

CORAL MOUNTAIN RESORT
DRAFT EIR
SCH# 2021020310

TECHNICAL APPENDICES

Traffic Report
Appendix L.1

June 2021



Coral Mountain Specific Plan

TRAFFIC IMPACT ANALYSIS

CITY OF LA QUINTA

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TABLE OF CONTENTS

TABLE OF CONTENTS.....	III
APPENDICES.....	V
LIST OF EXHIBITS.....	VII
LIST OF TABLES	IX
LIST OF ABBREVIATED TERMS	XI
1 EXECUTIVE SUMMARY	1
1.1 Introduction	1
1.2 Description of Proposed Project	1
1.3 Study Area and Analysis Scenarios.....	3
1.4 Criteria for Determining Significant Impacts	5
1.5 Summary of Findings.....	7
2 PROPOSED DEVELOPMENT.....	23
2.1 Location.....	23
2.2 Land Use and Phasing	23
2.3 Site Plan and Project Access	23
3 AREA CONDITIONS	25
3.1 Study Area.....	25
3.2 Area Roadway System.....	25
3.3 Transit Service.....	25
3.4 Pedestrian and Alternative Facilities	25
3.5 Traffic Volumes and Conditions	29
3.6 Level of Service Definitions and Analysis Methodologies.....	29
3.7 Required Intersection Level of Service	34
3.8 Existing Intersection Level of Service.....	35
3.9 Required Roadway Segment Level of Service	35
3.10 Existing Roadway Segment Level of Service	36
3.11 Existing Traffic Signal Warrant Analysis	36
4 PROJECTED FUTURE TRAFFIC.....	39
4.1 Project Trip Generation.....	39
4.2 Project Trip Distribution.....	40
4.3 Modal Split	44
4.4 Trip Assignment	44
4.5 Cumulative Growth Traffic.....	44
5 TRAFFIC IMPACT ASSESSMENT METHODOLOGY	61
5.1 Scenarios	61
5.2 Potentially Significant Traffic Impact Criteria	62
5.3 Traffic Signal Warrant Analysis Methodology.....	64
5.4 Queuing Analysis.....	64
5.5 Project Fair Share Calculation Methodology	65
6 NEAR TERM CONDITIONS TRAFFIC ANALYSIS	67
6.1 E+P Conditions	67
6.2 EAP Conditions	67

6.3	EAPC Phase 1 (2021) Conditions	79
6.4	EAPC Phase 2 (2023) Conditions	85
6.5	EAPC Project Buildout (2026) Conditions	91
7	YEAR 2040 CONDITIONS TRAFFIC ANALYSIS	101
7.1	General Plan Buildout (Year 2040) Without Project Conditions.....	101
7.2	General Plan Buildout (Year 2040) With Project Conditions	112
8	SPECIAL EVENTS	115
8.1	Weekend Traffic Volumes and Conditions.....	115
8.2	Weekend Special Event Project Land Use and Trip Generation	115
8.3	Weekend Special Event Analysis.....	119
8.4	Special Event Traffic Management	119
9	SUMMARY AND RECOMMENDATIONS	129
9.1	Project Access	129
9.2	Potentially Significant Impact Assessment Results	131
9.3	Fair Share Contribution	133
9.4	Vehicle Miles Traveled	134
10	REFERENCES.....	139

APPENDICES

- APPENDIX 1.1: APPROVED TRAFFIC STUDY SCOPING AGREEMENT**
- APPENDIX 3.1: EXISTING TRAFFIC COUNTS**
- APPENDIX 3.2: EXISTING (2019) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**
- APPENDIX 3.3: EXISTING (2019) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**
- APPENDIX 6.1: E+P CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**
- APPENDIX 6.2: E+P CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**
- APPENDIX 6.3: EA WITHOUT AND WITH PROJECT CONDITIONS
INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**
- APPENDIX 6.4: EA WITHOUT AND WITH PROJECT CONDITIONS
TRAFFIC SIGNAL WARRANTS ANALYSIS WORKSHEETS**
- APPENDIX 6.5: EAC (2021) WITHOUT AND WITH PROJECT
PHASE 1 CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**
- APPENDIX 6.6: EAC (2021) WITHOUT AND WITH PROJECT
PHASE 1 CONDITIONS TRAFFIC SIGNAL WARRANTS ANALYSIS WORKSHEETS**
- APPENDIX 6.7: EAC (2023) WITHOUT AND WITH PROJECT
PHASE 2 CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**
- APPENDIX 6.8: EAC (2023) WITHOUT AND WITH PROJECT
PHASE 2 CONDITIONS TRAFFIC SIGNAL WARRANTS ANALYSIS WORKSHEETS**
- APPENDIX 6.9: EAC (2026) WITHOUT AND WITH PROJECT BUILDOUT PHASE 3 CONDITIONS
INTERSECTION OPERATIONS ANALYSIS WORKSHEETS AND
PROJECT ACCESS QUEUEING ANALYSIS WORKSHEETS**
- APPENDIX 6.10: EAC (2026) WITHOUT AND WITH PROJECT BUILDOUT PHASE 3 CONDITIONS
TRAFFIC SIGNAL WARRANTS ANALYSIS WORKSHEETS**
- APPENDIX 7.1: GENERAL PLAN BUILDOUT (YEAR 2040) CONDITIONS
INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**
- APPENDIX 7.2: GENERAL PLAN BUILDOUT (YEAR 2040) CONDITIONS
TRAFFIC SIGNAL WARRANTS ANALYSIS WORKSHEETS**
- APPENDIX 7.3: GENERAL PLAN BUILDOUT (YEAR 2040) WITH PROJECT CONDITIONS
INTERSECTION OPERATIONS ANALYSIS WORKSHEETS AND
PROJECT ACCESS QUEUEING ANALYSIS WORKSHEETS**
- APPENDIX 7.4: GENERAL PLAN BUILDOUT (YEAR 2040) WITH PROJECT CONDITIONS
TRAFFIC SIGNAL WARRANTS ANALYSIS WORKSHEETS**
- APPENDIX 8.1: EAPC PROJECT BUILDOUT (2026) WEEKEND SPECIAL EVENT CONDITIONS
INTERSECTION OPERATIONS ANALYSIS WORKSHEETS AND
PROJECT ACCESS QUEUEING ANALYSIS WORKSHEETS**

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LIST OF EXHIBITS

EXHIBIT 1-1: PRELIMINARY SITE PLAN	2
EXHIBIT 1-2: LOCATION MAP.....	3
EXHIBIT 1-3: SUMMARY OF RECOMMENDED IMPROVEMENTS BY PHASE	12
EXHIBIT 3-1: EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS	26
EXHIBIT 3-2: CITY OF LA QUINTA GENERAL PLAN CIRCULATION ELEMENT	27
EXHIBIT 3-3: CITY OF LA QUINTA GENERAL PLAN ROADWAY CROSS-SECTIONS.....	28
EXHIBIT 3-4: EXISTING (2019) AVERAGE DAILY TRAFFIC VOLUMES (WITH PEAK SEASON ADJUSTMENT).....	30
EXHIBIT 3-5: EXISTING (2019) AM PEAK HOUR INTERSECTION VOLUMES (WITH PEAK SEASON ADJUSTMENT).....	31
EXHIBIT 3-6: EXISTING (2019) PM PEAK HOUR INTERSECTION VOLUMES (WITH PEAK SEASON ADJUSTMENT).....	32
EXHIBIT 4-1: PROJECT RESIDENTIAL AND RESORT EXTERNAL TRIP DISTRIBUTION	45
EXHIBIT 4-2: PROJECT SHOPPING CENTER EXTERNAL TRIP DISTRIBUTION	46
EXHIBIT 4-3: PROJECT PHASE 1 (2021) AVERAGE DAILY TRAFFIC (ADT) VOLUMES.....	47
EXHIBIT 4-4: PROJECT PHASE 1 (2021) AM PEAK HOUR INTERSECTION VOLUMES	48
EXHIBIT 4-5: PROJECT PHASE 1 (2021) PM PEAK HOUR INTERSECTION VOLUMES.....	49
EXHIBIT 4-6: PROJECT PHASE 2 (2023) AVERAGE DAILY TRAFFIC (ADT) VOLUMES.....	50
EXHIBIT 4-7: PROJECT PHASE 2 (2023) AM PEAK HOUR INTERSECTION VOLUMES	51
EXHIBIT 4-8: PROJECT PHASE 2 (2023) PM PEAK HOUR INTERSECTION VOLUMES.....	52
EXHIBIT 4-9: PROJECT BUILDOUT (2026) AVERAGE DAILY TRAFFIC (ADT) VOLUMES	53
EXHIBIT 4-10: PROJECT BUILDOUT (2026) AM PEAK HOUR INTERSECTION VOLUMES	54
EXHIBIT 4-11: PROJECT BUILDOUT (2026) PM PEAK HOUR INTERSECTION VOLUMES	55
EXHIBIT 4-12: CUMULATIVE DEVELOPMENT LOCATION MAP	58
EXHIBIT 6-1: E+P AVERAGE DAILY TRAFFIC (ADT) VOLUMES	68
EXHIBIT 6-2: E+P AM PEAK HOUR TRAFFIC VOLUMES	69
EXHIBIT 6-3: E+P PM PEAK HOUR TRAFFIC VOLUMES	70
EXHIBIT 6-4: EAP AVERAGE DAILY TRAFFIC (ADT) VOLUMES.....	73
EXHIBIT 6-5: EXISTING PLUS AMBIENT PLUS PROJECT AM PEAK HOUR INTERSECTION VOLUMES	74
EXHIBIT 6-6: EXISTING PLUS AMBIENT PLUS PROJECT PM PEAK HOUR INTERSECTION VOLUMES	75
EXHIBIT 6-7: EAPC PHASE 1 (2021) AVERAGE DAILY TRAFFIC (ADT).....	80
EXHIBIT 6-8: EAPC PHASE 1 (2021) AM PEAK HOUR INTERSECTION VOLUMES	81
EXHIBIT 6-9: EAPC PHASE 1 (2021) PM PEAK HOUR INTERSECTION VOLUMES	82
EXHIBIT 6-10: EAPC PHASE 2 (2023) AVERAGE DAILY TRAFFIC (ADT).....	86
EXHIBIT 6-11: EAPC PHASE 2 (2023) AM PEAK HOUR INTERSECTION VOLUMES	87
EXHIBIT 6-12: EAPC PHASE 2 (2023) PM PEAK HOUR INTERSECTION VOLUMES	88
EXHIBIT 6-13: EAPC PHASE 3 (2026) AVERAGE DAILY TRAFFIC (ADT) VOLUMES	92
EXHIBIT 6-14: EAPC PHASE 3 (2026) AM PEAK HOUR INTERSECTION VOLUMES	93
EXHIBIT 6-15: EAPC PHASE 3 (2026) PM PEAK HOUR INTERSECTION VOLUMES	94
EXHIBIT 7-1: GENERAL PLAN BUILDOUT (YEAR 2040) WITHOUT PROJECT AVERAGE DAILY TRAFFIC (ADT).....	102
EXHIBIT 7-2: GENERAL PLAN BUILDOUT (YEAR 2040) WITHOUT PROJECT AM PEAK HOUR TRAFFIC VOLUMES.....	103
EXHIBIT 7-3: GENERAL PLAN BUILDOUT (YEAR 2040) WITHOUT PROJECT PM PEAK HOUR TRAFFIC VOLUMES	104

EXHIBIT 7-4: GENERAL PLAN BUILDOUT (YEAR 2040) WITH PROJECT AVERAGE DAILY TRAFFIC (ADT)	105
EXHIBIT 7-5: GENERAL PLAN BUILDOUT (YEAR 2040) WITH PROJECT AM PEAK HOUR TRAFFIC VOLUMES	106
EXHIBIT 7-6: GENERAL PLAN BUILDOUT (YEAR 2040) WITH PROJECT PM PEAK HOUR TRAFFIC VOLUMES.....	107
EXHIBIT 8-1: EXISTING (2020) WEEKEND PEAK HOUR INTERSECTION VOLUMES	117
EXHIBIT 8-2: PROJECT BUILDOUT (2026) WEEKEND SPECIAL EVENT AVERAGE DAILY TRAFFIC (ADT, PROJECT ONLY)	120
EXHIBIT 8-3: PROJECT BUILDOUT (2026) WEEKEND SPECIAL EVENT ARRIVAL PEAK HOUR INTERSECTION VOLUMES (PROJECT ONLY)	121
EXHIBIT 8-4: PROJECT BUILDOUT (2026) WEEKEND SPECIAL EVENT DEPARTURE PEAK HOUR INTERSECTION VOLUMES (PROJECT ONLY)	122
EXHIBIT 8-5: EAPC PHASE 3 (2026) WEEKEND SPECIAL EVENT ARRIVAL PEAK HOUR INTERSECTION VOLUMES	123
EXHIBIT 8-6: EAPC PHASE 3 (2026) WEEKEND SPECIAL EVENT DEPARTURE PEAK HOUR INTERSECTION VOLUMES	124
EXHIBIT 8-7: EVENT OPERATIONS PLANNING SCHEDULE	128
EXHIBIT 9-1: SITE ADJACENT ROADWAY AND SITE ACCESS RECOMMENDATIONS.....	130

LIST OF TABLES

TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS	3
TABLE 1-2: ROADWAY SEGMENT ANALYSIS LOCATIONS	5
TABLE 1-3: IMPACT CRITERIA FOR INTERSECTIONS ALREADY OPERATING AT LOS E OR LOS F	6
TABLE 1-4: SUMMARY OF EXISTING AND EXISTING PLUS PROJECT INTERSECTION OPERATIONS.....	8
TABLE 1-5: SUMMARY OF PHASED INTERSECTION OPERATIONS	9
TABLE 1-6: SUMMARY OF GENERAL PLAN BUILDOUT (2040) INTERSECTION OPERATIONS.....	10
TABLE 1-7: SUMMARY OF ROADWAY SEGMENT ANALYSIS.....	11
TABLE 3-1: SIGNALIZED INTERSECTION LOS THRESHOLDS.....	33
TABLE 3-2: UNSIGNALIZED INTERSECTION DESCRIPTION OF LOS	34
TABLE 3-3: INTERSECTION ANALYSIS FOR EXISTING (2019) CONDITIONS	37
TABLE 3-4: ROADWAY SEGMENT ANALYSIS FOR EXISTING (2019) CONDITIONS.....	38
TABLE 4-1: PROJECT PHASE 1 (2021) TRIP GENERATION SUMMARY	41
TABLE 4-2: PROJECT PHASE 2 (2023) TRIP GENERATION SUMMARY	42
TABLE 4-3: PROJECT BUILDOUT (2026) TRIP GENERATION SUMMARY	43
TABLE 4-4: CUMULATIVE DEVELOPMENT LAND USE SUMMARY	56
TABLE 5-1: IMPACT CRITERIA FOR INTERSECTIONS ALREADY OPERATING AT LOS E OR LOS F	63
TABLE 6-1: INTERSECTION ANALYSIS FOR EXISTING PLUS PROJECT CONDITIONS	71
TABLE 6-2: ROADWAY VOLUME/CAPACITY ANALYSIS FOR EXISTING PLUS PROJECT CONDITIONS	72
TABLE 6-3: INTERSECTION ANALYSIS FOR EXISTING PLUS AMBIENT WITHOUT AND WITH PROJECT CONDITIONS.....	77
TABLE 6-4: ROADWAY SEGMENT ANALYSIS FOR EXISTING PLUS AMBIENT WITHOUT AND WITH PROJECT CONDITIONS.....	78
TABLE 6-5: INTERSECTION ANALYSIS FOR PHASE 1 (2021) WITHOUT AND WITH PROJECT CONDITIONS.....	83
TABLE 6-6: ROADWAY SEGMENT ANALYSIS FOR PHASE 1 (2021) WITHOUT AND WITH PROJECT CONDITIONS.....	84
TABLE 6-7: INTERSECTION ANALYSIS FOR PHASE 2 (2023) WITHOUT AND WITH PROJECT CONDITIONS.....	89
TABLE 6-8: ROADWAY SEGMENT ANALYSIS FOR PHASE 2 (2023) WITHOUT AND WITH PROJECT CONDITIONS.....	90
TABLE 6-9: INTERSECTION ANALYSIS FOR PHASE 2 (2026) WITHOUT AND WITH PROJECT CONDITIONS.....	95
TABLE 6-10: ROADWAY SEGMENT ANALYSIS FOR PHASE 2 (2026) WITHOUT AND WITH PROJECT CONDITIONS	97
TABLE 6-11: PROJECT ACCESS TURN LANE STORAGE LENGTHS FOR EAPC PHASE 3 (2026) CONDITIONS	99
TABLE 7-1: INTERSECTION ANALYSIS FOR GENERAL PLAN BUILDOUT (YEAR 2040) WITHOUT PROJECT CONDITIONS	108
TABLE 7-2: ROADWAY SEGMENT ANALYSIS FOR GENERAL PLAN BUILDOUT (YEAR 2040) WITHOUT PROJECT CONDITIONS	109
TABLE 7-3: INTERSECTION ANALYSIS FOR GENERAL PLAN BUILDOUT (YEAR 2040) WITH PROJECT CONDITIONS	110
TABLE 7-4: ROADWAY SEGMENT ANALYSIS FOR GENERAL PLAN BUILDOUT (YEAR 2040) WITH PROJECT CONDITIONS	111
TABLE 7-5: PROJECT ACCESS TURN LANE STORAGE LENGTHS FOR GENERAL PLAN BUILDOUT (2040) WITH PROJECT CONDITIONS	114

TABLE 8-1: WEEKEND INTERSECTION COUNT LOCATIONS.....	115
TABLE 8-2: EXISTING 2019 WEEKDAY PM PEAK HOUR & 2020 SATURDAY MID-DAY PEAK HOUR COMPARISON	116
TABLE 8-3: PROJECT TRIP GENERATION SUMMARY - WEEKEND SPECIAL EVENT	118
TABLE 8-4: INTERSECTION ANALYSIS FOR EAPC PHASE 3 (2026) WEEKEND SPECIAL EVENT CONDITIONS	125
TABLE 8-5: PROJECT ACCESS TURN LANE STORAGE LENGTHS FOR EAPC PHASE 3 (2026) WEEKEND SPECIAL EVENT CONDITIONS	127
TABLE 9-1: PROJECT FAIR SHARE CALCULATIONS.....	135
TABLE 9-2: SUMMARY OF PHASED INTERSECTION IMPROVEMENTS.....	136

LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
Av	Avenue
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CIP	Capital Improvement Program
CMP	Congestion Management Program
CVAG	Coachella Valley Association of Governments
DIF	Development Impact Fee
Dr	Drive
E+P	Existing Plus Project
EAP	Existing plus Ambient Growth plus Project
EAPC	Existing plus Ambient Growth plus Project plus Cumulative
FAR	Floor to Area Ratio
FHWA	Federal Highway Administration
HCM	Highway Capacity Manual
Hwy	Highway
ITE	Institute of Transportation Engineers
LOS	Level of Service
MUTCD	Manual on Uniform Traffic Control Devices
NEV	Neighborhood Electric Vehicle
PHF	Peak Hour Factor
Project	Coral Mountain Specific Plan
RCTC	Riverside County Transportation Commission
RTP	Regional Transportation Plan
SCAG	Southern California Association of Governments
SCS	Sustainable Communities Strategy
sf	Square Feet
St	Street
TIA	Traffic Impact Analysis
TUMF	Transportation Uniform Mitigation Fee
V/C	Volume-to-Capacity
VPH	Vehicles per Hour

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1 EXECUTIVE SUMMARY

1.1 INTRODUCTION

This report presents the results of the traffic impact analysis (TIA) for the proposed Coral Mountain Specific Plan (“Project”) located in the City of La Quinta. The Project is generally located on the southwest corner of re-aligned Madison Street at 58th Avenue as shown on Exhibit 1-1.

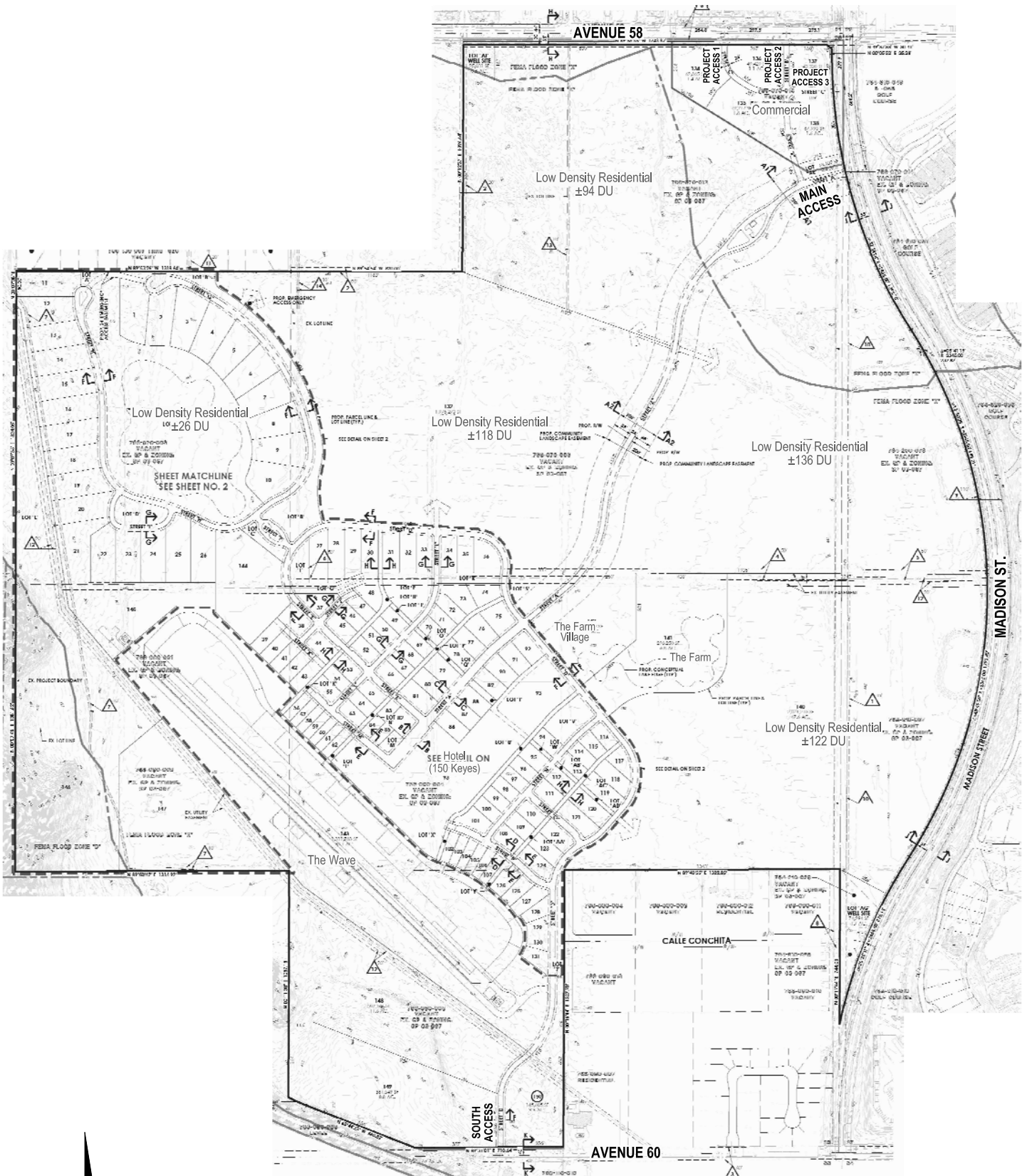
The purpose of this TIA is to evaluate the potential circulation system deficiencies that may result from the development of the proposed Project, and recommend improvements to achieve acceptable circulation system operational conditions. As coordinated with City of La Quinta staff, this TIA has been prepared in accordance with the City of La Quinta’s Traffic Study Guidelines (Engineering Bulletin #06-13, dated July 23, 2015) and Engineering Bulletin #10-01 (dated August 9, 2010). To ensure that this TIA satisfies the City of La Quinta’s traffic study requirements, Urban Crossroads, Inc. prepared a traffic study scoping package for review by City staff prior to the preparation of this report. The Agreement provides an outline of the Project study area, trip generation, trip distribution, and analysis methodology. The Agreement approved by the City is included in Appendix 1.1.

1.2 DESCRIPTION OF PROPOSED PROJECT

The Project consists of a master planned themed resort comprised of a wave basin, a 150-key hotel (with 1,900 square feet bar, 1,400 square feet restaurant, 4,200 square feet kitchen, 1,100 rooftop bar, 1,200 pool bar & grill, and 4,200 square feet spa), 104 attached dwelling units, 496 detached dwelling units, 60,000 square feet of retail, wave village area (with 900 square feet shape studio, 1,600 square feet surf shop, 3,000 square feet board room, 1,800 square feet surf lounge/living room, 800 square feet surf classroom, a fitness pavilion, 1,400 square feet high performance center, and 5,500 square feet beach club), the farm area (with 2,100 square feet barn, 2,500 square feet greenhouse, 1,400 square feet equipment barn, 300 square feet tool shed, 1,200 square feet family camp, 4,500 square feet gym, 2,000 square feet outfitters, and 2,000 square feet locker rooms). In addition, back of house complex consists of 9,500 square feet resort operations, 1,500 square feet wave operations, and 1,000 square feet guardhouses. The wave basin is a private facility. The preliminary Project land use plan is presented on Exhibit 1-1.

The Project is anticipated to be constructed in phases, with Phase 1 (2021) including resort (wave basin, hotel uses, and 57,000 square feet of commercial ancillary uses), 104 attached dwelling units, 26 detached dwelling units, and 10,000 square feet of retail. Project Phase 2 (2023) adds 25,000 square feet of retail. Project Phase 3 (2026) adds 470 detached dwelling units and 25,000 square feet of retail.

EXHIBIT 1-1: PRELIMINARY LAND USE PLAN



The Coral Mountain Specific Plan Project is proposed to be served by the Project access locations listed below:

- Madison Street / Main Access (full access)
- South Access / Avenue 60 (full access)
- Project Access 1 / Avenue 58 (full access)
- Project Access 2 / Avenue 58 (right-in/right-out access)
- Madison Street / Project Access 3 (right-in/right-out access)

It should be noted that both Avenue 58 and Madison Street are classified as Secondary Arterials adjacent to the site. The separation standards for a Secondary Arterial are 250 feet between driveways, and 600 feet between street intersections based upon the City of La Quinta Public Works Department Development Engineering Handbook). The separation between Project driveways along Avenue 58 and Madison Street are over 250 feet and separation between Avenue 58 and the Project's main access point (future signalized location) is over 600 feet. Therefore, the location of each Project access points meets City of La Quinta's separation standards criteria.

The proposed Project is anticipated to generate a net total of approximately 6,994 external trip-ends per day on a typical weekday with 447 external vehicles per hour (VPH) during the weekday AM peak hour and 638 external VPH during the weekday PM peak hour.

1.3 STUDY AREA AND ANALYSIS SCENARIOS

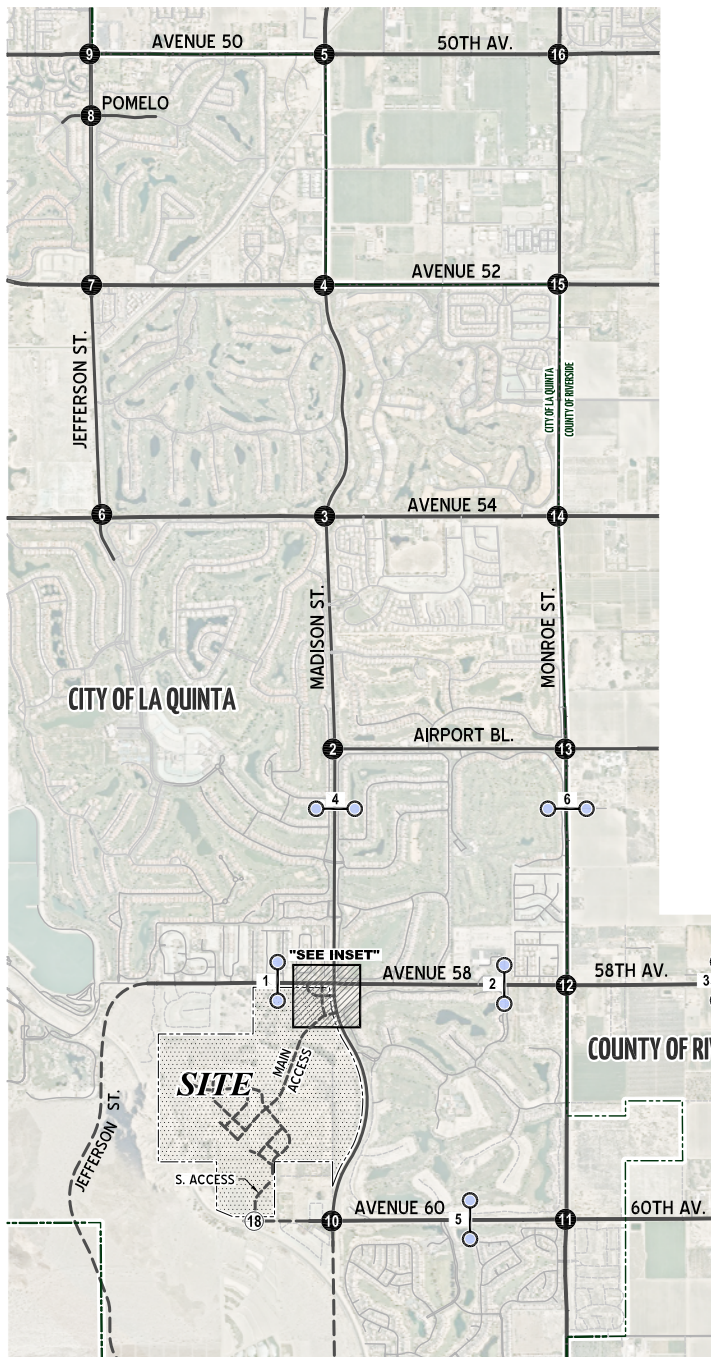
1.3.1 INTERSECTIONS

The following 22 study area intersections shown on Exhibit 1-2 and listed in Table 1-1 were selected for this TIA based on consultation with City of La Quinta staff.

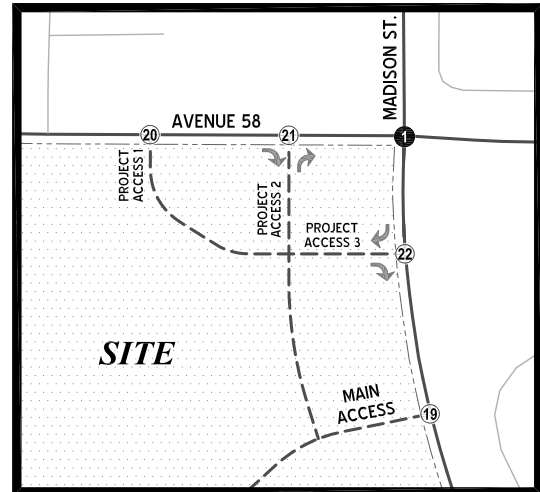
TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS

ID	Intersection Location	ID	Intersection Location
1	Madison Street at Avenue 58	12	Monroe Street at Avenue 58
2	Madison Street at Avenue 56	13	Monroe Street at Airport Boulevard
3	Madison Street at Avenue 54	14	Monroe Street at Avenue 54
4	Madison Street at Avenue 52	15	Monroe Street at Avenue 52
5	Madison Street at Avenue 50	16	Monroe Street at 50th Avenue
6	Jefferson Street at Avenue 54	17	Jackson Street at 58th Avenue
7	Jefferson Street at Avenue 52	18	South Access at Avenue 60 - <i>(Future Intersection)</i>
8	Jefferson Street at Pomelo	19	Madison Street at Main Access- <i>(Future Intersection)</i>
9	Jefferson Street at Avenue 50	20	Project Access 1 at Avenue 58- <i>(Future Intersection)</i>
10	Madison Street at Avenue 60	21	Project Access 2 at Avenue 58- <i>(Future Intersection)</i>
11	Monroe Street at Avenue 60	22	Madison Street at Project Access 3- <i>(Future Intersection)</i>

EXHIBIT 1-2: LOCATION MAP



INSET



LEGEND:

- = EXISTING ANALYSIS LOCATION
- = FUTURE ANALYSIS LOCATION
- = ROADWAY SEGMENT ANALYSIS LOCATION
- = FUTURE ROADWAY / DIRT
- = RIGHT-IN/RIGHT-OUT ONLY ACCESS



1.3.2 ROADWAY SEGMENTS

Through consultation with City staff, daily volume-to-capacity (V/C) roadway analyses have been evaluated for the following roadway segments as shown on Table 1-2:

TABLE 1-2: ROADWAY SEGMENT ANALYSIS LOCATIONS

Roadway Segment	
1 Avenue 58, west of Madison Street	4 Madison Street, south of Airport Boulevard
2 Avenue 58, west of Monroe Street	5 Avenue 60, west of Monroe Street
3 Avenue 58, west of Jackson Street	6 Monroe Street, south of Airport Boulevard

1.3.3 ANALYSIS SCENARIOS

In accordance with the City of La Quinta's traffic study guidelines and as documented in Appendix 1.1 of this TIA, this study has analyzed the following scenarios:

- Existing (2019)
- Existing Plus Project (E+P)
- Existing Plus Ambient Growth Plus Project (EAP)
- Existing Plus Ambient Growth Plus Cumulative Projects without and with Project for each of the following phases (EAC and EAPC):
 - Project Phase 1 (2021)
 - Project Phase 2 (2023)
 - Project Buildout (Phase 3, 2026)
 - Project Buildout (Phase 3, 2026) – Special Event
- General Plan buildout (2040) Without Project Conditions – establishes future year baseline to evaluate the proposed Project
- General Plan buildout (2040) With Project Conditions – represents future year baseline traffic conditions with the proposed Project

Detailed descriptions of each analysis scenario can be found in Section 5.1 *Scenarios* of this TIA.

1.4 CRITERIA FOR DETERMINING SIGNIFICANT IMPACTS

Potentially significant Project traffic impacts are divided separately into intersection and roadway segment traffic impacts. Intersections and roadway segments are evaluated for both potentially significant Project and cumulative impacts. The potentially significant Project and cumulative impact criteria described below for both intersection and roadway segments per the City of La Quinta's traffic study guidelines.

1.4.1 INTERSECTIONS

Potentially Significant Project Impacts

Pursuant to the criteria outlined for the analysis of study area intersections using the Highway Capacity Methodology (HCM), a potentially significant Project impact is defined to occur at any signalized intersection if the addition of Project trips will result in the level of service (LOS) for that intersection to exceed the criteria established in Table 1-3 for E+P traffic conditions.

TABLE 1-3: IMPACT CRITERIA FOR INTERSECTIONS ALREADY OPERATING AT LOS E OR LOS F

Significant Changes in LOS	
LOS E	An increase in delay of 2 seconds or more
LOS F	An increase in delay of 1 second or more

Source: City of La Quinta Engineering Bulletin #06-13 Table 4.0

A potentially significant Project impact at an unsignalized study area intersection is defined to occur when an intersection has a projected LOS F on a side street for a two-way stop control or LOS E or worse for the intersection an all-way stop controlled intersection and the addition of Project traffic results in an addition of 3 seconds or more of delay for any movement.

Potentially Significant Cumulative Impacts

A potentially significant cumulative impact is defined to occur at any signalized intersection if the addition of Project trips will result in the LOS for that intersection to exceed the criteria established in Table 1-3 for Existing Plus Ambient Growth Plus Project Plus Cumulative Projects (EAPC) traffic conditions.

A potentially significant cumulative impact at an unsignalized study area intersection is defined to occur when, with Project traffic included, an intersection has a projected LOS F on a side street for a two-way stop control or LOS E or worse for the intersection an all-way stop controlled intersection and the addition of Project traffic results in an addition of 3 seconds or more of delay for any movement.

1.4.2 ROADWAY SEGMENTS

Potentially Significant Project Impacts

A potentially significant Project impact is defined to occur at any study area roadway segment if the segment is projected to be operating at LOS E or LOS F and the volume-to-capacity (V/C) ratio increases by 0.02 or more with the addition of Project traffic for E+P traffic conditions.

Potentially Significant Cumulative Impacts

A potentially significant cumulative impact is defined to occur at any study area roadway segment if the Project would cause the Existing LOS to fall to worse than LOS D for Existing Plus Ambient Growth Plus Cumulative Projects traffic conditions. A potentially significant cumulative impact is also defined to occur on any study area roadway segment that is already operating at LOS E or LOS F, if the Project traffic will increase the V/C ratio by more than 0.02 for EAPC traffic conditions.

1.5 SUMMARY OF FINDINGS

The results of the potentially significant Project and cumulative impacts for the study area intersections for E+P and EAPC traffic conditions are summarized in Tables 1-4 and 1-5. As shown on Table 1-4 and discussed in detail on Section 6 Near Term Conditions Traffic Analysis, the development of the proposed Project is not anticipated to result in a potentially project specific impact. However, potentially significant cumulative impacts are anticipated at the following study area intersections, with the addition of the Project traffic as summarized in Table 1-5:

- #1 - Madison Street at Avenue 58
- #3 - Madison Street at Avenue 54.
- #6 - Jefferson Street at Avenue 54
- #7 - Jefferson Street at Avenue 52
- #9 - Jefferson Street at Avenue 50
- #11 – Monroe Street at Avenue 60
- #12 – Monroe Street at Avenue 58
- #13 – Monroe Street at Airport Boulevard
- #14 - Monroe Street at Avenue 54
- #15 – Monroe Street at Avenue 52

As shown in Table 1-5, the project's cumulative impact at the abovementioned intersections are mitigated to operate at an acceptable level of service (LOS "D" or better) with the implementation of the improvements shown on Exhibit 1-3 and described in detail in Sections 6 and 9.

Project access improvements, fully funded CIP improvements and added improvements (if necessary) are shown on Exhibit 1-3.

The results of the General Plan Buildout (2040) conditions and recommended improvements are summarized in Table 1-6.

A summary of roadway segment volume-to-capacity analysis is provided on Table 1-7. Intersection recommendations to provide acceptable operations for Year 2040 for various network scenarios are also documented.

1.5.1 EXISTING (2019) CONDITIONS

As shown in Table 1-4, the intersection analysis for Existing conditions indicates that the 17 existing study area intersections are currently operating at an acceptable LOS during the peak hours.

As shown on Table 1-7, all study area roadway segments analyzed are currently operating at acceptable LOS.

1.5.2 E+P AND EAP CONDITIONS

The 22 (17 existing + 5 Project intersections) study area intersections are anticipated to operate at acceptable LOS with the addition of Project traffic for E+P traffic conditions.

TABLE 1-4: SUMMARY OF EXISTING AND EXISTING PLUS PROJECT INTERSECTION OPERATIONS

#	Intersection	Traffic Control ²	Existing (2019)				E+P				Potentially Significant Project Specific Impact ³
			Delay (secs) ¹		Level of Service ¹		Delay (secs) ¹		Level of Service ¹		
			AM	PM	AM	PM	AM	PM	AM	PM	
1	Madison St. / Avenue 58	AWS	8.5	9.3	A	A	10.0	12.8	A	B	No
2	Madison St. / Airport Blvd.	TS	8.8	8.4	A	A	8.8	9.9	A	A	No
3	Madison St. / Avenue 54	AWS	12.9	15.9	B	C	15.2	23.5	C	C	No
4	Madison St. / Avenue 52	TS	27.9	28.5	C	C	29.1	30.0	C	C	No
5	Madison St. / Avenue 50	TS	28.6	29.4	C	C	29.1	29.8	C	C	No
6	Jefferson St. / Avenue 54	AWS	12.2	16.9	B	C	13.2	20.1	B	C	No
7	Jefferson St. / Avenue 52	RDB	9.4	9.7	A	A	10.6	11.2	B	B	No
8	Jefferson St. / Pomelo	TS	8.4	14.3	A	B	8.8	14.3	A	B	No
9	Jefferson St. / Avenue 50	TS	46.3	49.4	D	D	46.5	49.4	D	D	No
10	Madison St. / Avenue 60	AWS	8.2	9.1	A	A	8.7	9.5	A	A	No
11	Monroe St. / Avenue 60	AWS	8.1	8.3	A	A	8.5	8.9	A	A	No
12	Monroe St. / Avenue 58	AWS	8.1	9.4	A	A	8.9	11.0	A	B	No
13	Monroe St. / Airport Blvd.	AWS	8.5	9.2	A	A	9.0	10.0	A	B	No
14	Monroe St. / Avenue 54	AWS	14.3	12.7	B	B	16.3	32.9	C	D	No
15	Monroe St. / Avenue 52	AWS	14.7	25.3	B	D	16.8	34.3	C	D	No
16	Monroe St. / 50th Avenue	TS	16.6	18.0	B	B	16.6	18.5	B	B	No
17	Jackson St. / 58th Avenue	AWS	7.5	8.2	A	A	7.7	8.6	A	A	No
18	S. Access / Avenue 60	<u>CSS</u>	Future Intersection				8.9	8.9	A	A	No
19	Madison St. / Main Access	<u>CSS</u>	Future Intersection				12.7	15.6	B	C	No
20	Project Access 1 / Avenue 58	<u>CSS</u>	Future Intersection				9.2	9.8	A	A	No
21	Project Access 2 / Avenue 58	<u>CSS</u>	Future Intersection				8.6	9.0	A	A	No
22	Madison St. / Project Access 3	<u>CSS</u>	Future Intersection				8.9	10.1	A	B	No

¹ Per the Highway Capacity Manual 6th Edition (HCM6), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control.

For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

² CSS = Cross-street Stop; TS = Traffic Signal; AWS = All-way Stop; RDB = Roundabout; 1 = Improvement

³ A potentially significant project traffic impact is defined to occur at any signalized intersection if the intersection is operating at LOS E and the project causes the delay to increase by 2 seconds or more. If the signalized intersection is operating at LOS F, a potentially significant project specific traffic impact is defined to occur if the project causes the delay to increase by 1 second or more. For cross-street stop controlled intersections, a potentially significant project specific traffic impact is defined to occur if the intersection is operating at LOS F on the side street and the addition of project traffic results in an increase of 3 seconds or more of delay for any movement.

TABLE 1-5: SUMMARY OF PHASED INTERSECTION OPERATIONS

#	Intersection	Traffic Control ²	PHASE 1 (2021)								PHASE 2 (2023)								PHASE 3 (2026)								Potentially Significant Cumulative Impact ³
			Without Project				With Project				Without Project				With Project				Without Project				With Project				
			Delay ¹		LOS ¹		Delay ¹		LOS ¹		Delay ¹		LOS ¹		Delay ¹		LOS ¹		Delay ¹		LOS ¹		Delay (secs) ¹		LOS ¹		
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
1	Madison St. / Avenue 58 - With Improvements	AWS <u>TS</u>	10.9	14.2	B	B	11.4	15.6	B	C	11.4	15.9	B	C	12.0	18.2	B	C	12.7	20.8	B	C	17.3	57.9	C	F	
2	Madison St. / Airport Blvd.	TS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27.4	32.1	C	C	No
3	Madison St. / Avenue 54 - With Improvements	AWS <u>TS</u>	21.3	47.6	C	E	22.6	53.0	C	F	33.9	>80	D	F	36.9	>80	E	F	79.2	>80	F	F	>80	>80	F	F	
4	Madison St. / Avenue 52	TS	31.4	31.6	C	C	31.5	31.7	C	C	34.5	38.5	C	D	34.8	38.8	C	D	41.2	43.6	D	D	41.6	50.3	D	D	No
5	Madison St. / Avenue 50	TS	30.2	30.0	C	C	30.5	30.2	C	C	30.8	30.8	C	C	31.0	31.1	C	C	31.6	32.3	C	C	32.2	33.1	C	C	No
6	Jefferson St. / Avenue 54 - With Improvements	AWS <u>TS</u>	29.9	31.3	C	C	30.0	31.3	C	C	30.7	32.1	C	C	30.8	32.1	C	C	31.9	33.4	C	C	32.2	33.6	C	C	No
7	Jefferson St. / Avenue 52 - With Improvements	RDB RDB	18.8	49.7	C	E	19.3	52.1	C	F	24.1	79.4	C	F	25.2	>80	D	F	40.6	>80	E	F	54.2	>80	F	F	
8	Jefferson St. / Pomelo	TS	36.1	39.9	D	D	36.2	40.3	D	D	42.7	41.6	D	D	43.0	42.3	D	D	22.7	22.5	C	C	22.9	22.6	C	C	No
9	Jefferson St. / Avenue 50 - With Improvements	TS	42.8	78.7	E	F	44.3	>80	E	F	59.8	>80	F	F	61.7	>80	F	F	>80	>80	F	F	>80	>80	F	F	
10	Jefferson St. / Avenue 52	RDB	10.2	12.8	B	B	10.3	13.0	B	B	11.7	16.6	B	C	11.8	16.9	B	C	15.1	28.3	C	D	16.8	34.3	C	D	No
11	Jefferson St. / Avenue 50	TS	9.3	34.4	A	C	9.4	34.4	A	C	15.6	34.8	B	C	15.6	34.8	B	C	19.4	35.4	B	D	19.5	35.8	B	D	No
12	Jefferson St. / Avenue 50 - With Improvements	TS	52.4	50.6	D	D	52.5	50.7	D	D	52.3	53.3	D	D	52.4	53.4	D	D	52.4	58.8	D	E	53.0	60.3	D	E	
13	Madison St. / Avenue 60	AWS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51.4	51.0	D	D	51.8	51.6	D	D	No
14	Madison St. / Avenue 60 - With Improvements	AWS	8.8	10.6	A	B	8.9	10.8	A	B	9.0	11.2	A	B	9.2	11.7	A	B	9.4	12.8	A	B	10.2	14.8	B	B	No
15	Monroe St. / Avenue 60 - With Improvements	AWS	10.4	12.0	B	B	10.5	12.3	B	B	13.0	18.0	B	C	13.3	19.1	B	C	25.9	76.4	D	F	30.9	>80	D	F	
16	Monroe St. / Avenue 58 - With Improvements	AWS <u>TS</u>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33.3	34.9	C	C	34.4	37.7	C	D	No
17	Monroe St. / Avenue 58 - With Improvements	AWS <u>TS</u>	10.8	23.8	B	C	11.0	26.8	B	D	15.7	>80	C	F	16.4	>80	C	F	52.2	>80	F	F	>80	>80	F	F	
18	Monroe St. / Airport Blvd. - With Improvements	AWS <u>TS</u>	-	-	-	-	-	-	-	-	17.3	21.7	B	C	18.1	22.9	B	C	23.2	33.3	C	C	25.9	38.1	C	D	No
19	Monroe St. / Airport Blvd. - With Improvements	AWS <u>TS</u>	11.1	13.8	B	B	11.3	14.1	B	B	15.6	27.7	C	D	16.2	29.1	C	D	47.3	>80	E	F	70.4	>80	F	F	
20	Monroe St. / Avenue 54 - With Improvements	AWS <u>TS</u>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.0	24.9	C	C	24.6	25.8	C	C	No
21	Monroe St. / Avenue 54 - With Improvements	AWS <u>TS</u>	31.1	35.7	D	E	33.0	35.9	D	E	>80	>80	F	F	>80	>80	F	F	>80	>80	F	F	>80	>80	F	F	
22	Monroe St. / Avenue 54 - With Improvements	AWS <u>TS</u>	23.5	23.0	C	C	23.7	23.2	C	C	24.4	24.0	C	C	24.5	24.0	C	C	34.7	37.0	C	D	35.0	37.7	C	D	No
23	Monroe St. / Avenue 52 - With Improvements	AWS <u>TS</u>	50.3	>80	F	F	53.1	>80	F	F	>80	>80	F	F	>80	>80	F	F	>80	>80	F	F	>80	>80	F	F	
24	Monroe St. / Avenue 52 - With Improvements	AWS <u>TS</u>	13.0	14.7	B	B	13.0	14.7	B	B	13.9	15.5	B	B	13.9	15.5	B	B	33.7	41.2	C	D	34.1	44.1	C	D	No
25	Monroe St. / 50th Avenue	TS	16.3	20.4	B	C	16.3	20.4	B	C	16.6	21.5	B	C	16.6	21.5	B	C	17.7	25.0	B	C	17.9	25.8	B	C	No
26	Jackson St. / 58th Avenue	AWS	8.1	9.8	A	A	8.1	9.8	A	A	8.5	11.3	A	B	8.6	11.5	A	B	9.5	16.9	A	C	9.9	21.5	A	C	No
27	S. Access / Avenue 60	<u>CSS</u>	Future Intersection				8.6	8.6	A	A	Future Intersection				8.6	8.6	A	A	Future Intersection				8.9	8.9	A	A	No
28	Madison St. / Main Access	<u>CSS</u>	Future Intersection				11.2	12.6	B	B	Future Intersection				11.5	13.5	B	B	Future Intersection				17.4	24.3	C	C	No
29	Project Access 1 / Avenue 58	<u>CSS</u>	Future Intersection				9.9	10.6	A	B	Future Intersection				10.1	10.9	B	B	Future Intersection				10.2	11.1	B	B	No
30	Project Access 2 / Avenue 58	<u>CSS</u>	Future Intersection				9.3	9.8	A	A	Future Intersection				9.3	9.9	A	A	Future Intersection				9.4	10.0	A	B	No
31	Madison St. / Project Access 3	<u>CSS</u>	Future Intersection				9.0	9.7	A	A	Future Intersection				9.1	9.9	A	A	Future Intersection				9.6	11.3	A	B	No

¹ Per the Highway Capacity Manual 6th Edition (HCM6), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. **BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

² CSS = Cross-street Stop; TS = Traffic Signal; AWS = All-way Stop; RDB = Roundabout; 1 = Improvement

³ A potentially significant cumulative traffic impact is defined to occur at any signalized intersection if the intersection is operating at LOS E and the project causes the delay to increase by 2 seconds or more. If the signalized intersection is operating at LOS F, a potentially significant cumulative traffic impact is defined to occur if the project causes the delay to increase by 1 second or more. For cross-street stop controlled intersections, a potentially significant cumulative traffic impact is defined to occur if the intersection is operating at LOS F on the side street and the addition of project traffic results in an increase of 3 seconds or more of delay for any movement.

TABLE 1-6: SUMMARY OF GENERAL PLAN BUILDOUT (2040) INTERSECTION OPERATIONS

#	Intersection	Traffic Control ²	Without Project				With Project			
			Delay (Secs) ¹		Level of Service ¹		Delay (Secs) ¹		Level of Service ¹	
			AM	PM	AM	PM	AM	PM	AM	PM
1	Madison St. / Avenue 58									
	- With GPCE Update Improvements	<u>TS</u>	40.1	63.2	D	E	41.5	70.3	D	E
	- With Modified GPCE Improvements	<u>TS</u>	34.5	45.5	C	D	35.1	53.0	D	D
2	Madison St. / Airport Blvd.	TS	23.2	28.6	C	C	23.7	29.7	C	C
3	Madison St. / Avenue 54	<u>TS</u>	42.9	49.0	D	D	44.2	53.3	D	D
4	Madison St. / Avenue 52	TS	38.8	52.0	D	D	39.5	53.8	D	D
5	Madison St. / Avenue 50	TS	36.7	53.2	D	D	37.6	54.8	D	D
6	Jefferson St. / Avenue 54	<u>TS</u>	24.0	43.5	C	D	24.2	48.4	C	D
7	Jefferson St. / Avenue 524	RDB	5.8	8.3	A	A	5.9	9.1	A	A
8	Jefferson St. / Pomelo	TS	6.3	21.2	A	C	6.4	21.4	A	C
9	Jefferson St. / Avenue 50	TS	41.5	52.8	D	D	42.2	54.6	D	D
10	Madison St. / Avenue 60	<u>TS</u>	50.9	48.0	D	D	49.6	53.1	D	D
11	Monroe St. / Avenue 60									
	- With GPCE Update Improvements	<u>TS</u>	45.1	98.8	D	F	46.1	103.9	D	F
	- With Added GPCE Improvements	<u>TS</u>	36.7	50.3	D	D	37.2	53.0	D	D
12	Monroe St. / Avenue 58									
	- With GPCE Update Improvements	<u>TS</u>	47.8	72.0	D	E	50.1	75.9	D	E
	- With Added GPCE Improvements	<u>TS</u>	38.0	48.6	D	D	39.5	52.0	D	D
13	Monroe St. / Airport Blvd.	<u>TS</u>	33.3	44.1	C	D	37.8	45.4	D	D
14	Monroe St. / Avenue 54	<u>TS</u>	31.5	52.5	C	D	31.6	54.5	C	D
15	Monroe St. / Avenue 52	<u>TS</u>	39.0	52.7	D	D	39.0	54.3	D	D
16	Monroe St. / 50th Avenue	TS	34.5	53.3	C	D	34.1	54.5	C	D
17	Jackson St. / 58th Avenue	<u>TS</u>	29.7	36.7	C	D	29.7	38.0	C	D
18	S. Access / Avenue 60	<u>CSS</u>	0.0	0.0	0	0	34.2	34.8	D	D
19	Madison St. / Main Access									
	- With Cross-Street Stop Control	<u>CSS</u>	Future Intersection				113.2	91.7	F	F
	- With Traffic Signal	<u>TS</u>					7.6	9.0	A	A
20	Project Access 1 / Avenue 58	<u>CSS</u>	Future Intersection				12.9	14.5	B	B
21	Project Access 2 / Avenue 58	<u>CSS</u>	Future Intersection				10.2	10.4	B	B
22	Madison St. / Project Access 3	<u>CSS</u>	Future Intersection				13.6	14.4	B	B

¹ Per the Highway Capacity Manual 6th Edition (HCM6), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

² CSS = Cross-street Stop; TS = Traffic Signal; AWS = All-way Stop; RDB = Roundabout; 1 = Improvement

TABLE 1-7: SUMMARY OF ROADWAY SEGMENT ANALYSIS

Roadway	Segment	Roadway Designation	# of Lanes ⁷	Existing Capacity ¹	Existing (2019)		E+P		Potentially Significant Project Specific Impact ²	PHASE 3 (2026)				Potentially Significant Cumulative Impact ³	# of Lanes ⁷	2040 Capacity ¹	GPBO (2040)			
					ADT ³	V/C	ADT ³	V/C		Without Project		With Project					Without Project		With Project	
										ADT ³	V/C	ADT ³	V/C				ADT ³	V/C	ADT ³	V/C
Avenue 58	West of Madison St.	Secondary	3	21,000 ⁴	1,600	0.08	2,300	0.11	No	5,700	0.27	6,300	0.30	No	4	28,000	11,800	0.42	12,500	0.45
	West of Monroe St.	Secondary	4	28,000	2,300	0.08	4,100	0.15	No	5,900	0.21	7,800	0.28	No	4	28,000	12,100	0.43	14,000	0.50
	West of Jackson St.	Secondary	2	14,000 ⁴	1,800	0.13	2,700	0.19	No	4,900	0.35	5,700	0.41	No	4	28,000	18,200	0.65	19,000	0.68
Madison St.	South of Airport Bl.	Primary	4	42,600	6,700	0.16	9,700	0.23	No	14,300	0.34	17,400	0.41	No	4	42,600	30,900	0.73	34,000	0.80
Avenue 60	West of Monroe St.	Secondary	3	21,000 ⁴	3,200	0.15	4,500	0.21	No	6,900	0.33	8,200	0.39	No	4	28,000	22,700	0.81	24,000	0.86
Monroe St.	South of Airport Bl.	Primary	3	31,950 ⁵	3,400	0.11	4,400	0.14	No	12,100	0.38	13,100	0.41	No	4	42,600	24,900	0.58	26,000	0.61

¹ These maximum roadway capacities have been extracted from the City of La Quinta Engineering Bulletin #06-13 (October 2017).

These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS E service volumes are estimated maximum daily capacity for respective classifications. Capacity is affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian and bicycle traffic.

² A potentially significant project traffic impact is defined to occur on any road segment if the segment is projected to be operating at LOS E or LOS F with project traffic included and the V/C is increased

³ A potentially significant cumulative traffic impact is defined to occur on any road segment if the project would cause the existing LOS to fall to worse than LOS D for EAPC (2026) With Project volumes. A potentially significant cumulative traffic impact is also defined to occur if the segment is projected to be operating at LOS E or LOS F with project traffic included and the V/C is increased by 0.02 or more by addition of project traffic.

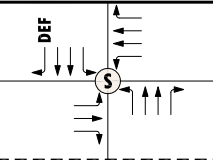
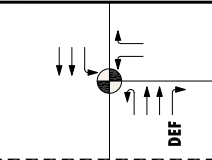
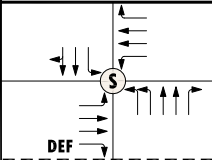
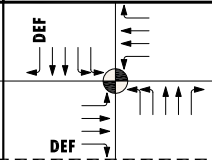
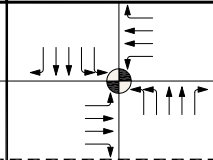
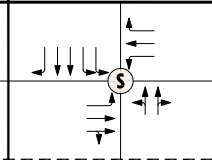
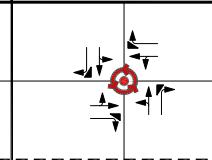
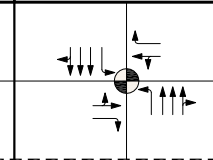
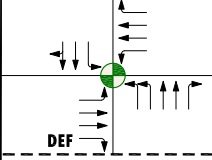
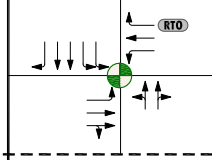
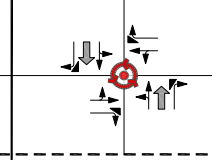
⁴ Capacity was calculated as a ratio of 4-lane Secondary capacity.

⁵ Capacity was calculated as a ratio of 4-lane Primary capacity.







⁷ 1 = Existing number of lanes; 4 = City of La Quinta General Plan Buildout number of lanes






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EXHIBIT 1-3 (1 OF 6): SUMMARY OF RECOMMENDED IMPROVEMENTS BY PHASE

1	MADISON ST. & AVENUE 58	2	MADISON ST. & AIRPORT BLVD.	3	MADISON ST. & AVENUE 54	4	MADISON ST. & AVENUE 52	5	MADISON ST. & AVENUE 50	6	JEFFERSON ST. & AVENUE 54	7	JEFFERSON ST. & AVENUE 52	8	JEFFERSON ST. & POMELO		
																WITHOUT PROJECT	EXISTING (2019) CONDITIONS
NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	WITH PROJECT	EXISTING (2019) CONDITIONS
NO IMPROVEMENTS	NO IMPROVEMENTS		NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS			NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	WITHOUT PROJECT	EXISTING (2026) CONDITIONS
NO IMPROVEMENTS	NO IMPROVEMENTS	SAME AS EA (2026) WITHOUT PROJECT IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	SAME AS EA (2026) WITHOUT PROJECT IMPROVEMENTS	SAME AS EA (2026) WITHOUT PROJECT IMPROVEMENTS	SAME AS EA (2026) WITHOUT PROJECT IMPROVEMENTS	SAME AS EA (2026) WITHOUT PROJECT IMPROVEMENTS	SAME AS EA (2026) WITHOUT PROJECT IMPROVEMENTS	SAME AS EA (2026) WITHOUT PROJECT IMPROVEMENTS	SAME AS EA (2026) WITHOUT PROJECT IMPROVEMENTS	SAME AS EA (2026) WITHOUT PROJECT IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	WITH PROJECT	EXISTING + AMBIENT (2026) CONDITIONS


LEGEND:

-  INTERSECTION ID
-  EXISTING TRAFFIC SIGNAL
-  CITY CIP TRAFFIC SIGNAL
-  NEW PROJECT TRAFFIC SIGNAL
-  EXISTING ROUNDABOUT
-  PROJECT ROUNDABOUT

-  EXISTING LANE
-  LANE IMPROVEMENT (CONSISTENT WITH CITY OF LA QUINTA GENERAL PLAN CIRCULATION ELEMENT UPDATE TIA, MAY 2012)
-  ADDITIONAL LANE IMPROVEMENT
-  PROJECT ACCESS LANE IMPROVEMENT
-  FREE RIGHT TURN

DEF ■ DEFACTO RIGHT TURN LANE

RTO ■ EXISTING RIGHT TURN OVERLAP

 RIGHT TURN OVERLAP IMPROVEMENT (CONSISTENT WITH CITY OF LA QUINTA GENERAL PLAN CIRCULATION ELEMENT UPDATE TIA, MAY 2012)

 ADDITIONAL RIGHT TURN OVERLAP IMPROVEMENT (GPA OPTION 1)

 LEFT TURN LANE ACCOMMODATED WITHIN TWO-WAY LEFT TURN LANE STRIPED MEDIAN

EXHIBIT 1-3 (2 OF 6): SUMMARY OF RECOMMENDED IMPROVEMENTS BY PHASE

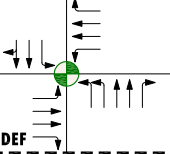
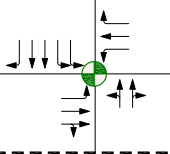
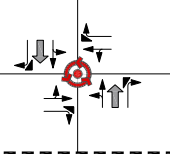
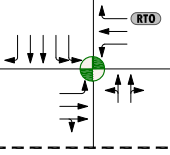
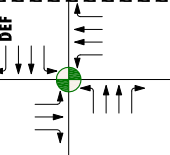
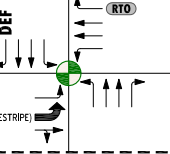
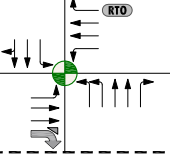
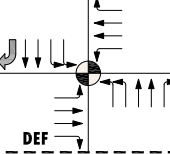
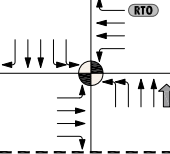
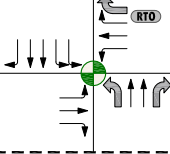
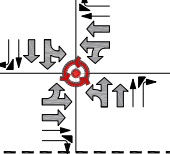
1 MADISON ST. & AVENUE 58	2 MADISON ST. & AIRPORT BLVD.	3 MADISON ST. & AVENUE 54	4 MADISON ST. & AVENUE 52	5 MADISON ST. & AVENUE 50	6 JEFFERSON ST. & AVENUE 54	7 JEFFERSON ST. & AVENUE 52	8 JEFFERSON ST. & POMELO		
NO IMPROVEMENTS	NO IMPROVEMENTS		NO IMPROVEMENTS	NO IMPROVEMENTS			NO IMPROVEMENTS	WITHOUT PROJECT	PHASE 1 (2021) CONDITIONS
NO IMPROVEMENTS	NO IMPROVEMENTS	SAME AS PHASE 1 (2021) WITHOUT PROJECT IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	SAME AS PHASE 1 (2021) WITHOUT PROJECT IMPROVEMENTS	SAME AS PHASE 1 (2021) WITHOUT PROJECT IMPROVEMENTS	NO IMPROVEMENTS	WITH PROJECT	
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NO IMPROVEMENTS	NO IMPROVEMENTS	SAME AS PHASE 1 (2021) WITHOUT PROJECT IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	SAME AS PHASE 1 (2021) WITHOUT PROJECT IMPROVEMENTS	SAME AS PHASE 1 (2021) WITHOUT PROJECT IMPROVEMENTS	NO IMPROVEMENTS	WITH PROJECT	
NO IMPROVEMENTS	NO IMPROVEMENTS	SAME AS PHASE 1 (2021) WITHOUT PROJECT IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS		SAME AS PHASE 1 (2021) WITHOUT PROJECT IMPROVEMENTS	NO IMPROVEMENTS	WITHOUT PROJECT	PHASE 3 (2026) CONDITIONS
	NO IMPROVEMENTS	SAME AS PHASE 1 (2021) WITHOUT PROJECT IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	SAME AS PHASE 3 (2026) WITHOUT PROJECT IMPROVEMENTS	SAME AS PHASE 1 (2021) WITHOUT PROJECT IMPROVEMENTS	NO IMPROVEMENTS	WITH PROJECT	
	NO IMPROVEMENTS						NO IMPROVEMENTS	WITHOUT PROJECT	2040 CONDITIONS
SAME AS 2040 WITHOUT PROJECT IMPROVEMENTS	NO IMPROVEMENTS	SAME AS 2040 WITHOUT PROJECT IMPROVEMENTS	SAME AS 2040 WITHOUT PROJECT IMPROVEMENTS	SAME AS 2040 WITHOUT PROJECT IMPROVEMENTS	SAME AS 2040 WITHOUT PROJECT IMPROVEMENTS	SAME AS 2040 WITHOUT PROJECT IMPROVEMENTS	NO IMPROVEMENTS	WITH PROJECT	

EXHIBIT 1-3 (3 OF 6): SUMMARY OF RECOMMENDED IMPROVEMENTS BY PHASE

9	JEFFERSON ST. & AVENUE 50	10	MADISON & AVENUE 60	11	MONROE ST. & AVENUE 60	12	MONROE ST. & AVENUE 58	13	MONROE ST. & AIRPORT BLVD.	14	MONROE ST. & AVENUE 54	15	MONROE ST. & AVENUE 52	16	MONROE ST. & 50TH AVENUE		
																WITHOUT PROJECT	EXISTING (2019) CONDITIONS
NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	WITH PROJECT	EXISTING (2019) CONDITIONS
NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS			NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	WITHOUT PROJECT	EXISTING (2026) CONDITIONS
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LEGEND:

- INTERSECTION ID
- EXISTING TRAFFIC SIGNAL
- CITY CIP TRAFFIC SIGNAL
- NEW PROJECT TRAFFIC SIGNAL
- EXISTING ROUNDABOUT
- PROJECT ROUNDABOUT

- EXISTING LANE
- LANE IMPROVEMENT
(CONSISTENT WITH CITY OF LA QUINTA
GENERAL PLAN CIRCULATION ELEMENT
UPDATE TIA, MAY 2012)
- ADDITIONAL LANE IMPROVEMENT
- PROJECT ACCESS LANE IMPROVEMENT
- FREE RIGHT TURN

DEF ■ DEFACTO RIGHT TURN LANE

RTO ■ EXISTING RIGHT TURN OVERLAP

RIGHT TURN OVERLAP IMPROVEMENT
(CONSISTENT WITH CITY OF LA QUINTA
GENERAL PLAN CIRCULATION ELEMENT
UPDATE TIA, MAY 2012)

ADDITIONAL RIGHT TURN OVERLAP
IMPROVEMENT (GPA OPTION 1)

LEFT TURN LANE ACCOMMODATED WITHIN
TWO-WAY LEFT TURN LANE STRIPED MEDIAN

EXHIBIT 1-3 (4 OF 6): SUMMARY OF RECOMMENDED IMPROVEMENTS BY PHASE

9	JEFFERSON ST. & AVENUE 50	10	MADISON & AVENUE 60	11	MONROE ST. & AVENUE 60	12	MONROE ST. & AVENUE 58	13	MONROE ST. & AIRPORT BLVD.	14	MONROE ST. & AVENUE 54	15	MONROE ST. & AVENUE 52	16	MONROE ST. & 50TH AVENUE		
NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS			NO IMPROVEMENTS	WITHOUT PROJECT	WITHOUT PROJECT	WITHOUT PROJECT	WITHOUT PROJECT	WITHOUT PROJECT
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NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	SAME AS PHASE 1 (2021) WITHOUT PROJECT IMPROVEMENTS	SAME AS PHASE 1 (2021) WITHOUT PROJECT IMPROVEMENTS	NO IMPROVEMENTS	WITHOUT PROJECT	WITHOUT PROJECT	WITHOUT PROJECT	WITHOUT PROJECT	WITHOUT PROJECT
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	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	NO IMPROVEMENTS	WITHOUT PROJECT	WITHOUT PROJECT	WITHOUT PROJECT	WITHOUT PROJECT	WITHOUT PROJECT
SAME AS PHASE 3 (2026) WITHOUT PROJECT IMPROVEMENTS	NO IMPROVEMENTS	SAME AS PHASE 3 (2026) WITHOUT PROJECT IMPROVEMENTS	SAME AS PHASE 3 (2026) WITHOUT PROJECT IMPROVEMENTS	SAME AS PHASE 3 (2026) WITHOUT PROJECT IMPROVEMENTS	SAME AS PHASE 3 (2026) WITHOUT PROJECT IMPROVEMENTS	SAME AS PHASE 3 (2026) WITHOUT PROJECT IMPROVEMENTS	SAME AS PHASE 3 (2026) WITHOUT PROJECT IMPROVEMENTS	SAME AS PHASE 3 (2026) WITHOUT PROJECT IMPROVEMENTS	SAME AS PHASE 3 (2026) WITHOUT PROJECT IMPROVEMENTS	SAME AS PHASE 3 (2026) WITHOUT PROJECT IMPROVEMENTS	SAME AS PHASE 3 (2026) WITHOUT PROJECT IMPROVEMENTS	SAME AS PHASE 1 (2021) WITHOUT PROJECT IMPROVEMENTS	WITH PROJECT	WITH PROJECT	WITH PROJECT	WITH PROJECT	PHASE 3 (2026) CONDITIONS
								WITHOUT PROJECT	WITHOUT PROJECT	WITHOUT PROJECT	WITHOUT PROJECT	WITHOUT PROJECT	WITHOUT PROJECT	WITHOUT PROJECT	WITHOUT PROJECT	WITHOUT PROJECT	WITHOUT PROJECT
SAME AS 2040 WITHOUT PROJECT IMPROVEMENTS	SAME AS 2040 WITHOUT PROJECT IMPROVEMENTS	SAME AS 2040 WITHOUT PROJECT IMPROVEMENTS	SAME AS 2040 WITHOUT PROJECT IMPROVEMENTS	SAME AS 2040 WITHOUT PROJECT IMPROVEMENTS	SAME AS 2040 WITHOUT PROJECT IMPROVEMENTS	SAME AS 2040 WITHOUT PROJECT IMPROVEMENTS	SAME AS 2040 WITHOUT PROJECT IMPROVEMENTS	SAME AS 2040 WITHOUT PROJECT IMPROVEMENTS	SAME AS 2040 WITHOUT PROJECT IMPROVEMENTS	SAME AS 2040 WITHOUT PROJECT IMPROVEMENTS	SAME AS 2040 WITHOUT PROJECT IMPROVEMENTS	SAME AS 2040 WITHOUT PROJECT IMPROVEMENTS	WITH PROJECT	WITH PROJECT	WITH PROJECT	WITH PROJECT	2040 CONDITIONS

EXHIBIT 1-3 (5 OF 6): SUMMARY OF RECOMMENDED IMPROVEMENTS BY PHASE

17	JACKSON ST. & 58TH AVENUE	18	S. ACCESS & AVENUE 60	19	MADISON ST. & MAIN ACCESS	20	PROJECT ACCESS 1 & AVENUE 58	21	PROJECT ACCESS 2 & AVENUE 58	22	MADISON ST. & PROJECT ACCESS 3		
		FUTURE INTERSECTION		FUTURE INTERSECTION		FUTURE INTERSECTION		FUTURE INTERSECTION		FUTURE INTERSECTION		WITHOUT PROJECT	EXISTING (2019) CONDITIONS
NO IMPROVEMENTS												WITH PROJECT	EXISTING (2019) CONDITIONS
NO IMPROVEMENTS		FUTURE INTERSECTION		FUTURE INTERSECTION		FUTURE INTERSECTION		FUTURE INTERSECTION		FUTURE INTERSECTION		WITHOUT PROJECT	EXISTING (2026) CONDITIONS
NO IMPROVEMENTS		SAME AS EXISTING PLUS PROJECT IMPROVEMENTS		SAME AS EXISTING PLUS PROJECT IMPROVEMENTS		SAME AS EXISTING PLUS PROJECT IMPROVEMENTS		SAME AS EXISTING PLUS PROJECT IMPROVEMENTS		SAME AS EXISTING PLUS PROJECT IMPROVEMENTS		WITH PROJECT	EXISTING + AMBIENT

LEGEND:

- INTERSECTION ID
- EXISTING TRAFFIC SIGNAL
- CITY CIP TRAFFIC SIGNAL
- NEW PROJECT TRAFFIC SIGNAL
- EXISTING ROUNDABOUT
- PROJECT ROUNDABOUT

- EXISTING LANE
- LANE IMPROVEMENT (CONSISTENT WITH CITY OF LA QUINTA GENERAL PLAN CIRCULATION ELEMENT UPDATE TIA, MAY 2012)
- ADDITIONAL LANE IMPROVEMENT
- PROJECT ACCESS LANE IMPROVEMENT
- FREE RIGHT TURN

- DEFACTO RIGHT TURN LANE
- EXISTING RIGHT TURN OVERLAP
- RIGHT TURN OVERLAP IMPROVEMENT (CONSISTENT WITH CITY OF LA QUINTA GENERAL PLAN CIRCULATION ELEMENT UPDATE TIA, MAY 2012)
- ADDITIONAL RIGHT TURN OVERLAP IMPROVEMENT (GPA OPTION 1)
- LEFT TURN LANE ACCOMMODATED WITHIN TWO-WAY LEFT TURN LANE STRIPED MEDIAN

EXHIBIT 1-3 (6 OF 6): SUMMARY OF RECOMMENDED IMPROVEMENTS BY PHASE

17	JACKSON ST. & 58TH AVENUE	18	S. ACCESS & AVENUE 60	19	MADISON ST. & MAIN ACCESS	20	PROJECT ACCESS 1 & AVENUE 58	21	PROJECT ACCESS 2 & AVENUE 58	22	MADISON ST. & PROJECT ACCESS 3		
NO IMPROVEMENTS		FUTURE INTERSECTION		FUTURE INTERSECTION		FUTURE INTERSECTION		FUTURE INTERSECTION		FUTURE INTERSECTION		WITHOUT PROJECT	PHASE 1 (2021) CONDITIONS
NO IMPROVEMENTS												WITH PROJECT	PHASE 1 (2021) CONDITIONS
NO IMPROVEMENTS		FUTURE INTERSECTION		FUTURE INTERSECTION		FUTURE INTERSECTION		FUTURE INTERSECTION		FUTURE INTERSECTION		WITHOUT PROJECT	PHASE 2 (2023) CONDITIONS
NO IMPROVEMENTS		SAME AS PHASE 1 (2021) WITH PROJECT IMPROVEMENTS		SAME AS PHASE 1 (2021) WITH PROJECT IMPROVEMENTS		SAME AS PHASE 1 (2021) WITH PROJECT IMPROVEMENTS		SAME AS PHASE 1 (2021) WITH PROJECT IMPROVEMENTS		SAME AS PHASE 1 (2021) WITH PROJECT IMPROVEMENTS		WITH PROJECT	PHASE 2 (2023) CONDITIONS
NO IMPROVEMENTS		FUTURE INTERSECTION		FUTURE INTERSECTION		FUTURE INTERSECTION		FUTURE INTERSECTION		FUTURE INTERSECTION		WITHOUT PROJECT	PHASE 3 (2026) CONDITIONS
NO IMPROVEMENTS		SAME AS PHASE 1 (2021) WITH PROJECT IMPROVEMENTS		SAME AS PHASE 1 (2021) WITH PROJECT IMPROVEMENTS		SAME AS PHASE 1 (2021) WITH PROJECT IMPROVEMENTS		SAME AS PHASE 1 (2021) WITH PROJECT IMPROVEMENTS		SAME AS PHASE 1 (2021) WITH PROJECT IMPROVEMENTS		WITH PROJECT	PHASE 3 (2026) CONDITIONS
		FUTURE INTERSECTION		FUTURE INTERSECTION		FUTURE INTERSECTION		FUTURE INTERSECTION		FUTURE INTERSECTION		WITHOUT PROJECT	2040 CONDITIONS
SAME AS 2040 WITHOUT PROJECT IMPROVEMENTS		SAME AS PHASE 1 (2021) WITH PROJECT IMPROVEMENTS										WITH PROJECT	2040 CONDITIONS

LEGEND:

- 22 ■ INTERSECTION ID
- EXISTING TRAFFIC SIGNAL
- CITY CIP TRAFFIC SIGNAL
- NEW PROJECT TRAFFIC SIGNAL
- EXISTING ROUNDABOUT
- PROJECT ROUNDABOUT
- EXISTING LANE
- LANE IMPROVEMENT (CONSISTENT WITH CITY OF LA QUINTA GENERAL PLAN CIRCULATION ELEMENT UPDATE TIA, MAY 2012)
- ADDITIONAL LANE IMPROVEMENT
- PROJECT ACCESS LANE IMPROVEMENT
- FREE RIGHT TURN
- DEF ■ DEFACTO RIGHT TURN LANE
- RTO ■ EXISTING RIGHT TURN OVERLAP
- (RTO) ■ RIGHT TURN OVERLAP IMPROVEMENT (CONSISTENT WITH CITY OF LA QUINTA GENERAL PLAN CIRCULATION ELEMENT UPDATE TIA, MAY 2012)
- (RTO) ■ ADDITIONAL RIGHT TURN OVERLAP IMPROVEMENT (GPA OPTION 1)
- * ■ LEFT TURN LANE ACCOMMODATED WITHIN TWO-WAY LEFT TURN LANE STRIPED MEDIAN

For EAP traffic conditions, the following five study area intersections are anticipated to require installation of a traffic signal (which is funded in the CIP) in order to maintain acceptable LOS under EAP conditions:

- #3 - Madison Street at Avenue 54
- #6 - Jefferson Street at Avenue 54
- #12 - Monroe Street at Avenue 58
- #14 - Monroe Street at Avenue 54
- #15 - Monroe Street at Avenue 52

EAP analysis results indicates that the intersection of Jefferson Street at Avenue 52 (#7) experiences deficient operations under cumulative “without project” conditions. Jefferson Street at Avenue 52 requires reconstruction of the current roundabout design to incorporate 2 circulating lanes around the center island. This effectively accommodates an additional through lane in the northbound and southbound directions to provide acceptable LOS.

All study roadway segments analyzed are anticipated to operate at acceptable LOS for E+P and EAP traffic conditions, consistent with Existing traffic conditions.

1.5.3 EAPC PHASE 1 (2021) CONDITIONS

For EAPC Phase 1 (2021) traffic conditions, the following four study area intersections are anticipated to require installation of a traffic signal (which is funded in the CIP) in order to maintain acceptable LOS under EAPC (2021) conditions:

- #3 - Madison Street at Avenue 54
- #6 - Jefferson Street at Avenue 54
- #14 - Monroe Street at Avenue 54
- #15 - Monroe Street at Avenue 52

EAPC Phase 1 (2021) analysis results indicates that the intersection of Jefferson Street at Avenue 52 (#7) experiences deficient operations under cumulative “without project” conditions. Jefferson Street at Avenue 52 requires reconstruction of the current roundabout design to incorporate 2 circulating lanes around the center island. This effectively accommodates an additional through lane in the northbound and southbound directions to provide acceptable LOS. The improvements are needed with or without the Project, so a fair share contribution is appropriate.

All study roadway segments analyzed are anticipated to operate at acceptable LOS for EAPC Phase 1 (2021) traffic conditions, consistent with Existing traffic conditions.

1.5.4 EAPC PHASE 2 (2023) CONDITIONS

For EAPC Phase 2(2023) traffic conditions, the following five study area intersections are anticipated to require installation of a traffic signal (which is funded in the CIP) in order to maintain acceptable LOS:

- #3 - Madison Street at Avenue 54
- #6 - Jefferson Street at Avenue 54
- #12 - Monroe Street at Avenue 58
- #14 - Monroe Street at Avenue 54
- #15 - Monroe Street at Avenue 52

EAPC Phase 2 (2023) analysis results indicates that the intersection of Jefferson Street at Avenue 52 (#7) experiences deficient operations under cumulative “without project” conditions. Jefferson Street at Avenue 52 requires reconstruction of the current roundabout design to incorporate 2 circulating lanes around the center island. This effectively accommodates an additional through lane in the northbound and southbound directions to provide acceptable LOS. The improvements are needed with or without the Project, so a fair share contribution is appropriate.

All study roadway segments analyzed are anticipated to operate at acceptable LOS for EAPC Phase 2 (2023) traffic conditions, consistent with Existing traffic conditions.

1.5.5 EAPC PHASE 3 (2026) CONDITIONS

For EAPC Phase 3 (2026) traffic conditions, the following eight study area intersections are anticipated to require installation of a traffic signal in order to maintain acceptable LOS under EAPC (2026) conditions:

- #1 - Madison Street at Avenue 58
- #3 - Madison Street at Avenue 54
- #6 - Jefferson Street at Avenue 54
- #11 - Monroe Street at Avenue 60
- #12 - Monroe Street at Avenue 58
- #13 - Monroe Street at Airport Boulevard
- #14 - Monroe Street at Avenue 54
- #15 - Monroe Street at Avenue 52

In addition, for Jefferson Street at Avenue 50 (#9), a second westbound through lane is necessary to maintain acceptable level of service. EAPC analysis results in one cumulatively impacted intersection (Jefferson Street at Avenue 52). Similar to EAPC Phase 2 conditions, Jefferson Street at Avenue 52 (#7) requires reconstruction of the current roundabout design to incorporate 2 circulating lanes around the center island. This effectively accommodates an additional through lane in the northbound and southbound directions to provide acceptable LOS.

For the intersection of Madison Street at Avenue 58 (#1), addition of Project traffic requires the installation of the traffic signal. Therefore, the required signal will be installed by the Project, and reimbursement to the Project developer may be provided for all but the Project’s fair share by future developments, or CIP, or DIF.

For the remaining deficient study area intersections, the improvements are needed for with or without the Project, so a fair share contribution is appropriate for these locations.

All study roadway segments analyzed are anticipated to operate at acceptable LOS for EAPC Phase 3 (2026) traffic conditions.

1.5.6 EAPC PHASE 3 (2026) WEEKEND SPECIAL EVENT CONDITIONS

The applicant anticipates the potential occurrence of special events at this location involving attendance of not-to-exceed 2,500 guests per day arriving or departing on Saturdays (up to 4 events per year).

The proposed Project is anticipated to generate a net total of 8,932 trip-ends per day on a Saturday during a special event with 906 vehicles per hour (VPH) during the arrival peak hour and 884 vph during the departure peak hour.

Improvement recommendations identified in Chapter 8 of this report for weekend special event conditions are consistent with the improvements identified in Section 1.5.5 above for EAPC Phase 3 weekday typical operations.

1.5.7 YEAR 2040 CONDITIONS

General Plan Buildout (Year 2040) conditions includes the Travertine project currently under consideration in the City of La Quinta that proposes to eliminate the connection of Madison Street as a General Plan roadway south of Avenue 60. Therefore, the General Plan Buildout (Year 2040) conditions analysis assumes elimination of this connection. Intersection lane recommendations determined in Chapter 7 of this report and shown on Exhibit 1-3 provide acceptable LOS under Year 2040 traffic conditions (i.e., LOS D or better).

1.5.8 SITE ACCESS AND ON-SITE CIRCULATION

The recommended site access improvements and on-site circulation for the Project are described below and illustrated on Exhibit 9-1. The Coral Mountain Specific Plan Project is proposed to be served by the Project access locations listed below:

- Madison Street / Main Access (full access)
- South Access / Avenue 60 (full access)
- Project Access 1 / Avenue 58 (full access)
- Project Access 2 / Avenue 58 (right-in/right-out access)
- Madison Street / Project Access 3 (right-in/right-out access)

The separation between Project driveways along Avenue 58 and Madison Street are over 250 feet and separation between Avenue 58 and the Project's main access point (future signalized location) is over 600 feet. The location of each Project access points meets City of La Quinta intersection spacing standards.

For Project Phase 1 conditions, the following improvements are recommended:

Avenue 58 should be constructed to its ultimate half-section width as a Secondary along the commercial portion of the Project.

Madison Street should be constructed to its ultimate half-section width as a Secondary along the commercial portion of the Project. Avenue 60 should be constructed as a 2-lane roadway along the Project boundary.

For Project Access 1 & Avenue 58 (intersection 20), provide northbound cross-street stop control. Construct south leg with one shared northbound left-right turn lane. Accommodate westbound left turn lane within two-way left turn lane (TWLTL) striping.

Northbound cross-street stop control should be provided for Project Access 2 & Avenue 58 (intersection 21). Construct south leg with one right turn outbound lane. Left turns should not be accommodated at this intersection.

For Madison Street & Project Access 3 (intersection 22), provide eastbound cross-street stop control. Construct west leg with one right turn outbound lane. Left turns should not be accommodated at this intersection.

Eastbound cross-street stop control should be provided for Madison Street & Main Access (intersection 19). Construct west leg with one left turn outbound and one right turn outbound lane. The main Project driveway is located on Madison Street south of Avenue 58. It is a full access location, serving left and right turns to and from Madison Street. With the Project, the northbound left turn lane serving the main Project driveway is recommended to provide 150 feet of vehicle queuing.

For South Access & Avenue 60 (intersection 18), provide southbound cross-street stop control. Construct north leg with one shared left-right turn outbound lane. Construct west leg with one shared left-through lane. Construct east leg with one shared through-right lane.

For Project Phase 2 conditions, the same improvements are recommended as for Project Phase 1 (see above).***For Project Buildout (Phase 3) conditions, the following improvements are recommended:***

Avenue 58 should be constructed to its ultimate half-section width as a Secondary along the residential / remaining portion of the Project.

Madison Street should be constructed to its ultimate half-section width as a Secondary along the residential / remaining portion of the Project.

Construct traffic signal for the intersection of Madison Street & Main Access when warranted.

On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project site.

Sight distance at the project access driveways should be reviewed with respect to City of La Quinta sight distance standards at the time of preparation of final grading, landscape and street improvement plans.

1.5.9 VEHICLE MILES TRAVELED

Project VMT (Vehicle Miles Traveled) has been evaluated and provided in a separate letter: *“Coral Mountain Specific Plan Vehicle Miles Traveled (VMT) Analysis”*, dated October 27, 2020.

2 PROPOSED DEVELOPMENT

2.1 LOCATION

The proposed Project is located on the southwest corner of re-aligned Madison Street at 58th Avenue in the City of La Quinta.

2.2 LAND USE AND PHASING

The Project consists of a master planned themed resort and comprised of a wave basin, a 150-key hotel (with 1,900 square feet bar, 1,400 square feet restaurant, 4,200 square feet kitchen, 1,100 rooftop bar, 1,200 pool bar & grill, and 4,200 square feet spa), 104 attached dwelling units, 496 detached dwelling units, 60,000 square feet of retail, wave village area (with 900 square feet shape studio, 1,600 square feet surf shop, 3,000 square feet board room, 1,800 square feet surf lounge/living room, 800 square feet surf classroom, a fitness pavilion, 1,400 square feet high performance center, and 5,500 square feet beach club), the farm area (with 2,100 square feet barn, 2,500 square feet greenhouse, 1,400 square feet equipment barn, 300 square feet tool shed, 1,200 square feet family camp, 4,500 square feet gym, 2,000 square feet outfitters, and 2,000 square feet locker rooms). In addition, back of house complex consists of 9,500 square feet resort operations, 1,500 square feet wave operations, and 1,000 square feet guardhouses. The wave basin is a private facility.

The Project is anticipated to be constructed in phases, with Phase 1 (2021) including resort (wave basin, hotel uses, and 57,000 square feet of commercial ancillary uses), 104 attached dwelling units, 26 detached dwelling units, and 10,000 square feet of retail. Project Phase 2 (2023) adds 25,000 square feet of retail. Project Phase 3 (2026) adds 470 detached dwelling units and 25,000 square feet of retail.

The current General Plan land use and zoning designated for the site is Low Density Residential, Open Space Recreation, and General Commercial.

2.3 SITE PLAN AND PROJECT ACCESS

The preliminary Project land use plan was previously presented on Exhibit 1-1. The Coral Mountain Specific Plan Project is proposed to be served by the Project access locations listed below:

- Madison Street / Main Access (full access)
- South Access / Avenue 60 (full access)
- Project Access 1 / Avenue 58 (full access)
- Project Access 2 / Avenue 58 (right-in/right-out access)
- Madison Street / Project Access 3 (right-in/right-out access)

Both Avenue 58 and Madison Street are classified as Secondary Arterials adjacent to the site. The separation standards for a Secondary Arterial are 250 feet between driveways, and 600

feet between street intersections (based upon the City of La Quinta Public Works Department Development Engineering Handbook).

The Project Main Driveway on Madison Street is located approximately 666 feet south of the Madison Street / Avenue 58 intersection. Both of these intersections (Madison Street / Avenue 58 and Madison Street / Project Main Access) are projected to eventually meet traffic signal warrants.

A Project commercial driveway (Project Access 3) is proposed to be located approximately 280 feet south of the Madison Street / Avenue 58 intersection. Project Access 3 is limited to right-turns in and out only (RIRO). It is located approximately 386 ft. north of the Madison Street / Project Main Access intersection.

Along Avenue 58, two Project commercial driveways are proposed. Project Access 2 is located approximately 273 feet west of Madison Street / Avenue 58 intersection, and is limited to right-turns in and out only (RIRO). Project Access 1 is located approximately 297 feet west of Project Access 2 / Avenue 58 intersection, and approximately 255 ft. east of S. Valley Lane.

3 AREA CONDITIONS

This section provides a summary of the existing study area, the City of La Quinta General Plan Circulation Network, and a review of existing peak hour intersection operations, roadway segment capacity, and traffic signal warrant analyses.

3.1 STUDY AREA

Pursuant to the agreement with City of La Quinta staff (Appendix 1.1), the study area includes 22 study area intersections. The locations of these intersections were shown previously on Exhibit 1-2.

3.2 AREA ROADWAY SYSTEM

Exhibit 3-1 illustrates the study area intersections located near the proposed Project and identifies the number of through traffic lanes for existing roadways and intersection traffic controls.

Exhibit 3-2 shows the City of La Quinta General Plan Circulation Element, and Exhibit 3-3 illustrates the City of La Quinta General Plan roadway cross-sections.

3.3 TRANSIT SERVICE

The City of La Quinta is currently served by the SunLine Transit Agency, but current bus services are not located within the Project study area. Transit service is reviewed and updated by the SunLine Transit Agency periodically to address ridership, budget and community demand needs. Changes in land use can affect these periodic adjustments which may lead to either enhanced or reduced service where appropriate.

3.4 PEDESTRIAN AND ALTERNATIVE FACILITIES

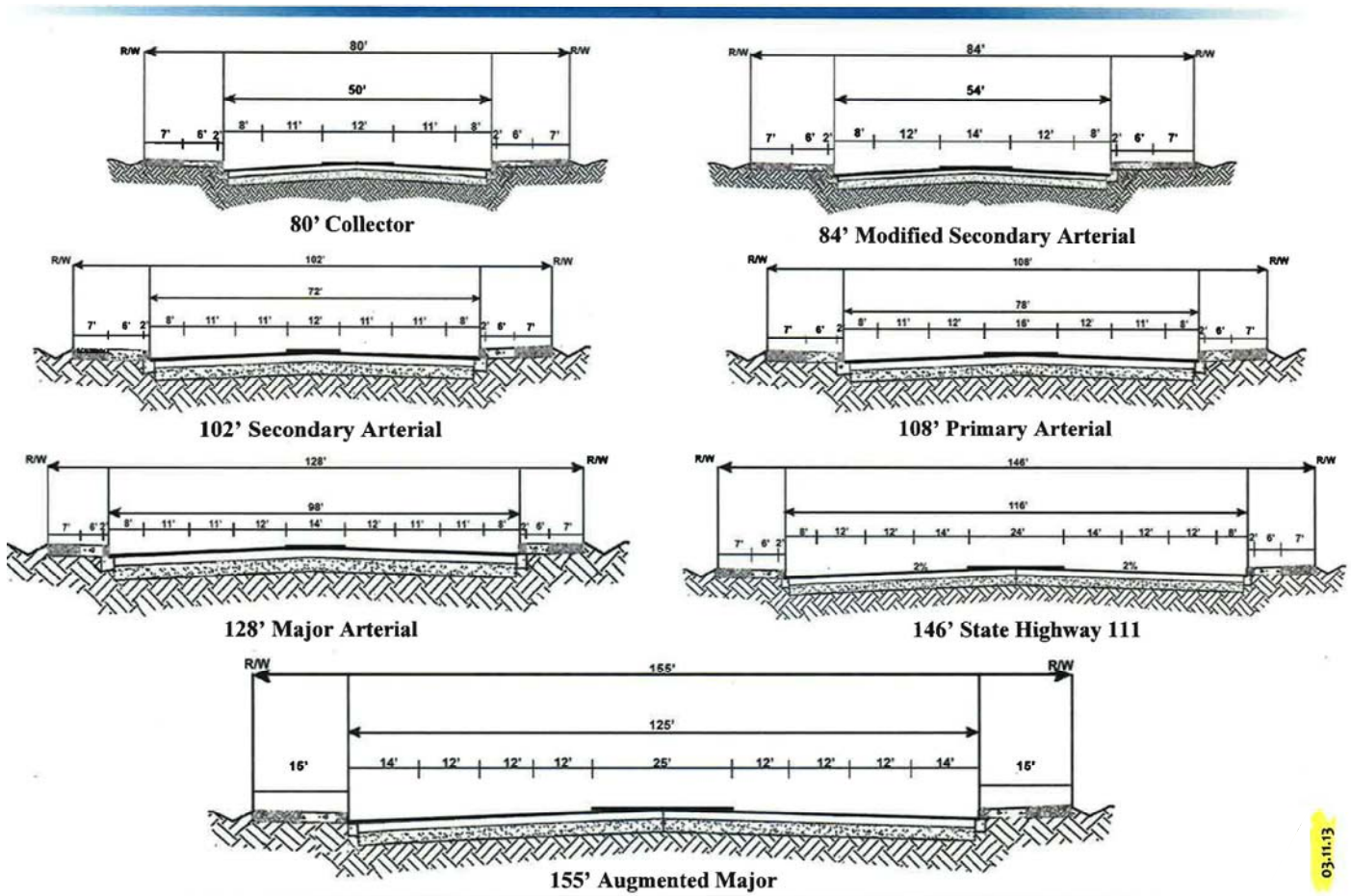
The study area has existing pedestrian / bicycle paths along sections of Jefferson Street, Madison Street, Monroe Street, Avenue 50, Avenue 52, Avenue 54, Airport Boulevard, and Avenue 58.

The City of La Quinta General Plan Update Future Class I golf cart/NEV path is proposed along Jefferson Street from Avenue 50 to Avenue 54. Jefferson Street south of Avenue 58, along with sections of Madison Street, Monroe Street, Jackson Street, Avenue 50, Avenue 52, Avenue 54, Airport Boulevard, Avenue 58, avenue 60, and Avenue 62 are planned to be a Class II Golf Cart/NEV path and multi-use path.

EXHIBIT 3-2: CITY OF LA QUINTA GENERAL PLAN ROADWAY CLASSIFICATIONS



EXHIBIT 3-3: CITY OF LA QUINTA GENERAL PLAN STREET CROSS-SECTIONS



03.11.13

3.5 TRAFFIC VOLUMES AND CONDITIONS

The intersection LOS analysis is based on the traffic volumes observed during the peak hour conditions using traffic count data collected on August 15th, 2017, April 9th, 2019, May 7th, 2019, and September 10, 2019. Based on discussions with City staff, the following peak hours were selected for analysis:

- Weekday AM Peak Hour (peak hour between 6:00 AM and 8:30 AM)
- Weekday PM Peak Hour (peak hour between 2:30 PM and 5:30 PM)

A 20% increase is applied to counts taken in August, 5% increase is applied to counts taken in April, and 10% increase is applied to counts taken in May per City of La Quinta's EB#06-13. The raw manual peak hour turning movement traffic count data sheets are included in Appendix 3.1. There were no observations made in the field that would indicate atypical traffic conditions on the count dates, such as construction activity that would prevent or limit roadway access and detour routes. The average AM/PM peak hour intersection growth between 2017 and 2019 counts data at selected study area and nearby intersections is approximately 2.66%. The additional 2.66% growth rate is applied to the study area intersections with 2017 counts to reflect 2019 conditions. The raw traffic count data provided in Appendix 3.1 was adjusted to maintain flow conservation between applicable study area intersections (i.e., no unexplained loss of vehicles between no or limited access intersections). Existing traffic volumes with seasonal adjustments are shown on Exhibits 3-4 through 3-6.

Existing weekday average daily traffic (ADT) volumes on arterial highways throughout the study area are shown on Exhibit 3-4. ADT volumes are estimated using the formula below for each intersection leg (consistent with 2018 TIA) and compared to the 2017 ADT's with 2.66% growth to reflect 2019 conditions, where 2019 counts are unavailable:

$$\text{Weekday PM Peak Hour (Approach Volume + Exit Volume)} \times 9.753 = \text{Leg Volume}$$

For those roadway segments which have 24-hour tube count data available in close proximity to the study area, a comparison between the PM peak hour and daily traffic volumes indicated that the peak-to-daily relationship of approximately 9.30 percent would sufficiently estimate average daily traffic (ADT) volumes for planning-level analyses. As such, the above equation utilizing a factor of 9.753 estimates the ADT volumes on the study area roadway segments assuming a peak-to-daily relationship of approximately 9.30 percent (i.e., $1/0.0930 = 9.753$).

3.6 LEVEL OF SERVICE DEFINITIONS AND ANALYSIS METHODOLOGIES

3.6.1 SIGNALIZED INTERSECTIONS

The City of La Quinta requires signalized intersection operations analysis based on the methodology described in the HCM. Intersection LOS operations are based on an intersection's average control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For signalized intersections LOS is directly related to the average control delay per vehicle and is correlated to a LOS designation as described in Table 3-1.

EXHIBIT 3-4: EXISTING (2019) AVERAGE DAILY TRAFFIC (ADT) (WITH PEAK SEASON ADJUSTMENT)

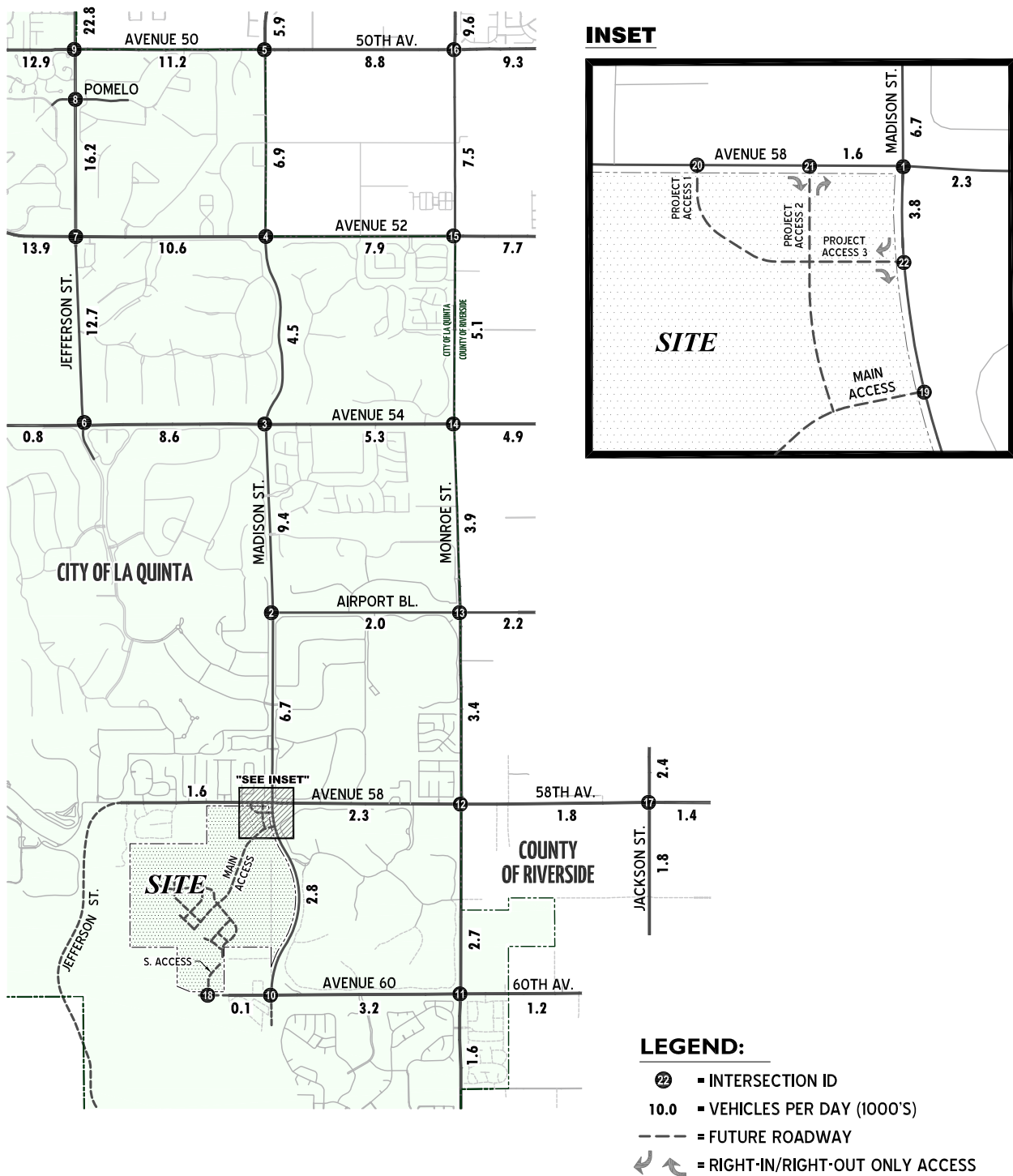


EXHIBIT 3-5: EXISTING (2019) AM PEAK HOUR INTERSECTION VOLUMES (WITH PEAK SEASON ADJUSTMENT)

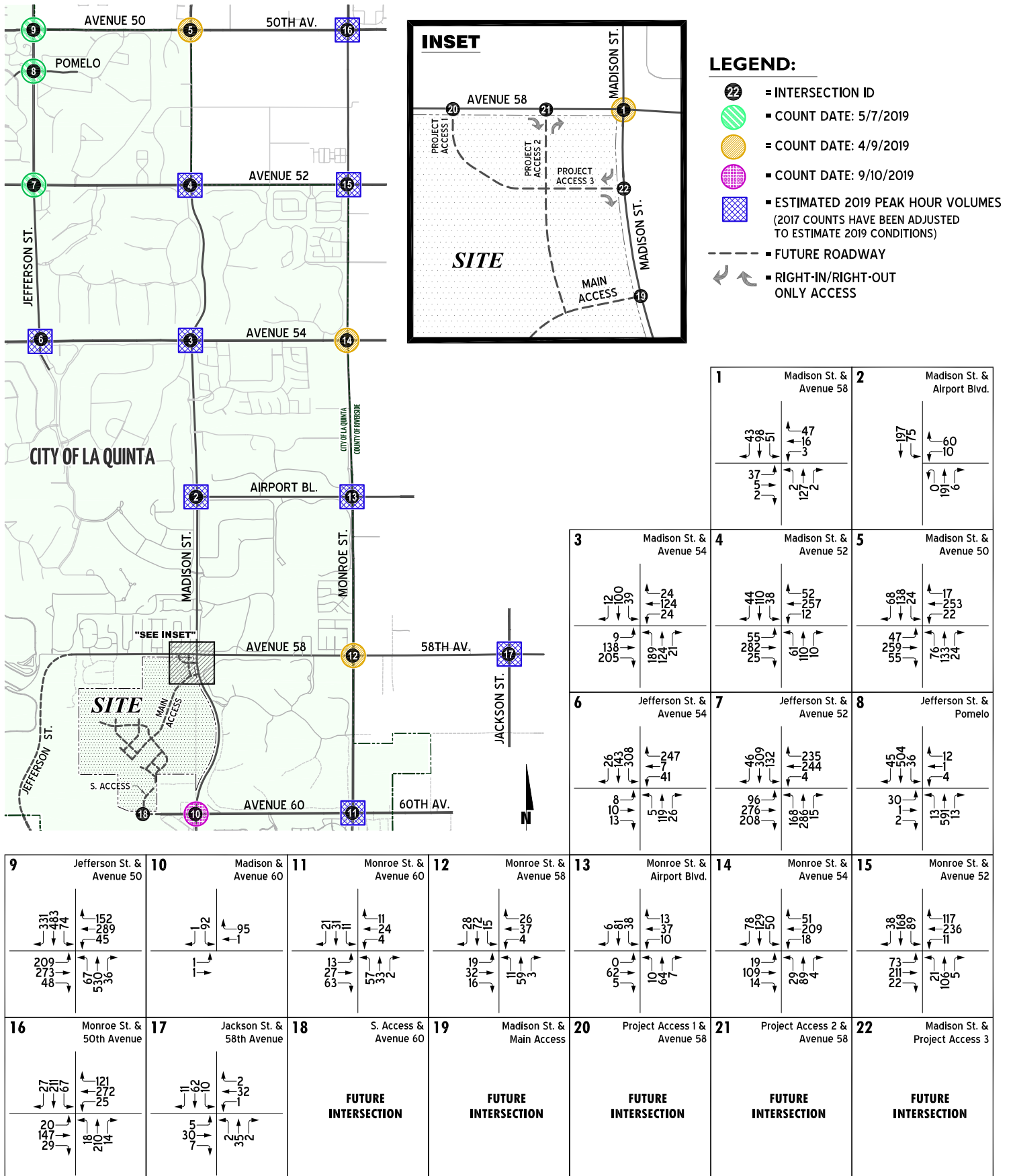


EXHIBIT 3-6: EXISTING (2019) PM PEAK HOUR INTERSECTION VOLUMES (WITH PEAK SEASON ADJUSTMENT)

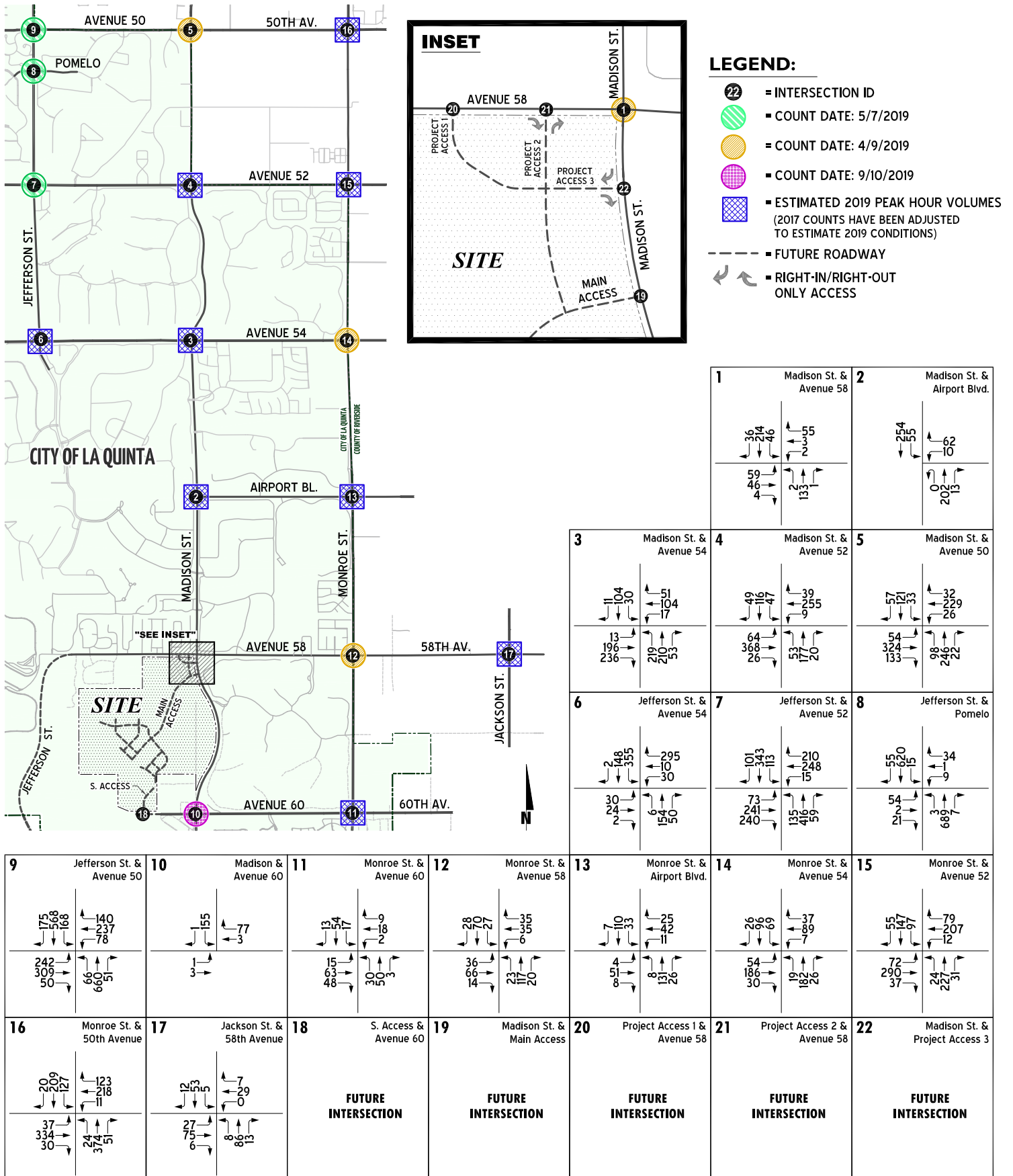


TABLE 3-1: SIGNALIZED INTERSECTION LOS THRESHOLDS

Description	Average Control Delay (Seconds), V/C ≤ 1.0	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 9.00	A	F
Operations with low delay occurring with good progression and/or short cycle lengths.	9.01 to 20.00	B	F
Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00	C	F
Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00	D	F
Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00	E	F
Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths	80.01 and up	F	F

Source: HCM

Study area intersections have been analyzed using the software package Synchro (Version 9.1). Synchro is a macroscopic traffic software program that is based on the signalized intersection capacity analysis as specified in the HCM. Macroscopic level models represent traffic in terms of aggregate measures for each movement at the study intersections. Equations are used to determine measures of effectiveness such as delay and queue length. The level of service and capacity analysis performed by Synchro takes into consideration optimization and coordination of signalized intersections within a network. The LOS analysis for signalized intersections has been performed using optimized signal timing for existing traffic conditions. Signal timing optimization has considered pedestrian safety and signal coordination requirements. Appropriate time for pedestrian crossings has also been considered in the signalized intersection analysis. Signal timing for study area intersections have been requested and utilized. Where signal timing was unavailable, the local accepted standards were utilized in lieu of actual signal timing.

The peak hour traffic volumes have been adjusted using a peak hour factor (PHF) to reflect peak 15 minute volumes. Common practice for LOS analysis is to use a peak 15-minute rate of flow. However, flow rates are typically expressed in vehicles per hour. The PHF is the relationship between the peak 15-minute flow rate and the full hourly volume (e.g. $PHF = [Hourly Volume] / [4 \times Peak\ 15\text{-minute Flow Rate}]$). The use of a 15-minute PHF produces a more detailed analysis as compared to analyzing vehicles per hour. Existing PHFs have been used for all analysis scenarios. Per the HCM, PHF values over 0.95 often are indicative of high traffic volumes with capacity constraints on peak hour flows while lower PHF values are indicative of greater variability of flow during the peak hour.

3.6.2 UNSIGNALIZED INTERSECTIONS

The City of La Quinta requires the operations of unsignalized intersections be evaluated using the methodology described in the HCM. The LOS rating is based on the weighted average control delay expressed in seconds per vehicle (see Table 3-2).

TABLE 3-2: UNSIGNALIZED INTERSECTION DESCRIPTION OF LOS

Description	Average Control Delay Per Vehicle (Seconds)	Level of Service, $V/C \leq 1.0$	Level of Service, $V/C > 1.0$
Little or no delays.	0 to 9.00	A	F
Short traffic delays.	9.01 to 15.00	B	F
Average traffic delays.	15.01 to 25.00	C	F
Long traffic delays.	25.01 to 35.00	D	F
Very long traffic delays.	35.01 to 50.00	E	F
Extreme traffic delays with intersection capacity exceeded.	> 50.00	F	F

Source: HCM

At side-street stop-controlled intersections, LOS is calculated for each controlled movement and for left turns from the major street, as well as for the whole intersection. For approaches served by a single lane, the delay computed is the average for all movements in that lane.

3.7 REQUIRED INTERSECTION LEVEL OF SERVICE

Per City of La Quinta traffic study guidelines, the following LOS criteria have been utilized for the purposes of this analysis.

Intersection Type	City of La Quinta LOS Criteria
Signalized Intersection or All-Way Stop Controlled Intersection	LOS D or better
Cross-Street Stop Controlled Intersection	LOS E or better for the side street

For the City of Indio, it was considered that a significant impact would occur (a) if the proposed Project causes the level of service to degrade to below LOS D, or (b) if the proposed Project causes the level of service to change from LOS E to LOS F. Additionally, significant impact would occur at the intersection level if the proposed Project causes an increase in delay of 2 seconds or more to an intersection already operating at LOS E; or 1 second or more to an intersection operating at LOS F, as indicated in the table below:

CITY OF INDIO IMPACT CRITERIA FOR INTERSECTIONS ALREADY OPERATING AT LOS "E" OR LOS "F"

Significant Changes in LOS	
LOS "E"	An increase in delay of 2 seconds or more
LOS "F"	An increase in delay of 1 second or more

3.8 EXISTING INTERSECTION LEVEL OF SERVICE

Existing peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 3.6 *Level of Service Definitions and Analysis Methodologies* of this report. The intersection operations analysis results are summarized in Table 3-3 which indicates that all of the 17 existing study area intersections are currently operating at an acceptable LOS during the peak hours. The intersection operations analysis worksheets are included in Appendix 3.2 of this TIA.

3.9 REQUIRED ROADWAY SEGMENT LEVEL OF SERVICE

The City of La Quinta has established LOS D as the minimum level of service for its roadway segments. Therefore, any study area roadway segment operating at LOS E or LOS F will be considered deficient for the purposes of this analysis.

Consistent with City guidelines, the level of service E capacity has been established as the limit of acceptable capacity threshold for roadway segments. The capacities utilized for this analysis are consistent with the maximum daily capacity thresholds provided in the City of La Quinta traffic study guidelines and are summarized in the table below:

ROADWAY SEGMENT CAPACITY THRESHOLDS

Roadway Classification	Lane Configuration	Capacity (Vehicles per Day)
Local	2-Lane Undivided	9,000
Collector	2-Lane Undivided	14,000
Modified Secondary	2-Lane Divided	19,000
Secondary	4-Lane Undivided	28,000
Primary	4-Lane Divided	42,600

It should be noted that although the ADT values are suitable for planning purposes, it is not a precise measure of capacity. The ultimate capacity of a roadway is based upon a number of factors. These factors include the relationships between peak hour and daily traffic volumes, intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian bicycle traffic. As such, where the peak hour roadway segment analysis indicates a deficiency (unacceptable LOS), a review of the more detailed peak hour intersection analysis is undertaken. The more detailed peak hour intersection analysis explicitly accounts for factors that affect roadway capacity. Therefore, roadway segment widening is typically only recommended if the peak hour intersection analysis indicates the need for additional through lanes.

These roadway capacities are “rule of thumb” estimates for planning purposes and are affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian bicycle traffic. As such, where the

ADT volume based roadway segment analysis indicates a deficiency (unacceptable LOS), a review of the more detailed peak hour intersection analysis and progression analysis are undertaken. The more detailed peak hour intersection analysis explicitly accounts for factors that affect roadway capacity. Therefore, for the purposes of this analysis, roadway widening is typically only recommended if the peak hour intersection analysis indicates the need for additional through lanes.

3.10 EXISTING ROADWAY SEGMENT LEVEL OF SERVICE

The roadway segment capacities are approximate figures only, and are used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet traffic demand. Table 3-5 provides a summary of the Existing conditions roadway segment capacity analysis based on the roadway segment capacity thresholds identified on Table 3-4. As shown on Table 3-5, all study area roadway segments analyzed are currently operating at acceptable LOS.

3.11 EXISTING TRAFFIC SIGNAL WARRANT ANALYSIS

Traffic signal warrants for Existing traffic conditions are based on existing peak hour intersection turning volumes. Based on the peak hour volume based Warrant #3 of the 2012 Federal Highway Administration's (FHWA) *Manual on Uniform Traffic Control Devices* (MUTCD), as amended for use in California, the following 4 unsignalized study area intersections currently warrant a traffic signal:

- Madison Street at Avenue 54
- Jefferson Street at Avenue 54
- Monroe Street at Avenue 54
- Monroe Street at Avenue 52

The traffic signal warrant worksheets for Existing traffic conditions are included in Appendix 3.3 of this TIA.

TABLE 3-3: INTERSECTION ANALYSIS FOR EXISTING (2019) CONDITIONS

#	Intersection	Traffic Control ³	Intersection Approach Lanes ¹												Delay ² (Secs)		Level of Service ²	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Madison St. / Avenue 58	AWS	1	2	1	1	2	d	1	1	1	1	2	1	8.5	9.3	A	A
2	Madison St. / Airport Blvd.	TS	1	2	d	1	2	0	0	0	0	1	0	1	8.8	8.4	A	A
3	Madison St. / Avenue 54	AWS	2	2	1	1	2	0	1	2	d	1	2	1	12.9	15.9	B	C
4	Madison St. / Avenue 52	TS	2	2	1	2	2	d	1	2	d	1	2	1	27.9	28.5	C	C
5	Madison St. / Avenue 50	TS	2	2	1	2	2	1	1	2	1	1	2	1	28.6	29.4	C	C
6	Jefferson St. / Avenue 54	AWS	0.5	1	0.5	2	2	1	1	2	0	1	1	1	12.2	16.9	B	C
7	Jefferson St. / Avenue 52	RDB	0.5	0.5	1>>	0.5	0.5	1>>	0.5	0.5	1>>	0.5	0.5	1>>	9.4	9.7	A	A
8	Jefferson St. / Pomelo	TS	1	3	0	1	3	0	0.5	0.5	1	0.5	0.5	1	8.4	14.3	A	B
9	Jefferson St. / Avenue 50	TS	1	3	1	2	3	1	1	2	1	1	1	1	46.3	49.4	D	D
10	Madison St. / Avenue 60	AWS	0	0	0	1	0	1	0.5	0.5	0	0	1	1	8.2	9.1	A	A
11	Monroe St. / Avenue 60	AWS	1	1	0	1	1	1	0.5	0.5	1	0	1!	0	8.1	8.3	A	A
12	Monroe St. / Avenue 58	AWS	0	1!	0	0.5	0.5	1	0	1!	0	0	1!	0	8.1	9.4	A	A
13	Monroe St. / Airport Blvd.	AWS	1	1	0	1	2	d	1	1	1	0	1!	0	8.5	9.2	A	A
14	Monroe St. / Avenue 54	AWS	0	1!	0	0.5	0.5	1	1	1	0	0	1!	0	14.3	12.7	B	B
15	Monroe St. / Avenue 52	AWS	0	1!	0	1	2	0	1	1	1	1	2	d	14.7	25.3	B	D
16	Monroe St. / 50th Avenue	TS	1	2	0	1	2	0	1	1	1	1	1	1>	16.6	18.0	B	B
17	Jackson St. / 58th Avenue	AWS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	7.5	8.2	A	A
18	S. Access / Avenue 60		Intersection Does Not Exist															
19	Madison St. / Main Access		Intersection Does Not Exist															
20	Project Access 1 / Avenue 58		Intersection Does Not Exist															
21	Project Access 2 / Avenue 58		Intersection Does Not Exist															
22	Madison St. / Project Access 3		Intersection Does Not Exist															

¹ When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; >> = Free-Right Turn Lane; d= Defacto Right Turn Lane

² Per the Highway Capacity Manual 6th Edition (HCM6), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. Delay and level of service is calculated using Synchro 10.1 analysis software.

³ TS = Traffic Signal; CSS = Cross-street Stop; AWS = All-Way Stop; RDB = Roundabout

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TABLE 3-4: ROADWAY VOLUME/CAPACITY ANALYSIS FOR EXISTING (2019) CONDITIONS

Roadway	Segment	Roadway Designation	Through Travel Lanes ¹	Capacity ²	ADT ³	Volume/ Capacity Ratio
Avenue 58	West of Madison Street	Secondary	3	21,000 ⁴	1,600	0.08
	West of Monroe Street	Secondary	4	28,000	2,300	0.08
	West of Jackson Street	Secondary	2	14,000 ⁴	1,800	0.13
Madison Street	South of Airport Boulevard	Primary	4	42,600	6,700	0.16
Avenue 60	West of Monroe Street	Secondary	3	21,000 ⁴	3,200	0.15
Monroe Street	South of Airport Boulevard	Primary	3	31,950 ⁵	3,400	0.11

¹ Existing Number of Through lanes

² Source: City of La Quinta Engineering Bulletin #06-13 (Oct 2017)

³ Average Daily Traffic (ADT) expressed in vehicles per day.

⁴ Capacity was calculated as a ratio of 4-lane Secondary capacity.

⁵ Capacity was calculated as a ratio of 4-lane Primary capacity.

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4 PROJECTED FUTURE TRAFFIC

This section presents the traffic volumes estimated to be generated by the Project, as well as the Project's trip assignment onto the study area roadway network. The Project consists of a master planned themed resort comprised of a wave basin, a 150-key hotel (with 1,900 square feet bar, 1,400 square feet restaurant, 4,200 square feet kitchen, 1,100 rooftop bar, 1,200 pool bar & grill, and 4,200 square feet spa), 104 attached dwelling units, 496 detached dwelling units, 60,000 square feet of retail, wave village area (with 900 square feet shape studio, 1,600 square feet surf shop, 3,000 square feet board room, 1,800 square feet surf lounge/living room, 800 square feet surf classroom, a fitness pavilion, 1,400 square feet high performance center, and 5,500 square feet beach club), the farm area (with 2,100 square feet barn, 2,500 square feet greenhouse, 1,400 square feet equipment barn, 300 square feet tool shed, 1,200 square feet family camp, 4,500 square feet gym, 2,000 square feet outfitters, and 2,000 square feet locker rooms). In addition, back of house complex consists of 9,500 square feet resort operations, 1,500 square feet wave operations, and 1,000 square feet guardhouses. The wave basin is a private facility. For the purposes of this analysis, it is assumed that the Project will be constructed in three phases, as follows:

- Phase 1 (2021) – 12-acre wave basin facility, a 150-key hotel, 96 multifamily attached dwelling units, 26 single family detached dwelling units, 10,000 square feet of retail, and 57,000 square feet of commercial ancillary uses
- Phase 2 (2023) – additional 25,000 square feet of retail for a total of 12-acre wave basin facility, a 150-key hotel, 104 multifamily attached dwelling units, 26 single family detached dwelling units, and 35,000 square feet of retail
- Phase 3 (2026) – additional 25,000 square feet of retail and 470 single family detached dwelling units for a total of 12-acre wave basin facility, a 150-key hotel, 104 multifamily attached dwelling units, 496 single family detached dwelling units, 60,000 square feet of retail

The Coral Mountain Specific Plan Project is proposed to be served by the Project access locations listed below:

- Madison Street / Main Access (full access)
- South Access / Avenue 60 (full access)
- Project Access 1 / Avenue 58 (full access)
- Project Access 2 / Avenue 58 (right-in/right-out access)
- Madison Street / Project Access 3 (right-in/right-out access)

4.1 PROJECT TRIP GENERATION

Trip generation represents the amount of traffic which is both attracted to and produced by a development. Determining traffic generation for a specific project is therefore based upon forecasting the amount of traffic that is expected to be both attracted to and produced by the specific land uses being proposed for a given development.

In accordance with the City of La Quinta's Engineering Bulletin #06-13, the Project trip generation rates to be used for the traffic impact analysis will be based on the Institute of

Transportation Engineers (ITE) Trip Generation manual, 10th Edition (2017). Trip generation estimates for the Project have been determined by utilizing the published rates for the peak hour of the generator rather than for the peak hour of adjacent street traffic, where possible.

Trip generation rates are presented on Tables 4-1 through 4-3 for Phase 1 through Project buildout conditions, respectively. ITE trip generation rates for Single Family Detached Residential (Code 210), Multifamily Housing (Code 220), Resort Hotel (Code 330), and Shopping Center (Code 820) are used. The wave basin is a private facility. As indicated in the original approved TIA scope for this Project, trip generation rates for the Wave Basin Facility from the San Diego Association of Governments recreational park (developed) rates appropriately account for this private facility. For the Wave Village area, ITE land use code 861 (sporting goods store) has been utilized and the Farm area, ITE land use code 495 (recreational community center) has been utilized.

The project area land uses includes a unique mix of commercial retail, resort, recreation and residential uses, so reasonable assumptions regarding internal/pass-by interactions between these uses are included in the trip generation calculations. The wave basin facility will be utilized by hotel guests, but outside trip generation is also included for things like off-site lunch, wave basin employees, etc. Area residents and visitors will use the commercial retail area facilities (which typically include merchandise, service station and restaurant land uses). The total internal/pass-by trip ends have been adjusted in a manner to ensure that no “double-counting” occurs before assigning the project trips to the roadway network.

As shown on Table 4-1, Phase 1 of the proposed Project is anticipated to generate a net total of 2,227 external trip-ends per day on a typical weekday with 114 external vehicles per hour (VPH) during the weekday AM peak hour and 151 external VPH during the weekday PM peak hour.

Table 4-2 shows trip generation for Phase 2 of the proposed Project, which is anticipated to generate a net total of 2,778 external trip-ends per day on a typical weekday with 123 external vehicles per hour (VPH) during the weekday AM peak hour and 208 external VPH during the weekday PM peak hour.

As shown on Table 4-3, at Project buildout, the site is anticipated to generate a net total of 6,994 external trip-ends per day on a typical weekday with 447 external vehicles per hour (VPH) during the weekday AM peak hour and 638 external VPH during the weekday PM peak hour.

4.2 PROJECT TRIP DISTRIBUTION

The trip distribution patterns for the proposed Project residential and resort components are graphically depicted on Exhibit 4-1. Exhibit 4-2 shows the trip distribution patterns for the proposed Project shopping center components. The trip distributions have been developed based on RivTAM and local knowledge in the vicinity of the Project site and refined to reflect the roadway network and the surrounding uses in the vicinity of the proposed Project as they exist today and are planned for the future.

TABLE 4-1: PROJECT PHASE 1 (2021) TRIP GENERATION SUMMARY

Trip Generation Rates ¹										
Land Use	ITE LU Code	Quantity ²		AM Peak Hour			PM Peak Hour			Daily
				In	Out	Total	In	Out	Total	
Single Family Detached	210	26 DU		0.19	0.55	0.74	0.62	0.37	0.99	9.44
Multifamily Housing (Low-Rise)	220	104 DU		0.11	0.35	0.46	0.35	0.21	0.56	7.32
Resort Hotel ⁵ (with bar, restaurant, kitchen, rooftop bar, pool bar & grill, and spa. Back of house resort operations included)	330	150 RM		0.27	0.10	0.37	0.20	0.27	0.47	7.87
Shopping Center	820	10 TSF		0.58	0.36	0.94	1.83	1.98	3.81	37.75
Wave Basin Facility ⁶ (Back of house wave operations included)	⁴	12 AC		1.20	0.80	2.00	2.40	1.60	4.00	50.00
Wave Village (Studio/Retail) ⁷ (with shape studio, surf shop, board room, surf lounge/living room, surf classroom, fitness pavilion, high performance center, & beach club)	861	15 TSF		0.27	0.07	0.34	0.97	1.05	2.02	28.75
The Farm (Recreational Area/Clubhouse) ⁸ (with Barn, Greenhouse, Equipment Barn, Tool Shed, Family Camp, Gym, Outfitters, & Locker Rooms)	495	16 TSF		1.16	0.60	1.76	1.09	1.22	2.31	28.82

Trip Generation Results										
Land Use	ITE LU Code	Quantity ²		AM Peak Hour			PM Peak Hour			Daily
				In	Out	Total	In	Out	Total	
Single Family Detached	210	26 DU		5	14	19	16	10	26	245
Multifamily Housing (Low-Rise)	220	104 DU		11	36	47	36	22	58	761
Internal to Retail/Resort				(6)	(9)	(15)	(19)	(16)	(35)	(417)
Residential External Trips				10	41	51	33	16	49	589
Shopping Center	820	10 TSF		6	4	10	18	20	38	378
Pass-By (25%)				(1)	(1)	(2)	(5)	(5)	(10)	(95)
Internal to Residential/Resort				(3)	(3)	(6)	(4)	(4)	(8)	(88)
Shopping Center External Trips				2	0	2	9	11	20	195
Resort Hotel	330	150 RM		41	15	56	30	41	71	1,181
Internal to Residential/Retail				(10)	(12)	(22)	(19)	(24)	(43)	(516)
Resort Hotel External Trips				31	3	34	11	17	28	665
Wave Basin Facility	⁴	12 AC		14	10	24	29	19	48	600
Internal to Residential/Retail/Resort				(8)	(6)	(14)	(16)	(12)	(28)	(306)
Wave Basin Facility External Trips				6	4	10	13	7	20	294
Wave Village	861	15 TSF		3	2	5	16	15	31	431
Internal to Residential/Resort				(1)	(1)	(2)	(7)	(7)	(14)	(168)
Wave Village External Trips				2	1	3	9	8	17	263
The Farm	495	16 TSF		18	11	29	18	19	37	461
Internal to Residential/Resort				(9)	(6)	(15)	(9)	(11)	(20)	(240)
The Farm External Trips				9	5	14	9	8	17	221
Project Subtotal				98	92	190	163	146	309	4,057
Internal Capture Subtotal				(37)	(37)	(74)	(74)	(74)	(148)	(1,735)
Pass-By (Shopping Center)				(1)	(1)	(2)	(5)	(5)	(10)	(95)
Project Total External Trips				60	54	114	84	67	151	2,227

¹ Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition (2017).² DU = Dwelling Unit; RM = Occupied Room; TSF = Thousand Square Feet³ Pass-By Source: Shops at Coral Mountain TIA, prepared by Urban Crossroads, Inc. (November 2009).⁴ Since ITE does not have trip rates for a wave pool facility, similar use based on SANDAG's recreation park (developed) peak hour and daily rates are utilized.⁵ Hotel trip rates account for 23.5 tsf of ancillary facilities which include bar, restaurant, kitchen, rooftop bar, pool bar & grill, spa, and back of house resort operations.⁶ The Wave Basin Facility trip rates account for pool area and 1.5 tsf of back of house wave operations.⁷ Wave Village trip rates account for 15 tsf of ancillary facilities which include shape studio, surf shop, board room, surf lounge/living room, surf classroom, fitness pavilion, high performance center, & beach club.⁸ The Farm trip rates account for 16 tsf of ancillary facilities which include Barn, Greenhouse, Equipment Barn, Tool Shed, Family Camp, Gym, Outfitters, & Locker Rooms.⁹ The 1 tsf back of house guardhouse use is accounted for in the Project rates.

TABLE 4-2: PROJECT PHASE 2 (2023) TRIP GENERATION SUMMARY

Trip Generation Rates ¹										
Land Use	ITE LU Code	Quantity ²		AM Peak Hour			PM Peak Hour			Daily
				In	Out	Total	In	Out	Total	
Single Family Detached	210	26 DU		0.19	0.55	0.74	0.62	0.37	0.99	9.44
Multifamily Housing (Low-Rise)	220	104 DU		0.11	0.35	0.46	0.35	0.21	0.56	7.32
Resort Hotel ⁵ (with bar, restaurant, kitchen, rooftop bar, pool bar & grill, and spa. Back of house resort operations included)	330	150 RM		0.27	0.10	0.37	0.20	0.27	0.47	7.87
Shopping Center	820	35 TSF		0.58	0.36	0.94	1.83	1.98	3.81	37.75
Wave Basin Facility ⁶ (Back of house wave operations included)	⁴	12 AC		1.20	0.80	2.00	2.40	1.60	4.00	50.00
Wave Village (Studio/Retail) ⁷ (with shape studio, surf shop, board room, surf lounge/living room, surf classroom, fitness pavilion, high performance center, & beach club)	861	15 TSF		0.27	0.07	0.34	0.97	1.05	2.02	28.75
The Farm (Recreational Area/Clubhouse) ⁸ (with Barn, Greenhouse, Equipment Barn, Tool Shed, Family Camp, Gym, Outfitters, & Locker Rooms)	495	16 TSF		1.16	0.60	1.76	1.09	1.22	2.31	28.82

Trip Generation Results										
Land Use	ITE LU Code	Quantity ²		AM Peak Hour			PM Peak Hour			Daily
				In	Out	Total	In	Out	Total	
Single Family Detached	210	26 DU		5	14	19	16	10	26	245
Multifamily Housing (Low-Rise)	220	104 DU		11	36	47	36	22	58	761
<i>Internal to Retail/Resort</i>				(6)	(11)	(17)	(20)	(17)	(37)	(431)
Residential External Trips				10	39	49	32	15	47	575
Shopping Center	820	35 TSF		20	13	33	64	69	133	1,321
<i>Pass-By (25%)</i>				(4)	(4)	(8)	(16)	(16)	(32)	(330)
<i>Internal to Residential/Resort</i>				(5)	(4)	(9)	(8)	(8)	(16)	(161)
Shopping Center External Trips				11	5	16	40	45	85	830
Resort Hotel	330	150 RM		41	15	56	30	41	71	1,181
<i>Internal to Residential/Retail</i>				(11)	(12)	(23)	(21)	(26)	(47)	(564)
Resort Hotel External Trips				30	3	33	9	15	24	617
Wave Basin Facility	⁴	12 AC		14	10	24	29	19	48	600
<i>Internal to Residential/Retail/Resort</i>				(9)	(7)	(16)	(17)	(13)	(30)	(328)
Wave Basin Facility External Trips				5	3	8	12	6	18	272
Wave Village	861	15 TSF		3	2	5	16	15	31	431
<i>Internal to Residential/Resort</i>				(1)	(1)	(2)	(7)	(7)	(14)	(168)
Wave Village External Trips				2	1	3	9	8	17	263
The Farm	495	16 TSF		18	11	29	18	19	37	461
<i>Internal to Residential/Resort</i>				(9)	(6)	(15)	(9)	(11)	(20)	(240)
The Farm External Trips				9	5	14	9	8	17	221
Project Subtotal				112	101	213	209	195	404	5,000
<i>Internal Capture Subtotal</i>				(41)	(41)	(82)	(82)	(82)	(164)	(1,892)
<i>Pass-By (Shopping Center)</i>				(4)	(4)	(8)	(16)	(16)	(32)	(330)
Project Total External Trips				67	56	123	111	97	208	2,778

¹ Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition (2017).² DU = Dwelling Unit; RM = Occupied Room; TSF = Thousand Square Feet³ Pass-By Source: Shops at Coral Mountain TIA, prepared by Urban Crossroads, Inc. (November 2009).⁴ Since ITE does not have trip rates for a wave pool facility, similar use based on SANDAG's recreation park (developed) peak hour and daily rates are utilized.⁵ Hotel trip rates account for 23.5 tsf of ancillary facilities which include bar, restaurant, kitchen, rooftop bar, pool bar & grill, spa, and back of house resort operations.⁶ The Wave Basin Facility trip rates account for pool area and 1.5 tsf of back of house wave operations.⁷ Wave Village trip rates account for 15 tsf of ancillary facilities which include shape studio, surf shop, board room, surf lounge/living room, surf classroom, fitness pavilion, high performance center, & beach club.⁸ The Farm trip rates account for 16 tsf of ancillary facilities which include Barn, Greenhouse, Equipment Barn, Tool Shed, Family Camp, Gym, Outfitters, & Locker Rooms.⁹ The 1 tsf back of house guardhouse use is accounted for in the Project rates.

TABLE 4-3: PROJECT BUILDOUT (2026) TRIP GENERATION SUMMARY

Trip Generation Rates ^{1,9}										
Land Use	ITE LU Code	Quantity ²		AM Peak Hour			PM Peak Hour			Daily
				In	Out	Total	In	Out	Total	
Single Family Detached	210	496 DU		0.19	0.55	0.74	0.62	0.37	0.99	9.44
Multifamily Housing (Low-Rise)	220	104 DU		0.11	0.35	0.46	0.35	0.21	0.56	7.32
Resort Hotel ⁵ (with bar, restaurant, kitchen, rooftop bar, pool bar & grill, and spa. Back of house resort operations included)	330	150 RM		0.27	0.10	0.37	0.20	0.27	0.47	7.87
Shopping Center	820	60 TSF		0.58	0.36	0.94	1.83	1.98	3.81	37.75
Wave Basin Facility ⁶ (Back of house wave operations included)	⁴	12 AC		1.20	0.80	2.00	2.40	1.60	4.00	50.00
Wave Village (Studio/Retail) ⁷ (with shape studio, surf shop, board room, surf lounge/living room, surf classroom, fitness pavilion, high performance center, & beach club)	861	15 TSF		0.27	0.07	0.34	0.97	1.05	2.02	28.75
The Farm (Recreational Area/Clubhouse) ⁸ (with Barn, Greenhouse, Equipment Barn, Tool Shed, Family Camp, Gym, Outfitters, & Locker Rooms)	495	16 TSF		1.16	0.60	1.76	1.09	1.22	2.31	28.82

Trip Generation Results										
Land Use	ITE LU Code	Quantity ²		AM Peak Hour			PM Peak Hour			Daily
				In	Out	Total	In	Out	Total	
Single Family Detached	210	496 DU		94	273	367	308	184	492	4,682
Multifamily Housing (Low-Rise)	220	104 DU		11	36	47	36	22	58	761
<i>Internal to Retail/Resort</i>				(14)	(26)	(40)	(50)	(38)	(88)	(771)
Residential External Trips				91	283	374	294	168	462	4,672
Shopping Center	820	60 TSF		35	22	57	110	119	229	2,265
<i>Pass-By (25%)</i>				(7)	(7)	(14)	(28)	(28)	(56)	(566)
<i>Internal to Residential/Resort</i>				(9)	(7)	(16)	(21)	(35)	(56)	(560)
Shopping Center External Trips				19	8	27	61	56	117	1,139
Resort Hotel	330	150 RM		41	15	56	30	41	71	1,181
<i>Internal to Residential/Retail</i>				(17)	(14)	(31)	(23)	(28)	(51)	(612)
Resort Hotel External Trips				24	1	25	7	13	20	569
Wave Basin Facility	⁴	12 AC		14	10	24	29	19	48	600
<i>Internal to Residential/Retail/Resort</i>				(12)	(8)	(20)	(26)	(17)	(43)	(470)
Wave Basin Facility External Trips				2	2	4	3	2	5	130
Wave Village	861	15 TSF		3	2	5	16	15	31	431
<i>Internal to Residential/Resort</i>				(1)	(1)	(2)	(7)	(7)	(14)	(168)
Wave Village External Trips				2	1	3	9	8	17	263
The Farm	495	16 TSF		18	11	29	18	19	37	461
<i>Internal to Residential/Resort</i>				(9)	(6)	(15)	(9)	(11)	(20)	(240)
The Farm External Trips				9	5	14	9	8	17	221
Project Subtotal				216	369	585	547	419	966	10,381
<i>Internal Capture Subtotal</i>				(62)	(62)	(124)	(136)	(136)	(272)	(2,821)
<i>Pass-By (Shopping Center)</i>				(7)	(7)	(14)	(28)	(28)	(56)	(566)
Project Total External Trips				147	300	447	383	255	638	6,994

¹ Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition (2017).² DU = Dwelling Unit; RM = Occupied Room; TSF = Thousand Square Feet³ Pass-By Source: Shops at Coral Mountain TIA, prepared by Urban Crossroads, Inc. (November 2009).⁴ Since ITE does not have trip rates for a wave pool facility, similar use based on SANDAG's recreation park (developed) peak hour and daily rates are utilized.⁵ Hotel trip rates account for 23.5 tsf of ancillary facilities which include bar, restaurant, kitchen, rooftop bar, pool bar & grill, spa, and back of house resort operations.⁶ The Wave Basin Facility trip rates account for pool area and 1.5 tsf of back of house wave operations.⁷ Wave Village trip rates account for 15 tsf of ancillary facilities which include shape studio, surf shop, board room, surf lounge/living room, surf classroom, fitness pavilion, high performance center, & beach club.⁸ The Farm trip rates account for 16 tsf of ancillary facilities which include Barn, Greenhouse, Equipment Barn, Tool Shed, Family Camp, Gym, Outfitters, & Locker Rooms.⁹ The 1 tsf back of house guardhouse use is accounted for in the Project rates.

4.3 MODAL SPLIT

Although the use of public transit, walking, and/or bicycling have the potential to reduce Project-related traffic, such reductions have not been taken into considerations in this traffic study in order to provide a conservative analysis of the Project's potential to contribute to circulation system deficiencies.

4.4 TRIP ASSIGNMENT

The assignment of traffic from the Project area to the adjoining roadway system is based upon the Project trip generation, trip distribution, and the arterial highway and local street system improvements that would be in place by the time of initial occupancy of the Project. Based on the identified Project traffic generation and trip distribution patterns, Project Phase 1 ADT and weekday AM and PM peak hour intersection turning movement volumes are shown on Exhibits 4-3 through 4-5, respectively. Project Phase 2 ADT and weekday AM and PM peak hour intersection turning movement volumes are shown on Exhibits 4-6 through 4-8, respectively.

Exhibits 4-9 through 4-11 show Project buildout ADT and weekday AM and PM peak hour intersection turning movement volumes, respectively.

4.5 CUMULATIVE GROWTH TRAFFIC

4.5.1 AMBIENT GROWTH

To account for background growth, an ambient growth rate is estimated for each turning movement between existing 2019 and each cumulative year (2021 for Project Phase 1, 2023 for Project Phase 2, and 2026 for Project Buildout) conditions. This background growth is based upon the relationship between existing traffic volumes and long range projections, interpolated to reflect the incremental growth calculated from the projections of the RivTAM. This ambient growth rate is added to existing traffic volumes to account for area-wide growth not reflected by cumulative development projects.

Ambient growth has been added to daily and peak hour traffic volumes on study area roadways, in addition to traffic generated by the development of future projects that have been approved but not yet built and/or for which development applications have been filed and are under consideration by governing agencies.

4.5.2 CUMULATIVE DEVELOPMENT TRAFFIC

California Environmental Quality Act (CEQA) guidelines require that other reasonably foreseeable development projects which are either approved or being processed concurrently in the study area also be included as part of a cumulative analysis scenario. A cumulative project list was developed for the purposes of this analysis through consultation with planning and engineering staff from the City of La Quinta. Table 4-4 provides a summary of the cumulative development land uses. Exhibit 4-12 shows the location of the cumulative development projects.

EXHIBIT 4-1: PROJECT RESIDENTIAL AND RESORT EXTERNAL TRIP DISTRIBUTION

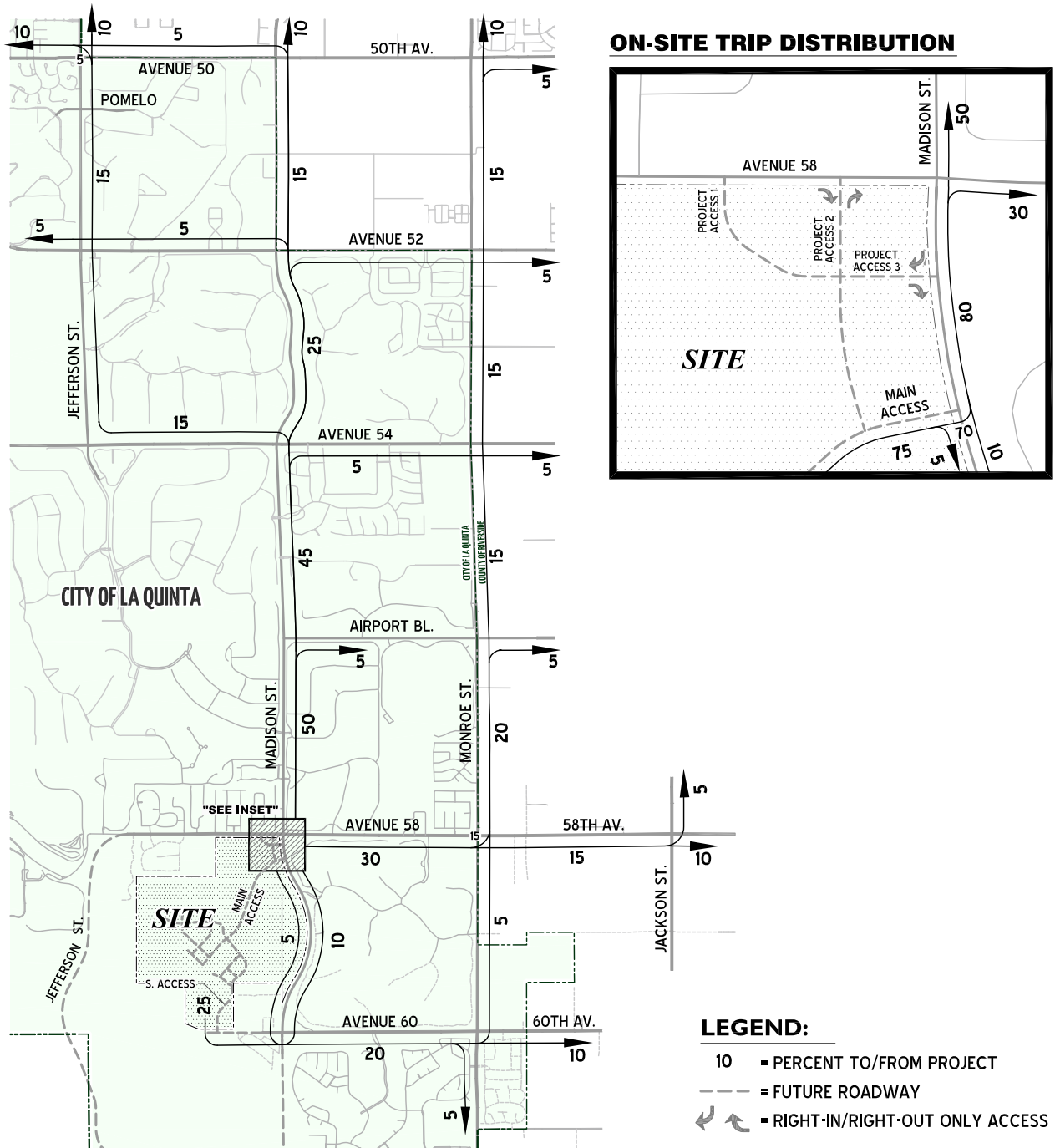
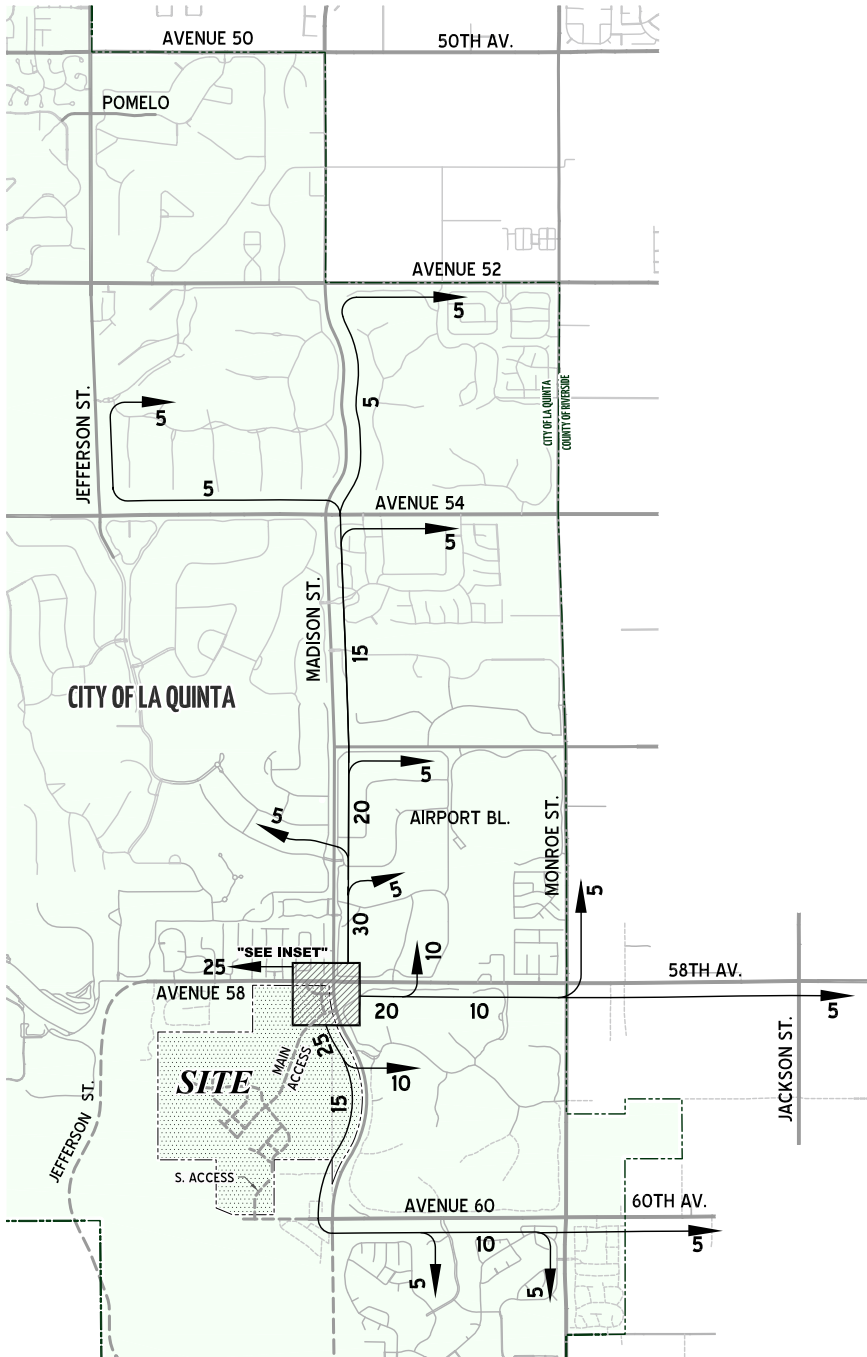
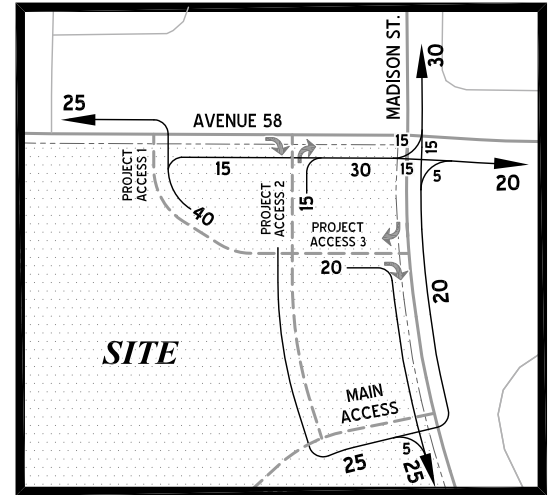


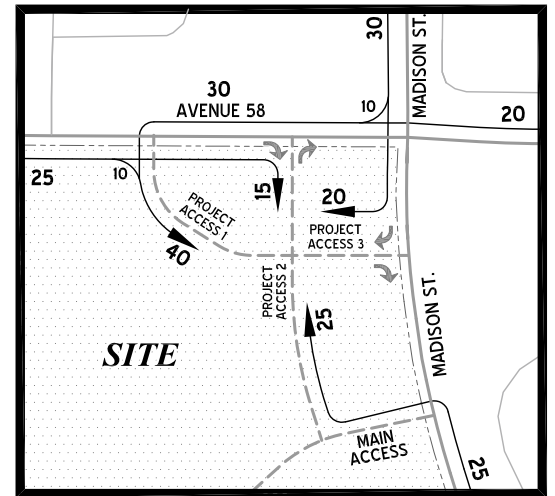
EXHIBIT 4-2: PROJECT SHOPPING CENTER EXTERNAL TRIP DISTRIBUTION



ON-SITE OUTBOUND TRIP DISTRIBUTION



ON-SITE INBOUND TRIP DISTRIBUTION

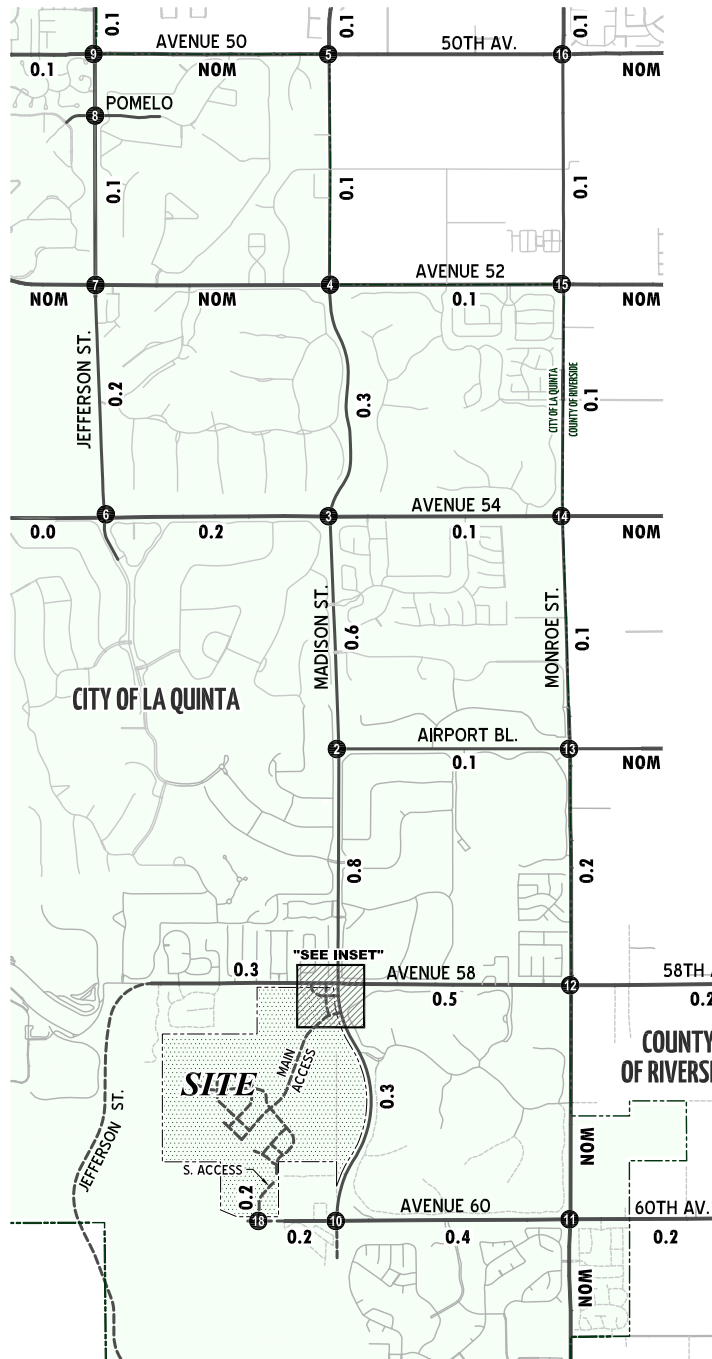


LEGEND:

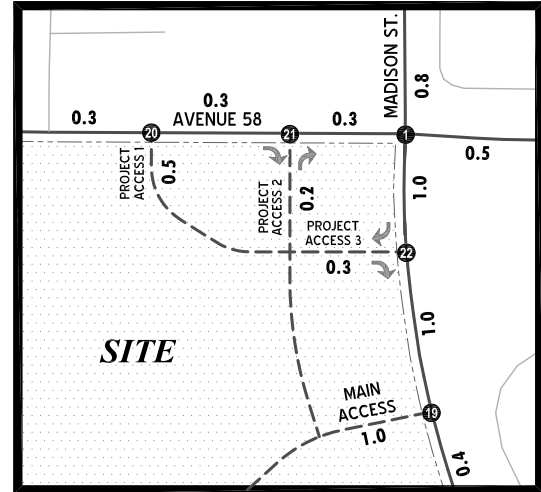
- 10 = PERCENT TO/FROM PROJECT
- = FUTURE ROADWAY
- ↪ = RIGHT-IN/RIGHT-OUT ONLY ACCESS



EXHIBIT 4-3: PROJECT PHASE 1 (2021) AVERAGE DAILY TRAFFIC (ADT)



INSET



LEGEND:

- 22 ■ INTERSECTION ID
- 10.0 ■ VEHICLES PER DAY (1000'S)
- NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY
- = FUTURE ROADWAY
- ↔ = RIGHT-IN/RIGHT-OUT ONLY ACCESS



EXHIBIT 4-4: PROJECT PHASE 1 (2021) AM PEAK HOUR INTERSECTION VOLUMES

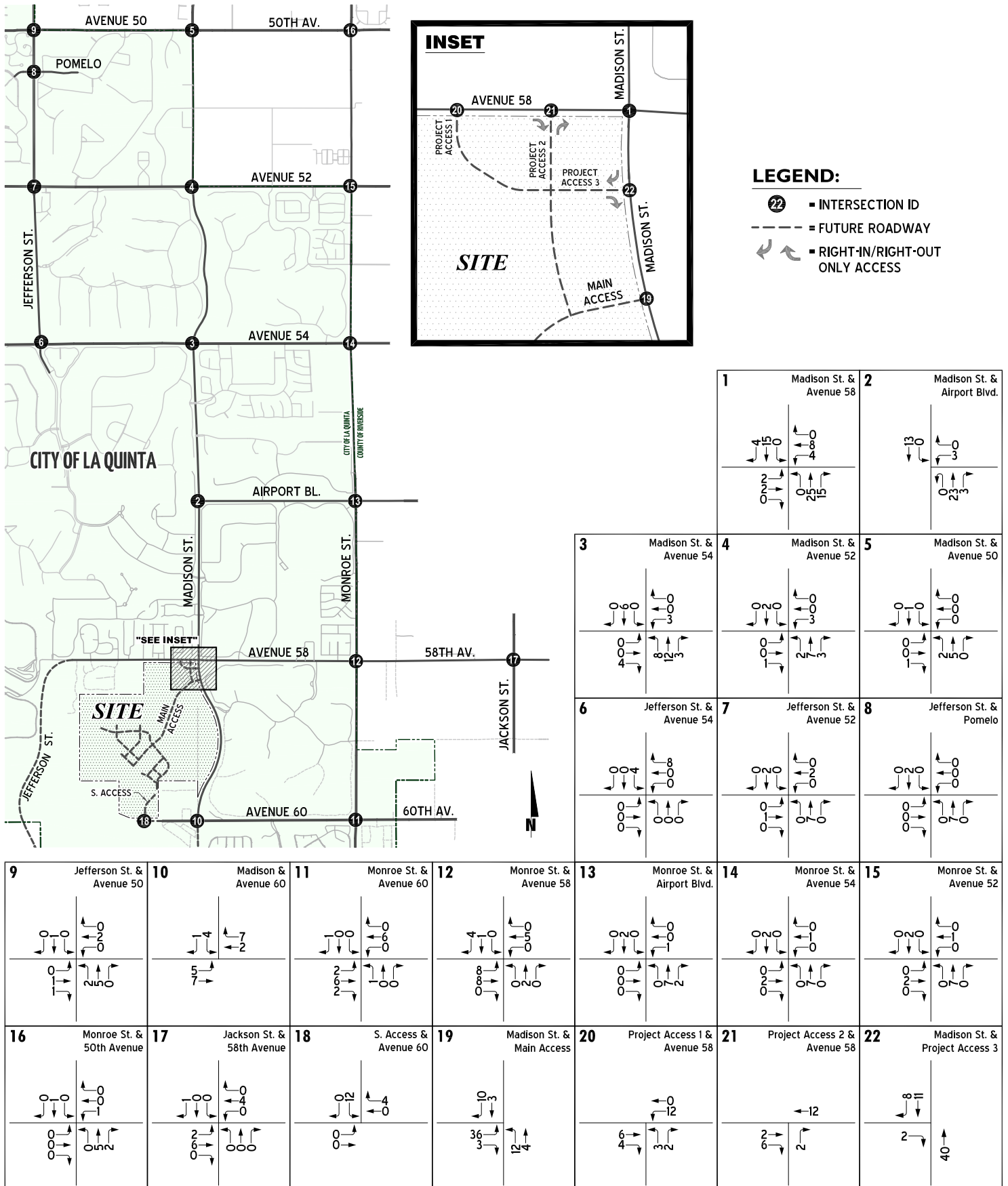


EXHIBIT 4-5: PROJECT PHASE 1 (2021) PM PEAK HOUR INTERSECTION VOLUMES

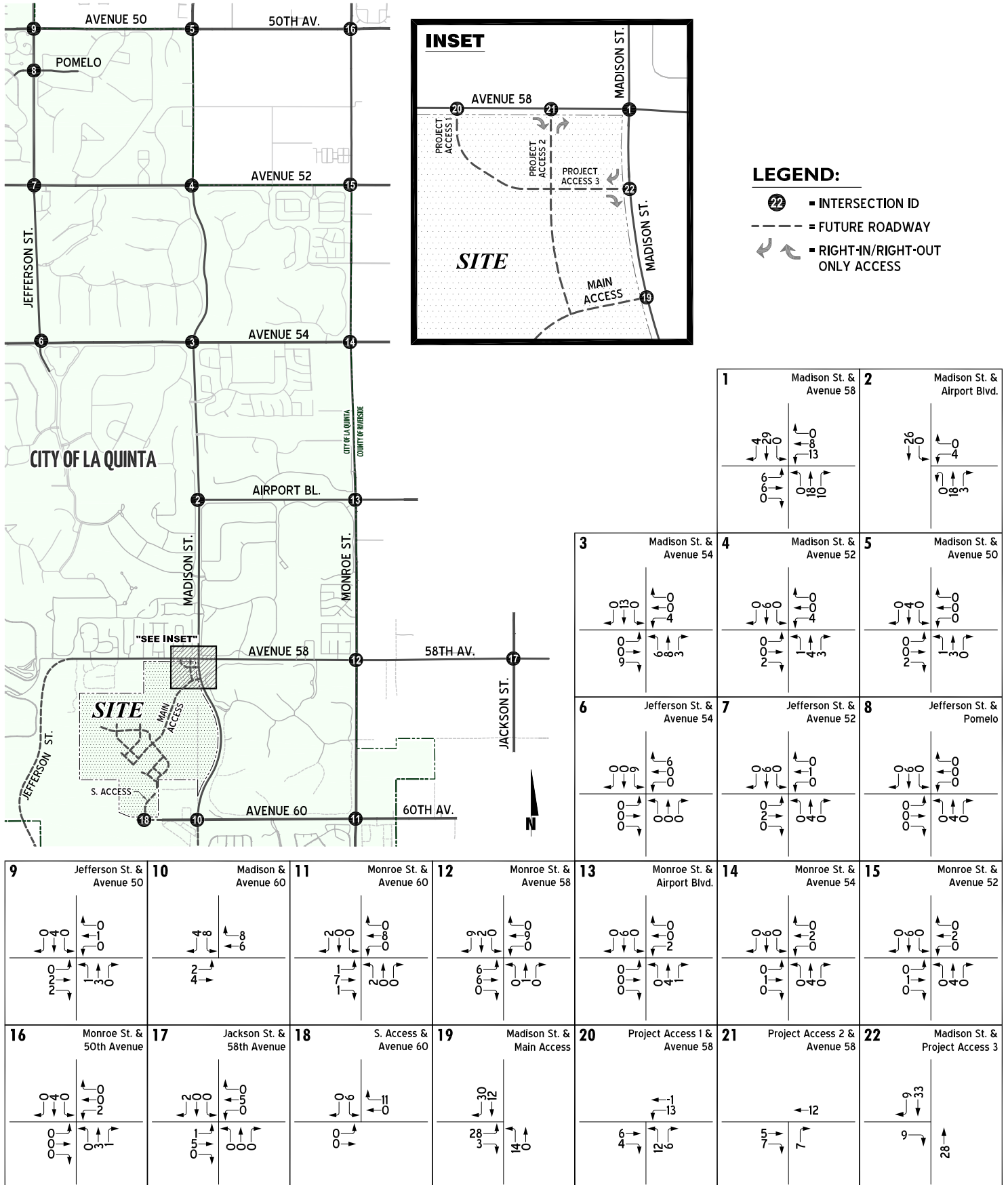
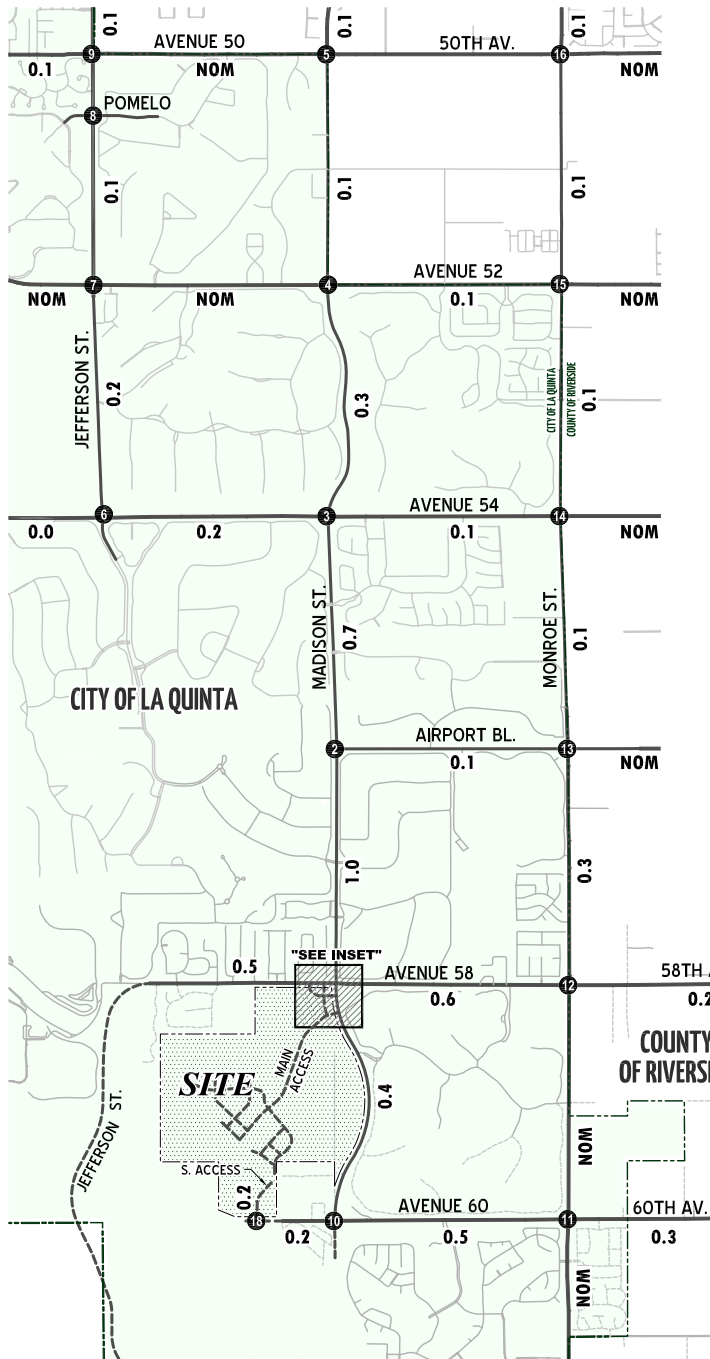
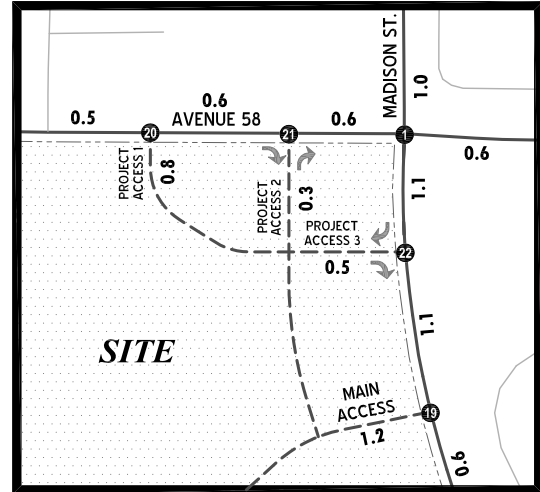


EXHIBIT 4-6: PROJECT PHASE 2 (2023) AVERAGE DAILY TRAFFIC (ADT)



INSET



LEGEND:

- 22 ■ INTERSECTION ID
- 10.0 ■ VEHICLES PER DAY (1000'S)
- NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY
- = FUTURE ROADWAY
- ↪ ↻ ■ RIGHT-IN/RIGHT-OUT ONLY ACCESS



EXHIBIT 4-7: PROJECT PHASE 2 (2023) AM PEAK HOUR INTERSECTION VOLUMES

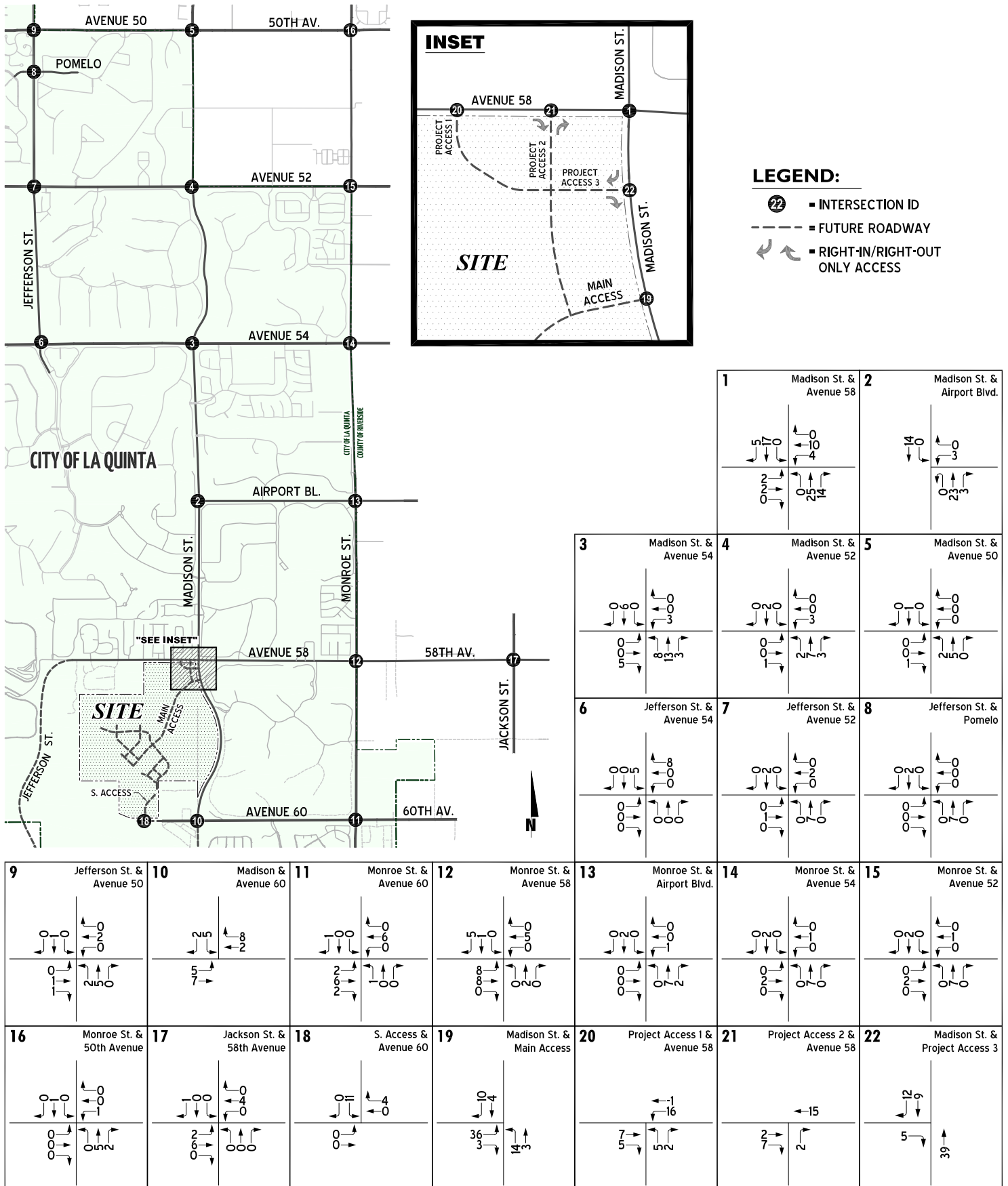


EXHIBIT 4-8: PROJECT PHASE 2 (2023) PM PEAK HOUR INTERSECTION VOLUMES

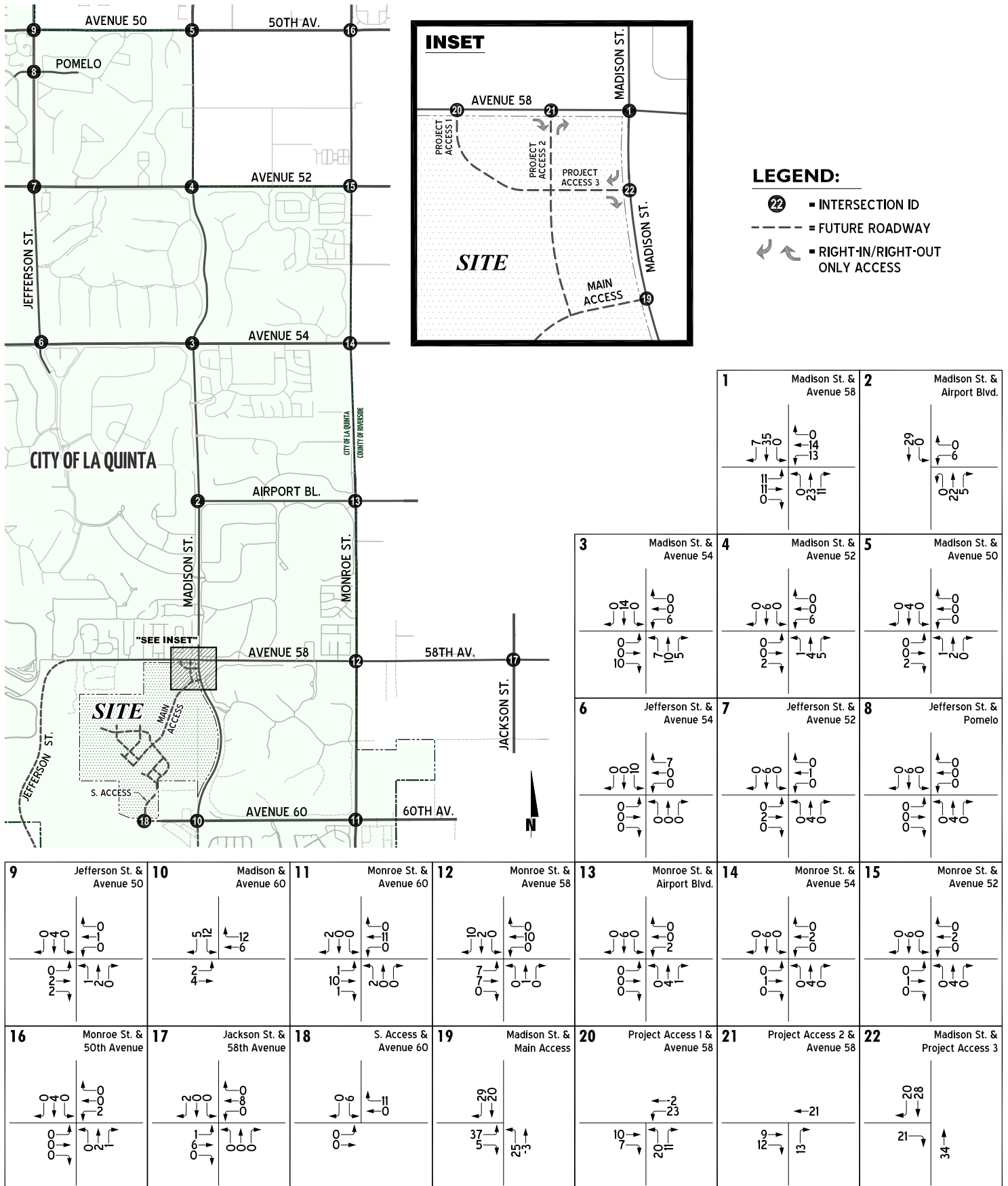


EXHIBIT 4-9: PROJECT BUILDOUT (2026) AVERAGE DAILY TRAFFIC (ADT)

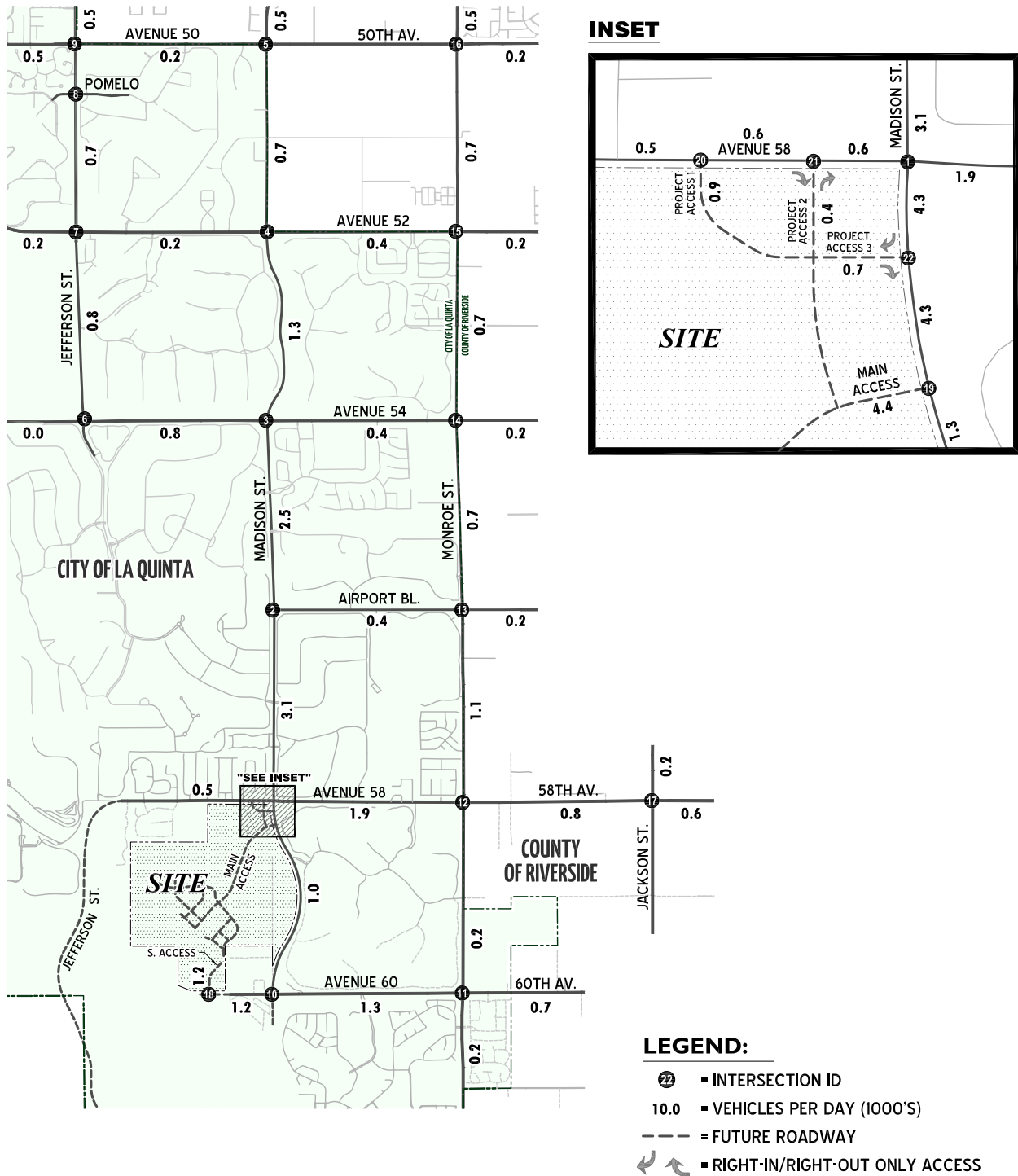


EXHIBIT 4-10: PROJECT BUILDOUT (2026) AM PEAK HOUR INTERSECTION VOLUMES

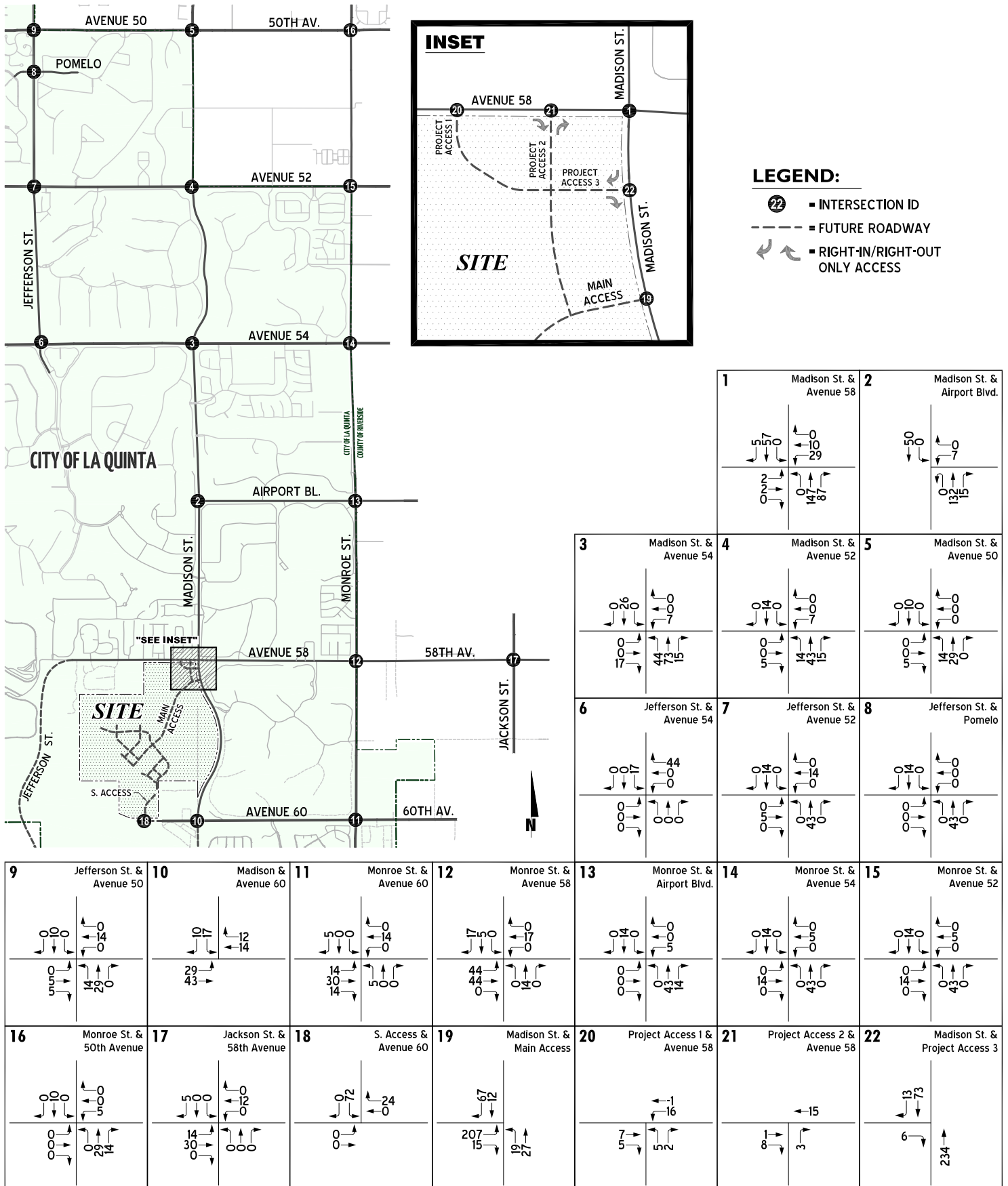


EXHIBIT 4-11: PROJECT BUILDOUT (2026) PM PEAK HOUR INTERSECTION VOLUMES

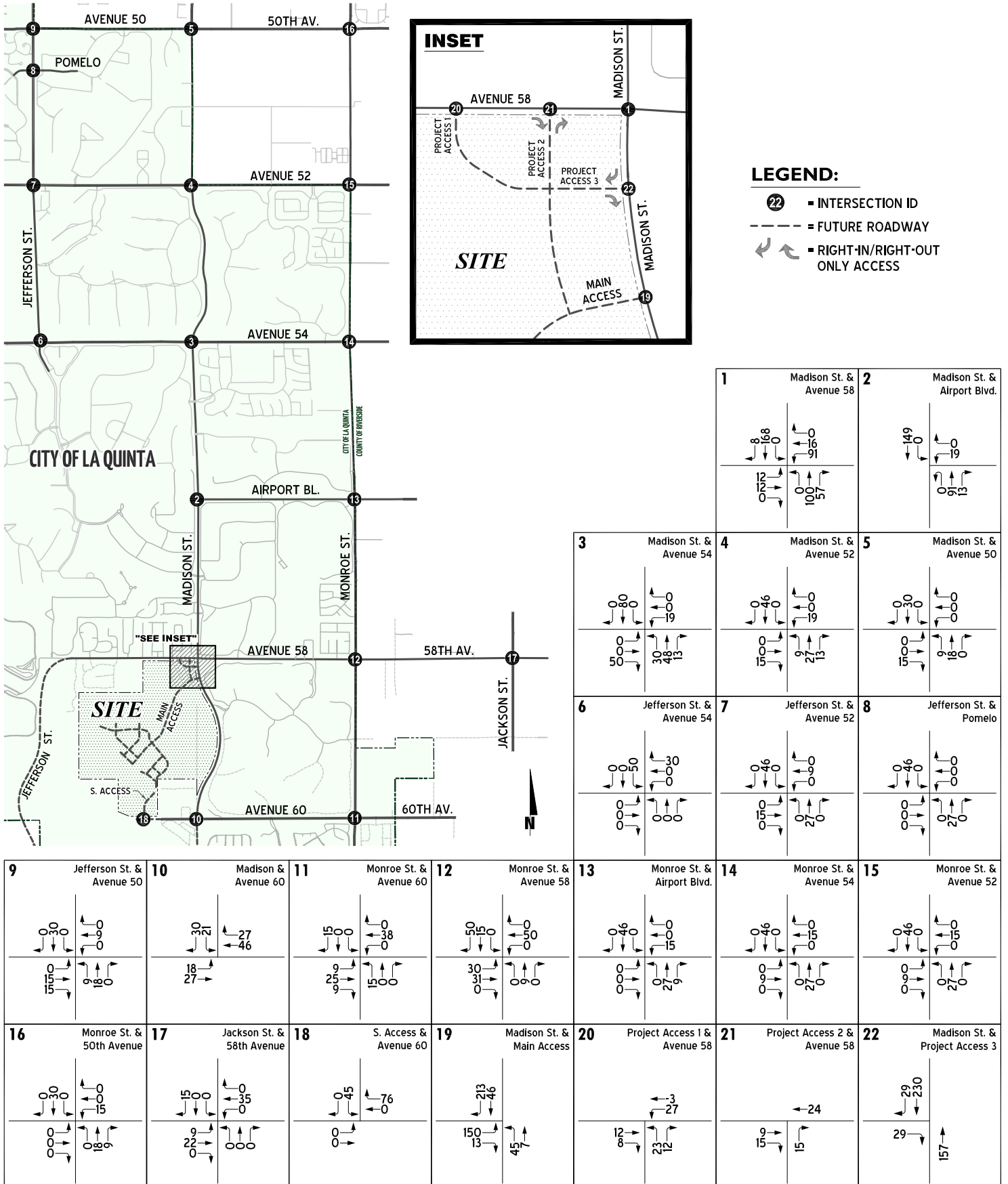


TABLE 4-4: CUMULATIVE DEVELOPMENT LAND USE SUMMARY

Page 1 of 2

#	Project/Location	Land Use ¹	Quantity	Units ²
City of La Quinta				
LQ1	Desert Club Apartments	Apartments	16	DU
LQ2	La Quinta Penthouses	Condo/Townhouse	8	DU
LQ3	Mountain Village Residences	Apartments	6	DU
LQ4	Mayer Villa Capri	Apartments	104.000	TSF
		Medical Office	130.450	TSF
LQ6	Washington Apartments	Apartments	26	DU
LQ7	The Dune Palms Specific Plan	Multifamily Housing (Low-Rise)	66	DU
		Hotel	108	Rooms
		Shopping Center	305.000	TSF
LQ8	Codorniz	SFDR	142	DU
LQ9	Estate Collection at Coral Mountain	SFDR	57	DU
LQ10	Villas at Indian Springs	SFDR	15	DU
LQ11	Bellesera	SFDR	320	DU
LQ12	SilverRock - Phase I	Luxury Hotel	140	Rooms
		Condo/Townhouse	29	DU
LQ13	SilverRock - Phase II	Lifestyle Hotel	200	Rooms
		Condo/Townhouse	66	DU
LQ14	American Tire Depot	Automobile Parts	6.720	TSF
LQ15	Estates at Griffin Lake	SFDR	78	DU
LQ16	Monterra	SFDR	40	DU
LQ17	Andalusia at Coral Mountain	SFDR	39	DU
LQ18	Floresta	SFDR	82	DU
LQ19	California Desert Museum of Art	Museum	18	TSF
LQ20	Walsh Urology	Medical Office	1.09	AC
LQ21	Crabpot	Restaurant	1.800	TSF
LQ22	Residence Club @ PGA West	SFDR	11	DU
LQ23	Signature at PGA West	SFDR	230	DU
LQ24	Casa Mendoza Expansion	Restaurant	1.053	TSF
LQ25	Pavilion Palms Shopping Center	Shopping Center	125.000	TSF
LQ26	Griffin Ranch Amendment	SFDR	4	DU
LQ27	Andalusia Village	SFDR	71	DU
LQ28	Travertine	SFDR	1,200	DU
		Hotel	100	Rooms
LQ29	Centre at La Quinta	SFDR	152	DU
		Hotel	125	Rooms
LQ31	Silverrock Temporary Clubhouse	Recreational Facility	3.886	TSF
LQ32	Canyon Ridge	SFDR	74	DU
LQ33	Shops at Coral Mountain	Shopping Center	40.7	TSF
LQ34	Coral Canyon	SFDR	219	DU

TABLE 4-4: CUMULATIVE DEVELOPMENT LAND USE SUMMARY

Page 2 of 2

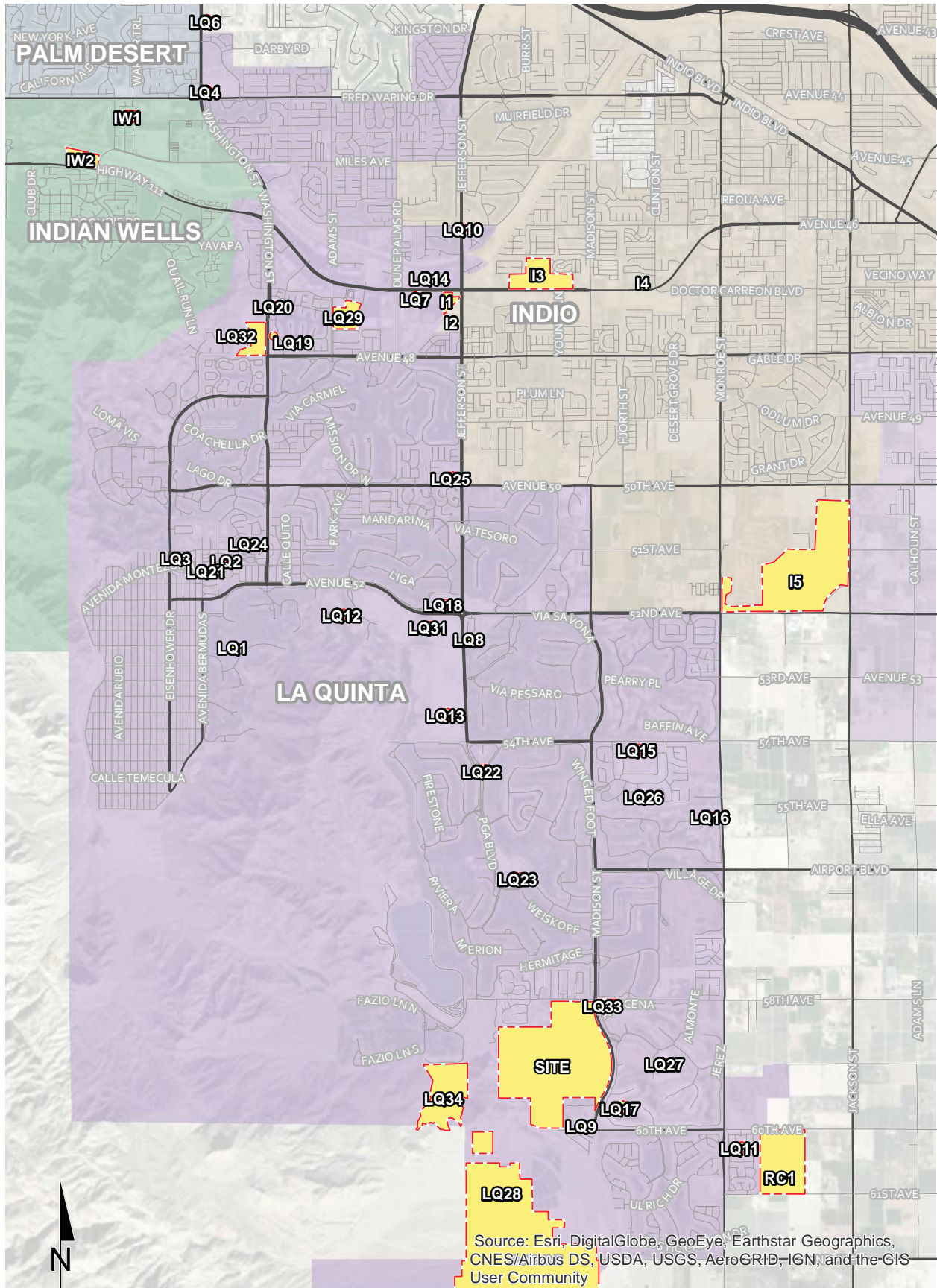
#	Project/Location	Land Use ¹	Quantity	Units ²
County of Riverside				
RC1	Vista Soleada	SFDR	230	DU
		Equestrian Way Station	1.4	AC
City of Indian Wells				
IW1	TTM No. 37467	SFDR	18	DU
IW2	Hotel Development	Condo/Townhouse	70	DU
		Hotel	263	Rooms
		Quality Restaurant	5.500	TSF
City of Indio				
I1	Jefferson and Hwy. 111	Health Club	38.000	TSF
		Shopping Center	15.000	TSF
		Restaurant	6.300	TSF
I3	Polo Square	Retail	350.000	TSF
		Office	200.000	TSF
		Hotel	370	Rooms
		Condo/Townhouse	516	DU
I4	La-Z-Boy Gallery	Retail	15.600	TSF
I5	Polo Community	Senior & SFDR	560	DU

¹ SFDR = Single Family Detached Residential

² AC = Acres; TSF = Thousand Square Feet; DU = Dwelling Unit

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EXHIBIT 4-12: CUMULATIVE DEVELOPMENT MAP



If applicable, the traffic generated by individual cumulative projects was manually added to the Cumulative forecasts to ensure that traffic generated by the listed cumulative development projects are reflected as part of the background traffic.

4.5.3 NEAR-TERM TRAFFIC FORECASTS

The “buildup” approach combines existing traffic counts with a background ambient growth factor to forecast EAP (2026) traffic conditions. Existing Plus Ambient Growth Plus Cumulative Projects traffic volume forecasts are developed, with and without Project for each of the following phases:

- Project Phase 1 (2021)
- Project Phase 2 (2023)
- Project Buildout (Phase 3, 2026)

An ambient growth factor is estimated for each turning movement to be utilized in estimating the compounded growth between existing and Near Term Year (2021, 2023, and 2026) conditions, accounting for background (area-wide) traffic increases that occur over time from year 2019.

Project traffic is added to assess EAP, EAPC (Phase 1 2021), EAPC (Phase 2 2023), and EAPC (Project Buildout 2026) traffic conditions. Cumulative development projects traffic volumes are not included in EAP traffic conditions. The near-term traffic analysis includes the following traffic conditions, with the various traffic components:

- EAP
 - Existing 2019 volumes
 - Ambient growth traffic for 7 years
 - Project Traffic
- EAPC (2021)
 - Existing 2019 volumes
 - Ambient growth traffic
 - Cumulative Development traffic
 - Project Phase 1 Traffic
- EAPC (2023)
 - Existing 2019 volumes
 - Ambient growth traffic
 - Cumulative Development traffic
 - Project Phase 2 Traffic
- EAPC (2026)
 - Existing 2019 volumes
 - Ambient growth traffic
 - Cumulative Development traffic
 - Project Buildout Traffic

E+P, EAP (2026), and EAPC (2021, 2023, and 2026) ADT and peak hour traffic volumes are presented in Section 6 *Near Term Conditions Traffic Analysis* of this TIA.

4.5.4 YEAR 2040 TRAFFIC FORECASTS

The Year 2040 forecast volumes are based upon an updated version of the Riverside County Transportation Analysis Model (RivTAM) which became available in the CVAG region during 2016. It is consistent with the SCAG draft 2016 RTP for the Transportation Project Prioritization Study (TPPS) 2040 project.

5 TRAFFIC IMPACT ASSESSMENT METHODOLOGY

This section discusses the criteria used to determine potentially significant Project impacts and potentially significant cumulative impacts.

5.1 SCENARIOS

In accordance with the City of La Quinta's traffic study guidelines and as documented in Appendix 1.1 of this TIA, this study has analyzed the following scenarios:

- Existing (2019)
- Existing Plus Project (E+P)
- Existing Plus Ambient Growth Plus Project (E+A+P)
- Existing Plus Ambient Growth Plus Cumulative Projects Plus Project for each of the following phases:
 - Project Phase 1 (2021)
 - Project Phase 2 (2023)
 - Project Buildout (Phase 3, 2026)
 - Project Buildout (Phase 3, 2026) – Special Event
- General Plan buildout (2040) Without Project Conditions – establishes future year baseline to evaluate the proposed Project
- General Plan buildout (2040) With Project Conditions – represents future year baseline traffic conditions with the proposed Project

5.1.1 EXISTING (2019) CONDITIONS

Existing physical conditions have been disclosed to represent the baseline traffic conditions as they existed at the time this report was prepared.

5.1.2 E+P CONDITIONS

The Existing plus Project (E+P) traffic conditions analysis determines circulation system deficiencies that would occur on the existing roadway system in the scenario of the Project being placed upon Existing traffic conditions. For the purposes of this analysis, the E+P analysis scenario was utilized to determine potentially significant Project impacts associated solely with the development of the proposed Project and the corresponding mitigation measures necessary to mitigate these impacts.

5.1.3 EAP CONDITIONS

The Existing plus Ambient Growth plus Project (EAP) conditions analysis determines the traffic impacts based on a comparison of the EAP traffic conditions to Existing conditions (i.e., baseline conditions). To account for background traffic growth, ambient growth from Existing conditions is included for EAP (2026) traffic conditions. Cumulative development projects are not included as part of the EAP analysis.

5.1.4 EAPC (2021) CONDITIONS

To account for background traffic, other known cumulative development projects in the study area were included in addition to ambient growth is included for EAPC Project Phase 1 (2021) traffic conditions in conjunction with traffic associated with the proposed Project.

The EAPC traffic conditions analysis will be utilized to determine if improvements funded through local and regional transportation mitigation fee programs such as the Transportation Uniform Mitigation Fee (TUMF) program, City of La Quinta Development Impact Fee (DIF) program, or other approved funding mechanism can accommodate the near-term cumulative traffic at the target LOS identified in the City of La Quinta's traffic study guidelines.

5.1.5 EAPC (2023) CONDITIONS

To account for background traffic, other known cumulative development projects in the study area were included in addition to ambient growth is included for EAPC Project Phase 2 (2023) traffic conditions in conjunction with traffic associated with the proposed Project.

The EAPC traffic conditions analysis will be utilized to determine if improvements funded through local and regional transportation mitigation fee programs such as the Transportation Uniform Mitigation Fee (TUMF) program, City of La Quinta Development Impact Fee (DIF) program, or other approved funding mechanism can accommodate the near-term cumulative traffic at the target LOS identified in the City of La Quinta's traffic study guidelines.

5.1.6 EAPC (2026) CONDITIONS

To account for background traffic, other known cumulative development projects in the study area were included in addition to ambient growth is included for EAPC Project buildout (2026) traffic conditions in conjunction with traffic associated with the proposed Project.

The EAPC traffic conditions analysis will be utilized to determine if improvements funded through local and regional transportation mitigation fee programs such as the Transportation Uniform Mitigation Fee (TUMF) program, City of La Quinta Development Impact Fee (DIF) program, or other approved funding mechanism can accommodate the near-term cumulative traffic at the target LOS identified in the City of La Quinta's traffic study guidelines.

5.1.7 YEAR 2040 CONDITIONS

The Year 2040 analysis determines if the City of La Quinta Circulation Element is adequate to accommodate future traffic at the target LOS, or if additional mitigation is necessary. This section provides recommended intersection and segment lanes to provide acceptable levels of service for three roadway network scenarios.

5.2 POTENTIALLY SIGNIFICANT TRAFFIC IMPACT CRITERIA

Potentially significant Project traffic impacts are divided separately into intersection and roadway segment traffic impacts. Intersections and roadway segments are evaluated for both potentially significant Project and cumulative impacts.

The potentially significant Project and cumulative impact criteria described below for both intersection and roadway segments per the City of La Quinta's traffic study guidelines.

5.2.1 INTERSECTIONS

Potentially Significant Project Impacts

Pursuant to the criteria outlined for the analysis of study area intersections using the HCM methodology, a potentially significant Project impact is defined to occur at any signalized intersection if the addition of Project trips will result in the LOS for that intersection to exceed the criteria established in Table 5-1 for E+P and EAP traffic conditions.

TABLE 5-1: IMPACT CRITERIA FOR INTERSECTIONS ALREADY OPERATING AT LOS E OR LOS F

Significant Changes in LOS	
LOS E	An increase in delay of 2 seconds or more
LOS F	An increase in delay of 1 second or more

Source: City of La Quinta Engineering Bulletin #06-13 Table 4.0

A potentially significant Project impact at an unsignalized study area intersection is defined to occur when an intersection has a projected LOS F on a side street for a two-way stop control or LOS E or worse for the intersection an all-way stop controlled intersection and the addition of Project traffic results in an addition of 3 seconds or more of delay for any movement.

Potentially Significant Cumulative Impacts

A potentially significant cumulative impact is defined to occur at any signalized intersection if the addition of Project trips will result in the LOS for that intersection to exceed the criteria established in Table 5-1 for EAPC traffic conditions.

A potentially significant cumulative impact at an unsignalized study area intersection is defined to occur when, with Project traffic included, an intersection has a projected LOS F on a side street for a two-way stop control or LOS E or worse for the intersection an all-way stop controlled intersection and the addition of Project traffic results in an addition of 3 seconds or more of delay for any movement.

5.2.2 ROADWAY SEGMENTS

Potentially Significant Project Impacts

A potentially significant Project impact is defined to occur at any study area roadway segment if the segment is projected to be operating at LOS E or LOS F and the V/C ratio increases by 0.02 or more with the addition of Project traffic for E+P and EAP traffic conditions.

Potentially Significant Cumulative Impacts

A potentially significant cumulative impact is defined to occur at any study area roadway segment if the Project would cause the Existing LOS to fall to worse than LOS D for EAPC traffic conditions. A potentially significant cumulative impact is also defined to occur on any study

area roadway segment that is already operating at LOS E or LOS F, if the Project traffic will increase the V/C ratio by more than 0.02 for EAPC traffic conditions.

5.3 TRAFFIC SIGNAL WARRANT ANALYSIS METHODOLOGY

The term "signal warrants" refers to the list of established criteria used by Caltrans and other public agencies to quantitatively justify or ascertain the potential need for installation of a traffic signal at an otherwise unsignalized intersection. This TIA uses the signal warrant criteria presented in the latest edition of the Federal Highway Administration's (FHWA) *Manual on Uniform Traffic Control Devices (MUTCD)*, as amended by the *MUTCD 2012 California Supplement*, for all study area intersections.

The signal warrant criteria for Existing conditions are based upon several factors, including volume of vehicular and pedestrian traffic, frequency of accidents, and location of school areas. Both the FHWA's *MUTCD* and the *MUTCD 2012 California Supplement* indicate that the installation of a traffic signal should be considered if one or more of the signal warrants are met. Specifically, this TIA utilizes the Peak Hour Volume-based Warrant 3 as the appropriate representative traffic signal warrant analysis for existing traffic conditions. Warrant 3 criteria are basically identical for both the FHWA's *MUTCD* and the *MUTCD 2012 California Supplement*. Warrant 3 is appropriate to use for this TIA because it provides specialized warrant criteria for intersections with rural characteristics (e.g. located in communities with populations of less than 10,000 persons or with adjacent major streets operating above 40 miles per hour). For the purposes of this study, the speed limit was the basis for determining whether Urban or Rural warrants were used for a given intersection.

Future intersections that do not currently exist have been assessed regarding the potential need for new traffic signals based on future average daily traffic (ADT) volumes, using the Caltrans planning level ADT-based signal warrant analysis worksheets.

It is important to note that a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this threshold condition does not require that a traffic control signal be installed at a particular location, but rather, that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified. It should also be noted that signal warrants do not necessarily correlate with LOS. An intersection may satisfy a signal warrant condition and operate at or above acceptable LOS or operate below acceptable LOS and not meet a signal warrant.

5.4 QUEUING ANALYSIS

For the purpose of this analysis, the 95th percentile queuing of vehicles has been assessed at Project access locations.

The traffic progression analysis tool and HCM intersection analysis program, Synchro, has been used to assess the potential deficiencies/needs of the intersections with traffic added from the proposed Project. Storage (turn-pocket) length recommendations have been based upon the 95th percentile queue resulting from the Synchro progression analysis. The queue length reported is for the lane with the highest queue in the lane group.

A vehicle is considered queued whenever it is traveling at less than 10 feet/second. A vehicle will only become queued when it is either at the stop bar or behind another queued vehicle. Although only the 95th percentile queue has been reported in the tables, the 50th percentile queue can be found in the appendix alongside the 95th percentile queue for each ramp location. The 50th percentile maximum queue is the maximum back of queue on a typical cycle during the peak hour, while the 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes during the peak hour. In other words, if traffic were observed for 100 cycles, the 95th percentile queue would be the queue experienced with the 95th busiest cycle (or 5% of the time). The 50th percentile or average queue represents the typical queue length for peak hour traffic conditions, while the 95th percentile queue is derived from the average queue plus 1.65 standard deviations. The 95th percentile queue is not necessarily ever observed, it is simply based on statistical calculations.

5.5 PROJECT FAIR SHARE CALCULATION METHODOLOGY

In cases where this TIA identifies that the proposed Project would have a significant cumulative impact to a roadway facility, the following methodology was applied to determine the fair share contribution. A project's fair share contribution at an off-site study area intersection is determined based on the following equation, which is the ratio of Project traffic to total traffic:

$$\text{Project Fair Share \%} = \text{Project Traffic} / (\text{EAPC With Project Traffic})$$

The Project fair share contribution calculations are presented in Section 9.4 *Fair Share Contribution* of this TIA.

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6 NEAR TERM CONDITIONS TRAFFIC ANALYSIS

This section discusses the results of the near-term HCM intersection analysis and roadway segment capacity analysis. This section also identifies any potentially significant Project and cumulative traffic impacts to the study area intersections and roadway segments.

6.1 E+P CONDITIONS

E+P ADT, weekday AM and weekday PM peak hour volumes are shown on Exhibits 6-1 through 6-3, respectively.

6.1.1 INTERSECTION OPERATIONS ANALYSIS

LOS calculations were conducted for the study intersections to evaluate their operations under E+P traffic conditions with roadway and intersection geometrics consistent with those described in Section 5.1.2 *E+P Conditions*. The intersection analysis results are summarized in Table 6-1, which indicates that the study area intersections are projected to operate at acceptable level of service, with existing geometry.

The intersection operations analysis worksheets for E+P traffic conditions are included in Appendix 6.1 of this TIA.

6.1.2 ROADWAY SEGMENT CAPACITY ANALYSIS

The roadway segment capacities are approximate figures only, and are typically used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet future forecasted traffic demand. Table 6-2 provides a summary of the E+P traffic conditions roadway segment capacity analysis based on the City of La Quinta roadway segment capacity thresholds identified previously. As shown on Table 6-2, all study roadway segments analyzed are anticipated to operate at acceptable LOS for E+P traffic conditions.

6.1.3 TRAFFIC SIGNAL WARRANT ANALYSIS

Traffic signal warrant analyses have been performed at all applicable unsignalized study area intersections for E+P traffic conditions (see Appendix 6.2). No additional intersections (beyond the four that satisfy signal warrants for Existing conditions) are projected to satisfy traffic signal warrants for E+P conditions.

6.2 EAP CONDITIONS

EAP ADT, weekday AM, and weekday PM peak hour volumes are shown on Exhibits 6-4 through 6-6, respectively. The Existing plus Ambient plus Project scenario includes the entire Project and seven years of background growth.

EXHIBIT 6-1: EXISTING PLUS PROJECT AVERAGE DAILY TRAFFIC (ADT)

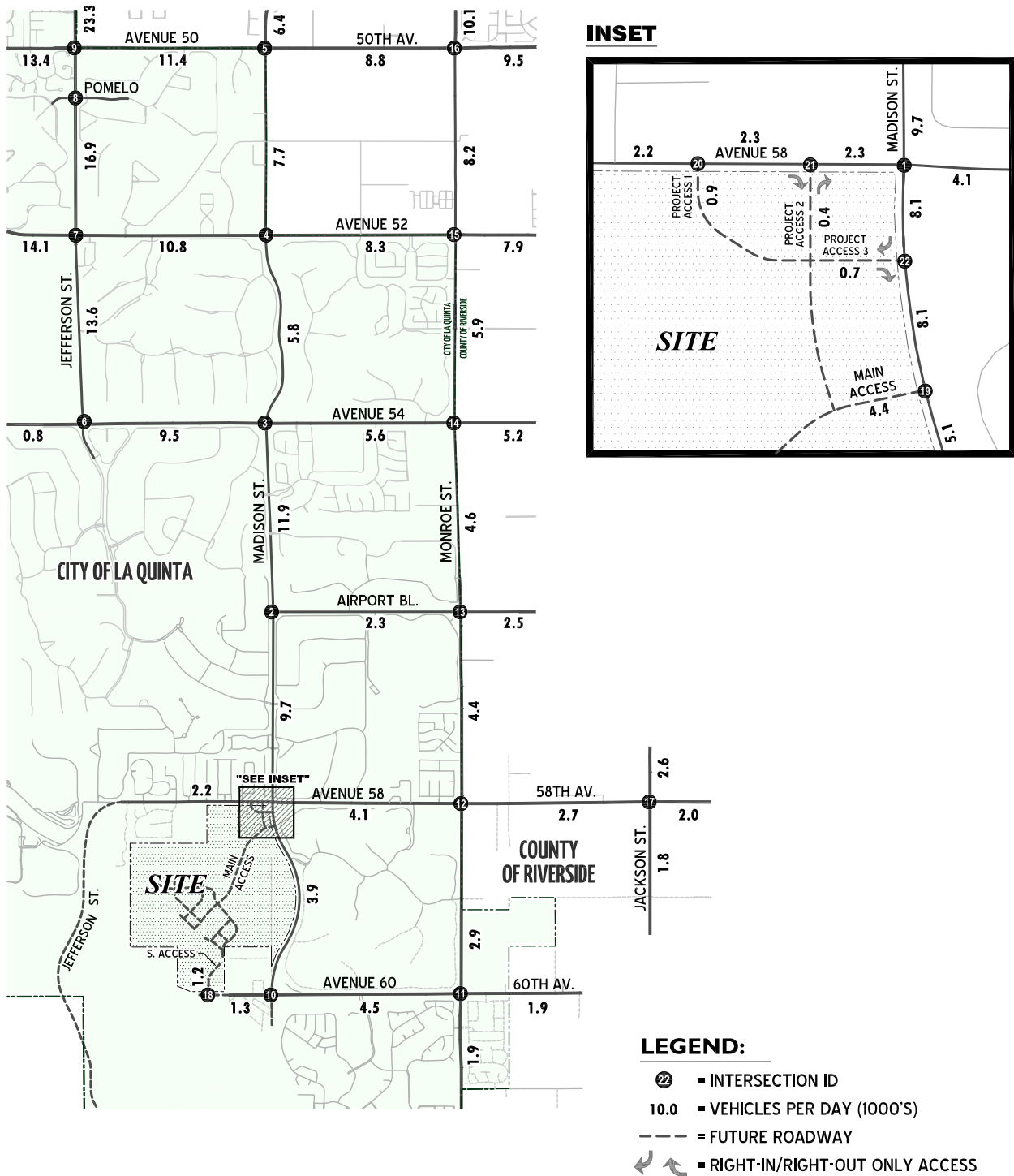


EXHIBIT 6-2: EXISTING PLUS PROJECT AM PEAK HOUR INTERSECTION VOLUMES

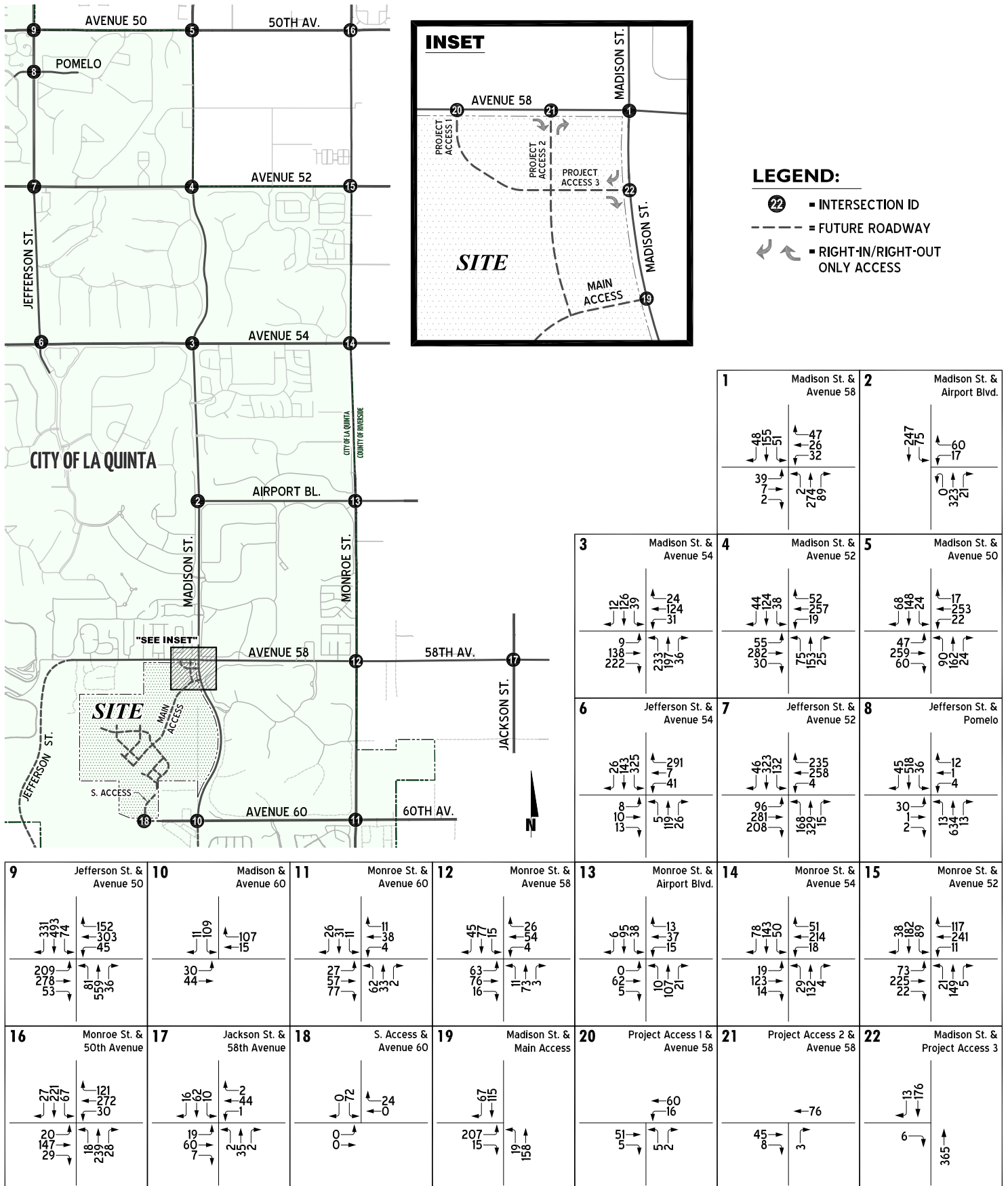
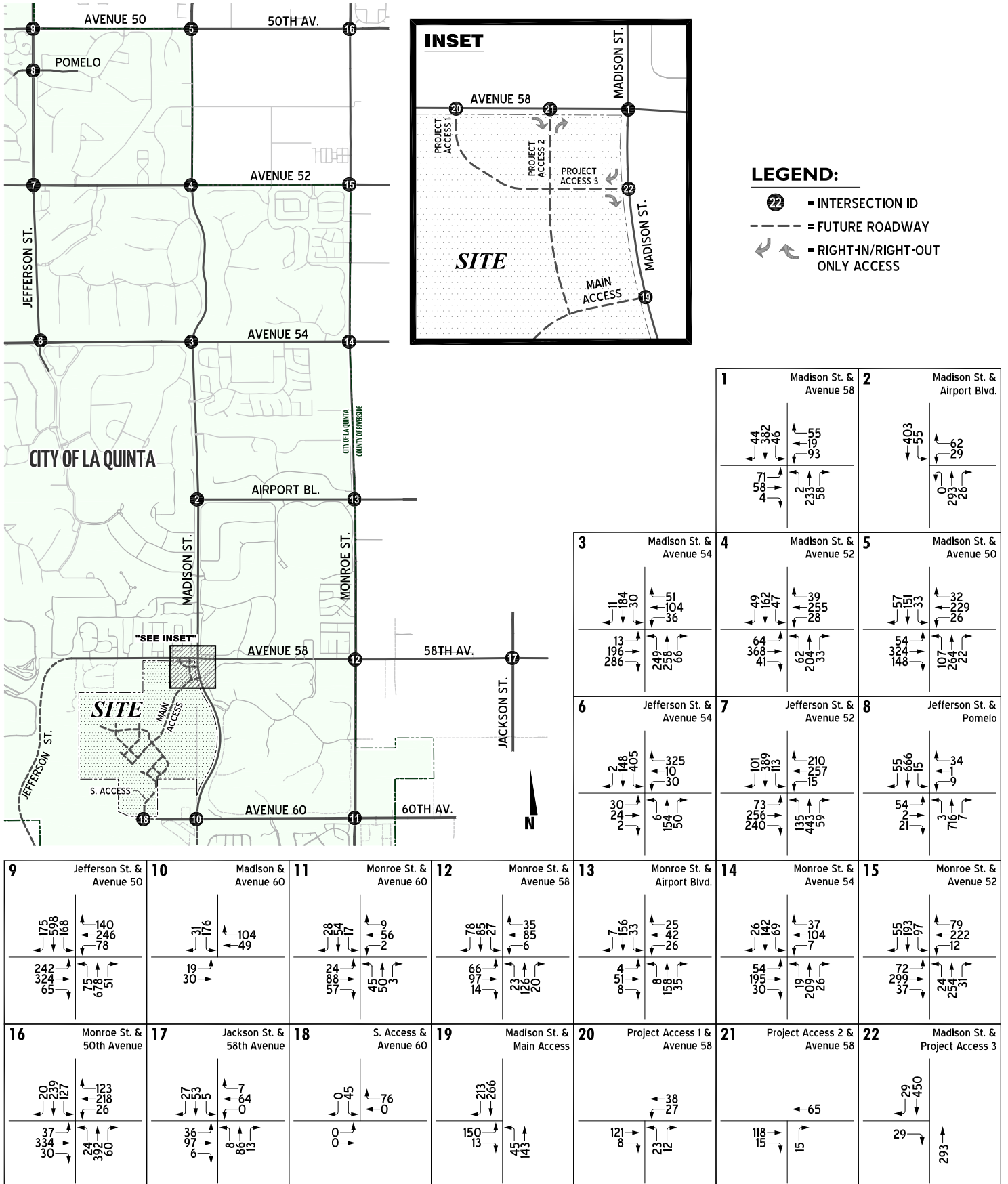


EXHIBIT 6-3: EXISTING PLUS PROJECT PM PEAK HOUR INTERSECTION VOLUMES



**TABLE 6-1: INTERSECTION ANALYSIS
FOR EXISTING PLUS PROJECT CONDITIONS**

#	Intersection	Traffic Control ³	Intersection Approach Lanes ¹												Delay ² (Secs)		Level of Service ²	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Madison St. / Avenue 58	AWS	1	2	1	1	2	d	1	1	1	1	2	1	10.0	12.8	A	B
2	Madison St. / Airport Blvd.	TS	1	2	d	1	2	0	0	0	0	1	0	1	8.8	9.9	A	A
3	Madison St. / Avenue 54	AWS	2	2	1	1	2	0	1	2	d	1	2	1	15.2	23.5	C	C
4	Madison St. / Avenue 52	TS	2	2	1	2	2	d	1	2	d	1	2	1	29.1	30.0	C	C
5	Madison St. / Avenue 50	TS	2	2	1	2	2	1	1	2	1	1	2	1	29.1	29.8	C	C
6	Jefferson St. / Avenue 54	AWS	0.5	1	0.5	2	2	1	1	2	0	1	1	1	13.2	20.1	B	C
7	Jefferson St. / Avenue 52	RDB	0.5	0.5	1>>	0.5	0.5	1>>	0.5	0.5	1>>	0.5	0.5	1>>	10.6	11.2	B	B
8	Jefferson St. / Pomelo	TS	1	3	0	1	3	0	0.5	0.5	1	0.5	0.5	1	8.8	14.3	A	B
9	Jefferson St. / Avenue 50	TS	1	3	1	2	3	1	1	2	1	1	1	1	46.5	49.4	D	D
10	Madison St. / Avenue 60	AWS	0	0	0	1	0	1	0.5	0.5	0	0	1	1	8.7	9.5	A	A
11	Monroe St. / Avenue 60	AWS	1	1	0	1	1	1	0.5	0.5	1	0	1!	0	8.5	8.9	A	A
12	Monroe St. / Avenue 58	AWS	0	1!	0	0.5	0.5	1	0	1!	0	0	1!	0	8.9	11.0	A	B
13	Monroe St. / Airport Blvd.	AWS	1	1	0	1	2	d	1	1	1	0	1!	0	9.0	10.0	A	B
14	Monroe St. / Avenue 54	AWS	0	1!	0	0.5	0.5	1	1	1	0	0	1!	0	16.3	14.4	C	B
15	Monroe St. / Avenue 52	AWS	0	1!	0	1	2	0	1	1	1	1	2	d	16.8	34.3	C	D
16	Monroe St. / 50th Avenue	TS	1	2	0	1	2	0	1	1	1	1	1	1>	16.6	18.5	B	B
17	Jackson St. / 58th Avenue	AWS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	7.7	8.6	A	A
18	S. Access / Avenue 60	<u>CSS</u>	0	0	0	0	<u>1!</u>	0	0	<u>1</u>	0	0	<u>1</u>	0	8.9	8.9	A	A
19	Madison St. / Main Access	<u>CSS</u>	<u>1</u>	2	0	0	2	0	<u>1</u>	0	<u>1</u>	0	0	0	12.7	15.6	B	C
20	Project Access 1 / Avenue 58	<u>CSS</u>	0	<u>1!</u>	0	0	0	0	0	1	0	<u>1*</u>	2	0	9.2	9.8	A	A
21	Project Access 2 / Avenue 58	<u>CSS</u>	0	0	<u>1</u>	0	0	0	0	1	0	0	2	0	8.6	9.0	A	A
22	Madison St. / Project Access 3	<u>CSS</u>	0	2	0	0	2	0	0	0	<u>1</u>	0	0	0	8.9	10.1	A	B

¹ When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; >> = Free-Right Turn Lane; d= Defacto Right Turn Lane; 1 = Improvement

* = Left turn lane accommodated within two-way left turn lane

² Per the Highway Capacity Manual 6th Edition (HCM6), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. Delay and level of service is calculated using Synchro 10.1 analysis software.

³ TS = Traffic Signal; CSS = Cross-street Stop; AWS = All-Way Stop; RDB = Roundabout

**TABLE 6-2: ROADWAY VOLUME/CAPACITY ANALYSIS
FOR EXISTING PLUS PROJECT CONDITIONS**

Roadway	Segment	Roadway Designation	Through Travel Lanes ¹	Capacity ²	ADT ³	Volume/ Capacity Ratio
Avenue 58	West of Madison Street	Secondary	3	21,000 ⁴	2,300	0.11
	West of Monroe Street	Secondary	4	28,000	4,100	0.15
	West of Jackson Street	Secondary	2	14,000 ⁴	2,700	0.19
Madison Street	South of Airport Boulevard	Primary	4	42,600	9,700	0.23
Avenue 60	West of Monroe Street	Secondary	3	21,000 ⁴	4,500	0.21
Monroe Street	South of Airport Boulevard	Primary	3	31,950 ⁵	4,400	0.14

¹ Existing Number of Through lanes

² Source: City of La Quinta Engineering Bulletin #06-13 (Oct 2017)

³ Average Daily Traffic (ADT) expressed in vehicles per day.

⁴ Capacity was calculated as a ratio of 4-lane Secondary capacity.

⁵ Capacity was calculated as a ratio of 4-lane Primary capacity.

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EXHIBIT 6-4: EXISTING PLUS AMBIENT PLUS PROJECT AVERAGE DAILY TRAFFIC (ADT)

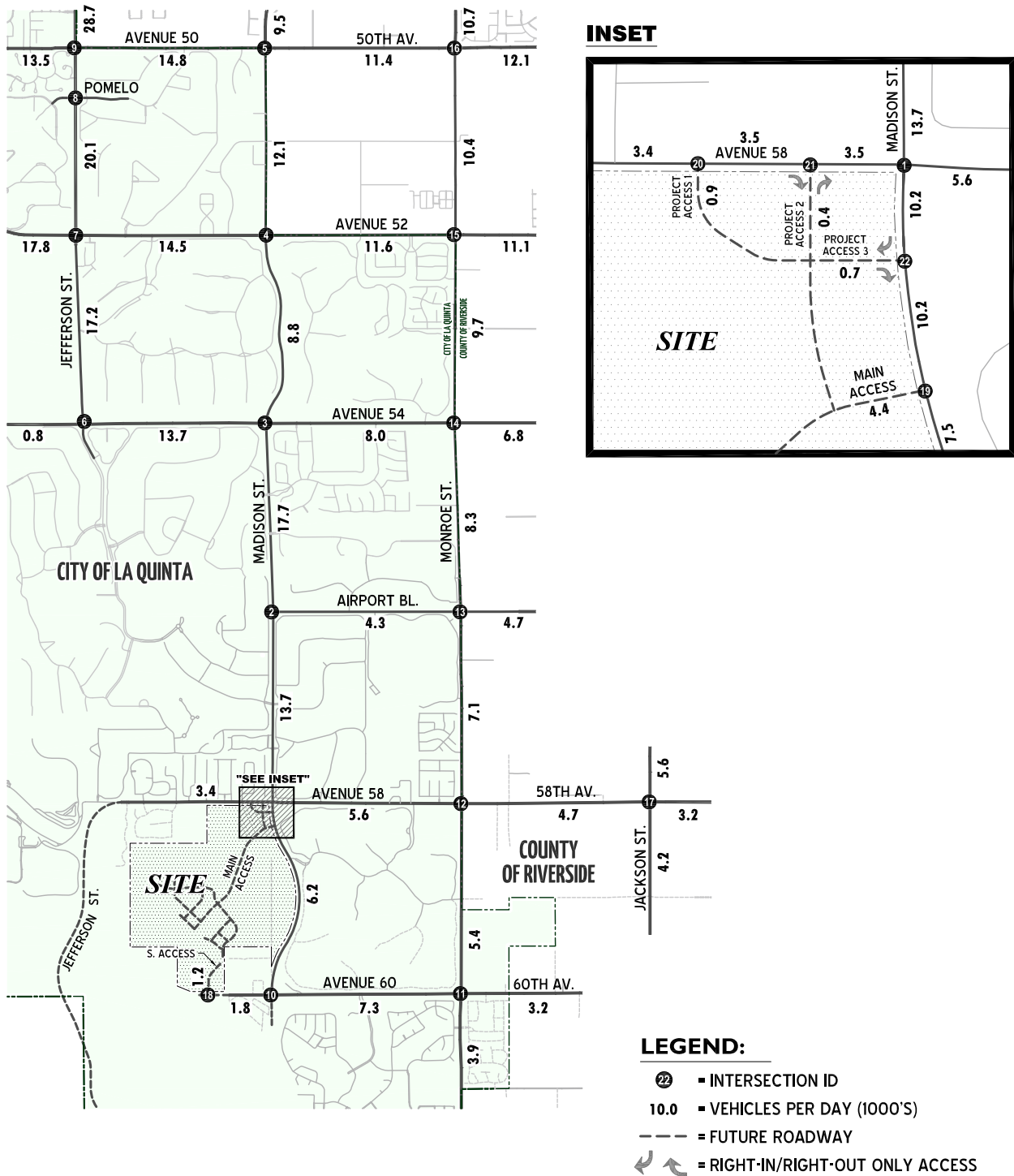


EXHIBIT 6-5: EXISTING PLUS AMBIENT PLUS PROJECT AM PEAK HOUR INTERSECTION VOLUMES

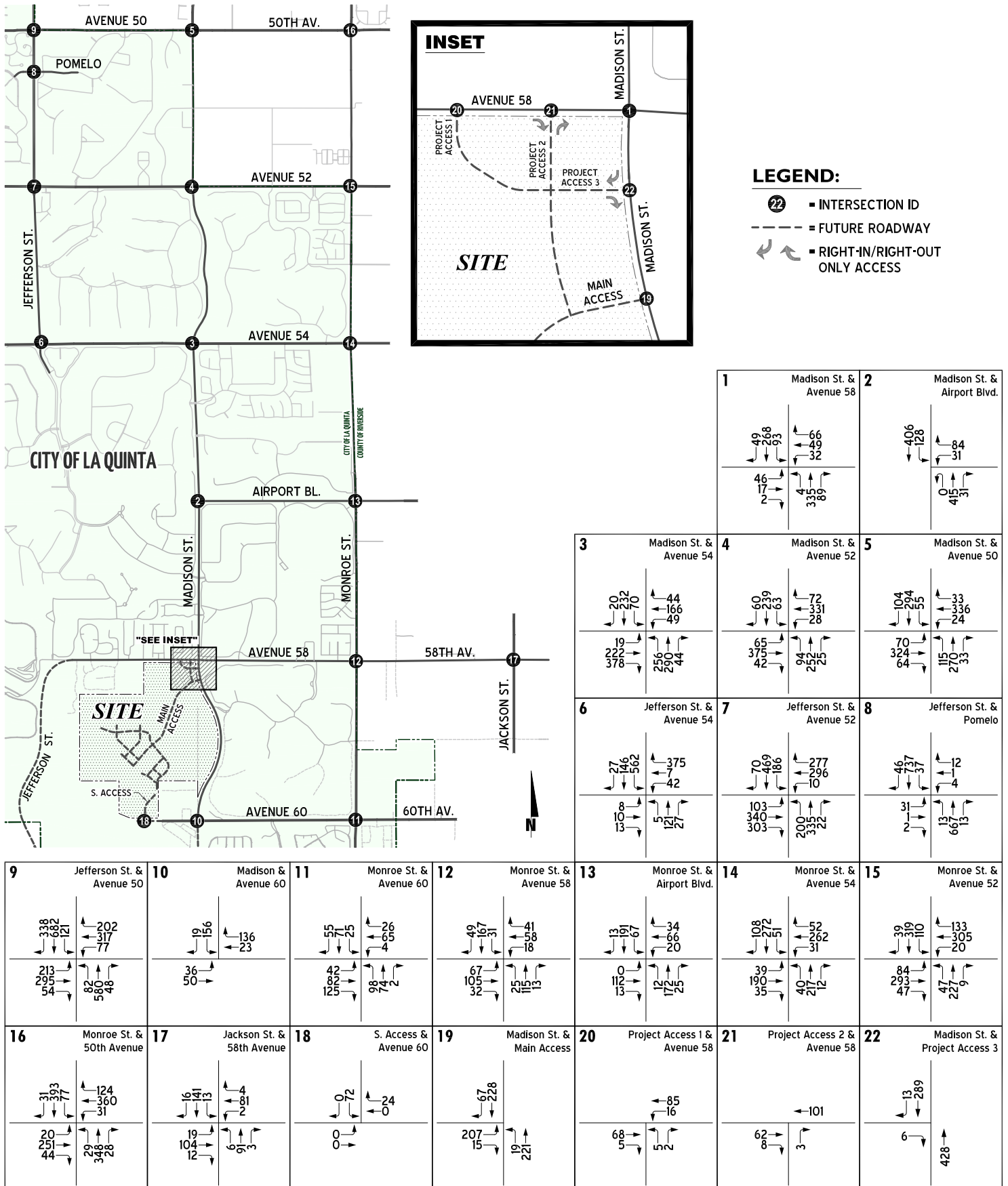
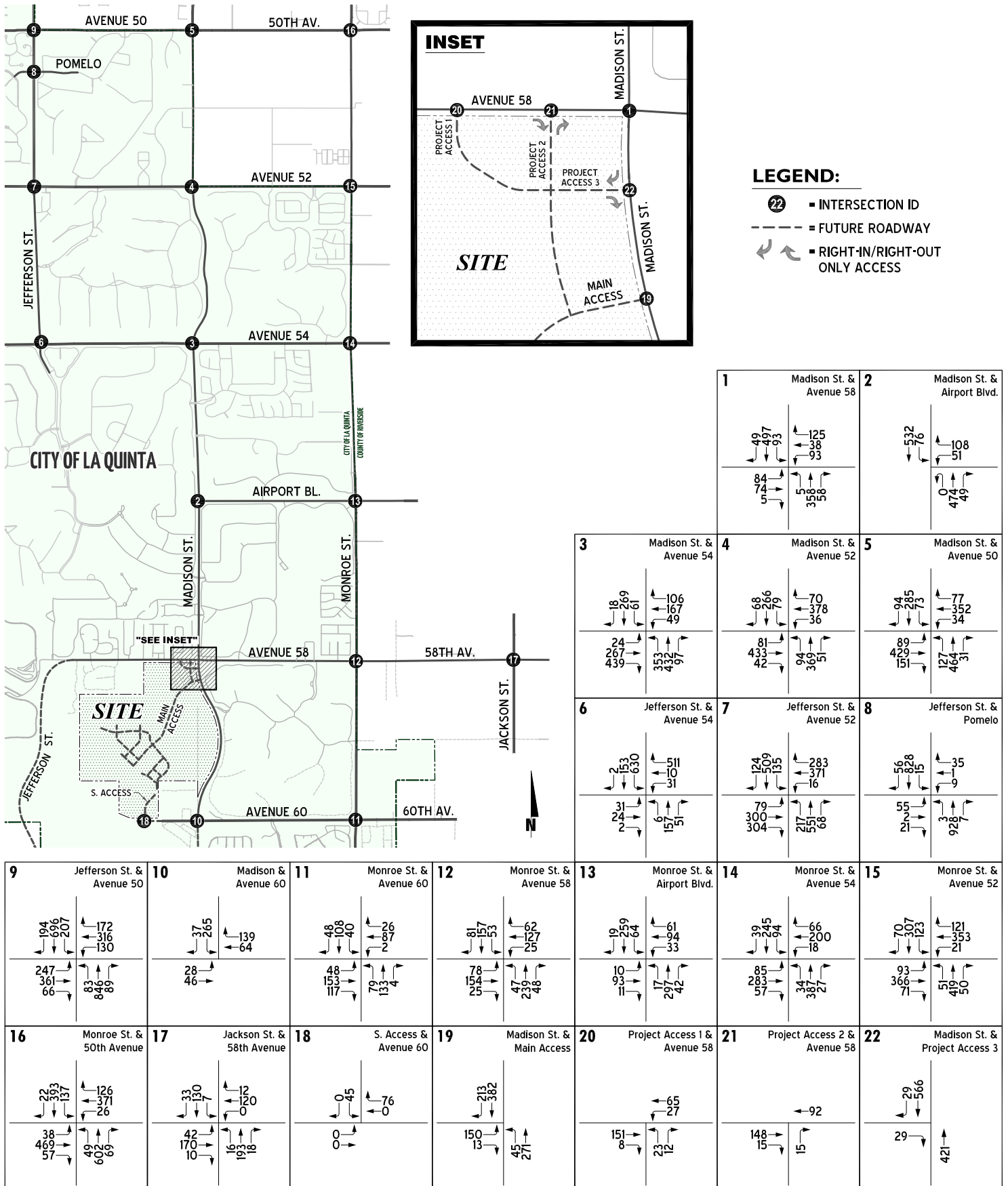


EXHIBIT 6-6: EXISTING PLUS AMBIENT PLUS PROJECT PM PEAK HOUR INTERSECTION VOLUMES



6.2.1 INTERSECTION OPERATIONS ANALYSIS

LOS calculations were conducted for the study intersections to evaluate their operations under EAP traffic conditions with roadway and intersection geometrics consistent with those described in Section 5.1.3 *EAP Conditions*. The intersection analysis results are summarized in Table 6-3, which indicates that the following five study area intersections are anticipated to require installation of a traffic signal (which is funded in the CIP) in order to maintain acceptable LOS under EAP conditions:

- Madison Street at Avenue 54
- Jefferson Street at Avenue 54
- Monroe Street at Avenue 58
- Monroe Street at Avenue 54
- Monroe Street at Avenue 52

EAP analysis results indicates that the intersection of Jefferson Street at Avenue 52 experiences deficient operations under cumulative “without project” conditions. Jefferson Street at Avenue 52 requires reconstruction of the current roundabout design to incorporate 2 circulating lanes around the center island. This effectively accommodates an additional through lane in the northbound and southbound directions to provide acceptable LOS. The intersection operations analysis worksheets for EAP traffic conditions are included in Appendix 6.3 of this TIA.

6.2.2 ROADWAY SEGMENT CAPACITY ANALYSIS

Roadway segment capacity analysis based upon approximate capacities used to assist in determining the roadway functional classification (number of through lanes) needed to meet future forecasted traffic demand is summarized on Table 6-4 for EAP traffic conditions. As shown on Table 6-4, study roadway segments analyzed are anticipated to operate at acceptable LOS under EAP traffic conditions. The addition of Project traffic is not anticipated to result in any roadway segment capacity deficiencies.

6.2.3 TRAFFIC SIGNAL WARRANT ANALYSIS

Traffic signal warrant analyses have been performed at all applicable unsignalized study area intersections for EAP traffic conditions (see Appendix 6.4). Additional intersections (beyond the eight that satisfy signal warrants for Existing or E+P conditions) that are projected to satisfy traffic signal warrants for EAP conditions are:

- Madison Street at Avenue 58
- Madison Street at Main Access
- Monroe Street at Avenue 58
- Monroe Street at Airport Boulevard

**TABLE 6-3: INTERSECTION ANALYSIS
FOR EXISTING PLUS AMBIENT WITHOUT AND WITH PROJECT CONDITIONS**

#	Intersection	Traffic Control ³	Intersection Approach Lanes ¹												EA (2026) Without Project		EA (2026) With Project	
			Northbound				Southbound				Eastbound				Delay ² (Secs)		Level of Service ²	
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Madison St. / Avenue 58	AWS	1	2	1	1	2	d	1	1	1	1	2	1	9.7	12.1	A	B
2	Madison St. / Airport Blvd.	TS	1	2	d	1	2	0	0	0	0	1	0	1	10.0	11.4	A	B
3	Madison St. / Avenue 54																	
	- Without Improvements	AWS	2	2	1	1	2	0	1	2	d	1	2	1	41.4	>80	E	F
	- With Improvements	<u>TS</u>	2	2	1	1	2	0	1	2	d	1	2	1	35.6	36.1	D	D
4	Madison St. / Avenue 52	TS	2	2	1	2	2	d	1	2	d	1	2	1	30.2	31.3	C	C
5	Madison St. / Avenue 50	TS	2	2	1	2	2	1	1	2	1	1	2	1	31.0	32.1	C	C
6	Jefferson St. / Avenue 54																	
	- Without Improvements	AWS	0.5	1	0.5	2	2	1	1	2	0	1	1	1	18.7	72.4	C	F
	- With Improvements	<u>TS</u>	0.5	1	0.5	2	2	1	1	2	0	1	1	<u>1</u>	24.4	25.0	C	C
7	Jefferson St. / Avenue 52																	
	- Without Improvements	RDB	0.5	0.5	1>>	0.5	0.5	1>>	0.5	0.5	1>>	0.5	0.5	1>>	18.5	36.7	C	E
	- Without Improvements	RDB	0.5	<u>1.5</u>	1>>	0.5	<u>1.5</u>	1>>	0.5	0.5	1>>	0.5	0.5	1>>	7.8	8.6	A	A
8	Jefferson St. / Pomelo	TS	1	3	0	1	3	0	0.5	0.5	1	0.5	0.5	1	8.0	14.0	A	B
9	Jefferson St. / Avenue 50	TS	1	3	1	2	3	1	1	2	1	1	1	1	46.6	50.4	D	D
10	Madison St. / Avenue 60	AWS	0	0	0	1	0	1	0.5	0.5	0	0	1	1	8.9	11.0	A	B
11	Monroe St. / Avenue 60	AWS	1	1	0	1	1	1	0.5	0.5	1	0	1	0	9.5	10.9	A	B
12	Monroe St. / Avenue 58																	
	- Without Improvements	AWS	0	1	0	0.5	0.5	1	0	1	0	0	1	0	9.8	20.1	A	C
	- With Improvements	<u>TS</u>	0	1	0	0.5	0.5	1	0	1	0	0	1	0	22.1	23.0	C	C
13	Monroe St. / Airport Blvd.	AWS	1	1	0	1	2	d	1	1	1	0	1	0	10.6	15.4	B	C
14	Monroe St. / Avenue 54																	
	- Without Improvements	AWS	0	1	0	0.5	0.5	1	1	1	0	0	1	0	50.7	70.1	F	F
	- With Improvements	<u>TS</u>	0	1	0	0.5	0.5	1	1	1	0	0	1	0	25.4	25.9	C	C
15	Monroe St. / Avenue 52																	
	- Without Improvements	AWS	0	1	0	1	2	0	1	1	1	1	2	d	39.4	>80	E	F
	- With Improvements	<u>TS</u>	0	1	0	1	2	0	1	1	1	1	2	d	12.6	15.4	B	B
16	Monroe St. / 50th Avenue	TS	1	2	0	1	2	0	1	1	1	1	1	1>	17.1	21.8	B	C
17	Jackson St. / 58th Avenue	AWS	0	1	0	0	1	0	0	1	0	0	1	0	8.4	11.3	A	B
18	S. Access / Avenue 60	<u>CSS</u>	0	0	0	0	<u>1</u>	0	0	<u>1</u>	0	0	<u>1</u>	0	Future Intersection		8.9	8.9
19	Madison St. / Main Access	<u>CSS</u>	<u>1</u>	2	0	0	2	0	<u>1</u>	0	<u>1</u>	0	0	0	Future Intersection		14.8	19.2
20	Project Access 1 / Avenue 58	<u>CSS</u>	0	<u>1</u>	0	0	0	0	0	1	0	<u>1</u> *	2	0	Future Intersection		9.3	10.0
21	Project Access 2 / Avenue 58	<u>CSS</u>	0	0	<u>1</u>	0	0	0	0	1	0	0	2	0	Future Intersection		8.6	9.2
22	Madison St. / Project Access 3	<u>CSS</u>	0	2	0	0	2	0	0	0	<u>1</u>	0	0	0	Future Intersection		9.3	10.6

¹ When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; >> = Free-Right Turn Lane; d = Defacto Right Turn Lane; 1 = Improvement

* = Left turn lane accommodated within two-way left turn lane

² Per the Highway Capacity Manual 6th Edition (HCM6), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control.

For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

Delay and level of service is calculated using Synchro 10.1 analysis software.

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

³ TS = Traffic Signal; CSS = Cross-street Stop; AWS = All-Way Stop; RDB = Roundabout

**TABLE 6-4: ROADWAY VOLUME/CAPACITY ANALYSIS
FOR EXISTING PLUS AMBIENT WITHOUT AND WITH PROJECT CONDITIONS**

Roadway	Segment	Roadway Designation	Through Travel Lanes ¹	Capacity ²	Without Project		With Project	
					ADT ³	Volume/ Capacity Ratio	ADT ³	Volume/ Capacity Ratio
Avenue 58	West of Madison Street	Secondary	3	21,000 ⁴	2,900	0.14	3,500	0.17
	West of Monroe Street	Secondary	4	28,000	3,700	0.13	5,600	0.20
	West of Jackson Street	Secondary	2	14,000 ⁴	3,900	0.28	4,700	0.34
Madison Street	South of Airport Boulevard	Primary	4	42,600	10,700	0.25	13,700	0.32
Avenue 60	West of Monroe Street	Secondary	3	21,000 ⁴	6,000	0.29	7,300	0.35
Monroe Street	South of Airport Boulevard	Primary	3	31,950 ⁵	6,000	0.19	7,100	0.22

¹ Existing Number of Through lanes

² Source: City of La Quinta Engineering Bulletin #06-13 (Oct 2017)

³ Average Daily Traffic (ADT) expressed in vehicles per day.

⁴ Capacity was calculated as a ratio of 4-lane Secondary capacity.

⁵ Capacity was calculated as a ratio of 4-lane Primary capacity.

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6.3 EAPC PHASE 1 (2021) CONDITIONS

EAPC Project Phase 1 (2021) ADT, weekday AM, and weekday PM peak hour volumes are shown on Exhibits 6-7 through 6-9, respectively.

6.3.1 INTERSECTION OPERATIONS ANALYSIS

LOS calculations were conducted for the study intersections to evaluate their operations under EAPC Project Phase 1 (2021) traffic conditions with roadway and intersection geometrics consistent with those described in Section 5.1.4 *EAPC (2021) Conditions*. The intersection analysis results are summarized in Table 6-5, which indicates that the following four study area intersections are anticipated to require installation of a traffic signal (which is funded in the CIP) in order to maintain acceptable LOS under EAPC conditions:

- Madison Street at Avenue 54
- Jefferson Street at Avenue 54
- Monroe Street at Avenue 54
- Monroe Street at Avenue 52

EAPC analysis results in a cumulatively impacted intersection for Jefferson Street at Avenue 52. The intersection operations analysis worksheets for EAPC Project Phase 1 (2021) traffic conditions are included in Appendix 6.5 of this TIA.

Table 6-5 also documents conditions with improvements to attain acceptable LOS. Jefferson Street at Avenue 52 requires reconstruction of the current roundabout design to incorporate 2 circulating lanes around the center island. This effectively accommodates an additional through lane in the northbound and southbound directions to provide acceptable LOS.

6.3.2 ROADWAY SEGMENT CAPACITY ANALYSIS

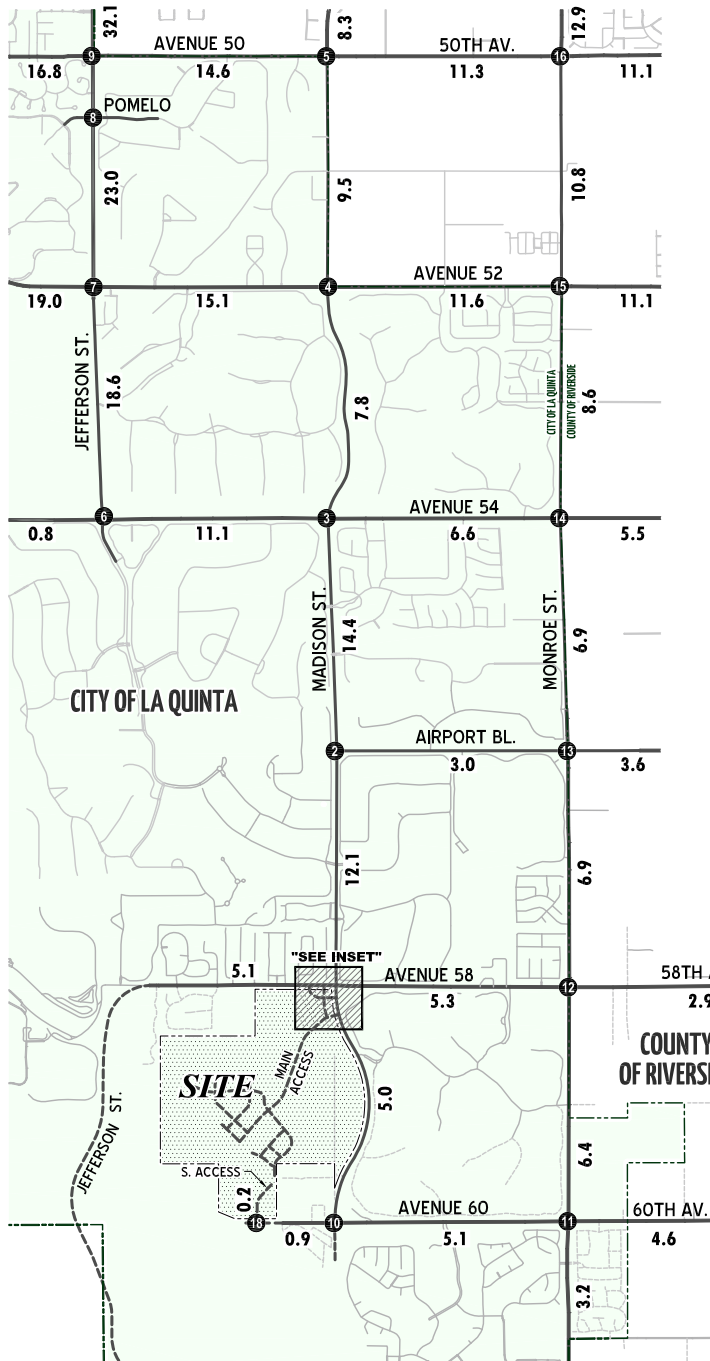
The roadway segment capacities are approximate figures only, and are typically used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet future forecasted traffic demand. Table 6-6 provides a summary of the EAPC Project Phase 1 (2021) traffic conditions roadway segment capacity analysis based on the City of La Quinta roadway segment capacity thresholds identified previously in Table 3-4. As shown on Table 6-6, all study roadway segments analyzed are anticipated to operate at acceptable LOS under EAPC Project Phase 1 (2021) traffic conditions.

6.3.3 TRAFFIC SIGNAL WARRANT ANALYSIS

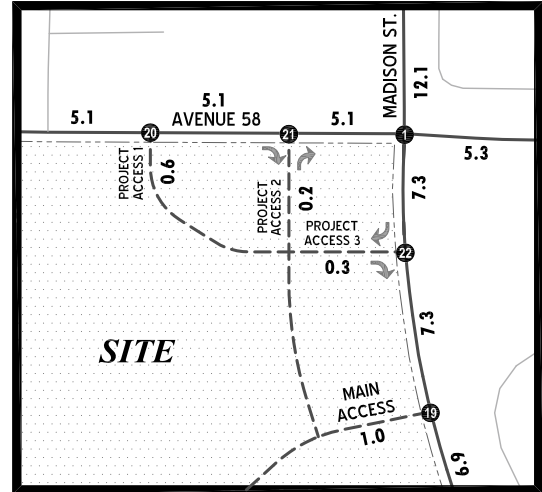
Traffic signal warrant analyses have been performed at all applicable unsignalized study area intersections for EAPC Project Phase 1 (2021) traffic conditions (see Appendix 6.6). Three additional intersections are projected to satisfy traffic signal warrants beyond the four that satisfy signal warrants for E+P conditions:

- Madison Street at Avenue 58
- Monroe Street at Avenue 58
- Monroe Street at Airport Boulevard

EXHIBIT 6-7: EAPC PHASE 1 (2021) AVERAGE DAILY TRAFFIC (ADT)



INSET



LEGEND:

- 22 ■ INTERSECTION ID
- 10.0 ■ VEHICLES PER DAY (1000'S)
- ■ FUTURE ROADWAY
- ↪ ↻ ■ RIGHT-IN/RIGHT-OUT ONLY ACCESS



EXHIBIT 6-8: EAPC PHASE 1 (2021) **AM PEAK HOUR INTERSECTION VOLUMES**

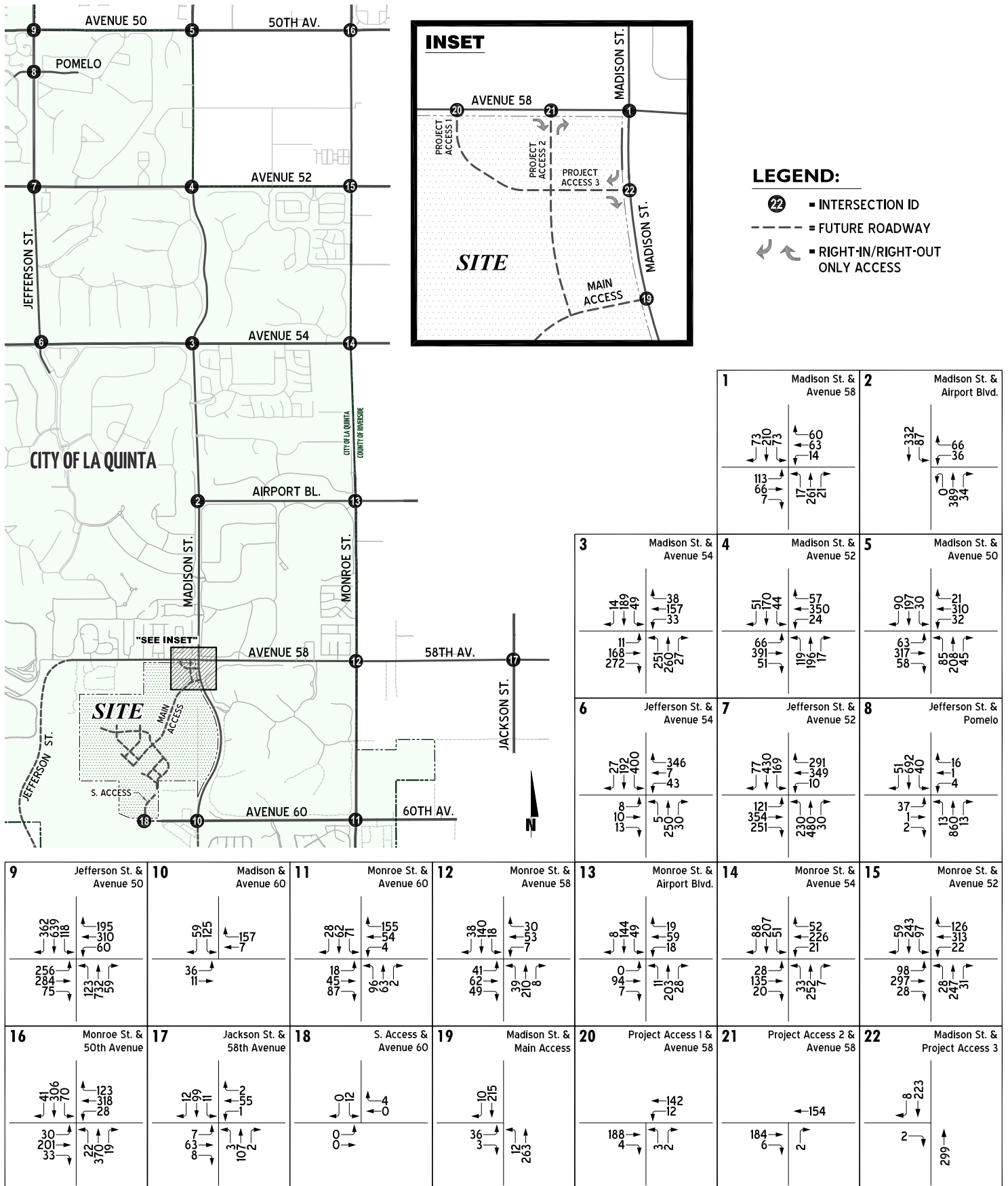
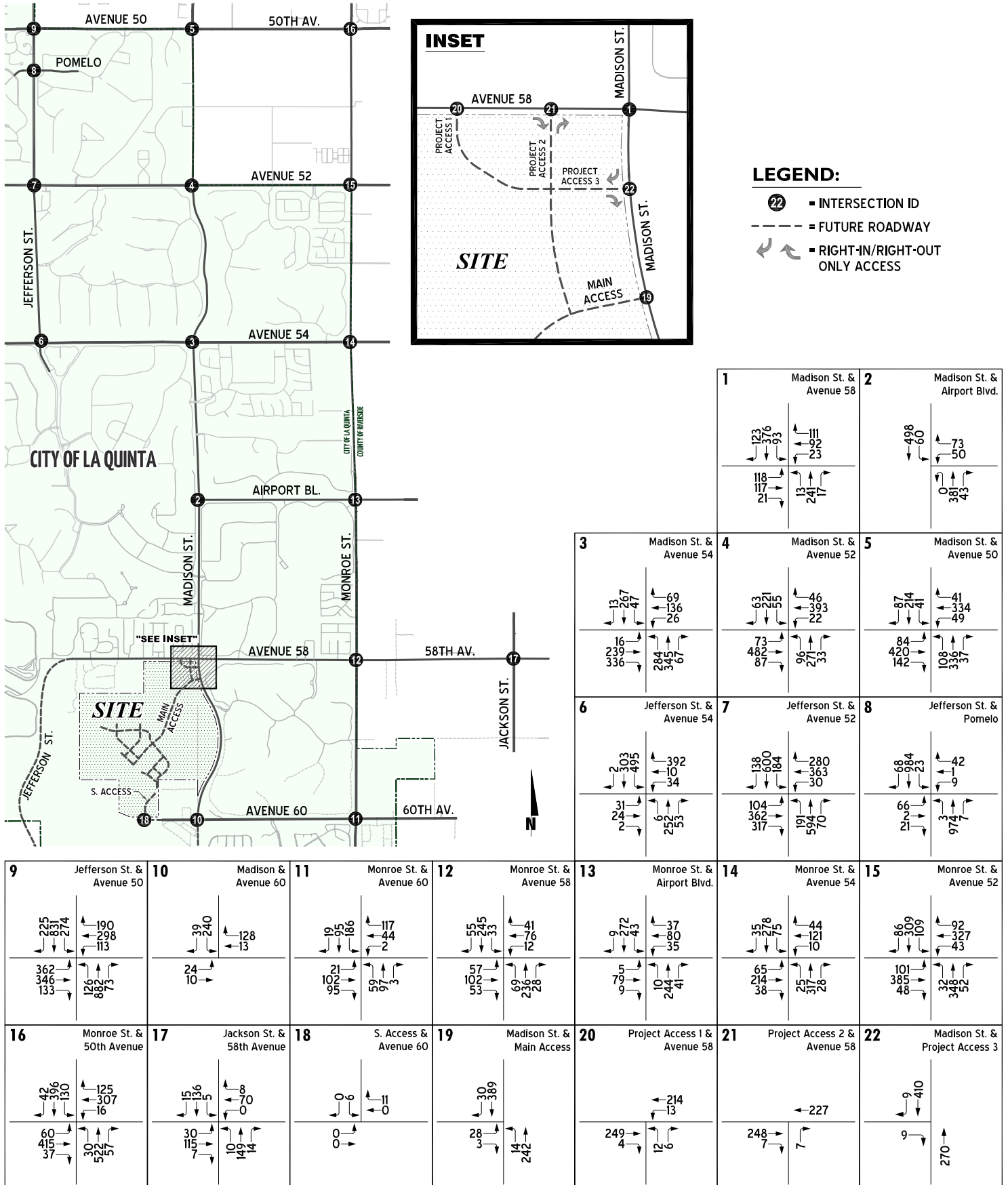


EXHIBIT 6-9: EAPC PHASE 1 (2021) PM PEAK HOUR INTERSECTION VOLUMES



**TABLE 6-5: INTERSECTION ANALYSIS
FOR PHASE 1 (2021) WITHOUT AND WITH PROJECT CONDITIONS**

#	Intersection	Traffic Control ³	Intersection Approach Lanes ¹												Without Project				With Project			
															Delay ²		Level of Service ²		Delay ²		Level of Service ²	
			Northbound			Southbound			Eastbound			Westbound			(Secs)		Service ²		(Secs)		Service ²	
L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM	AM	PM	AM	PM			
1	Madison St. / Avenue 58	AWS	1	2	1	1	2	d	1	1	1	1	2	1	10.9	14.2	B	B	11.4	15.6	B	C
2	Madison St. / Airport Blvd.	TS	1	2	d	1	2	0	0	0	0	1	0	1	8.8	10.2	A	B	8.9	10.2	A	B
3	Madison St. / Avenue 54	AWS																				
	- Without Improvements		2	2	1	1	2	0	1	2	d	1	2	1	21.3	47.6	C	E	22.6	53.0	C	F
	- With Improvements	TS	2	2	1	1	2	0	1	2	d	1	2	1	31.4	31.6	C	C	31.5	31.7	C	C
4	Madison St. / Avenue 52	TS	2	2	1	2	2	d	1	2	d	1	2	1	30.2	30.0	C	C	30.5	30.2	C	C
5	Madison St. / Avenue 50	TS	2	2	1	2	2	1	1	2	1	1	2	1	29.9	31.3	C	C	30.0	31.3	C	C
6	Jefferson St. / Avenue 54	AWS																				
	- Without Improvements		0.5	1	0.5	2	2	1	1	2	0	1	1	1	18.8	49.7	C	E	19.3	52.1	C	F
	- With Improvements	TS	0.5	1	0.5	2	2	1	1	2	0	1	1	1	36.1	39.9	D	D	36.2	40.3	D	D
7	Jefferson St. / Avenue 52																					
	- Without Improvements	RDB	0.5	0.5	1>>	0.5	0.5	1>>	0.5	0.5	1>>	0.5	0.5	1>>	42.8	78.7	E	F	44.3	>80	E	F
	- Without Improvements	RDB	0.5	1.5	1>>	0.5	1.5	1>>	0.5	0.5	1>>	0.5	0.5	1>>	10.2	12.8	B	B	10.3	13.0	B	B
8	Jefferson St. / Pomelo	TS	1	3	0	1	3	0	0.5	0.5	1	0.5	0.5	1	9.3	34.4	A	C	9.4	34.4	A	C
9	Jefferson St. / Avenue 50	TS	1	3	1	2	3	1	1	2	1	1	1	1	52.4	50.6	D	D	52.5	50.7	D	D
10	Madison St. / Avenue 60	AWS	0	0	0	1	0	1	0.5	0.5	0	0	1	1	8.8	10.6	A	B	8.9	10.8	A	B
11	Monroe St. / Avenue 60	AWS	1	1	0	1	1	1	0.5	0.5	1	0	1!	0	10.4	12.0	B	B	10.5	12.3	B	B
12	Monroe St. / Avenue 58	AWS	0	1!	0	0.5	0.5	1	0	1!	0	0	1!	0	10.8	23.8	B	C	11.0	26.8	B	D
13	Monroe St. / Airport Blvd.	AWS	1	1	0	1	2	d	1	1	1	0	1!	0	11.1	13.8	B	B	11.3	14.1	B	B
14	Monroe St. / Avenue 54																					
	- Without Improvements	AWS	0	1!	0	0.5	0.5	1	1	1	0	0	1!	0	31.1	35.7	D	E	33.0	35.9	D	E
	- With Improvements	TS	0	1!	0	0.5	0.5	1	1	1	0	0	1!	0	23.5	23.0	C	C	23.7	23.2	C	C
15	Monroe St. / Avenue 52																					
	- Without Improvements	AWS	0	1!	0	1	2	0	1	1	1	1	2	d	50.3	>80	F	F	53.1	>80	F	F
	- With Improvements	TS	0	1!	0	1	2	0	1	1	1	1	2	d	13.0	14.7	B	B	13.0	14.7	B	B
16	Monroe St. / 50th Avenue	TS	1	2	0	1	2	0	1	1	1	1	1	1>	16.3	20.4	B	C	16.3	20.4	B	C
17	Jackson St. / 58th Avenue	AWS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	8.1	9.8	A	A	8.1	9.8	A	A
18	S. Access / Avenue 60	CSS	0	0	0	0	1!	0	0	1	0	0	1	0	Future Intersection			8.6	8.6	A	A	
19	Madison St. / Main Access	CSS	1	2	0	0	2	0	1	0	1	0	0	0	Future Intersection			11.2	12.6	B	B	
20	Project Access 1 / Avenue 58	CSS	0	1!	0	0	0	0	0	1	0	1*	2	0	Future Intersection			9.9	10.6	A	B	
21	Project Access 2 / Avenue 58	CSS	0	0	1	0	0	0	0	1	0	0	2	0	Future Intersection			9.3	9.8	A	A	
22	Madison St. / Project Access 3	CSS	0	2	0	0	2	0	0	0	1	0	0	0	Future Intersection			9.0	9.7	A	A	

¹ When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; >> = Free-Right Turn Lane; d = Defacto Right Turn Lane; **1** = Improvement

* = Left turn lane accommodated within two-way left turn lane

² Per the Highway Capacity Manual 6th Edition (HCM6), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control.

For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

Delay and level of service is calculated using Synchro 10.1 analysis software.

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

³ TS = Traffic Signal; CSS = Cross-street Stop; AWS = All-Way Stop; RDB = Roundabout

**TABLE 6-6: ROADWAY VOLUME/CAPACITY ANALYSIS
FOR PHASE 1 (2021) WITHOUT AND WITH PROJECT CONDITIONS**

Roadway	Segment	Roadway Designation	Through Travel Lanes ¹	Capacity ²	Without Project		With Project	
					ADT ³	Volume/ Capacity Ratio	ADT ³	Volume/ Capacity Ratio
Avenue 58	West of Madison Street	Secondary	3	21,000 ⁴	4,700	0.22	5,100	0.24
	West of Monroe Street	Secondary	4	28,000	4,800	0.17	5,300	0.19
	West of Jackson Street	Secondary	2	14,000 ⁴	2,700	0.19	2,900	0.21
Madison Street	South of Airport Boulevard	Primary	4	42,600	11,200	0.26	12,100	0.28
Avenue 60	West of Monroe Street	Secondary	3	21,000 ⁴	4,700	0.22	5,100	0.24
Monroe Street	South of Airport Boulevard	Primary	3	31,950 ⁵	6,600	0.21	6,900	0.22

¹ Existing Number of Through lanes

² Source: City of La Quinta Engineering Bulletin #06-13 (Oct 2017)

³ Average Daily Traffic (ADT) expressed in vehicles per day.

⁴ Capacity was calculated as a ratio of 4-lane Secondary capacity.

⁵ Capacity was calculated as a ratio of 4-lane Primary capacity.

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6.4 EAPC PHASE 2 (2023) CONDITIONS

EAPC Project Phase 2 (2023) ADT, weekday AM, and weekday PM peak hour volumes are shown on Exhibits 6-10 through 6-12, respectively.

6.4.1 INTERSECTION OPERATIONS ANALYSIS

LOS calculations were conducted for the study intersections to evaluate their operations under EAPC Project Phase 2 (2023) traffic conditions with roadway and intersection geometrics consistent with those described in Section 5.1.5 *EAPC (2023) Conditions*. The intersection analysis results are summarized in Table 6-7, which indicates that the following five study area intersections are anticipated to require installation of a traffic signal (which is funded in the CIP) in order to maintain acceptable LOS under EAPC Phase 2 conditions:

- Madison Street at Avenue 54
- Jefferson Street at Avenue 54
- Monroe Street at Avenue 58
- Monroe Street at Avenue 54
- Monroe Street at Avenue 52

EAPC analysis results in one cumulatively impacted intersection (Jefferson Street at Avenue 52). The intersection operations analysis worksheets for EAPC Project Phase 2 (2023) traffic conditions are included in Appendix 6.5 of this TIA.

Table 6-7 also documents conditions with improvements to attain acceptable LOS. Similar to EAPC (2021) conditions, Jefferson Street at Avenue 52 requires reconstruction of the current roundabout design to incorporate 2 circulating lanes around the center island. This effectively accommodates an additional through lane in the northbound and southbound directions to provide acceptable LOS.

6.4.2 ROADWAY SEGMENT CAPACITY ANALYSIS

The roadway segment capacities are approximate figures only, and are typically used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet future forecasted traffic demand. Table 6-8 provides a summary of the EAPC Project Phase 2 (2023) traffic conditions roadway segment capacity analysis based on the City of La Quinta roadway segment capacity thresholds identified previously in Table 3-4. As shown on Table 6-8, all study roadway segments analyzed are anticipated to operate at acceptable LOS under EAPC Project Phase 2 (2023) traffic conditions.

6.4.3 TRAFFIC SIGNAL WARRANT ANALYSIS

Traffic signal warrant analyses have been performed at all applicable unsignalized study area intersections for EAPC Project Phase 2 (2023) traffic conditions (see Appendix 6.6). One additional intersection (Monroe Street at Avenue 60) is projected to satisfy traffic signal warrants beyond the seven that satisfy signal warrants for EAPC (2021) conditions.

EXHIBIT 6-10: EAPC PHASE 2 (2023) AVERAGE DAILY TRAFFIC (ADT)

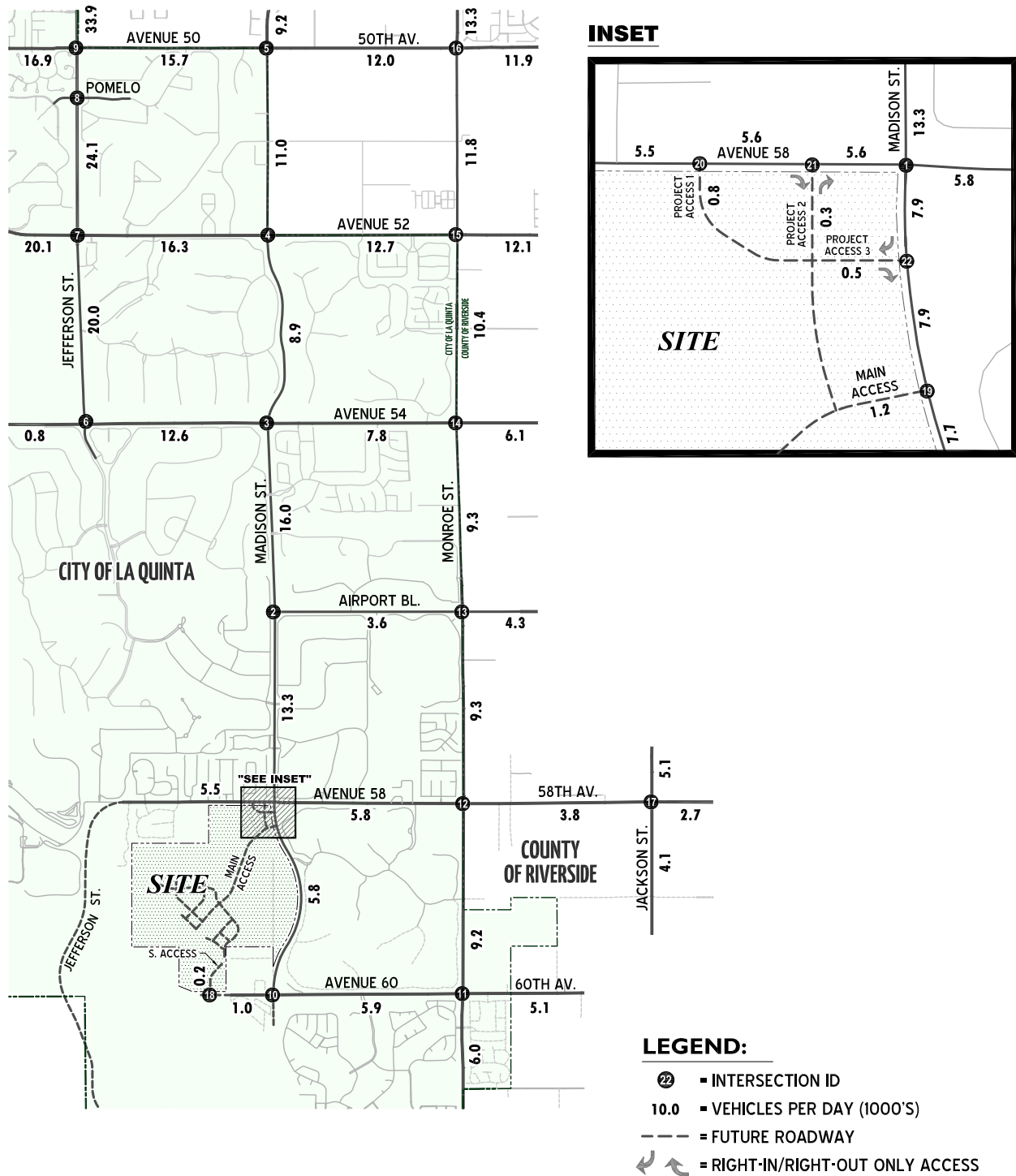


EXHIBIT 6-11: EAPC PHASE 2 (2023) **AM PEAK HOUR INTERSECTION VOLUMES**

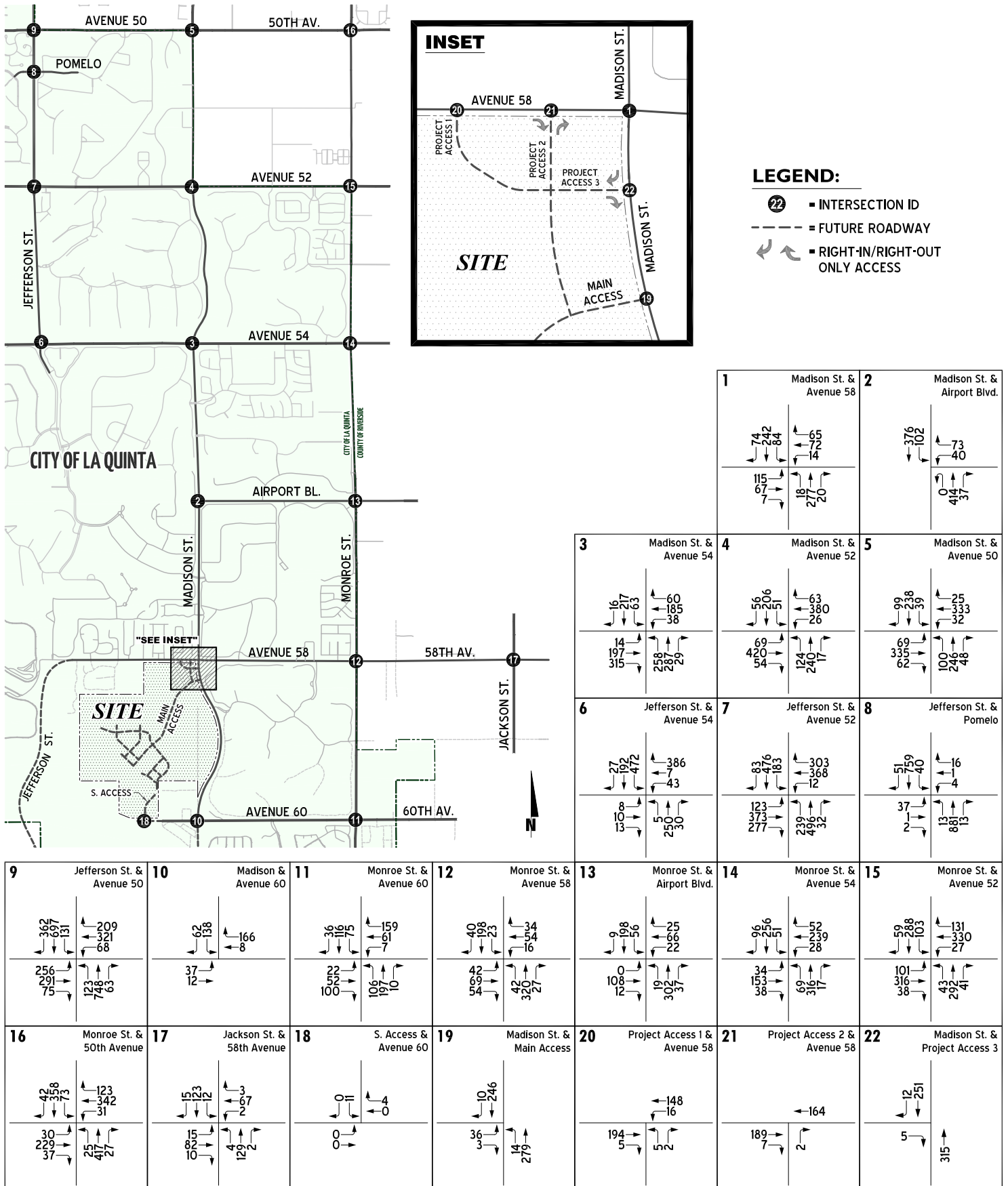
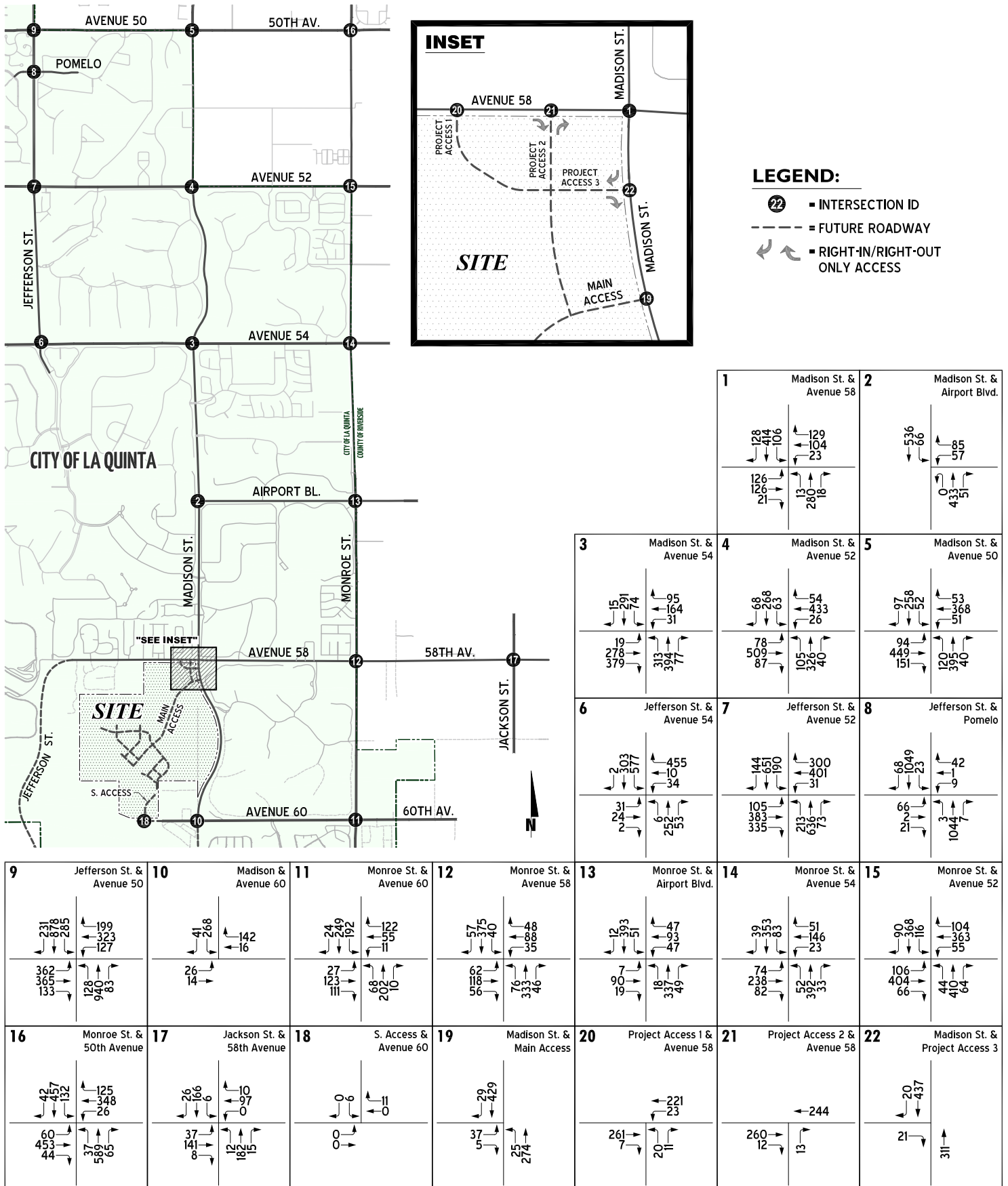


EXHIBIT 6-12: EAPC PHASE 2 (2023) PM PEAK HOUR INTERSECTION VOLUMES



**TABLE 6-7: INTERSECTION ANALYSIS
FOR PHASE 2 (2023) WITHOUT AND WITH PROJECT CONDITIONS**

#	Intersection	Traffic Control ³	Intersection Approach Lanes ¹												Without Project				With Project			
			Northbound				Southbound				Eastbound				Delay ² (Secs)		Level of Service ²		Delay ² (Secs)		Level of Service ²	
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM	AM	PM	AM	PM
1	Madison St. / Avenue 58	AWS	1	2	1	1	2	d	1	1	1	1	2	1	11.4	15.9	B	C	12.0	18.2	B	C
2	Madison St. / Airport Blvd.	TS	1	2	d	1	2	0	0	0	0	1	0	1	9.0	10.4	A	B	9.2	10.4	A	B
3	Madison St. / Avenue 54																					
	- Without Improvements	AWS	2	2	1	1	2	0	1	2	d	1	2	1	33.9	>80	D	F	36.9	>80	E	F
	- With Improvements	<u>TS</u>	2	2	1	1	2	0	1	2	d	1	2	1	34.5	38.5	C	D	34.8	38.8	C	D
4	Madison St. / Avenue 52	TS	2	2	1	2	2	d	1	2	d	1	2	1	30.8	30.8	C	C	31.0	31.1	C	C
5	Madison St. / Avenue 50	TS	2	2	1	2	2	1	1	2	1	1	2	1	30.7	32.1	C	C	30.8	32.1	C	C
6	Jefferson St. / Avenue 54																					
	- Without Improvements	AWS	0.5	1	0.5	2	2	1	1	2	0	1	1	1	24.1	79.4	C	F	25.2	>80	D	F
	- With Improvements	<u>TS</u>	0.5	1	0.5	2	2	1	1	2	0	1	1	1	42.7	41.6	D	D	43.0	42.3	D	D
7	Jefferson St. / Avenue 52																					
	- Without Improvements	RDB	0.5	0.5	1>>	0.5	0.5	1>>	0.5	0.5	1>>	0.5	0.5	1>>	59.8	>80	F	F	61.7	>80	F	F
	- Without Improvements	RDB	0.5	<u>1.5</u>	1>>	0.5	<u>1.5</u>	1>>	0.5	0.5	1>>	0.5	0.5	1>>	11.7	16.6	B	C	11.8	16.9	B	C
8	Jefferson St. / Pomelo	TS	1	3	0	1	3	0	0.5	0.5	1	0.5	0.5	1	15.6	34.8	B	C	15.6	34.8	B	C
9	Jefferson St. / Avenue 50	TS	1	3	1	2	3	1	1	2	1	1	1	1	52.3	53.3	D	D	52.4	53.4	D	D
10	Madison St. / Avenue 60	AWS	0	0	0	1	0	1	0.5	0.5	0	0	1	1	9.0	11.2	A	B	9.2	11.7	A	B
11	Monroe St. / Avenue 60	AWS	1	1	0	1	1	1	0.5	0.5	1	0	1!	0	13.0	18.0	B	C	13.3	19.1	B	C
12	Monroe St. / Avenue 58																					
	- Without Improvements	AWS	0	1!	0	0.5	0.5	1	0	1!	0	0	1!	0	15.7	>80	C	F	16.4	>80	C	F
	- With Improvements	<u>TS</u>	0	1!	0	0.5	0.5	1	0	1!	0	0	1!	0	17.3	21.7	B	C	18.1	22.9	B	C
13	Monroe St. / Airport Blvd.	AWS	1	1	0	1	2	d	1	1	1	0	1!	0	15.6	27.7	C	D	16.2	29.1	C	D
14	Monroe St. / Avenue 54																					
	- Without Improvements	AWS	0	1!	0	0.5	0.5	1	1	1	0	0	1!	0	>80	>80	F	F	>80	>80	F	F
	- With Improvements	<u>TS</u>	0	1!	0	0.5	0.5	1	1	1	0	0	1!	0	24.4	24.0	C	C	24.5	24.0	C	C
15	Monroe St. / Avenue 52																					
	- Without Improvements	AWS	0	1!	0	1	2	0	1	1	1	1	2	d	>80	>80	F	F	>80	>80	F	F
	- With Improvements	<u>TS</u>	0	1!	0	1	2	0	1	1	1	1	2	d	13.9	15.5	B	B	13.9	15.5	B	B
16	Monroe St. / 50th Avenue	TS	1	2	0	1	2	0	1	1	1	1	1	1>	16.6	21.5	B	C	16.6	21.5	B	C
17	Jackson St. / 58th Avenue	AWS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	8.5	11.3	A	B	8.6	11.5	A	B
18	S. Access / Avenue 60	<u>CSS</u>	0	0	0	0	<u>1!</u>	0	0	<u>1</u>	0	0	<u>1</u>	0	Future Intersection				8.6	8.6	A	A
19	Madison St. / Main Access	<u>CSS</u>	<u>1</u>	2	0	0	2	0	<u>1</u>	0	<u>1</u>	0	0	0	Future Intersection				11.5	13.5	B	B
20	Project Access 1 / Avenue 58	<u>CSS</u>	0	<u>1!</u>	0	0	0	0	0	1	0	<u>1*</u>	2	0	Future Intersection				10.1	10.9	B	B
21	Project Access 2 / Avenue 58	<u>CSS</u>	0	0	<u>1</u>	0	0	0	0	1	0	0	2	0	Future Intersection				9.3	9.9	A	A
22	Madison St. / Project Access 3	<u>CSS</u>	0	2	0	0	2	0	0	0	<u>1</u>	0	0	0	Future Intersection				9.1	9.9	A	A

¹ When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; >> = Free-Right Turn Lane; d = Defacto Right Turn Lane; 1 = Improvement

* = Left turn lane accommodated within two-way left turn lane

² Per the Highway Capacity Manual 6th Edition (HCM6), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control.

For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

Delay and level of service is calculated using Synchro 10.1 analysis software.

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

³ TS = Traffic Signal; CSS = Cross-street Stop; AWS = All-Way Stop; RDB = Roundabout

**TABLE 6-8: ROADWAY VOLUME/CAPACITY ANALYSIS
FOR PHASE 2 (2023) WITHOUT AND WITH PROJECT CONDITIONS**

Roadway	Segment	Roadway Designation	Through Travel Lanes ¹	Capacity ²	Without Project		With Project	
					ADT ³	Volume/ Capacity Ratio	ADT ³	Volume/ Capacity Ratio
Avenue 58	West of Madison Street	Secondary	3	21,000 ⁴	5,100	0.24	5,600	0.27
	West of Monroe Street	Secondary	4	28,000	5,200	0.19	5,800	0.21
	West of Jackson Street	Secondary	2	14,000 ⁴	3,500	0.25	3,800	0.27
Madison Street	South of Airport Boulevard	Primary	4	42,600	12,300	0.29	13,300	0.31
Avenue 60	West of Monroe Street	Secondary	3	21,000 ⁴	5,500	0.26	5,900	0.28
Monroe Street	South of Airport Boulevard	Primary	3	31,950 ⁵	9,100	0.28	9,300	0.29

¹ Existing Number of Through lanes

² Source: City of La Quinta Engineering Bulletin #06-13 (Oct 2017)

³ Average Daily Traffic (ADT) expressed in vehicles per day.

⁴ Capacity was calculated as a ratio of 4-lane Secondary capacity.

⁵ Capacity was calculated as a ratio of 4-lane Primary capacity.

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6.5 EAPC PROJECT BUILDOUT (2026) CONDITIONS

EAPC Project Buildout (2026) ADT, weekday AM, and weekday PM peak hour volumes are shown on Exhibits 6-13 through 6-15, respectively.

6.5.1 INTERSECTION OPERATIONS ANALYSIS

LOS calculations were conducted for the study intersections to evaluate their operations under EAPC Project Buildout (2026) traffic conditions with roadway and intersection geometrics consistent with those described in Section 5.1.6 *EAPC (2026) Conditions*. The intersection analysis results are summarized in Table 6-9, which indicates that the following eight study area intersections are anticipated to require installation of a traffic signal in order to maintain acceptable LOS under EAPC Project Buildout conditions:

- Madison Street at Avenue 58
- Madison Street at Avenue 54
- Jefferson Street at Avenue 54
- Monroe Street at Avenue 60
- Monroe Street at Avenue 58
- Monroe Street at Airport Boulevard
- Monroe Street at Avenue 54
- Monroe Street at Avenue 52

In addition, for Jefferson Street at Avenue 50, a second westbound through lane is necessary to maintain acceptable level of service. EAPC analysis results in one cumulatively impacted intersection (Jefferson Street at Avenue 52). The intersection operations analysis worksheets for EAPC Project Buildout traffic conditions are included in Appendix 6.5 of this TIA.

Table 6-8 also documents conditions with improvements to attain acceptable LOS. Similar to EAPC (2021) and EAPC (2023) conditions, Jefferson Street at Avenue 52 requires reconstruction of the current roundabout design to incorporate 2 circulating lanes around the center island. This effectively accommodates an additional through lane in the northbound and southbound directions to provide acceptable LOS.

6.5.2 ROADWAY SEGMENT CAPACITY ANALYSIS

The roadway segment capacities are approximate figures only, and are typically used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet future forecasted traffic demand. Table 6-10 provides a summary of the EAPC Project Buildout (2026) traffic conditions roadway segment capacity analysis based on the City of La Quinta roadway segment capacity thresholds identified previously in Table 3-4. As shown on Table 6-9, all study roadway segments analyzed are anticipated to operate at acceptable LOS under EAPC Project Buildout (2026) traffic conditions.

EXHIBIT 6-13: EAPC PHASE 3 (2026) AVERAGE DAILY TRAFFIC (ADT)

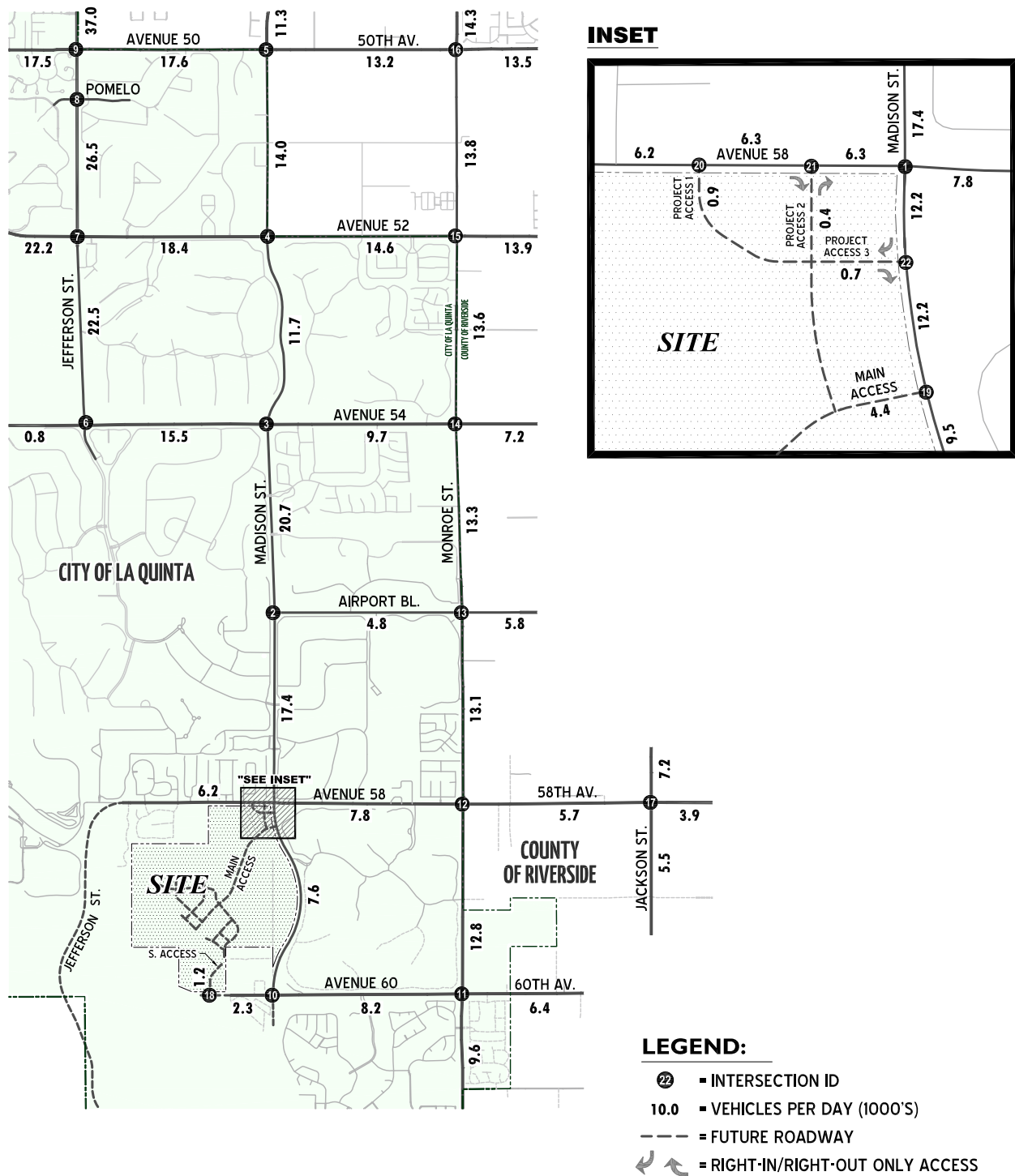


EXHIBIT 6-14: EAPC PHASE 3 (2026) **AM PEAK HOUR INTERSECTION VOLUMES**

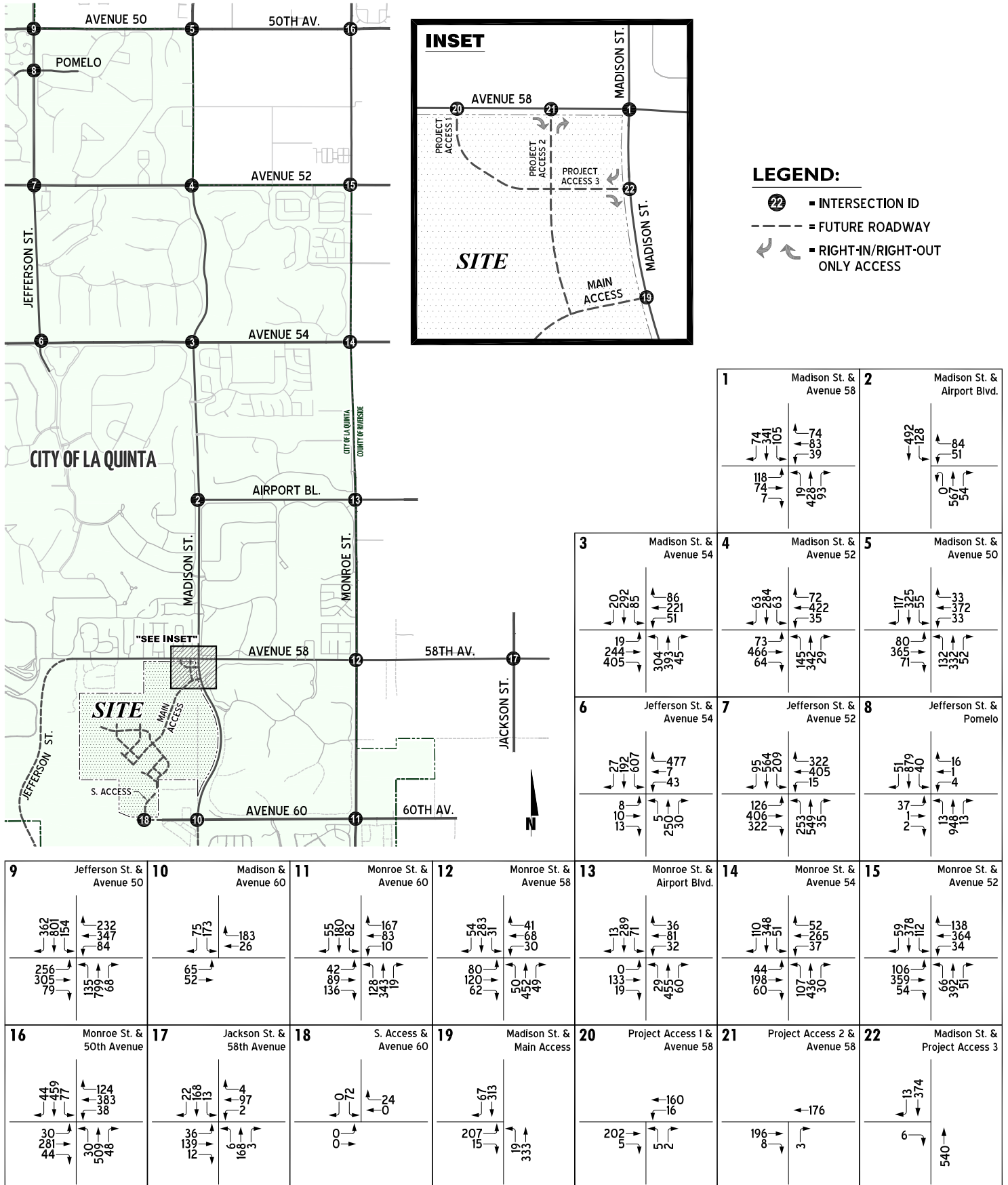
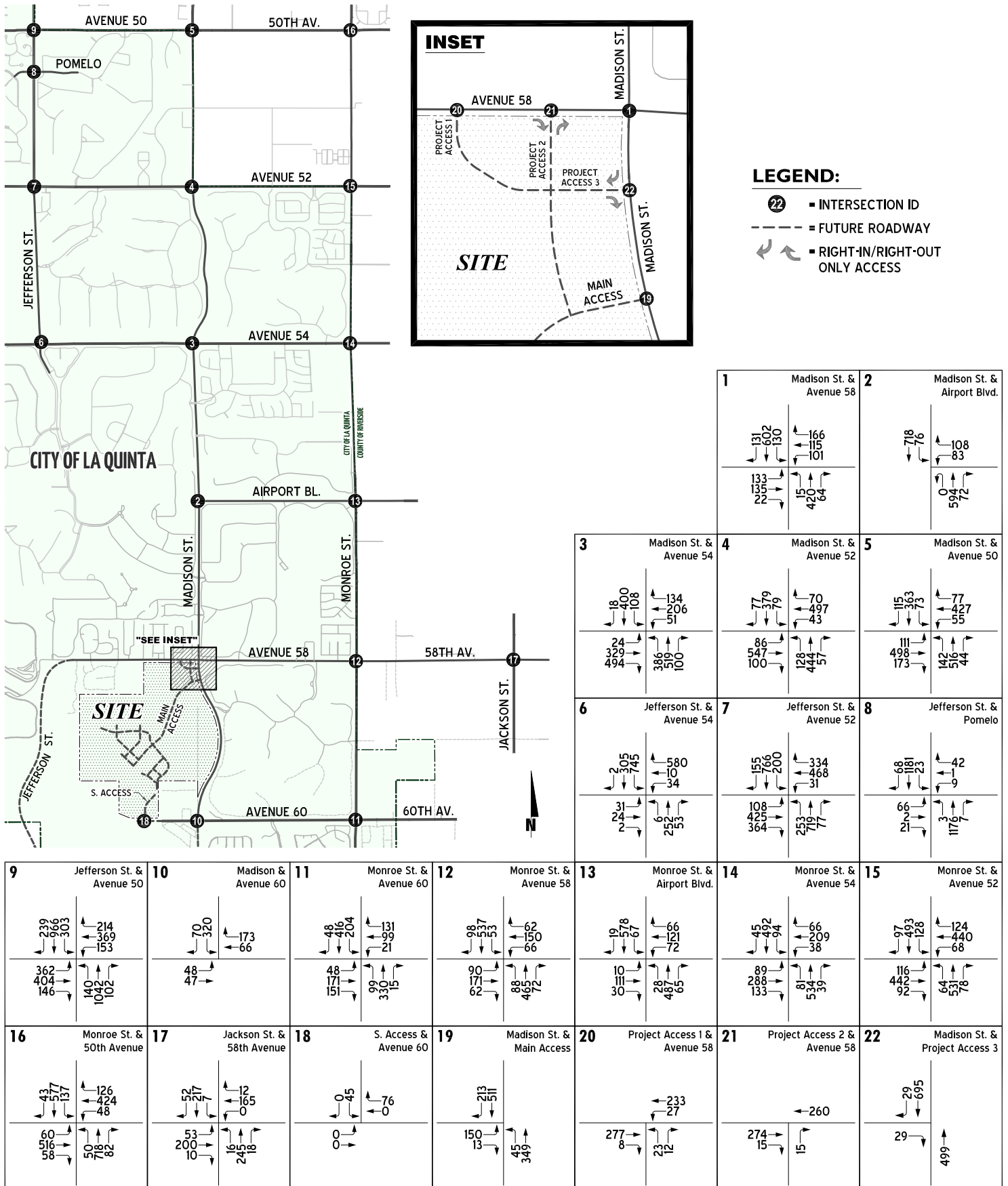


EXHIBIT 6-15: EAPC PHASE 3 (2026) PM PEAK HOUR INTERSECTION VOLUMES



**TABLE 6-9: INTERSECTION ANALYSIS
FOR PHASE 3 (2026) WITHOUT AND WITH PROJECT CONDITIONS**

#	Intersection	Traffic Control ³	Intersection Approach Lanes ¹												Without Project				With Project			
			Northbound				Southbound				Eastbound				Delay ² (Secs)		Level of Service ²		Delay ² (Secs)		Level of Service ²	
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM	AM	PM	AM	PM
1	Madison St. / Avenue 58																					
	- Without Improvements	AWS	1	2	1	1	2	d	1	1	1	1	2	1	12.7	20.8	B	C	17.3	57.9	C	F
	- With Improvements	TS	1	2	1	1	2	d	1	1	1	1	2	1	27.4	32.0	C	C	27.4	32.1	C	C
2	Madison St. / Airport Blvd.	TS	1	2	d	1	2	0	0	0	0	1	0	1	9.6	10.9	A	B	9.6	10.9	A	B
3	Madison St. / Avenue 54																					
	- Without Improvements	AWS	2	2	1	1	2	0	1	2	d	1	2	1	79.2	>80	F	F	>80	>80	F	F
	- With Improvements	TS	2	2	1	1	2	0	1	2	d	1	2	1	41.2	43.6	D	D	41.6	50.3	D	D
4	Madison St. / Avenue 52	TS	2	2	1	2	2	d	1	2	d	1	2	1	31.6	32.3	C	C	32.2	33.1	C	C
5	Madison St. / Avenue 50	TS	2	2	1	2	2	1	1	2	1	1	2	1	31.9	33.4	C	C	32.2	33.6	C	C
6	Jefferson St. / Avenue 54																					
	- Without Improvements	AWS	0.5	1	0.5	2	2	1	1	2	0	1	1	1	40.6	>80	E	F	54.2	>80	F	F
	- With Improvements	TS	0.5	1	0.5	2	2	1	1	2	0	1	1	1>	22.7	22.5	C	C	22.9	22.6	C	C
7	Jefferson St. / Avenue 52																					
	- Without Improvements	RDB	0.5	0.5	1>>	0.5	0.5	1>>	0.5	0.5	1>>	0.5	0.5	1>>	>80	>80	F	F	>80	>80	F	F
	- Without Improvements	RDB	0.5	1.5	1>>	0.5	1.5	1>>	0.5	0.5	1>>	0.5	0.5	1>>	15.1	28.3	C	D	16.8	34.3	C	D
8	Jefferson St. / Pomelo	TS	1	3	0	1	3	0	0.5	0.5	1	0.5	0.5	1	19.4	35.4	B	D	19.5	35.8	B	D
9	Jefferson St. / Avenue 50																					
	- Without Improvements	TS	1	3	1	2	3	1	1	2	1	1	1	1	52.4	58.8	D	E	53.0	60.3	D	E
	- With Improvements	TS	1	3	1	2	3	1	1	2	1	1	2	1	51.4	51.0	D	D	51.8	51.6	D	D
10	Madison St. / Avenue 60	AWS	0	0	0	1	0	1	0.5	0.5	0	0	1	1	9.4	12.8	A	B	10.2	14.8	B	B
11	Monroe St. / Avenue 60																					
	- Without Improvements	AWS	1	1	0	1	1	1	0.5	0.5	1	0	1!	0	25.9	76.4	D	F	30.9	>80	D	F
	- With Improvements	TS	1	1	0	1	1	1	0.5	0.5	1	0	1!	0	33.3	34.9	C	C	34.4	37.7	C	D
12	Monroe St. / Avenue 58																					
	- Without Improvements	AWS	0	1!	0	0.5	0.5	1	0	1!	0	0	1!	0	52.2	>80	F	F	>80	>80	F	F
	- With Improvements	TS	1	1	0	1	1	0	1	1	0	1	1	0	23.2	33.3	C	C	25.9	38.1	C	D
13	Monroe St. / Airport Blvd.																					
	- Without Improvements	AWS	1	1	0	1	2	d	1	1	1	0	1!	0	47.3	>80	E	F	70.4	>80	F	F
	- With Improvements	TS	1	1	0	1	2	d	1	1	1	0	1!	0	24.0	24.9	C	C	24.6	25.8	C	C
14	Monroe St. / Avenue 54																					
	- Without Improvements	AWS	0	1!	0	0.5	0.5	1	1	1	0	0	1!	0	>80	>80	F	F	>80	>80	F	F
	- With Improvements	TS	1	1	0	1	1	0	1	1	0	1	1	0	34.7	37.0	C	D	35.0	37.7	C	D
15	Monroe St. / Avenue 52																					
	- Without Improvements	AWS	0	1!	0	1	2	0	1	1	1	1	2	d	>80	>80	F	F	>80	>80	F	F
	- With Improvements	TS	0	1!	0	1	2	0	1	1	1	1	2	d	33.7	41.2	C	D	34.1	44.1	C	D
16	Monroe St. / 50th Avenue	TS	1	2	0	1	2	0	1	1	1	1	1	1>	17.7	25.0	B	C	17.9	25.8	B	C
17	Jackson St. / 58th Avenue	AWS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	9.5	16.9	A	C	9.9	21.5	A	C

**TABLE 6-9: INTERSECTION ANALYSIS
FOR PHASE 3 (2026) WITHOUT AND WITH PROJECT CONDITIONS**

#	Intersection	Traffic Control ³	Intersection Approach Lanes ¹												Without Project				With Project			
			Northbound				Southbound				Eastbound				Delay ² (Secs)		Level of Service ²		Delay ² (Secs)		Level of Service ²	
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM	AM	PM	AM	PM
18	S. Access / Avenue 60	CSS	0	0	0	0	1!	0	0	1	0	0	1	0	Future Intersection				8.9	8.9	A	A
19	Madison St. / Main Access	CSS	1	2	0	0	2	0	1	0	1	0	0	0	Future Intersection				17.4	24.3	C	C
20	Project Access 1 / Avenue 58	CSS	0	1!	0	0	0	0	0	1	0	1*	2	0	Future Intersection				10.2	11.1	B	B
21	Project Access 2 / Avenue 58	CSS	0	0	1	0	0	0	0	1	0	0	2	0	Future Intersection				9.4	10.0	A	B
22	Madison St. / Project Access 3	CSS	0	2	0	0	2	0	0	0	1	0	0	0	Future Intersection				9.6	11.3	A	B

¹ When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; >> = Free-Right Turn Lane; d= Defacto Right Turn Lane; **1** = Improvement

* = Left turn lane accommodated within two-way left turn lane

² Per the Highway Capacity Manual 6th Edition (HCM6), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

Delay and level of service is calculated using Synchro 10.1 analysis software.

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

³ TS = Traffic Signal; CSS = Cross-street Stop; AWS = All-Way Stop; RDB = Roundabout

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**TABLE 6-10: ROADWAY VOLUME/CAPACITY ANALYSIS
FOR PHASE 3 (2026) WITHOUT AND WITH PROJECT CONDITIONS**

Roadway	Segment	Roadway Designation	Through Travel Lanes ¹	Capacity ²	Without Project		With Project	
					ADT ³	Volume/ Capacity Ratio	ADT ³	Volume/ Capacity Ratio
Avenue 58	West of Madison Street	Secondary	3	21,000 ⁴	5,700	0.27	6,300	0.30
	West of Monroe Street	Secondary	4	28,000	5,900	0.21	7,800	0.28
	West of Jackson Street	Secondary	2	14,000 ⁴	4,900	0.35	5,700	0.41
Madison Street	South of Airport Boulevard	Primary	4	42,600	14,300	0.34	17,400	0.41
Avenue 60	West of Monroe Street	Secondary	3	21,000 ⁴	6,900	0.33	8,200	0.39
Monroe Street	South of Airport Boulevard	Primary	3	31,950 ⁵	12,100	0.38	13,100	0.41

¹ Existing Number of Through lanes

² Source: City of La Quinta Engineering Bulletin #06-13 (Oct 2017)

³ Average Daily Traffic (ADT) expressed in vehicles per day.

⁴ Capacity was calculated as a ratio of 4-lane Secondary capacity.

⁵ Capacity was calculated as a ratio of 4-lane Primary capacity.

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6.5.3 TRAFFIC SIGNAL WARRANT ANALYSIS

Traffic signal warrant analyses have been performed at all applicable unsignalized study area intersections for EAPC Project Buildout (2026) traffic conditions (see Appendix 6.6). Two additional intersections (Jackson Street at Avenue 58 and Madison Street at Main Access) are projected to satisfy traffic signal warrants beyond the eight that satisfy signal warrants for EAPC (2023) conditions.

6.5.4 QUEUING ANALYSIS

A queuing analysis was performed for With Project Conditions to assess the adequacy of turn bay lengths to accommodate vehicle queues at the Project entries. Queuing analysis findings are presented in Table 6-11 for EAPC (2026) traffic conditions. Queueing analysis worksheets for EAPC (2026) are also provided in Appendix 6.5.

**TABLE 6-11: PROJECT ACCESS TURN LANE STORAGE LENGTHS
FOR EAPC PHASE 3 (2026) CONDITIONS**

ID	Intersection	Turning Movement Lane	EAPC (2026)				Storage Length ² (ft.)	95th Percentile ¹ Queue Length	
			AM	PM	Peak Hour	Volume		AM	PM
18	S. Access / Avenue 60	SBL/SBR	72	45	AM	72	<u>>300</u>	56	49
19	Madison St. / Main Access	NBL	19	45	PM	45	<u>150</u>	22	45
		EBL	207	150	AM	207	<u>150</u>	101	115
		EBR	15	13	AM	15	<u>>150</u>	37	36
20	Project Access 1 / Avenue 58	NBL/NBR	7	35	PM	35	<u>>50</u>	25	43
		WBL	16	27	PM	27	<u>>50</u>	15	21
21	Project Access 2 / Avenue 58	NBR	3	15	PM	15	<u>>50</u>	20	44
22	Madison St. / Project Access 3	EBR	6	29	PM	29	<u>>50</u>	28	40

¹ Queue length calculated using SimTraffic.

² Existing Storage Length = 100 ; Proposed Storage Length = 100

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7 YEAR 2040 CONDITIONS TRAFFIC ANALYSIS

This section discusses the results of the General Plan Buildout (Year 2040) HCM intersection analysis and roadway segment capacity analysis. This analysis will determine if the City of La Quinta Circulation Element is adequate to accommodate future traffic at the target LOS, or if additional mitigation is necessary. This section provides recommended intersection and segment lanes to provide acceptable levels of service for three roadway network scenarios.

7.1 GENERAL PLAN BUILDOUT (YEAR 2040) WITHOUT PROJECT CONDITIONS

General Plan Buildout (Year 2040) ADT, weekday AM and weekday PM peak hour volumes are shown on Exhibits 7-1 through 7-3, respectively.

7.1.1 INTERSECTION OPERATIONS ANALYSIS

The lane configurations and traffic controls assumed to be in place for General Plan Buildout (Year 2040) conditions are consistent with the City of La Quinta General Plan buildout (2035) intersection configurations (May 2012).

LOS calculations were conducted for the study intersections to evaluate their operations under General Plan Buildout (Year 2040) traffic conditions. The intersection analysis results are summarized in Table 7-1.

The intersection operations analysis worksheets for General Plan Buildout (Year 2040) traffic conditions are included in Appendix 7.1 of this TIA. All intersections are anticipated to experience acceptable operations under General Plan Buildout (Year 2040) conditions with improvements.

7.1.2 ROADWAY SEGMENT CAPACITY ANALYSIS

The roadway segment capacities are approximate figures only, and are typically used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet future forecasted traffic demand. Table 7-2 provides a summary of the General Plan Buildout (Year 2040) traffic conditions roadway segment capacity analysis based on the City of La Quinta roadway segment capacity thresholds identified previously in Table 3-4.

As shown on Table 7-2, The study roadway segments analyzed are anticipated to operate at acceptable LOS for General Plan Buildout (Year 2040) traffic conditions. However, one roadway segment along Madison Street, between Avenue 54 and Airport Boulevard (as shown on Exhibit 7-1) appears to exceed the theoretical daily segment LOS thresholds.

As mentioned previously in Section 3.11, where the peak hour roadway segment analysis indicates a deficiency (unacceptable LOS), a review of the more detailed peak hour intersection analysis is undertaken. Further review of the more detailed peak hour intersection analysis indicates that the recommended improvements at adjacent study area intersections provide acceptable level of service. Therefore, roadway segment widening is not anticipated.

EXHIBIT 7-1: GENERAL PLAN BUILDOUT (YEAR 2040) WITHOUT PROJECT AVERAGE DAILY TRAFFIC (ADT)

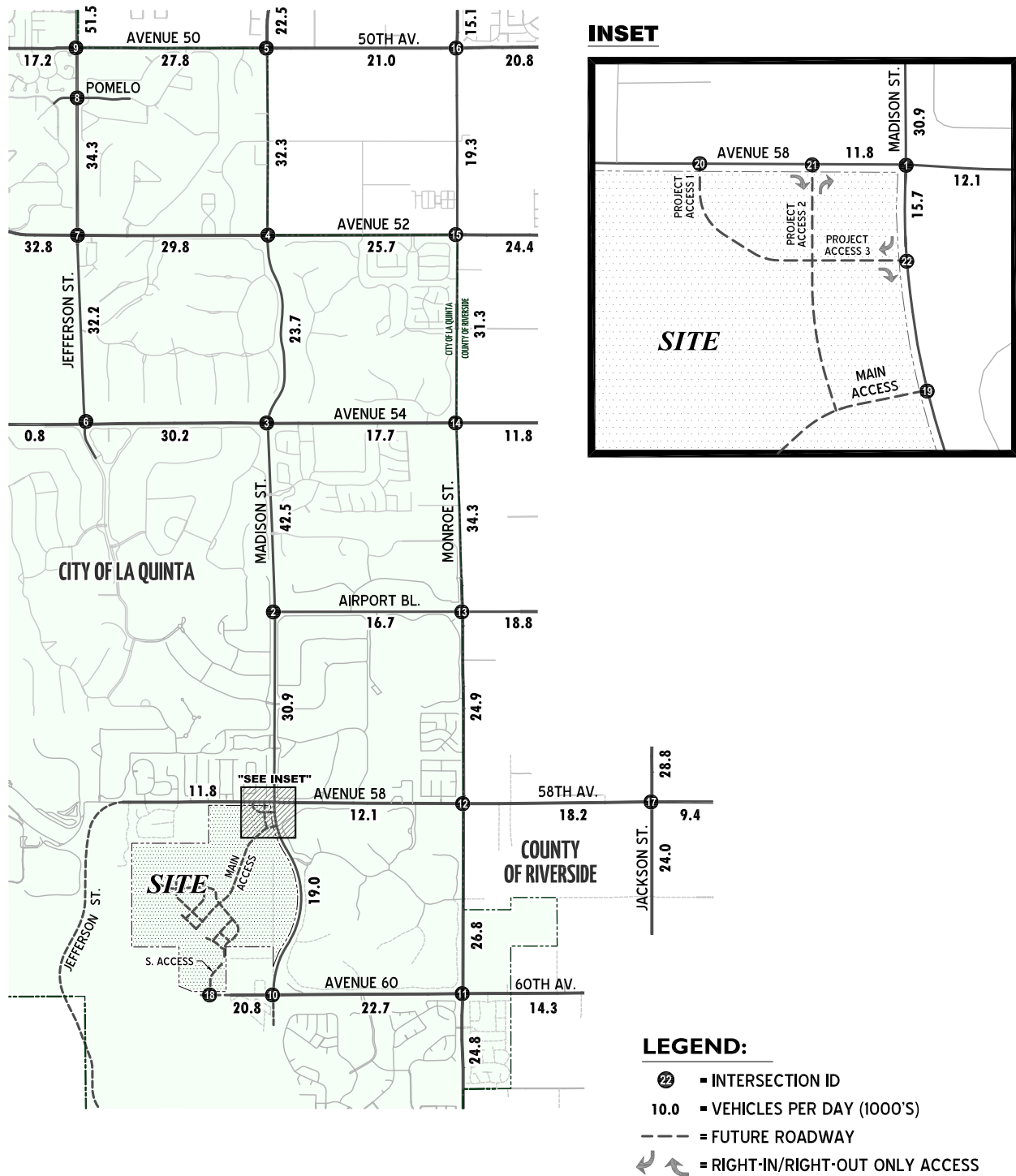


EXHIBIT 7-2: GENERAL PLAN BUILDOUT (YEAR 2040) WITHOUT PROJECT AM PEAK HOUR INTERSECTION VOLUMES

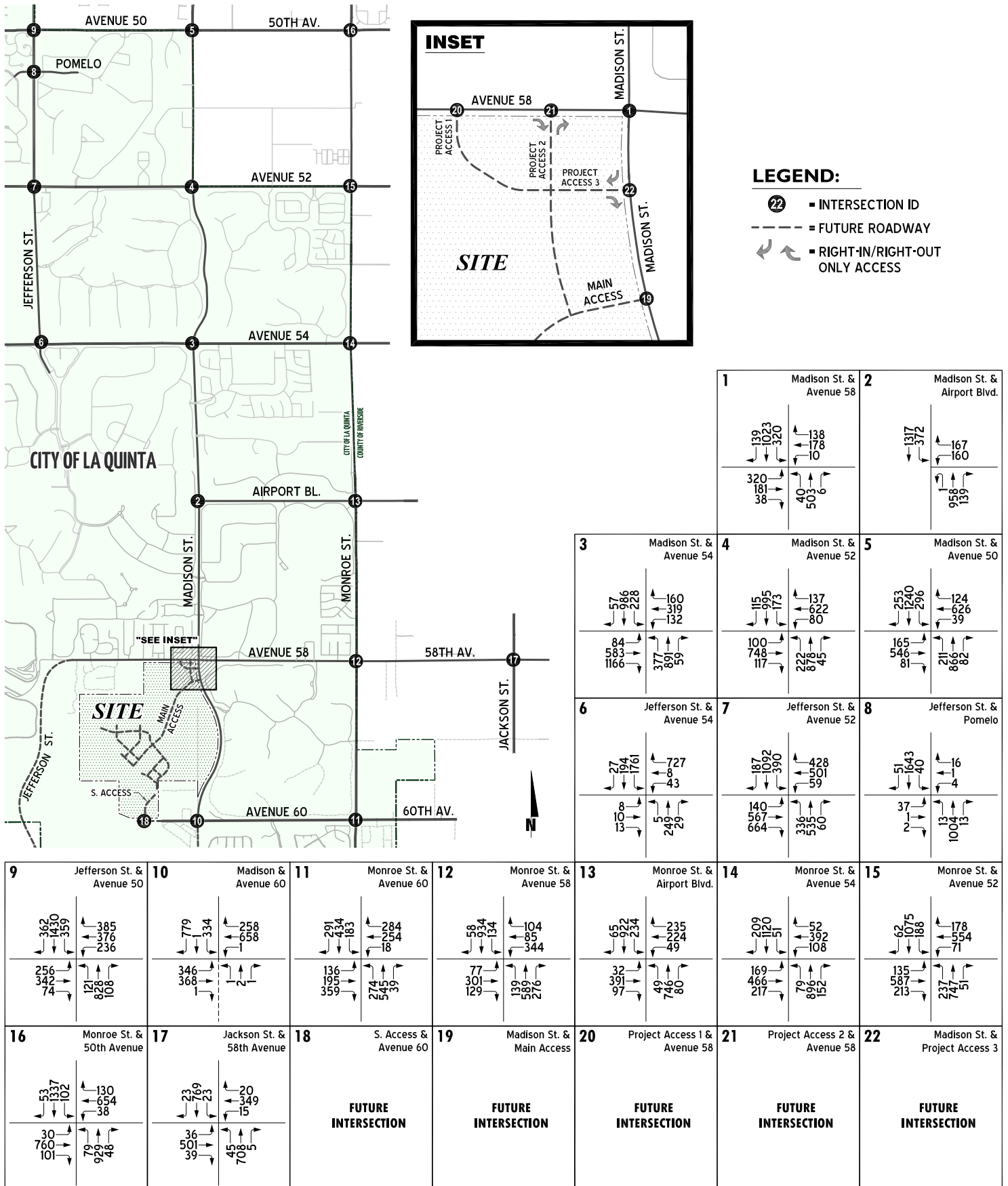


EXHIBIT 7-3: GENERAL PLAN BUILDOUT (YEAR 2040) WITHOUT PROJECT PM PEAK HOUR INTERSECTION VOLUMES

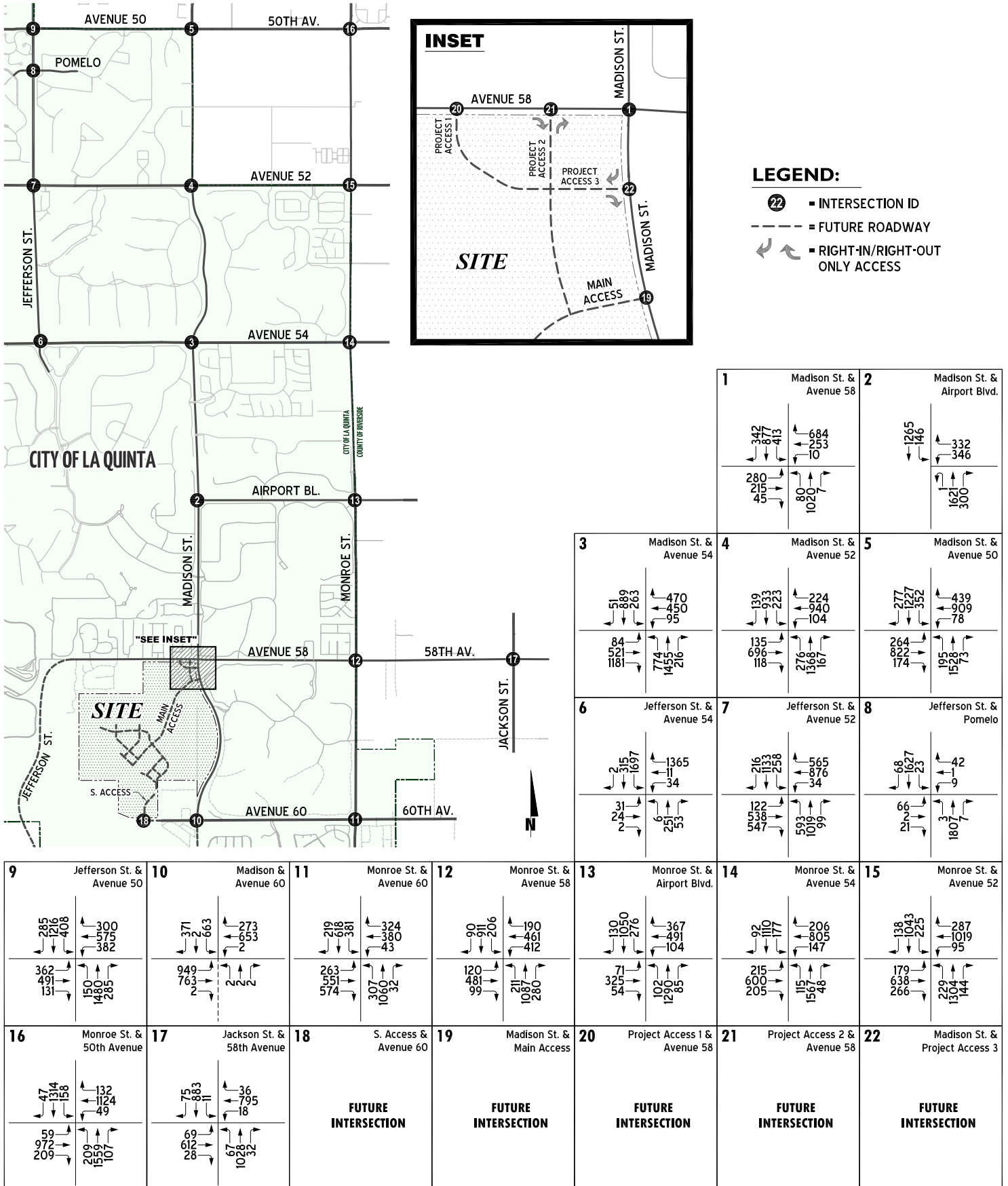


EXHIBIT 7-4: GENERAL PLAN BUILDOUT (YEAR 2040) WITH PROJECT AVERAGE DAILY TRAFFIC (ADT)

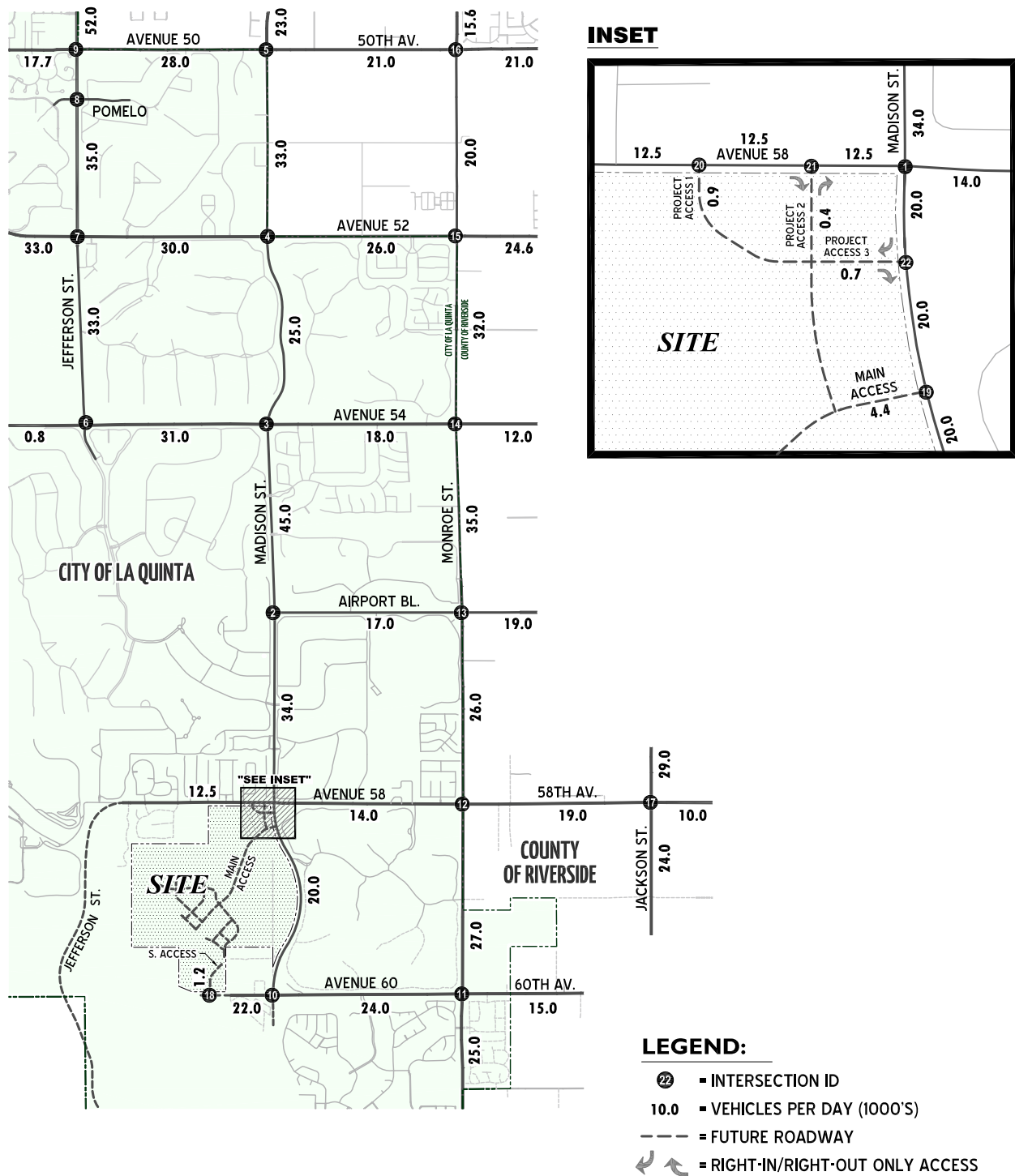


EXHIBIT 7-5: GENERAL PLAN BUILDOUT (YEAR 2040) WITH PROJECT AM PEAK HOUR INTERSECTION VOLUMES

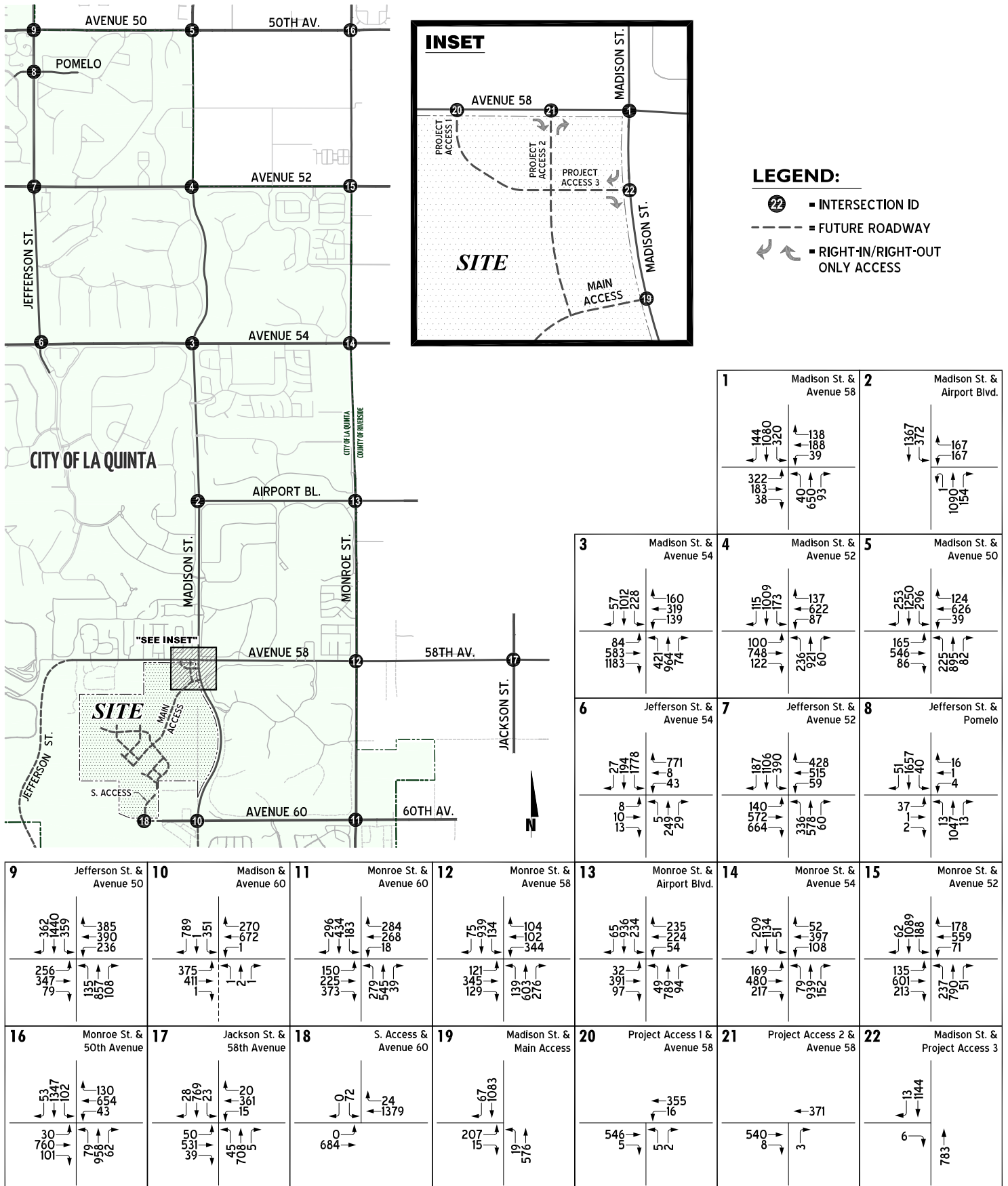
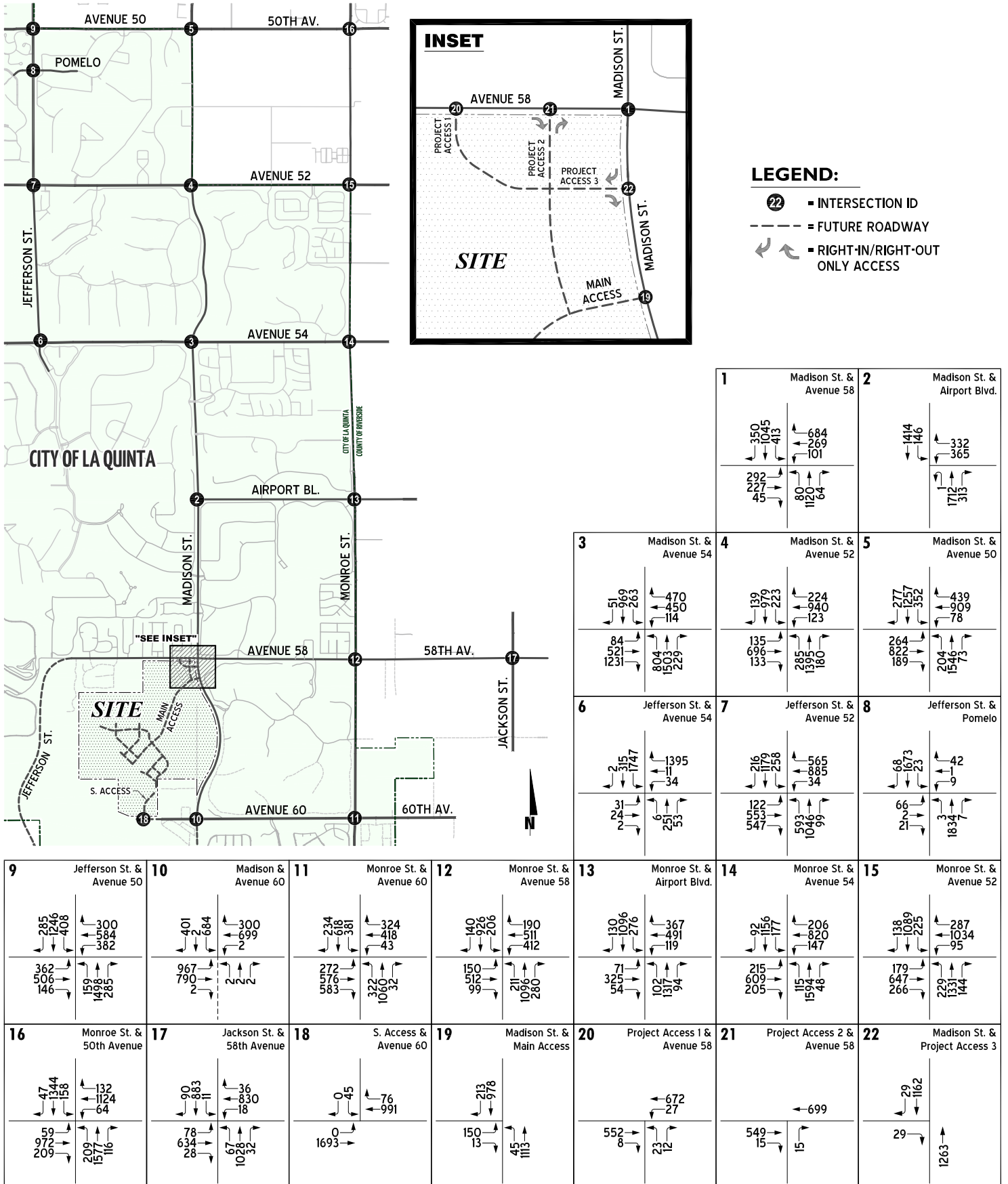


EXHIBIT 7-6: GENERAL PLAN BUILDOUT (YEAR 2040) WITH PROJECT PM PEAK HOUR INTERSECTION VOLUMES



**TABLE 7-1: INTERSECTION ANALYSIS
FOR GENERAL PLAN BUILDOUT (2040) WITHOUT PROJECT CONDITIONS**

#	Intersection	Traffic Control ³	Intersection Approach Lanes ¹												Delay ² (Secs)		Level of Service ²	
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM
			L	T	R	L	T	R	L	T	R	L	T	R				
1	Madison St. / Avenue 58																	
	- With GPCE Update Improvements	<u>TS</u>	1	2	1	1	2	d	1	<u>2</u>	0	1	2	<u>1></u>	40.1	63.2	D	E
	- With Modified GPCE Improvements	<u>TS</u>	1	2	1	1	2	d	<u>2</u>	<u>1</u>	0	1	2	<u>1></u>	34.5	45.5	C	D
2	Madison St. / Airport Blvd.	TS	1	2	d	1	2	0	0	0	0	1	0	1	23.2	28.6	C	C
3	Madison St. / Avenue 54	<u>TS</u>	2	2	1	1	2	0	1	2	<u>1>></u>	1	2	<u>1></u>	42.9	49.0	D	D
4	Madison St. / Avenue 52	TS	2	2	1	2	2	<u>1</u>	1	2	d	1	2	1	38.8	52.0	D	D
5	Madison St. / Avenue 50	TS	2	<u>3</u>	1	2	2	1	1	2	1	1	2	<u>1></u>	36.7	53.2	D	D
6	Jefferson St. / Avenue 54	<u>TS</u>	<u>1</u>	2	<u>1</u>	2	2	1	1	1	1	1	1	<u>2></u>	24.0	43.5	C	D
7	Jefferson St. / Avenue 52 ⁴	RDB	0.5	<u>2.5</u>	1>>	0.5	<u>2.5</u>	1>>	0.5	<u>2.5</u>	1>>	0.5	<u>2.5</u>	1>>	5.8	8.3	A	A
8	Jefferson St. / Pomelo	TS	1	3	0	1	3	0	0.5	0.5	1	0.5	0.5	1	6.3	21.2	A	C
9	Jefferson St. / Avenue 50	TS	1	3	1	2	3	1	<u>2</u>	2	1	<u>2</u>	<u>2</u>	1	41.5	52.8	D	D
10	Madison St. / Avenue 60	<u>TS</u>	0	<u>1!</u>	0	<u>2</u>	<u>1</u>	<u>1></u>	<u>2</u>	2	0	<u>1</u>	<u>2</u>	1	50.9	48.0	D	D
11	Monroe St. / Avenue 60																	
	- With GPCE Update Improvements	<u>TS</u>	1	<u>2</u>	0	1	<u>2</u>	1	1	<u>2</u>	1	<u>1</u>	1	<u>1></u>	45.1	98.8	D	F
	- With Added GPCE Improvements	<u>TS</u>	1	<u>2</u>	0	1	<u>2</u>	1	1	<u>2</u>	<u>1></u>	<u>1</u>	<u>2</u>	<u>1></u>	36.7	50.3	D	D
12	Monroe St. / Avenue 58																	
	- With GPCE Update Improvements	<u>TS</u>	1	<u>2</u>	<u>1</u>	<u>1</u>	<u>2</u>	0	<u>1</u>	<u>2</u>	0	<u>1</u>	<u>2</u>	0	47.8	72.0	D	E
	- With Added GPCE Improvements	<u>TS</u>	<u>2</u>	<u>2</u>	<u>1></u>	<u>2</u>	<u>2</u>	0	<u>1</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>2</u>	0	38.0	48.6	D	D
13	Monroe St. / Airport Blvd.	<u>TS</u>	1	<u>2</u>	0	1	2	d	1	<u>2</u>	0	<u>1</u>	<u>2</u>	<u>1></u>	33.3	44.1	C	D
14	Monroe St. / Avenue 54	<u>TS</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>1</u>	31.5	52.5	C	D
15	Monroe St. / Avenue 52	<u>TS</u>	<u>2</u>	<u>2</u>	<u>1</u>	<u>2</u>	2	0	1	<u>2</u>	1	1	2	<u>1</u>	39.0	52.7	D	D
16	Monroe St. / 50th Avenue	TS	<u>2</u>	2	<u>1</u>	<u>2</u>	2	0	1	<u>2</u>	1	1	<u>2</u>	1>	34.5	53.3	C	D
17	Jackson St. / 58th Avenue	<u>TS</u>	<u>1</u>	<u>2</u>	0	<u>1</u>	<u>2</u>	0	<u>1</u>	<u>2</u>	0	<u>1</u>	<u>2</u>	0	29.7	36.7	C	D
18	S. Access / Avenue 60		Intersection Does Not Exist															
19	Madison St. / Main Access		Intersection Does Not Exist															
20	Project Access 1 / Avenue 58		Intersection Does Not Exist															
21	Project Access 2 / Avenue 58		Intersection Does Not Exist															
22	Madison St. / Project Access 3		Intersection Does Not Exist															

¹ When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; >> = Free-Right Turn Lane; d = Defacto Right Turn Lane; 1 = Improvement

1 = Improvement per City of La Quinta General Plan Circulation Element Update Traffic Impact Analysis (May 2012)

² Per the Highway Capacity Manual 6th Edition (HCM6), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control.

For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. Delay and level of service is calculated using Synchro 10.1 analysis software.

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

³ TS = Traffic Signal; CSS = Cross-street Stop; AWS = All-Way Stop; RDB = Roundabout

⁴ Since roundabout analysis in Synchro is limited to a maximum of 2 lanes per approach, traffic has been utilized at this location (similar to the City of La Quinta General Plan Buildout TIA worksheets).

**TABLE 7-2: ROADWAY VOLUME/CAPACITY ANALYSIS
FOR GENERAL PLAN BUILDOUT (2040) WITHOUT PROJECT CONDITIONS**

Roadway	Segment	Roadway Designation	Through Travel Lanes ¹	Capacity ²	ADT ³	Volume/ Capacity Ratio
Avenue 58	West of Madison Street	Secondary	<u>4</u>	28,000	11,800	0.42
	West of Monroe Street	Secondary	4	28,000	12,100	0.43
	West of Jackson Street	Secondary	<u>4</u>	28,000	18,200	0.65
Madison Street	South of Airport Boulevard	Primary	4	42,600	30,900	0.73
Avenue 60	West of Monroe Street	Secondary	<u>4</u>	28,000	22,700	0.81
Monroe Street	South of Airport Boulevard	Primary	<u>4</u>	42,600	24,900	0.58

¹ Existing Number of Through lanes; 1 = City of La Quinta General Plan Buildout number of lanes

² Source: City of La Quinta Engineering Bulletin #06-13 (Oct 2017)

³ Average Daily Traffic (ADT) expressed in vehicles per day.

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**TABLE 7-3: INTERSECTION ANALYSIS
FOR GENERAL PLAN BUILDOUT (2040) WITH PROJECT CONDITIONS**

#	Intersection	Traffic Control ³	Intersection Approach Lanes ¹												Delay ² (Secs)		Level of Service ²	
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM
			L	T	R	L	T	R	L	T	R	L	T	R				
1	Madison St. / Avenue 58																	
	- With GPCE Update Improvements	<u>TS</u>	1	2	1	1	2	d	1	<u>2</u>	0	1	2	<u>1></u>	41.5	70.3	D	E
	- With Modified GPCE Improvements	<u>TS</u>	1	2	1	1	2	d	<u>2</u>	<u>1</u>	0	1	2	<u>1></u>	35.1	53.0	D	D
2	Madison St. / Airport Blvd.	TS	1	2	d	1	2	0	0	0	0	1	0	1	23.7	29.7	C	C
3	Madison St. / Avenue 54	<u>TS</u>	2	2	1	1	2	0	1	2	<u>1>></u>	1	2	<u>1></u>	44.2	53.3	D	D
4	Madison St. / Avenue 52	TS	2	2	1	2	2	<u>1</u>	1	2	d	1	2	1	39.5	53.8	D	D
5	Madison St. / Avenue 50	TS	2	<u>3</u>	1	2	2	1	1	2	1	1	2	<u>1></u>	37.6	54.8	D	D
6	Jefferson St. / Avenue 54	<u>TS</u>	<u>1</u>	2	<u>1</u>	2	2	1	1	1	1	1	1	<u>2></u>	24.2	48.4	C	D
7	Jefferson St. / Avenue 52 ⁴	RDB	0.5	<u>2.5</u>	1>>	0.5	<u>2.5</u>	1>>	0.5	<u>2.5</u>	1>>	0.5	<u>2.5</u>	1>>	5.9	9.1	A	A
8	Jefferson St. / Pomelo	TS	1	3	0	1	3	0	0.5	0.5	1	0.5	0.5	1	6.4	21.4	A	C
9	Jefferson St. / Avenue 50	TS	1	3	1	2	3	1	<u>2</u>	2	1	<u>2</u>	<u>2</u>	1	42.2	54.6	D	D
10	Madison St. / Avenue 60	<u>TS</u>	0	<u>1!</u>	0	<u>2</u>	<u>1</u>	<u>1></u>	<u>2</u>	2	0	<u>1</u>	<u>2</u>	1	49.6	53.1	D	D
11	Monroe St. / Avenue 60																	
	- With GPCE Update Improvements	<u>TS</u>	1	<u>2</u>	0	1	<u>2</u>	1	1	<u>2</u>	1	<u>1</u>	1	<u>1></u>	46.1	103.9	D	F
	- With Added GPCE Improvements	<u>TS</u>	1	<u>2</u>	0	1	<u>2</u>	1	1	<u>2</u>	<u>1></u>	<u>1</u>	<u>2</u>	<u>1></u>	37.2	53.0	D	D
12	Monroe St. / Avenue 58																	
	- With GPCE Update Improvements	<u>TS</u>	1	<u>2</u>	<u>1</u>	<u>1</u>	<u>2</u>	0	<u>1</u>	<u>2</u>	0	<u>1</u>	<u>2</u>	0	50.1	75.9	D	E
	- With Added GPCE Improvements	<u>TS</u>	<u>2</u>	<u>2</u>	<u>1></u>	<u>2</u>	<u>2</u>	0	<u>1</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>2</u>	0	39.5	52.0	D	D
13	Monroe St. / Airport Blvd.	<u>TS</u>	1	<u>2</u>	0	1	2	d	1	<u>2</u>	0	<u>1</u>	<u>2</u>	<u>1></u>	37.8	45.4	D	D
14	Monroe St. / Avenue 54	<u>TS</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>1</u>	31.6	54.5	C	D
15	Monroe St. / Avenue 52	<u>TS</u>	<u>2</u>	<u>2</u>	<u>1</u>	<u>2</u>	2	0	1	<u>2</u>	1	1	2	<u>1</u>	39.0	54.3	D	D
16	Monroe St. / 50th Avenue	TS	<u>2</u>	2	<u>1</u>	<u>2</u>	2	0	1	<u>2</u>	1	1	<u>2</u>	1>	34.1	54.5	C	D
17	Jackson St. / 58th Avenue	<u>TS</u>	<u>1</u>	<u>2</u>	0	<u>1</u>	<u>2</u>	0	<u>1</u>	<u>2</u>	0	<u>1</u>	<u>2</u>	0	29.7	38.0	C	D
18	S. Access / Avenue 60	<u>CSS</u>	0	0	0	0	<u>1!</u>	0	0	<u>1</u>	0	0	<u>1</u>	0	34.2	34.8	D	D
19	Madison St. / Main Access																	
	- With Cross-Street Stop Control	<u>CSS</u>	<u>1</u>	2	0	0	2	0	<u>1</u>	0	<u>1</u>	0	0	0	113.2	91.7	F	F
	- With Traffic Signal	<u>TS</u>	<u>1</u>	2	0	0	2	0	<u>1</u>	0	<u>1</u>	0	0	0	7.6	9.0	A	A
20	Project Access 1 / Avenue 58	<u>CSS</u>	0	<u>1!</u>	0	0	0	0	0	<u>2</u>	0	<u>1*</u>	2	0	12.9	14.5	B	B
21	Project Access 2 / Avenue 58	<u>CSS</u>	0	0	<u>1</u>	0	0	0	0	<u>2</u>	0	0	2	0	10.2	10.4	B	B
22	Madison St. / Project Access 3	<u>CSS</u>	0	2	0	0	2	0	0	0	<u>1</u>	0	0	0	13.6	14.4	B	B

¹ When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; >> = Free-Right Turn Lane; d = Defacto Right Turn Lane; 1 = Improvement

1 = Improvement per City of La Quinta General Plan Circulation Element Update Traffic Impact Analysis (May 2012)

* = Left turn lane accommodated within two-way left turn lane

² Per the Highway Capacity Manual 6th Edition (HCM6), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. Delay and level of service is calculated using Synchro 10.1 analysis software.

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

³ TS = Traffic Signal; CSS = Cross-street Stop; AWS = All-Way Stop; RDB = Roundabout

⁴ Since roundabout analysis in Synchro is limited to a maximum of 2 lanes per approach, traffic has been utilized at this location (similar to the City of La Quinta General Plan Buildout TIA worksheets).

**TABLE 7-4: ROADWAY VOLUME/CAPACITY ANALYSIS
FOR GENERAL PLAN BUILDOUT (2040) WITH PROJECT CONDITIONS**

Roadway	Segment	Roadway Designation	Through Travel Lanes ¹	Capacity ²	ADT ³	Volume/ Capacity Ratio
Avenue 58	West of Madison Street	Secondary	<u>4</u>	28,000	12,500	0.45
	West of Monroe Street	Secondary	4	28,000	14,000	0.50
	West of Jackson Street	Secondary	<u>4</u>	28,000	19,000	0.68
Madison Street	South of Airport Boulevard	Primary	4	42,600	34,000	0.80
Avenue 60	West of Monroe Street	Secondary	<u>4</u>	28,000	24,000	0.86
Monroe Street	South of Airport Boulevard	Primary	<u>4</u>	42,600	26,000	0.61

¹ Existing Number of Through lanes; 1 = City of La Quinta General Plan Buildout number of lanes

² Source: City of La Quinta Engineering Bulletin #06-13 (Oct 2017)

³ Average Daily Traffic (ADT) expressed in vehicles per day.

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7.1.3 TRAFFIC SIGNAL WARRANT ANALYSIS

Traffic signal warrant analyses have been performed at all applicable unsignalized study area intersections for General Plan Buildout (Year 2040) traffic conditions (see Appendix 7.2). One additional study area intersections are anticipated to warrant a traffic signal beyond those warranted for EAPC (2026) conditions (Madison at Avenue 60).

7.2 GENERAL PLAN BUILDOUT (YEAR 2040) WITH PROJECT CONDITIONS

General Plan Buildout (Year 2040) ADT, weekday AM and weekday PM peak hour volumes are shown on Exhibits 7-1 through 7-3, respectively.

7.2.1 INTERSECTION OPERATIONS ANALYSIS

The lane configurations and traffic controls assumed to be in place for General Plan Buildout (Year 2040) conditions are consistent with the City of La Quinta General Plan buildout (2035) intersection configurations (May 2012).

LOS calculations were conducted for the study intersections to evaluate their operations under General Plan Buildout (Year 2040) traffic conditions. The intersection analysis results are summarized in Table 7-3.

The intersection operations analysis worksheets for General Plan Buildout (Year 2040) traffic conditions are included in Appendix 7.3 of this TIA. All intersections are anticipated to experience acceptable operations under General Plan Buildout (Year 2040) conditions with improvements.

7.2.2 ROADWAY SEGMENT CAPACITY ANALYSIS

The roadway segment capacities are approximate figures only, and are typically used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet future forecasted traffic demand. Table 7-4 provides a summary of the General Plan Buildout (Year 2040) with project traffic conditions roadway segment capacity analysis based on the City of La Quinta roadway segment capacity thresholds identified previously in Table 3-4. As shown on Table 7-4, the study roadway segments analyzed are anticipated to operate at acceptable LOS for General Plan Buildout (Year 2040) traffic conditions.

7.2.3 TRAFFIC SIGNAL WARRANT ANALYSIS

Traffic signal warrant analyses have been performed at all applicable unsignalized study area intersections for General Plan Buildout (Year 2040) traffic conditions (see Appendix 7.4). One additional study area intersections are anticipated to warrant a traffic signal beyond those warranted for General plan Buildout (Year 2040) conditions (Madison Street at Main Access).

7.2.4 QUEUING ANALYSIS

A queuing analysis was performed for With Project Conditions to assess the adequacy of turn bay lengths to accommodate vehicle queues at the Project entries. Queuing analysis findings are presented in Table 7-5 for General Plan Buildout (Year 2040) With Project traffic conditions. Queueing analysis worksheets are provided in Appendix 7.3.

**TABLE 7-5: PROJECT ACCESS TURN LANE STORAGE LENGTHS
FOR GENERAL PLAN BUILDOUT (2040) WITH PROJECT CONDITIONS**

ID	Intersection	Turning Movement Lane	General Plan Buildout (2040) With Project				Storage Length ² (ft.)	95th Percentile ¹ Queue Length	
			AM	PM	Peak Hour	Volume		AM	PM
18	S. Access / Avenue 60	SBL/SBR	73	46	AM	73	<u>>300</u>	97	232
19	Madison St. / Main Access	NBL	19	45	PM	45	<u>150</u>	43	76
		EBL	207	150	AM	207	<u>150</u>	141	130
		EBR	15	13	AM	15	<u>>150</u>	93	41
20	Project Access 1 / Avenue 58	NBL/NBR	7	35	PM	35	<u>>50</u>	22	52
		WBL	16	27	PM	27	<u>>50</u>	23	38
21	Project Access 2 / Avenue 58	NBR	3	15	PM	15	<u>>50</u>	18	52
22	Madison St. / Project Access 3	EBR	6	29	PM	29	<u>>50</u>	32	57

¹ Queue length calculated using SimTraffic.

² Existing Storage Length = 100 ; Proposed Storage Length = 100

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8 SPECIAL EVENTS

The applicant anticipates the potential occurrence of special events at this location involving attendance of not-to-exceed 2,500 guests per day arriving or departing on Saturdays (up to 4 events per year).

8.1 WEEKEND TRAFFIC VOLUMES AND CONDITIONS

The weekend special event intersection LOS analysis is based on the traffic volumes observed during the weekend peak hour conditions using traffic count data collected on February 22, 2020. Based on discussions with City staff, the Saturday peak hour is selected from this period between 10:00 AM and 2:00 PM.

A sample comparison of the PM weekday data and weekend counts focuses on key locations (4 intersections), as listed in Table 8-1. The raw manual Saturday peak period turning movement traffic count data sheets are included in Appendix 3.1.

TABLE 8-1: WEEKEND INTERSECTION COUNT LOCATIONS

ID	Intersection Location	ID	Intersection Location
1	Madison Street at Avenue 58	11	Monroe Street at Avenue 58
5	Madison Street at Avenue 50	13	Monroe Street at Avenue 54

Volume changes at these locations are extrapolated to the remaining study area locations as identified in the TIA. The average peak hour intersection change between weekday pm peak hour and weekend peak hour count data at selected study area and nearby intersections is a decrease of approximately 17.20% (see Table 8-2). The -17.20% rate is applied to the study area intersections with weekday counts to reflect weekend conditions. Existing weekend peak hour intersection volumes are shown on Exhibit 8-1.

8.2 WEEKEND SPECIAL EVENT PROJECT LAND USE AND TRIP GENERATION

Trip generation rates used to estimate weekend Project traffic and a summary of the Project's trip generation are shown in Table 8-3. The ITE Trip Generation Manual does not provide weekend trip generation rates for special events at a wave basin facility since the use is very specific. As such, vehicle trips are calculated based on estimated number of guests anticipated for these special events and a vehicle occupancy of 2.4.

Table 8-3 shows the Weekend Project trip generation during a special event based on 2,500 guests per day at the Wave Basin facility and approximately 25% of the guests arriving or departing during the arrival or departure peak hours. Weekend rates for other on-site land uses represent typical Saturday rates. As shown on Table 8-3, the proposed Project is anticipated to generate a net total of 8,932 trip-ends per day on a Saturday during a special event with 906 vehicles per hour (VPH) during the arrival peak hour and 884 vph during the departure peak hour.

**TABLE 8-2: EXISTING 2019 WEEKDAY PM PEAK HOUR & 2020 SATURDAY MID-DAY PEAK HOUR
COMPARISON**

ID	Intersection	Peak Hour Intersection Volumes					
		Weekday PM Peak Hour			Saturday Mid-Day Peak Hour		
		N/S ¹	E/W ²	TOTAL	N/S ¹	E/W ²	TOTAL
1	Madison St. / Avenue 58	432	169	601	365	224	589
5	Madison St. / Avenue 50	577	798	1,375	570	732	1,302
12	Monroe St. / Avenue 58	285	192	477	160	109	269
14	Monroe St. / Avenue 54	418	403	821	303	248	551
TOTAL		1,712	1,562	3,274	1,398	1,313	2,711
ADJUSTMENT FACTORS (to be applied to the remaining study intersections with Weekday PM volumes to reflect Saturday mid- day conditions)		<div> <div>-18.34%</div> <div>-15.94%</div> <div>-17.20%</div> </div>					

¹ Northbound and Southbound Approach Volumes

² Eastbound and Westbound Approach Volumes

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EXHIBIT 8-1: EXISTING (2020) WEEKEND PEAK HOUR INTERSECTION VOLUMES

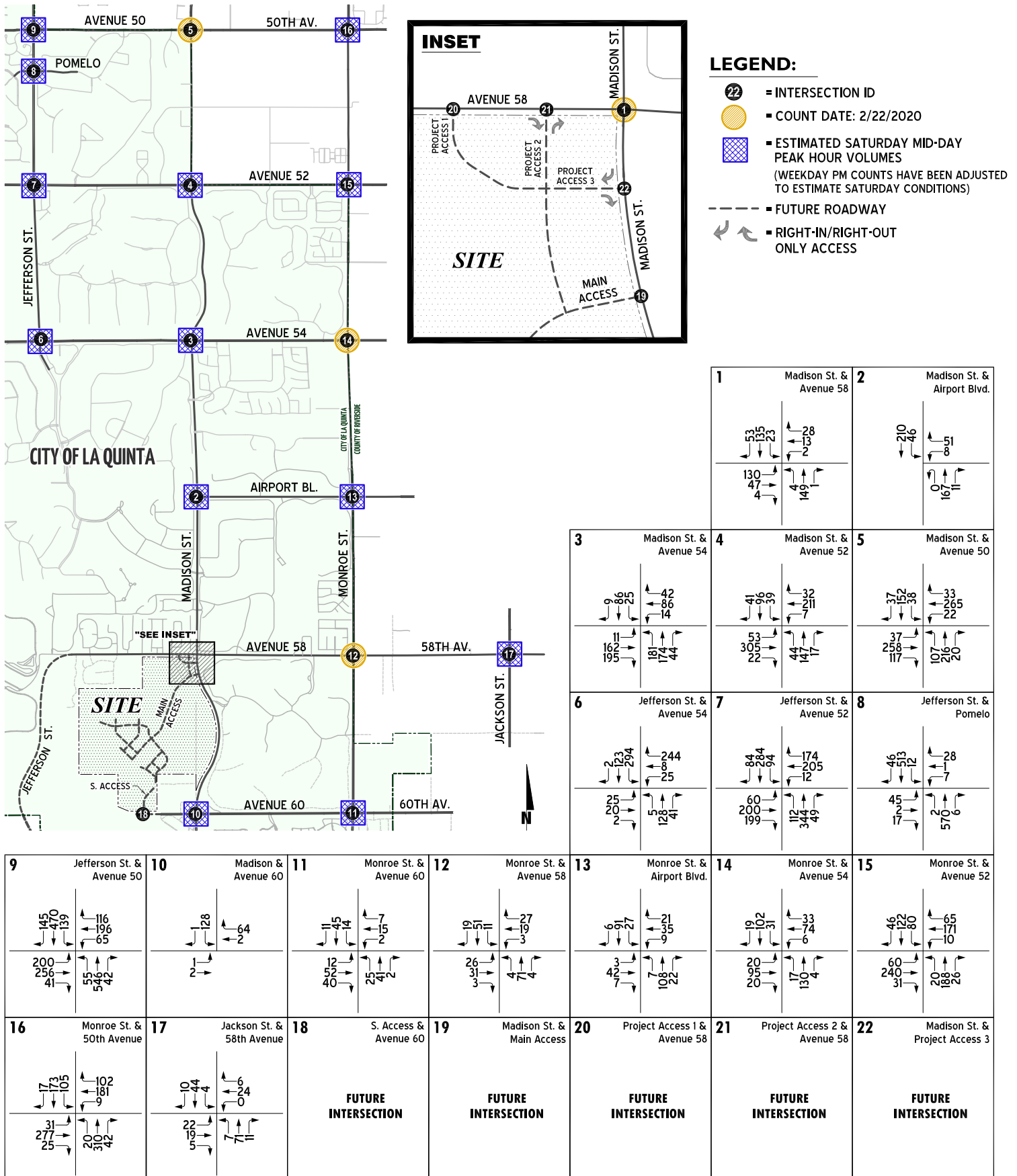


TABLE 8-3: PROJECT BUILDOUT (2026) TRIP GENERATION SUMMARY - WEEKEND SPECIAL EVENT

Trip Generation Rates ^{1,11}						
Land Use	ITE LU Code	Units ²	Saturday Mid-Day Peak Hour			Weekend Daily
			In	Out	Total	
Single Family Detached	210	DU	0.50	0.43	0.93	9.54
Multifamily Housing (Low-Rise)	220 ⁶	DU	0.38	0.32	0.70	8.14
Resort Hotel ⁷ (with bar, restaurant, kitchen, rooftop bar, pool bar & grill, and spa. Back of house resort operations included)	310 ⁵	RM	0.40	0.32	0.72	8.19
Shopping Center	820	TSF	2.34	2.16	4.50	46.12
Wave Basin Facility ⁸ (Back of house wave operations included)	4	Guests	See Below			
Wave Village (Studio/Retail) ⁹ (with shape studio, surf shop, board room, surf lounge/living room, surf classroom, fitness pavilion, high performance center, & beach club)	861	TSF	2.15	2.06	4.21	58.09
The Farm (Recreational Area/Clubhouse) ¹⁰ (with Barn, Greenhouse, Equipment Barn, Tool Shed, Family Camp, Gym, Outfitters, & Locker Rooms)	495	TSF	0.54	0.53	1.07	9.10

Trip Generation Results										
Land Use	ITE LU Code	Quantity ²		Arrival Peak Hour			Departure Peak Hour			Weekend Daily
				In	Out	Total	In	Out	Total	
Single Family Detached	210	496	DU	248	213	461	248	213	461	4,732
Multifamily Housing (Low-Rise)	220 ⁶	104	DU	40	33	73	40	33	73	847
Internal to Retail/Resort				(29)	(52)	(81)	(65)	(36)	(101)	(777)
Residential External Trips				259	194	453	223	210	433	4,802
Shopping Center	820	60	TSF	140	130	270	140	130	270	2,767
Pass-By (26%)				(35)	(35)	(70)	(35)	(35)	(70)	(719)
Internal to Residential/Resort				(25)	(33)	(58)	(35)	(26)	(61)	(501)
Shopping Center External Trips				80	62	142	70	69	139	1,547
Resort Hotel	310 ⁵	150	RM	60	48	108	60	48	108	1,229
Internal to Residential/Retail				(28)	(37)	(65)	(33)	(27)	(60)	(720)
Resort Hotel External Trips				32	11	43	27	21	48	509
Wave Basin Facility	4	2,500	Guests	260	14	274	14	260	274	2,084
Internal to Residential/Retail/Resort				(42)	(4)	(46)	(4)	(46)	(50)	(547)
Wave Basin Facility External Trips				218	10	228	10	214	224	1,537
Wave Village	861	15	TSF	32	31	63	31	32	63	871
Internal to Residential/Resort				(14)	(15)	(29)	(15)	(14)	(29)	(348)
Wave Village External Trips				18	16	34	16	18	34	523
The Farm	495	16	TSF	9	8	17	8	9	17	146
Internal to Residential/Resort				(7)	(4)	(11)	(4)	(7)	(11)	(132)
The Farm External Trips				2	4	6	4	2	6	14
Project Subtotal				789	477	1,266	541	725	1,266	12,676
Internal Capture Subtotal				(145)	(145)	(290)	(156)	(156)	(312)	(3,025)
Pass-By (Shopping Center)				(35)	(35)	(70)	(35)	(35)	(70)	(719)
Project Total External Trips				609	297	906	350	534	884	8,932

¹ Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition (2017).² DU = Dwelling Unit; RM = Room; TSF = Thousand Square Feet³ Source: Trip Generation Handbook, 3rd Edition (2017).⁴ Vehicle trips are calculated based on estimated number of guests during special events and vehicle occupancy of 2.4.⁵ Saturday data for Hotel (ITE Land Use 310) has been utilized.⁶ Since Saturday peak hour in/out ratio is not available for ITE Land Use 220, the in/out Saturday split for ITE LU 210 (Single Family Detached Residential) has been utilized.⁷ Hotel trip rates account for 23.5 tsf of ancillary facilities which include bar, restaurant, kitchen, rooftop bar, pool bar & grill, spa, and back of house resort operations.⁸ The Wave Basin Facility trip rates account for pool area and 1.5 tsf of back of house wave operations.⁹ Wave Village trip rates account for 15 tsf of ancillary facilities which include shape studio, surf shop, board room, surf lounge/living room, surf classroom, fitness pavilion, high performance center, & beach club.¹⁰ The Farm trip rates account for 16 tsf of ancillary facilities which include Barn, Greenhouse, Equipment Barn, Tool Shed, Family Camp, Gym, Outfitters, & Locker Rooms.¹¹ The 1 tsf back of house guardhouse use is accounted for in the Project rates.

The trip distribution patterns for the special event components of the proposed Project is consistent with the typical weekday operation.

Based on the identified Project traffic generation and trip distribution patterns, Project (Special Event) weekend traffic volumes are shown on Exhibits 8-2 through 8-4.

8.3 WEEKEND SPECIAL EVENT ANALYSIS

EAPC Project Buildout (2026), weekend special event arrival and departure peak hour intersection volumes are shown on Exhibits 8-5 and 8-6, respectively.

The intersection analysis results are summarized in Table 8-4, which indicates that the following study area intersections are anticipated to operate at an unacceptable LOS conditions:

- Madison Street at Avenue 58
- Madison Street at Avenue 54
- Jefferson Street at Avenue 54
- Jefferson Street at Avenue 52
- Monroe Street at Avenue 60
- Monroe Street at Avenue 58
- Monroe Street at Airport Boulevard
- Monroe Street at Avenue 54
- Monroe Street at Avenue 52

Improvement recommendations identified in Tables 8-4 are consistent with the improvements for EAPC Phase 3 weekday typical operations. The intersection operations analysis worksheets for EAPC Project Buildout (2026) Weekend Special Event traffic conditions are included in Appendix 8.1 of this TIA.

A queuing analysis was performed for With Project Weekend Special Event Conditions to assess the adequacy of turn bay lengths to accommodate vehicle queues at the Project entries. Queuing analysis findings are presented in Table 8-5 for EAPC (2026) Weekend Special Event traffic conditions. Queueing analysis worksheets for EAPC (2026) are also provided in Appendix 8.1.

8.4 SPECIAL EVENT TRAFFIC MANAGEMENT

Special events of up to 2,500 guests are anticipated to generate approximately 2,084 daily trips to and from the wave basin facility alone, of which 1,604 are from outside the Project residential, retail, and resort hotel. During the arrival and departure peak hours, approximately 624 guests are anticipated to arrive or depart per hour, with an average of 2.4 persons per vehicle.

EXHIBIT 8-2: PROJECT BUILDOUT (2026) WEEKEND SPECIAL EVENT AVERAGE DAILY TRAFFIC (ADT, PROJECT ONLY)

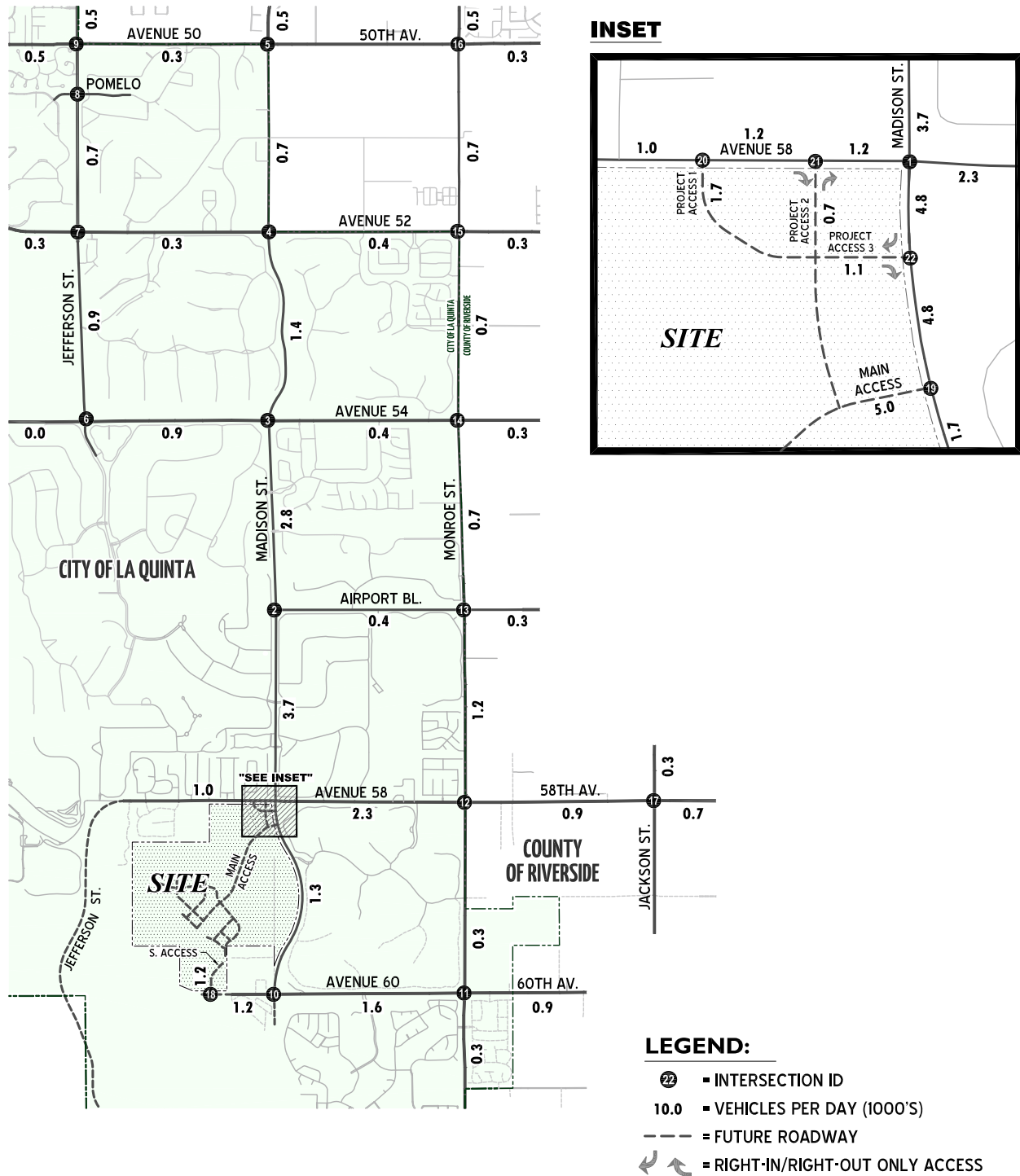


EXHIBIT 8-3: PROJECT BUILDOUT (2026) WEEKEND SPECIAL EVENT ARRIVAL PEAK HOUR INTERSECTION VOLUMES (PROJECT ONLY)

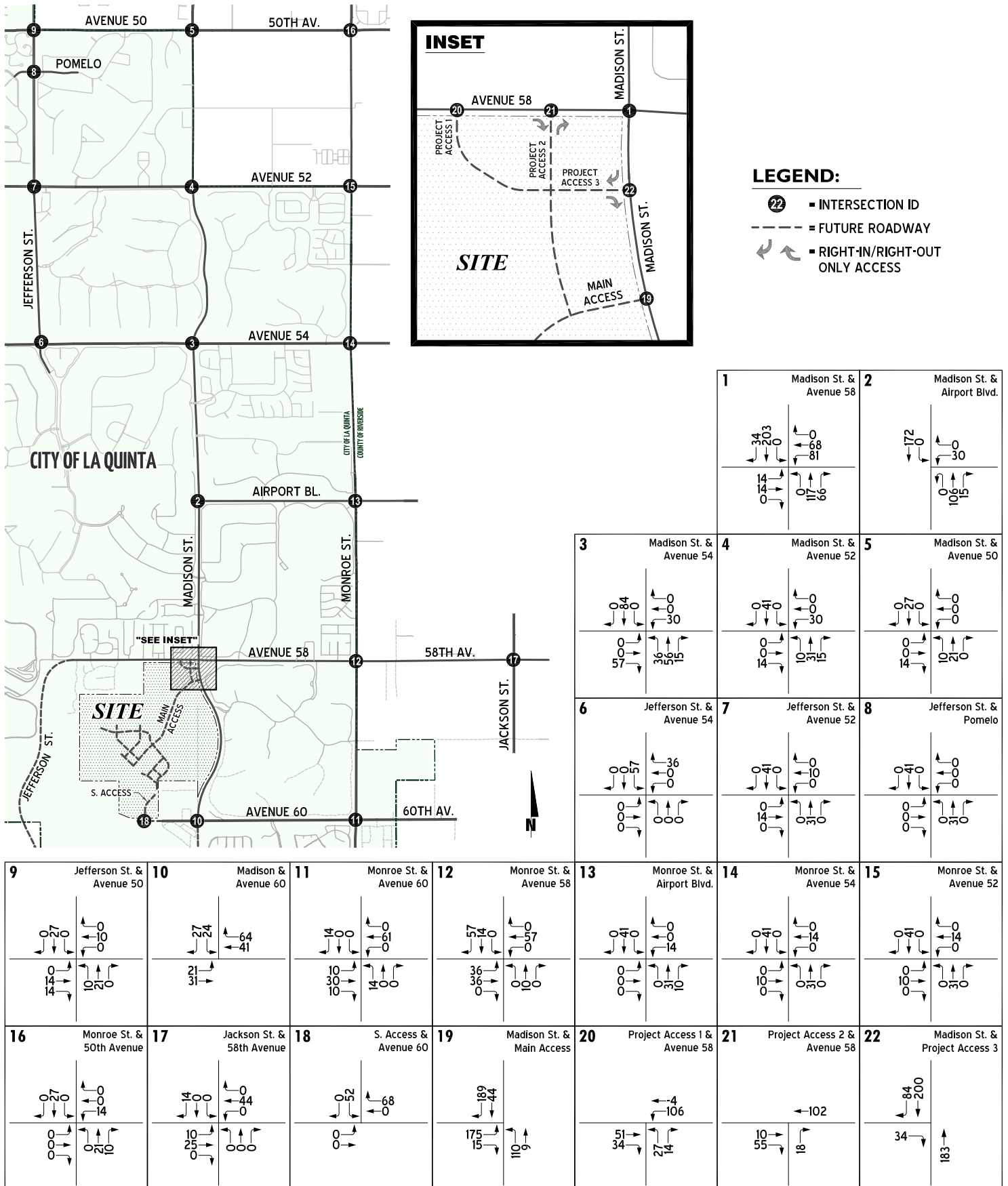


EXHIBIT 8-4: PROJECT BUILDOUT (2026) WEEKEND SPECIAL EVENT DEPARTURE PEAK HOUR INTERSECTION VOLUMES (PROJECT ONLY)

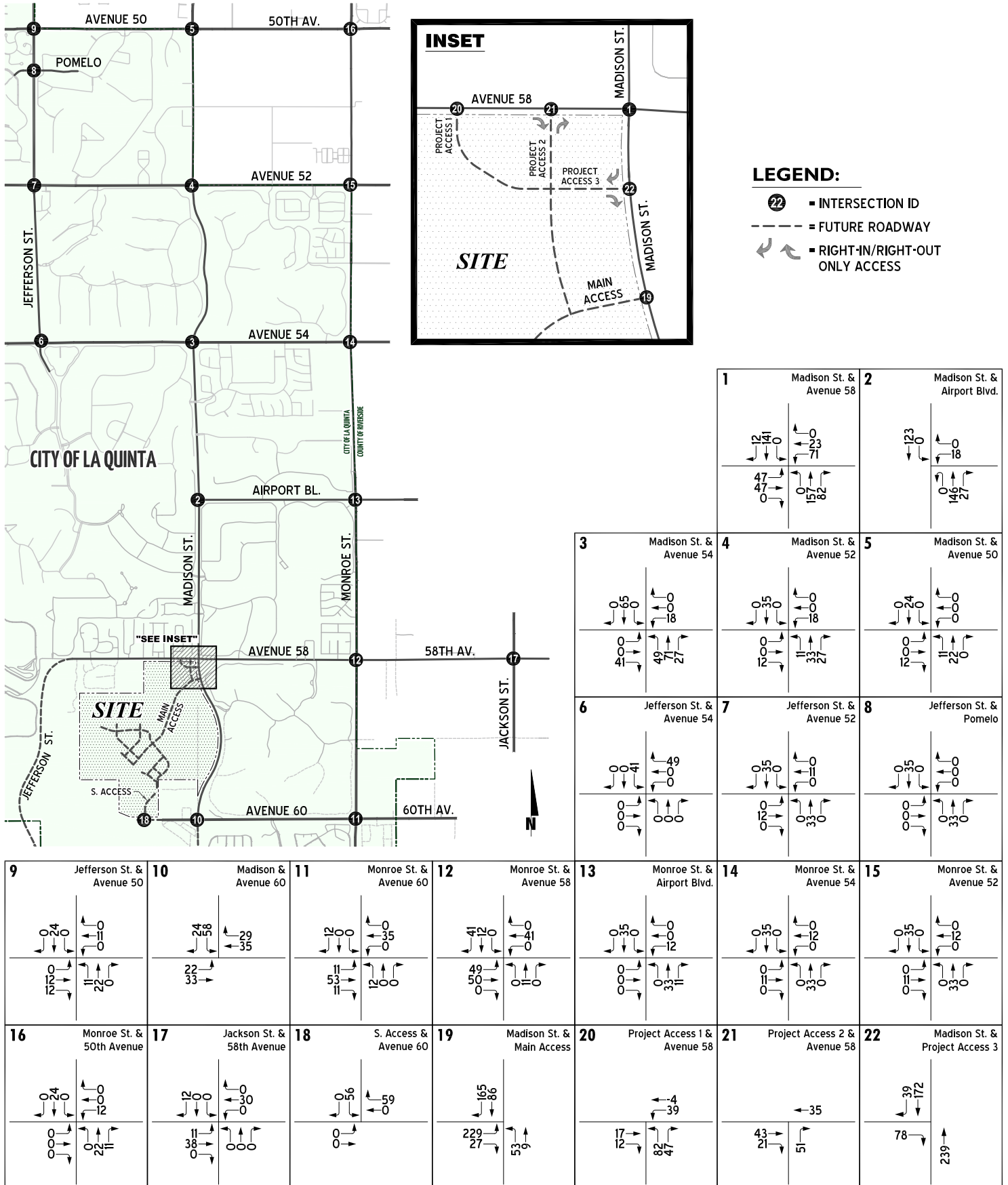


EXHIBIT 8-5: EAPC PHASE 3 (2026) WEEKEND SPECIAL EVENT ARRIVAL PEAK HOUR INTERSECTION VOLUMES

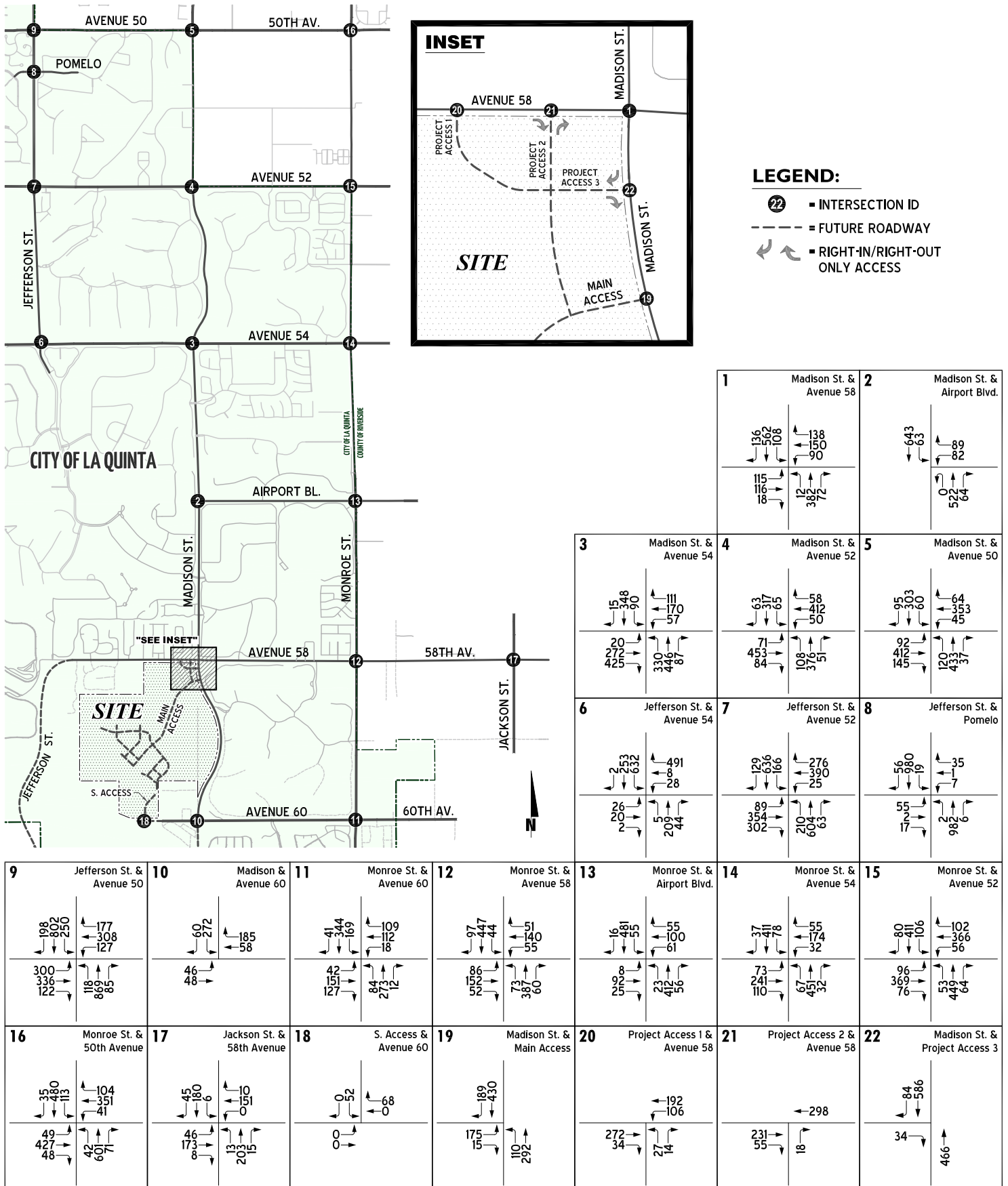
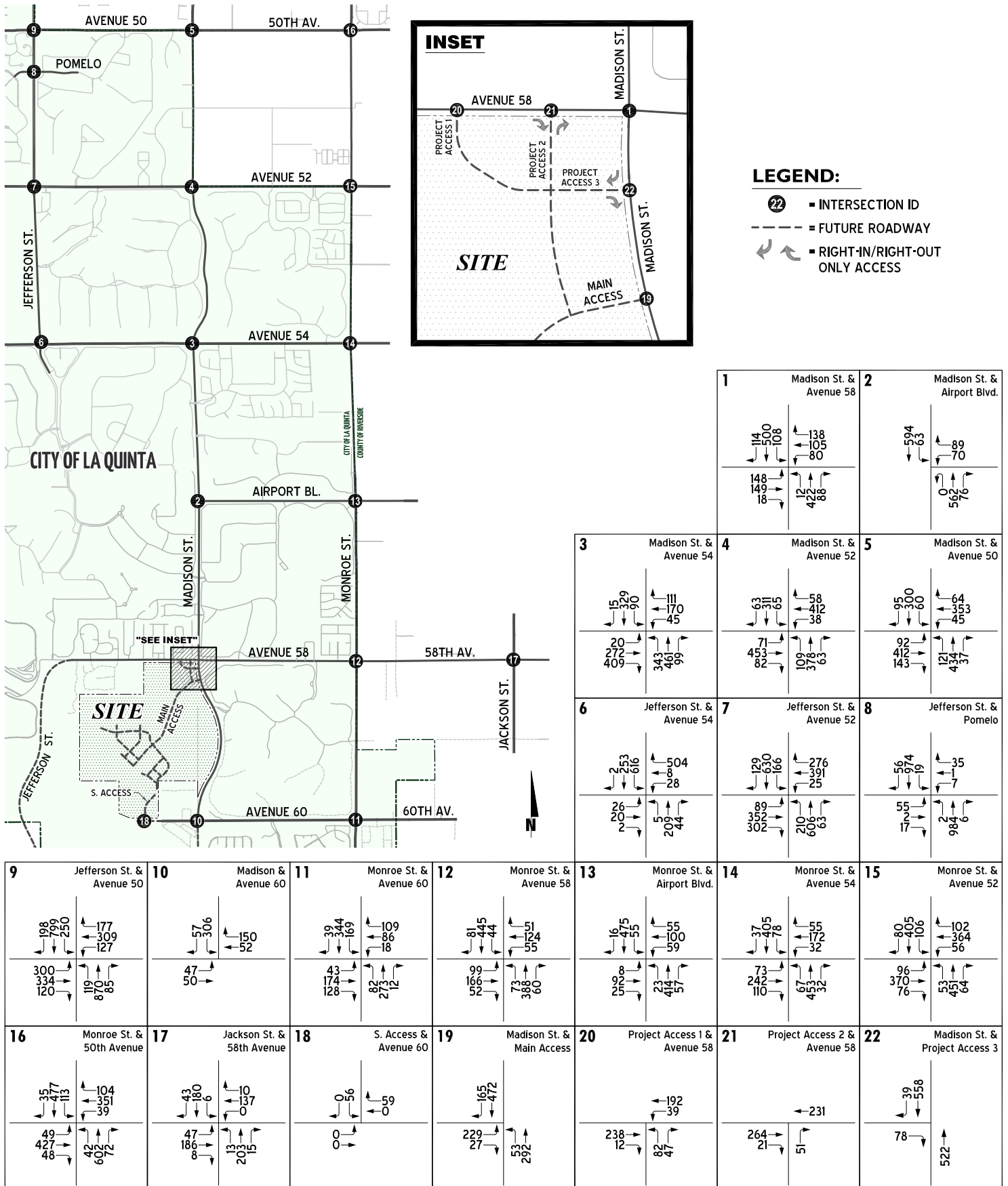


EXHIBIT 8-6: EAPC PHASE 3 (2026) **WEEKEND SPECIAL EVENT DEPARTURE PEAK HOUR INTERSECTION VOLUMES**



**TABLE 8-4: INTERSECTION ANALYSIS FOR
EAPC PHASE 3 (2026) WEEKEND SPECIAL EVENT CONDITIONS**

#	Intersection	Traffic Control ³	Intersection Approach Lanes ¹												With Project			
			Northbound				Southbound				Eastbound				Delay ² (Secs)		Level of Service ²	
			L	T	R	L	T	R	L	T	R	L	T	R	L	T	Arrival	Departure
1	Madison St. / Avenue 58																	
	- Without Improvements	AWS	1	2	1	1	2	d	1	1	1	1	2	1	41.6	37.8	E	E
	- With Improvements	<u>TS</u>	1	2	1	1	2	d	1	1	1	1	2	1	29.9	30.9	C	C
2	Madison St. / Airport Blvd.	TS	1	2	d	1	2	0	0	0	0	1	0	1	10.5	10.8	B	B
3	Madison St. / Avenue 54																	
	- Without Improvements	AWS	2	2	1	1	2	0	1	2	d	1	2	1	45.9	39.3	E	E
	- With Improvements	<u>TS</u>	2	2	1	1	2	0	1	2	d	1	2	1	42.6	41.4	D	D
4	Madison St. / Avenue 52	TS	2	2	1	2	2	d	1	2	d	1	2	1	32.3	32.0	C	C
5	Madison St. / Avenue 50	TS	2	2	1	2	2	1	1	2	1	1	2	1	32.5	32.5	C	C
6	Jefferson St. / Avenue 54																	
	- Without Improvements	AWS	0.5	1	0.5	2	2	1	1	2	0	1	1	1	>80	>80	F	F
	- With Improvements	<u>TS</u>	0.5	1	0.5	2	2	1	1	2	0	1	1	1>	21.9	21.8	C	C
7	Jefferson St. / Avenue 52																	
	- Without Improvements	RDB	0.5	0.5	1>>	0.5	0.5	1>>	0.5	0.5	1>>	0.5	0.5	1>>	>80	>80	F	F
	- Without Improvements	RDB	0.5	<u>1.5</u>	1>>	0.5	<u>1.5</u>	1>>	0.5	0.5	1>>	0.5	0.5	1>>	13.5	13.4	B	B
8	Jefferson St. / Pomelo	TS	1	3	0	1	3	0	0.5	0.5	1	0.5	0.5	1	29.0	28.9	C	C
9	Jefferson St. / Avenue 50																	
	- Without Improvements	TS	1	3	1	2	3	1	1	2	1	1	1	1	48.1	48.1	D	D
	- With Improvements	TS	1	3	1	2	3	1	1	2	1	1	<u>2</u>	1	47.3	47.3	D	D
10	Madison St. / Avenue 60	AWS	0	0	0	1	0	1	0.5	0.5	0	0	1	1	12.7	13.9	B	B
11	Monroe St. / Avenue 60																	
	- Without Improvements	AWS	1	1	0	1	1	1	0.5	0.5	1	0	1!	0	47.0	45.2	E	E
	- With Improvements	<u>TS</u>	1	1	0	1	1	1	0.5	0.5	1	0	1!	0	35.3	35.4	D	D
12	Monroe St. / Avenue 58																	
	- Without Improvements	AWS	0	1!	0	0.5	0.5	1	0	1!	0	0	1!	0	>80	>80	F	F
	- With Improvements	<u>TS</u>	<u>1</u>	1	0	<u>1</u>	1	0	<u>1</u>	1	0	<u>1</u>	1	0	30.2	30.4	C	C
13	Monroe St. / Airport Blvd.																	
	- Without Improvements	AWS	1	1	0	1	2	d	1	1	1	0	1!	0	66.3	66.4	F	F
	- With Improvements	<u>TS</u>	1	1	0	1	2	d	1	1	1	0	1!	0	22.9	22.8	C	C
14	Monroe St. / Avenue 54																	
	- Without Improvements	AWS	0	1!	0	0.5	0.5	1	1	1	0	0	1!	0	>80	>80	F	F
	- With Improvements	<u>TS</u>	<u>1</u>	1	0	<u>1</u>	1	0	1	1	0	<u>1</u>	1	0	32.6	32.6	C	C
15	Monroe St. / Avenue 52																	
	- Without Improvements	AWS	0	1!	0	1	2	0	1	1	1	1	2	d	>80	>80	F	F
	- With Improvements	<u>TS</u>	0	1!	0	1	2	0	1	1	1	1	2	d	34.3	34.3	C	C
16	Monroe St. / 50th Avenue	TS	1	2	0	1	2	0	1	1	1	1	1	1>	20.7	20.7	C	C
17	Jackson St. / 58th Avenue	AWS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	14.6	14.6	B	B

**TABLE 8-4: INTERSECTION ANALYSIS FOR
EAPC PHASE 3 (2026) WEEKEND SPECIAL EVENT CONDITIONS**

#	Intersection	Traffic Control ³	Intersection Approach Lanes ¹												With Project			
			Northbound				Southbound				Eastbound				Delay ² (Secs)		Level of Service ²	
			L	T	R	L	T	R	L	T	R	L	T	R	Arrival	Departure	Arrival	Departure
18	S. Access / Avenue 60	<u>CSS</u>	0	0	0	0	<u>1!</u>	0	0	<u>1</u>	0	0	<u>1</u>	0	8.9	8.9	A	A
19	Madison St. / Main Access	<u>CSS</u>	<u>1</u>	2	0	0	2	0	<u>1</u>	0	<u>1</u>	0	0	0	30.9	32.2	D	D
20	Project Access 1 / Avenue 58	<u>CSS</u>	0	<u>1!</u>	0	0	0	0	0	1	0	<u>1*</u>	2	0	12.6	12.1	B	B
21	Project Access 2 / Avenue 58	<u>CSS</u>	0	0	<u>1</u>	0	0	0	0	1	0	0	2	0	9.9	10.3	A	B
22	Madison St. / Project Access 3	<u>CSS</u>	0	2	0	0	2	0	0	0	<u>1</u>	0	0	0	11.0	11.1	B	B

¹ When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; >> = Free-Right Turn Lane; d= Defacto Right Turn Lane; 1 = Improvement

* = Left turn lane accommodated within two-way left turn lane

² Per the Highway Capacity Manual 6th Edition (HCM6), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. Delay and level of service is calculated using Synchro 10.1 analysis software.

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

³ TS = Traffic Signal; CSS = Cross-street Stop; AWS = All-Way Stop; RDB = Roundabout

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**TABLE 8-5: PROJECT ACCESS TURN LANE STORAGE LENGTHS FOR
EAPC PHASE 3 (2026) WEEKEND SPECIAL EVENT CONDITIONS**

ID	Intersection	Turning Movement Lane	EAPC (2026) WEEKEND SPECIAL EVENT				Storage Length ² (ft.)	95th Percentile ¹ Queue Length	
			AM	PM	Peak Hour	Volume		Arrival	Departure
18	S. Access / Avenue 60	SBL/SBR	52	56	PM	56	<u>>300</u>	44	53
19	Madison St. / Main Access	NBL	110	53	AM	110	<u>150</u>	89	61
		EBL	175	229	PM	229	<u>150</u>	107	137
		EBR	15	27	PM	27	<u>>150</u>	41	42
20	Project Access 1 / Avenue 58	NBL/NBR	29	94	PM	94	<u>>50</u>	20	69
		WBL	106	39	AM	106	<u>>50</u>	44	37
21	Project Access 2 / Avenue 58	NBR	18	51	PM	51	<u>>50</u>	52	44
22	Madison St. / Project Access 3	EBR	34	78	PM	78	<u>>50</u>	43	42

¹ Queue length calculated using SimTraffic.

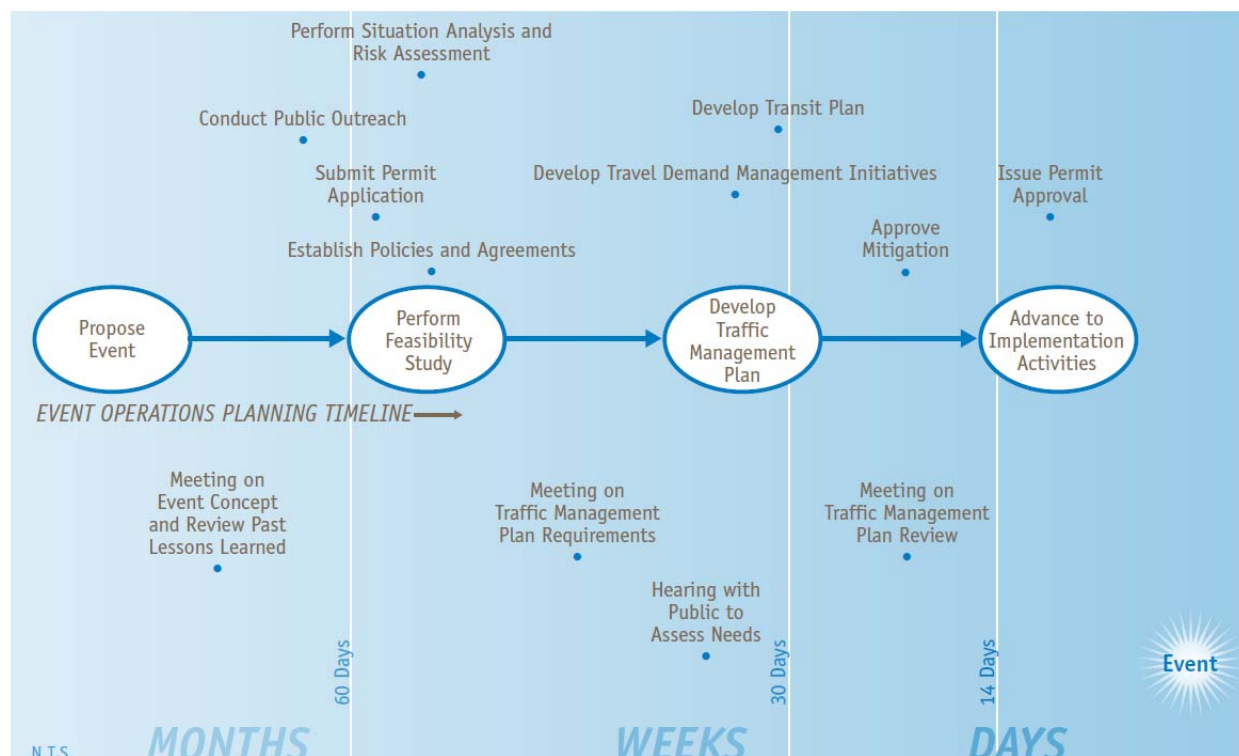
² Existing Storage Length = 100 ; Proposed Storage Length = 100

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Approximately 260 total inbound trips to the wave basin facility alone are anticipated during the arrival peak hour (of which 214 are from outside the Project residential, retail, and resort hotel), with a similar quantity occurring in the outbound direction during the departure peak hour.

These special event attendee vehicles are anticipated to access the wave basin facility via the Project Main Entry. For large special event venues, traffic control typically includes special event flaggers, law enforcement personnel, online or transmitted event information (suggested routes, parking, etc.), and portable changeable message signs (CMS). In the case studied here, with appropriate wayfinding signage, these special event traffic control measures are not currently anticipated to be necessary. However, if at a later date these measures are determined to be desirable / necessary, the facility management should coordinate with the City staff to develop a traffic management plan prior to the Special Event. Exhibit 8-7 shows a potential generalized schedule of special event operation planning.

EXHIBIT 8-7: EVENT OPERATIONS PLANNING SCHEDULE



Source: Managing Travel for Planned Special Events Handbook: Executive Summary (June 2007) prepared by Federal Highway Administration (FHWA)

9 SUMMARY AND RECOMMENDATIONS

9.1 PROJECT ACCESS

The Coral Mountain Specific Plan Project is proposed to be served by the Project access locations listed below:

- Madison Street / Main Access (full access)
- South Access / Avenue 60 (full access)
- Project Access 1 / Avenue 58 (full access)
- Project Access 2 / Avenue 58 (right-in/right-out access)
- Madison Street / Project Access 3 (right-in/right-out access)

The separation between Project driveways along Avenue 58 and Madison Street are over 250 feet and separation between Avenue 58 and the Project's main access point (future signalized location) is over 600 feet. The location of each Project access points meets City of La Quinta intersection spacing standards.

Exhibit 9-1 shows Project access and site-adjacent improvements to be constructed in conjunction with development.

For Project Phase 1 conditions, the following improvements are recommended:

Avenue 58 should be constructed to its ultimate half-section width as a Secondary along the commercial portion of the Project.

Madison Street should be constructed to its ultimate half-section width as a Secondary along the commercial portion of the Project. Avenue 60 should be constructed as a 2-lane roadway along the Project boundary.

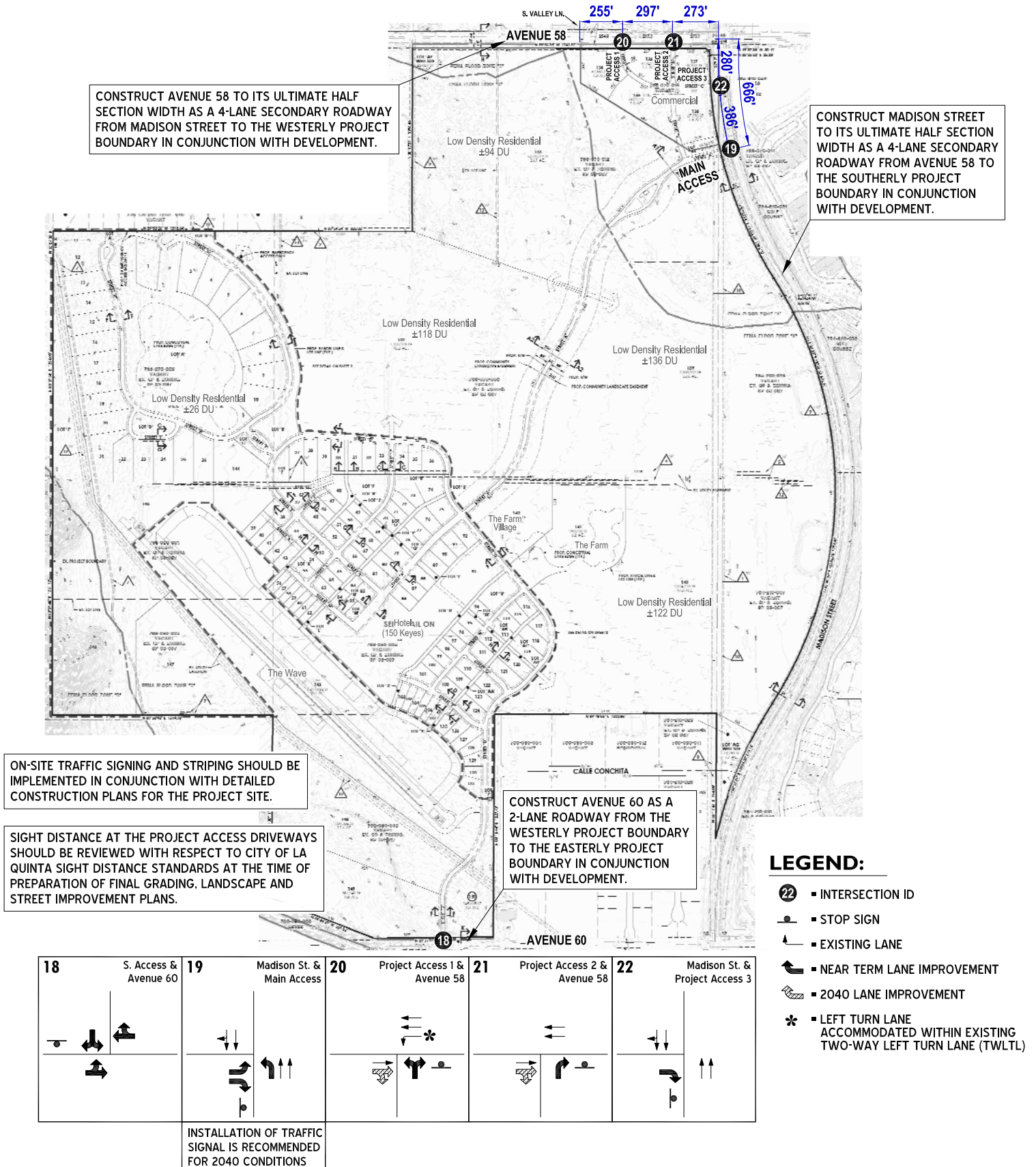
For Project Access 1 & Avenue 58 (intersection 20), provide northbound cross-street stop control. Construct south leg with one shared northbound left-right turn lane. Accommodate westbound left turn lane within two-way left turn lane (TWLTL) striping.

Northbound cross-street stop control should be provided for Project Access 2 & Avenue 58 (intersection 21). Construct south leg with one right turn outbound lane. Left turns should not be accommodated at this intersection.

For Madison Street & Project Access 3 (intersection 22), provide eastbound cross-street stop control. Construct west leg with one right turn outbound lane. Left turns should not be accommodated at this intersection.

Eastbound cross-street stop control should be provided for Madison Street & Main Access (intersection 19). Construct west leg with one left turn outbound and one right turn outbound lane. Construct a northbound left turn inbound lane with a minimum turn bay length of 150'.

EXHIBIT 9-1: SITE ADJACENT ROADWAY AND SITE ACCESS RECOMMENDATIONS



For South Access & Avenue 60 (intersection 18), provide southbound cross-street stop control. Construct north leg with one shared left-right turn outbound lane. Construct west leg with one shared left-through lane. Construct east leg with one shared through-right lane.

For Project Phase 2 conditions, the same improvements are recommended as for Project Phase 1 (see above).

For Project Buildout (Phase 3) conditions, the following improvements are recommended:

Avenue 58 should be constructed to its ultimate half-section width as a Secondary along the residential / remaining portion of the Project.

Madison Street should be constructed to its ultimate half-section width as a Secondary along the residential / remaining portion of the Project.

Construct traffic signal for the intersection of Madison Street & Main Access when warranted.

9.2 POTENTIALLY SIGNIFICANT IMPACT ASSESSMENT RESULTS

Existing intersection operations were presented in Section 3.10 of this TIA. All of the 17 existing study area intersections are currently operating at an acceptable LOS during the peak hours. The following 4 unsignalized study area intersections currently warrant a traffic signal:

- Madison Street at Avenue 54
- Jefferson Street at Avenue 54
- Monroe Street at Avenue 54
- Monroe Street at Avenue 52

9.2.1 E+P CONDITIONS

For Existing + Project conditions, the intersection analysis results were previously presented on Table 6-1, which indicates that two study area intersections require installation of a traffic signal (which is funded in the CIP) in order to maintain acceptable LOS under E+P conditions:

Jefferson Street at Avenue 54 (#6) – Install CIP-funded traffic signal control

Monroe Street at Avenue 52 (#15) – Install CIP-funded traffic signal control

9.2.2 EAP CONDITIONS

EAP intersection analysis results were previously presented on Table 6-3, which indicates that the following five study area intersections are anticipated to require installation of a traffic signal (which is funded in the CIP) in order to maintain acceptable LOS under EAP conditions:

Madison Street at Avenue 54 (#3) – Install CIP-funded traffic signal control

Jefferson Street at Avenue 54 (#6) – Install CIP-funded traffic signal control

Monroe Street at Avenue 58 (#11) – Install CIP-funded traffic signal control

Monroe Street at Avenue 54 (#13) – Install CIP-funded traffic signal control

Monroe Street at Avenue 52 (#14) – Install CIP-funded traffic signal control

EAP analysis results indicates that the intersection of Jefferson Street at Avenue 52 experiences deficient operations under cumulative “without project” conditions. Jefferson Street at Avenue 52 requires reconstruction of the current roundabout design to incorporate 2 circulating lanes around the center island. This effectively accommodates an additional through lane in the northbound and southbound directions to provide acceptable LOS.

9.2.3 EXISTING PLUS AMBIENT GROWTH PLUS CUMULATIVE PROJECTS (2021) CONDITIONS

EAPC intersection analysis results were previously presented on Table 6-5, which indicates that the following four study area intersections are anticipated to require installation of a traffic signal (which is funded in the CIP) in order to maintain acceptable LOS under EAPC Phase 1 conditions:

Madison Street at Avenue 54 (#3) – Install CIP-funded traffic signal control

Jefferson Street at Avenue 54 (#6) – Install CIP-funded traffic signal control

Monroe Street at Avenue 54 (#13) – Install CIP-funded traffic signal control

Monroe Street at Avenue 52 (#14) – Install CIP-funded traffic signal control

EAPC analysis results in a cumulatively impacted intersection for Jefferson Street at Avenue 52. Jefferson Street at Avenue 52 requires reconstruction of the current roundabout design to incorporate 2 circulating lanes around the center island. This effectively accommodates an additional through lane in the northbound and southbound directions to provide acceptable LOS. The improvements are needed with or without the Project, so a fair share contribution is appropriate.

9.2.4 EXISTING PLUS AMBIENT GROWTH PLUS CUMULATIVE PROJECTS (2023) CONDITIONS

EAPC intersection analysis results were previously presented on Table 6-7, which indicates that the following five study area intersections are anticipated to require installation of a traffic signal (which is funded in the CIP) in order to maintain acceptable LOS under EAPC Phase 2 conditions:

Madison Street at Avenue 54 (#3) – Install CIP-funded traffic signal control

Jefferson Street at Avenue 54 (#6) – Install CIP-funded traffic signal control

Monroe Street at Avenue 58 (#12) – Install CIP-funded traffic signal control

Monroe Street at Avenue 54 (#13) – Install CIP-funded traffic signal control

Monroe Street at Avenue 52 (#14) – Install CIP-funded traffic signal control

EAPC analysis results in one cumulatively impacted intersection (Jefferson Street at Avenue 52). Similar to EAPC Phase 1 conditions, Jefferson Street at Avenue 52 requires reconstruction of the current roundabout design to incorporate 2 circulating lanes around the center island. This effectively accommodates an additional through lane in the northbound and southbound directions to provide acceptable LOS. The improvements are needed with or without the Project, so a fair share contribution is appropriate.

9.2.5 EXISTING PLUS AMBIENT GROWTH PLUS CUMULATIVE PROJECTS (2026) CONDITIONS

EAPC intersection analysis results were previously presented on Table 6-9, which indicates that the following eight study area intersections are anticipated to require installation of a traffic signal in order to maintain acceptable LOS under EAPC conditions:

Madison Street at Avenue 58 (#1) – Install CIP-funded traffic signal control

Madison Street at Avenue 54 (#3) – Install CIP-funded traffic signal control

Jefferson Street at Avenue 54 (#6) – Install CIP-funded traffic signal control

Monroe Street at Avenue 60 (#11) – Install CIP-funded traffic signal control

Monroe Street at Avenue 58 (#12) – Install CIP-funded traffic signal control

Monroe Street at Airport Boulevard (#13) – Install CIP-funded traffic signal control

Monroe Street at Avenue 54 (#14) – Install CIP-funded traffic signal control

Monroe Street at Avenue 52 (#15) – Install CIP-funded traffic signal control

In addition, for Jefferson Street at Avenue 50, a second westbound through lane is necessary to maintain acceptable level of service. EAPC analysis results in one cumulatively impacted intersection (Jefferson Street at Avenue 52). Similar to EAPC Phase 1 and Phase 2 conditions, Jefferson Street at Avenue 52 requires reconstruction of the current roundabout design to incorporate 2 circulating lanes around the center island. This effectively accommodates an additional through lane in the northbound and southbound directions to provide acceptable LOS. The improvements are needed with or without the Project, so a fair share contribution is appropriate.

The main Project driveway is located at on Madison Street south of Avenue 58. It is a full access location, serving left and right turns to and from Madison Street with traffic signal control. With the Project, the northbound left turn lane serving the main Project driveway is recommended to provide 150 feet of vehicle queuing.

9.2.6 GENERAL PLAN BUILDOUT (YEAR 2040) CONDITIONS

All intersections are anticipated to experience acceptable operations under General Plan Buildout (Year 2040), based upon improvements indicated in the City of La Quinta General Plan Circulation Element Update Traffic Impact Analysis.

The main Project driveway is located at on Madison Street south of Avenue 58. It is a full access location, serving left and right turns to and from Madison Street with traffic signal control. With the Project, the northbound left turn lane serving the main Project driveway is recommended to provide 150 feet of vehicle queuing.

9.3 FAIR SHARE CONTRIBUTION

Project mitigation may include a combination of fee payments to established programs, construction of specific improvements, payment of a fair share contribution toward future improvements or a combination of these approaches. Improvements constructed by

development should be eligible for a fee credit or reimbursement through the program where appropriate (to be determined at the City's discretion).

Table 9-1 shows the project fair share percentages at cumulatively impacted intersections and CIP funded locations (for EAPC and 2040 conditions). However, these percentages are an approximation only as they are intended only for discussion purposes and do not imply any legal responsibility or formula for contributions or mitigation.

In addition, a summary of study area improvements needed to address intersection operational deficiencies and corresponding funding sources for near-term and General Plan Buildout conditions are summarized in Table 9-2.

9.4 VEHICLE MILES TRAVELED

Project VMT (Vehicle Miles Traveled) has been evaluated and provided in a separate letter "*Coral Mountain Specific Plan Vehicle Miles Traveled (VMT) Analysis*", dated October 27, 2020.

TABLE 9-1: PROJECT FAIR SHARE CALCULATIONS

ID	Intersection	Project Only Traffic			EAPC Peak Hour Traffic			2040 With Project Peak Hour Traffic	Fair Share (%)			
		Phase 1 (2021)	Phase 2 (2023)	Phase 3 Buildout (2026)	Phase 1 (2021)	Phase 2 (2023)	Phase 3 (2026)		EAPC Phase 1 (2021) ¹	EAPC Phase 2 (2023) ²	EAPC Phase 3 (2026) ³	2040 With Project ⁴
1	Madison St. / Avenue 58 • AM Peak Hour • PM Peak Hour	N/A	N/A	339 464	N/A	N/A	1,455 2,034	3,235 4,690	N/A	N/A	23% 23%	10% 10%
3	Madison St. / Avenue 54 • AM Peak Hour • PM Peak Hour	36 43	38 52	182 240	1,469 1,845	1,679 2,130	2,165 2,769	5,224 6,689	2% 2%	2% 2%	8% 9%	3% 4%
4	Madison St. / Avenue 52 • AM Peak Hour • PM Peak Hour	N/A	N/A	98 129	N/A	N/A	N/A	4,330 5,452	N/A	N/A	N/A	2% 2%
5	Madison St. / Avenue 50 • AM Peak Hour • PM Peak Hour	N/A	N/A	58 72	N/A	N/A	1,967 2,594	4,587 6,410	N/A	N/A	N/A	1% 1%
6	Jefferson St. / Avenue 54 • AM Peak Hour • PM Peak Hour	12 15	13 17	61 80	1,331 1,604	1,443 1,749	1,669 2,044	3,135 3,871	1% 1%	1% 1%	4% 4%	2% 2%
7	Jefferson St. / Avenue 52 • AM Peak Hour • PM Peak Hour	12 13	12 13	76 97	2,792 3,233	2,965 3,462	3,301 3,900	5,035 6,097	0.4% 0.4%	0.4% 0.4%	2% 2%	2% 2%
9	Jefferson St. / Avenue 50 • AM Peak Hour • PM Peak Hour	N/A	N/A	77 96	3,213 3,853	3,344 4,054	3,622 4,440	4,954 6,161	N/A	N/A	2% 2%	2% 2%
10	Madison St. / Avenue 60 • AM Peak Hour • PM Peak Hour	N/A	N/A	125 169	N/A	N/A	N/A	2,875 3,853	N/A	N/A	N/A	4% 4%
11	Monroe St. / Avenue 60 • AM Peak Hour • PM Peak Hour	N/A	N/A	82 111	685 840	941 1,194	1,334 1,733	3,094 4,863	N/A	N/A	6% 6%	3% 2%
12	Monroe St. / Avenue 58 • AM Peak Hour • PM Peak Hour	N/A	29 37	141 185	695 1,007	919 1,334	1,320 1,914	3,311 4,733	N/A	3% 3%	11% 10%	4% 4%
13	Monroe St. / Airport Blvd. • AM Peak Hour • PM Peak Hour	N/A	N/A	76 97	640 864	854 1,163	1,218 1,654	3,200 4,442	N/A	N/A	6% 6%	2% 2%
14	Monroe St. / Avenue 54 • AM Peak Hour • PM Peak Hour	12 13	12 13	76 97	1,120 1,250	1,349 1,566	1,738 2,108	3,987 5,384	1% 1%	1% 1%	4% 5%	2% 2%
15	Monroe St. / Avenue 52 • AM Peak Hour • PM Peak Hour	12 13	12 13	76 97	1,589 1,932	1,769 2,190	2,113 2,673	4,174 5,664	1% 1%	1% 1%	4% 4%	2% 2%
16	Monroe St. / 50th Avenue • AM Peak Hour • PM Peak Hour	9 10	9 9	58 72	1,561 2,137	1,734 2,378	2,067 2,839	4,319 6,011	1% 0%	1% 0%	3% 3%	1% 1%
17	Jackson St. / 58th Avenue • AM Peak Hour • PM Peak Hour	13 13	13 17	61 81	370 559	464 700	670 995	2,594 3,735	4% 2%	3% 2%	9% 8%	2% 2%

¹ Project Fair Share % = ("Project Only Phase 1 (2021) Traffic" / "EAPC Phase 1 (2021) Peak Hour Traffic")² Project Fair Share % = ("Project Only Phase 2 (2023) Traffic" / "EAPC Phase 2 (2023) Peak Hour Traffic")³ Project Fair Share % = ("Project Only Phase 3 Buildout (2026) Traffic" / "EAPC Phase 3 (2026) Peak Hour Traffic")⁴ Project Fair Share % = ("Project Only Phase 3 Buildout (2026) Traffic" / "2040 With Project Peak Hour Traffic")

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TABLE 9-2: SUMMARY OF PHASED INTERSECTION IMPROVEMENTS

ID	Intersection	Jurisdiction	Phase 1 (2021) ¹		Phase 2 (2023) ¹		Phase 3 (2026) ¹		Funding Source?	2040 Conditions ¹	
			Without Project	With Project	Without Project	With Project	Without Project	With Project		Without Project	With Project
1	Madison St. / Avenue 58	City of La Quinta	None	None	None	None	None	• Install TS	DIF / CIP ²	• Same • 2nd EBL, WBR Ovl	• Same • Same
3	Madison St. / Avenue 54	City of La Quinta	• Install TS	• Same	• Same	• Same	• Same	• Same	DIF / CIP	• Same • 1 EB free RT • WBR OVL	• Same • Same • Same
4	Madison St. / Avenue 52	City of La Quinta/ City of Indio	None	None	None	None	None	None	DIF / CIP	• 1 SBR	• Same
5	Madison St. / Avenue 50	City of La Quinta/ City of Indio	None	None	None	None	None	None	DIF / CIP	• 3rd NBT • WBR OVL	• Same • Same
6	Jefferson St. / Avenue 54	City of La Quinta	• Install TS	• Same	• Same	• Same	• Same • WBR OVL	• Same • Same	DIF / CIP	• Same • Same, 2nd WBR • 1 NBL, 1 NBR	• Same • Same • Same
7	Jefferson St. / Avenue 52	City of La Quinta	• 2 lane RDB • 2nd NBT • 2nd SBT	• Same • Same • Same	• Same • Same • Same	• Same • Same • Same	• Same • Same • Same	• Same • Same • Same	DIF / CIP	• 3 lane RDB • Same, 3rd NBT • Same, 3rd SBT • 2nd EBT, 3rd EBT • 2nd WBT, 3rd WBT	• Same • Same • Same • Same • Same
9	Jefferson St. / Avenue 50	City of La Quinta/ City of Indio	None	None	None	None	• 2nd WBT	• Same	La Quinta CIP	• Same, 2nd WBL • 2nd EBL	• Same • Same
10	Madison St. / Avenue 60	City of La Quinta	None	None	None	None	None	None	--	• Install TS • 1 Shared NB L/T/R • 2nd SBL, 1 SBT, SBR OVL • 2 EBL • 1 WBL, 2nd WBT	• Same • Same • Same • Same • Same
11	Monroe St. / Avenue 60	City of La Quinta/ County of Riverside	None	None	None	None	• Install TS	• Same	La Quinta CIP	• Same • 2nd NBT • 2nd SBT • 1 EBL, 2nd EBT, EBR OVL • 1 WBL, 2nd WBT 1 WBR w/ OVL	• Same • Same • Same • Same • Same

TABLE 9-2: SUMMARY OF PHASED INTERSECTION IMPROVEMENTS

ID	Intersection	Jurisdiction	Phase 1 (2021) ¹		Phase 2 (2023) ¹		Phase 3 (2026) ¹		Funding Source?	2040 Conditions ¹	
			Without Project	With Project	Without Project	With Project	Without Project	With Project		Without Project	With Project
12	Monroe St. / Avenue 58	City of La Quinta/ County of Riverside	None	None	• Install TS	• Same	• Same • 1 NBL, 1 SBL, • 1 EBL, 1 WBL	• Same • Same • Same	DIF / CIP	• Same • Same • Same • 2nd NBL, 2nd NBT, 1 NBR w/ OVL • 2nd SBL, 2nd SBT • 2nd EBT, 2nd EBR • 2nd WBT	• Same • Same • Same • Same • Same • Same
13	Monroe St. / Airport Blvd.	City of La Quinta/ County of Riverside	None	None	None	None	• Install TS	• Same	DIF / CIP	• Same • 2nd NBT • 2nd EBT • 1 WBL, 2nd WBT, 1 WBR w/ OVL	• Same • Same • Same • Same
14	Monroe St. / Avenue 54	City of La Quinta/ County of Riverside	• Install TS	• Same	• Same	• Same	• Same • 1 NBL, 1 SBL, 1 WRI	• Same • Same	DIF / CIP	• Same • Same • 2nd NBT, 1 NBR • 2nd SBT, 1 SBR • 2nd EBL, 2nd EBT, 1 EBR • 1 WBL, 2nd WBT, 1 WBR	• Same • Same • Same • Same • Same
15	Monroe St. / Avenue 52	City of La Quinta/ City of Indio/ County of Riverside	• Install TS	• Same	• Same	• Same	• Same	• Same	DIF / CIP	• Same • 2 NBL, 1NBT, 1 NBR • 2nd SBL • 2nd EBT • 2nd WBR	• Same • Same • Same • Same
16	Monroe St. / 50th Avenue	City of Indio	None	None	None	None	None	None	--	• 2nd NBL, 1 NBR • 2nd SBL • 2nd EBT • 2nd WBT	• Same • Same • Same • Same

TABLE 9-2: SUMMARY OF PHASED INTERSECTION IMPROVEMENTS

ID	Intersection	Jurisdiction	Phase 1 (2021) ¹		Phase 2 (2023) ¹		Phase 3 (2026) ¹		Funding Source?	2040 Conditions ¹	
			Without Project	With Project	Without Project	With Project	Without Project	With Project		Without Project	With Project
17	Jackson St. / 58th Avenue	County of Riverside	None	None	None	None	None	None	--	<ul style="list-style-type: none"> • Install TS • 1 NBL, 2nd NBT • 1 SBL, 2nd SBT • 1 EBL, 2nd EBT • 1 WBL, 2nd WBT 	<ul style="list-style-type: none"> • Same • Same • Same • Same • Same
18	S. Access / Avenue 60	City of La Quinta	N/A	<ul style="list-style-type: none"> • Install SB CSS • 1 shared SBL/R • 1 shared EBL/T • 1 shared WBT/R 	N/A	<ul style="list-style-type: none"> • Same • Same • Same • Same 	N/A	<ul style="list-style-type: none"> • Same • Same • Same • Same 	Project	N/A	<ul style="list-style-type: none"> • Same • Same • Same • Same
19	Madison St. / Main Access	City of La Quinta	N/A	<ul style="list-style-type: none"> • Install EB CSS • 1 NBL • 1 EBL & 1 EBR 	N/A	<ul style="list-style-type: none"> • Same • Same • Same 	N/A	<ul style="list-style-type: none"> • Same • Same • Same 	Project	N/A	<ul style="list-style-type: none"> • Install TS • Same • Same
20	Project Access 1 / Avenue 58	City of La Quinta	N/A	<ul style="list-style-type: none"> • Install NB CSS • 1 shared NBL/R 	N/A	<ul style="list-style-type: none"> • Same • Same 	N/A	<ul style="list-style-type: none"> • Same • Same 	Project	N/A	<ul style="list-style-type: none"> • Same • Same • 2nd EBT
21	Project Access 2 / Avenue 58	City of La Quinta	N/A	<ul style="list-style-type: none"> • Install NB CSS • 1 NBR 	N/A	<ul style="list-style-type: none"> • Same • Same 	N/A	<ul style="list-style-type: none"> • Same • Same 	Project	N/A	<ul style="list-style-type: none"> • Same • Same • 2nd EBT

¹ TS = Traffic Signal; RDB = Roundabout; CSS = Cross-Street Stop Control; OVL = Overlap Phase

² The required signal will be installed by the Project, and reimbursement may be provided for all but the Project's fair share by future developments, or CIP, or DIF.

10 REFERENCES

1. **Iteris.** *City of La Quinta General Plan Circulation Element Update Traffic Impact Analysis.* Prepared for City of La Quinta, May 14, 2012.
2. **City of La Quinta.** *Engineering Bulletin #06-13.* s.l. : City of La Quinta, July 23, 2015.
3. **City of La Quinta.** *Engineering Bulletin #10-01 Intersection Sight Distance Guidelines.* City of La Quinta Public Works/Engineering Department, 2010.
4. **Institute of Transportation Engineers.** *Trip Generation.* 9th Edition. 2012.
5. **Riverside County Transportation Commission.** *2011 Riverside County Congestion Management Program.* County of Riverside : RCTC, December 14, 2011.
6. **City of La Quinta.** *City of La Quinta Municipal Code.* City of La Quinta. December 1996.
7. **Transportation Research Board.** *Highway Capacity Manual (HCM).* National Academy of Sciences, 2010.
8. **California Department of Transportation.** *Guide for the Preparation of Traffic Impact Studies.* December 2002.
9. **Federal Highway Administration.** *Manual on Uniform Traffic Control Devices (MUTCD).* [book auth.] California Department of Transportation. *California Manual on Uniform Traffic Control Devices (CAMUTCD).* 2014.
10. **Southern California Association of Governments.** *2016 Regional Transportation Plan/Sustainable Communities Strategy.* April 2016.
11. **City of La Quinta.** *Resolution No. 2012-12: Fiscal Year 2012/2013 through 2016/2017 Capital Improvement Plan.* City of La Quinta, 2012.
12. **KOA Corporation.** *CVAG Transportation Project Prioritization Study - 2010 Update.* Coachella Valley Association of Governments, 2010.

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APPENDIX 1.1:

APPROVED TRAFFIC STUDY SCOPING AGREEMENT

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February 12, 2020
Mr. Steve Libring
City of La Quinta
78-405 Calle Tampico
La Quinta, CA 92253

**SUBJECT: REVISED SCOPING AGREEMENT FOR THE WAVE AT CORAL MOUNTAIN
REVISED TRAFFIC IMPACT ANALYSIS**

Dear Mr. Steve Libring:

The firm of Urban Crossroads, Inc. is pleased to submit this scoping agreement for The Wave at Coral Mountain ("Project"), which is located on the southwest corner of re-aligned Madison Street at 58th Avenue, in the City of La Quinta. Proposed development activities within the Specific Plan (west of Madison Street) are based upon the following land use quantities:

• Single Family Detached	496	DU
• Multifamily Housing (Low-Rise)	104	DU
• Resort Hotel	150	RM
• Shopping Center	60	TSF
• Wave Pool Facility	12	AC

The preliminary land use plan for the proposed Project is shown on Exhibit 1.

The average number of attendees per day on a typical weekday as well as a special event day will be discussed in the revised TIA.

Our goal is to obtain comments from City of La Quinta staff, to ensure that the traffic impact analysis (TIA) fully addresses the potential impacts of the proposed Project.

The remainder of this letter describes the proposed analysis methodology, Project trip generation, and trip distribution on the surrounding roadway network. The following scoping assumptions have been prepared in accordance with the City of La Quinta Traffic Study Guidelines (Engineering Bulletin #06-13, revised October 3, 2017).

Exhibit 2 depicts the location of the proposed project in relation to the existing roadway network. Project access locations are listed below:

- Madison Street / Main Access (full access)
- South Access / Avenue 60 (full access)
- Project Access 1 / Avenue 58 (full access)
- Project Access 2 / Avenue 58 (right-in/right-out access)
- Madison Street / Project Access 3 (right-in/right-out access)

TRIP GENERATION

The Project is anticipated to be constructed in phases, with Phase 1 (2021) including resort (wave pool and hotel uses), 104 attached dwelling units, 26 detached dwelling units, and 10,000 square feet of retail. Project Phase 2 (2023) adds 22,500 square feet of retail. Project Phase 3 (2026) adds 470 detached dwelling units and 22,500 square feet of retail.

In accordance with the City of La Quinta's Engineering Bulletin #06-13, the Project trip generation rates to be used for the traffic impact analysis will be based on the Institute of Transportation Engineers (ITE) Trip Generation manual, 10th Edition (2017). Trip generation estimates for the Project have been determined by utilizing the published rates for the peak hour of the generator rather than for the peak hour of adjacent street traffic, where possible.

Trip generation rates are presented on Tables 1 through 3 for Phase 1 through Project buildout conditions, respectively. ITE trip generation rates for Single Family Detached Residential (Code 210), Multifamily Housing (Code 220), Resort Hotel (Code 330), and Shopping Center (Code 820) are used. The surf pool is a private facility. As indicated in the original approved TIA scope for this Project, trip generation rates for the Wave Pool Facility from the San Diego Association of Governments recreational park (developed) rates appropriately account for this private facility.

The project area land uses include a unique mix of commercial retail, resort, recreation and residential uses, so reasonable assumptions regarding internal/pass-by interactions between these uses are included in the trip generation calculations. The wave pool facility will be utilized by hotel guests, but outside trip generation is also included for things like off-site lunch, wave pool employees, etc. Area residents and visitors will use the commercial retail area facilities (which typically include merchandise, service station and restaurant land uses). The total internal/pass-by trip ends have been adjusted in a manner to ensure that no "double counting" occurs before assigning the project trips to the roadway network.

As shown on Table 1, Phase 1 of the proposed Project is anticipated to generate a net total of 2,227 external trip-ends per day on a typical weekday with 114 external vehicles per hour (VPH) during the weekday AM peak hour and 151 external VPH during the weekday PM peak hour.

Table 2 shows trip generation for Phase 2 of the proposed Project, which is anticipated to generate a net total of 2,778 external trip-ends per day on a typical weekday with 123 external vehicles per hour (VPH) during the weekday AM peak hour and 208 external VPH during the weekday PM peak hour.

As shown on Table 3, at Project buildout, the site is anticipated to generate a net total of 6,994 external trip-ends per day on a typical weekday with 447 external vehicles per hour (VPH) during the weekday AM peak hour and 638 external VPH during the weekday PM peak hour.

TRIP DISTRIBUTION

Trip distribution is the process of identifying the probable destinations, directions or traffic routes that will be utilized by Project traffic. The potential interaction between the planned land uses and surrounding regional access routes are considered to identify the routes where modified project traffic

would travel. The trip distribution pattern is heavily influenced by the geographical location of the site, the location of surrounding uses, and the proximity to the arterial and regional freeway system.

The trip distribution patterns for the proposed Project residential and resort components are graphically depicted on Exhibit 3. Exhibit 4 shows the trip distribution patterns for the proposed Project shopping center components. The trip distributions have been developed based on RivTAM and local knowledge in the vicinity of the Project site and refined to reflect the roadway network and the surrounding uses in the vicinity of the proposed Project as they exist today and are planned for the future.

STUDY AREA

The traffic impact study area was defined in conformance with the requirements of Engineering Bulletin #06-13. Based on this criterion, anticipated trip generation and trip distribution, the following intersections will be evaluated (see Exhibit 2):

ID	Intersection Location	ID	Intersection Location
1	Madison Street at Avenue 58	12	Monroe Street at Avenue 58
2	Madison Street at Avenue 56	13	Monroe Street at Airport Boulevard
3	Madison Street at Avenue 54	14	Monroe Street at Avenue 54
4	Madison Street at Avenue 52	15	Monroe Street at Avenue 52
5	Madison Street at Avenue 50	16	Monroe Street at 50th Avenue
6	Jefferson Street at Avenue 54	17	Jackson Street at 58th Avenue
7	Jefferson Street at Avenue 52	18	South Access at Avenue 60 - <i>(Future Intersection)</i>
8	Jefferson Street at Pomelo	19	Madison Street at Main Access- <i>(Future Intersection)</i>
9	Jefferson Street at Avenue 50	20	Project Access 1 at Avenue 58- <i>(Future Intersection)</i>
10	Madison Street at Avenue 60	21	Project Access 2 at Avenue 58- <i>(Future Intersection)</i>
11	Monroe Street at Avenue 60	22	Madison Street at Project Access 3- <i>(Future Intersection)</i>

In addition, the following roadway segments will be evaluated:

Roadway Segment	
1 Avenue 58, west of Madison Street	4 Madison Street, south of Airport Boulevard
2 Avenue 58, west of Monroe Street	5 Avenue 60, west of Monroe Street
3 Avenue 58, west of Jackson Street	6 Monroe Street, south of Airport Boulevard

TRAFFIC COUNTS

Traffic count data were previously taken on August 15th, 2017, April 9th, 2019, May 7th, 2019, and September 9th, 2019 during the AM peak period of 6:00 AM to 8:30 AM and PM peak period of 2:30 PM to 5:30 PM. A 20% increase is applied to counts taken in August, 5% increase is applied to counts taken in April, 10% increase is applied to counts taken in May, and 15% increase is applied to counts taken in September per City of La Quinta's EB#06-13.

Table 4 shows that the average AM/PM peak hour intersection growth between 2017 and 2019 counts data at selected study area and nearby intersections is approximately 2.66%. The additional 2.66% growth rate is applied to the study area intersections with 2017 counts to reflect 2019 conditions. Exhibits 5 and 6 identify the count data utilized for each study intersection and illustrate the resulting Existing (2019) morning and evening peak hour intersection volumes.

ADT volumes are estimated using the formula below for each intersection leg (consistent with 2018 Travertine Specific Plan TIA, prepared by Urban Crossroads, Inc.) and compared to the 2017 ADT's with 2.66% growth to reflect 2019 conditions, where 2019 counts are unavailable.

- Weekday PM Peak Hour (Approach Volume + Exit Volume) x 12 = Leg Volume

ANALYSIS SCENARIOS

Consistent with Engineering Bulletin #06-13, the following analysis scenarios are proposed for this traffic study:

- Existing (2019)
- Existing Plus Project (E+P)
- Existing Plus Ambient Growth Plus Project (E+A+P)
- Existing Plus Ambient Growth Plus Cumulative Projects, with and without Project for each of the following phases:
 - Project Phase 1 (2021)
 - Project Phase 2 (2023)
 - Project buildout (Phase 3, 2026)
 - Project buildout (Phase 3, 2026) – Special Event
- General Plan buildout (2040) Without Project Conditions – establishes future year baseline to evaluate the proposed Project
- General Plan buildout (2040) With Project Conditions – represents future year baseline traffic conditions with the proposed Project

In accordance with Engineering Bulletin #06-13, improvements fully funded by the City of La Quinta's Capital Improvement Program (CIP) will be assumed to be in place for long range future conditions. Improvements fully funded by the City's CIP, the Development Impact Fee Program (DIF) and the Transportation Uniform Mitigation Fee Program (TUMF) are assumed to be in place for Opening Year Cumulative conditions.

The analysis of each Project phase, as listed above, will include the identification of improvements needed for cumulative conditions with and without the Project.

A centralized list of improvements needed with and without the Project for all analysis phases will be compiled in the TIA report.

LEVEL OF SERVICE (LOS) CRITERIA

Per Engineering Bulletin #06-13, the following LOS criteria will be utilized for study area intersections:

Intersection Type	LOS Criteria
Signalized Intersection	LOS "D" or better
All-way Stop Controlled Intersection	LOS "D" or better for all critical movements
Cross-Street Stop Controlled Intersection	LOS "E" or better for the side street

The City of La Quinta has established LOS "D" as the minimum level of service for its street segments.

PREFERRED ANALYSIS METHODOLOGY

The study area intersections will be analyzed using the Highway Capacity Manual (HCM) 6th Edition methodology. The parameters provided in Attachment 2 of Engineering Bulletin #06-13 will be utilized for the purposes of this analysis, unless directed otherwise.

CUMULATIVE DEVELOPMENT PROJECTS

It is requested that the City of La Quinta Planning Department review the cumulative projects shown on Exhibit 7 and listed on Table 5.

CUMULATIVE GROWTH VOLUMES

The background (non project) Opening Year Cumulative traffic projections will be determined by interpolating between the existing traffic volumes and the year 2040 City and/or CVAG traffic projections.

YEAR 2040 TRAFFIC FORECASTS

The Year 2040 forecast volumes are based upon an updated version of the Riverside County Transportation Analysis Model (RivTAM) which became available in the CVAG region during 2016. It is consistent with the SCAG draft 2016 RTP for the Transportation Project Prioritization Study (TPPS) 2040 project. For 2040 conditions, RivTAM projections will be examined to determine additional growth beyond the 2035 peak hour intersection volumes identified in the 2012 traffic study prepared by Iteris for the La Quinta General Plan Update. Where necessary, the resulting 2040 volumes estimates will be adjusted to achieve flow conservation, reasonable growth, and reasonable diversion between parallel routes.

SPECIAL ISSUES

The following issues will also be addressed as part of the TIA:

- Site Access Evaluation: Recommendations regarding site access and queuing analysis will be included in the traffic study. It is anticipated that the project will be required to widen Avenue

58 frontage. Eastbound left turn capacity will be evaluated along Avenue 58 approaching Madison Street. Project fair share participation in signal improvements will also be determined.

Both Avenue 58 and Madison Street are classified as Secondary Arterials adjacent to the site. The separation standards for a Secondary Arterial are 250 feet between driveways, and 600 feet between street intersections (based upon the City of La Quinta Public Works Department Development Engineering Handbook).

The revised TIA will include verification that the Project commercial driveways meet the 250-foot minimum standard, and that the Project main entry road intersection on Madison Street meets the 600-foot minimum standard between street intersections.

- Jefferson & Avenue 52 Improvements: The revised TIA will now include recommended improvements at Jefferson Street / Avenue 52 for relevant analysis scenarios, based upon discussion with City staff and their consultants.
- Interim Year Project Share Estimates: The revised TIA will include fair share calculations for interim year scenarios (as opposed to cumulative long range conditions), based upon the City consultant request.
- Vehicle miles traveled (VMT): Consistent with the Office of Planning and Research (OPR) updates to CEQA guidelines which are responding to Senate Bill 743 (SB 743), VMT estimates for the Project will be calculated. Potential mitigation measures and estimated effectiveness in reducing VMT in terms of percentage reduction of VMT for each measure will be identified in the traffic study.
- Special Events: The applicant anticipates the potential occurrence of special events at this location involving attendance of not-to-exceed 2,500 guests per day arriving or departing on Saturdays (up to 4 events per year). In order to estimate background mid-day Saturday peak hour volumes in the Project study area, weekday PM peak hour counts will be adjusted. The adjustments will be based upon a sampling of four Saturday intersection counts (between 10:00 AM and 2:00 PM) in the study area.

Table 6 shows the Saturday Project trip generation during a special event based on 2,500 guests per day at the Wave Pool facility and approximately 25% of the guests arriving or departing during the arrival or departure peak hour. Weekend rates for other on-site land uses represent typical Saturday rates. As shown on Table 6, the proposed Project is anticipated to generate a net total of 8,932 trip-ends per day on a Saturday during a special event with 906 vehicles per hour (VPH) during the arrival peak hour and 884 vph during the departure peak hour.

Traffic management plan features will be identified for the typical Project special event (2,500 guests). Exhibit 8 shows a high-level event operations planning framework which will also be included in the revised TIA as part of the discussion of future traffic control plan refinements for special events.

Mr. Steve Libring
City of La Quinta
February 12, 2020
Page 7

If you have any questions, please contact John Kain at (949) 336-5990 or Marlie Whiteman at (949) 336-5991.

Respectfully submitted,
URBAN CROSSROADS, INC.


John Kain, AICP
Principal


Marlie Whiteman, PE
Senior Associate

JN: 12615 The Wave at Coral Mountain
Attachments

xc: Mr. Bryan McKinney

EXHIBIT 1: PRELIMINARY LAND USE PLAN

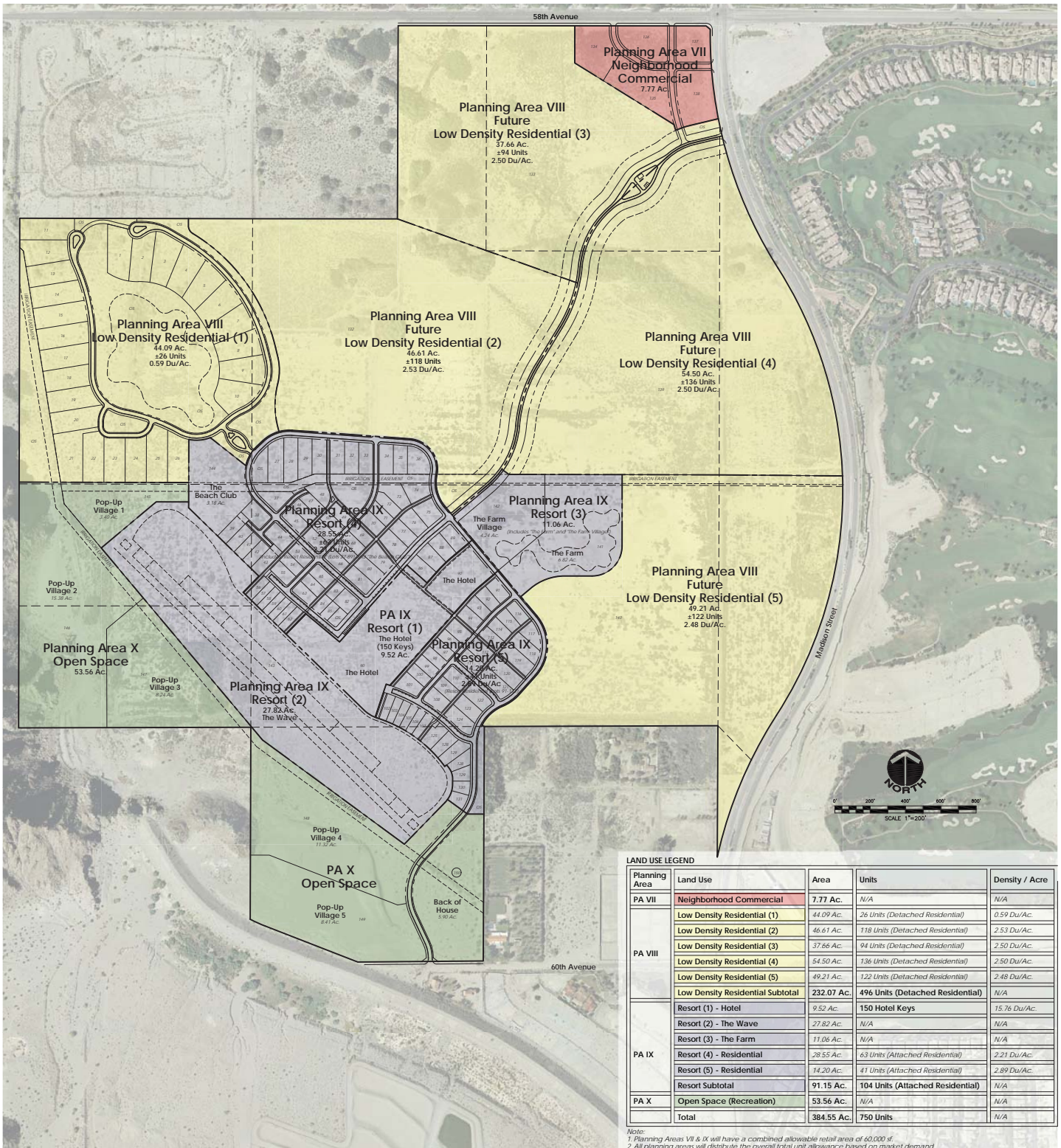
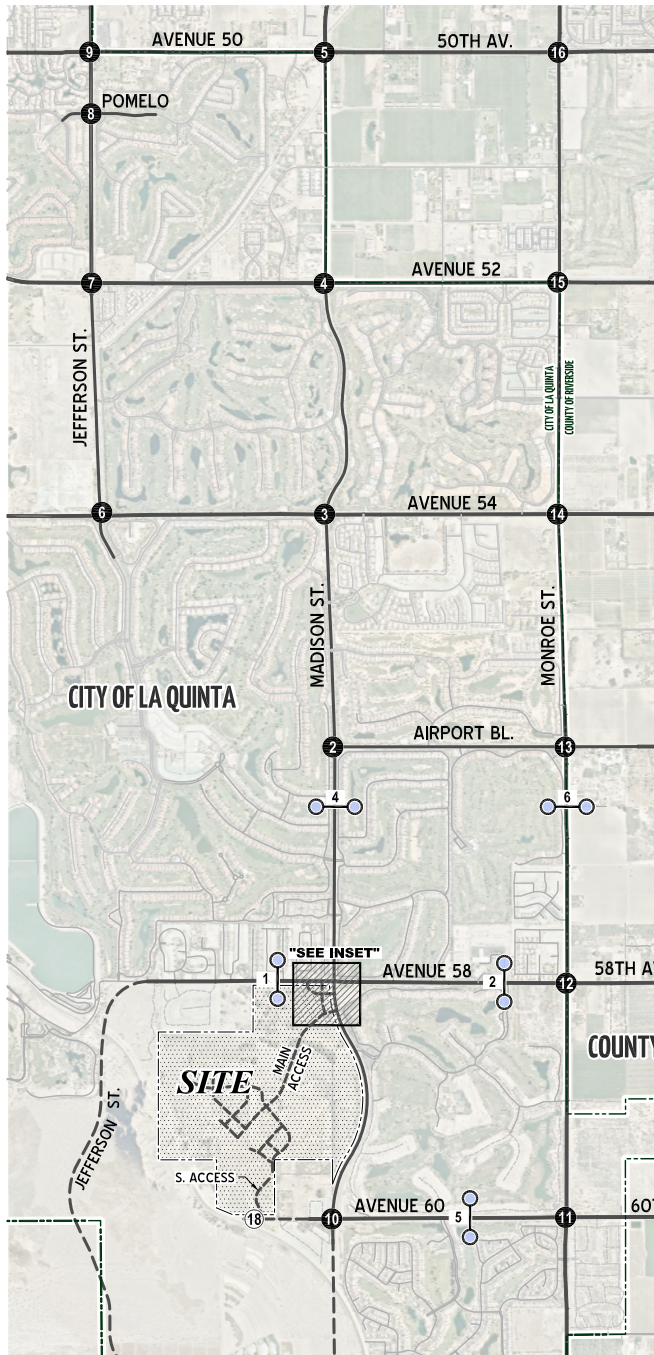
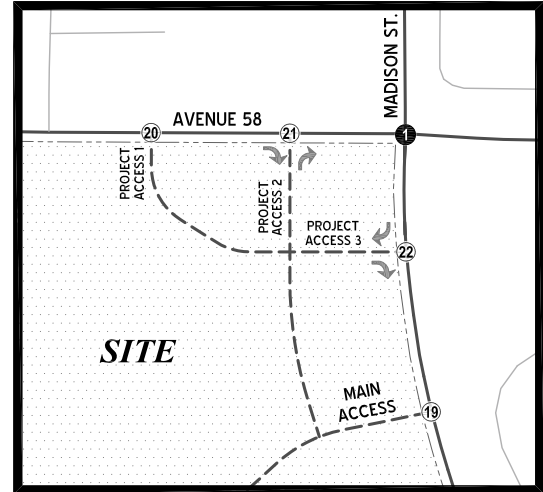


EXHIBIT 2: LOCATION MAP



INSET



LEGEND:






-  = EXISTING ANALYSIS LOCATION
-  = FUTURE ANALYSIS LOCATION
-  = ROADWAY SEGMENT ANALYSIS LOCATION
-  = FUTURE ROADWAY / DIRT
-  = RIGHT-IN/RIGHT-OUT ONLY ACCESS



TABLE 1: PROJECT PHASE 1 (2021) TRIP GENERATION SUMMARY

Trip Generation Rates ¹										
Land Use	ITE LU Code	Quantity ²		AM Peak Hour			PM Peak Hour			Daily
				In	Out	Total	In	Out	Total	
Single Family Detached	210	26 DU		0.19	0.55	0.74	0.62	0.37	0.99	9.44
Multifamily Housing (Low-Rise)	220	104 DU		0.11	0.35	0.46	0.35	0.21	0.56	7.32
Resort Hotel	330 ⁵	150 RM		0.27	0.10	0.37	0.20	0.27	0.47	7.87
Shopping Center	820	10 TSF		0.58	0.36	0.94	1.83	1.98	3.81	37.75
Wave Pool Facility	- ⁴	12 AC		1.20	0.80	2.00	2.40	1.60	4.00	50.00

Trip Generation Results										
Land Use	ITE LU Code	Quantity ²		AM Peak Hour			PM Peak Hour			Daily
				In	Out	Total	In	Out	Total	
Single Family Detached	210	26 DU		5	14	19	16	10	26	245
Multifamily Housing (Low-Rise)	220	104 DU		11	36	47	36	22	58	761
Internal to Retail/Resort				(2)	(3)	(5)	(9)	(7)	(16)	(141)
Residential External Trips				14	47	61	43	25	68	865
Shopping Center	820	10 TSF		6	4	10	18	20	38	378
Pass-By (25%) ³				(1)	(1)	(2)	(5)	(5)	(10)	(95)
Internal to Residential/Resort				(3)	(3)	(6)	(4)	(4)	(8)	(72)
Shopping Center External Trips				2	0	2	9	11	20	211
Resort Hotel	330 ⁵	150 RM		41	15	56	30	41	71	1,181
Internal to Residential/Retail				(7)	(8)	(15)	(11)	(17)	(28)	(324)
Resort Hotel External Trips				34	7	41	19	24	43	857
Wave Pool Facility	- ⁴	12 AC		14	10	24	29	19	48	600
Internal to Residential/Retail/Resort				(8)	(6)	(14)	(16)	(12)	(28)	(306)
Wave Pool Facility External Trips				6	4	10	13	7	20	294
Project Subtotal				77	79	156	129	112	241	3,165
Internal Capture Subtotal				(20)	(20)	(40)	(40)	(40)	(80)	(843)
Pass-By (Shopping Center)				(1)	(1)	(2)	(5)	(5)	(10)	(95)
Project Total External Trips				56	58	114	84	67	151	2,227

¹ Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition (2017).

² DU = Dwelling Unit; RM = Occupied Room; TSF = Thousand Square Feet

³ Pass-By Source: Shops at Coral Mountain TIA, prepared by Urban Crossroads, Inc. (November 2009).

⁴ Since ITE does not have trip rates for a wave pool facility, similar use based on SANDAG's recreation park (developed) peak hour and daily rates are utilized.

⁵ Since ITE does not have daily rate for a ITE LU 330 (Resort Hotel), daily rate has been estimated based on ITE LU 210 (Hotel) peak to daily relationship.

TABLE 2: PROJECT PHASE 2 (2023) TRIP GENERATION SUMMARY

Trip Generation Rates ¹										
Land Use	ITE LU Code	Quantity ²		AM Peak Hour			PM Peak Hour			Daily
				In	Out	Total	In	Out	Total	
Single Family Detached	210	26 DU		0.19	0.55	0.74	0.62	0.37	0.99	9.44
Multifamily Housing (Low-Rise)	220	104 DU		0.11	0.35	0.46	0.35	0.21	0.56	7.32
Resort Hotel	330 ⁵	150 RM		0.27	0.10	0.37	0.20	0.27	0.47	7.87
Shopping Center	820	35 TSF		0.58	0.36	0.94	1.83	1.98	3.81	37.75
Wave Pool Facility	- ⁴	12 AC		1.20	0.80	2.00	2.40	1.60	4.00	50.00

Trip Generation Results										
Land Use	ITE LU Code	Quantity ²		AM Peak Hour			PM Peak Hour			Daily
				In	Out	Total	In	Out	Total	
Single Family Detached	210	26 DU		5	14	19	16	10	26	245
Multifamily Housing (Low-Rise)	220	104 DU		11	36	47	36	22	58	761
Internal to Retail/Resort				(2)	(5)	(7)	(10)	(8)	(18)	(158)
Residential External Trips				14	45	59	42	24	66	848
Shopping Center	820	35 TSF		20	13	33	64	69	133	1,321
Pass-By (25%) ³				(4)	(4)	(8)	(16)	(16)	(32)	(330)
Internal to Residential/Resort				(5)	(4)	(9)	(8)	(8)	(16)	(144)
Shopping Center External Trips				11	5	16	40	45	85	847
Resort Hotel	330 ⁵	150 RM		41	15	56	30	41	71	1,181
Internal to Residential/Retail				(8)	(8)	(16)	(13)	(19)	(32)	(370)
Resort Hotel External Trips				33	7	40	17	22	39	811
Wave Pool Facility	- ⁴	12 AC		14	10	24	29	19	48	600
Internal to Residential/Retail/Resort				(9)	(7)	(16)	(17)	(13)	(30)	(328)
Wave Pool Facility External Trips				5	3	8	12	6	18	272
Project Subtotal				91	88	179	175	161	336	4,108
Internal Capture Subtotal				(24)	(24)	(48)	(48)	(48)	(96)	(1,000)
Pass-By (Shopping Center)				(4)	(4)	(8)	(16)	(16)	(32)	(330)
Project Total External Trips				63	60	123	111	97	208	2,778

¹ Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition (2017).

² DU = Dwelling Unit; RM = Occupied Room; TSF = Thousand Square Feet

³ Pass-By Source: Shops at Coral Mountain TIA, prepared by Urban Crossroads, Inc. (November 2009).

⁴ Since ITE does not have trip rates for a wave pool facility, similar use based on SANDAG's recreation park (developed) peak hour and daily rates are utilized.

⁵ Since ITE does not have daily rate for a ITE LU 330 (Resort Hotel), daily rate has been estimated based on ITE LU 210 (Hotel) peak to daily relationship.

TABLE 3: PROJECT BUILDOUT (2026) TRIP GENERATION SUMMARY

Trip Generation Rates ¹										
Land Use	ITE LU Code	Quantity ²		AM Peak Hour			PM Peak Hour			Daily
				In	Out	Total	In	Out	Total	
Single Family Detached	210	496 DU		0.19	0.55	0.74	0.62	0.37	0.99	9.44
Multifamily Housing (Low-Rise)	220	104 DU		0.11	0.35	0.46	0.35	0.21	0.56	7.32
Resort Hotel	330 ⁵	150 RM		0.27	0.10	0.37	0.20	0.27	0.47	7.87
Shopping Center	820	60 TSF		0.58	0.36	0.94	1.83	1.98	3.81	37.75
Wave Pool Facility	- ⁴	12 AC		1.20	0.80	2.00	2.40	1.60	4.00	50.00

Trip Generation Results										
Land Use	ITE LU Code	Quantity ²		AM Peak Hour			PM Peak Hour			Daily
				In	Out	Total	In	Out	Total	
Single Family Detached	210	496 DU		94	273	367	308	184	492	4,682
Multifamily Housing (Low-Rise)	220	104 DU		11	36	47	36	22	58	761
<i>Internal to Retail/Resort</i>				(10)	(20)	(30)	(40)	(29)	(69)	(595)
Residential External Trips				95	289	384	304	177	481	4,848
Shopping Center	820	60 TSF		35	22	57	110	119	229	2,265
<i>Pass-By (25%)³</i>				(7)	(7)	(14)	(28)	(28)	(56)	(566)
<i>Internal to Residential/Resort</i>				(9)	(7)	(16)	(21)	(35)	(56)	(448)
Shopping Center External Trips				19	8	27	61	56	117	1,251
Resort Hotel	330 ⁵	150 RM		41	15	56	30	41	71	1,181
<i>Internal to Residential/Retail</i>				(14)	(10)	(24)	(15)	(21)	(36)	(416)
Resort Hotel External Trips				27	5	32	15	20	35	765
Wave Pool Facility	- ⁴	12 AC		14	10	24	29	19	48	600
<i>Internal to Residential/Retail/Resort</i>				(12)	(8)	(20)	(26)	(17)	(43)	(470)
Wave Pool Facility External Trips				2	2	4	3	2	5	130
Project Subtotal				195	356	551	513	385	898	9,489
<i>Internal Capture Subtotal</i>				(45)	(45)	(90)	(102)	(102)	(204)	(1,929)
<i>Pass-By (Shopping Center)</i>				(7)	(7)	(14)	(28)	(28)	(56)	(566)
Project Total External Trips				143	304	447	383	255	638	6,994

¹ Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition (2017).

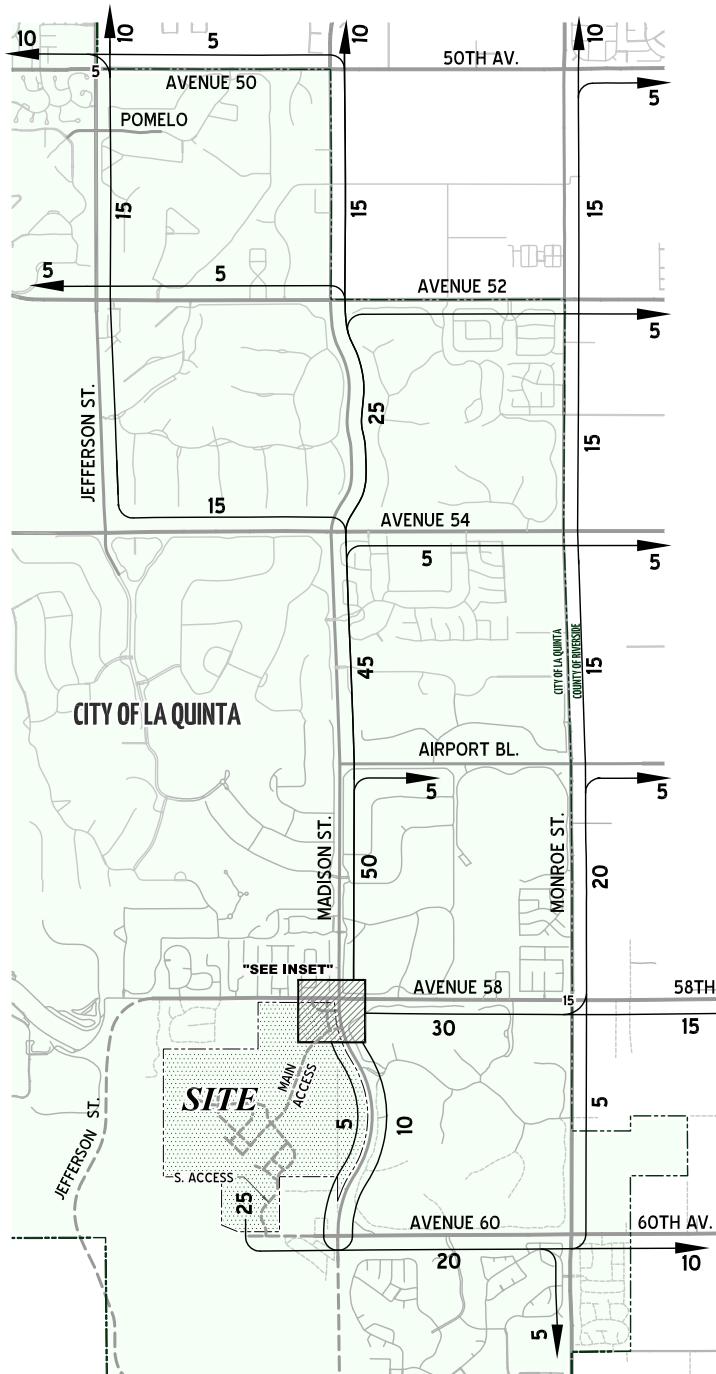
² DU = Dwelling Unit; RM = Occupied Room; TSF = Thousand Square Feet

³ Pass-By Source: Shops at Coral Mountain TIA, prepared by Urban Crossroads, Inc. (November 2009).

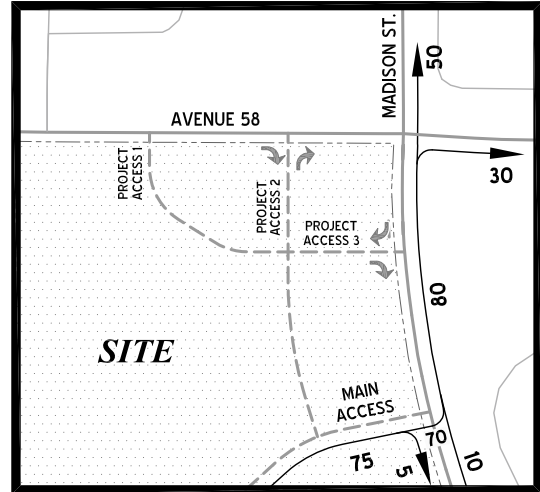
⁴ Since ITE does not have trip rates for a wave pool facility, similar use based on SANDAG's recreation park (developed) peak hour and daily rates are utilized.

⁵ Since ITE does not have daily rate for a ITE LU 330 (Resort Hotel), daily rate has been estimated based on ITE LU 210 (Hotel) peak to daily relationship.

EXHIBIT 3: PROJECT RESIDENTIAL AND RESORT EXTERNAL TRIP DISTRIBUTION



ON-SITE TRIP DISTRIBUTION

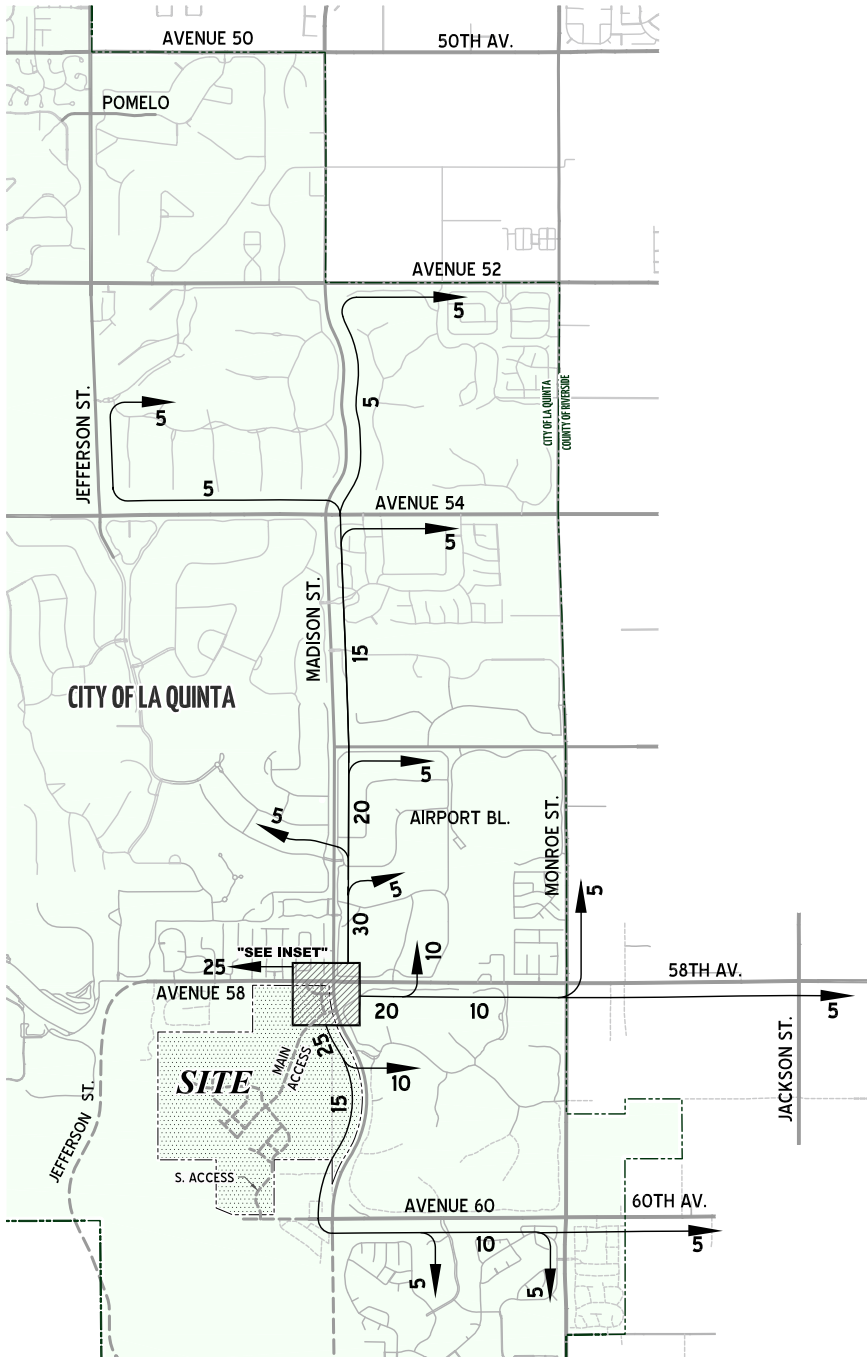


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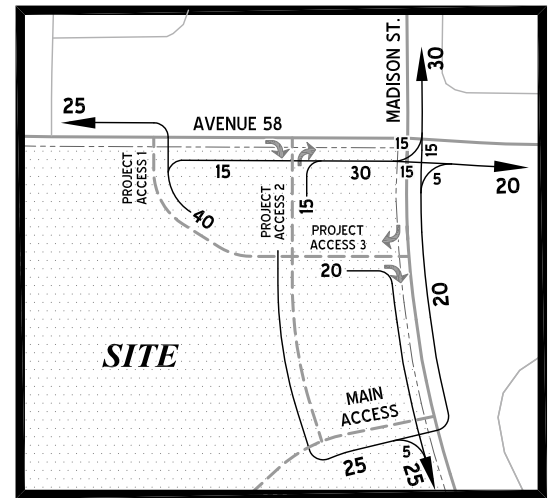
- 10 ■ PERCENT TO/FROM PROJECT
- ■ FUTURE ROADWAY
- ↔ ■ RIGHT-IN/RIGHT-OUT ONLY ACCESS



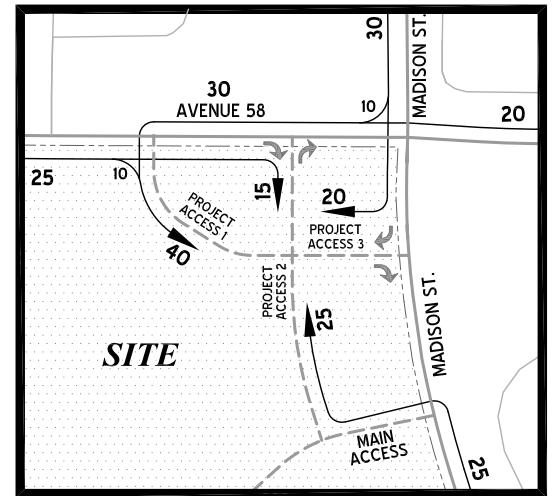
EXHIBIT 4: PROJECT SHOPPING CENTER EXTERNAL TRIP DISTRIBUTION



ON-SITE OUTBOUND TRIP DISTRIBUTION



ON-SITE INBOUND TRIP DISTRIBUTION



LEGEND:

- 10 = PERCENT TO/FROM PROJECT
- = FUTURE ROADWAY
- ↪ = RIGHT-IN/RIGHT-OUT ONLY ACCESS



**TABLE 4: EXISTING 2017 & 2019 PEAK HOUR INTERSECTION VOLUMES
COMPARISON SUMMARY**

ID	Intersection	Peak Hour Intersection Volumes					
		Existing 2017 ¹			Existing 2019 ²		
		AM	PM	TOTAL	AM	PM	TOTAL
1	Madison St. / Avenue 58	410	540	950	433	601	1,034
5	Madison St. / Avenue 50	1,148	1,371	2,519	1,116	1,375	2,491
12	Monroe St. / Avenue 58	307	418	725	322	477	799
14	Monroe St. / Avenue 54	740	835	1,575	799	821	1,620
	Monroe St. / Avenue 62	163	188	351	151	188	339
TOTAL		2,768	3,352	6,120	2,821	3,462	6,283
AVERAGE AM/PM GROWTH (to be applied to the remaining study intersections with 2017 Counts to reflect 2019 conditions)		2.66%					

¹ Source: Travertine Specific Plan TIA, April 2018. Prepared by Urban Crossroads, Inc.

² Existing count data were collected in April 9, 2019. In accordance with the City of La Quinta's traffic study guidelines, a 5% seasonal variation factor has been applied to the April 2019 traffic count data.

R:\UXRjobs\12600-13000\12615\Excel\12615 - Scope Rev.xlsx]Summary_(Existing Comparison1)

EXHIBIT 5: EXISTING (2019) AM PEAK HOUR INTERSECTION VOLUMES (WITH PEAK SEASON ADJUSTMENT)

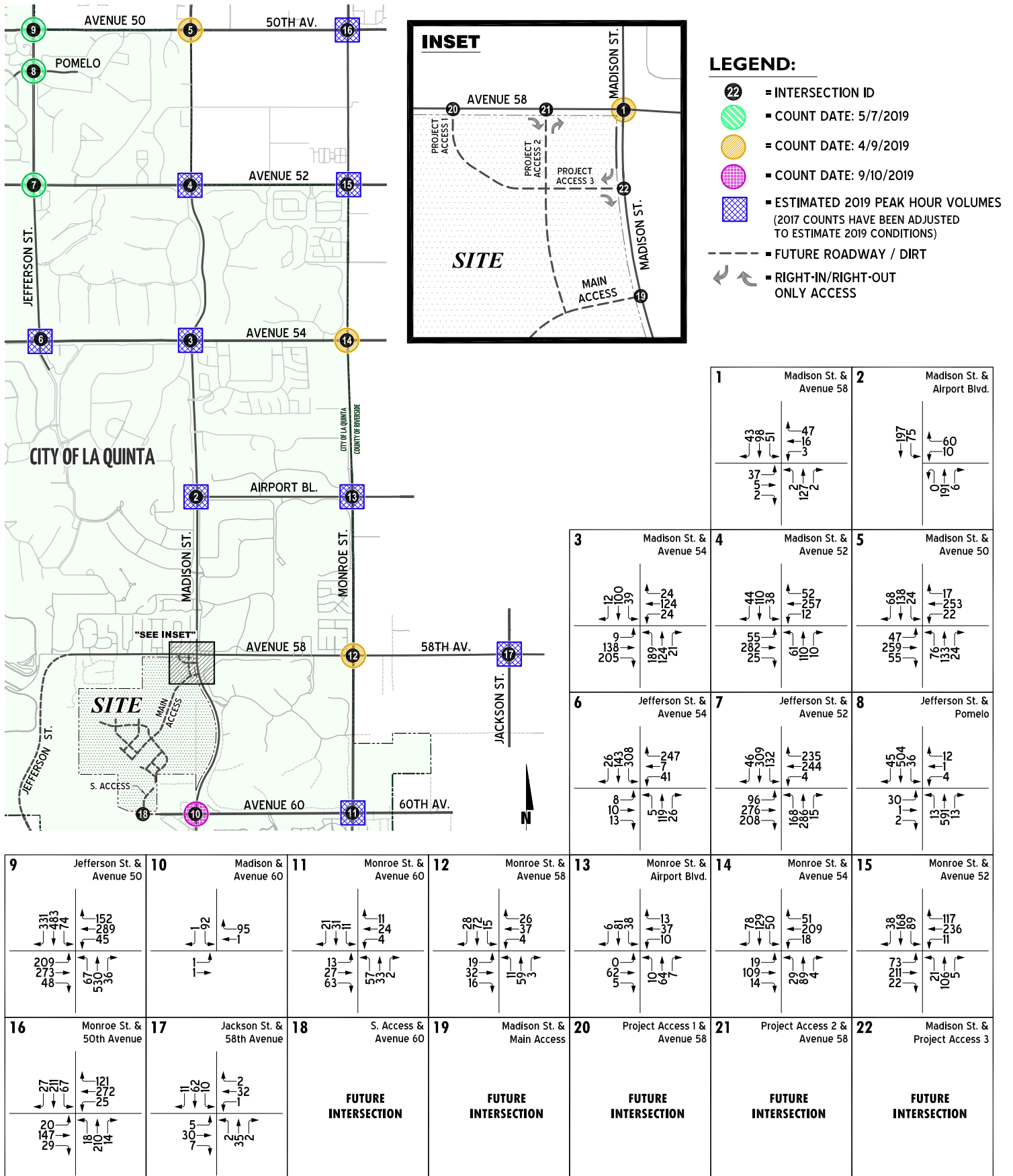


EXHIBIT 6: EXISTING (2019) PM PEAK HOUR INTERSECTION VOLUMES (WITH PEAK SEASON ADJUSTMENT)

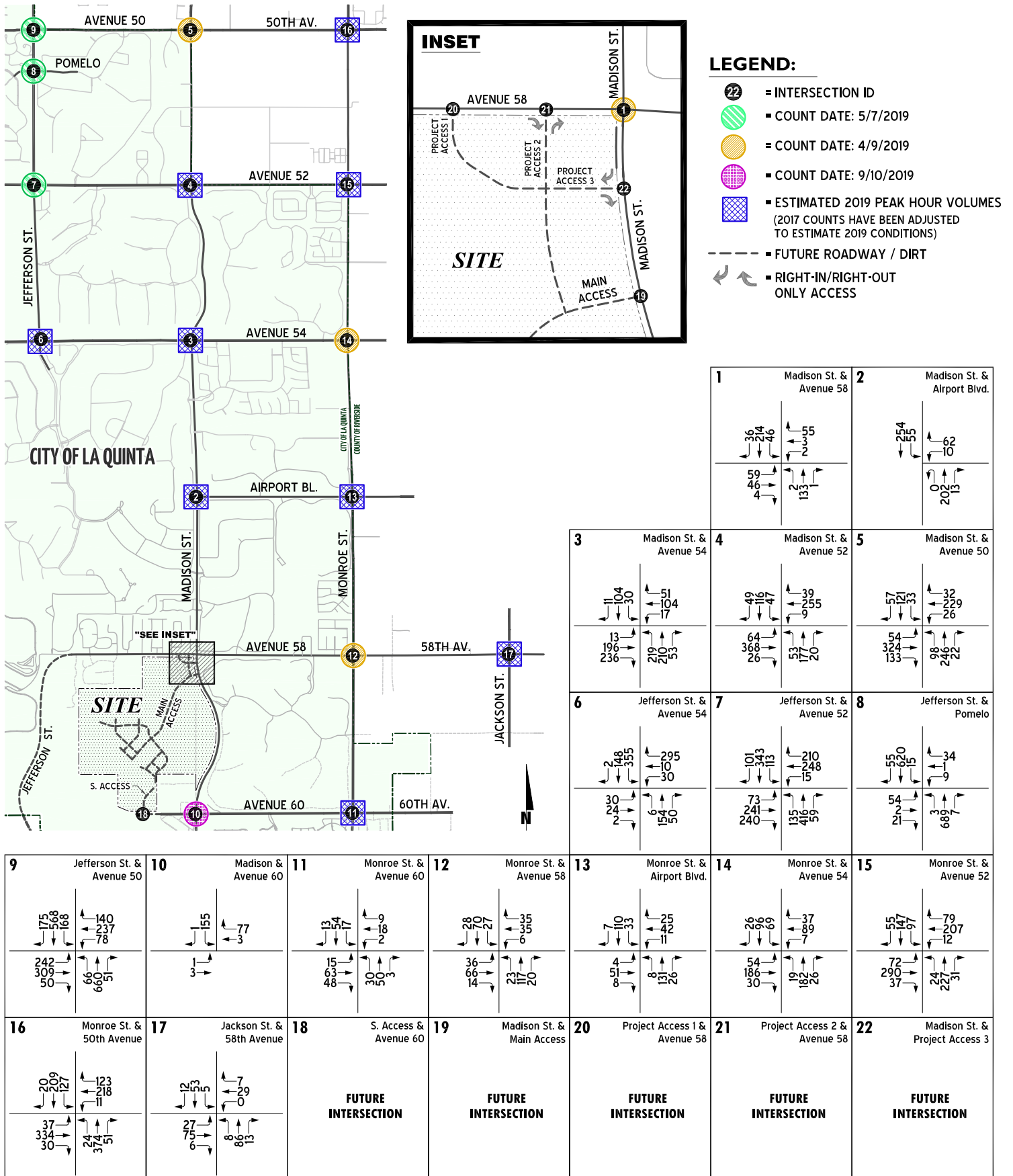


EXHIBIT 7: CUMULATIVE DEVELOPMENT MAP

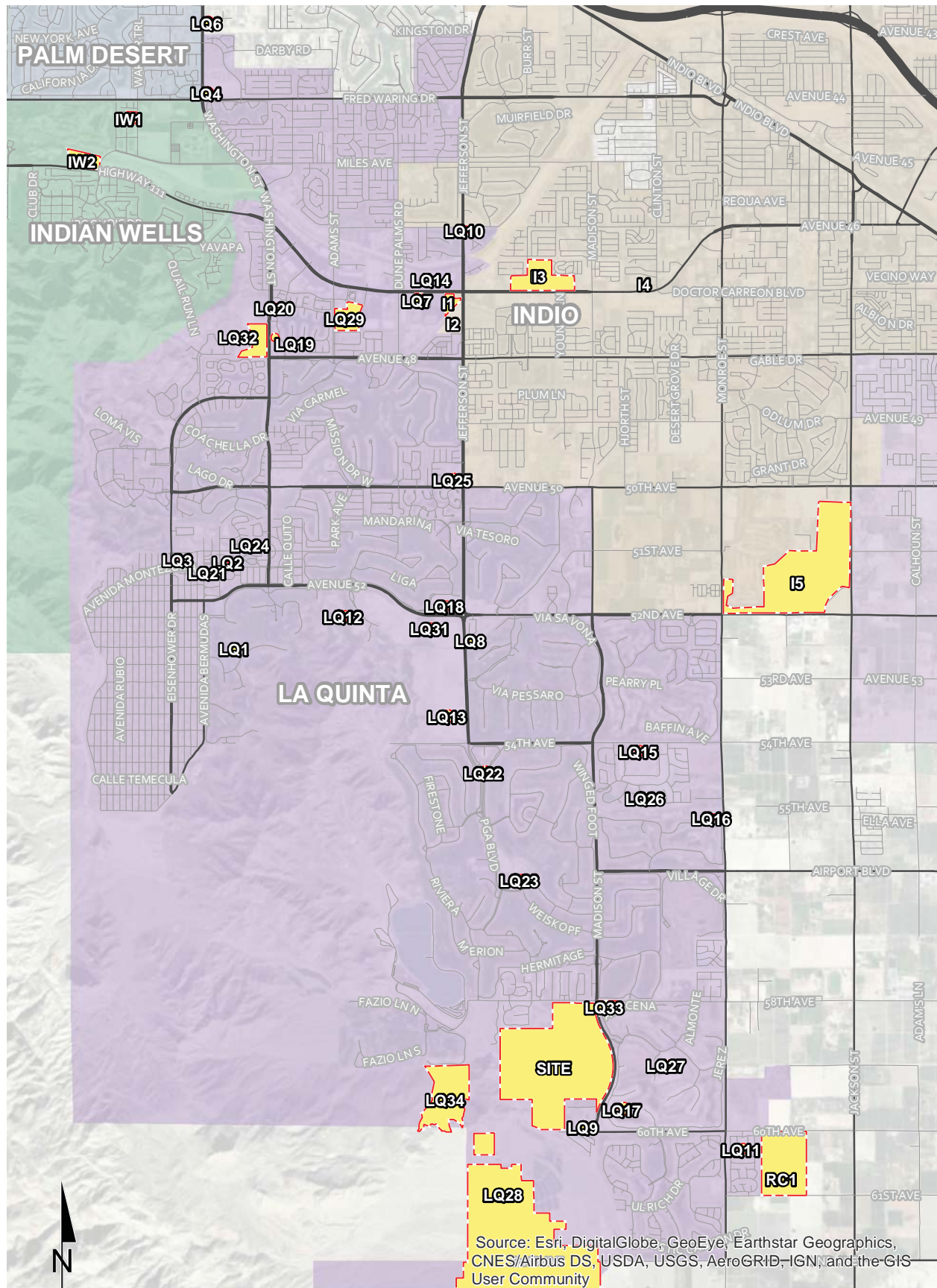


TABLE 5: CUMULATIVE DEVELOPMENT LAND USE SUMMARY

Page 1 of 2

#	Project/Location	Land Use ¹	Quantity	Units ²
City of La Quinta				
LQ1	Desert Club Apartments	Apartments	16	DU
LQ2	La Quinta Penthouses	Condo/Townhouse	8	DU
LQ3	Mountain Village Residences	Apartments	6	DU
LQ4	Mayer Villa Capri	Apartments	104.000	TSF
		Medical Office	130.450	TSF
LQ6	Washington Apartments	Apartments	26	DU
LQ7	The Dune Palms Specific Plan	Multifamily Housing (Low-Rise)	66	DU
		Hotel	108	Rooms
		Shopping Center	305.000	TSF
LQ8	Codorniz	SFDR	142	DU
LQ9	Estate Collection at Coral Mountain	SFDR	57	DU
LQ10	Villas at Indian Springs	SFDR	15	DU
LQ11	Bellesera	SFDR	320	DU
LQ12	SilverRock - Phase I	Luxury Hotel	140	Rooms
		Condo/Townhouse	29	DU
LQ13	SilverRock - Phase II	Lifestyle Hotel	200	Rooms
		Condo/Townhouse	66	DU
LQ14	American Tire Depot	Automobile Parts	6.720	TSF
LQ15	Estates at Griffin Lake	SFDR	78	DU
LQ16	Monterra	SFDR	40	DU
LQ17	Andalusia at Coral Mountain	SFDR	39	DU
LQ18	Floresta	SFDR	82	DU
LQ19	California Desert Museum of Art	Museum	18	TSF
LQ20	Walsh Urology	Medical Office	1.09	AC
LQ21	Crabpot	Restaurant	1.800	TSF
LQ22	Residence Club @ PGA West	SFDR	11	DU
LQ23	Signature at PGA West	SFDR	230	DU
LQ24	Casa Mendoza Expansion	Restaurant	1.053	TSF
LQ25	Pavilion Palms Shopping Center	Shopping Center	125.000	TSF
LQ26	Griffin Ranch Amendment	SFDR	4	DU
LQ27	Andalusia Village	SFDR	71	DU
LQ28	Travertine	SFDR	1,200	DU
		Hotel	100	Rooms
LQ29	Centre at La Quinta	SFDR	152	DU
		Hotel	125	Rooms
LQ31	Silverrock Temporary Clubhouse	Recreational Facility	3.886	TSF
LQ32	Canyon Ridge	SFDR	74	DU
LQ33	Shops at Coral Mountain	Shopping Center	40.7	TSF
LQ34	Coral Canyon	SFDR	219	DU

TABLE 5: CUMULATIVE DEVELOPMENT LAND USE SUMMARY

Page 2 of 2

#	Project/Location	Land Use ¹	Quantity	Units ²
County of Riverside				
RC1	Vista Soleada	SFDR	230	DU
		Equestrian Way Station	1.4	AC
City of Indian Wells				
IW1	TTM No. 37467	SFDR	18	DU
IW2	Hotel Development	Condo/Townhouse	70	DU
		Hotel	263	Rooms
		Quality Restaurant	5.500	TSF
City of Indio				
I1	Jefferson and Hwy. 111	Health Club	38.000	TSF
		Shopping Center	15.000	TSF
		Restaurant	6.300	TSF
I3	Polo Square	Retail	350.000	TSF
		Office	200.000	TSF
		Hotel	370	Rooms
		Condo/Townhouse	516	DU
I4	La-Z-Boy Gallery	Retail	15.600	TSF
I5	Polo Community	Senior & SFDR	560	DU

¹ SFDR = Single Family Detached Residential

² AC = Acres; TSF = Thousand Square Feet; DU = Dwelling Unit

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TABLE 6: PROJECT BUILDOUT (2026) TRIP GENERATION SUMMARY - WEEKEND SPECIAL EVENT

Trip Generation Rates ¹						
Land Use	ITE LU Code	Units ²	Saturday Mid-Day Peak Hour			Weekend Daily
			In	Out	Total	
Single Family Detached	210	DU	0.50	0.43	0.93	9.54
Multifamily Housing (Low-Rise)	220 ⁶	DU	0.38	0.32	0.70	8.14
Resort Hotel	310 ⁵	RM	0.40	0.32	0.72	8.19
Shopping Center	820	TSF	2.34	2.16	4.50	46.12
Wave Pool Facility	- ⁴	Guests	See Below			

Trip Generation Results										
Land Use	ITE LU Code	Quantity ²		Arrival Peak Hour			Departure Peak Hour			Weekend Daily
				In	Out	Total	In	Out	Total	
Single Family Detached	210	496	DU	248	213	461	248	213	461	4,732
Multifamily Housing (Low-Rise)	220	104	DU	40	33	73	40	33	73	847
Internal to Retail/Resort				(18)	(40)	(58)	(53)	(25)	(78)	(600)
Residential External Trips				270	206	476	235	221	456	4,979
Shopping Center	820	60	TSF	140	130	270	140	130	270	2,767
Pass-By (26%)				(35)	(35)	(70)	(35)	(35)	(70)	(719)
Internal to Residential/Resort				(25)	(33)	(58)	(35)	(26)	(61)	(498)
Shopping Center External Trips				80	62	142	70	69	139	1,550
Resort Hotel	330	150	RM	60	48	108	60	48	108	1,229
Internal to Residential/Retail				(20)	(28)	(48)	(24)	(19)	(43)	(430)
Resort Hotel External Trips				40	20	60	36	29	65	799
Wave Pool Facility	- ⁴	2,500	Guests	260	14	274	14	260	274	2,084
Internal to Residential/Retail/Resort				(42)	(4)	(46)	(4)	(46)	(50)	(480)
Wave Pool Facility External Trips				218	10	228	10	214	224	1,604
Project Subtotal				748	438	1,186	502	684	1,186	11,659
Internal Capture Subtotal				(105)	(105)	(210)	(116)	(116)	(232)	(2,008)
Pass-By (Shopping Center)				(35)	(35)	(70)	(35)	(35)	(70)	(719)
Project Total External Trips				608	298	906	351	533	884	8,932

¹ Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition (2017).

² DU = Dwelling Unit; RM = Room; TSF = Thousand Square Feet

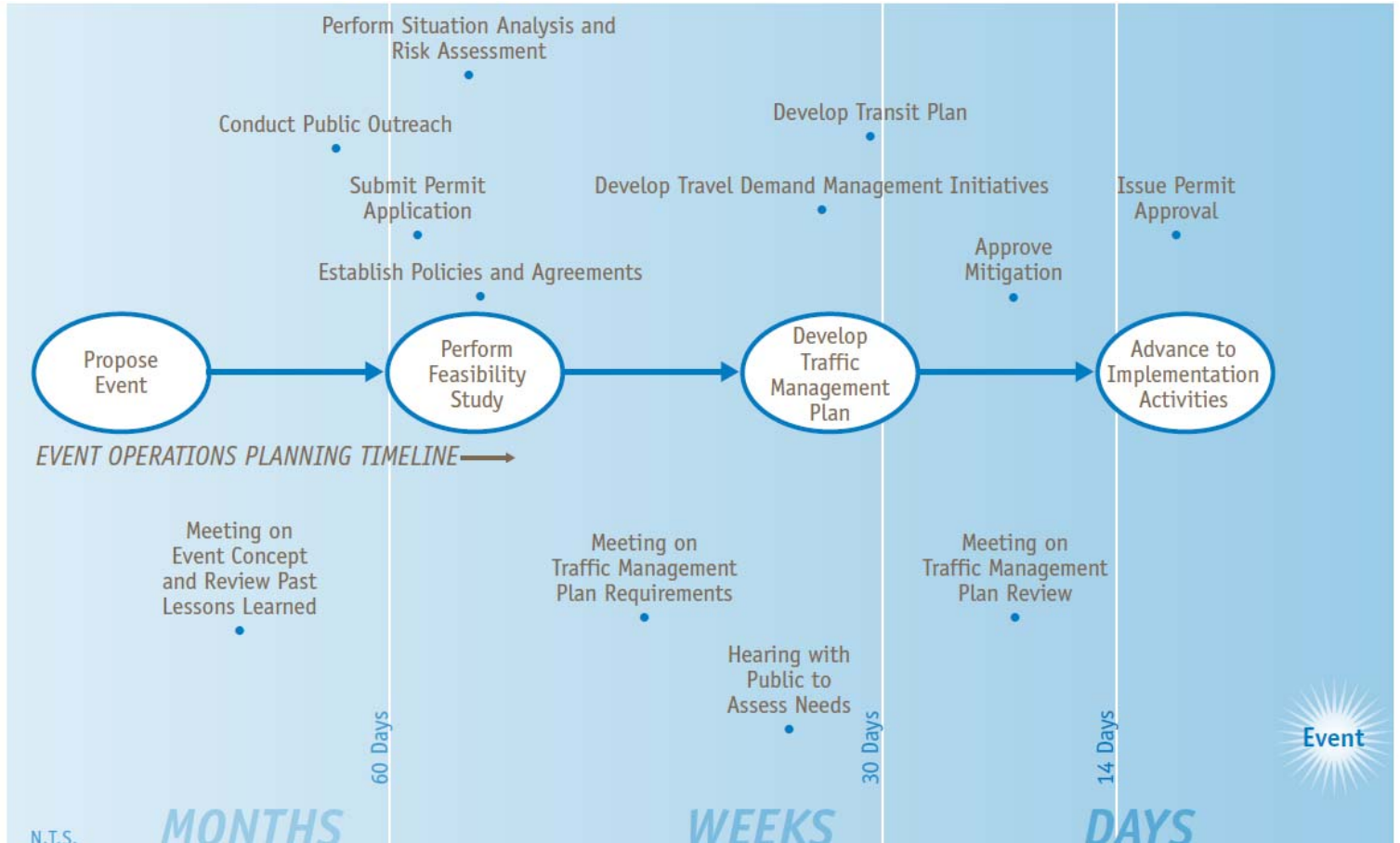
³ Source: Trip Generation Handbook, 3rd Edition (2017).

⁴ Vehicle trips are calculated based on estimated number of guests during special events and vehicle occupancy of 2.4.

⁵ Saturday data for Hotel (ITE Land Use 310) has been utilized.

⁶ Since Saturday peak hour in/out ratio is not available for ITE Land Use 220, the in/out Saturday split for ITE LU 210 (Single Family Detached Residential) has been utilized.

EXHIBIT 8: EVENT OPERATIONS PLANNING FRAMEWORK



Source: Managing Travel for Planned Special Events Handbook: Executive Summary (June 2007) prepared by Federal Highway Administration (FHWA)

APPENDIX 3.1:

EXISTING TRAFFIC COUNTS

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City of La Quinta
N/S: Madison Street
E/W: Avenue 58
Weather: Clear

File Name : 01_LQA_Madison_Ave 58 AM
Site Code : 05119233
Start Date : 4/9/2019
Page No : 1

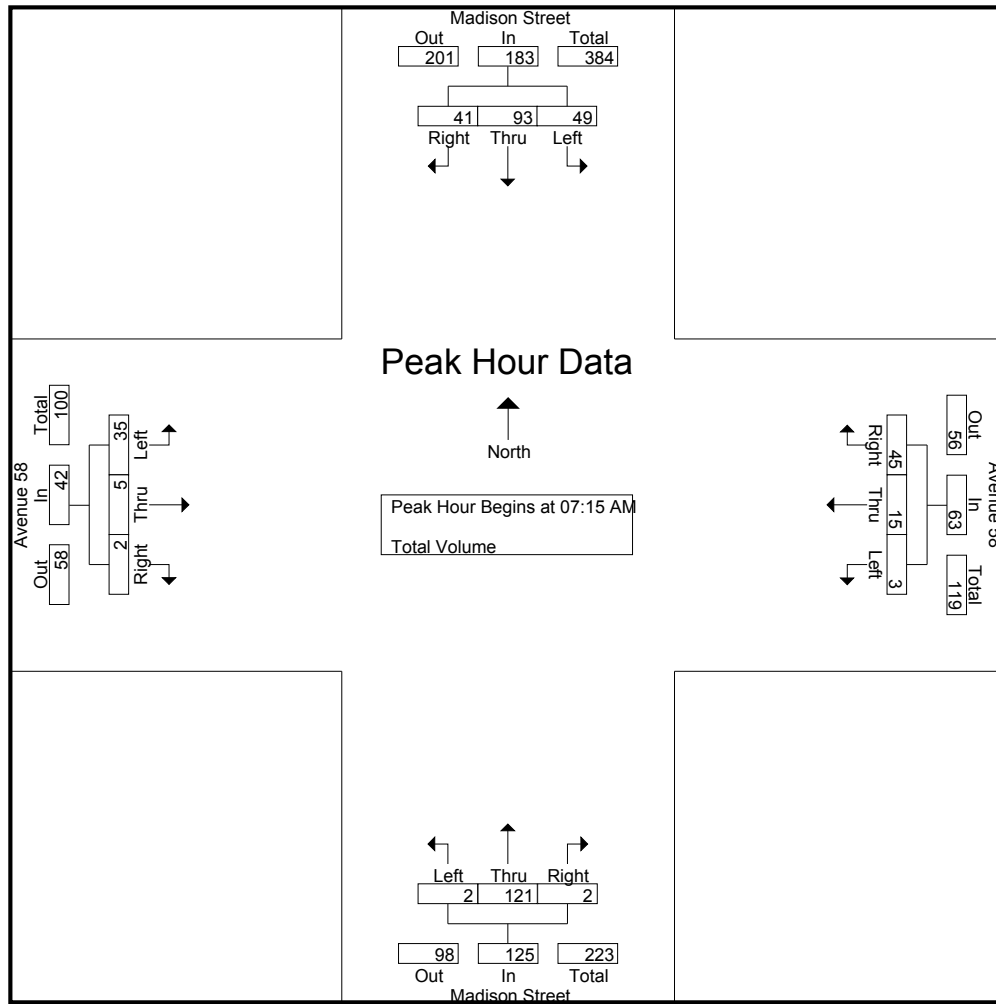
Groups Printed- Total Volume

	Madison Street Southbound				Avenue 58 Westbound				Madison Street Northbound				Avenue 58 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	11	11	5	27	0	4	4	8	0	10	0	10	2	0	0	2	47
06:15 AM	6	10	14	30	0	7	8	15	1	13	0	14	1	1	0	2	61
06:30 AM	7	21	7	35	0	2	9	11	0	21	0	21	4	4	1	9	76
06:45 AM	14	29	9	52	0	2	8	10	1	19	1	21	3	0	1	4	87
Total	38	71	35	144	0	15	29	44	2	63	1	66	10	5	2	17	271
07:00 AM	8	31	7	46	0	4	11	15	0	29	0	29	3	1	0	4	94
07:15 AM	14	25	7	46	1	5	17	23	0	29	1	30	11	0	0	11	110
07:30 AM	12	21	11	44	0	1	11	12	1	32	1	34	5	1	0	6	96
07:45 AM	9	28	15	52	1	5	5	11	0	29	0	29	11	4	0	15	107
Total	43	105	40	188	2	15	44	61	1	119	2	122	30	6	0	36	407
08:00 AM	14	19	8	41	1	4	12	17	1	31	0	32	8	0	2	10	100
08:15 AM	14	24	6	44	2	2	13	17	0	27	0	27	7	0	1	8	96
Grand Total	109	219	89	417	5	36	98	139	4	240	3	247	55	11	5	71	874
Apprch %	26.1	52.5	21.3		3.6	25.9	70.5		1.6	97.2	1.2		77.5	15.5	7		
Total %	12.5	25.1	10.2	47.7	0.6	4.1	11.2	15.9	0.5	27.5	0.3	28.3	6.3	1.3	0.6	8.1	

	Madison Street Southbound				Avenue 58 Westbound				Madison Street Northbound				Avenue 58 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	14	25	7	46	1	5	17	23	0	29	1	30	11	0	0	11	110
07:30 AM	12	21	11	44	0	1	11	12	1	32	1	34	5	1	0	6	96
07:45 AM	9	28	15	52	1	5	5	11	0	29	0	29	11	4	0	15	107
08:00 AM	14	19	8	41	1	4	12	17	1	31	0	32	8	0	2	10	100
Total Volume	49	93	41	183	3	15	45	63	2	121	2	125	35	5	2	42	413
% App. Total	26.8	50.8	22.4		4.8	23.8	71.4		1.6	96.8	1.6		83.3	11.9	4.8		
PHF	.875	.830	.683	.880	.750	.750	.662	.685	.500	.945	.500	.919	.795	.313	.250	.700	.939

City of La Quinta
N/S: Madison Street
E/W: Avenue 58
Weather: Clear

File Name : 01_LQA_Madison_Ave 58 AM
Site Code : 05119233
Start Date : 4/9/2019
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	06:45 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	14	29	9	52	1	5	17	23	0	29	1	30	11	0	0	11
+15 mins.	8	31	7	46	0	1	11	12	1	32	1	34	5	1	0	6
+30 mins.	14	25	7	46	1	5	5	11	0	29	0	29	11	4	0	15
+45 mins.	12	21	11	44	1	4	12	17	1	31	0	32	8	0	2	10
Total Volume	48	106	34	188	3	15	45	63	2	121	2	125	35	5	2	42
% App. Total	25.5	56.4	18.1		4.8	23.8	71.4		1.6	96.8	1.6		83.3	11.9	4.8	
PHF	.857	.855	.773	.904	.750	.750	.662	.685	.500	.945	.500	.919	.795	.313	.250	.700

City of La Quinta
N/S: Madison Street
E/W: Avenue 58
Weather: Clear

File Name : 01_LQA_Madison_Ave 58 PM
Site Code : 05119233
Start Date : 4/9/2019
Page No : 1

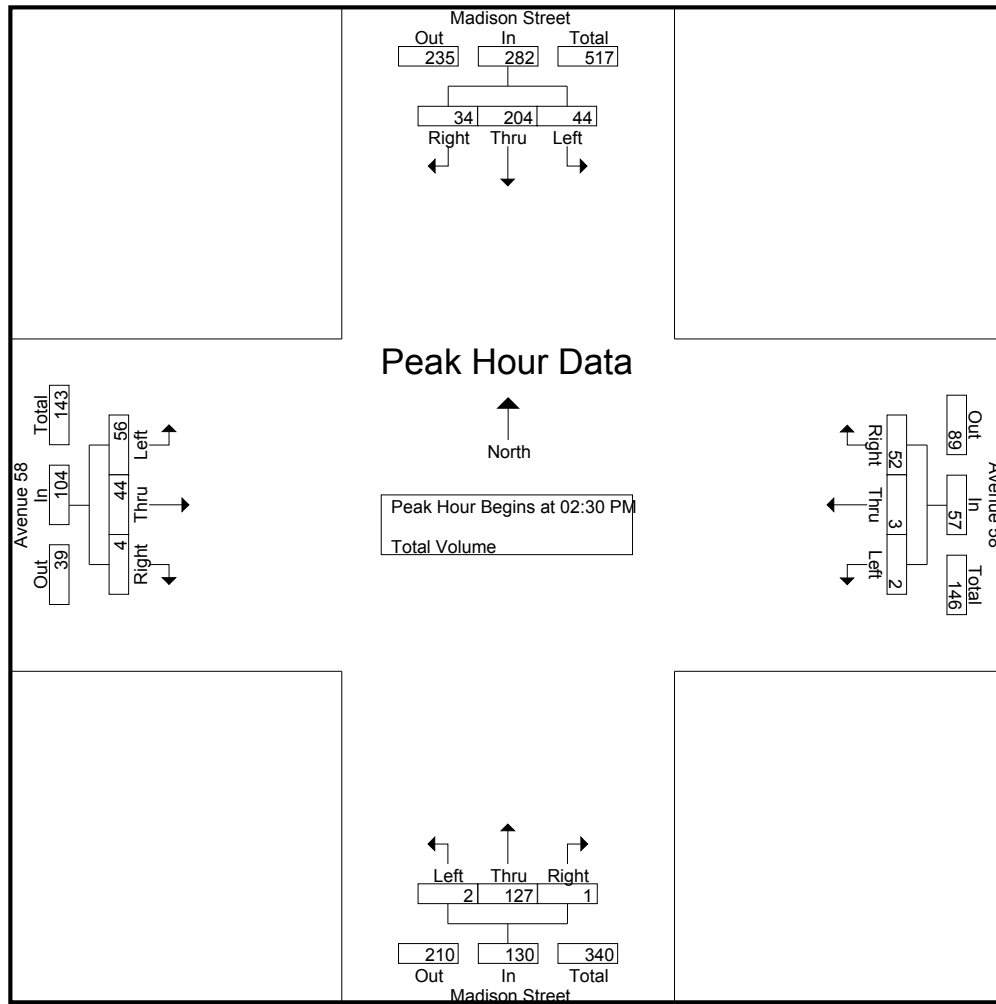
Groups Printed- Total Volume

	Madison Street Southbound				Avenue 58 Westbound				Madison Street Northbound				Avenue 58 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:30 PM	4	47	8	59	1	1	12	14	0	40	1	41	23	18	1	42	156
02:45 PM	15	54	8	77	0	1	8	9	1	34	0	35	14	3	1	18	139
Total	19	101	16	136	1	2	20	23	1	74	1	76	37	21	2	60	295
03:00 PM	14	43	10	67	1	1	17	19	0	36	0	36	9	18	2	29	151
03:15 PM	11	60	8	79	0	0	15	15	1	17	0	18	10	5	0	15	127
03:30 PM	6	42	12	60	1	0	21	22	0	43	0	43	3	2	1	6	131
03:45 PM	17	42	10	69	0	0	10	10	1	33	1	35	7	0	0	7	121
Total	48	187	40	275	2	1	63	66	2	129	1	132	29	25	3	57	530
04:00 PM	11	42	8	61	1	1	18	20	0	31	1	32	13	2	2	17	130
04:15 PM	5	52	7	64	0	2	14	16	0	28	0	28	10	1	0	11	119
04:30 PM	6	46	7	59	0	0	13	13	0	17	1	18	8	1	2	11	101
04:45 PM	7	47	9	63	1	2	7	10	2	24	1	27	7	2	0	9	109
Total	29	187	31	247	2	5	52	59	2	100	3	105	38	6	4	48	459
05:00 PM	13	26	4	43	1	0	13	14	1	26	1	28	2	1	1	4	89
05:15 PM	5	36	5	46	0	0	6	6	1	28	0	29	10	0	0	10	91
Grand Total	114	537	96	747	6	8	154	168	7	357	6	370	116	53	10	179	1464
Apprch %	15.3	71.9	12.9		3.6	4.8	91.7		1.9	96.5	1.6		64.8	29.6	5.6		
Total %	7.8	36.7	6.6	51	0.4	0.5	10.5	11.5	0.5	24.4	0.4	25.3	7.9	3.6	0.7	12.2	

	Madison Street Southbound				Avenue 58 Westbound				Madison Street Northbound				Avenue 58 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:30 PM																	
02:30 PM	4	47	8	59	1	1	12	14	0	40	1	41	23	18	1	42	156
02:45 PM	15	54	8	77	0	1	8	9	1	34	0	35	14	3	1	18	139
03:00 PM	14	43	10	67	1	1	17	19	0	36	0	36	9	18	2	29	151
03:15 PM	11	60	8	79	0	0	15	15	1	17	0	18	10	5	0	15	127
Total Volume	44	204	34	282	2	3	52	57	2	127	1	130	56	44	4	104	573
% App. Total	15.6	72.3	12.1		3.5	5.3	91.2		1.5	97.7	0.8		53.8	42.3	3.8		
PHF	.733	.850	.850	.892	.500	.750	.765	.750	.500	.794	.250	.793	.609	.611	.500	.619	.918

City of La Quinta
N/S: Madison Street
E/W: Avenue 58
Weather: Clear

File Name : 01_LQA_Madison_Ave 58 PM
Site Code : 05119233
Start Date : 4/9/2019
Page No : 2



Peak Hour Analysis From 02:30 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM				03:30 PM				03:30 PM				02:30 PM			
+0 mins.	15	54	8	77	1	0	21	22	0	43	0	43	23	18	1	42
+15 mins.	14	43	10	67	0	0	10	10	1	33	1	35	14	3	1	18
+30 mins.	11	60	8	79	1	1	18	20	0	31	1	32	9	18	2	29
+45 mins.	6	42	12	60	0	2	14	16	0	28	0	28	10	5	0	15
Total Volume	46	199	38	283	2	3	63	68	1	135	2	138	56	44	4	104
% App. Total	16.3	70.3	13.4		2.9	4.4	92.6		0.7	97.8	1.4		53.8	42.3	3.8	
PHF	.767	.829	.792	.896	.500	.375	.750	.773	.250	.785	.500	.802	.609	.611	.500	.619

City of La Quinta
N/S: Madison Street
E/W: Airport Boulevard
Weather: Clear

File Name : 02_LQA_Madison_Airport AM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 1

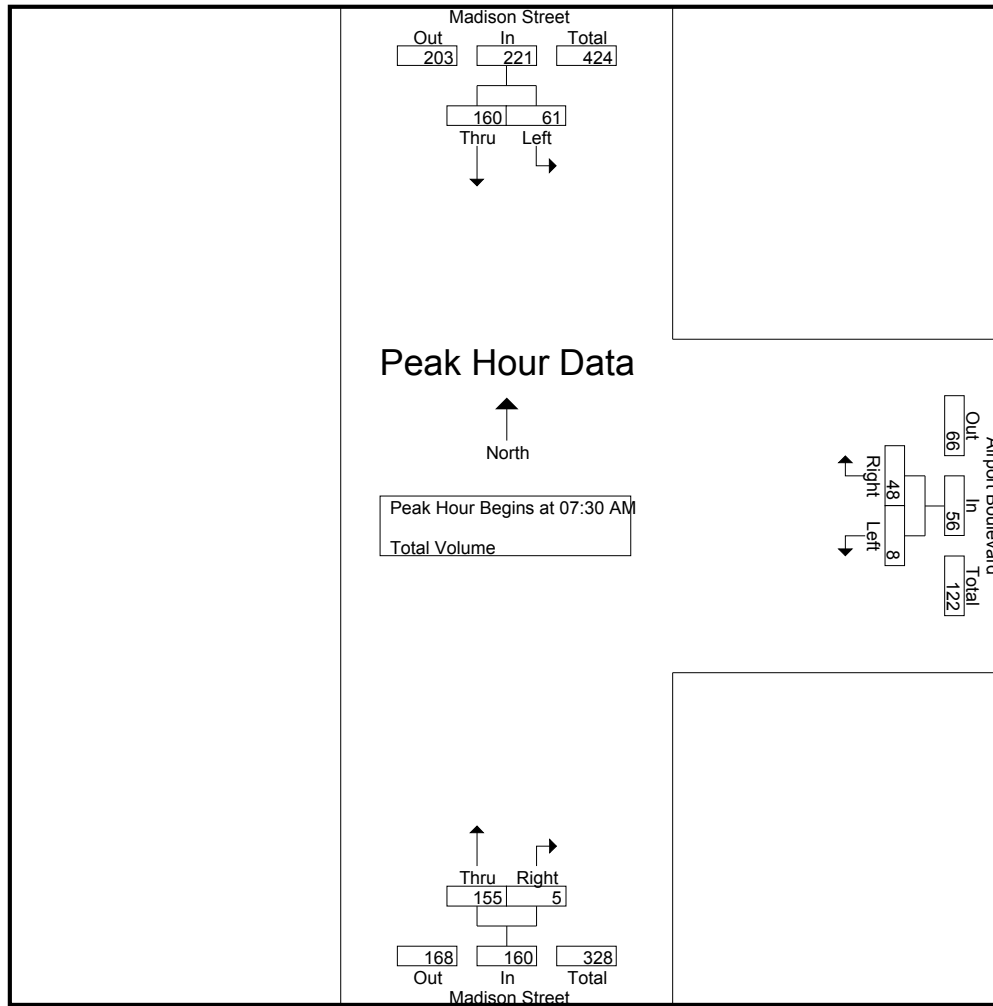
Groups Printed- Total Volume

	Madison Street Southbound			Airport Boulevard Westbound			Madison Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
06:00 AM	5	20	25	2	10	12	22	0	22	59
06:15 AM	3	18	21	3	6	9	30	0	30	60
06:30 AM	6	28	34	3	10	13	19	1	20	67
06:45 AM	13	49	62	3	12	15	28	1	29	106
Total	27	115	142	11	38	49	99	2	101	292
07:00 AM	10	34	44	6	3	9	41	1	42	95
07:15 AM	14	35	49	2	10	12	34	0	34	95
07:30 AM	9	33	42	2	19	21	42	1	43	106
07:45 AM	23	50	73	2	8	10	43	0	43	126
Total	56	152	208	12	40	52	160	2	162	422
08:00 AM	16	40	56	2	8	10	37	1	38	104
08:15 AM	13	37	50	2	13	15	33	3	36	101
Grand Total	112	344	456	27	99	126	329	8	337	919
Apprch %	24.6	75.4		21.4	78.6		97.6	2.4		
Total %	12.2	37.4	49.6	2.9	10.8	13.7	35.8	0.9	36.7	

	Madison Street Southbound			Airport Boulevard Westbound			Madison Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	9	33	42	2	19	21	42	1	43	106
07:45 AM	23	50	73	2	8	10	43	0	43	126
08:00 AM	16	40	56	2	8	10	37	1	38	104
08:15 AM	13	37	50	2	13	15	33	3	36	101
Total Volume	61	160	221	8	48	56	155	5	160	437
% App. Total	27.6	72.4		14.3	85.7		96.9	3.1		
PHF	.663	.800	.757	1.00	.632	.667	.901	.417	.930	.867

City of La Quinta
N/S: Madison Street
E/W: Airport Boulevard
Weather: Clear

File Name : 02_LQA_Madison_Airport AM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:30 AM			06:45 AM			07:00 AM		
+0 mins.	9	33	42	3	12	15	41	1	42
+15 mins.	23	50	73	6	3	9	34	0	34
+30 mins.	16	40	56	2	10	12	42	1	43
+45 mins.	13	37	50	2	19	21	43	0	43
Total Volume	61	160	221	13	44	57	160	2	162
% App. Total	27.6	72.4		22.8	77.2		98.8	1.2	
PHF	.663	.800	.757	.542	.579	.679	.930	.500	.942

City of La Quinta
N/S: Madison Street
E/W: Airport Boulevard
Weather: Clear

File Name : 02_LQA_Madison_Airport PM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 1

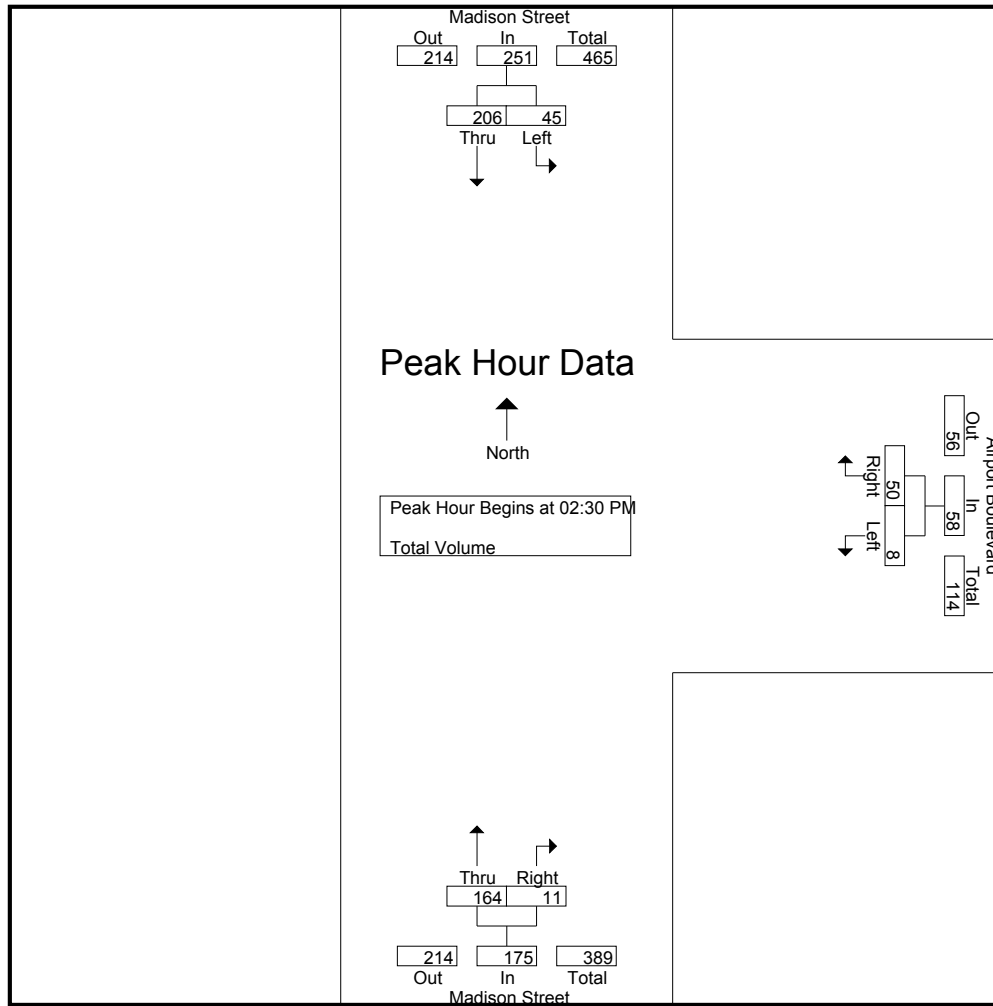
Groups Printed- Total Volume

	Madison Street Southbound			Airport Boulevard Westbound			Madison Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
02:30 PM	12	55	67	0	8	8	50	1	51	126
02:45 PM	11	52	63	2	19	21	50	2	52	136
Total	23	107	130	2	27	29	100	3	103	262
03:00 PM	15	54	69	4	12	16	23	3	26	111
03:15 PM	7	45	52	2	11	13	41	5	46	111
03:30 PM	18	41	59	2	16	18	48	1	49	126
03:45 PM	6	41	47	2	14	16	40	3	43	106
Total	46	181	227	10	53	63	152	12	164	454
04:00 PM	7	40	47	3	12	15	39	3	42	104
04:15 PM	9	36	45	2	19	21	33	4	37	103
04:30 PM	8	32	40	0	15	15	31	1	32	87
04:45 PM	11	35	46	1	12	13	37	3	40	99
Total	35	143	178	6	58	64	140	11	151	393
05:00 PM	5	27	32	2	10	12	44	1	45	89
05:15 PM	11	41	52	0	18	18	24	0	24	94
Grand Total	120	499	619	20	166	186	460	27	487	1292
Apprch %	19.4	80.6		10.8	89.2		94.5	5.5		
Total %	9.3	38.6	47.9	1.5	12.8	14.4	35.6	2.1	37.7	

	Madison Street Southbound			Airport Boulevard Westbound			Madison Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:30 PM										
02:30 PM	12	55	67	0	8	8	50	1	51	126
02:45 PM	11	52	63	2	19	21	50	2	52	136
03:00 PM	15	54	69	4	12	16	23	3	26	111
03:15 PM	7	45	52	2	11	13	41	5	46	111
Total Volume	45	206	251	8	50	58	164	11	175	484
% App. Total	17.9	82.1		13.8	86.2		93.7	6.3		
PHF	.750	.936	.909	.500	.658	.690	.820	.550	.841	.890

City of La Quinta
N/S: Madison Street
E/W: Airport Boulevard
Weather: Clear

File Name : 02_LQA_Madison_Airport PM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 2



Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	02:30 PM			03:30 PM			03:15 PM		
+0 mins.	12	55	67	2	16	18	41	5	46
+15 mins.	11	52	63	2	14	16	48	1	49
+30 mins.	15	54	69	3	12	15	40	3	43
+45 mins.	7	45	52	2	19	21	39	3	42
Total Volume	45	206	251	9	61	70	168	12	180
% App. Total	17.9	82.1		12.9	87.1		93.3	6.7	
PHF	.750	.936	.909	.750	.803	.833	.875	.600	.918

City of La Quinta
N/S: Madison Street
E/W: Avenue 54
Weather: Clear

File Name : 03_LQA_Madison_Ave 54 AM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 1

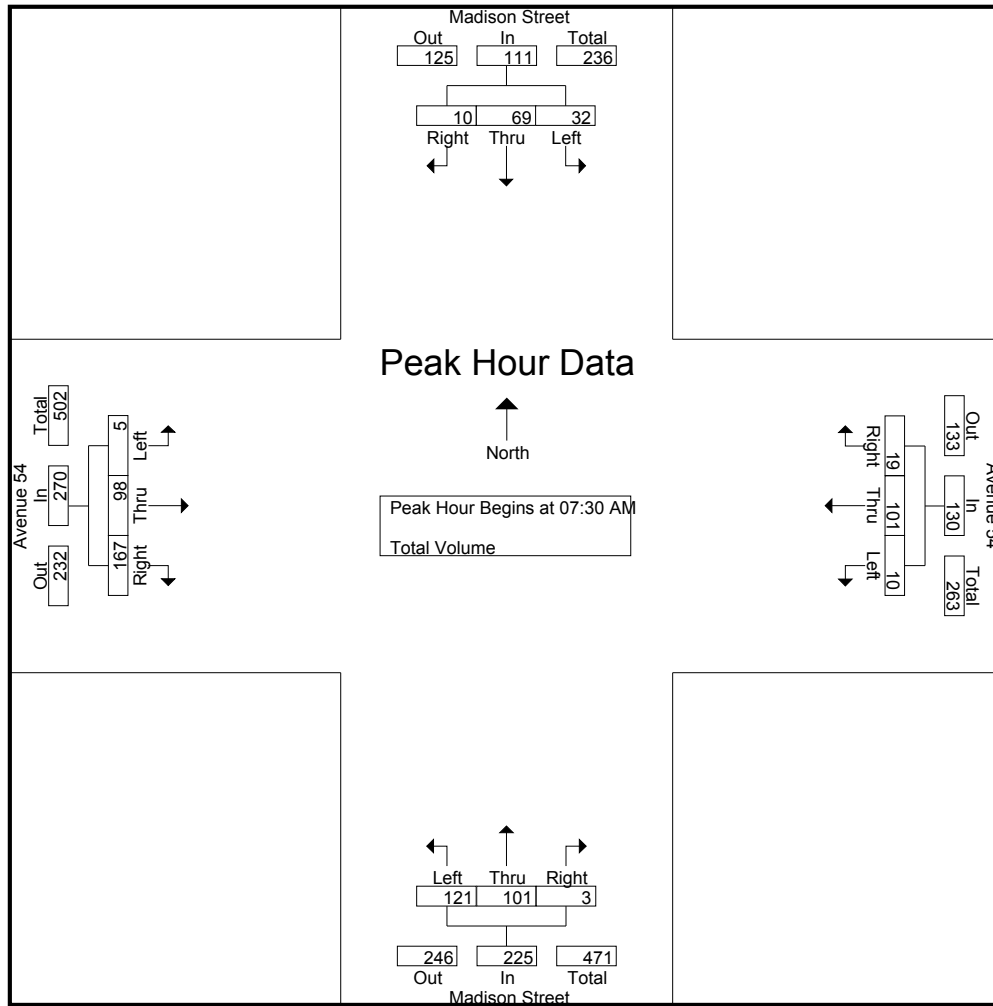
Groups Printed- Total Volume

	Madison Street Southbound				Avenue 54 Westbound				Madison Street Northbound				Avenue 54 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	11	12	6	29	17	30	2	49	14	16	1	31	0	12	23	35	144
06:15 AM	2	3	3	8	4	20	4	28	22	13	2	37	0	18	13	31	104
06:30 AM	7	22	0	29	3	31	6	40	16	11	3	30	1	19	19	39	138
06:45 AM	7	23	5	35	10	25	6	41	24	17	2	43	0	25	48	73	192
Total	27	60	14	101	34	106	18	158	76	57	8	141	1	74	103	178	578
07:00 AM	4	13	4	21	9	34	3	46	21	21	1	43	0	19	29	48	158
07:15 AM	6	22	1	29	1	17	8	26	23	28	1	52	1	22	31	54	161
07:30 AM	5	17	1	23	0	22	7	29	45	21	2	68	0	25	29	54	174
07:45 AM	14	19	4	37	5	21	6	32	30	27	0	57	3	30	48	81	207
Total	29	71	10	110	15	94	24	133	119	97	4	220	4	96	137	237	700
08:00 AM	9	21	2	32	1	30	4	35	20	27	0	47	2	23	38	63	177
08:15 AM	4	12	3	19	4	28	2	34	26	26	1	53	0	20	52	72	178
Grand Total	69	164	29	262	54	258	48	360	241	207	13	461	7	213	330	550	1633
Apprch %	26.3	62.6	11.1		15	71.7	13.3		52.3	44.9	2.8		1.3	38.7	60		
Total %	4.2	10	1.8	16	3.3	15.8	2.9	22	14.8	12.7	0.8	28.2	0.4	13	20.2	33.7	

	Madison Street Southbound				Avenue 54 Westbound				Madison Street Northbound				Avenue 54 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	5	17	1	23	0	22	7	29	45	21	2	68	0	25	29	54	174
07:45 AM	14	19	4	37	5	21	6	32	30	27	0	57	3	30	48	81	207
08:00 AM	9	21	2	32	1	30	4	35	20	27	0	47	2	23	38	63	177
08:15 AM	4	12	3	19	4	28	2	34	26	26	1	53	0	20	52	72	178
Total Volume	32	69	10	111	10	101	19	130	121	101	3	225	5	98	167	270	736
% App. Total	28.8	62.2	9		7.7	77.7	14.6		53.8	44.9	1.3		1.9	36.3	61.9		
PHF	.571	.821	.625	.750	.500	.842	.679	.929	.672	.935	.375	.827	.417	.817	.803	.833	.889

City of La Quinta
N/S: Madison Street
E/W: Avenue 54
Weather: Clear

File Name : 03_LQA_Madison_Ave 54 AM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				06:00 AM				07:30 AM				07:30 AM			
+0 mins.	6	22	1	29	17	30	2	49	45	21	2	68	0	25	29	54
+15 mins.	5	17	1	23	4	20	4	28	30	27	0	57	3	30	48	81
+30 mins.	14	19	4	37	3	31	6	40	20	27	0	47	2	23	38	63
+45 mins.	9	21	2	32	10	25	6	41	26	26	1	53	0	20	52	72
Total Volume	34	79	8	121	34	106	18	158	121	101	3	225	5	98	167	270
% App. Total	28.1	65.3	6.6		21.5	67.1	11.4		53.8	44.9	1.3		1.9	36.3	61.9	
PHF	.607	.898	.500	.818	.500	.855	.750	.806	.672	.935	.375	.827	.417	.817	.803	.833

City of La Quinta
N/S: Madison Street
E/W: Avenue 54
Weather: Clear

File Name : 03_LQA_Madison_Ave 54 PM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 1

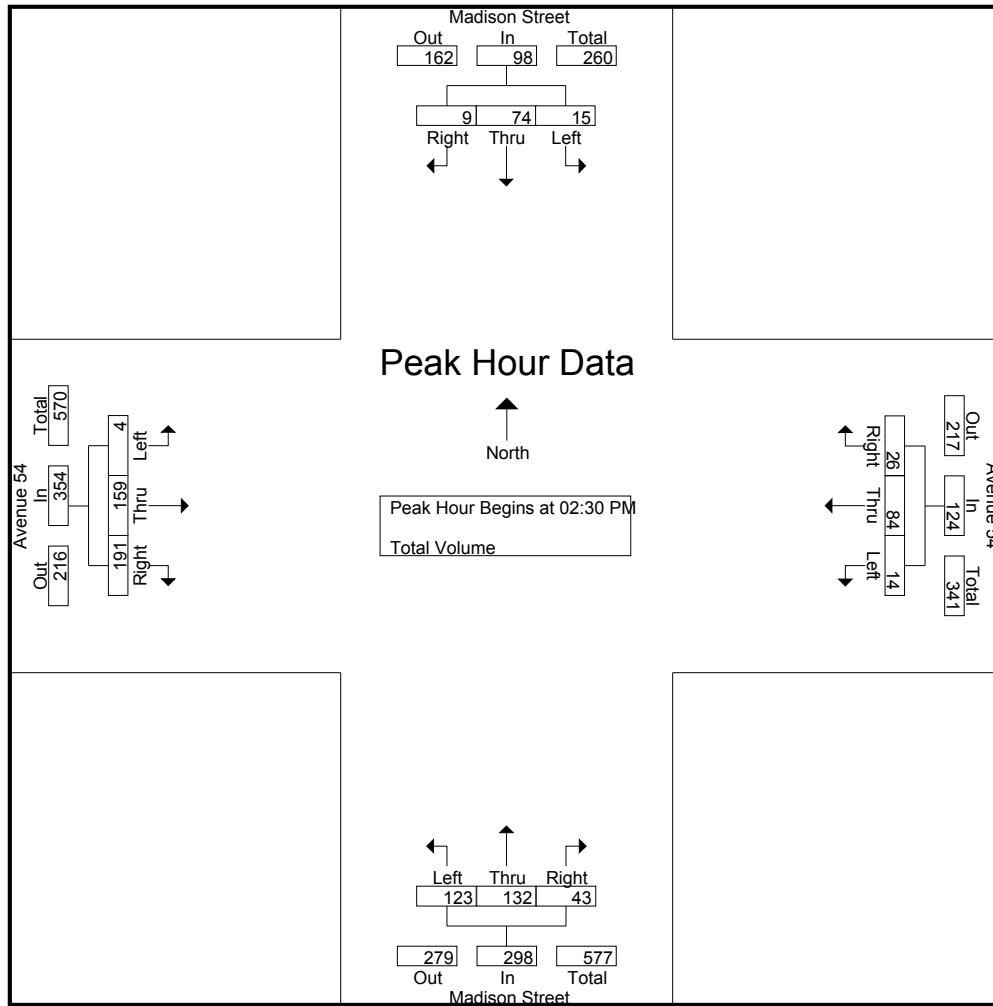
Groups Printed- Total Volume

	Madison Street Southbound				Avenue 54 Westbound				Madison Street Northbound				Avenue 54 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:30 PM	3	23	4	30	5	25	7	37	25	38	2	65	1	59	55	115	247
02:45 PM	6	15	0	21	3	27	4	34	40	40	13	93	0	38	47	85	233
Total	9	38	4	51	8	52	11	71	65	78	15	158	1	97	102	200	480
03:00 PM	2	20	0	22	2	13	6	21	22	31	21	74	1	32	48	81	198
03:15 PM	4	16	5	25	4	19	9	32	36	23	7	66	2	30	41	73	196
03:30 PM	7	26	8	41	3	19	6	28	37	42	6	85	1	27	43	71	225
03:45 PM	2	21	3	26	0	16	7	23	40	21	5	66	0	33	33	66	181
Total	15	83	16	114	9	67	28	104	135	117	39	291	4	122	165	291	800
04:00 PM	1	19	1	21	0	18	3	21	30	29	4	63	3	29	35	67	172
04:15 PM	2	10	0	12	3	27	11	41	34	21	0	55	1	19	32	52	160
04:30 PM	6	21	2	29	3	14	9	26	22	27	3	52	0	23	26	49	156
04:45 PM	2	18	1	21	1	15	11	27	17	31	5	53	1	18	28	47	148
Total	11	68	4	83	7	74	34	115	103	108	12	223	5	89	121	215	636
05:00 PM	7	16	1	24	0	18	11	29	25	28	3	56	2	22	17	41	150
05:15 PM	4	17	2	23	2	17	8	27	24	20	5	49	1	24	36	61	160
Grand Total	46	222	27	295	26	228	92	346	352	351	74	777	13	354	441	808	2226
Apprch %	15.6	75.3	9.2		7.5	65.9	26.6		45.3	45.2	9.5		1.6	43.8	54.6		
Total %	2.1	10	1.2	13.3	1.2	10.2	4.1	15.5	15.8	15.8	3.3	34.9	0.6	15.9	19.8	36.3	

	Madison Street Southbound				Avenue 54 Westbound				Madison Street Northbound				Avenue 54 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:30 PM																	
02:30 PM	3	23	4	30	5	25	7	37	25	38	2	65	1	59	55	115	247
02:45 PM	6	15	0	21	3	27	4	34	40	40	13	93	0	38	47	85	233
03:00 PM	2	20	0	22	2	13	6	21	22	31	21	74	1	32	48	81	198
03:15 PM	4	16	5	25	4	19	9	32	36	23	7	66	2	30	41	73	196
Total Volume	15	74	9	98	14	84	26	124	123	132	43	298	4	159	191	354	874
% App. Total	15.3	75.5	9.2		11.3	67.7	21		41.3	44.3	14.4		1.1	44.9	54		
PHF	.625	.804	.450	.817	.700	.778	.722	.838	.769	.825	.512	.801	.500	.674	.868	.770	.885

City of La Quinta
N/S: Madison Street
E/W: Avenue 54
Weather: Clear

File Name : 03_LQA_Madison_Ave 54 PM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 2



Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				02:30 PM				02:45 PM				02:30 PM			
+0 mins.	2	20	0	22	5	25	7	37	40	40	13	93	1	59	55	115
+15 mins.	4	16	5	25	3	27	4	34	22	31	21	74	0	38	47	85
+30 mins.	7	26	8	41	2	13	6	21	36	23	7	66	1	32	48	81
+45 mins.	2	21	3	26	4	19	9	32	37	42	6	85	2	30	41	73
Total Volume	15	83	16	114	14	84	26	124	135	136	47	318	4	159	191	354
% App. Total	13.2	72.8	14		11.3	67.7	21		42.5	42.8	14.8		1.1	44.9	54	
PHF	.536	.798	.500	.695	.700	.778	.722	.838	.844	.810	.560	.855	.500	.674	.868	.770

City of La Quinta
N/S: Madison Street
E/W: Avenue 52
Weather: Clear

File Name : 04_LQA_Madison_Ave 52 AM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 1

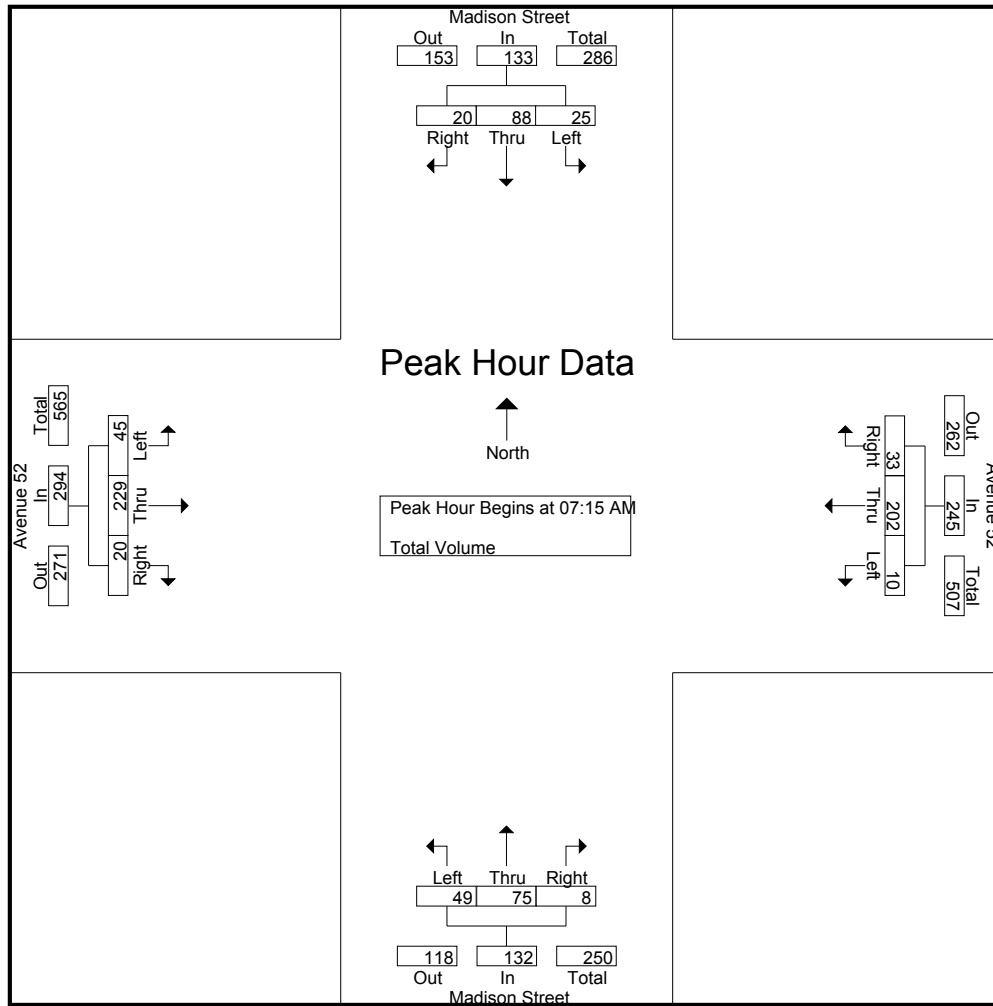
Groups Printed- Total Volume

	Madison Street Southbound				Avenue 52 Westbound				Madison Street Northbound				Avenue 52 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	3	12	6	21	4	48	4	56	6	10	3	19	4	22	8	34	130
06:15 AM	3	12	4	19	0	49	4	53	3	14	0	17	3	29	0	32	121
06:30 AM	3	19	3	25	6	55	7	68	12	6	1	19	2	32	4	38	150
06:45 AM	5	23	6	34	6	45	3	54	10	12	2	24	10	53	6	69	181
Total	14	66	19	99	16	197	18	231	31	42	6	79	19	136	18	173	582
07:00 AM	3	14	3	20	1	42	3	46	9	15	0	24	8	37	6	51	141
07:15 AM	4	26	9	39	1	43	10	54	15	18	3	36	10	68	4	82	211
07:30 AM	6	17	6	29	0	52	3	55	9	18	2	29	10	56	5	71	184
07:45 AM	8	31	3	42	5	55	13	73	14	19	2	35	15	62	5	82	232
Total	21	88	21	130	7	192	29	228	47	70	7	124	43	223	20	286	768
08:00 AM	7	14	2	23	4	52	7	63	11	20	1	32	10	43	6	59	177
08:15 AM	5	14	2	21	4	55	5	64	7	22	1	30	11	56	3	70	185
Grand Total	47	182	44	273	31	496	59	586	96	154	15	265	83	458	47	588	1712
Apprch %	17.2	66.7	16.1		5.3	84.6	10.1		36.2	58.1	5.7		14.1	77.9	8		
Total %	2.7	10.6	2.6	15.9	1.8	29	3.4	34.2	5.6	9	0.9	15.5	4.8	26.8	2.7	34.3	

	Madison Street Southbound				Avenue 52 Westbound				Madison Street Northbound				Avenue 52 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	4	26	9	39	1	43	10	54	15	18	3	36	10	68	4	82	211
07:30 AM	6	17	6	29	0	52	3	55	9	18	2	29	10	56	5	71	184
07:45 AM	8	31	3	42	5	55	13	73	14	19	2	35	15	62	5	82	232
08:00 AM	7	14	2	23	4	52	7	63	11	20	1	32	10	43	6	59	177
Total Volume	25	88	20	133	10	202	33	245	49	75	8	132	45	229	20	294	804
% App. Total	18.8	66.2	15		4.1	82.4	13.5		37.1	56.8	6.1		15.3	77.9	6.8		
PHF	.781	.710	.556	.792	.500	.918	.635	.839	.817	.938	.667	.917	.750	.842	.833	.896	.866

City of La Quinta
N/S: Madison Street
E/W: Avenue 52
Weather: Clear

File Name : 04_LQA_Madison_Ave 52 AM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:30 AM				07:15 AM				07:15 AM			
+0 mins.	4	26	9	39	0	52	3	55	15	18	3	36	10	68	4	82
+15 mins.	6	17	6	29	5	55	13	73	9	18	2	29	10	56	5	71
+30 mins.	8	31	3	42	4	52	7	63	14	19	2	35	15	62	5	82
+45 mins.	7	14	2	23	4	55	5	64	11	20	1	32	10	43	6	59
Total Volume	25	88	20	133	13	214	28	255	49	75	8	132	45	229	20	294
% App. Total	18.8	66.2	15		5.1	83.9	11		37.1	56.8	6.1		15.3	77.9	6.8	
PHF	.781	.710	.556	.792	.650	.973	.538	.873	.817	.938	.667	.917	.750	.842	.833	.896

City of La Quinta
N/S: Madison Street
E/W: Avenue 52
Weather: Clear

File Name : 04_LQA_Madison_Ave 52 PM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 1

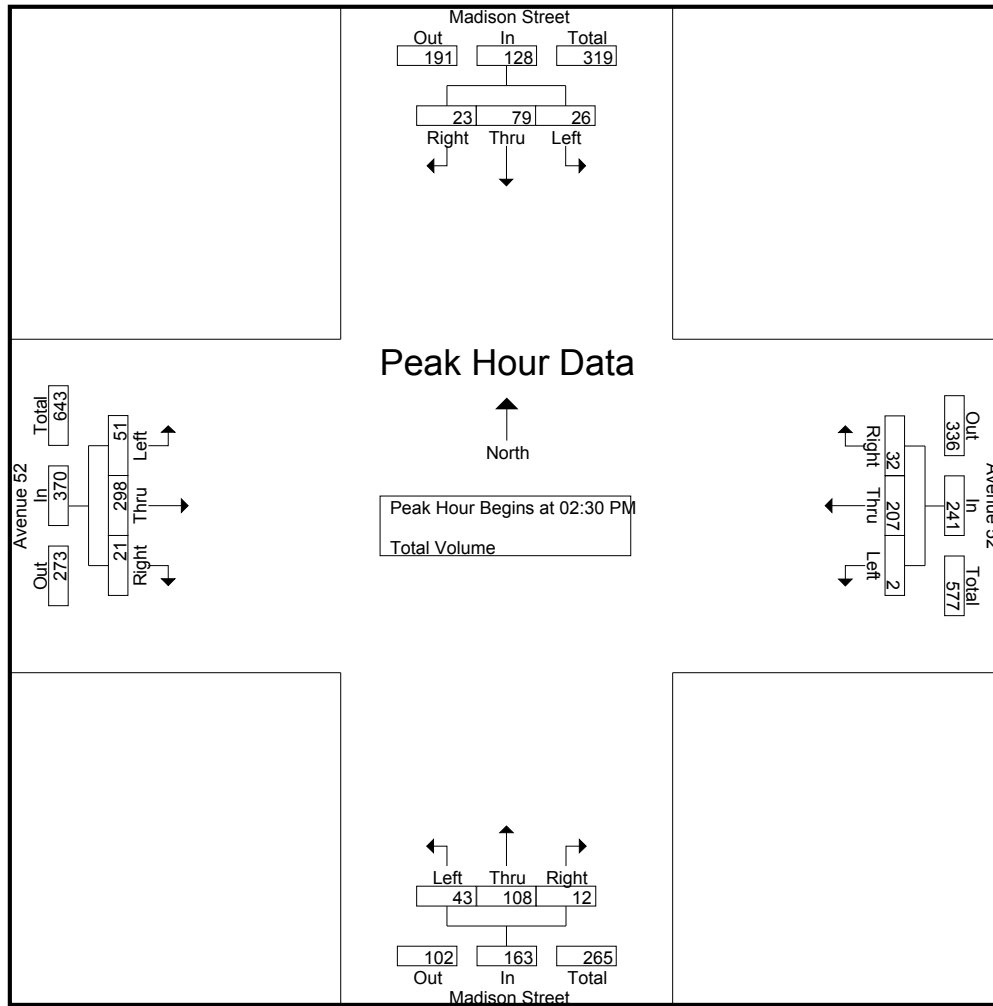
Groups Printed- Total Volume

	Madison Street Southbound				Avenue 52 Westbound				Madison Street Northbound				Avenue 52 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:30 PM	9	23	6	38	1	51	8	60	14	32	2	48	15	95	7	117	263
02:45 PM	3	13	4	20	0	51	9	60	17	26	1	44	13	77	6	96	220
Total	12	36	10	58	1	102	17	120	31	58	3	92	28	172	13	213	483
03:00 PM	5	20	6	31	1	49	8	58	5	25	7	37	17	56	1	74	200
03:15 PM	9	23	7	39	0	56	7	63	7	25	2	34	6	70	7	83	219
03:30 PM	11	33	3	47	0	44	5	49	13	35	1	49	8	73	9	90	235
03:45 PM	8	13	4	25	2	47	8	57	12	14	2	28	6	58	4	68	178
Total	33	89	20	142	3	196	28	227	37	99	12	148	37	257	21	315	832
04:00 PM	6	18	6	30	1	35	7	43	11	24	1	36	5	44	3	52	161
04:15 PM	8	10	5	23	1	86	10	97	7	25	1	33	8	50	1	59	212
04:30 PM	1	26	5	32	2	47	6	55	3	33	0	36	13	58	4	75	198
04:45 PM	7	19	15	41	1	68	9	78	13	28	1	42	12	53	2	67	228
Total	22	73	31	126	5	236	32	273	34	110	3	147	38	205	10	253	799
05:00 PM	8	19	7	34	2	60	6	68	8	34	0	42	9	66	1	76	220
05:15 PM	3	21	9	33	1	62	6	69	6	20	1	27	5	70	1	76	205
Grand Total	78	238	77	393	12	656	89	757	116	321	19	456	117	770	46	933	2539
Apprch %	19.8	60.6	19.6		1.6	86.7	11.8		25.4	70.4	4.2		12.5	82.5	4.9		
Total %	3.1	9.4	3	15.5	0.5	25.8	3.5	29.8	4.6	12.6	0.7	18	4.6	30.3	1.8	36.7	

	Madison Street Southbound				Avenue 52 Westbound				Madison Street Northbound				Avenue 52 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:30 PM																	
02:30 PM	9	23	6	38	1	51	8	60	14	32	2	48	15	95	7	117	263
02:45 PM	3	13	4	20	0	51	9	60	17	26	1	44	13	77	6	96	220
03:00 PM	5	20	6	31	1	49	8	58	5	25	7	37	17	56	1	74	200
03:15 PM	9	23	7	39	0	56	7	63	7	25	2	34	6	70	7	83	219
Total Volume	26	79	23	128	2	207	32	241	43	108	12	163	51	298	21	370	902
% App. Total	20.3	61.7	18		0.8	85.9	13.3		26.4	66.3	7.4		13.8	80.5	5.7		
PHF	.722	.859	.821	.821	.500	.924	.889	.956	.632	.844	.429	.849	.750	.784	.750	.791	.857

City of La Quinta
N/S: Madison Street
E/W: Avenue 52
Weather: Clear

File Name : 04_LQA_Madison_Ave 52 PM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 2



Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				04:15 PM				02:45 PM				02:30 PM			
+0 mins.	5	20	6	31	1	86	10	97	17	26	1	44	15	95	7	117
+15 mins.	9	23	7	39	2	47	6	55	5	25	7	37	13	77	6	96
+30 mins.	11	33	3	47	1	68	9	78	7	25	2	34	17	56	1	74
+45 mins.	8	13	4	25	2	60	6	68	13	35	1	49	6	70	7	83
Total Volume	33	89	20	142	6	261	31	298	42	111	11	164	51	298	21	370
% App. Total	23.2	62.7	14.1		2	87.6	10.4		25.6	67.7	6.7		13.8	80.5	5.7	
PHF	.750	.674	.714	.755	.750	.759	.775	.768	.618	.793	.393	.837	.750	.784	.750	.791

City of La Quinta
N/S: Madison Street
E/W: Avenue 50
Weather: Clear

File Name : 05_LQA_Madison_Ave 50 AM
Site Code : 05119233
Start Date : 4/9/2019
Page No : 1

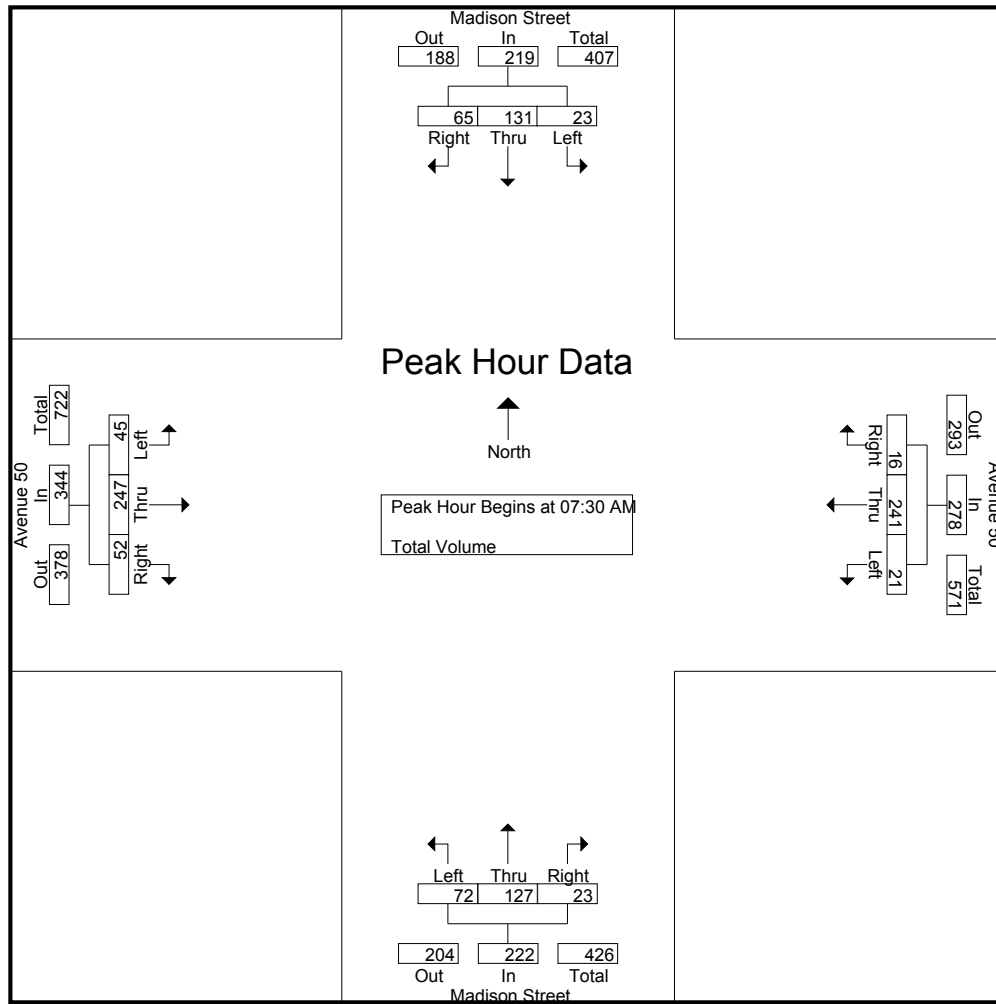
Groups Printed- Total Volume

	Madison Street Southbound				Avenue 50 Westbound				Madison Street Northbound				Avenue 50 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	4	13	2	19	3	23	1	27	3	16	0	19	0	15	2	17	82
06:15 AM	3	24	5	32	4	28	7	39	3	17	1	21	2	16	2	20	112
06:30 AM	4	31	3	38	4	62	6	72	13	21	1	35	1	29	7	37	182
06:45 AM	0	42	3	45	4	64	6	74	10	25	4	39	7	34	16	57	215
Total	11	110	13	134	15	177	20	212	29	79	6	114	10	94	27	131	591
07:00 AM	3	32	8	43	5	54	7	66	13	19	3	35	7	30	5	42	186
07:15 AM	6	31	11	48	2	48	5	55	17	37	5	59	7	27	8	42	204
07:30 AM	9	33	14	56	7	61	3	71	17	36	8	61	8	50	7	65	253
07:45 AM	8	41	16	65	3	48	3	54	16	25	6	47	6	75	20	101	267
Total	26	137	49	212	17	211	18	246	63	117	22	202	28	182	40	250	910
08:00 AM	3	26	17	46	7	72	4	83	24	38	2	64	10	55	13	78	271
08:15 AM	3	31	18	52	4	60	6	70	15	28	7	50	21	67	12	100	272
Grand Total	43	304	97	444	43	520	48	611	131	262	37	430	69	398	92	559	2044
Apprch %	9.7	68.5	21.8		7	85.1	7.9		30.5	60.9	8.6		12.3	71.2	16.5		
Total %	2.1	14.9	4.7	21.7	2.1	25.4	2.3	29.9	6.4	12.8	1.8	21	3.4	19.5	4.5	27.3	

	Madison Street Southbound				Avenue 50 Westbound				Madison Street Northbound				Avenue 50 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	9	33	14	56	7	61	3	71	17	36	8	61	8	50	7	65	253
07:45 AM	8	41	16	65	3	48	3	54	16	25	6	47	6	75	20	101	267
08:00 AM	3	26	17	46	7	72	4	83	24	38	2	64	10	55	13	78	271
08:15 AM	3	31	18	52	4	60	6	70	15	28	7	50	21	67	12	100	272
Total Volume	23	131	65	219	21	241	16	278	72	127	23	222	45	247	52	344	1063
% App. Total	10.5	59.8	29.7		7.6	86.7	5.8		32.4	57.2	10.4		13.1	71.8	15.1		
PHF	.639	.799	.903	.842	.750	.837	.667	.837	.750	.836	.719	.867	.536	.823	.650	.851	.977

City of La Quinta
N/S: Madison Street
E/W: Avenue 50
Weather: Clear

File Name : 05_LQA_Madison_Ave 50 AM
Site Code : 05119233
Start Date : 4/9/2019
Page No : 2

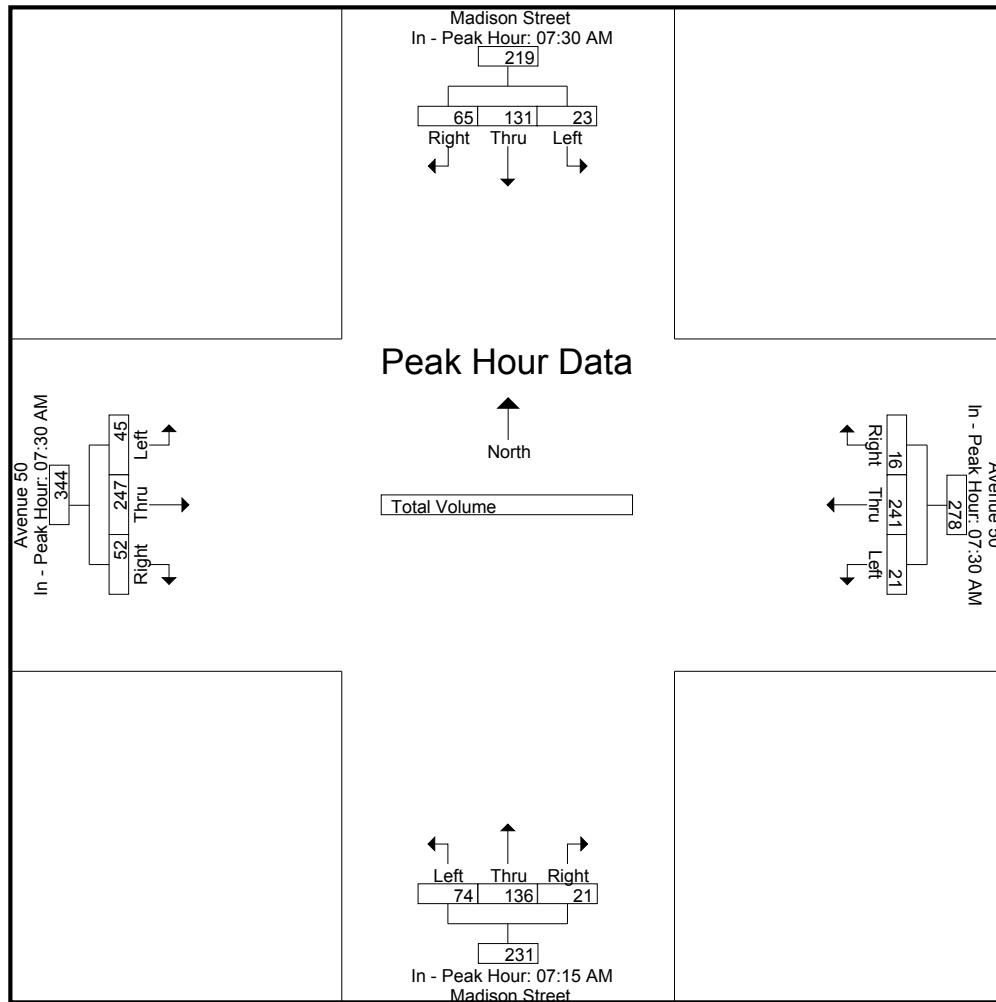


Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:15 AM				07:30 AM			
+0 mins.	9	33	14	56	7	61	3	71	17	37	5	59	8	50	7	65
+15 mins.	8	41	16	65	3	48	3	54	17	36	8	61	6	75	20	101
+30 mins.	3	26	17	46	7	72	4	83	16	25	6	47	10	55	13	78
+45 mins.	3	31	18	52	4	60	6	70	24	38	2	64	21	67	12	100
Total Volume	23	131	65	219	21	241	16	278	74	136	21	231	45	247	52	344
% App. Total	10.5	59.8	29.7		7.6	86.7	5.8		32	58.9	9.1		13.1	71.8	15.1	
PHF	.639	.799	.903	.842	.750	.837	.667	.837	.771	.895	.656	.902	.536	.823	.650	.851

City of La Quinta
N/S: Madison Street
E/W: Avenue 50
Weather: Clear

File Name : 05_LQA_Madison_Ave 50 AM
Site Code : 05119233
Start Date : 4/9/2019
Page No : 3



City of La Quinta
N/S: Madison Street
E/W: Avenue 50
Weather: Clear

File Name : 05_LQA_Madison_Ave 50 PM
Site Code : 05119233
Start Date : 4/9/2019
Page No : 1

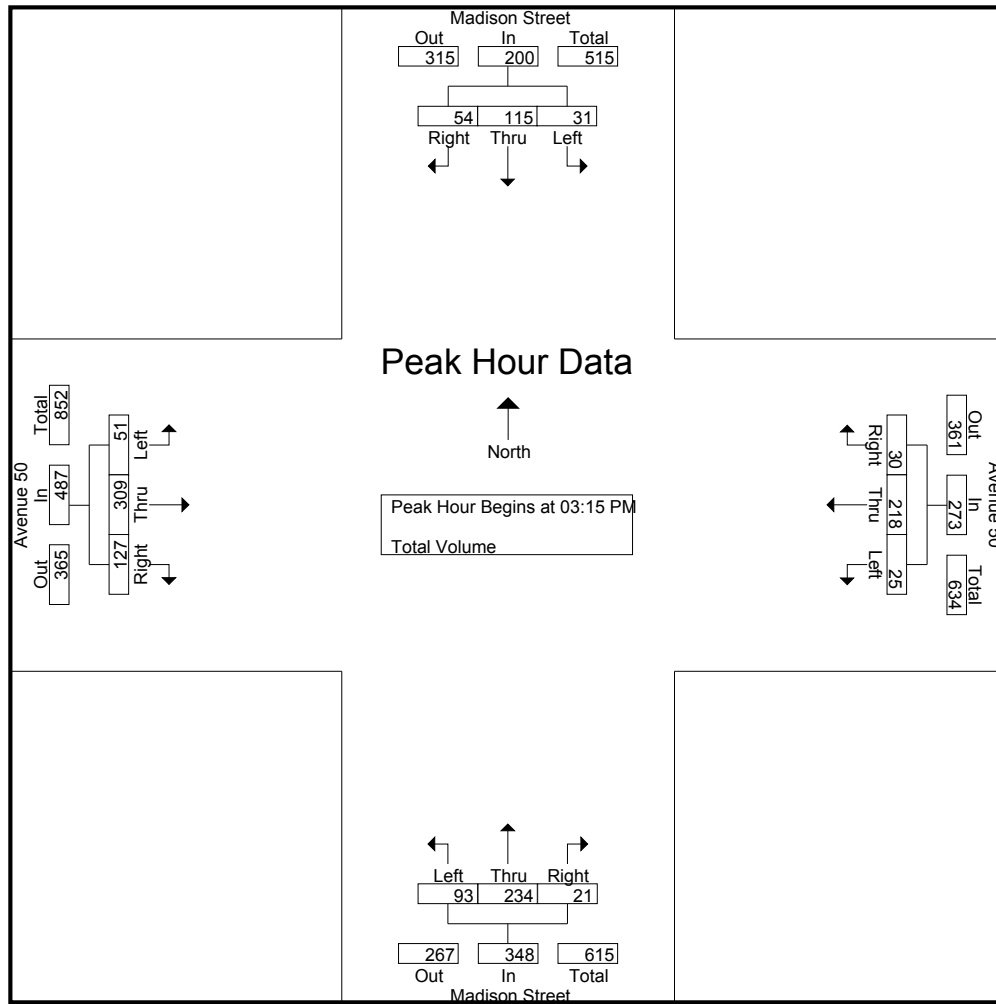
Groups Printed- Total Volume

	Madison Street Southbound				Avenue 50 Westbound				Madison Street Northbound				Avenue 50 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:30 PM	12	31	17	60	7	38	6	51	24	61	11	96	18	66	31	115	322
02:45 PM	17	33	11	61	6	51	7	64	20	57	9	86	22	76	25	123	334
Total	29	64	28	121	13	89	13	115	44	118	20	182	40	142	56	238	656
03:00 PM	6	45	4	55	4	41	6	51	26	48	5	79	14	56	26	96	281
03:15 PM	9	27	11	47	2	49	5	56	26	61	5	92	18	76	23	117	312
03:30 PM	6	31	22	59	9	53	10	72	25	72	3	100	8	71	33	112	343
03:45 PM	7	33	11	51	6	55	8	69	15	53	8	76	15	76	42	133	329
Total	28	136	48	212	21	198	29	248	92	234	21	347	55	279	124	458	1265
04:00 PM	9	24	10	43	8	61	7	76	27	48	5	80	10	86	29	125	324
04:15 PM	9	29	9	47	6	52	10	68	28	49	6	83	15	60	20	95	293
04:30 PM	9	23	5	37	8	44	3	55	13	51	7	71	20	86	18	124	287
04:45 PM	7	32	10	49	6	62	8	76	21	31	7	59	8	73	19	100	284
Total	34	108	34	176	28	219	28	275	89	179	25	293	53	305	86	444	1188
05:00 PM	12	26	10	48	5	47	11	63	19	45	7	71	15	74	20	109	291
05:15 PM	12	34	10	56	4	67	16	87	23	34	5	62	11	71	19	101	306
Grand Total	115	368	130	613	71	620	97	788	267	610	78	955	174	871	305	1350	3706
Apprch %	18.8	60	21.2		9	78.7	12.3		28	63.9	8.2		12.9	64.5	22.6		
Total %	3.1	9.9	3.5	16.5	1.9	16.7	2.6	21.3	7.2	16.5	2.1	25.8	4.7	23.5	8.2	36.4	

	Madison Street Southbound				Avenue 50 Westbound				Madison Street Northbound				Avenue 50 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:15 PM																	
03:15 PM	9	27	11	47	2	49	5	56	26	61	5	92	18	76	23	117	312
03:30 PM	6	31	22	59	9	53	10	72	25	72	3	100	8	71	33	112	343
03:45 PM	7	33	11	51	6	55	8	69	15	53	8	76	15	76	42	133	329
04:00 PM	9	24	10	43	8	61	7	76	27	48	5	80	10	86	29	125	324
Total Volume	31	115	54	200	25	218	30	273	93	234	21	348	51	309	127	487	1308
% App. Total	15.5	57.5	27		9.2	79.9	11		26.7	67.2	6		10.5	63.4	26.1		
PHF	.861	.871	.614	.847	.694	.893	.750	.898	.861	.813	.656	.870	.708	.898	.756	.915	.953

City of La Quinta
N/S: Madison Street
E/W: Avenue 50
Weather: Clear

File Name : 05_LQA_Madison_Ave 50 PM
Site Code : 05119233
Start Date : 4/9/2019
Page No : 2

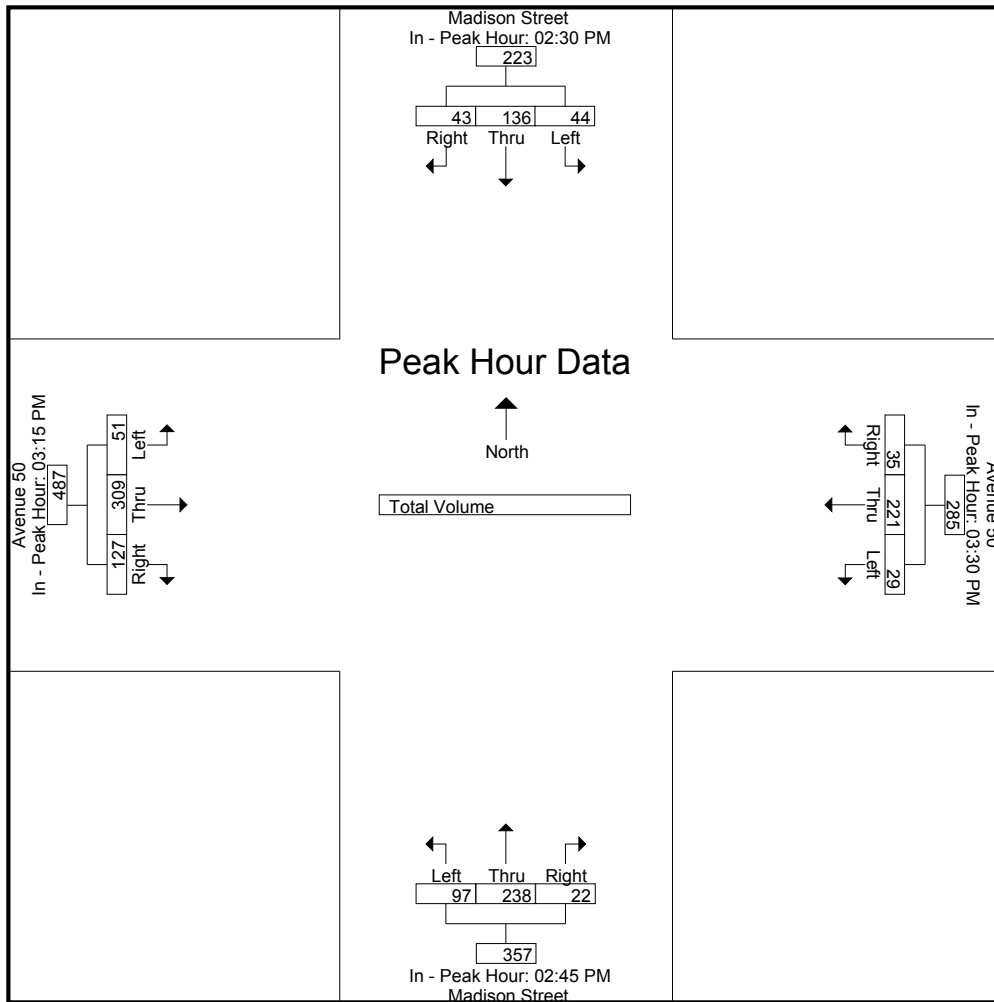


Peak Hour Analysis From 02:30 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:30 PM				03:30 PM				02:45 PM				03:15 PM			
+0 mins.	12	31	17	60	9	53	10	72	20	57	9	86	18	76	23	117
+15 mins.	17	33	11	61	6	55	8	69	26	48	5	79	8	71	33	112
+30 mins.	6	45	4	55	8	61	7	76	26	61	5	92	15	76	42	133
+45 mins.	9	27	11	47	6	52	10	68	25	72	3	100	10	86	29	125
Total Volume	44	136	43	223	29	221	35	285	97	238	22	357	51	309	127	487
% App. Total	19.7	61	19.3		10.2	77.5	12.3		27.2	66.7	6.2		10.5	63.4	26.1	
PHF	.647	.756	.632	.914	.806	.906	.875	.938	.933	.826	.611	.893	.708	.898	.756	.915

City of La Quinta
N/S: Madison Street
E/W: Avenue 50
Weather: Clear

File Name : 05_LQA_Madison_Ave 50 PM
Site Code : 05119233
Start Date : 4/9/2019
Page No : 3



City of La Quinta
N/S: Jefferson Street/PGA Boulevard
E/W: Avenue 54
Weather: Clear

File Name : 06_LQA_Jefferson_Ave 54 AM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 1

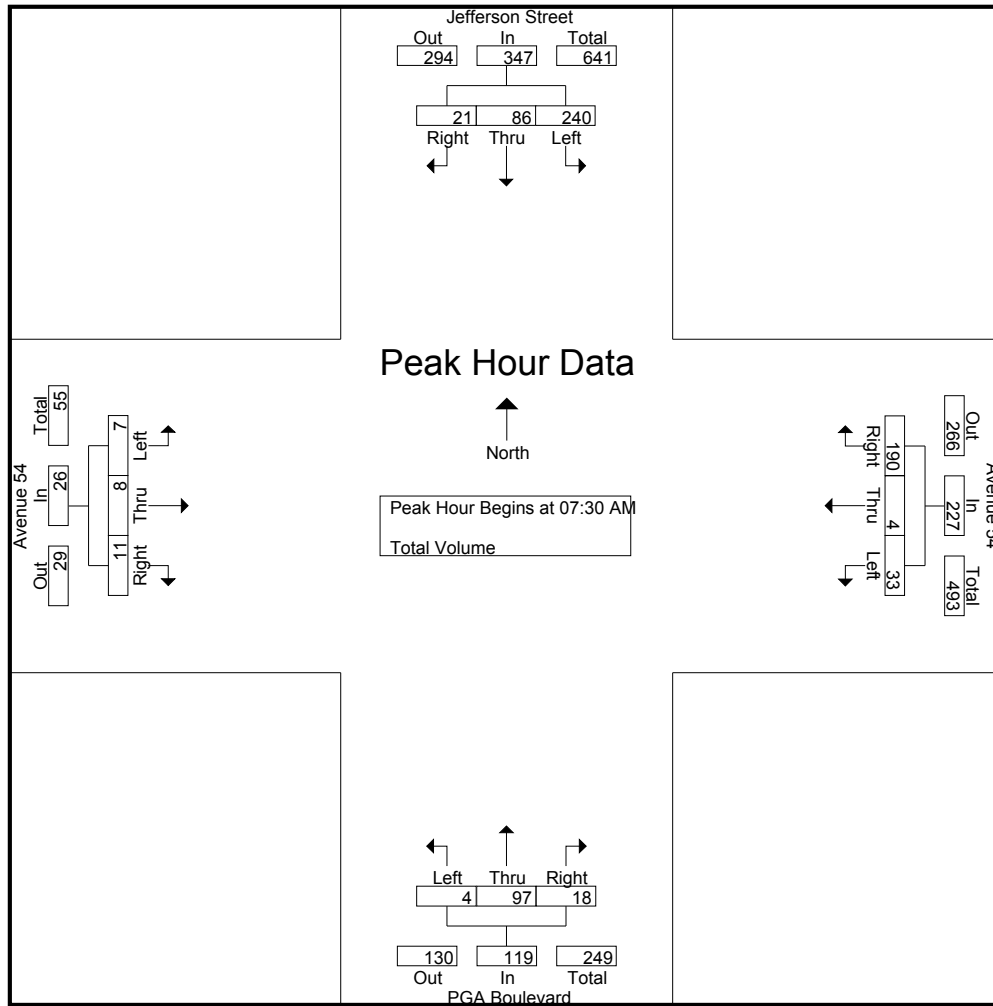
Groups Printed- Total Volume

	Jefferson Street Southbound				Avenue 54 Westbound				PGA Boulevard Northbound				Avenue 54 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	25	14	10	49	6	11	30	47	0	5	2	7	4	3	0	7	110
06:15 AM	31	4	3	38	5	3	37	45	0	2	0	2	2	2	1	5	90
06:30 AM	42	6	1	49	8	6	33	47	1	4	3	8	3	0	0	3	107
06:45 AM	63	11	6	80	9	9	37	55	0	10	2	12	3	2	1	6	153
Total	161	35	20	216	28	29	137	194	1	21	7	29	12	7	2	21	460
07:00 AM	45	19	5	69	12	6	43	61	1	13	2	16	2	2	6	10	156
07:15 AM	53	16	6	75	8	1	30	39	0	24	2	26	3	2	1	6	146
07:30 AM	54	18	9	81	5	2	59	66	1	19	2	22	2	3	4	9	178
07:45 AM	83	24	8	115	12	1	42	55	2	17	2	21	4	1	3	8	199
Total	235	77	28	340	37	10	174	221	4	73	8	85	11	8	14	33	679
08:00 AM	40	24	3	67	10	1	43	54	0	26	11	37	1	2	2	5	163
08:15 AM	63	20	1	84	6	0	46	52	1	35	3	39	0	2	2	4	179
Grand Total	499	156	52	707	81	40	400	521	6	155	29	190	24	19	20	63	1481
Apprch %	70.6	22.1	7.4		15.5	7.7	76.8		3.2	81.6	15.3		38.1	30.2	31.7		
Total %	33.7	10.5	3.5	47.7	5.5	2.7	27	35.2	0.4	10.5	2	12.8	1.6	1.3	1.4	4.3	

	Jefferson Street Southbound				Avenue 54 Westbound				PGA Boulevard Northbound				Avenue 54 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	54	18	9	81	5	2	59	66	1	19	2	22	2	3	4	9	178
07:45 AM	83	24	8	115	12	1	42	55	2	17	2	21	4	1	3	8	199
08:00 AM	40	24	3	67	10	1	43	54	0	26	11	37	1	2	2	5	163
08:15 AM	63	20	1	84	6	0	46	52	1	35	3	39	0	2	2	4	179
Total Volume	240	86	21	347	33	4	190	227	4	97	18	119	7	8	11	26	719
% App. Total	69.2	24.8	6.1		14.5	1.8	83.7		3.4	81.5	15.1		26.9	30.8	42.3		
PHF	.723	.896	.583	.754	.688	.500	.805	.860	.500	.693	.409	.763	.438	.667	.688	.722	.903

City of La Quinta
N/S: Jefferson Street/PGA Boulevard
E/W: Avenue 54
Weather: Clear

File Name : 06_LQA_Jefferson_Ave 54 AM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:00 AM			
+0 mins.	54	18	9	81	5	2	59	66	1	19	2	22	2	2	6	10
+15 mins.	83	24	8	115	12	1	42	55	2	17	2	21	3	2	1	6
+30 mins.	40	24	3	67	10	1	43	54	0	26	11	37	2	3	4	9
+45 mins.	63	20	1	84	6	0	46	52	1	35	3	39	4	1	3	8
Total Volume	240	86	21	347	33	4	190	227	4	97	18	119	11	8	14	33
% App. Total	69.2	24.8	6.1		14.5	1.8	83.7		3.4	81.5	15.1		33.3	24.2	42.4	
PHF	.723	.896	.583	.754	.688	.500	.805	.860	.500	.693	.409	.763	.688	.667	.583	.825

City of La Quinta
N/S: Jefferson Street/PGA Boulevard
E/W: Avenue 54
Weather: Clear

File Name : 06_LQA_Jefferson_Ave 54 PM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 1

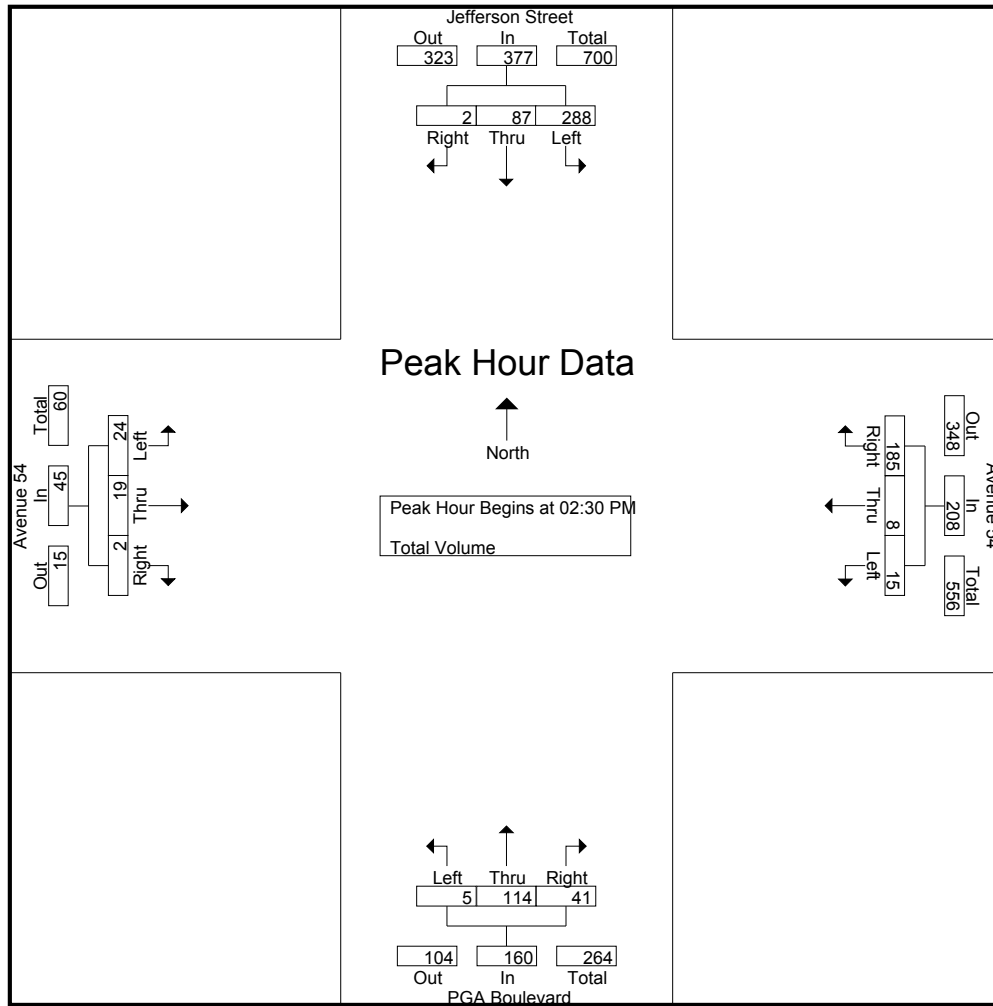
Groups Printed- Total Volume

	Jefferson Street Southbound				Avenue 54 Westbound				PGA Boulevard Northbound				Avenue 54 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:30 PM	89	26	1	116	3	5	43	51	2	31	17	50	12	13	0	25	242
02:45 PM	70	24	0	94	4	1	60	65	2	25	6	33	6	2	1	9	201
Total	159	50	1	210	7	6	103	116	4	56	23	83	18	15	1	34	443
03:00 PM	73	20	1	94	2	0	31	33	1	37	10	48	4	2	1	7	182
03:15 PM	56	17	0	73	6	2	51	59	0	21	8	29	2	2	0	4	165
03:30 PM	62	26	1	89	6	5	51	62	1	20	3	24	6	9	2	17	192
03:45 PM	56	20	0	76	7	5	46	58	0	35	4	39	6	6	0	12	185
Total	247	83	2	332	21	12	179	212	2	113	25	140	18	19	3	40	724
04:00 PM	53	21	1	75	4	1	44	49	0	16	12	28	3	1	1	5	157
04:15 PM	40	24	2	66	4	0	54	58	0	21	4	25	1	0	0	1	150
04:30 PM	44	17	0	61	2	1	37	40	0	23	6	29	0	3	0	3	133
04:45 PM	40	13	1	54	3	0	28	31	0	12	3	15	0	0	1	1	101
Total	177	75	4	256	13	2	163	178	0	72	25	97	4	4	2	10	541
05:00 PM	41	13	0	54	3	0	41	44	0	20	6	26	0	0	0	0	124
05:15 PM	52	19	0	71	3	0	40	43	2	11	2	15	2	2	0	4	133
Grand Total	676	240	7	923	47	20	526	593	8	272	81	361	42	40	6	88	1965
Apprch %	73.2	26	0.8		7.9	3.4	88.7		2.2	75.3	22.4		47.7	45.5	6.8		
Total %	34.4	12.2	0.4	47	2.4	1	26.8	30.2	0.4	13.8	4.1	18.4	2.1	2	0.3	4.5	

	Jefferson Street Southbound				Avenue 54 Westbound				PGA Boulevard Northbound				Avenue 54 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:30 PM																	
02:30 PM	89	26	1	116	3	5	43	51	2	31	17	50	12	13	0	25	242
02:45 PM	70	24	0	94	4	1	60	65	2	25	6	33	6	2	1	9	201
03:00 PM	73	20	1	94	2	0	31	33	1	37	10	48	4	2	1	7	182
03:15 PM	56	17	0	73	6	2	51	59	0	21	8	29	2	2	0	4	165
Total Volume	288	87	2	377	15	8	185	208	5	114	41	160	24	19	2	45	790
% App. Total	76.4	23.1	0.5		7.2	3.8	88.9		3.1	71.2	25.6		53.3	42.2	4.4		
PHF	.809	.837	.500	.813	.625	.400	.771	.800	.625	.770	.603	.800	.500	.365	.500	.450	.816

City of La Quinta
N/S: Jefferson Street/PGA Boulevard
E/W: Avenue 54
Weather: Clear

File Name : 06_LQA_Jefferson_Ave 54 PM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 2



Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:30 PM				03:15 PM				02:30 PM				02:30 PM			
+0 mins.	89	26	1	116	6	2	51	59	2	31	17	50	12	13	0	25
+15 mins.	70	24	0	94	6	5	51	62	2	25	6	33	6	2	1	9
+30 mins.	73	20	1	94	7	5	46	58	1	37	10	48	4	2	1	7
+45 mins.	56	17	0	73	4	1	44	49	0	21	8	29	2	2	0	4
Total Volume	288	87	2	377	23	13	192	228	5	114	41	160	24	19	2	45
% App. Total	76.4	23.1	0.5		10.1	5.7	84.2		3.1	71.2	25.6		53.3	42.2	4.4	
PHF	.809	.837	.500	.813	.821	.650	.941	.919	.625	.770	.603	.800	.500	.365	.500	.450

City of La Quinta
N/S: Jefferson Street
E/W: Avenue 52
Weather: Clear

File Name : 10_LQA_Jefferson_Ave 52 AM
Site Code : 05119315
Start Date : 5/7/2019
Page No : 1

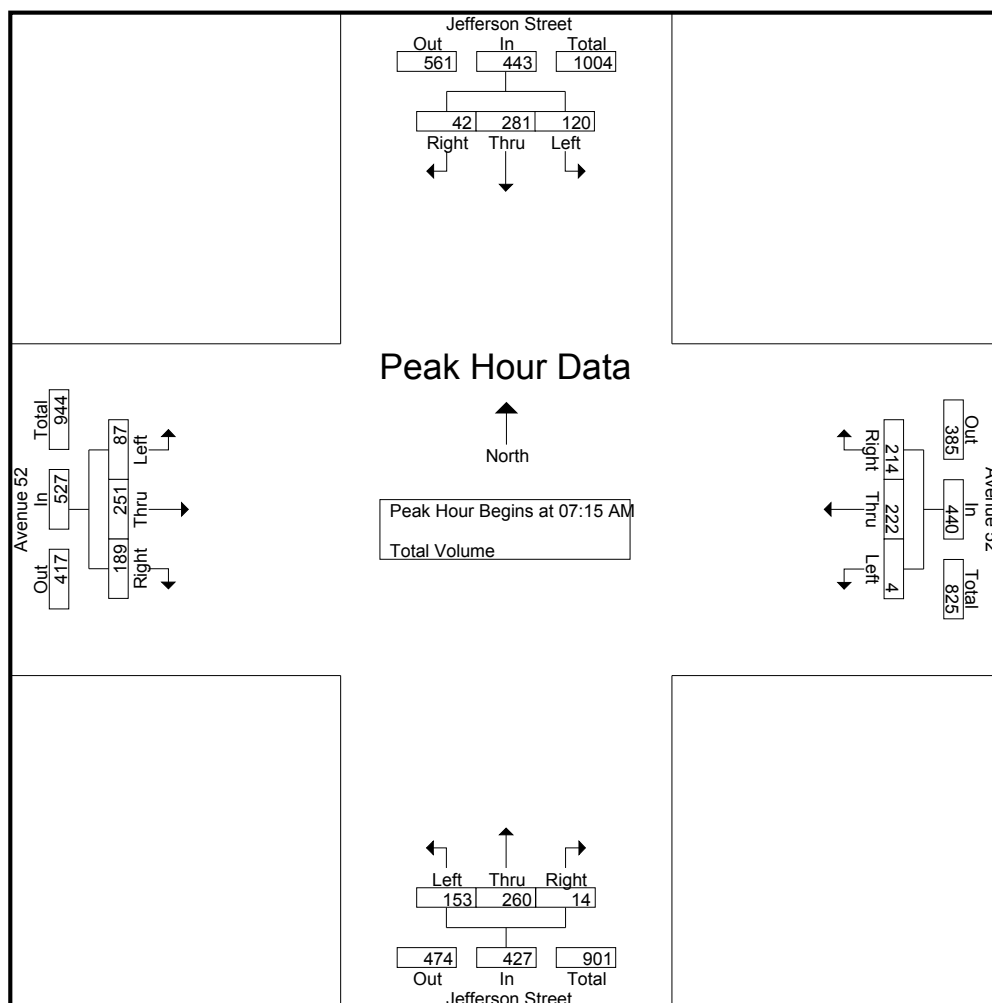
Groups Printed- Total Volume

	Jefferson Street Southbound				Avenue 52 Westbound				Jefferson Street Northbound				Avenue 52 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	7	33	5	45	1	18	17	36	23	18	2	43	14	24	20	58	182
06:15 AM	5	34	6	45	1	28	28	57	28	39	0	67	10	17	27	54	223
06:30 AM	12	52	5	69	3	46	36	85	34	29	2	65	10	48	49	107	326
06:45 AM	18	53	8	79	1	43	46	90	34	47	6	87	19	30	45	94	350
Total	42	172	24	238	6	135	127	268	119	133	10	262	53	119	141	313	1081
07:00 AM	23	60	10	93	0	49	42	91	36	53	3	92	15	39	33	87	363
07:15 AM	40	68	9	117	0	49	59	108	41	64	5	110	20	55	38	113	448
07:30 AM	20	73	8	101	0	56	70	126	33	67	5	105	26	77	57	160	492
07:45 AM	21	79	10	110	3	58	54	115	36	64	0	100	26	72	47	145	470
Total	104	280	37	421	3	212	225	440	146	248	13	407	87	243	175	505	1773
08:00 AM	39	61	15	115	1	59	31	91	43	65	4	112	15	47	47	109	427
08:15 AM	23	61	10	94	2	67	46	115	23	47	3	73	23	62	57	142	424
Grand Total	208	574	86	868	12	473	429	914	331	493	30	854	178	471	420	1069	3705
Apprch %	24	66.1	9.9		1.3	51.8	46.9		38.8	57.7	3.5		16.7	44.1	39.3		
Total %	5.6	15.5	2.3	23.4	0.3	12.8	11.6	24.7	8.9	13.3	0.8	23	4.8	12.7	11.3	28.9	

	Jefferson Street Southbound				Avenue 52 Westbound				Jefferson Street Northbound				Avenue 52 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	40	68	9	117	0	49	59	108	41	64	5	110	20	55	38	113	448
07:30 AM	20	73	8	101	0	56	70	126	33	67	5	105	26	77	57	160	492
07:45 AM	21	79	10	110	3	58	54	115	36	64	0	100	26	72	47	145	470
08:00 AM	39	61	15	115	1	59	31	91	43	65	4	112	15	47	47	109	427
Total Volume	120	281	42	443	4	222	214	440	153	260	14	427	87	251	189	527	1837
% App. Total	27.1	63.4	9.5		0.9	50.5	48.6		35.8	60.9	3.3		16.5	47.6	35.9		
PHF	.750	.889	.700	.947	.333	.941	.764	.873	.890	.970	.700	.953	.837	.815	.829	.823	.933

City of La Quinta
N/S: Jefferson Street
E/W: Avenue 52
Weather: Clear

File Name : 10_LQA_Jefferson_Ave 52 AM
Site Code : 05119315
Start Date : 5/7/2019
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM				07:30 AM				07:15 AM				07:30 AM			
+0 mins.	40	68	9	117	0	56	70	126	41	64	5	110	26	77	57	160
+15 mins.	20	73	8	101	3	58	54	115	33	67	5	105	26	72	47	145
+30 mins.	21	79	10	110	1	59	31	91	36	64	0	100	15	47	47	109
+45 mins.	39	61	15	115	2	67	46	115	43	65	4	112	23	62	57	142
Total Volume	120	281	42	443	6	240	201	447	153	260	14	427	90	258	208	556
% App. Total	27.1	63.4	9.5		1.3	53.7	45		35.8	60.9	3.3		16.2	46.4	37.4	
PHF	.750	.889	.700	.947	.500	.896	.718	.887	.890	.970	.700	.953	.865	.838	.912	.869

City of La Quinta
N/S: Jefferson Street
E/W: Avenue 52
Weather: Clear

File Name : 10_LQA_Jefferson_Ave 52 PM
Site Code : 05119315
Start Date : 5/7/2019
Page No : 1

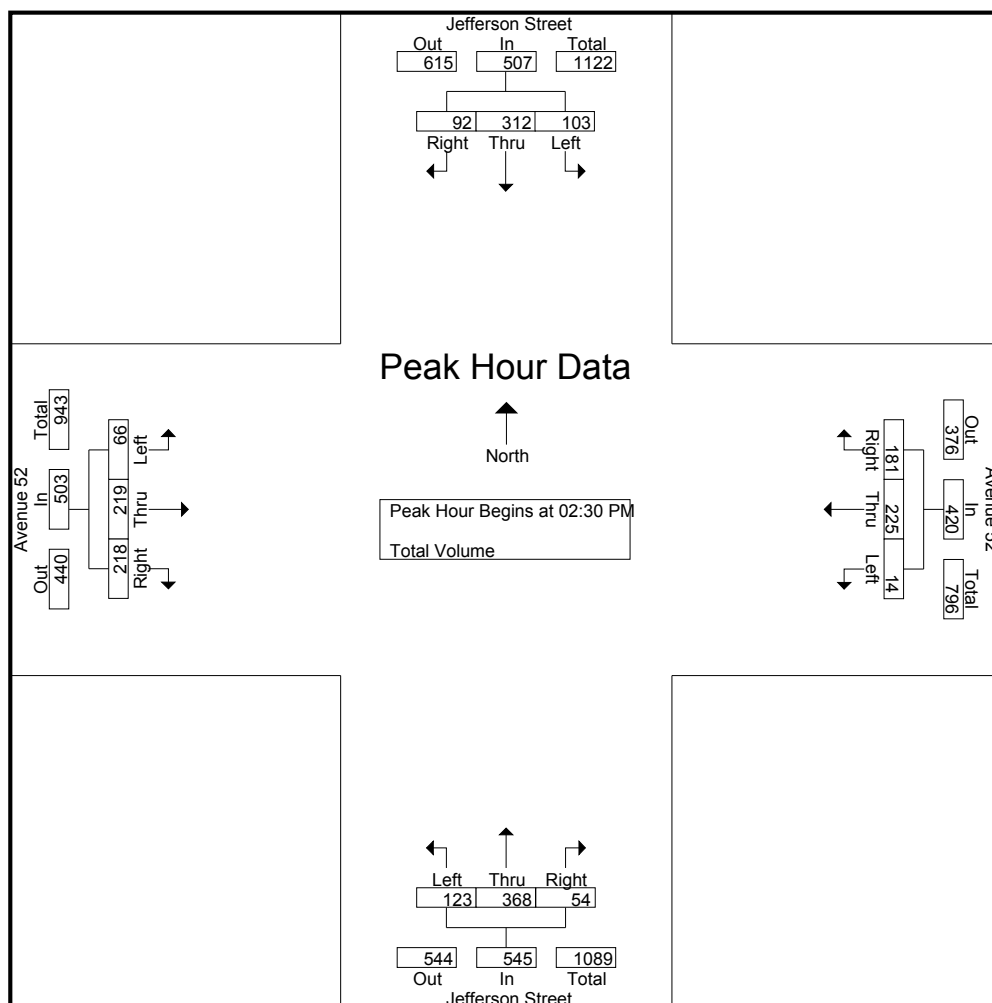
Groups Printed- Total Volume

	Jefferson Street Southbound				Avenue 52 Westbound				Jefferson Street Northbound				Avenue 52 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:30 PM	27	84	21	132	3	57	47	107	24	106	12	142	16	71	66	153	534
02:45 PM	34	75	11	120	8	48	51	107	29	93	18	140	12	52	56	120	487
Total	61	159	32	252	11	105	98	214	53	199	30	282	28	123	122	273	1021
03:00 PM	21	76	25	122	3	51	35	89	36	91	15	142	19	55	48	122	475
03:15 PM	21	77	35	133	0	69	48	117	34	78	9	121	19	41	48	108	479
03:30 PM	24	69	21	114	1	56	58	115	27	104	12	143	16	55	60	131	503
03:45 PM	27	84	23	134	0	73	48	121	29	73	9	111	10	39	60	109	475
Total	93	306	104	503	4	249	189	442	126	346	45	517	64	190	216	470	1932
04:00 PM	29	62	20	111	1	38	29	68	39	69	4	112	13	54	51	118	409
04:15 PM	34	79	31	144	3	59	41	103	40	76	13	129	24	46	45	115	491
04:30 PM	25	74	16	115	2	59	32	93	30	62	13	105	13	70	44	127	440
04:45 PM	14	54	39	107	1	63	37	101	40	59	16	115	16	62	40	118	441
Total	102	269	106	477	7	219	139	365	149	266	46	461	66	232	180	478	1781
05:00 PM	24	77	29	130	1	50	28	79	26	65	11	102	21	87	32	140	451
05:15 PM	22	69	17	108	2	62	45	109	41	61	9	111	12	60	48	120	448
Grand Total	302	880	288	1470	25	685	499	1209	395	937	141	1473	191	692	598	1481	5633
Apprch %	20.5	59.9	19.6		2.1	56.7	41.3		26.8	63.6	9.6		12.9	46.7	40.4		
Total %	5.4	15.6	5.1	26.1	0.4	12.2	8.9	21.5	7	16.6	2.5	26.1	3.4	12.3	10.6	26.3	

	Jefferson Street Southbound				Avenue 52 Westbound				Jefferson Street Northbound				Avenue 52 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:30 PM																	
02:30 PM	27	84	21	132	3	57	47	107	24	106	12	142	16	71	66	153	534
02:45 PM	34	75	11	120	8	48	51	107	29	93	18	140	12	52	56	120	487
03:00 PM	21	76	25	122	3	51	35	89	36	91	15	142	19	55	48	122	475
03:15 PM	21	77	35	133	0	69	48	117	34	78	9	121	19	41	48	108	479
Total Volume	103	312	92	507	14	225	181	420	123	368	54	545	66	219	218	503	1975
% App. Total	20.3	61.5	18.1		3.3	53.6	43.1		22.6	67.5	9.9		13.1	43.5	43.3		
PHF	.757	.929	.657	.953	.438	.815	.887	.897	.854	.868	.750	.960	.868	.771	.826	.822	.925

City of La Quinta
N/S: Jefferson Street
E/W: Avenue 52
Weather: Clear

File Name : 10_LQA_Jefferson_Ave 52 PM
Site Code : 05119315
Start Date : 5/7/2019
Page No : 2



Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:30 PM				03:00 PM				02:45 PM				04:30 PM			
+0 mins.	27	84	21	132	3	51	35	89	29	93	18	140	13	70	44	127
+15 mins.	34	75	11	120	0	69	48	117	36	91	15	142	16	62	40	118
+30 mins.	21	76	25	122	1	56	58	115	34	78	9	121	21	87	32	140
+45 mins.	21	77	35	133	0	73	48	121	27	104	12	143	12	60	48	120
Total Volume	103	312	92	507	4	249	189	442	126	366	54	546	62	279	164	505
% App. Total	20.3	61.5	18.1		0.9	56.3	42.8		23.1	67	9.9		12.3	55.2	32.5	
PHF	.757	.929	.657	.953	.333	.853	.815	.913	.875	.880	.750	.955	.738	.802	.854	.902

City of La Quinta
N/S: Jefferson Street
E/W: Pomelo
Weather: Clear

File Name : 09_LQA_Jefferson_Pomelo AM
Site Code : 05119315
Start Date : 5/7/2019
Page No : 1

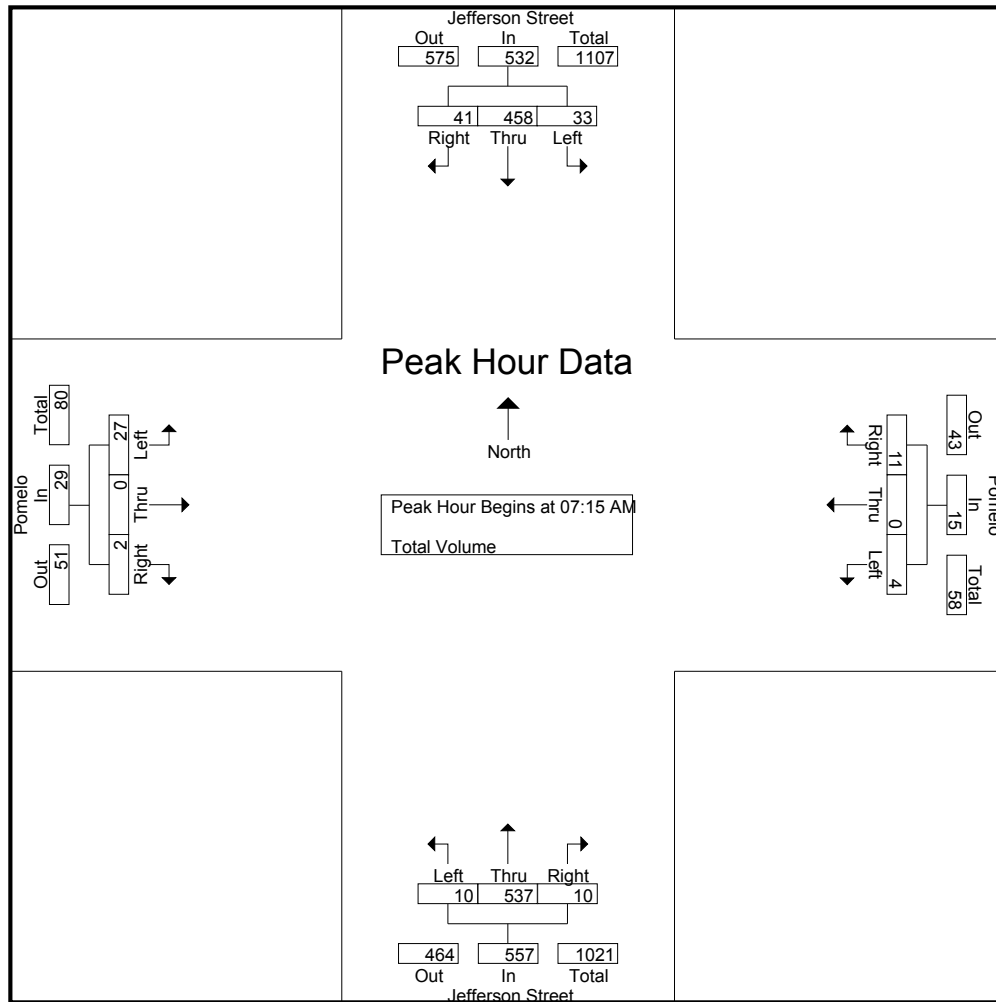
Groups Printed- Total Volume

	Jefferson Street Southbound				Pomelo Westbound				Jefferson Street Northbound				Pomelo Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	4	48	1	53	0	0	4	4	1	47	0	48	1	0	1	2	107
06:15 AM	3	47	0	50	0	0	1	1	1	72	0	73	3	0	1	4	128
06:30 AM	3	68	6	77	1	0	1	2	2	73	2	77	4	0	0	4	160
06:45 AM	5	93	10	108	1	0	0	1	0	103	8	111	3	0	0	3	223
Total	15	256	17	288	2	0	6	8	4	295	10	309	11	0	2	13	618
07:00 AM	11	88	12	111	0	0	2	2	4	111	2	117	5	0	2	7	237
07:15 AM	10	114	6	130	0	0	2	2	3	136	5	144	7	0	0	7	283
07:30 AM	4	125	10	139	1	0	2	3	2	150	2	154	8	0	1	9	305
07:45 AM	12	104	14	130	1	0	4	5	3	134	3	140	6	0	0	6	281
Total	37	431	42	510	2	0	10	12	12	531	12	555	26	0	3	29	1106
08:00 AM	7	115	11	133	2	0	3	5	2	117	0	119	6	0	1	7	264
08:15 AM	11	101	9	121	0	0	7	7	3	108	2	113	13	0	1	14	255
Grand Total	70	903	79	1052	6	0	26	32	21	1051	24	1096	56	0	7	63	2243
Apprch %	6.7	85.8	7.5		18.8	0	81.2		1.9	95.9	2.2		88.9	0	11.1		
Total %	3.1	40.3	3.5	46.9	0.3	0	1.2	1.4	0.9	46.9	1.1	48.9	2.5	0	0.3	2.8	

	Jefferson Street Southbound				Pomelo Westbound				Jefferson Street Northbound				Pomelo Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	10	114	6	130	0	0	2	2	3	136	5	144	7	0	0	7	283
07:30 AM	4	125	10	139	1	0	2	3	2	150	2	154	8	0	1	9	305
07:45 AM	12	104	14	130	1	0	4	5	3	134	3	140	6	0	0	6	281
08:00 AM	7	115	11	133	2	0	3	5	2	117	0	119	6	0	1	7	264
Total Volume	33	458	41	532	4	0	11	15	10	537	10	557	27	0	2	29	1133
% App. Total	6.2	86.1	7.7		26.7	0	73.3		1.8	96.4	1.8		93.1	0	6.9		
PHF	.688	.916	.732	.957	.500	.000	.688	.750	.833	.895	.500	.904	.844	.000	.500	.806	.929

City of La Quinta
N/S: Jefferson Street
E/W: Pomelo
Weather: Clear

File Name : 09_LQA_Jefferson_Pomelo AM
Site Code : 05119315
Start Date : 5/7/2019
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:30 AM				07:15 AM				07:30 AM			
+0 mins.	10	114	6	130	1	0	2	3	3	136	5	144	8	0	1	9
+15 mins.	4	125	10	139	1	0	4	5	2	150	2	154	6	0	0	6
+30 mins.	12	104	14	130	2	0	3	5	3	134	3	140	6	0	1	7
+45 mins.	7	115	11	133	0	0	7	7	2	117	0	119	13	0	1	14
Total Volume	33	458	41	532	4	0	16	20	10	537	10	557	33	0	3	36
% App. Total	6.2	86.1	7.7		20	0	80		1.8	96.4	1.8		91.7	0	8.3	
PHF	.688	.916	.732	.957	.500	.000	.571	.714	.833	.895	.500	.904	.635	.000	.750	.643

City of La Quinta
N/S: Jefferson Street
E/W: Pomelo
Weather: Clear

File Name : 09_LQA_Jefferson_Pomelo PM
Site Code : 05119315
Start Date : 5/7/2019
Page No : 1

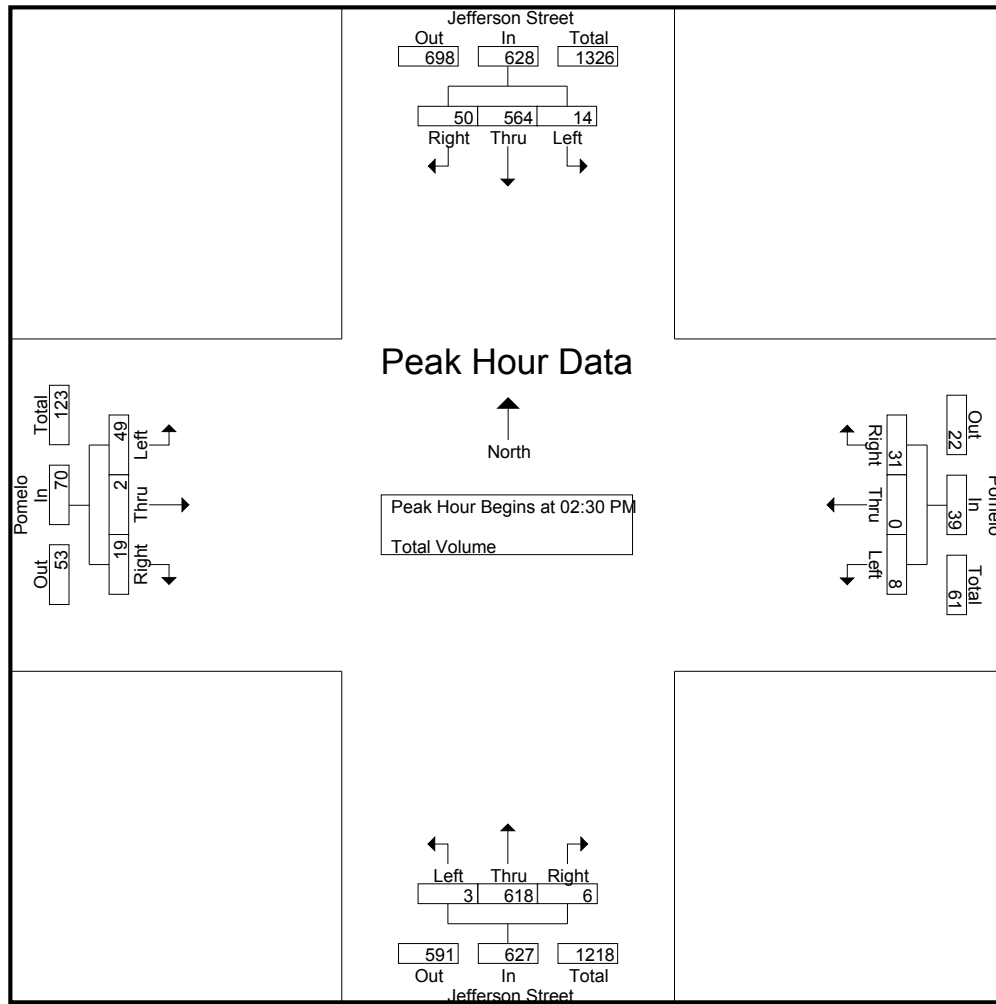
Groups Printed- Total Volume

	Jefferson Street Southbound				Pomelo Westbound				Jefferson Street Northbound				Pomelo Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:30 PM	1	127	13	141	3	0	10	13	0	167	2	169	12	0	12	24	347
02:45 PM	2	134	17	153	1	0	1	2	2	154	2	158	8	1	4	13	326
Total	3	261	30	294	4	0	11	15	2	321	4	327	20	1	16	37	673
03:00 PM	8	162	12	182	1	0	11	12	0	149	1	150	12	1	1	14	358
03:15 PM	3	141	8	152	3	0	9	12	1	148	1	150	17	0	2	19	333
03:30 PM	9	130	5	144	1	0	6	7	0	167	2	169	15	0	4	19	339
03:45 PM	10	130	20	160	2	0	3	5	1	138	2	141	14	0	3	17	323
Total	30	563	45	638	7	0	29	36	2	602	6	610	58	1	10	69	1353
04:00 PM	5	123	14	142	2	0	6	8	1	116	2	119	5	1	3	9	278
04:15 PM	6	156	9	171	0	0	4	4	2	129	2	133	5	0	0	5	313
04:30 PM	1	140	11	152	2	0	10	12	0	107	2	109	14	0	0	14	287
04:45 PM	9	135	10	154	0	0	4	4	1	111	0	112	10	0	0	10	280
Total	21	554	44	619	4	0	24	28	4	463	6	473	34	1	3	38	1158
05:00 PM	6	126	8	140	0	0	7	7	1	112	0	113	15	0	1	16	276
05:15 PM	8	120	8	136	1	0	6	7	0	114	0	114	10	1	0	11	268
Grand Total	68	1624	135	1827	16	0	77	93	9	1612	16	1637	137	4	30	171	3728
Apprch %	3.7	88.9	7.4		17.2	0	82.8		0.5	98.5	1		80.1	2.3	17.5		
Total %	1.8	43.6	3.6	49	0.4	0	2.1	2.5	0.2	43.2	0.4	43.9	3.7	0.1	0.8	4.6	

	Jefferson Street Southbound				Pomelo Westbound				Jefferson Street Northbound				Pomelo Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:30 PM																	
02:30 PM	1	127	13	141	3	0	10	13	0	167	2	169	12	0	12	24	347
02:45 PM	2	134	17	153	1	0	1	2	2	154	2	158	8	1	4	13	326
03:00 PM	8	162	12	182	1	0	11	12	0	149	1	150	12	1	1	14	358
03:15 PM	3	141	8	152	3	0	9	12	1	148	1	150	17	0	2	19	333
Total Volume	14	564	50	628	8	0	31	39	3	618	6	627	49	2	19	70	1364
% App. Total	2.2	89.8	8		20.5	0	79.5		0.5	98.6	1		70	2.9	27.1		
PHF	.438	.870	.735	.863	.667	.000	.705	.750	.375	.925	.750	.928	.721	.500	.396	.729	.953

City of La Quinta
N/S: Jefferson Street
E/W: Pomelo
Weather: Clear

File Name : 09_LQA_Jefferson_Pomelo PM
Site Code : 05119315
Start Date : 5/7/2019
Page No : 2



Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				02:30 PM				02:30 PM				02:30 PM			
+0 mins.	8	162	12	182	3	0	10	13	0	167	2	169	12	0	12	24
+15 mins.	3	141	8	152	1	0	1	2	2	154	2	158	8	1	4	13
+30 mins.	9	130	5	144	1	0	11	12	0	149	1	150	12	1	1	14
+45 mins.	10	130	20	160	3	0	9	12	1	148	1	150	17	0	2	19
Total Volume	30	563	45	638	8	0	31	39	3	618	6	627	49	2	19	70
% App. Total	4.7	88.2	7.1		20.5	0	79.5		0.5	98.6	1		70	2.9	27.1	
PHF	.750	.869	.563	.876	.667	.000	.705	.750	.375	.925	.750	.928	.721	.500	.396	.729

City of La Quinta
N/S: Jefferson Street
E/W: Avenue 50
Weather: Clear

File Name : 08_LQA_Jefferson_Ave 50 AM
Site Code : 05119315
Start Date : 5/7/2019
Page No : 1

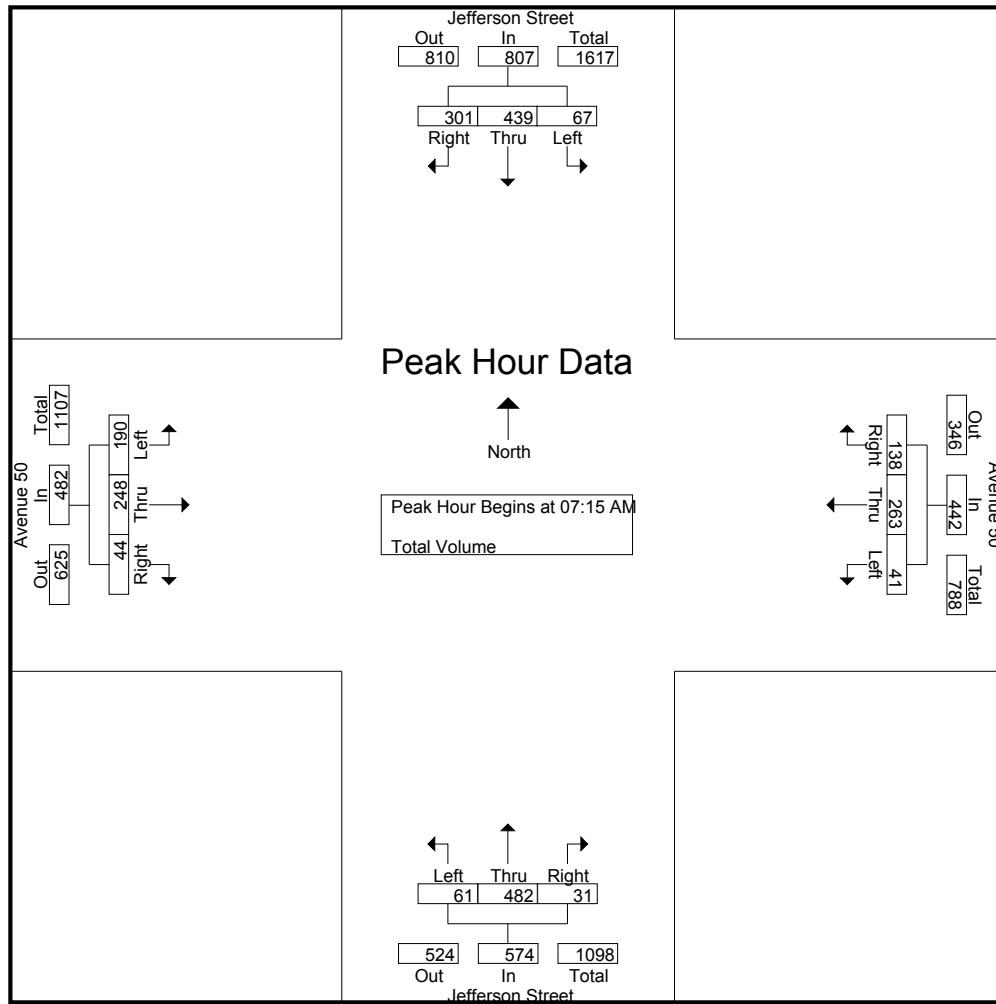
Groups Printed- Total Volume

	Jefferson Street Southbound				Avenue 50 Westbound				Jefferson Street Northbound				Avenue 50 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	4	51	9	64	2	20	9	31	5	42	2	49	7	8	4	19	163
06:15 AM	4	43	9	56	4	18	13	35	5	65	2	72	5	8	0	13	176
06:30 AM	11	71	22	104	14	33	15	62	8	72	1	81	10	19	5	34	281
06:45 AM	6	96	61	163	13	60	33	106	10	94	4	108	18	30	3	51	428
Total	25	261	101	387	33	131	70	234	28	273	9	310	40	65	12	117	1048
07:00 AM	7	95	94	196	8	76	35	119	12	97	4	113	48	53	6	107	535
07:15 AM	10	108	80	198	11	61	39	111	10	122	4	136	63	66	9	138	583
07:30 AM	28	124	53	205	13	64	47	124	16	152	5	173	38	46	5	89	591
07:45 AM	17	99	70	186	12	75	22	109	19	107	5	131	48	62	10	120	546
Total	62	426	297	785	44	276	143	463	57	478	18	553	197	227	30	454	2255
08:00 AM	12	108	98	218	5	63	30	98	16	101	17	134	41	74	20	135	585
08:15 AM	16	105	40	161	13	53	17	83	16	111	8	135	58	54	12	124	503
Grand Total	115	900	536	1551	95	523	260	878	117	963	52	1132	336	420	74	830	4391
Apprch %	7.4	58	34.6		10.8	59.6	29.6		10.3	85.1	4.6		40.5	50.6	8.9		
Total %	2.6	20.5	12.2	35.3	2.2	11.9	5.9	20	2.7	21.9	1.2	25.8	7.7	9.6	1.7	18.9	

	Jefferson Street Southbound				Avenue 50 Westbound				Jefferson Street Northbound				Avenue 50 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	10	108	80	198	11	61	39	111	10	122	4	136	63	66	9	138	583
07:30 AM	28	124	53	205	13	64	47	124	16	152	5	173	38	46	5	89	591
07:45 AM	17	99	70	186	12	75	22	109	19	107	5	131	48	62	10	120	546
08:00 AM	12	108	98	218	5	63	30	98	16	101	17	134	41	74	20	135	585
Total Volume	67	439	301	807	41	263	138	442	61	482	31	574	190	248	44	482	2305
% App. Total	8.3	54.4	37.3		9.3	59.5	31.2		10.6	84	5.4		39.4	51.5	9.1		
PHF	.598	.885	.768	.925	.788	.877	.734	.891	.803	.793	.456	.829	.754	.838	.550	.873	.975

City of La Quinta
N/S: Jefferson Street
E/W: Avenue 50
Weather: Clear

File Name : 08_LQA_Jefferson_Ave 50 AM
Site Code : 05119315
Start Date : 5/7/2019
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:15 AM				07:15 AM			
+0 mins.	10	108	80	198	8	76	35	119	10	122	4	136	63	66	9	138
+15 mins.	28	124	53	205	11	61	39	111	16	152	5	173	38	46	5	89
+30 mins.	17	99	70	186	13	64	47	124	19	107	5	131	48	62	10	120
+45 mins.	12	108	98	218	12	75	22	109	16	101	17	134	41	74	20	135
Total Volume	67	439	301	807	44	276	143	463	61	482	31	574	190	248	44	482
% App. Total	8.3	54.4	37.3		9.5	59.6	30.9		10.6	84	5.4		39.4	51.5	9.1	
PHF	.598	.885	.768	.925	.846	.908	.761	.933	.803	.793	.456	.829	.754	.838	.550	.873

City of La Quinta
N/S: Jefferson Street
E/W: Avenue 50
Weather: Clear

File Name : 08_LQA_Jefferson_Ave 50 PM
Site Code : 05119315
Start Date : 5/7/2019
Page No : 1

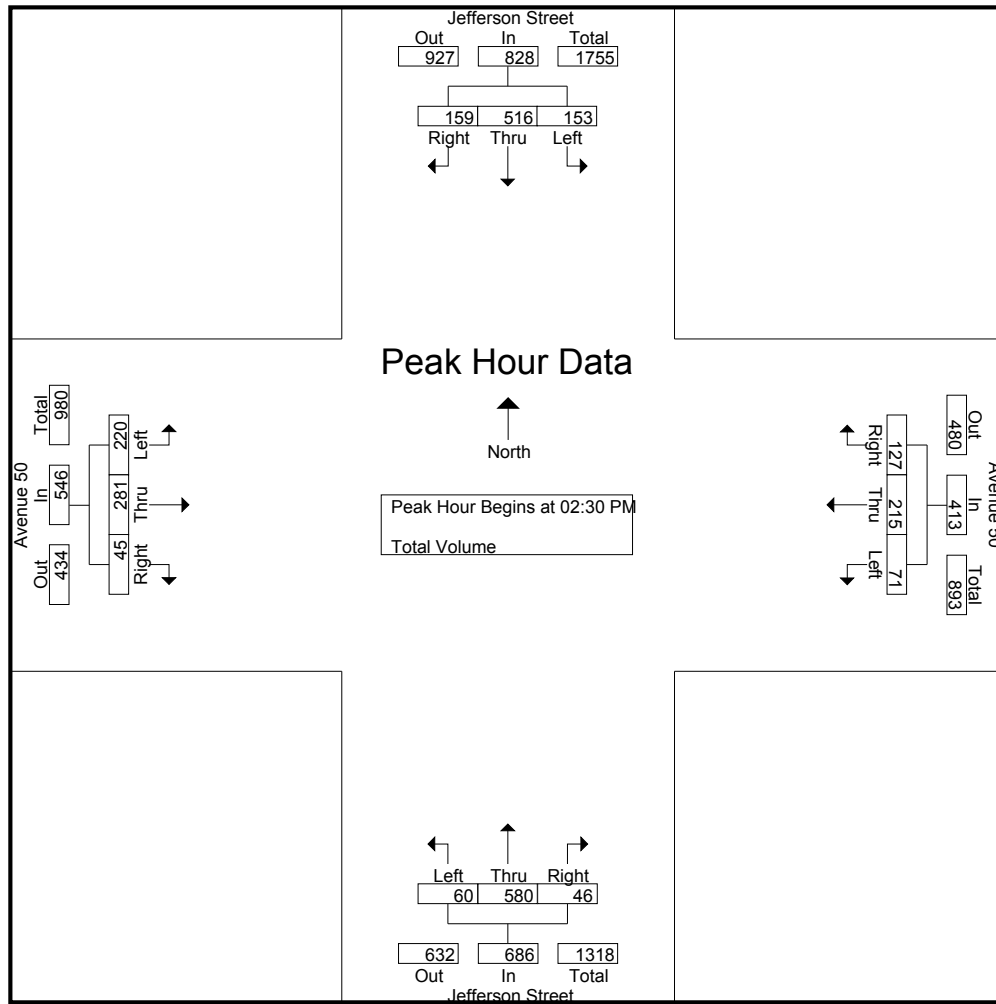
Groups Printed- Total Volume

	Jefferson Street Southbound				Avenue 50 Westbound				Jefferson Street Northbound				Avenue 50 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:30 PM	36	115	51	202	18	51	32	101	22	151	10	183	57	61	9	127	613
02:45 PM	45	124	33	202	16	55	23	94	9	137	10	156	66	86	13	165	617
Total	81	239	84	404	34	106	55	195	31	288	20	339	123	147	22	292	1230
03:00 PM	39	153	38	230	16	57	31	104	12	141	17	170	49	70	12	131	635
03:15 PM	33	124	37	194	21	52	41	114	17	151	9	177	48	64	11	123	608
03:30 PM	38	129	29	196	14	51	28	93	10	166	11	187	47	66	8	121	597
03:45 PM	48	134	27	209	27	52	38	117	14	130	8	152	39	59	9	107	585
Total	158	540	131	829	78	212	138	428	53	588	45	686	183	259	40	482	2425
04:00 PM	32	116	38	186	21	47	22	90	7	108	10	125	40	47	17	104	505
04:15 PM	49	113	30	192	29	48	31	108	5	105	13	123	30	54	6	90	513
04:30 PM	30	115	30	175	30	38	33	101	12	103	12	127	33	54	6	93	496
04:45 PM	36	118	41	195	22	38	35	95	9	97	3	109	34	46	6	86	485
Total	147	462	139	748	102	171	121	394	33	413	38	484	137	201	35	373	1999
05:00 PM	41	114	46	201	18	46	32	96	9	116	15	140	36	49	12	97	534
05:15 PM	42	117	47	206	13	53	34	100	10	108	9	127	40	51	5	96	529
Grand Total	469	1472	447	2388	245	588	380	1213	136	1513	127	1776	519	707	114	1340	6717
Apprch %	19.6	61.6	18.7		20.2	48.5	31.3		7.7	85.2	7.2		38.7	52.8	8.5		
Total %	7	21.9	6.7	35.6	3.6	8.8	5.7	18.1	2	22.5	1.9	26.4	7.7	10.5	1.7	19.9	

	Jefferson Street Southbound				Avenue 50 Westbound				Jefferson Street Northbound				Avenue 50 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:30 PM																	
02:30 PM	36	115	51	202	18	51	32	101	22	151	10	183	57	61	9	127	613
02:45 PM	45	124	33	202	16	55	23	94	9	137	10	156	66	86	13	165	617
03:00 PM	39	153	38	230	16	57	31	104	12	141	17	170	49	70	12	131	635
03:15 PM	33	124	37	194	21	52	41	114	17	151	9	177	48	64	11	123	608
Total Volume	153	516	159	828	71	215	127	413	60	580	46	686	220	281	45	546	2473
% App. Total	18.5	62.3	19.2		17.2	52.1	30.8		8.7	84.5	6.7		40.3	51.5	8.2		
PHF	.850	.843	.779	.900	.845	.943	.774	.906	.682	.960	.676	.937	.833	.817	.865	.827	.974

City of La Quinta
N/S: Jefferson Street
E/W: Avenue 50
Weather: Clear

File Name : 08_LQA_Jefferson_Ave 50 PM
Site Code : 05119315
Start Date : 5/7/2019
Page No : 2



Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				03:00 PM				02:45 PM				02:30 PM			
+0 mins.	39	153	38	230	16	57	31	104	9	137	10	156	57	61	9	127
+15 mins.	33	124	37	194	21	52	41	114	12	141	17	170	66	86	13	165
+30 mins.	38	129	29	196	14	51	28	93	17	151	9	177	49	70	12	131
+45 mins.	48	134	27	209	27	52	38	117	10	166	11	187	48	64	11	123
Total Volume	158	540	131	829	78	212	138	428	48	595	47	690	220	281	45	546
% App. Total	19.1	65.1	15.8		18.2	49.5	32.2		7	86.2	6.8		40.3	51.5	8.2	
PHF	.823	.882	.862	.901	.722	.930	.841	.915	.706	.896	.691	.922	.833	.817	.865	.827

City of La Quinta
N/S: Madison Street
E/W: Avenue 60
Weather: Clear

File Name : LQA_Madison_Ave 60 AM
Site Code : 05119590
Start Date : 9/10/2019
Page No : 1

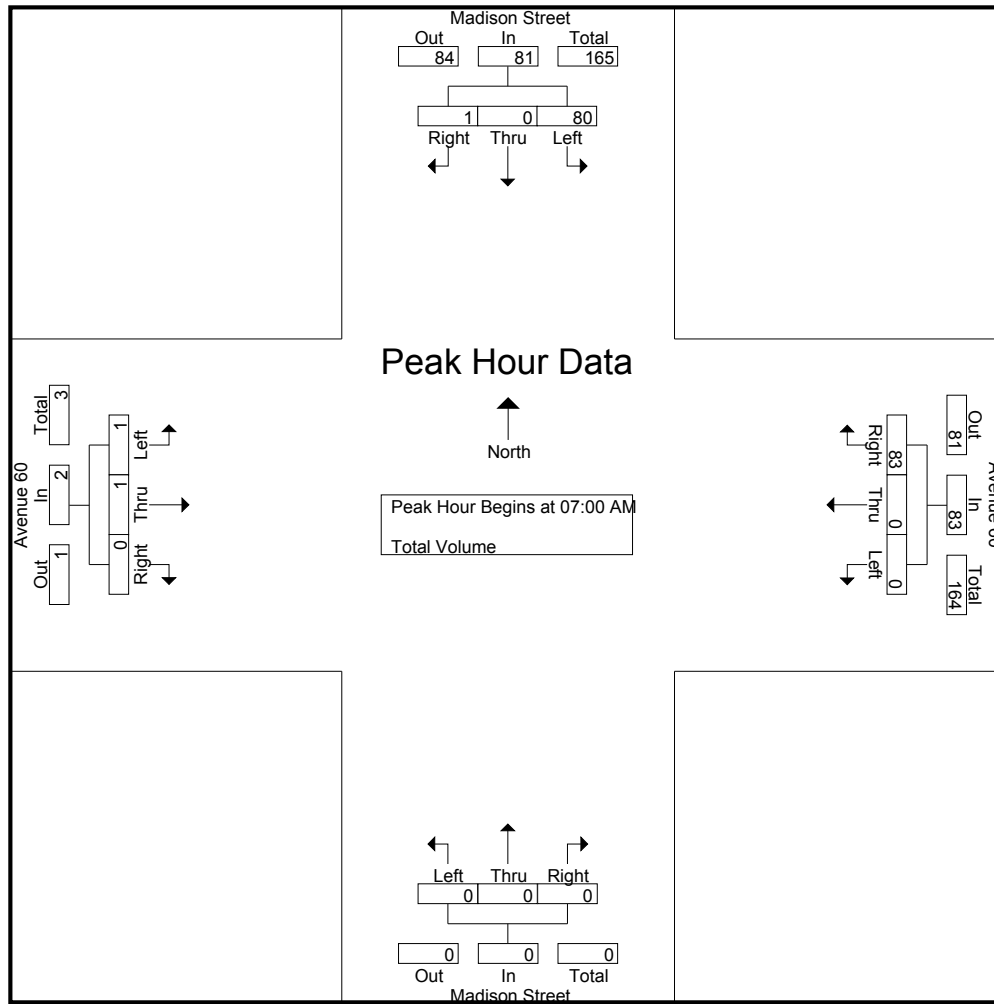
Groups Printed- Total Volume

	Madison Street Southbound				Avenue 60 Westbound				Madison Street Northbound				Avenue 60 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	3	0	0	3	0	0	11	11	0	0	0	0	0	0	0	0	14
06:15 AM	10	0	0	10	0	0	16	16	0	0	0	0	0	0	0	0	26
06:30 AM	16	0	0	16	0	1	15	16	0	0	0	0	1	0	0	1	33
06:45 AM	22	0	0	22	0	0	14	14	0	0	0	0	0	0	0	0	36
Total	51	0	0	51	0	1	56	57	0	0	0	0	1	0	0	1	109
07:00 AM	27	0	0	27	0	0	21	21	0	0	0	0	1	1	0	2	50
07:15 AM	13	0	1	14	0	0	18	18	0	0	0	0	0	0	0	0	32
07:30 AM	20	0	0	20	0	0	16	16	0	0	0	0	0	0	0	0	36
07:45 AM	20	0	0	20	0	0	28	28	0	0	0	0	0	0	0	0	48
Total	80	0	1	81	0	0	83	83	0	0	0	0	1	1	0	2	166
08:00 AM	19	0	0	19	0	0	19	19	0	0	0	0	0	0	0	0	38
08:15 AM	20	0	1	21	0	0	20	20	0	0	0	0	1	0	0	1	42
Grand Total	170	0	2	172	0	1	178	179	0	0	0	0	3	1	0	4	355
Apprch %	98.8	0	1.2		0	0.6	99.4		0	0	0		75	25	0		
Total %	47.9	0	0.6	48.5	0	0.3	50.1	50.4	0	0	0	0	0.8	0.3	0	1.1	

	Madison Street Southbound				Avenue 60 Westbound				Madison Street Northbound				Avenue 60 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	27	0	0	27	0	0	21	21	0	0	0	0	1	1	0	2	50
07:15 AM	13	0	1	14	0	0	18	18	0	0	0	0	0	0	0	0	32
07:30 AM	20	0	0	20	0	0	16	16	0	0	0	0	0	0	0	0	36
07:45 AM	20	0	0	20	0	0	28	28	0	0	0	0	0	0	0	0	48
Total Volume	80	0	1	81	0	0	83	83	0	0	0	0	1	1	0	2	166
% App. Total	98.8	0	1.2		0	0	100		0	0	0		50	50	0		
PHF	.741	.000	.250	.750	.000	.000	.741	.741	.000	.000	.000	.000	.250	.250	.000	.250	.830

City of La Quinta
N/S: Madison Street
E/W: Avenue 60
Weather: Clear

File Name : LQA_Madison_Ave 60 AM
Site Code : 05119590
Start Date : 9/10/2019
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	06:45 AM				07:00 AM				06:00 AM				06:15 AM			
+0 mins.	22	0	0	22	0	0	21	21	0	0	0	0	0	0	0	0
+15 mins.	27	0	0	27	0	0	18	18	0	0	0	0	1	0	0	1
+30 mins.	13	0	1	14	0	0	16	16	0	0	0	0	0	0	0	0
+45 mins.	20	0	0	20	0	0	28	28	0	0	0	0	1	1	0	2
Total Volume	82	0	1	83	0	0	83	83	0	0	0	0	2	1	0	3
% App. Total	98.8	0	1.2		0	0	100		0	0	0		66.7	33.3	0	
PHF	.759	.000	.250	.769	.000	.000	.741	.741	.000	.000	.000	.000	.500	.250	.000	.375

City of La Quinta
N/S: Madison Street
E/W: Avenue 60
Weather: Clear

File Name : LQA_Madison_Ave 60 PM
Site Code : 05119590
Start Date : 9/10/2019
Page No : 1

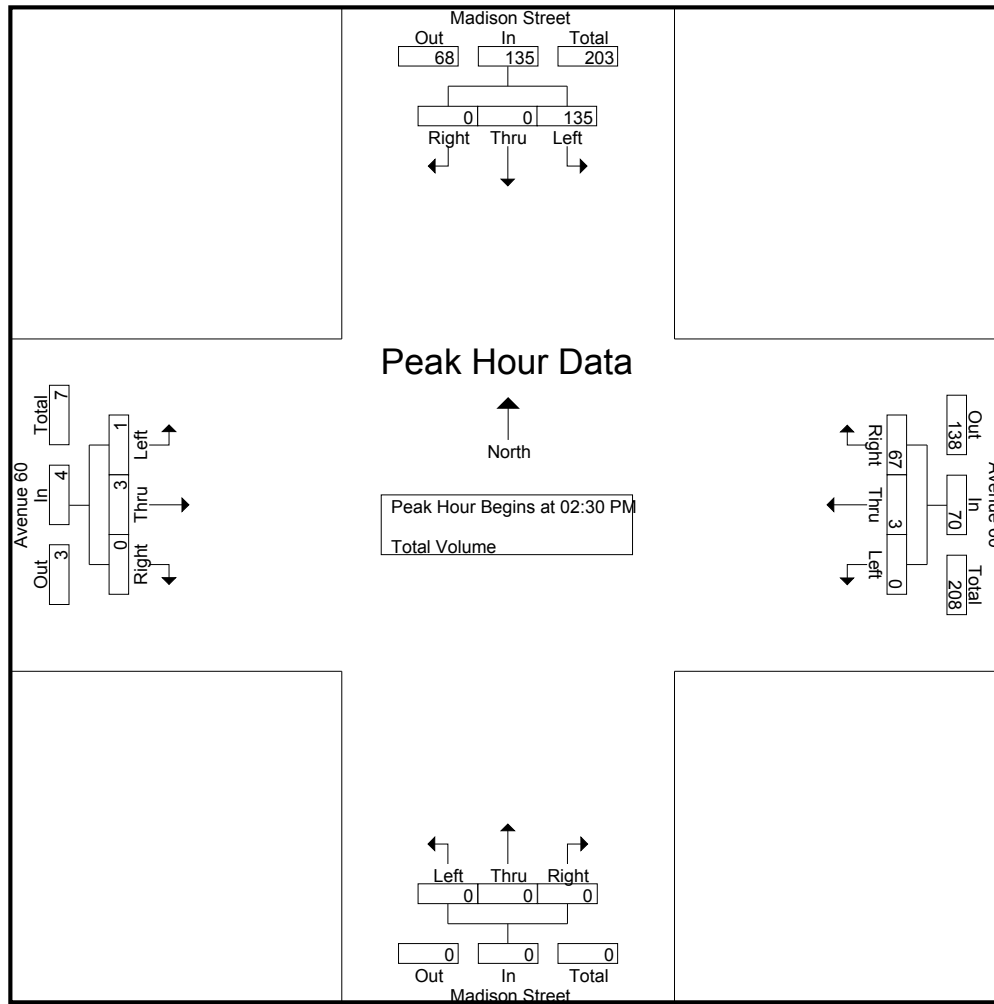
Groups Printed- Total Volume

	Madison Street Southbound				Avenue 60 Westbound				Madison Street Northbound				Avenue 60 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:30 PM	37	0	0	37	0	1	23	24	0	0	0	0	1	2	0	3	64
02:45 PM	40	0	0	40	0	0	15	15	0	0	0	0	0	0	0	0	55
Total	77	0	0	77	0	1	38	39	0	0	0	0	1	2	0	3	119
03:00 PM	27	0	0	27	0	2	13	15	0	0	0	0	0	1	0	1	43
03:15 PM	31	0	0	31	0	0	16	16	0	0	0	0	0	0	0	0	47
03:30 PM	23	0	0	23	0	0	16	16	0	0	0	0	0	0	0	0	39
03:45 PM	32	0	0	32	0	0	23	23	0	0	0	0	0	0	0	0	55
Total	113	0	0	113	0	2	68	70	0	0	0	0	0	1	0	1	184
04:00 PM	24	0	0	24	0	0	21	21	0	0	0	0	1	0	0	1	46
04:15 PM	21	0	0	21	0	0	19	19	0	0	0	0	0	0	0	0	40
04:30 PM	19	0	0	19	0	0	25	25	0	0	0	0	0	0	0	0	44
04:45 PM	20	0	1	21	0	0	19	19	0	0	0	0	0	1	0	1	41
Total	84	0	1	85	0	0	84	84	0	0	0	0	1	1	0	2	171
05:00 PM	18	0	0	18	0	0	15	15	0	0	0	0	0	0	0	0	33
05:15 PM	31	0	1	32	0	1	18	19	0	0	0	0	0	0	0	0	51
Grand Total	323	0	2	325	0	4	223	227	0	0	0	0	2	4	0	6	558
Apprch %	99.4	0	0.6		0	1.8	98.2		0	0	0		33.3	66.7	0		
Total %	57.9	0	0.4	58.2	0	0.7	40	40.7	0	0	0	0	0.4	0.7	0	1.1	

	Madison Street Southbound				Avenue 60 Westbound				Madison Street Northbound				Avenue 60 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:30 PM																	
02:30 PM	37	0	0	37	0	1	23	24	0	0	0	0	1	2	0	3	64
02:45 PM	40	0	0	40	0	0	15	15	0	0	0	0	0	0	0	0	55
03:00 PM	27	0	0	27	0	2	13	15	0	0	0	0	0	1	0	1	43
03:15 PM	31	0	0	31	0	0	16	16	0	0	0	0	0	0	0	0	47
Total Volume	135	0	0	135	0	3	67	70	0	0	0	0	1	3	0	4	209
% App. Total	100	0	0		0	4.3	95.7		0	0	0		25	75	0		
PHF	.844	.000	.000	.844	.000	.375	.728	.729	.000	.000	.000	.000	.250	.375	.000	.333	.816

City of La Quinta
N/S: Madison Street
E/W: Avenue 60
Weather: Clear

File Name : LQA_Madison_Ave 60 PM
Site Code : 05119590
Start Date : 9/10/2019
Page No : 2



Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:30 PM				03:45 PM				02:30 PM				02:30 PM			
+0 mins.	37	0	0	37	0	0	23	23	0	0	0	0	1	2	0	3
+15 mins.	40	0	0	40	0	0	21	21	0	0	0	0	0	0	0	0
+30 mins.	27	0	0	27	0	0	19	19	0	0	0	0	0	1	0	1
+45 mins.	31	0	0	31	0	0	25	25	0	0	0	0	0	0	0	0
Total Volume	135	0	0	135	0	0	88	88	0	0	0	0	1	3	0	4
% App. Total	100	0	0		0	0	100		0	0	0		25	75	0	
PHF	.844	.000	.000	.844	.000	.000	.880	.880	.000	.000	.000	.000	.250	.375	.000	.333

City of La Quinta
N/S: Monroe Street
E/W: Avenue 60
Weather: Clear

File Name : 10_LQA_Monroe_Ave 60 AM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 1

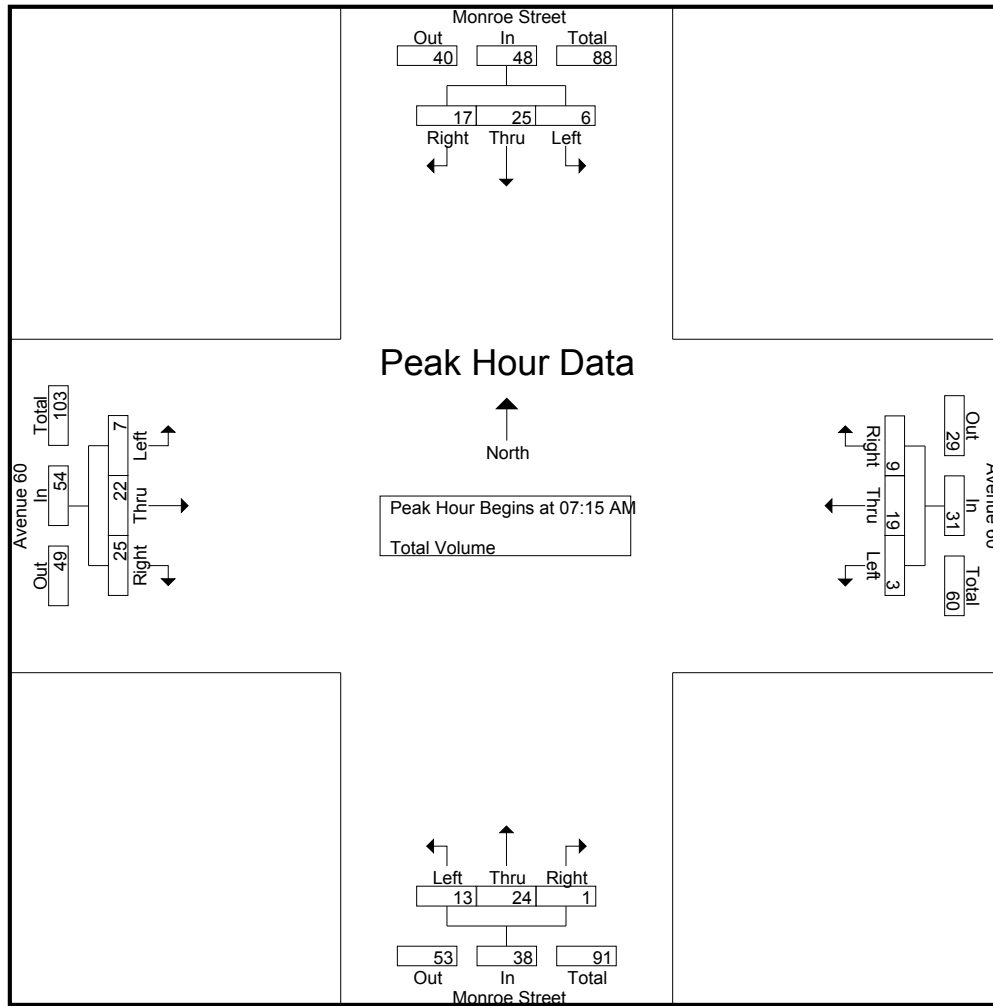
Groups Printed- Total Volume

	Monroe Street Southbound				Avenue 60 Westbound				Monroe Street Northbound				Avenue 60 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	1	9	3	13	0	2	5	7	1	5	0	6	1	2	3	6	32
06:15 AM	4	6	3	13	1	4	0	5	2	4	0	6	1	3	6	10	34
06:30 AM	4	5	1	10	0	13	1	14	4	2	1	7	1	7	7	15	46
06:45 AM	3	12	0	15	2	4	4	10	0	4	1	5	0	4	10	14	44
Total	12	32	7	51	3	23	10	36	7	15	2	24	3	16	26	45	156
07:00 AM	4	3	2	9	0	4	0	4	2	3	0	5	2	5	7	14	32
07:15 AM	0	7	4	11	2	3	3	8	2	7	0	9	2	3	8	13	41
07:30 AM	2	6	4	12	0	4	1	5	5	6	1	12	2	5	5	12	41
07:45 AM	2	4	4	10	0	3	3	6	4	5	0	9	1	12	4	17	42
Total	8	20	14	42	2	14	7	23	13	21	1	35	7	25	24	56	156
08:00 AM	2	8	5	15	1	9	2	12	2	6	0	8	2	2	8	12	47
08:15 AM	1	7	3	11	0	1	0	1	4	4	1	9	1	5	2	8	29
Grand Total	23	67	29	119	6	47	19	72	26	46	4	76	13	48	60	121	388
Apprch %	19.3	56.3	24.4		8.3	65.3	26.4		34.2	60.5	5.3		10.7	39.7	49.6		
Total %	5.9	17.3	7.5	30.7	1.5	12.1	4.9	18.6	6.7	11.9	1	19.6	3.4	12.4	15.5	31.2	

	Monroe Street Southbound				Avenue 60 Westbound				Monroe Street Northbound				Avenue 60 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	7	4	11	2	3	3	8	2	7	0	9	2	3	8	13	41
07:30 AM	2	6	4	12	0	4	1	5	5	6	1	12	2	5	5	12	41
07:45 AM	2	4	4	10	0	3	3	6	4	5	0	9	1	12	4	17	42
08:00 AM	2	8	5	15	1	9	2	12	2	6	0	8	2	2	8	12	47
Total Volume	6	25	17	48	3	19	9	31	13	24	1	38	7	22	25	54	171
% App. Total	12.5	52.1	35.4		9.7	61.3	29		34.2	63.2	2.6		13	40.7	46.3		
PHF	.750	.781	.850	.800	.375	.528	.750	.646	.650	.857	.250	.792	.875	.458	.781	.794	.910

City of La Quinta
N/S: Monroe Street
E/W: Avenue 60
Weather: Clear

File Name : 10_LQA_Monroe_Ave 60 AM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	06:00 AM				06:00 AM				07:15 AM				06:30 AM			
+0 mins.	1	9	3	13	0	2	5	7	2	7	0	9	1	7	7	15
+15 mins.	4	6	3	13	1	4	0	5	5	6	1	12	0	4	10	14
+30 mins.	4	5	1	10	0	13	1	14	4	5	0	9	2	5	7	14
+45 mins.	3	12	0	15	2	4	4	10	2	6	0	8	2	3	8	13
Total Volume	12	32	7	51	3	23	10	36	13	24	1	38	5	19	32	56
% App. Total	23.5	62.7	13.7		8.3	63.9	27.8		34.2	63.2	2.6		8.9	33.9	57.1	
PHF	.750	.667	.583	.850	.375	.442	.500	.643	.650	.857	.250	.792	.625	.679	.800	.933

City of La Quinta
N/S: Monroe Street
E/W: Avenue 60
Weather: Clear

File Name : 10_LQA_Monroe_Ave 60 PM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 1

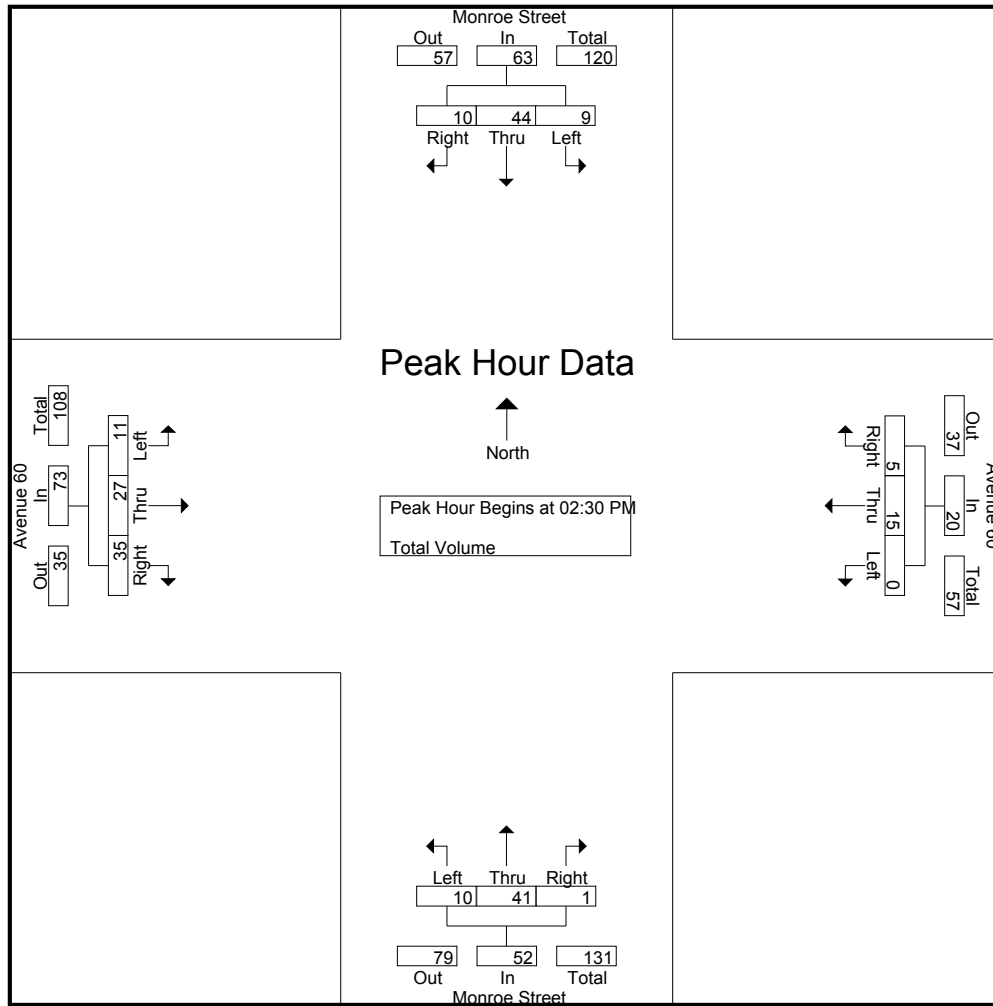
Groups Printed- Total Volume

	Monroe Street Southbound				Avenue 60 Westbound				Monroe Street Northbound				Avenue 60 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:30 PM	4	16	1	21	0	3	1	4	5	11	0	16	3	3	7	13	54
02:45 PM	1	8	4	13	0	4	0	4	3	11	0	14	1	14	13	28	59
Total	5	24	5	34	0	7	1	8	8	22	0	30	4	17	20	41	113
03:00 PM	3	11	3	17	0	3	4	7	2	13	1	16	5	6	7	18	58
03:15 PM	1	9	2	12	0	5	0	5	0	6	0	6	2	4	8	14	37
03:30 PM	3	4	3	10	0	0	2	2	5	5	0	10	2	1	14	17	39
03:45 PM	2	12	2	16	0	2	3	5	1	4	0	5	1	3	10	14	40
Total	9	36	10	55	0	10	9	19	8	28	1	37	10	14	39	63	174
04:00 PM	0	7	3	10	0	6	3	9	5	3	0	8	1	4	3	8	35
04:15 PM	3	7	4	14	0	0	3	3	4	5	1	10	4	7	5	16	43
04:30 PM	0	7	0	7	0	3	2	5	5	6	0	11	2	3	4	9	32
04:45 PM	3	5	1	9	0	2	0	2	4	4	0	8	3	2	4	9	28
Total	6	26	8	40	0	11	8	19	18	18	1	37	10	16	16	42	138
05:00 PM	0	6	4	10	0	3	3	6	2	10	1	13	5	1	4	10	39
05:15 PM	4	16	4	24	0	2	1	3	5	8	0	13	2	2	3	7	47
Grand Total	24	108	31	163	0	33	22	55	41	86	3	130	31	50	82	163	511
Apprch %	14.7	66.3	19		0	60	40		31.5	66.2	2.3		19	30.7	50.3		
Total %	4.7	21.1	6.1	31.9	0	6.5	4.3	10.8	8	16.8	0.6	25.4	6.1	9.8	16	31.9	

	Monroe Street Southbound				Avenue 60 Westbound				Monroe Street Northbound				Avenue 60 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:30 PM																	
02:30 PM	4	16	1	21	0	3	1	4	5	11	0	16	3	3	7	13	54
02:45 PM	1	8	4	13	0	4	0	4	3	11	0	14	1	14	13	28	59
03:00 PM	3	11	3	17	0	3	4	7	2	13	1	16	5	6	7	18	58
03:15 PM	1	9	2	12	0	5	0	5	0	6	0	6	2	4	8	14	37
Total Volume	9	44	10	63	0	15	5	20	10	41	1	52	11	27	35	73	208
% App. Total	14.3	69.8	15.9		0	75	25		19.2	78.8	1.9		15.1	37	47.9		
PHF	.563	.688	.625	.750	.000	.750	.313	.714	.500	.788	.250	.813	.550	.482	.673	.652	.881

City of La Quinta
N/S: Monroe Street
E/W: Avenue 60
Weather: Clear

File Name : 10_LQA_Monroe_Ave 60 PM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 2



Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:30 PM				03:45 PM				02:30 PM				02:45 PM			
+0 mins.	4	16	1	21	0	2	3	5	5	11	0	16	1	14	13	28
+15 mins.	1	8	4	13	0	6	3	9	3	11	0	14	5	6	7	18
+30 mins.	3	11	3	17	0	0	3	3	2	13	1	16	2	4	8	14
+45 mins.	1	9	2	12	0	3	2	5	0	6	0	6	2	1	14	17
Total Volume	9	44	10	63	0	11	11	22	10	41	1	52	10	25	42	77
% App. Total	14.3	69.8	15.9		0	50	50		19.2	78.8	1.9		13	32.5	54.5	
PHF	.563	.688	.625	.750	.000	.458	.917	.611	.500	.788	.250	.813	.500	.446	.750	.688

City of La Quinta
N/S: Monroe Street
E/W: Avenue 58
Weather: Clear

File Name : 11_LQA_Monroe_Ave 58 AM
Site Code : 05119233
Start Date : 4/9/2019
Page No : 1

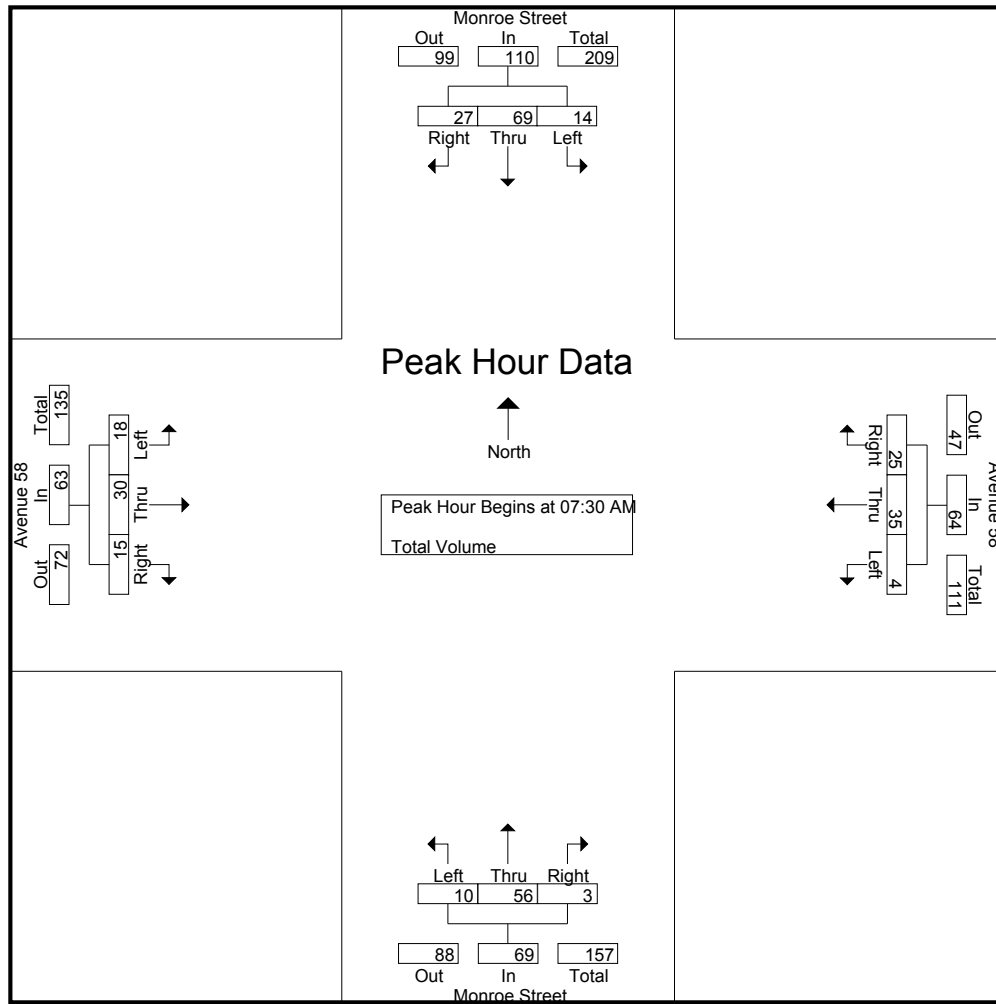
Groups Printed- Total Volume

	Monroe Street Southbound				Avenue 58 Westbound				Monroe Street Northbound				Avenue 58 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	2	13	3	18	1	9	2	12	0	8	1	9	0	8	7	15	54
06:15 AM	5	12	1	18	6	14	4	24	5	6	0	11	1	3	2	6	59
06:30 AM	5	12	3	20	3	12	4	19	0	14	0	14	2	6	2	10	63
06:45 AM	6	24	5	35	7	14	4	25	2	13	2	17	5	5	4	14	91
Total	18	61	12	91	17	49	14	80	7	41	3	51	8	22	15	45	267
07:00 AM	3	13	6	22	2	17	2	21	2	7	3	12	4	3	3	10	65
07:15 AM	0	10	10	20	2	16	4	22	3	10	1	14	1	5	2	8	64
07:30 AM	2	15	3	20	0	6	6	12	2	13	1	16	5	6	3	14	62
07:45 AM	6	18	6	30	3	9	7	19	2	8	2	12	3	6	2	11	72
Total	11	56	25	92	7	48	19	74	9	38	7	54	13	20	10	43	263
08:00 AM	4	14	9	27	0	11	4	15	4	18	0	22	3	8	6	17	81
08:15 AM	2	22	9	33	1	9	8	18	2	17	0	19	7	10	4	21	91
Grand Total	35	153	55	243	25	117	45	187	22	114	10	146	31	60	35	126	702
Apprch %	14.4	63	22.6		13.4	62.6	24.1		15.1	78.1	6.8		24.6	47.6	27.8		
Total %	5	21.8	7.8	34.6	3.6	16.7	6.4	26.6	3.1	16.2	1.4	20.8	4.4	8.5	5	17.9	

	Monroe Street Southbound				Avenue 58 Westbound				Monroe Street Northbound				Avenue 58 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	2	15	3	20	0	6	6	12	2	13	1	16	5	6	3	14	62
07:45 AM	6	18	6	30	3	9	7	19	2	8	2	12	3	6	2	11	72
08:00 AM	4	14	9	27	0	11	4	15	4	18	0	22	3	8	6	17	81
08:15 AM	2	22	9	33	1	9	8	18	2	17	0	19	7	10	4	21	91
Total Volume	14	69	27	110	4	35	25	64	10	56	3	69	18	30	15	63	306
% App. Total	12.7	62.7	24.5		6.2	54.7	39.1		14.5	81.2	4.3		28.6	47.6	23.8		
PHF	.583	.784	.750	.833	.333	.795	.781	.842	.625	.778	.375	.784	.643	.750	.625	.750	.841

City of La Quinta
N/S: Monroe Street
E/W: Avenue 58
Weather: Clear

File Name : 11_LQA_Monroe_Ave 58 AM
Site Code : 05119233
Start Date : 4/9/2019
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				06:15 AM				07:30 AM				07:30 AM			
+0 mins.	2	15	3	20	6	14	4	24	2	13	1	16	5	6	3	14
+15 mins.	6	18	6	30	3	12	4	19	2	8	2	12	3	6	2	11
+30 mins.	4	14	9	27	7	14	4	25	4	18	0	22	3	8	6	17
+45 mins.	2	22	9	33	2	17	2	21	2	17	0	19	7	10	4	21
Total Volume	14	69	27	110	18	57	14	89	10	56	3	69	18	30	15	63
% App. Total	12.7	62.7	24.5		20.2	64	15.7		14.5	81.2	4.3		28.6	47.6	23.8	
PHF	.583	.784	.750	.833	.643	.838	.875	.890	.625	.778	.375	.784	.643	.750	.625	.750

City of La Quinta
N/S: Monroe Street
E/W: Avenue 58
Weather: Clear

File Name : 11_LQA_Monroe_Ave 58 PM
Site Code : 05119233
Start Date : 4/9/2019
Page No : 1

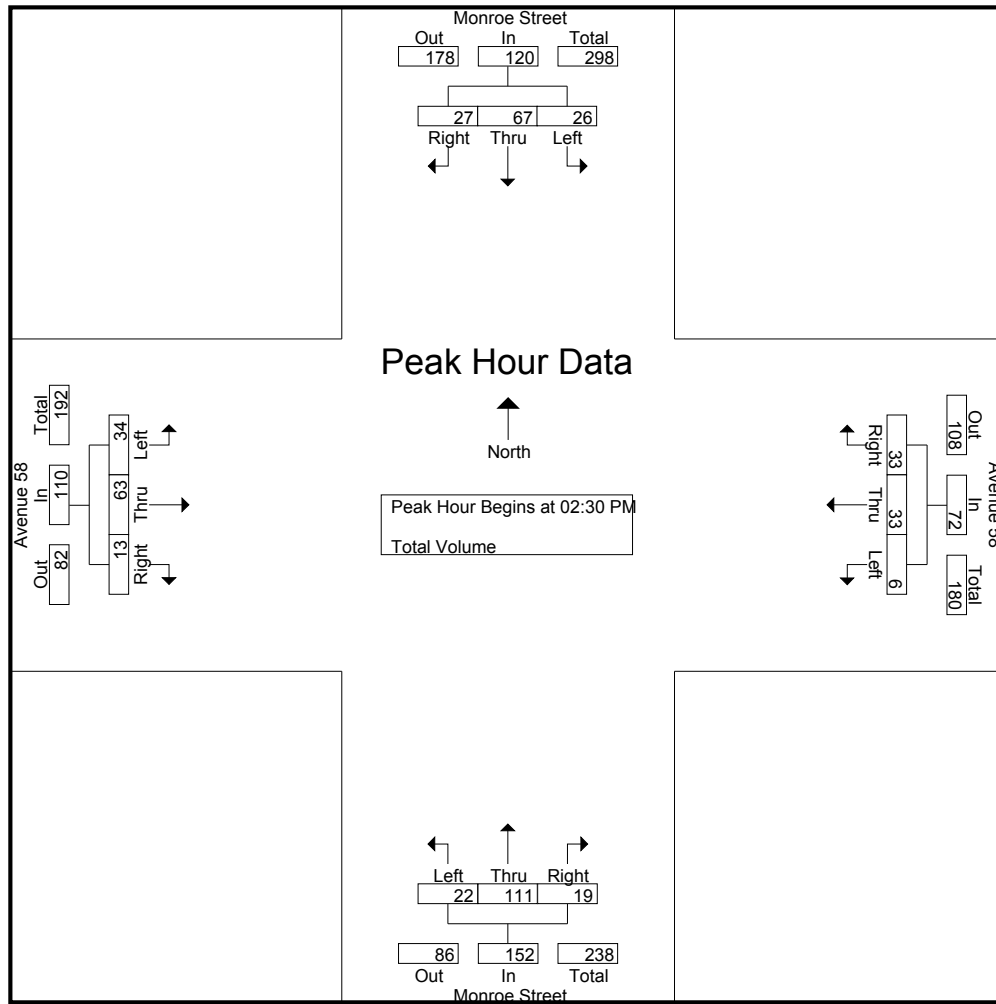
Groups Printed- Total Volume

	Monroe Street Southbound				Avenue 58 Westbound				Monroe Street Northbound				Avenue 58 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:30 PM	6	14	10	30	4	4	10	18	2	28	1	31	7	16	1	24	103
02:45 PM	5	19	5	29	1	6	5	12	6	23	9	38	3	7	8	18	97
Total	11	33	15	59	5	10	15	30	8	51	10	69	10	23	9	42	200
03:00 PM	9	24	4	37	1	15	8	24	6	39	3	48	15	24	3	42	151
03:15 PM	6	10	8	24	0	8	10	18	8	21	6	35	9	16	1	26	103
03:30 PM	1	15	4	20	0	13	4	17	3	27	3	33	10	14	2	26	96
03:45 PM	3	18	3	24	0	11	6	17	0	16	1	17	4	11	3	18	76
Total	19	67	19	105	1	47	28	76	17	103	13	133	38	65	9	112	426
04:00 PM	0	5	3	8	1	8	5	14	1	14	0	15	14	12	2	28	65
04:15 PM	4	11	5	20	1	6	5	12	1	7	2	10	4	6	3	13	55
04:30 PM	2	10	7	19	0	10	4	14	3	17	0	20	12	14	2	28	81
04:45 PM	3	16	4	23	1	4	1	6	2	10	0	12	8	9	2	19	60
Total	9	42	19	70	3	28	15	46	7	48	2	57	38	41	9	88	261
05:00 PM	3	16	5	24	1	8	5	14	2	11	0	13	8	12	1	21	72
05:15 PM	3	9	5	17	0	4	2	6	0	9	2	11	4	5	1	10	44
Grand Total	45	167	63	275	10	97	65	172	34	222	27	283	98	146	29	273	1003
Apprch %	16.4	60.7	22.9		5.8	56.4	37.8		12	78.4	9.5		35.9	53.5	10.6		
Total %	4.5	16.7	6.3	27.4	1	9.7	6.5	17.1	3.4	22.1	2.7	28.2	9.8	14.6	2.9	27.2	

	Monroe Street Southbound				Avenue 58 Westbound				Monroe Street Northbound				Avenue 58 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:30 PM																	
02:30 PM	6	14	10	30	4	4	10	18	2	28	1	31	7	16	1	24	103
02:45 PM	5	19	5	29	1	6	5	12	6	23	9	38	3	7	8	18	97
03:00 PM	9	24	4	37	1	15	8	24	6	39	3	48	15	24	3	42	151
03:15 PM	6	10	8	24	0	8	10	18	8	21	6	35	9	16	1	26	103
Total Volume	26	67	27	120	6	33	33	72	22	111	19	152	34	63	13	110	454
% App. Total	21.7	55.8	22.5		8.3	45.8	45.8		14.5	73	12.5		30.9	57.3	11.8		
PHF	.722	.698	.675	.811	.375	.550	.825	.750	.688	.712	.528	.792	.567	.656	.406	.655	.752

City of La Quinta
N/S: Monroe Street
E/W: Avenue 58
Weather: Clear

File Name : 11_LQA_Monroe_Ave 58 PM
Site Code : 05119233
Start Date : 4/9/2019
Page No : 2



Peak Hour Analysis From 02:30 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:30 PM				03:00 PM				02:45 PM				02:45 PM			
+0 mins.	6	14	10	30	1	15	8	24	6	23	9	38	3	7	8	18
+15 mins.	5	19	5	29	0	8	10	18	6	39	3	48	15	24	3	42
+30 mins.	9	24	4	37	0	13	4	17	8	21	6	35	9	16	1	26
+45 mins.	6	10	8	24	0	11	6	17	3	27	3	33	10	14	2	26
Total Volume	26	67	27	120	1	47	28	76	23	110	21	154	37	61	14	112
% App. Total	21.7	55.8	22.5		1.3	61.8	36.8		14.9	71.4	13.6		33	54.5	12.5	
PHF	.722	.698	.675	.811	.250	.783	.700	.792	.719	.705	.583	.802	.617	.635	.438	.667

City of La Quinta
N/S: Monroe Street
E/W: Airport Boulevard
Weather: Clear

File Name : 12_LQA_Monroe_Airport AM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 1

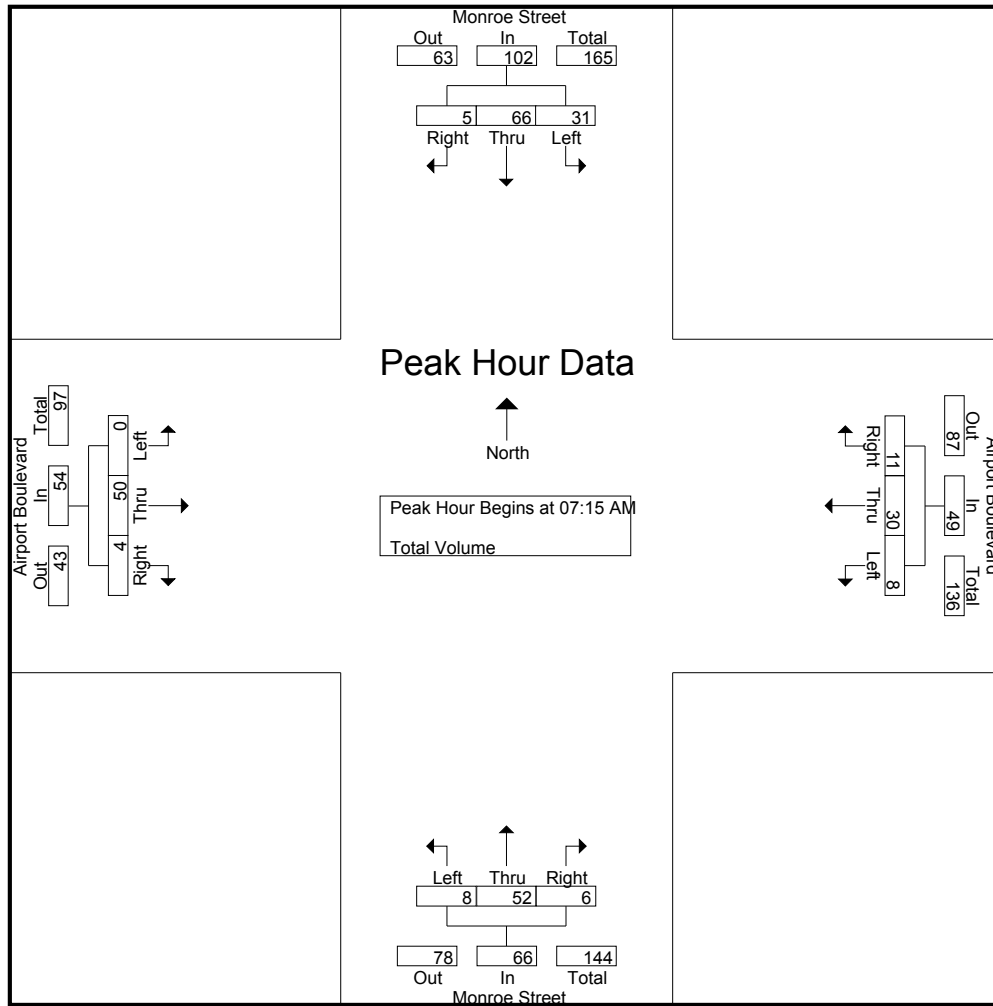
Groups Printed- Total Volume

	Monroe Street Southbound				Airport Boulevard Westbound				Monroe Street Northbound				Airport Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	2	17	2	21	3	6	7	16	1	15	0	16	2	3	1	6	59
06:15 AM	4	14	0	18	1	6	5	12	2	13	2	17	0	2	1	3	50
06:30 AM	6	13	3	22	0	11	5	16	2	8	0	10	1	7	0	8	56
06:45 AM	2	12	1	15	2	10	5	17	3	10	2	15	1	13	1	15	62
Total	14	56	6	76	6	33	22	61	8	46	4	58	4	25	3	32	227
07:00 AM	5	13	1	19	1	6	3	10	1	6	1	8	1	9	1	11	48
07:15 AM	5	16	2	23	2	11	1	14	1	14	0	15	0	7	1	8	60
07:30 AM	7	15	0	22	4	9	4	17	2	10	2	14	0	7	2	9	62
07:45 AM	14	16	1	31	1	6	6	13	1	10	3	14	0	22	0	22	80
Total	31	60	4	95	8	32	14	54	5	40	6	51	1	45	4	50	250
08:00 AM	5	19	2	26	1	4	0	5	4	18	1	23	0	14	1	15	69
08:15 AM	4	8	2	14	2	3	4	9	2	10	0	12	1	15	2	18	53
Grand Total	54	143	14	211	17	72	40	129	19	114	11	144	6	99	10	115	599
Apprch %	25.6	67.8	6.6		13.2	55.8	31		13.2	79.2	7.6		5.2	86.1	8.7		
Total %	9	23.9	2.3	35.2	2.8	12	6.7	21.5	3.2	19	1.8	24	1	16.5	1.7	19.2	

	Monroe Street Southbound				Airport Boulevard Westbound				Monroe Street Northbound				Airport Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	5	16	2	23	2	11	1	14	1	14	0	15	0	7	1	8	60
07:30 AM	7	15	0	22	4	9	4	17	2	10	2	14	0	7	2	9	62
07:45 AM	14	16	1	31	1	6	6	13	1	10	3	14	0	22	0	22	80
08:00 AM	5	19	2	26	1	4	0	5	4	18	1	23	0	14	1	15	69
Total Volume	31	66	5	102	8	30	11	49	8	52	6	66	0	50	4	54	271
% App. Total	30.4	64.7	4.9		16.3	61.2	22.4		12.1	78.8	9.1		0	92.6	7.4		
PHF	.554	.868	.625	.823	.500	.682	.458	.721	.500	.722	.500	.717	.000	.568	.500	.614	.847

City of La Quinta
N/S: Monroe Street
E/W: Airport Boulevard
Weather: Clear

File Name : 12_LQA_Monroe_Airport AM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				06:00 AM				07:15 AM				07:30 AM			
+0 mins.	5	16	2	23	3	6	7	16	1	14	0	15	0	7	2	9
+15 mins.	7	15	0	22	1	6	5	12	2	10	2	14	0	22	0	22
+30 mins.	14	16	1	31	0	11	5	16	1	10	3	14	0	14	1	15
+45 mins.	5	19	2	26	2	10	5	17	4	18	1	23	1	15	2	18
Total Volume	31	66	5	102	6	33	22	61	8	52	6	66	1	58	5	64
% App. Total	30.4	64.7	4.9		9.8	54.1	36.1		12.1	78.8	9.1		1.6	90.6	7.8	
PHF	.554	.868	.625	.823	.500	.750	.786	.897	.500	.722	.500	.717	.250	.659	.625	.727

City of La Quinta
N/S: Monroe Street
E/W: Airport Boulevard
Weather: Clear

File Name : 12_LQA_Monroe_Airport PM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 1

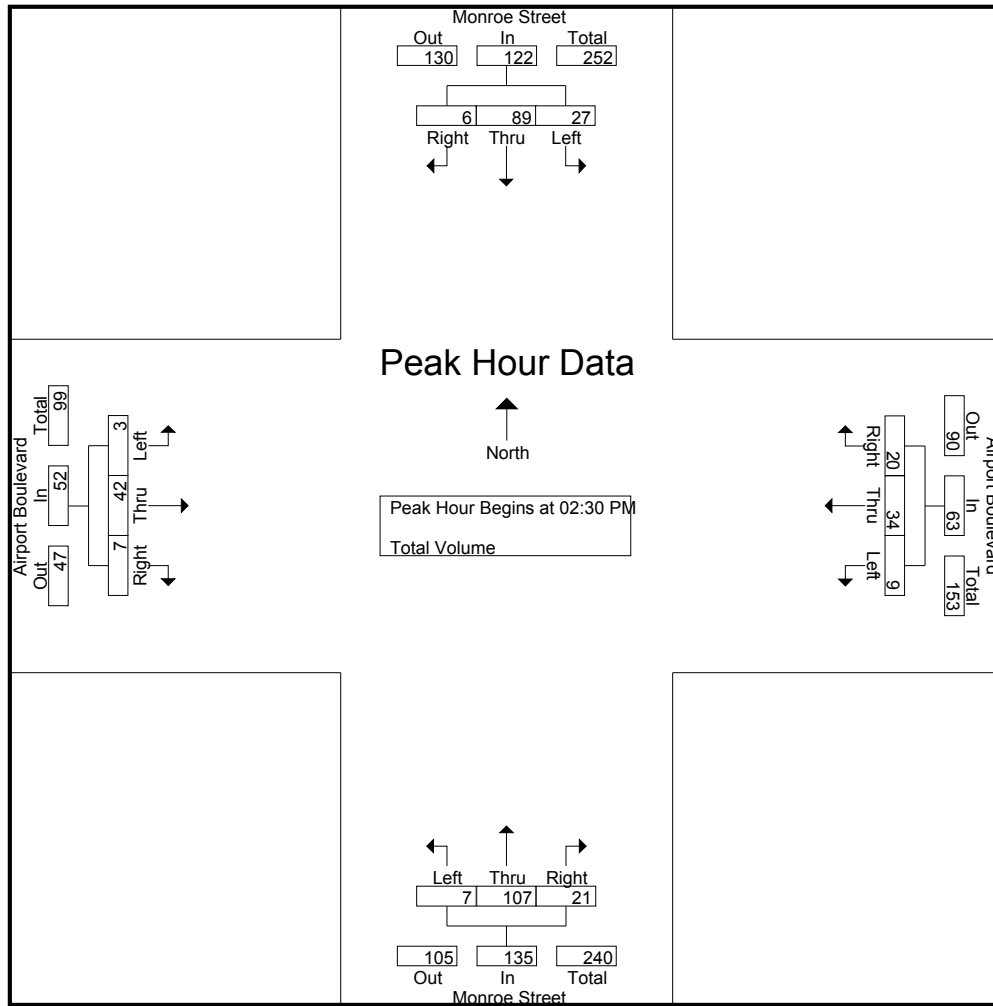
Groups Printed- Total Volume

	Monroe Street Southbound				Airport Boulevard Westbound				Monroe Street Northbound				Airport Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:30 PM	6	34	1	41	0	5	9	14	2	28	8	38	0	13	1	14	107
02:45 PM	9	19	2	30	3	10	5	18	2	33	3	38	0	10	2	12	98
Total	15	53	3	71	3	15	14	32	4	61	11	76	0	23	3	26	205
03:00 PM	7	22	2	31	3	11	3	17	2	20	7	29	2	12	2	16	93
03:15 PM	5	14	1	20	3	8	3	14	1	26	3	30	1	7	2	10	74
03:30 PM	4	7	0	11	3	15	7	25	2	22	2	26	1	11	6	18	80
03:45 PM	5	26	2	33	1	11	10	22	1	23	6	30	1	5	1	7	92
Total	21	69	5	95	10	45	23	78	6	91	18	115	5	35	11	51	339
04:00 PM	5	20	2	27	4	13	8	25	1	14	4	19	1	10	0	11	82
04:15 PM	5	9	1	15	2	14	4	20	3	18	1	22	0	5	5	10	67
04:30 PM	7	13	0	20	5	16	4	25	1	19	3	23	0	8	2	10	78
04:45 PM	1	11	0	12	0	7	3	10	1	15	1	17	1	5	5	11	50
Total	18	53	3	74	11	50	19	80	6	66	9	81	2	28	12	42	277
05:00 PM	1	13	0	14	3	13	9	25	1	17	2	20	0	4	1	5	64
05:15 PM	1	21	0	22	1	11	7	19	2	10	0	12	0	5	2	7	60
Grand Total	56	209	11	276	28	134	72	234	19	245	40	304	7	95	29	131	945
Apprch %	20.3	75.7	4		12	57.3	30.8		6.2	80.6	13.2		5.3	72.5	22.1		
Total %	5.9	22.1	1.2	29.2	3	14.2	7.6	24.8	2	25.9	4.2	32.2	0.7	10.1	3.1	13.9	

	Monroe Street Southbound				Airport Boulevard Westbound				Monroe Street Northbound				Airport Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:30 PM																	
02:30 PM	6	34	1	41	0	5	9	14	2	28	8	38	0	13	1	14	107
02:45 PM	9	19	2	30	3	10	5	18	2	33	3	38	0	10	2	12	98
03:00 PM	7	22	2	31	3	11	3	17	2	20	7	29	2	12	2	16	93
03:15 PM	5	14	1	20	3	8	3	14	1	26	3	30	1	7	2	10	74
Total Volume	27	89	6	122	9	34	20	63	7	107	21	135	3	42	7	52	372
% App. Total	22.1	73	4.9		14.3	54	31.7		5.2	79.3	15.6		5.8	80.8	13.5		
PHF	.750	.654	.750	.744	.750	.773	.556	.875	.875	.811	.656	.888	.375	.808	.875	.813	.869

City of La Quinta
N/S: Monroe Street
E/W: Airport Boulevard
Weather: Clear

File Name : 12_LQA_Monroe_Airport PM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 2



Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:30 PM				03:30 PM				02:30 PM				02:45 PM			
+0 mins.	6	34	1	41	3	15	7	25	2	28	8	38	0	10	2	12
+15 mins.	9	19	2	30	1	11	10	22	2	33	3	38	2	12	2	16
+30 mins.	7	22	2	31	4	13	8	25	2	20	7	29	1	7	2	10
+45 mins.	5	14	1	20	2	14	4	20	1	26	3	30	1	11	6	18
Total Volume	27	89	6	122	10	53	29	92	7	107	21	135	4	40	12	56
% App. Total	22.1	73	4.9		10.9	57.6	31.5		5.2	79.3	15.6		7.1	71.4	21.4	
PHF	.750	.654	.750	.744	.625	.883	.725	.920	.875	.811	.656	.888	.500	.833	.500	.778

City of La Quinta
N/S: Monroe Street
E/W: Avenue 54
Weather: Clear

File Name : 13_LQA_Monroe_Ave 54 AM
Site Code : 05119233
Start Date : 4/9/2019
Page No : 1

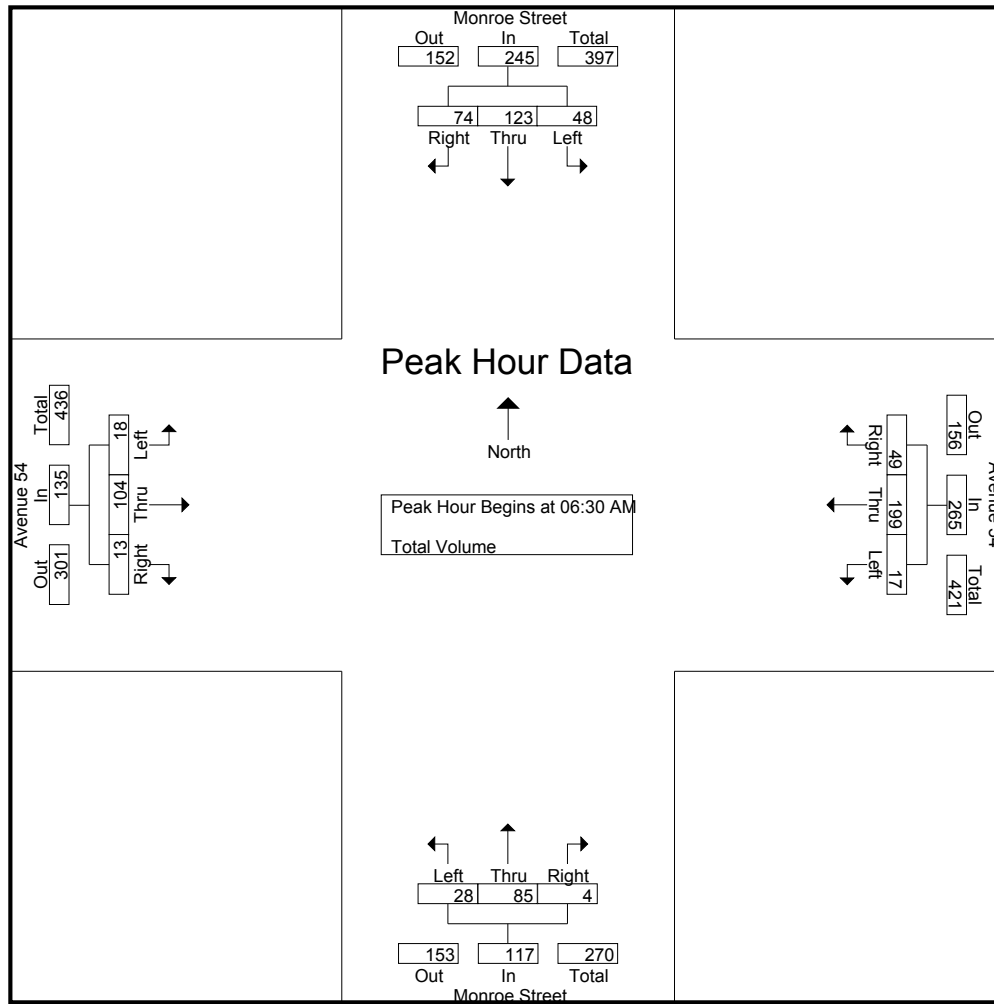
Groups Printed- Total Volume

	Monroe Street Southbound				Avenue 54 Westbound				Monroe Street Northbound				Avenue 54 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	7	18	10	35	1	19	2	22	1	8	0	9	0	8	0	8	74
06:15 AM	6	21	11	38	4	33	2	39	5	9	0	14	2	16	0	18	109
06:30 AM	12	32	18	62	1	59	10	70	10	15	0	25	4	24	3	31	188
06:45 AM	14	49	29	92	2	60	6	68	7	29	1	37	5	32	1	38	235
Total	39	120	68	227	8	171	20	199	23	61	1	85	11	80	4	95	606
07:00 AM	10	21	18	49	5	43	11	59	7	22	1	30	6	24	6	36	174
07:15 AM	12	21	9	42	9	37	22	68	4	19	2	25	3	24	3	30	165
07:30 AM	6	25	11	42	2	38	11	51	5	26	4	35	12	31	6	49	177
07:45 AM	11	28	15	54	3	42	18	63	7	18	1	26	5	29	4	38	181
Total	39	95	53	187	19	160	62	241	23	85	8	116	26	108	19	153	697
08:00 AM	13	37	7	57	4	55	11	70	3	36	0	39	5	20	6	31	197
08:15 AM	9	30	8	47	7	27	9	43	7	40	1	48	8	20	3	31	169
Grand Total	100	282	136	518	38	413	102	553	56	222	10	288	50	228	32	310	1669
Apprch %	19.3	54.4	26.3		6.9	74.7	18.4		19.4	77.1	3.5		16.1	73.5	10.3		
Total %	6	16.9	8.1	31	2.3	24.7	6.1	33.1	3.4	13.3	0.6	17.3	3	13.7	1.9	18.6	

	Monroe Street Southbound				Avenue 54 Westbound				Monroe Street Northbound				Avenue 54 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 06:30 AM																	
06:30 AM	12	32	18	62	1	59	10	70	10	15	0	25	4	24	3	31	188
06:45 AM	14	49	29	92	2	60	6	68	7	29	1	37	5	32	1	38	235
07:00 AM	10	21	18	49	5	43	11	59	7	22	1	30	6	24	6	36	174
07:15 AM	12	21	9	42	9	37	22	68	4	19	2	25	3	24	3	30	165
Total Volume	48	123	74	245	17	199	49	265	28	85	4	117	18	104	13	135	762
% App. Total	19.6	50.2	30.2		6.4	75.1	18.5		23.9	72.6	3.4		13.3	77	9.6		
PHF	.857	.628	.638	.666	.472	.829	.557	.946	.700	.733	.500	.791	.750	.813	.542	.888	.811

City of La Quinta
N/S: Monroe Street
E/W: Avenue 54
Weather: Clear

File Name : 13_LQA_Monroe_Ave 54 AM
Site Code : 05119233
Start Date : 4/9/2019
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	06:30 AM				06:30 AM				07:30 AM				06:45 AM			
+0 mins.	12	32	18	62	1	59	10	70	5	26	4	35	5	32	1	38
+15 mins.	14	49	29	92	2	60	6	68	7	18	1	26	6	24	6	36
+30 mins.	10	21	18	49	5	43	11	59	3	36	0	39	3	24	3	30
+45 mins.	12	21	9	42	9	37	22	68	7	40	1	48	12	31	6	49
Total Volume	48	123	74	245	17	199	49	265	22	120	6	148	26	111	16	153
% App. Total	19.6	50.2	30.2		6.4	75.1	18.5		14.9	81.1	4.1		17	72.5	10.5	
PHF	.857	.628	.638	.666	.472	.829	.557	.946	.786	.750	.375	.771	.542	.867	.667	.781

City of La Quinta
N/S: Monroe Street
E/W: Avenue 54
Weather: Clear

File Name : 13_LQA_Monroe_Ave 54 PM
Site Code : 05119233
Start Date : 4/9/2019
Page No : 1

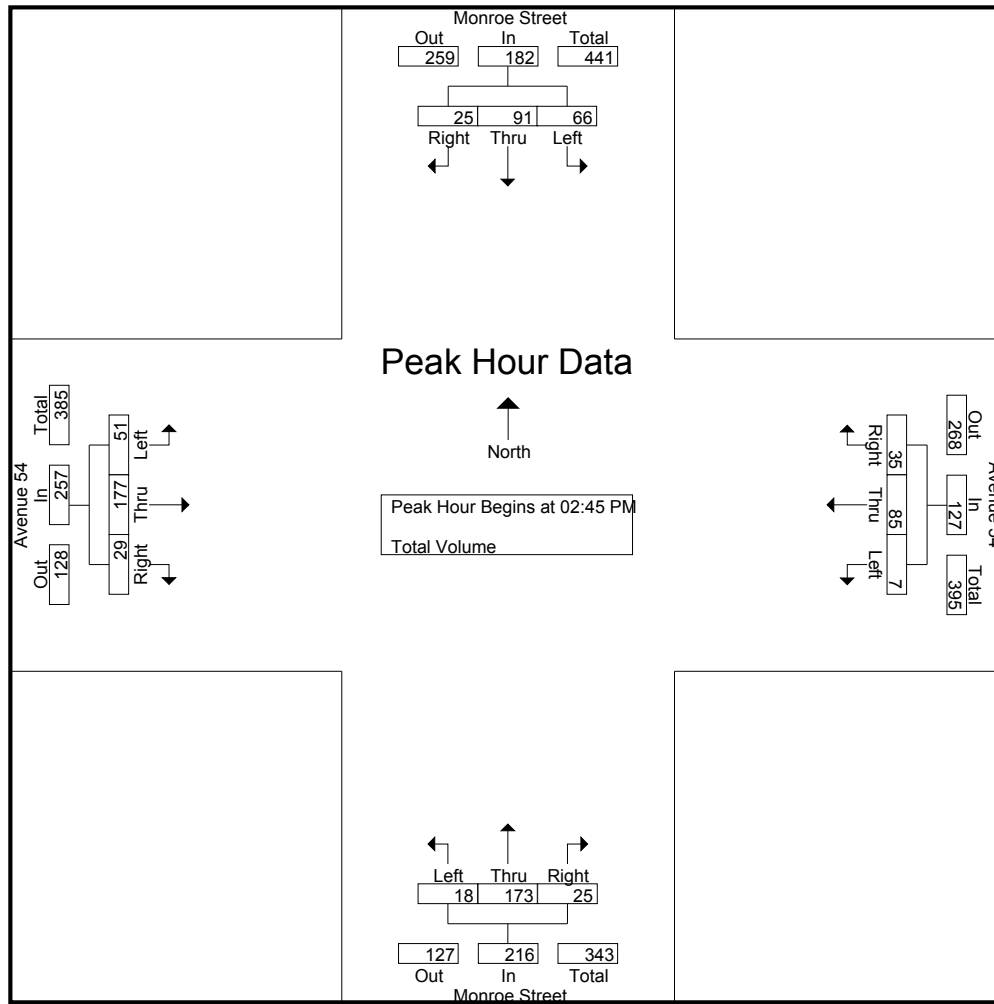
Groups Printed- Total Volume

	Monroe Street Southbound				Avenue 54 Westbound				Monroe Street Northbound				Avenue 54 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:30 PM	12	38	2	52	5	32	8	45	1	40	4	45	8	39	11	58	200
02:45 PM	17	19	10	46	1	17	14	32	6	38	4	48	4	31	4	39	165
Total	29	57	12	98	6	49	22	77	7	78	8	93	12	70	15	97	365
03:00 PM	19	25	4	48	6	20	3	29	3	54	8	65	16	43	13	72	214
03:15 PM	15	19	3	37	0	23	9	32	2	40	6	48	15	53	6	74	191
03:30 PM	15	28	8	51	0	25	9	34	7	41	7	55	16	50	6	72	212
03:45 PM	10	13	3	26	1	21	9	31	3	36	1	40	14	49	3	66	163
Total	59	85	18	162	7	89	30	126	15	171	22	208	61	195	28	284	780
04:00 PM	14	19	2	35	1	15	7	23	4	37	3	44	10	30	4	44	146
04:15 PM	8	15	2	25	1	28	2	31	1	21	3	25	3	34	5	42	123
04:30 PM	7	25	8	40	3	24	10	37	1	35	4	40	7	26	2	35	152
04:45 PM	7	23	2	32	1	21	6	28	1	17	2	20	4	28	2	34	114
Total	36	82	14	132	6	88	25	119	7	110	12	129	24	118	13	155	535
05:00 PM	10	22	2	34	3	29	7	39	3	25	3	31	3	32	5	40	144
05:15 PM	12	19	8	39	1	22	8	31	1	25	3	29	6	31	3	40	139
Grand Total	146	265	54	465	23	277	92	392	33	409	48	490	106	446	64	616	1963
Apprch %	31.4	57	11.6		5.9	70.7	23.5		6.7	83.5	9.8		17.2	72.4	10.4		
Total %	7.4	13.5	2.8	23.7	1.2	14.1	4.7	20	1.7	20.8	2.4	25	5.4	22.7	3.3	31.4	

	Monroe Street Southbound				Avenue 54 Westbound				Monroe Street Northbound				Avenue 54 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	17	19	10	46	1	17	14	32	6	38	4	48	4	31	4	39	165
03:00 PM	19	25	4	48	6	20	3	29	3	54	8	65	16	43	13	72	214
03:15 PM	15	19	3	37	0	23	9	32	2	40	6	48	15	53	6	74	191
03:30 PM	15	28	8	51	0	25	9	34	7	41	7	55	16	50	6	72	212
Total Volume	66	91	25	182	7	85	35	127	18	173	25	216	51	177	29	257	782
% App. Total	36.3	50	13.7		5.5	66.9	27.6		8.3	80.1	11.6		19.8	68.9	11.3		
PHF	.868	.813	.625	.892	.292	.850	.625	.934	.643	.801	.781	.831	.797	.835	.558	.868	.914

City of La Quinta
N/S: Monroe Street
E/W: Avenue 54
Weather: Clear

File Name : 13_LQA_Monroe_Ave 54 PM
Site Code : 05119233
Start Date : 4/9/2019
Page No : 2



Peak Hour Analysis From 02:30 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:30 PM				02:30 PM				02:45 PM				03:00 PM			
+0 mins.	12	38	2	52	5	32	8	45	6	38	4	48	16	43	13	72
+15 mins.	17	19	10	46	1	17	14	32	3	54	8	65	15	53	6	74
+30 mins.	19	25	4	48	6	20	3	29	2	40	6	48	16	50	6	72
+45 mins.	15	19	3	37	0	23	9	32	7	41	7	55	14	49	3	66
Total Volume	63	101	19	183	12	92	34	138	18	173	25	216	61	195	28	284
% App. Total	34.4	55.2	10.4		8.7	66.7	24.6		8.3	80.1	11.6		21.5	68.7	9.9	
PHF	.829	.664	.475	.880	.500	.719	.607	.767	.643	.801	.781	.831	.953	.920	.538	.959

City of Indio
N/S: Monroe Street
E/W: Avenue 52
Weather: Clear

File Name : 14_IND_Monroe_Ave 52 AM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 1

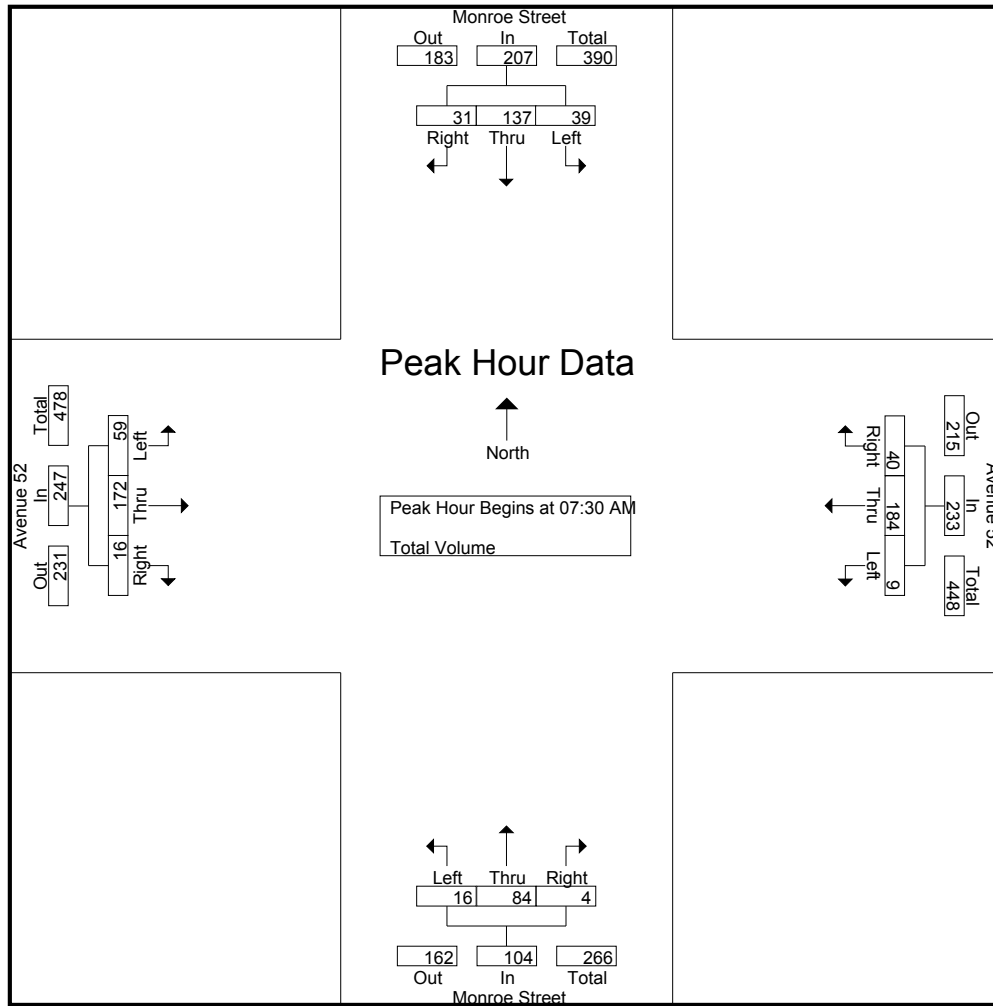
Groups Printed- Total Volume

	Monroe Street Southbound				Avenue 52 Westbound				Monroe Street Northbound				Avenue 52 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	8	35	4	47	12	52	7	71	0	8	2	10	12	18	2	32	160
06:15 AM	1	26	5	32	7	42	5	54	3	13	1	17	3	21	4	28	131
06:30 AM	5	28	4	37	5	52	4	61	2	10	0	12	11	19	3	33	143
06:45 AM	14	29	9	52	6	41	13	60	3	16	0	19	17	39	2	58	189
Total	28	118	22	168	30	187	29	246	8	47	3	58	43	97	11	151	623
07:00 AM	5	28	7	40	3	38	4	45	3	15	0	18	7	28	5	40	143
07:15 AM	7	31	6	44	6	42	4	52	3	10	0	13	21	43	4	68	177
07:30 AM	12	33	5	50	2	39	10	51	3	19	2	24	17	47	2	66	191
07:45 AM	8	48	7	63	2	62	10	74	2	23	1	26	15	55	4	74	237
Total	32	140	25	197	13	181	28	222	11	67	3	81	60	173	15	248	748
08:00 AM	11	30	13	54	4	39	10	53	4	21	0	25	12	33	2	47	179
08:15 AM	8	26	6	40	1	44	10	55	7	21	1	29	15	37	8	60	184
Grand Total	79	314	66	459	48	451	77	576	30	156	7	193	130	340	36	506	1734
Apprch %	17.2	68.4	14.4		8.3	78.3	13.4		15.5	80.8	3.6		25.7	67.2	7.1		
Total %	4.6	18.1	3.8	26.5	2.8	26	4.4	33.2	1.7	9	0.4	11.1	7.5	19.6	2.1	29.2	

	Monroe Street Southbound				Avenue 52 Westbound				Monroe Street Northbound				Avenue 52 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	12	33	5	50	2	39	10	51	3	19	2	24	17	47	2	66	191
07:45 AM	8	48	7	63	2	62	10	74	2	23	1	26	15	55	4	74	237
08:00 AM	11	30	13	54	4	39	10	53	4	21	0	25	12	33	2	47	179
08:15 AM	8	26	6	40	1	44	10	55	7	21	1	29	15	37	8	60	184
Total Volume	39	137	31	207	9	184	40	233	16	84	4	104	59	172	16	247	791
% App. Total	18.8	66.2	15		3.9	79	17.2		15.4	80.8	3.8		23.9	69.6	6.5		
PHF	.813	.714	.596	.821	.563	.742	1.00	.787	.571	.913	.500	.897	.868	.782	.500	.834	.834

City of Indio
N/S: Monroe Street
E/W: Avenue 52
Weather: Clear

File Name : 14_IND_Monroe_Ave 52 AM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				06:00 AM				07:30 AM				07:15 AM			
+0 mins.	7	31	6	44	12	52	7	71	3	19	2	24	21	43	4	68
+15 mins.	12	33	5	50	7	42	5	54	2	23	1	26	17	47	2	66
+30 mins.	8	48	7	63	5	52	4	61	4	21	0	25	15	55	4	74
+45 mins.	11	30	13	54	6	41	13	60	7	21	1	29	12	33	2	47
Total Volume	38	142	31	211	30	187	29	246	16	84	4	104	65	178	12	255
% App. Total	18	67.3	14.7		12.2	76	11.8		15.4	80.8	3.8		25.5	69.8	4.7	
PHF	.792	.740	.596	.837	.625	.899	.558	.866	.571	.913	.500	.897	.774	.809	.750	.861

City of Indio
N/S: Monroe Street
E/W: Avenue 52
Weather: Clear

File Name : 14_IND_Monroe_Ave 52 PM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 1

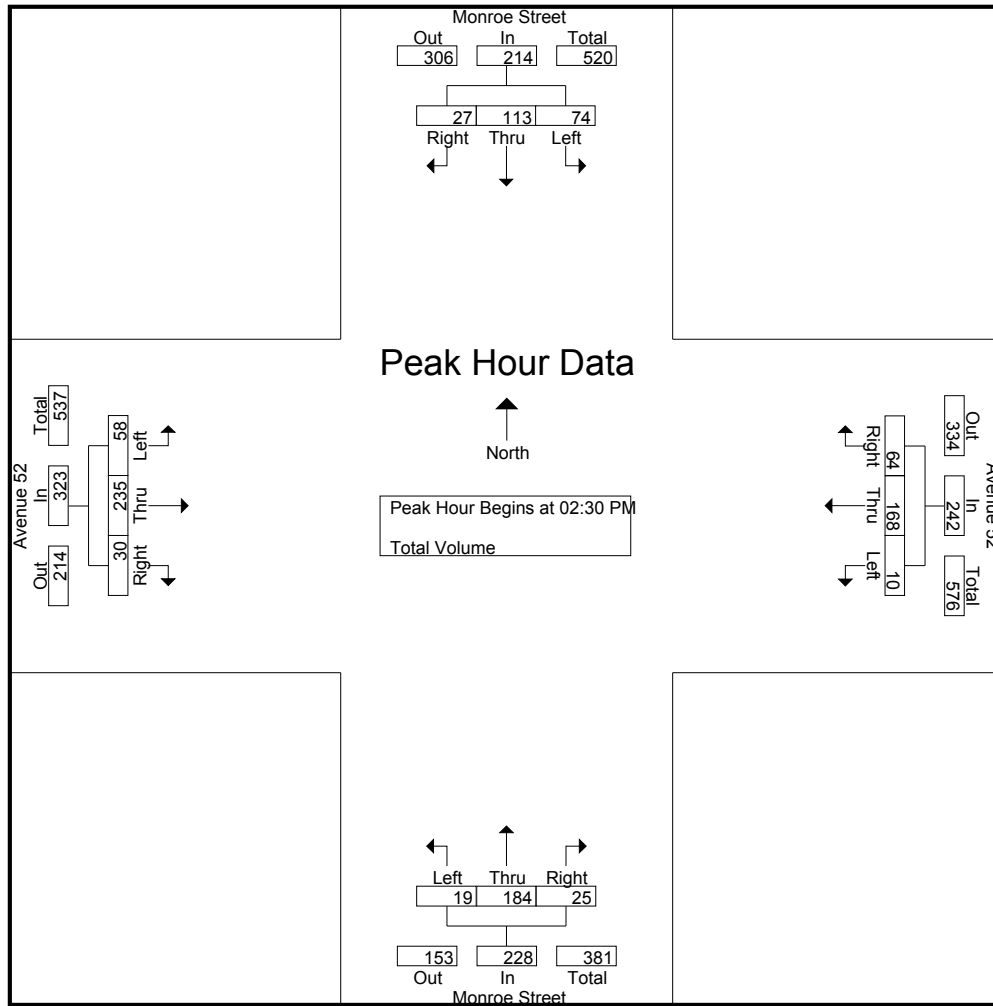
Groups Printed- Total Volume

	Monroe Street Southbound				Avenue 52 Westbound				Monroe Street Northbound				Avenue 52 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:30 PM	26	34	8	68	4	38	15	57	6	66	8	80	21	62	8	91	296
02:45 PM	15	28	2	45	2	43	23	68	9	40	7	56	12	70	9	91	260
Total	41	62	10	113	6	81	38	125	15	106	15	136	33	132	17	182	556
03:00 PM	19	29	11	59	2	39	9	50	1	38	6	45	13	48	5	66	220
03:15 PM	14	22	6	42	2	48	17	67	3	40	4	47	12	55	8	75	231
03:30 PM	18	17	13	48	0	33	18	51	3	38	2	43	6	59	7	72	214
03:45 PM	20	28	10	58	6	46	14	66	0	46	3	49	12	47	6	65	238
Total	71	96	40	207	10	166	58	234	7	162	15	184	43	209	26	278	903
04:00 PM	10	29	3	42	2	31	15	48	5	31	1	37	6	41	3	50	177
04:15 PM	16	23	16	55	0	67	15	82	7	27	2	36	11	39	4	54	227
04:30 PM	17	23	7	47	0	45	17	62	4	31	2	37	11	44	0	55	201
04:45 PM	22	16	10	48	0	59	18	77	4	29	4	37	16	43	3	62	224
Total	65	91	36	192	2	202	65	269	20	118	9	147	44	167	10	221	829
05:00 PM	22	27	17	66	0	49	18	67	2	16	2	20	8	60	4	72	225
05:15 PM	20	28	21	69	0	41	12	53	5	29	3	37	9	53	5	67	226
Grand Total	219	304	124	647	18	539	191	748	49	431	44	524	137	621	62	820	2739
Apprch %	33.8	47	19.2		2.4	72.1	25.5		9.4	82.3	8.4		16.7	75.7	7.6		
Total %	8	11.1	4.5	23.6	0.7	19.7	7	27.3	1.8	15.7	1.6	19.1	5	22.7	2.3	29.9	

	Monroe Street Southbound				Avenue 52 Westbound				Monroe Street Northbound				Avenue 52 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:30 PM																	
02:30 PM	26	34	8	68	4	38	15	57	6	66	8	80	21	62	8	91	296
02:45 PM	15	28	2	45	2	43	23	68	9	40	7	56	12	70	9	91	260
03:00 PM	19	29	11	59	2	39	9	50	1	38	6	45	13	48	5	66	220
03:15 PM	14	22	6	42	2	48	17	67	3	40	4	47	12	55	8	75	231
Total Volume	74	113	27	214	10	168	64	242	19	184	25	228	58	235	30	323	1007
% App. Total	34.6	52.8	12.6		4.1	69.4	26.4		8.3	80.7	11		18	72.8	9.3		
PHF	.712	.831	.614	.787	.625	.875	.696	.890	.528	.697	.781	.713	.690	.839	.833	.887	.851

City of Indio
N/S: Monroe Street
E/W: Avenue 52
Weather: Clear

File Name : 14_IND_Monroe_Ave 52 PM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 2



Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:15 PM				02:30 PM				02:30 PM			
+0 mins.	17	23	7	47	0	67	15	82	6	66	8	80	21	62	8	91
+15 mins.	22	16	10	48	0	45	17	62	9	40	7	56	12	70	9	91
+30 mins.	22	27	17	66	0	59	18	77	1	38	6	45	13	48	5	66
+45 mins.	20	28	21	69	0	49	18	67	3	40	4	47	12	55	8	75
Total Volume	81	94	55	230	0	220	68	288	19	184	25	228	58	235	30	323
% App. Total	35.2	40.9	23.9		0	76.4	23.6		8.3	80.7	11		18	72.8	9.3	
PHF	.920	.839	.655	.833	.000	.821	.944	.878	.528	.697	.781	.713	.690	.839	.833	.887

City of Indio
N/S: Monroe Street
E/W: Avenue 50
Weather: Clear

File Name : 15_IND_Monroe_Ave 50 AM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 1

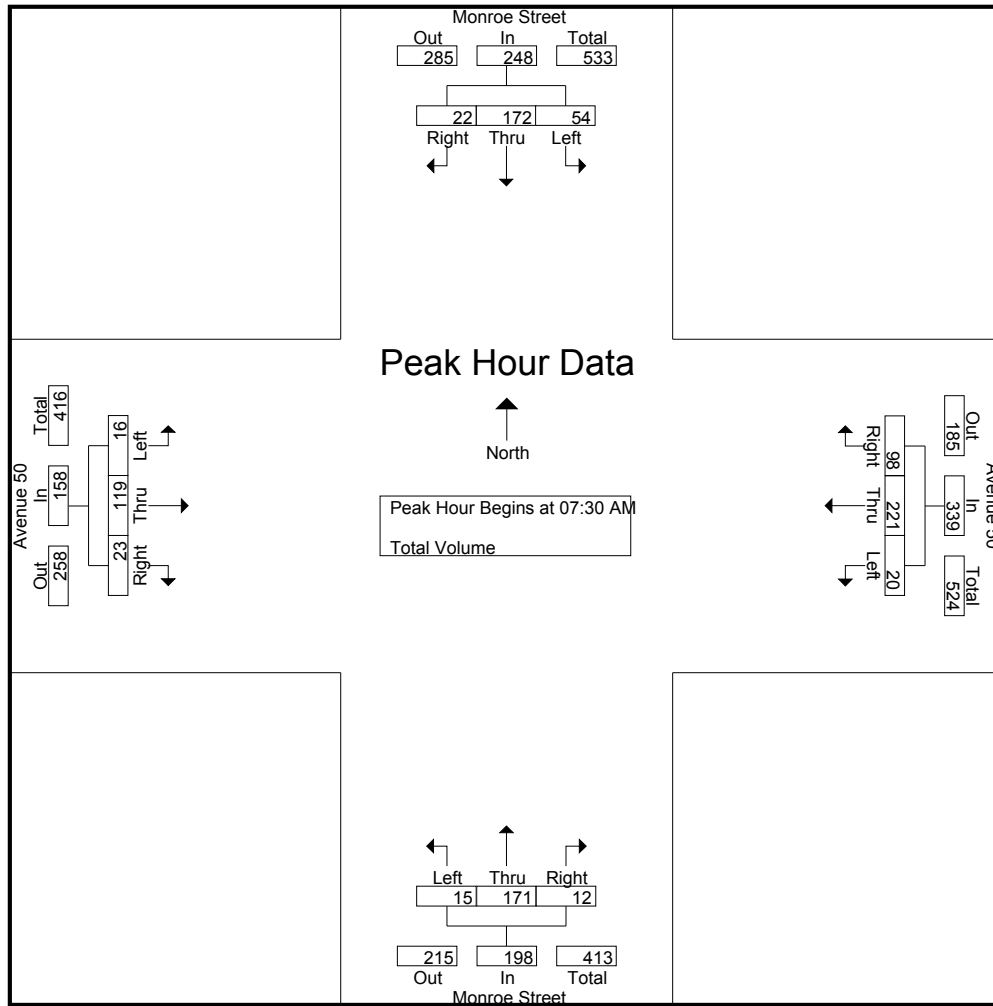
Groups Printed- Total Volume

	Monroe Street Southbound				Avenue 50 Westbound				Monroe Street Northbound				Avenue 50 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	4	49	3	56	6	39	13	58	2	21	4	27	0	6	1	7	148
06:15 AM	12	24	2	38	8	44	9	61	0	19	6	25	2	7	2	11	135
06:30 AM	7	24	3	34	7	52	24	83	1	22	3	26	4	13	5	22	165
06:45 AM	4	49	5	58	3	57	23	83	4	38	4	46	2	17	5	24	211
Total	27	146	13	186	24	192	69	285	7	100	17	124	8	43	13	64	659
07:00 AM	8	40	1	49	3	59	16	78	3	22	3	28	2	16	2	20	175
07:15 AM	10	37	4	51	1	53	21	75	3	31	3	37	4	30	1	35	198
07:30 AM	20	34	5	59	6	62	21	89	6	39	4	49	3	30	9	42	239
07:45 AM	17	56	4	77	7	67	34	108	2	46	4	52	4	35	3	42	279
Total	55	167	14	236	17	241	92	350	14	138	14	166	13	111	15	139	891
08:00 AM	11	49	4	64	3	47	22	72	4	41	2	47	4	30	5	39	222
08:15 AM	6	33	9	48	4	45	21	70	3	45	2	50	5	24	6	35	203
Grand Total	99	395	40	534	48	525	204	777	28	324	35	387	30	208	39	277	1975
Apprch %	18.5	74	7.5		6.2	67.6	26.3		7.2	83.7	9		10.8	75.1	14.1		
Total %	5	20	2	27	2.4	26.6	10.3	39.3	1.4	16.4	1.8	19.6	1.5	10.5	2	14	

	Monroe Street Southbound				Avenue 50 Westbound				Monroe Street Northbound				Avenue 50 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	20	34	5	59	6	62	21	89	6	39	4	49	3	30	9	42	239
07:45 AM	17	56	4	77	7	67	34	108	2	46	4	52	4	35	3	42	279
08:00 AM	11	49	4	64	3	47	22	72	4	41	2	47	4	30	5	39	222
08:15 AM	6	33	9	48	4	45	21	70	3	45	2	50	5	24	6	35	203
Total Volume	54	172	22	248	20	221	98	339	15	171	12	198	16	119	23	158	943
% App. Total	21.8	69.4	8.9		5.9	65.2	28.9		7.6	86.4	6.1		10.1	75.3	14.6		
PHF	.675	.768	.611	.805	.714	.825	.721	.785	.625	.929	.750	.952	.800	.850	.639	.940	.845

City of Indio
N/S: Monroe Street
E/W: Avenue 50
Weather: Clear

File Name : 15_IND_Monroe_Ave 50 AM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:30 AM				07:15 AM			
+0 mins.	10	37	4	51	3	59	16	78	6	39	4	49	4	30	1	35
+15 mins.	20	34	5	59	1	53	21	75	2	46	4	52	3	30	9	42
+30 mins.	17	56	4	77	6	62	21	89	4	41	2	47	4	35	3	42
+45 mins.	11	49	4	64	7	67	34	108	3	45	2	50	4	30	5	39
Total Volume	58	176	17	251	17	241	92	350	15	171	12	198	15	125	18	158
% App. Total	23.1	70.1	6.8		4.9	68.9	26.3		7.6	86.4	6.1		9.5	79.1	11.4	
PHF	.725	.786	.850	.815	.607	.899	.676	.810	.625	.929	.750	.952	.938	.893	.500	.940

City of Indio
N/S: Monroe Street
E/W: Avenue 50
Weather: Clear

File Name : 15_IND_Monroe_Ave 50 PM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 1

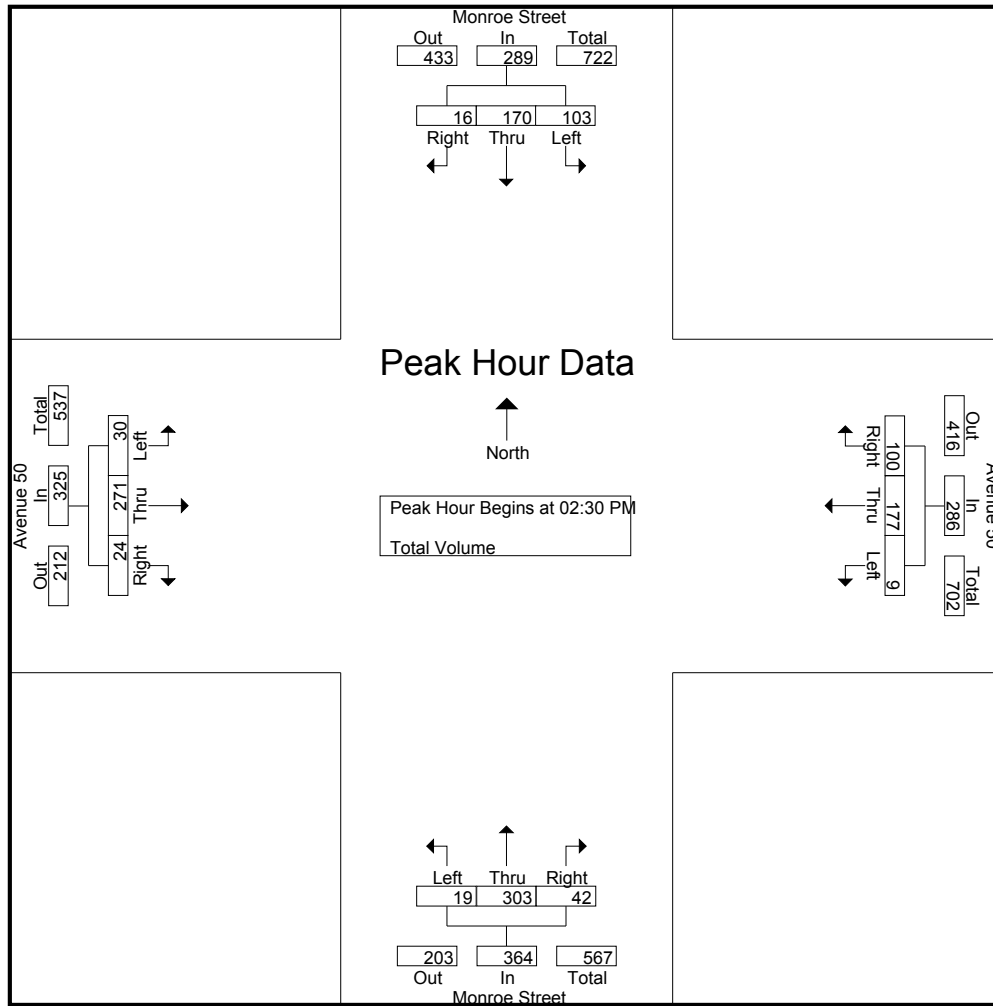
Groups Printed- Total Volume

	Monroe Street Southbound				Avenue 50 Westbound				Monroe Street Northbound				Avenue 50 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:30 PM	25	41	3	69	0	43	22	65	2	110	23	135	5	72	6	83	352
02:45 PM	23	38	2	63	3	47	29	79	3	73	5	81	10	72	4	86	309
Total	48	79	5	132	3	90	51	144	5	183	28	216	15	144	10	169	661
03:00 PM	32	49	3	84	3	34	26	63	4	58	7	69	10	65	7	82	298
03:15 PM	23	42	8	73	3	53	23	79	10	62	7	79	5	62	7	74	305
03:30 PM	29	46	10	85	5	43	28	76	8	51	4	63	5	74	5	84	308
03:45 PM	20	42	6	68	1	52	34	87	4	74	6	84	7	53	4	64	303
Total	104	179	27	310	12	182	111	305	26	245	24	295	27	254	23	304	1214
04:00 PM	24	47	10	81	3	46	35	84	3	54	5	62	2	72	5	79	306
04:15 PM	32	45	14	91	3	53	28	84	3	55	3	61	6	50	5	61	297
04:30 PM	28	46	5	79	3	47	21	71	2	58	3	63	6	64	8	78	291
04:45 PM	28	44	8	80	3	48	23	74	4	57	2	63	7	61	4	72	289
Total	112	182	37	331	12	194	107	313	12	224	13	249	21	247	22	290	1183
05:00 PM	37	62	10	109	5	58	21	84	3	41	4	48	5	59	14	78	319
05:15 PM	17	63	8	88	6	53	24	83	4	50	3	57	7	73	4	84	312
Grand Total	318	565	87	970	38	577	314	929	50	743	72	865	75	777	73	925	3689
Apprch %	32.8	58.2	9		4.1	62.1	33.8		5.8	85.9	8.3		8.1	84	7.9		
Total %	8.6	15.3	2.4	26.3	1	15.6	8.5	25.2	1.4	20.1	2	23.4	2	21.1	2	25.1	

	Monroe Street Southbound				Avenue 50 Westbound				Monroe Street Northbound				Avenue 50 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:30 PM																	
02:30 PM	25	41	3	69	0	43	22	65	2	110	23	135	5	72	6	83	352
02:45 PM	23	38	2	63	3	47	29	79	3	73	5	81	10	72	4	86	309
03:00 PM	32	49	3	84	3	34	26	63	4	58	7	69	10	65	7	82	298
03:15 PM	23	42	8	73	3	53	23	79	10	62	7	79	5	62	7	74	305
Total Volume	103	170	16	289	9	177	100	286	19	303	42	364	30	271	24	325	1264
% App. Total	35.6	58.8	5.5		3.1	61.9	35		5.2	83.2	11.5		9.2	83.4	7.4		
PHF	.805	.867	.500	.860	.750	.835	.862	.905	.475	.689	.457	.674	.750	.941	.857	.945	.898

City of Indio
N/S: Monroe Street
E/W: Avenue 50
Weather: Clear

File Name : 15_IND_Monroe_Ave 50 PM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 2



Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				03:30 PM				02:30 PM				02:45 PM			
+0 mins.	32	45	14	91	5	43	28	76	2	110	23	135	10	72	4	86
+15 mins.	28	46	5	79	1	52	34	87	3	73	5	81	10	65	7	82
+30 mins.	28	44	8	80	3	46	35	84	4	58	7	69	5	62	7	74
+45 mins.	37	62	10	109	3	53	28	84	10	62	7	79	5	74	5	84
Total Volume	125	197	37	359	12	194	125	331	19	303	42	364	30	273	23	326
% App. Total	34.8	54.9	10.3		3.6	58.6	37.8		5.2	83.2	11.5		9.2	83.7	7.1	
PHF	.845	.794	.661	.823	.600	.915	.893	.951	.475	.689	.457	.674	.750	.922	.821	.948

County of Riverside
N/S: Jackson Street
E/W: 58th Avenue
Weather: Clear

File Name : 18_CRV_Jackson_58th AM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 1

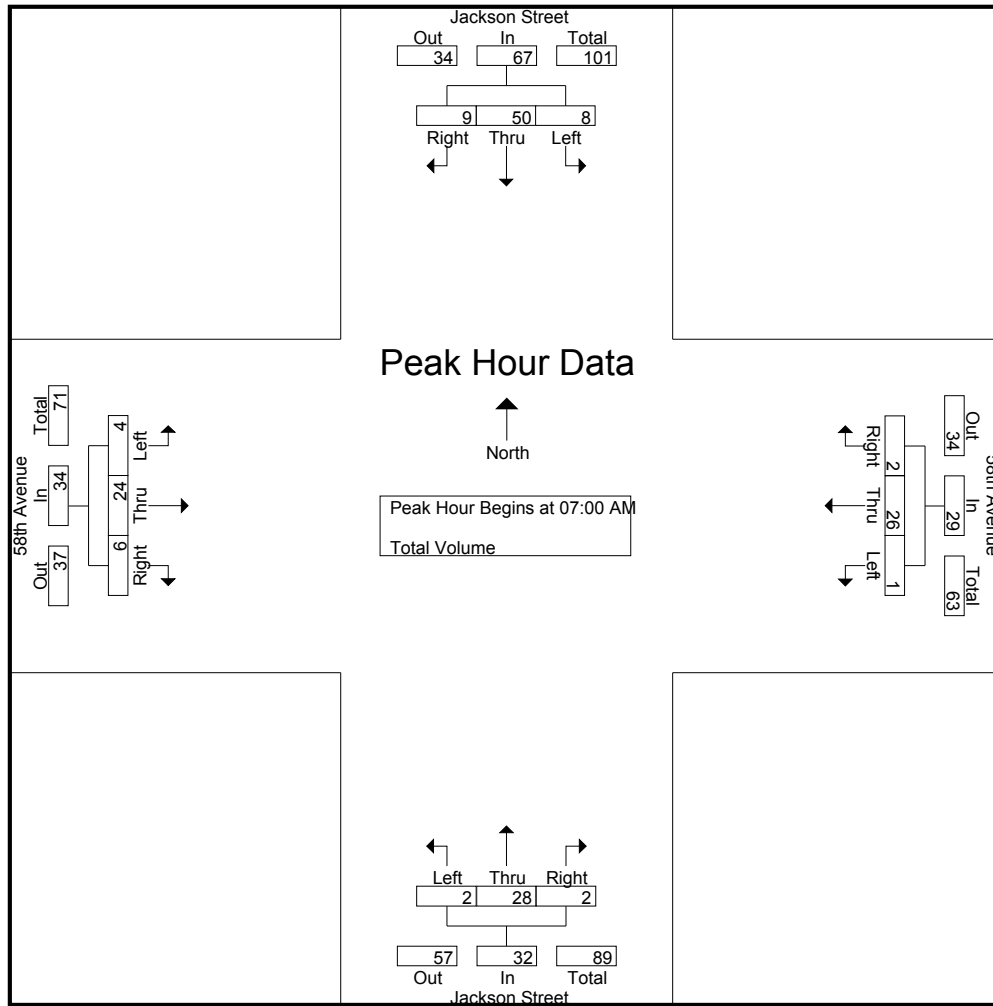
Groups Printed- Total Volume

	Jackson Street Southbound				58th Avenue Westbound				Jackson Street Northbound				58th Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	2	7	4	13	0	11	1	12	2	5	0	7	0	5	2	7	39
06:15 AM	0	15	5	20	0	6	0	6	1	7	1	9	0	4	1	5	40
06:30 AM	1	3	0	4	1	6	1	8	0	9	1	10	5	5	1	11	33
06:45 AM	3	11	3	17	0	8	1	9	2	5	0	7	0	2	1	3	36
Total	6	36	12	54	1	31	3	35	5	26	2	33	5	16	5	26	148
07:00 AM	2	11	2	15	1	9	0	10	1	7	0	8	1	6	1	8	41
07:15 AM	1	12	3	16	0	6	1	7	0	7	1	8	0	7	1	8	39
07:30 AM	2	10	2	14	0	6	0	6	1	6	0	7	2	8	2	12	39
07:45 AM	3	17	2	22	0	5	1	6	0	8	1	9	1	3	2	6	43
Total	8	50	9	67	1	26	2	29	2	28	2	32	4	24	6	34	162
08:00 AM	3	9	1	13	0	4	1	5	0	7	0	7	1	3	0	4	29
08:15 AM	0	10	1	11	0	8	1	9	3	8	0	11	1	2	0	3	34
Grand Total	17	105	23	145	2	69	7	78	10	69	4	83	11	45	11	67	373
Apprch %	11.7	72.4	15.9		2.6	88.5	9		12	83.1	4.8		16.4	67.2	16.4		
Total %	4.6	28.2	6.2	38.9	0.5	18.5	1.9	20.9	2.7	18.5	1.1	22.3	2.9	12.1	2.9	18	

	Jackson Street Southbound				58th Avenue Westbound				Jackson Street Northbound				58th Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	2	11	2	15	1	9	0	10	1	7	0	8	1	6	1	8	41
07:15 AM	1	12	3	16	0	6	1	7	0	7	1	8	0	7	1	8	39
07:30 AM	2	10	2	14	0	6	0	6	1	6	0	7	2	8	2	12	39
07:45 AM	3	17	2	22	0	5	1	6	0	8	1	9	1	3	2	6	43
Total Volume	8	50	9	67	1	26	2	29	2	28	2	32	4	24	6	34	162
% App. Total	11.9	74.6	13.4		3.4	89.7	6.9		6.2	87.5	6.2		11.8	70.6	17.6		
PHF	.667	.735	.750	.761	.250	.722	.500	.725	.500	.875	.500	.889	.500	.750	.750	.708	.942

County of Riverside
N/S: Jackson Street
E/W: 58th Avenue
Weather: Clear

File Name : 18_CRV_Jackson_58th AM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 2



Peak Hour Analysis From 06:00 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				06:00 AM				06:15 AM				07:00 AM			
+0 mins.	2	11	2	15	0	11	1	12	1	7	1	9	1	6	1	8
+15 mins.	1	12	3	16	0	6	0	6	0	9	1	10	0	7	1	8
+30 mins.	2	10	2	14	1	6	1	8	2	5	0	7	2	8	2	12
+45 mins.	3	17	2	22	0	8	1	9	1	7	0	8	1	3	2	6
Total Volume	8	50	9	67	1	31	3	35	4	28	2	34	4	24	6	34
% App. Total	11.9	74.6	13.4		2.9	88.6	8.6		11.8	82.4	5.9		11.8	70.6	17.6	
PHF	.667	.735	.750	.761	.250	.705	.750	.729	.500	.778	.500	.850	.500	.750	.750	.708

County of Riverside
N/S: Jackson Street
E/W: 58th Avenue
Weather: Clear

File Name : 18_CRV_Jackson_58th PM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 1

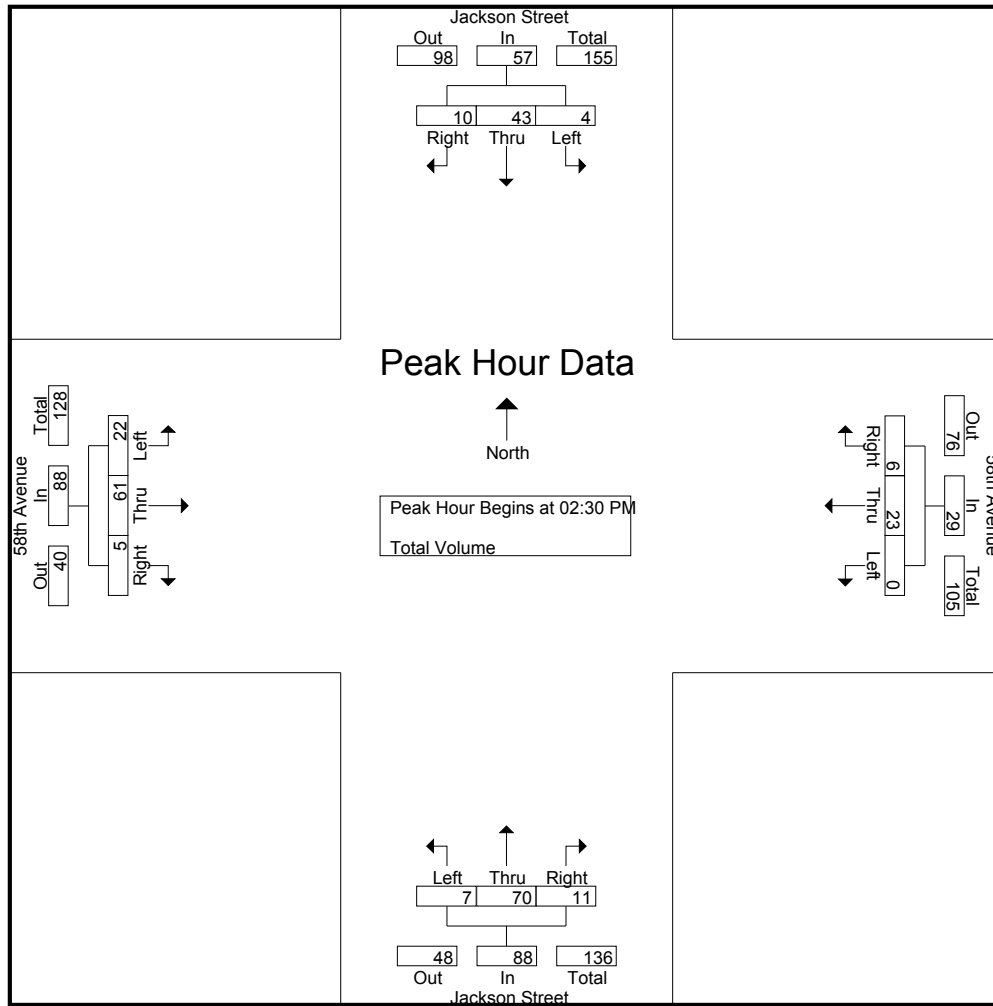
Groups Printed- Total Volume

	Jackson Street Southbound				58th Avenue Westbound				Jackson Street Northbound				58th Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:30 PM	0	14	2	16	0	5	2	7	2	14	2	18	11	29	2	42	83
02:45 PM	1	6	4	11	0	5	0	5	1	16	3	20	6	10	1	17	53
Total	1	20	6	27	0	10	2	12	3	30	5	38	17	39	3	59	136
03:00 PM	1	11	3	15	0	9	2	11	4	22	4	30	1	4	1	6	62
03:15 PM	2	12	1	15	0	4	2	6	0	18	2	20	4	18	1	23	64
03:30 PM	2	15	1	18	1	8	3	12	1	11	0	12	2	13	1	16	58
03:45 PM	3	13	1	17	0	6	0	6	2	11	0	13	1	4	0	5	41
Total	8	51	6	65	1	27	7	35	7	62	6	75	8	39	3	50	225
04:00 PM	0	12	2	14	2	6	1	9	0	14	0	14	3	10	1	14	51
04:15 PM	2	11	2	15	0	5	1	6	1	9	0	10	5	7	0	12	43
04:30 PM	5	12	3	20	0	5	1	6	1	15	0	16	2	5	1	8	50
04:45 PM	2	10	2	14	0	4	1	5	2	17	0	19	3	3	0	6	44
Total	9	45	9	63	2	20	4	26	4	55	0	59	13	25	2	40	188
05:00 PM	1	4	2	7	2	9	0	11	0	10	0	10	3	3	1	7	35
05:15 PM	0	9	2	11	1	3	0	4	2	14	0	16	2	9	0	11	42
Grand Total	19	129	25	173	6	69	13	88	16	171	11	198	43	115	9	167	626
Apprch %	11	74.6	14.5		6.8	78.4	14.8		8.1	86.4	5.6		25.7	68.9	5.4		
Total %	3	20.6	4	27.6	1	11	2.1	14.1	2.6	27.3	1.8	31.6	6.9	18.4	1.4	26.7	

	Jackson Street Southbound				58th Avenue Westbound				Jackson Street Northbound				58th Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:30 PM																	
02:30 PM	0	14	2	16	0	5	2	7	2	14	2	18	11	29	2	42	83
02:45 PM	1	6	4	11	0	5	0	5	1	16	3	20	6	10	1	17	53
03:00 PM	1	11	3	15	0	9	2	11	4	22	4	30	1	4	1	6	62
03:15 PM	2	12	1	15	0	4	2	6	0	18	2	20	4	18	1	23	64
Total Volume	4	43	10	57	0	23	6	29	7	70	11	88	22	61	5	88	262
% App. Total	7	75.4	17.5		0	79.3	20.7		8	79.5	12.5		25	69.3	5.7		
PHF	.500	.768	.625	.891	.000	.639	.750	.659	.438	.795	.688	.733	.500	.526	.625	.524	.789

County of Riverside
N/S: Jackson Street
E/W: 58th Avenue
Weather: Clear

File Name : 18_CRV_Jackson_58th PM
Site Code : 05117509
Start Date : 8/15/2017
Page No : 2



Peak Hour Analysis From 02:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:45 PM				03:00 PM				02:30 PM				02:30 PM			
+0 mins.	3	13	1	17	0	9	2	11	2	14	2	18	11	29	2	42
+15 mins.	0	12	2	14	0	4	2	6	1	16	3	20	6	10	1	17
+30 mins.	2	11	2	15	1	8	3	12	4	22	4	30	1	4	1	6
+45 mins.	5	12	3	20	0	6	0	6	0	18	2	20	4	18	1	23
Total Volume	10	48	8	66	1	27	7	35	7	70	11	88	22	61	5	88
% App. Total	15.2	72.7	12.1		2.9	77.1	20		8	79.5	12.5		25	69.3	5.7	
PHF	.500	.923	.667	.825	.250	.750	.583	.729	.438	.795	.688	.733	.500	.526	.625	.524

Counts Unlimited, Inc

Page 1

City of La Quinta
Avenue 58
W/ Jackson Street
24 Hour Directional Volume Count

PO Box 1178
Corona, CA 92878
Phone: 951-268-6268
email: counts@countsunlimited.com

LQA003
Site Code: 051-19233

Start Time	4/9/2019 Tue	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		1	18			3	13				
12:15		1	16			1	8				
12:30		0	10			8	12				
12:45		2	8	4	52	2	22	14	55	18	107
01:00		1	23			0	16				
01:15		0	19			0	7				
01:30		0	15			0	12				
01:45		1	16	2	73	0	14	0	49	2	122
02:00		0	23			0	12				
02:15		1	14			1	9				
02:30		0	22			0	22				
02:45		0	16	1	75	0	10	1	53	2	128
03:00		0	52			0	32				
03:15		0	31			1	22				
03:30		0	18			1	18				
03:45		2	18	2	119	0	15	2	87	4	206
04:00		1	17			3	18				
04:15		0	19			5	15				
04:30		0	19			11	14				
04:45		1	12	2	67	8	8	27	55	29	122
05:00		0	17			10	20				
05:15		0	12			11	8				
05:30		5	12			10	9				
05:45		7	9	12	50	19	1	50	38	62	88
06:00		12	2			28	6				
06:15		10	5			30	8				
06:30		17	4			18	6				
06:45		13	2	52	13	23	6	99	26	151	39
07:00		14	6			22	5				
07:15		10	8			22	3				
07:30		12	9			13	2				
07:45		20	2	56	25	19	7	76	17	132	42
08:00		10	5			13	2				
08:15		16	0			22	7				
08:30		14	2			18	2				
08:45		13	3	53	10	18	2	71	13	124	23
09:00		13	0			10	4				
09:15		11	0			18	3				
09:30		10	2			14	6				
09:45		15	2	49	4	15	2	57	15	106	19
10:00		10	3			12	1				
10:15		26	2			19	1				
10:30		11	4			16	0				
10:45		16	1	63	10	16	0	63	2	126	12
11:00		6	1			9	0				
11:15		7	1			12	1				
11:30		10	0			12	0				
11:45		8	2	31	4	11	0	44	1	75	5
Total		327	502	327	502	504	411	504	411	831	913
Combined Total		829		829		915		915		1744	
AM Peak	-	10:00	-	-	-	06:00	-	-	-	-	-
Vol.	-	63	-	-	-	99	-	-	-	-	-
P.H.F.		0.606				0.825					
PM Peak	-	-	02:30	-	-	-	03:00	-	-	-	-
Vol.	-	-	121	-	-	-	87	-	-	-	-
P.H.F.			0.582				0.680				
Percentage		39.4%	60.6%			55.1%	44.9%				
ADT/AADT		ADT 1,744	AADT 1,744								

Counts Unlimited, Inc

Page 1

City of La Quinta
Madison Street
S/ Avenue 56
24 Hour Directional Volume Count

PO Box 1178
Corona, CA 92878
Phone: 951-268-6268
email: counts@countsunlimited.com

LQA004
Site Code: 051-19233

Start Time	4/9/2019 Tue	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		0	64			0	62				
12:15		1	69			0	34				
12:30		2	45			0	51				
12:45		2	74	5	252	1	66	1	213	6	465
01:00		1	65			3	70				
01:15		2	69			3	59				
01:30		1	78			2	60				
01:45		1	62	5	274	1	49	9	238	14	512
02:00		0	75			1	74				
02:15		0	47			1	54				
02:30		0	75			0	62				
02:45		0	58	0	255	2	78	4	268	4	523
03:00		0	70			2	72				
03:15		0	42			0	92				
03:30		0	73			3	64				
03:45		2	58	2	243	1	72	6	300	8	543
04:00		4	69			3	58				
04:15		3	53			5	66				
04:30		10	44			9	67				
04:45		8	39	25	205	11	66	28	257	53	462
05:00		7	48			8	45				
05:15		9	49			20	52				
05:30		12	42			21	55				
05:45		16	43	44	182	25	48	74	200	118	382
06:00		28	29			24	35				
06:15		27	27			25	41				
06:30		46	27			34	32				
06:45		36	16	137	99	53	33	136	141	273	240
07:00		54	17			51	40				
07:15		60	22			47	28				
07:30		59	12			43	31				
07:45		49	12	222	63	53	35	194	134	416	197
08:00		65	20			41	25				
08:15		50	8			47	32				
08:30		58	10			54	25				
08:45		80	12	253	50	52	17	194	99	447	149
09:00		61	9			30	18				
09:15		63	10			45	17				
09:30		81	6			36	10				
09:45		73	7	278	32	33	14	144	59	422	91
10:00		60	4			49	13				
10:15		72	0			52	10				
10:30		83	1			50	7				
10:45		62	1	277	6	47	6	198	36	475	42
11:00		76	1			43	5				
11:15		66	2			73	2				
11:30		51	3			55	4				
11:45		63	2	256	8	63	3	234	14	490	22
Total		1504	1669	1504	1669	1222	1959	1222	1959	2726	3628
Combined Total		3173		3173		3181		3181		6354	
AM Peak	-	10:15	-	-	-	11:00	-	-	-	-	-
Vol.	-	293	-	-	-	234	-	-	-	-	-
P.H.F.		0.883				0.801					
PM Peak	-	-	00:45	-	-	-	02:45	-	-	-	-
Vol.	-	-	286	-	-	-	306	-	-	-	-
P.H.F.			0.917				0.832				
Percentage		47.4%	52.6%			38.4%	61.6%				
ADT/AADT		ADT 6,354	AADT 6,354								

Counts Unlimited, Inc

Page 1

City of La Quinta
Monroe Street
S/ Avenue 60
24 Hour Directional Volume Count

PO Box 1178
Corona, CA 92878
Phone: 951-268-6268
email: counts@countsunlimited.com

LQA008
Site Code: 051-19233

Start Time	4/9/2019 Tue	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		0	12			1	8				
12:15		0	13			0	14				
12:30		0	6			0	9				
12:45		0	9	0	40	0	11	1	42	1	82
01:00		0	14			0	17				
01:15		0	10			1	8				
01:30		1	12			1	14				
01:45		0	15	1	51	1	15	3	54	4	105
02:00		1	10			2	18				
02:15		0	22			0	15				
02:30		0	21			0	26				
02:45		0	14	1	67	1	19	3	78	4	145
03:00		0	19			0	34				
03:15		0	18			0	20				
03:30		2	18			1	20				
03:45		2	12	4	67	0	16	1	90	5	157
04:00		0	6			1	18				
04:15		0	8			0	20				
04:30		7	17			1	14				
04:45		6	8	13	39	0	24	2	76	15	115
05:00		6	10			2	19				
05:15		4	10			6	14				
05:30		8	15			2	15				
05:45		5	8	23	43	6	12	16	60	39	103
06:00		11	8			8	12				
06:15		8	8			10	13				
06:30		22	8			24	11				
06:45		16	4	57	28	27	14	69	50	126	78
07:00		18	4			11	7				
07:15		12	6			16	8				
07:30		18	3			18	6				
07:45		13	6	61	19	16	7	61	28	122	47
08:00		11	2			12	4				
08:15		15	3			13	9				
08:30		12	2			14	8				
08:45		18	0	56	7	18	3	57	24	113	31
09:00		7	2			8	2				
09:15		10	1			6	3				
09:30		13	3			6	7				
09:45		9	0	39	6	4	8	24	20	63	26
10:00		14	0			8	1				
10:15		8	1			12	2				
10:30		7	0			10	5				
10:45		8	0	37	1	12	2	42	10	79	11
11:00		8	1			12	1				
11:15		10	0			6	0				
11:30		8	0			12	1				
11:45		10	0	36	1	7	0	37	2	73	3
Total		328	369	328	369	316	534	316	534	644	903
Combined Total		697		697		850		850		1547	
AM Peak	-	06:30	-	-	-	06:30	-	-	-	-	-
Vol.	-	68	-	-	-	78	-	-	-	-	-
P.H.F.		0.773				0.722					
PM Peak	-	-	02:15	-	-	-	02:30	-	-	-	-
Vol.	-	-	76	-	-	-	99	-	-	-	-
P.H.F.			0.864				0.728				
Percentage		47.1%	52.9%			37.2%	62.8%				
ADT/AADT		ADT 1,547	AADT 1,547								

Counts Unlimited, Inc

City of La Quinta
Monroe Street
S/ Avenue 56
24 Hour Directional Volume Count

PO Box 1178
Corona, CA 92878
Phone: 951-268-6268
email: counts@countsunlimited.com

LQA010
Site Code: 051-19233

Start Time	4/9/2019 Tue	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		0	33			4	30				
12:15		1	32			0	39				
12:30		1	26			1	24				
12:45		0	34	2	125	0	26	5	119	7	244
01:00		2	23			1	25				
01:15		1	31			0	26				
01:30		1	28			2	27				
01:45		1	53	5	135	2	28	5	106	10	241
02:00		0	30			1	36				
02:15		0	51			0	38				
02:30		0	40			1	37				
02:45		0	65	0	186	0	36	2	147	2	333
03:00		1	51			0	26				
03:15		3	44			0	24				
03:30		0	30			2	20				
03:45		1	39	5	164	1	18	3	88	8	252
04:00		1	22			0	22				
04:15		4	45			3	29				
04:30		5	25			5	29				
04:45		5	21	15	113	8	22	16	102	31	215
05:00		4	24			8	21				
05:15		7	21			11	17				
05:30		7	9			18	17				
05:45		6	15	24	69	22	17	59	72	83	141
06:00		14	15			21	10				
06:15		26	11			29	21				
06:30		30	8			40	17				
06:45		15	9	85	43	29	10	119	58	204	101
07:00		18	13			27	11				
07:15		32	7			25	9				
07:30		24	12			35	5				
07:45		33	2	107	34	39	11	126	36	233	70
08:00		37	4			39	12				
08:15		28	1			29	3				
08:30		34	5			28	6				
08:45		30	4	129	14	18	2	114	23	243	37
09:00		30	4			23	7				
09:15		29	3			31	7				
09:30		19	0			21	8				
09:45		33	0	111	7	27	3	102	25	213	32
10:00		42	4			28	4				
10:15		22	0			27	4				
10:30		34	0			19	4				
10:45		28	0	126	4	38	0	112	12	238	16
11:00		39	2			25	1				
11:15		22	0			28	1				
11:30		36	0			27	1				
11:45		33	0	130	2	41	1	121	4	251	6
Total		739	896	739	896	784	792	784	792	1523	1688
Combined Total		1635		1635		1576		1576		3211	
AM Peak	-	07:45	-	-	-	07:30	-	-	-	-	-
Vol.	-	132	-	-	-	142	-	-	-	-	-
P.H.F.		0.892				0.910					
PM Peak	-	-	02:15	-	-	-	02:00	-	-	-	-
Vol.	-	-	207	-	-	-	147	-	-	-	-
P.H.F.			0.796				0.967				
Percentage		45.2%	54.8%			49.7%	50.3%				
ADT/AADT		ADT 3,211	AADT 3,211								

Counts Unlimited, Inc.

City of La Quinta
Avenue 50
E/ Jefferson Street
24 Hour Directional Volume Count

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

LQA007
Site Code: 051-19315

Start Time	21-May-19 Tue	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		13	68			8	92				
12:15		15	63			7	78				
12:30		4	70			6	64				
12:45		4	67	36	268	2	71	23	305	59	573
01:00		4	87			3	92				
01:15		1	75			2	103				
01:30		5	76			1	100				
01:45		3	104	13	342	1	112	7	407	20	749
02:00		1	114			0	94				
02:15		2	85			3	92				
02:30		1	107			4	101				
02:45		2	141	6	447	1	94	8	381	14	828
03:00		0	126			1	104				
03:15		2	106			0	114				
03:30		1	115			4	93				
03:45		3	115	6	462	7	117	12	428	18	890
04:00		3	89			6	90				
04:15		3	116			4	108				
04:30		4	96			7	101				
04:45		3	85	13	386	23	95	40	394	53	780
05:00		6	105			16	96				
05:15		13	102			28	100				
05:30		15	94			26	107				
05:45		16	76	50	377	34	91	104	394	154	771
06:00		14	72			31	81				
06:15		14	85			35	96				
06:30		31	59			62	69				
06:45		40	68	99	284	106	73	234	319	333	603
07:00		64	57			119	55				
07:15		80	62			111	56				
07:30		79	77			124	53				
07:45		84	49	307	245	109	57	463	221	770	466
08:00		103	64			98	43				
08:15		78	54			83	48				
08:30		70	56			97	35				
08:45		52	54	303	228	66	39	344	165	647	393
09:00		57	54			58	38				
09:15		48	39			61	27				
09:30		60	53			70	16				
09:45		47	29	212	175	80	30	269	111	481	286
10:00		48	25			77	31				
10:15		49	37			70	13				
10:30		50	29			63	15				
10:45		74	13	221	104	82	15	292	74	513	178
11:00		45	17			72	9				
11:15		50	20			67	9				
11:30		65	17			56	3				
11:45		67	4	227	58	65	6	260	27	487	85
Total		1493	3376	1493	3376	2056	3226	2056	3226	3549	6602
Combined Total		4869		4869		5282		5282		10151	
AM Peak	-	07:15	-	-	-	07:00	-	-	-	-	-
Vol.	-	346	-	-	-	463	-	-	-	-	-
P.H.F.		0.840				0.933					
PM Peak	-	-	02:45	-	-	-	03:00	-	-	-	-
Vol.	-	-	488	-	-	-	428	-	-	-	-
P.H.F.			0.865				0.915				
Percentage		30.7%	69.3%			38.9%	61.1%				
ADT/AADT		ADT 10,151	AADT 10,151								

Counts Unlimited, Inc.

Page 1

City of La Quinta
Jefferson Street
B/ Avenue 50 - Ralphs Driveway 2
24 Hour Directional Volume Count

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

LQA004
Site Code: 051-19315

Start Time	21-May-19 Tue	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		10	165			15	174				
12:15		6	198			18	176				
12:30		11	170			11	138				
12:45		2	184	29	717	11	160	55	648	84	1365
01:00		2	177			8	174				
01:15		9	173			8	185				
01:30		3	189			4	185				
01:45		2	207	16	746	6	215	26	759	42	1505
02:00		6	211			5	222				
02:15		4	199			4	214				
02:30		4	240			11	202				
02:45		1	226	15	876	5	202	25	840	40	1716
03:00		1	221			2	230				
03:15		2	240			2	194				
03:30		10	241			4	196				
03:45		6	207	19	909	7	209	15	829	34	1738
04:00		5	170			4	166				
04:15		9	176			18	212				
04:30		16	169			14	175				
04:45		40	166	70	681	16	205	52	758	122	1439
05:00		22	184			28	201				
05:15		22	182			35	206				
05:30		37	153			35	194				
05:45		52	157	133	676	62	173	160	774	293	1450
06:00		58	130			64	152				
06:15		83	147			56	155				
06:30		97	119			94	133				
06:45		145	113	383	509	163	101	377	541	760	1050
07:00		180	99			206	140				
07:15		204	111			178	116				
07:30		227	95			205	106				
07:45		177	58	788	363	186	84	775	446	1563	809
08:00		172	61			218	112				
08:15		186	52			161	96				
08:30		170	64			144	87				
08:45		171	48	699	225	129	115	652	410	1351	635
09:00		149	65			126	91				
09:15		163	57			144	78				
09:30		179	44			141	79				
09:45		177	39	668	205	138	68	549	316	1217	521
10:00		166	32			124	51				
10:15		188	25			123	57				
10:30		174	18			151	41				
10:45		173	24	701	99	147	28	545	177	1246	276
11:00		177	13			152	32				
11:15		177	12			141	36				
11:30		155	13			172	27				
11:45		174	5	683	43	161	21	626	116	1309	159
Total		4204	6049	4204	6049	3857	6614	3857	6614	8061	12663
Combined Total		10253		10253		10471		10471		20724	
AM Peak	-	07:00	-	-	-	07:15	-	-	-	-	-
Vol.	-	788	-	-	-	787	-	-	-	-	-
P.H.F.		0.868				0.903					
PM Peak	-	-	02:45	-	-	-	01:45	-	-	-	-
Vol.	-	-	928	-	-	-	853	-	-	-	-
P.H.F.			0.963				0.961				
Percentage		41.0%	59.0%			36.8%	63.2%				
ADT/AADT		ADT 20,724	AADT 20,724								

Counts Unlimited, Inc.

City of La Quinta
Jefferson Street
N/ Pomelo
24 Hour Directional Volume Count

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

LQA005
Site Code: 051-19315

Start Time	21-May-19 Tue	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		4	132			5	142				
12:15		5	144			12	139				
12:30		7	150			9	124				
12:45		2	137	18	563	8	139	34	544	52	1107
01:00		1	142			6	133				
01:15		5	141			3	147				
01:30		2	165			5	111				
01:45		2	141	10	589	4	165	18	556	28	1145
02:00		6	160			5	161				
02:15		3	176			2	160				
02:30		1	189			9	141				
02:45		3	163	13	688	3	153	19	615	32	1303
03:00		1	172			1	182				
03:15		2	174			0	152				
03:30		6	188			2	144				
03:45		4	155	13	689	5	160	8	638	21	1327
04:00		3	127			2	142				
04:15		12	138			12	171				
04:30		11	131			14	152				
04:45		32	125	58	521	13	154	41	619	99	1140
05:00		18	134			21	140				
05:15		14	130			28	136				
05:30		27	121			31	138				
05:45		46	101	105	486	49	113	129	527	234	1013
06:00		52	97			53	133				
06:15		76	94			50	101				
06:30		78	90			77	98				
06:45		106	80	312	361	108	80	288	412	600	773
07:00		118	80			111	104				
07:15		145	58			130	75				
07:30		160	55			139	73				
07:45		144	41	567	234	130	70	510	322	1077	556
08:00		126	46			133	65				
08:15		128	27			121	58				
08:30		144	45			117	62				
08:45		153	35	551	153	96	69	467	254	1018	407
09:00		123	30			120	72				
09:15		136	31			122	56				
09:30		143	21			116	55				
09:45		139	26	541	108	115	55	473	238	1014	346
10:00		142	14			124	43				
10:15		157	20			113	45				
10:30		162	19			120	25				
10:45		141	15	602	68	117	22	474	135	1076	203
11:00		136	11			144	27				
11:15		153	9			112	20				
11:30		119	8			134	17				
11:45		155	1	563	29	127	19	517	83	1080	112
Total		3353	4489	3353	4489	2978	4943	2978	4943	6331	9432
Combined Total		7842		7842		7921		7921		15763	
AM Peak	-	10:00	-	-	-	07:15	-	-	-	-	-
Vol.	-	602	-	-	-	532	-	-	-	-	-
P.H.F.		0.929				0.957					
PM Peak	-	-	02:15	-	-	-	03:00	-	-	-	-
Vol.	-	-	700	-	-	-	638	-	-	-	-
P.H.F.			0.926				0.876				
Percentage		42.8%	57.2%			37.6%	62.4%				
ADT/AADT		ADT 15,763	AADT 15,763								

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City of La Quinta
N/S: Madison Street
E/W: Avenue 58
Weather: Clear

File Name : 01_LQA_Madison_Ave 58 Sat
Site Code : 05120105
Start Date : 2/22/2020
Page No : 1

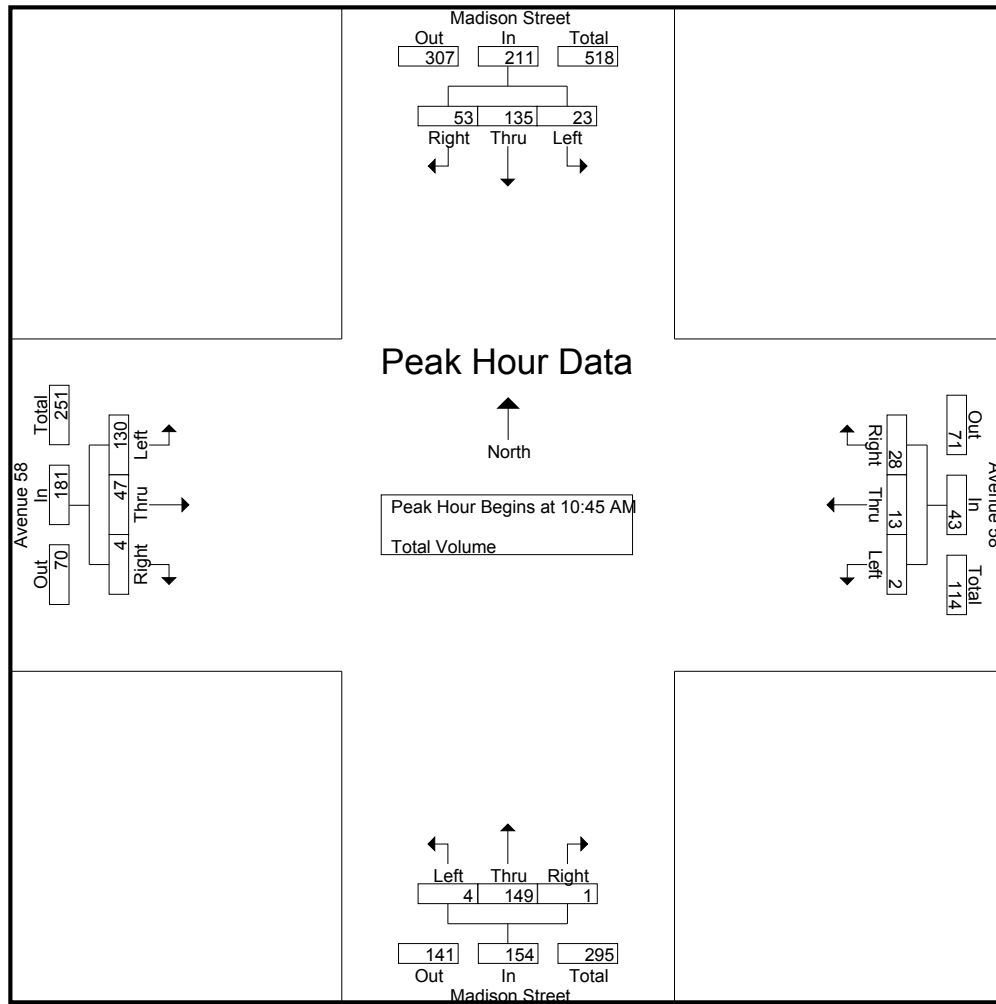
Groups Printed- Total Volume

	Madison Street Southbound				Avenue 58 Westbound				Madison Street Northbound				Avenue 58 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
10:00 AM	7	39	13	59	0	3	11	14	1	31	2	34	15	4	0	19	126
10:15 AM	6	29	9	44	0	2	8	10	0	47	0	47	41	12	2	55	156
10:30 AM	6	22	13	41	2	4	4	10	0	43	0	43	21	3	3	27	121
10:45 AM	3	38	12	53	0	8	5	13	1	31	0	32	23	8	0	31	129
Total	22	128	47	197	2	17	28	47	2	152	2	156	100	27	5	132	532
11:00 AM	8	27	14	49	0	2	4	6	0	40	0	40	32	18	3	53	148
11:15 AM	7	29	9	45	1	0	9	10	0	39	1	40	43	13	0	56	151
11:30 AM	5	41	18	64	1	3	10	14	3	39	0	42	32	8	1	41	161
11:45 AM	5	38	10	53	2	1	3	6	0	39	0	39	22	8	1	31	129
Total	25	135	51	211	4	6	26	36	3	157	1	161	129	47	5	181	589
12:00 PM	9	30	8	47	1	2	3	6	2	55	1	58	12	4	1	17	128
12:15 PM	13	36	15	64	2	2	11	15	0	34	0	34	14	0	2	16	129
12:30 PM	7	51	16	74	0	1	6	7	0	35	0	35	19	5	0	24	140
12:45 PM	7	37	9	53	3	1	7	11	2	29	0	31	10	3	2	15	110
Total	36	154	48	238	6	6	27	39	4	153	1	158	55	12	5	72	507
01:00 PM	2	43	12	57	0	4	8	12	1	39	1	41	14	2	1	17	127
01:15 PM	7	31	15	53	1	1	5	7	1	26	1	28	11	4	2	17	105
01:30 PM	8	41	9	58	2	4	3	9	0	34	0	34	8	2	1	11	112
01:45 PM	10	28	12	50	1	1	5	7	0	35	0	35	13	4	2	19	111
Total	27	143	48	218	4	10	21	35	2	134	2	138	46	12	6	64	455
Grand Total	110	560	194	864	16	39	102	157	11	596	6	613	330	98	21	449	2083
Apprch %	12.7	64.8	22.5		10.2	24.8	65		1.8	97.2	1		73.5	21.8	4.7		
Total %	5.3	26.9	9.3	41.5	0.8	1.9	4.9	7.5	0.5	28.6	0.3	29.4	15.8	4.7	1	21.6	

	Madison Street Southbound				Avenue 58 Westbound				Madison Street Northbound				Avenue 58 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 10:45 AM																	
10:45 AM	3	38	12	53	0	8	5	13	1	31	0	32	23	8	0	31	129
11:00 AM	8	27	14	49	0	2	4	6	0	40	0	40	32	18	3	53	148
11:15 AM	7	29	9	45	1	0	9	10	0	39	1	40	43	13	0	56	151
11:30 AM	5	41	18	64	1	3	10	14	3	39	0	42	32	8	1	41	161
Total Volume	23	135	53	211	2	13	28	43	4	149	1	154	130	47	4	181	589
% App. Total	10.9	64	25.1		4.7	30.2	65.1		2.6	96.8	0.6		71.8	26	2.2		
PHF	.719	.823	.736	.824	.500	.406	.700	.768	.333	.931	.250	.917	.756	.653	.333	.808	.915

City of La Quinta
N/S: Madison Street
E/W: Avenue 58
Weather: Clear

File Name : 01_LQA_Madison_ Ave 58 Sat
Site Code : 05120105
Start Date : 2/22/2020
Page No : 2



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:15 PM				10:00 AM				11:15 AM				10:45 AM			
+0 mins.	13	36	15	64	0	3	11	14	0	39	1	40	23	8	0	31
+15 mins.	7	51	16	74	0	2	8	10	3	39	0	42	32	18	3	53
+30 mins.	7	37	9	53	2	4	4	10	0	39	0	39	43	13	0	56
+45 mins.	2	43	12	57	0	8	5	13	2	55	1	58	32	8	1	41
Total Volume	29	167	52	248	2	17	28	47	5	172	2	179	130	47	4	181
% App. Total	11.7	67.3	21		4.3	36.2	59.6		2.8	96.1	1.1		71.8	26	2.2	
PHF	.558	.819	.813	.838	.250	.531	.636	.839	.417	.782	.500	.772	.756	.653	.333	.808

City of La Quinta
N/S: Madison Street
E/W: Avenue 50
Weather: Clear

File Name : 02_LQA_Madison_Ave 50 Sat
Site Code : 05120105
Start Date : 2/22/2020
Page No : 1

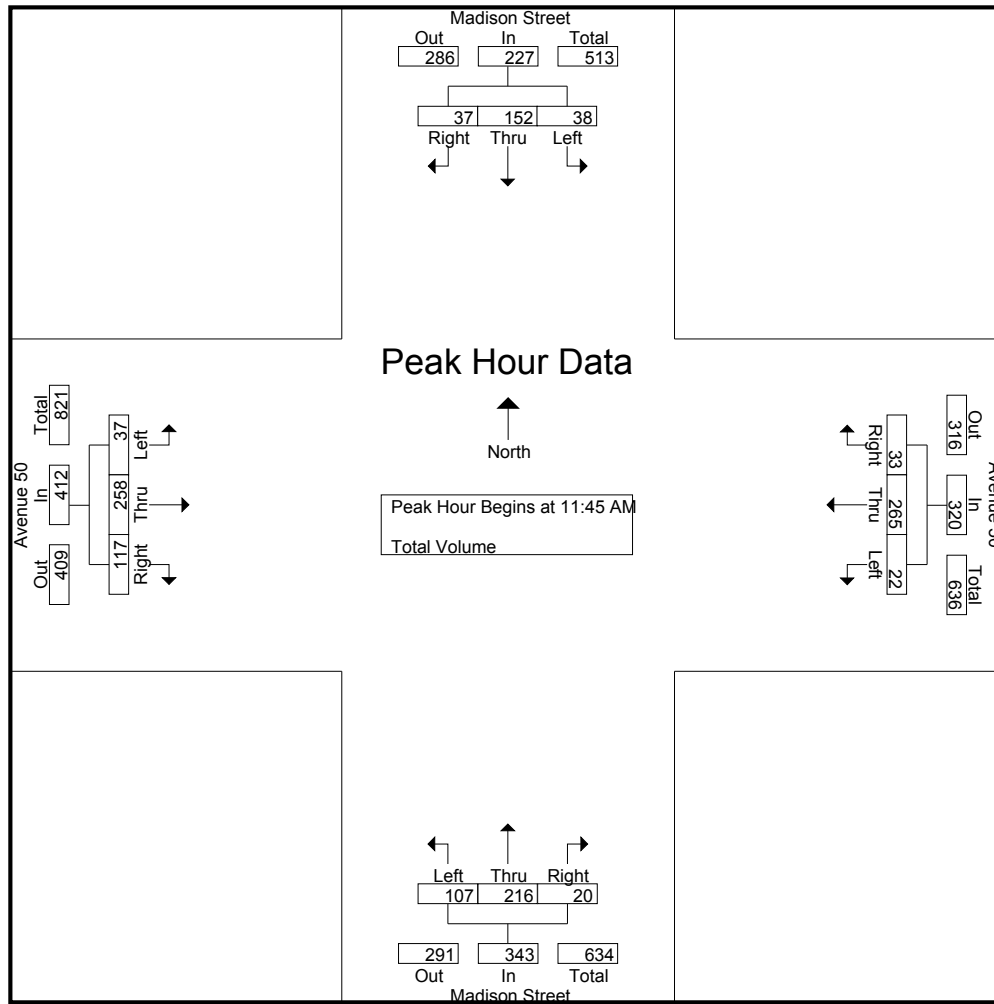
Groups Printed- Total Volume

	Madison Street Southbound				Avenue 50 Westbound				Madison Street Northbound				Avenue 50 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
10:00 AM	8	28	11	47	2	58	13	73	28	48	4	80	7	63	21	91	291
10:15 AM	9	25	7	41	2	48	7	57	24	53	3	80	3	41	24	68	246
10:30 AM	8	30	13	51	3	48	5	56	28	53	4	85	7	54	19	80	272
10:45 AM	5	32	11	48	4	74	15	93	25	54	8	87	10	50	24	84	312
Total	30	115	42	187	11	228	40	279	105	208	19	332	27	208	88	323	1121
11:00 AM	4	32	6	42	5	59	9	73	24	60	12	96	6	59	16	81	292
11:15 AM	11	37	13	61	7	73	13	93	20	56	6	82	5	39	27	71	307
11:30 AM	9	24	5	38	10	65	11	86	30	58	8	96	10	57	29	96	316
11:45 AM	13	38	9	60	8	68	7	83	32	37	7	76	8	60	28	96	315
Total	37	131	33	201	30	265	40	335	106	211	33	350	29	215	100	344	1230
12:00 PM	5	33	11	49	5	68	10	83	32	68	4	104	9	78	25	112	348
12:15 PM	8	36	7	51	4	59	9	72	18	61	3	82	8	57	32	97	302
12:30 PM	12	45	10	67	5	70	7	82	25	50	6	81	12	63	32	107	337
12:45 PM	13	37	15	65	3	50	10	63	22	61	2	85	3	62	24	89	302
Total	38	151	43	232	17	247	36	300	97	240	15	352	32	260	113	405	1289
01:00 PM	10	36	17	63	4	53	7	64	22	34	5	61	12	73	32	117	305
01:15 PM	11	41	17	69	2	50	6	58	23	46	4	73	5	63	28	96	296
01:30 PM	9	35	11	55	8	60	8	76	15	46	5	66	5	68	31	104	301
01:45 PM	7	42	4	53	5	66	12	83	26	48	5	79	6	58	34	98	313
Total	37	154	49	240	19	229	33	281	86	174	19	279	28	262	125	415	1215
Grand Total	142	551	167	860	77	969	149	1195	394	833	86	1313	116	945	426	1487	4855
Apprch %	16.5	64.1	19.4		6.4	81.1	12.5		30	63.4	6.5		7.8	63.6	28.6		
Total %	2.9	11.3	3.4	17.7	1.6	20	3.1	24.6	8.1	17.2	1.8	27	2.4	19.5	8.8	30.6	

	Madison Street Southbound				Avenue 50 Westbound				Madison Street Northbound				Avenue 50 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:45 AM																	
11:45 AM	13	38	9	60	8	68	7	83	32	37	7	76	8	60	28	96	315
12:00 PM	5	33	11	49	5	68	10	83	32	68	4	104	9	78	25	112	348
12:15 PM	8	36	7	51	4	59	9	72	18	61	3	82	8	57	32	97	302
12:30 PM	12	45	10	67	5	70	7	82	25	50	6	81	12	63	32	107	337
Total Volume	38	152	37	227	22	265	33	320	107	216	20	343	37	258	117	412	1302
% App. Total	16.7	67	16.3		6.9	82.8	10.3		31.2	63	5.8		9	62.6	28.4		
PHF	.731	.844	.841	.847	.688	.946	.825	.964	.836	.794	.714	.825	.771	.827	.914	.920	.935

City of La Quinta
N/S: Madison Street
E/W: Avenue 50
Weather: Clear

File Name : 02_LQA_Madison_Ave 50 Sat
Site Code : 05120105
Start Date : 2/22/2020
Page No : 2



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:30 PM				10:45 AM				10:45 AM				01:00 PM			
+0 mins.	12	45	10	67	4	74	15	93	25	54	8	87	12	73	32	117
+15 mins.	13	37	15	65	5	59	9	73	24	60	12	96	5	63	28	96
+30 mins.	10	36	17	63	7	73	13	93	20	56	6	82	5	68	31	104
+45 mins.	11	41	17	69	10	65	11	86	30	58	8	96	6	58	34	98
Total Volume	46	159	59	264	26	271	48	345	99	228	34	361	28	262	125	415
% App. Total	17.4	60.2	22.3		7.5	78.6	13.9		27.4	63.2	9.4		6.7	63.1	30.1	
PHF	.885	.883	.868	.957	.650	.916	.800	.927	.825	.950	.708	.940	.583	.897	.919	.887

City of La Quinta
N/S: Monroe Street
E/W: Avenue 58
Weather: Clear

File Name : 03_LQA_Monroe_ Ave 58 Sat
Site Code : 05120105
Start Date : 2/22/2020
Page No : 1

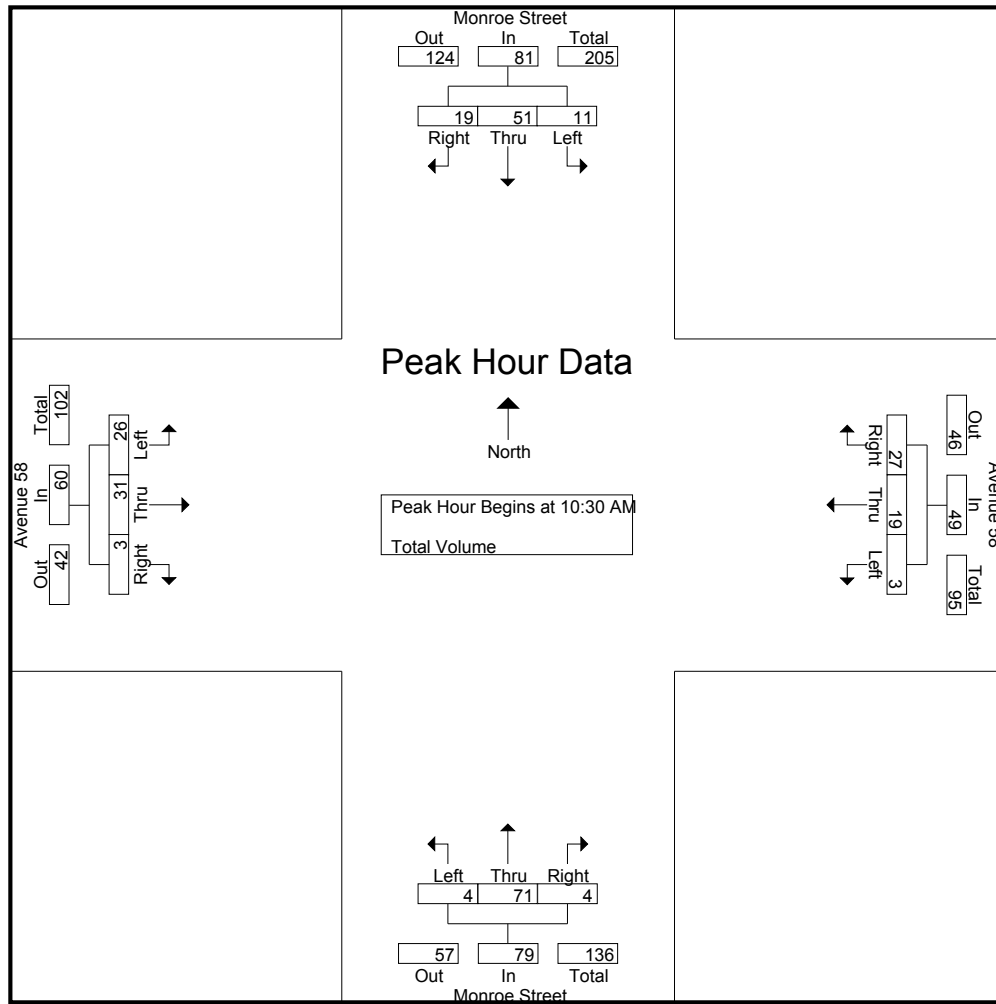
Groups Printed- Total Volume

	Monroe Street Southbound				Avenue 58 Westbound				Monroe Street Northbound				Avenue 58 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
10:00 AM	6	10	4	20	0	9	3	12	0	15	1	16	3	8	0	11	59
10:15 AM	3	15	2	20	0	3	3	6	4	14	0	18	8	9	1	18	62
10:30 AM	2	12	7	21	1	3	9	13	0	15	2	17	1	4	0	5	56
10:45 AM	3	11	2	16	0	8	8	16	2	18	1	21	1	8	1	10	63
Total	14	48	15	77	1	23	23	47	6	62	4	72	13	29	2	44	240
11:00 AM	2	12	5	19	0	5	3	8	1	18	1	20	8	11	2	21	68
11:15 AM	4	16	5	25	2	3	7	12	1	20	0	21	16	8	0	24	82
11:30 AM	3	12	2	17	1	3	4	8	1	15	0	16	1	13	0	14	55
11:45 AM	5	10	5	20	0	2	5	7	1	12	4	17	8	9	1	18	62
Total	14	50	17	81	3	13	19	35	4	65	5	74	33	41	3	77	267
12:00 PM	4	11	4	19	2	1	1	4	2	14	1	17	4	5	3	12	52
12:15 PM	2	18	3	23	0	2	5	7	1	16	0	17	0	3	2	5	52
12:30 PM	2	13	1	16	1	2	3	6	1	8	0	9	3	4	2	9	40
12:45 PM	5	12	4	21	0	4	7	11	1	7	2	10	2	5	4	11	53
Total	13	54	12	79	3	9	16	28	5	45	3	53	9	17	11	37	197
01:00 PM	3	18	3	24	2	4	2	8	1	20	1	22	2	4	2	8	62
01:15 PM	1	10	2	13	0	5	4	9	0	15	2	17	1	2	1	4	43
01:30 PM	5	23	5	33	0	1	4	5	0	15	3	18	3	6	1	10	66
01:45 PM	7	9	0	16	0	4	1	5	0	14	0	14	1	3	4	8	43
Total	16	60	10	86	2	14	11	27	1	64	6	71	7	15	8	30	214
Grand Total	57	212	54	323	9	59	69	137	16	236	18	270	62	102	24	188	918
Apprch %	17.6	65.6	16.7		6.6	43.1	50.4		5.9	87.4	6.7		33	54.3	12.8		
Total %	6.2	23.1	5.9	35.2	1	6.4	7.5	14.9	1.7	25.7	2	29.4	6.8	11.1	2.6	20.5	

	Monroe Street Southbound				Avenue 58 Westbound				Monroe Street Northbound				Avenue 58 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 10:30 AM																	
10:30 AM	2	12	7	21	1	3	9	13	0	15	2	17	1	4	0	5	56
10:45 AM	3	11	2	16	0	8	8	16	2	18	1	21	1	8	1	10	63
11:00 AM	2	12	5	19	0	5	3	8	1	18	1	20	8	11	2	21	68
11:15 AM	4	16	5	25	2	3	7	12	1	20	0	21	16	8	0	24	82
Total Volume	11	51	19	81	3	19	27	49	4	71	4	79	26	31	3	60	269
% App. Total	13.6	63	23.5		6.1	38.8	55.1		5.1	89.9	5.1		43.3	51.7	5		
PHF	.688	.797	.679	.810	.375	.594	.750	.766	.500	.888	.500	.940	.406	.705	.375	.625	.820

City of La Quinta
N/S: Monroe Street
E/W: Avenue 58
Weather: Clear

File Name : 03_LQA_Monroe_ Ave 58 Sat
Site Code : 05120105
Start Date : 2/22/2020
Page No : 2



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:45 PM				10:30 AM				10:30 AM				11:00 AM			
+0 mins.	5	12	4	21	1	3	9	13	0	15	2	17	8	11	2	21
+15 mins.	3	18	3	24	0	8	8	16	2	18	1	21	16	8	0	24
+30 mins.	1	10	2	13	0	5	3	8	1	18	1	20	1	13	0	14
+45 mins.	5	23	5	33	2	3	7	12	1	20	0	21	8	9	1	18
Total Volume	14	63	14	91	3	19	27	49	4	71	4	79	33	41	3	77
% App. Total	15.4	69.2	15.4		6.1	38.8	55.1		5.1	89.9	5.1		42.9	53.2	3.9	
PHF	.700	.685	.700	.689	.375	.594	.750	.766	.500	.888	.500	.940	.516	.788	.375	.802

City of La Quinta
N/S: Monroe Street
E/W: Avenue 54
Weather: Clear

File Name : 04_LQA_Monroe_ Ave 54 Sat
Site Code : 05120105
Start Date : 2/22/2020
Page No : 1

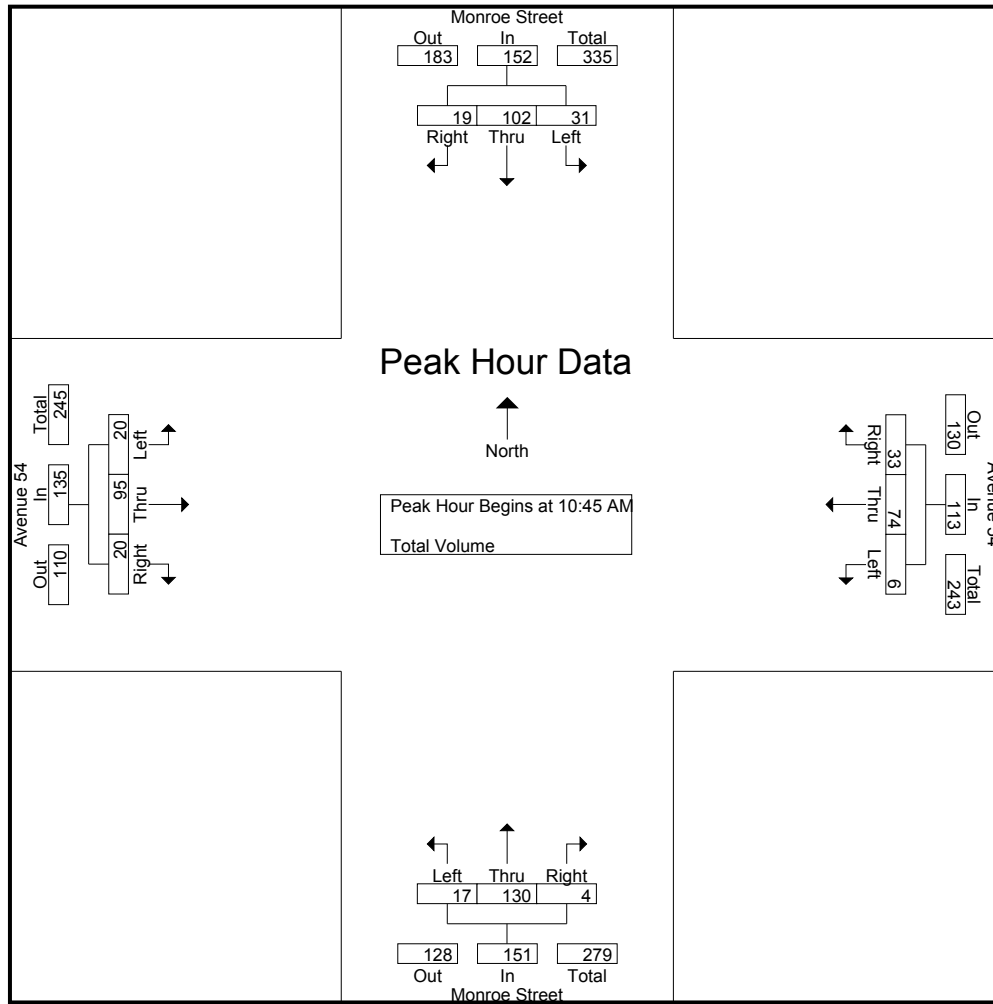
Groups Printed- Total Volume

	Monroe Street Southbound				Avenue 54 Westbound				Monroe Street Northbound				Avenue 54 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
10:00 AM	11	24	5	40	2	16	5	23	4	23	2	29	4	23	11	38	130
10:15 AM	7	20	4	31	3	21	4	28	4	21	0	25	5	20	5	30	114
10:30 AM	9	23	6	38	1	13	13	27	6	28	1	35	4	17	5	26	126
10:45 AM	9	21	4	34	1	18	10	29	5	35	1	41	5	24	3	32	136
Total	36	88	19	143	7	68	32	107	19	107	4	130	18	84	24	126	506
11:00 AM	10	28	4	42	1	22	6	29	2	35	0	37	5	27	5	37	145
11:15 AM	4	26	5	35	3	13	7	23	2	35	1	38	5	19	6	30	126
11:30 AM	8	27	6	41	1	21	10	32	8	25	2	35	5	25	6	36	144
11:45 AM	9	28	5	42	1	20	6	27	6	25	3	34	1	16	4	21	124
Total	31	109	20	160	6	76	29	111	18	120	6	144	16	87	21	124	539
12:00 PM	6	20	7	33	4	21	3	28	4	35	3	42	6	26	2	34	137
12:15 PM	7	29	3	39	0	27	8	35	2	20	0	22	5	13	4	22	118
12:30 PM	9	23	6	38	2	19	5	26	4	32	3	39	5	24	5	34	137
12:45 PM	3	20	5	28	0	14	8	22	0	16	1	17	5	26	5	36	103
Total	25	92	21	138	6	81	24	111	10	103	7	120	21	89	16	126	495
01:00 PM	18	29	6	53	0	17	6	23	3	22	3	28	3	24	7	34	138
01:15 PM	14	11	12	37	0	18	5	23	4	26	0	30	6	30	6	42	132
01:30 PM	14	24	10	48	1	14	3	18	3	30	1	34	6	27	9	42	142
01:45 PM	11	15	10	36	1	15	7	23	1	24	0	25	2	22	9	33	117
Total	57	79	38	174	2	64	21	87	11	102	4	117	17	103	31	151	529
Grand Total	149	368	98	615	21	289	106	416	58	432	21	511	72	363	92	527	2069
Apprch %	24.2	59.8	15.9		5	69.5	25.5		11.4	84.5	4.1		13.7	68.9	17.5		
Total %	7.2	17.8	4.7	29.7	1	14	5.1	20.1	2.8	20.9	1	24.7	3.5	17.5	4.4	25.5	

	Monroe Street Southbound				Avenue 54 Westbound				Monroe Street Northbound				Avenue 54 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 10:45 AM																	
10:45 AM	9	21	4	34	1	18	10	29	5	35	1	41	5	24	3	32	136
11:00 AM	10	28	4	42	1	22	6	29	2	35	0	37	5	27	5	37	145
11:15 AM	4	26	5	35	3	13	7	23	2	35	1	38	5	19	6	30	126
11:30 AM	8	27	6	41	1	21	10	32	8	25	2	35	5	25	6	36	144
Total Volume	31	102	19	152	6	74	33	113	17	130	4	151	20	95	20	135	551
% App. Total	20.4	67.1	12.5		5.3	65.5	29.2		11.3	86.1	2.6		14.8	70.4	14.8		
PHF	.775	.911	.792	.905	.500	.841	.825	.883	.531	.929	.500	.921	1.00	.880	.833	.912	.950

City of La Quinta
N/S: Monroe Street
E/W: Avenue 54
Weather: Clear

File Name : 04_LQA_Monroe_ Ave 54 Sat
Site Code : 05120105
Start Date : 2/22/2020
Page No : 2



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	01:00 PM				11:30 AM				10:30 AM				12:45 PM			
+0 mins.	18	29	6	53	1	21	10	32	6	28	1	35	5	26	5	36
+15 mins.	14	11	12	37	1	20	6	27	5	35	1	41	3	24	7	34
+30 mins.	14	24	10	48	4	21	3	28	2	35	0	37	6	30	6	42
+45 mins.	11	15	10	36	0	27	8	35	2	35	1	38	6	27	9	42
Total Volume	57	79	38	174	6	89	27	122	15	133	3	151	20	107	27	154
% App. Total	32.8	45.4	21.8		4.9	73	22.1		9.9	88.1	2		13	69.5	17.5	
PHF	.792	.681	.792	.821	.375	.824	.675	.871	.625	.950	.750	.921	.833	.892	.750	.917

























APPENDIX 3.2:

EXISTING (2019) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Lanes, Volumes, Timings
1: Madison St. & Avenue 58










Existing AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	5	2	3	16	47	2	127	2	51	98	43
Future Volume (vph)	37	5	2	3	16	47	2	127	2	51	98	43
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

HCM 6th AWSC
1: Madison St. & Avenue 58

Existing AM Peak hour

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	37	5	2	3	16	47	2	127	2	51	98	43
Future Vol, veh/h	37	5	2	3	16	47	2	127	2	51	98	43
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	39	5	2	3	17	50	2	135	2	54	104	46
Number of Lanes	1	1	1	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	9	8.1	8.6	8.4
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	95%	0%	100%	0%	0%	100%	10%	0%	100%
Vol Right, %	0%	0%	5%	0%	0%	100%	0%	0%	90%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	2	85	44	37	5	2	3	11	52	51	65
LT Vol	2	0	0	37	0	0	3	0	0	51	0
Through Vol	0	85	42	0	5	0	0	11	5	0	65
RT Vol	0	0	2	0	0	2	0	0	47	0	0
Lane Flow Rate	2	90	47	39	5	2	3	11	56	54	70
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.003	0.131	0.068	0.066	0.008	0.003	0.005	0.017	0.076	0.085	0.099
Departure Headway (Hd)	5.75	5.25	5.218	6.047	5.547	4.847	6.021	5.521	4.893	5.637	5.137
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	622	682	686	592	644	736	594	647	730	636	697
Service Time	3.487	2.987	2.955	3.792	3.292	2.592	3.763	3.263	2.634	3.371	2.871
HCM Lane V/C Ratio	0.003	0.132	0.069	0.066	0.008	0.003	0.005	0.017	0.077	0.085	0.1
HCM Control Delay	8.5	8.8	8.3	9.2	8.3	7.6	8.8	8.4	8	8.9	8.4
HCM Lane LOS	A	A	A	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0.4	0.2	0.2	0	0	0	0.1	0.2	0.3	0.3

Lanes, Volumes, Timings
2: Madison St. & Airport Bl.

Existing AM Peak hour

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	10	60	0	191	6	75	197
Future Volume (vph)	10	60	0	191	6	75	197
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		3			2		
Detector Phase	3	3	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	11.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	16.0	16.0	11.5	27.0	27.0	17.0	32.5
Total Split (%)	26.7%	26.7%	19.2%	45.0%	45.0%	28.3%	54.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 17 (28%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 45

Control Type: Actuated-Coordinated















Splits and Phases: 2: Madison St. & Airport Bl.



HCM 6th Signalized Intersection Summary
























2: Madison St. & Airport Bl.

Existing AM Peak hour

							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	10	60	0	191	6	75	197
Future Volume (veh/h)	10	60	0	191	6	75	197
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	11	69		220	7	86	226
Peak Hour Factor	0.87	0.87		0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	163	145		2106	939	169	2673
Arrive On Green	0.11	0.11		0.73	0.73	0.12	0.93
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	11	69		220	7	86	226
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	0.3	2.5		1.1	0.1	2.8	0.3
Cycle Q Clear(g_c), s	0.3	2.5		1.1	0.1	2.8	0.3
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	163	145		2106	939	169	2673
V/C Ratio(X)	0.07	0.47		0.10	0.01	0.51	0.08
Avail Cap(c_a), veh/h	347	309		2106	939	376	2673
HCM Platoon Ratio	1.20	1.20		1.20	1.20	1.20	1.20
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	25.2		3.3	3.2	25.2	0.5
Incr Delay (d2), s/veh	0.2	2.4		0.1	0.0	2.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.9		0.2	0.0	1.1	0.0
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	24.4	27.6		3.4	3.2	27.5	0.6
LnGrp LOS	C	C		A	A	C	A
Approach Vol, veh/h	80			227			312
Approach Delay, s/veh	27.2			3.4			8.0
Approach LOS	C			A			A
Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	9.8	40.5				50.3	9.7
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	12.5	22.5				28.0	11.5
Max Q Clear Time (g_c+I1), s	4.8	3.1				2.3	4.5
Green Ext Time (p_c), s	0.1	1.1				1.2	0.1
Intersection Summary							
HCM 6th Ctrl Delay			8.8				
HCM 6th LOS			A				
Notes							
User approved ignoring U-Turning movement.							

Lanes, Volumes, Timings
3: Madison St. & Avenue 54

Existing AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	138	205	24	124	24	189	124	21	39	100	12
Future Volume (vph)	9	138	205	24	124	24	189	124	21	39	100	12
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											









HCM 6th AWSC
3: Madison St. & Avenue 54

Existing AM Peak hour

Intersection

Intersection Delay, s/veh 12.9

Intersection LOS B

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	138	205	24	124	24	189	124	21	39	100	12
Future Vol, veh/h	9	138	205	24	124	24	189	124	21	39	100	12
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	155	230	27	139	27	212	139	24	44	112	13
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	13.8	11.3	13.4	11.2
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	66%	0%	100%	18%	0%	100%	63%	0%	100%	74%
Vol Right, %	0%	0%	34%	0%	0%	82%	0%	0%	37%	0%	0%	26%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	189	83	62	9	92	251	24	83	65	39	67	45
LT Vol	189	0	0	9	0	0	24	0	0	39	0	0
Through Vol	0	83	41	0	92	46	0	83	41	0	67	33
RT Vol	0	0	21	0	0	205	0	0	24	0	0	12
Lane Flow Rate	212	93	70	10	103	282	27	93	73	44	75	51
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.43	0.175	0.128	0.021	0.195	0.488	0.058	0.188	0.144	0.096	0.153	0.102
Departure Headway (Hd)	7.291	6.791	6.555	7.298	6.798	6.226	7.803	7.303	7.046	7.861	7.361	7.175
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	491	524	542	487	524	573	462	494	512	458	490	502
Service Time	5.09	4.59	4.354	5.096	4.596	4.025	5.503	5.003	4.746	5.567	5.067	4.881
HCM Lane V/C Ratio	0.432	0.177	0.129	0.021	0.197	0.492	0.058	0.188	0.143	0.096	0.153	0.102
HCM Control Delay	15.5	11	10.3	10.3	11.3	14.9	11	11.7	10.9	11.4	11.4	10.7
HCM Lane LOS	C	B	B	B	B	B	B	B	B	B	B	B
HCM 95th-tile Q	2.1	0.6	0.4	0.1	0.7	2.7	0.2	0.7	0.5	0.3	0.5	0.3

Lanes, Volumes, Timings
4: Madison St. & Avenue 52

Existing AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	282	25	12	257	52	61	110	10	38	110	44
Future Volume (vph)	55	282	25	12	257	52	61	110	10	38	110	44
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	23.0	53.0	53.0	15.0	45.0	45.0	17.0	36.0	36.0	16.0	35.0	35.0
Total Split (%)	19.2%	44.2%	44.2%	12.5%	37.5%	37.5%	14.2%	30.0%	30.0%	13.3%	29.2%	29.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

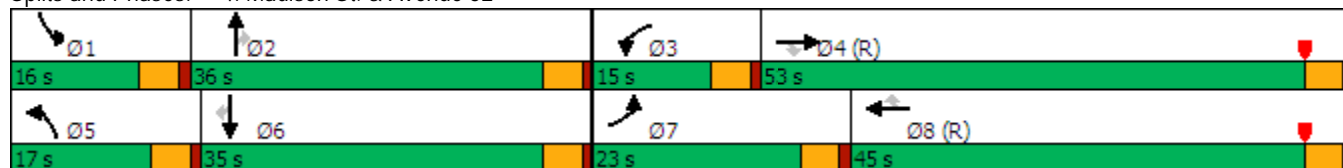
Actuated Cycle Length: 120

Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated

























Splits and Phases: 4: Madison St. & Avenue 52



HCM 6th Signalized Intersection Summary


4: Madison St. & Avenue 52

Existing AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	282	25	12	257	52	61	110	10	38	110	44
Future Volume (veh/h)	55	282	25	12	257	52	61	110	10	38	110	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	63	324	29	14	295	60	70	126	11	44	126	51
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	1802	804	38	1700	758	177	908	405	151	881	393
Arrive On Green	0.05	0.52	0.52	0.02	0.49	0.49	0.05	0.26	0.26	0.04	0.25	0.25
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	63	324	29	14	295	60	70	126	11	44	126	51
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	4.3	5.9	1.1	1.0	5.7	2.5	2.4	3.3	0.6	1.5	3.4	3.1
Cycle Q Clear(g_c), s	4.3	5.9	1.1	1.0	5.7	2.5	2.4	3.3	0.6	1.5	3.4	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	89	1802	804	38	1700	758	177	908	405	151	881	393
V/C Ratio(X)	0.71	0.18	0.04	0.37	0.17	0.08	0.39	0.14	0.03	0.29	0.14	0.13
Avail Cap(c_a), veh/h	267	1802	804	152	1700	758	350	908	405	322	881	393
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.1	15.2	14.0	57.9	17.0	16.1	55.0	33.9	32.9	55.5	34.6	34.5
Incr Delay (d2), s/veh	9.9	0.2	0.1	6.0	0.2	0.2	1.4	0.3	0.1	1.1	0.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	2.3	0.4	0.5	2.1	0.8	1.0	1.4	0.2	0.6	1.4	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.0	15.4	14.1	63.8	17.2	16.3	56.4	34.2	33.0	56.5	34.9	35.1
LnGrp LOS	E	B	B	E	B	B	E	C	C	E	C	D
Approach Vol, veh/h	416			369			207			221		
Approach Delay, s/veh	23.0			18.8			41.6			39.3		
Approach LOS	C			B			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.9	36.0	7.1	67.0	10.8	35.1	10.6	63.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.5	31.5	10.5	48.5	12.5	30.5	18.5	40.5				
Max Q Clear Time (g_c+I1), s	3.5	5.3	3.0	7.9	4.4	5.4	6.3	7.7				
Green Ext Time (p_c), s	0.0	0.6	0.0	2.1	0.1	0.8	0.1	1.8				
Intersection Summary												
HCM 6th Ctrl Delay	27.9											
HCM 6th LOS	C											

Lanes, Volumes, Timings
5: Madison St. & Avenue 50/50th Avenue

Existing AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	259	55	22	253	17	76	133	24	24	138	68
Future Volume (vph)	47	259	55	22	253	17	76	133	24	24	138	68
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	22.0	48.0	48.0	18.0	44.0	44.0	18.0	38.0	38.0	16.0	36.0	36.0
Total Split (%)	18.3%	40.0%	40.0%	15.0%	36.7%	36.7%	15.0%	31.7%	31.7%	13.3%	30.0%	30.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

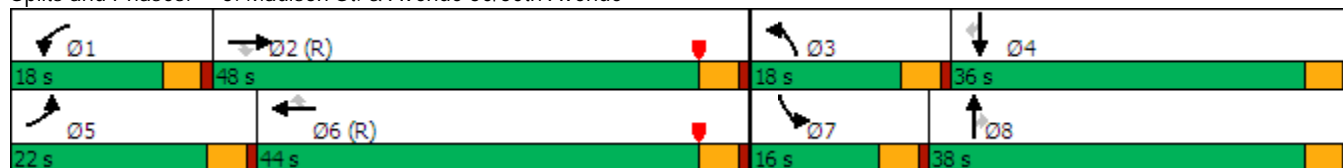
Actuated Cycle Length: 120

Offset: 64.5 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue




























HCM 6th Signalized Intersection Summary 5: Madison St. & Avenue 50/50th Avenue

Existing AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	259	55	22	253	17	76	133	24	24	138	68
Future Volume (veh/h)	47	259	55	22	253	17	76	133	24	24	138	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	48	264	56	22	258	17	78	136	24	24	141	69
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	81	1741	777	53	1685	752	182	984	439	108	908	405
Arrive On Green	0.05	0.50	0.50	0.03	0.49	0.49	0.05	0.28	0.28	0.03	0.26	0.26
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	48	264	56	22	258	17	78	136	24	24	141	69
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	3.3	4.9	2.2	1.5	5.0	0.7	2.7	3.5	1.4	0.8	3.8	4.1
Cycle Q Clear(g_c), s	3.3	4.9	2.2	1.5	5.0	0.7	2.7	3.5	1.4	0.8	3.8	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	81	1741	777	53	1685	752	182	984	439	108	908	405
V/C Ratio(X)	0.59	0.15	0.07	0.42	0.15	0.02	0.43	0.14	0.05	0.22	0.16	0.17
Avail Cap(c_a), veh/h	253	1741	777	195	1685	752	379	984	439	322	908	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.1	16.0	15.4	57.1	17.1	16.0	55.0	32.0	31.2	56.6	34.0	34.2
Incr Delay (d2), s/veh	6.8	0.2	0.2	5.2	0.2	0.1	1.6	0.3	0.2	1.0	0.4	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	1.9	0.8	0.7	1.9	0.2	1.1	1.5	0.5	0.4	1.6	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.9	16.2	15.5	62.4	17.3	16.0	56.6	32.3	31.4	57.6	34.4	35.1
LnGrp LOS	E	B	B	E	B	B	E	C	C	E	C	D
Approach Vol, veh/h	368			297			238			234		
Approach Delay, s/veh	22.2			20.5			40.2			37.0		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.1	64.9	11.0	36.0	10.1	62.9	8.4	38.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	13.5	43.5	13.5	31.5	17.5	39.5	11.5	33.5				
Max Q Clear Time (g_c+I1), s	3.5	6.9	4.7	6.1	5.3	7.0	2.8	5.5				
Green Ext Time (p_c), s	0.0	1.8	0.1	0.9	0.1	1.5	0.0	0.8				
Intersection Summary												
HCM 6th Ctrl Delay	28.6											
HCM 6th LOS	C											

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54










Existing AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 		 	 	
Traffic Volume (vph)	8	10	13	41	7	247	5	119	26	308	143	26
Future Volume (vph)	8	10	13	41	7	247	5	119	26	308	143	26
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh12.2

Intersection LOS B





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	10	13	41	7	247	5	119	26	308	143	26
Future Vol, veh/h	8	10	13	41	7	247	5	119	26	308	143	26
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	11	14	46	8	274	6	132	29	342	159	29
Number of Lanes	1	2	0	1	1	1	0	2	0	2	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	10.2	13.2	10.8	12.1
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	8%	0%	100%	0%	0%	100%	0%	0%	100%	100%	0%
Vol Thru, %	92%	70%	0%	100%	20%	0%	100%	0%	0%	0%	85%
Vol Right, %	0%	30%	0%	0%	80%	0%	0%	100%	0%	0%	15%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	65	86	8	7	16	41	7	247	154	154	169
LT Vol	5	0	8	0	0	41	0	0	154	154	0
Through Vol	60	60	0	7	3	0	7	0	0	0	143
RT Vol	0	26	0	0	13	0	0	247	0	0	26
Lane Flow Rate	72	95	9	7	18	46	8	274	171	171	188
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.136	0.174	0.02	0.015	0.035	0.091	0.014	0.456	0.315	0.315	0.314
Departure Headway (Hd)	6.854	6.602	7.919	7.411	6.846	7.195	6.69	5.984	6.623	6.623	6.015
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	522	541	450	481	520	497	534	601	542	542	597
Service Time	4.616	4.364	5.697	5.189	4.624	4.951	4.446	3.739	4.371	4.371	3.763
HCM Lane V/C Ratio	0.138	0.176	0.02	0.015	0.035	0.093	0.015	0.456	0.315	0.315	0.315
HCM Control Delay	10.7	10.8	10.9	10.3	9.9	10.7	9.5	13.7	12.4	12.4	11.5
HCM Lane LOS	B	B	B	B	A	B	A	B	B	B	B
HCM 95th-tile Q	0.5	0.6	0.1	0	0.1	0.3	0	2.4	1.3	1.3	1.3

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

Existing AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	96	276	208	4	244	235	168	286	15	132	309	46
Future Volume (vph)	96	276	208	4	244	235	168	286	15	132	309	46
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											

























HCM 6th Roundabout
7: Jefferson St. & Avenue 52

Existing AM Peak hour

Intersection									
Intersection Delay, s/veh	9.4								
Intersection LOS	A								
Approach	EB		WB		NB		SB		
Entry Lanes	1		1		1		1		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	624		519		505		523		
Demand Flow Rate, veh/h	636		529		515		534		
Vehicles Circulating, veh/h	488		604		553		456		
Vehicles Exiting, veh/h	452		448		343		419		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	7.0		4.9		15.2		11.1		
Approach LOS	A		A		C		B		
Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Bypass	
Designated Moves	LT	R	LT	R	LT	R	LT	R	
Assumed Moves	LT	R	LT	R	LT	R	LT	R	
RT Channelized		Free		Free		Free		Free	
Lane Util	1.000		1.000		1.000		1.000		
Follow-Up Headway, s	2.609		2.609		2.609		2.609		
Critical Headway, s	4.976	228	4.976	258	4.976	16	4.976	50	
Entry Flow, veh/h	408	1887	271	1887	499	1887	484	1887	
Cap Entry Lane, veh/h	839	0.980	745	0.980	785	0.980	867	0.980	
Entry HV Adj Factor	0.981	224	0.981	253	0.980	16	0.980	49	
Flow Entry, veh/h	400	1850	266	1850	489	1850	474	1850	
Cap Entry, veh/h	823	0.121	731	0.137	769	0.009	849	0.026	
V/C Ratio	0.486	0.0	0.364	0.0	0.636	0.0	0.558	0.0	
Control Delay, s/veh	10.9	A	9.5	A	15.7	A	12.3	A	
LOS	B	0	A	0	C	0	B	0	
95th %tile Queue, veh	3		2		5		4		

Lanes, Volumes, Timings 8: Jefferson St. & Pomelo

Existing AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (vph)	30	1	2	4	1	12	13	591	13	36	504	45
Future Volume (vph)	30	1	2	4	1	12	13	591	13	36	504	45
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	20.0	51.0		21.0	52.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	16.7%	42.5%		17.5%	43.3%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary

Area Type: Other

Cycle Length: 120

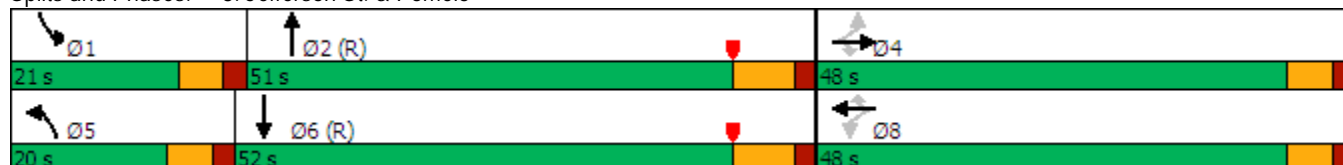
Actuated Cycle Length: 120

Offset: 90 (75%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110


Control Type: Actuated-Coordinated

Splits and Phases: 8: Jefferson St. & Pomelo



























HCM 6th Signalized Intersection Summary 8: Jefferson St. & Pomelo

Existing AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↱	↑↑↑		↱	↑↑↑	
Traffic Volume (veh/h)	30	1	2	4	1	12	13	591	13	36	504	45
Future Volume (veh/h)	30	1	2	4	1	12	13	591	13	36	504	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	32	1	2	4	1	13	14	635	14	39	542	48
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	59	1	137	54	8	137	65	3383	74	126	3311	290
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.04	0.68	0.68	0.15	1.00	1.00
Sat Flow, veh/h	3	11	1543	3	86	1543	1734	5006	110	1734	4654	408
Grp Volume(v), veh/h	33	0	2	5	0	13	14	420	229	39	384	206
Grp Sat Flow(s),veh/h/ln	14	0	1543	89	0	1543	1734	1657	1801	1734	1657	1748
Q Serve(g_s), s	0.0	0.0	0.1	0.0	0.0	0.9	0.9	5.6	5.7	2.4	0.0	0.0
Cycle Q Clear(g_c), s	10.7	0.0	0.1	10.7	0.0	0.9	0.9	5.6	5.7	2.4	0.0	0.0
Prop In Lane	0.97		1.00	0.80		1.00	1.00		0.06	1.00		0.23
Lane Grp Cap(c), veh/h	60	0	137	62	0	137	65	2240	1218	126	2358	1243
V/C Ratio(X)	0.55	0.00	0.01	0.08	0.00	0.09	0.22	0.19	0.19	0.31	0.16	0.17
Avail Cap(c_a), veh/h	428	0	540	448	0	540	202	2240	1218	217	2358	1243
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.86	0.86	0.86
Uniform Delay (d), s/veh	59.7	0.0	49.9	50.4	0.0	50.2	56.1	7.2	7.2	48.6	0.0	0.0
Incr Delay (d2), s/veh	15.5	0.0	0.1	1.2	0.0	0.6	3.5	0.2	0.3	2.5	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.1	0.2	0.0	0.4	0.5	1.7	1.9	1.1	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.2	0.0	50.0	51.6	0.0	50.9	59.6	7.4	7.6	51.1	0.1	0.2
LnGrp LOS	E	A	D	D	A	D	E	A	A	D	A	A
Approach Vol, veh/h	35			18			663			629		
Approach Delay, s/veh	73.8			51.1			8.6			3.3		
Approach LOS	E			D			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.7	88.6		16.7	10.5	92.8		16.7				
Change Period (Y+Rc), s	6.0	7.5		6.0	6.0	7.5		6.0				
Max Green Setting (Gmax), s	15.0	43.5		42.0	14.0	44.5		42.0				
Max Q Clear Time (g_c+I1), s	4.4	7.7		12.7	2.9	2.0		12.7				
Green Ext Time (p_c), s	0.1	7.9		0.2	0.0	7.4		0.1				
Intersection Summary												
HCM 6th Ctrl Delay	8.4											
HCM 6th LOS	A											

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

Existing AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	209	273	48	45	289	152	67	530	36	74	483	331
Future Volume (vph)	209	273	48	45	289	152	67	530	36	74	483	331
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	43.5	43.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	36.3%	36.3%	15.0%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

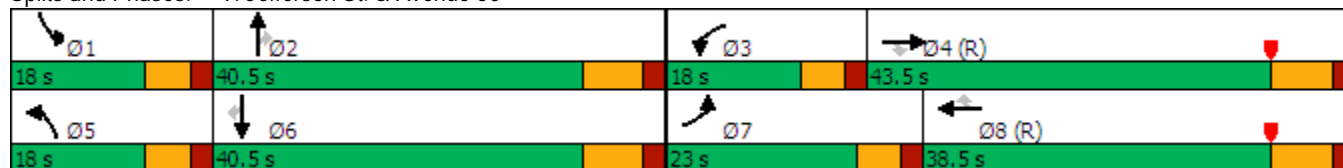
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 115

























Control Type: Actuated-Coordinated

Splits and Phases: 9: Jefferson St. & Avenue 50



HCM 6th Signalized Intersection Summary 9: Jefferson St. & Avenue 50

Existing AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	209	273	48	45	289	152	67	530	36	74	483	331
Future Volume (veh/h)	209	273	48	45	289	152	67	530	36	74	483	331
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	213	279	49	46	295	155	68	541	37	76	493	338
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	239	1237	552	136	543	460	155	1228	381	310	1240	385
Arrive On Green	0.14	0.36	0.36	0.08	0.30	0.30	0.03	0.08	0.08	0.09	0.25	0.25
Sat Flow, veh/h	1734	3460	1543	1734	1821	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	213	279	49	46	295	155	68	541	37	76	493	338
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	14.5	6.8	2.5	3.0	16.3	9.4	4.6	12.4	2.7	2.5	9.9	25.3
Cycle Q Clear(g_c), s	14.5	6.8	2.5	3.0	16.3	9.4	4.6	12.4	2.7	2.5	9.9	25.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	239	1237	552	136	543	460	155	1228	381	310	1240	385
V/C Ratio(X)	0.89	0.23	0.09	0.34	0.54	0.34	0.44	0.44	0.10	0.25	0.40	0.88
Avail Cap(c_a), veh/h	246	1237	552	173	543	460	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.9	26.9	25.6	52.3	35.3	32.8	55.3	47.2	42.7	50.6	37.5	43.3
Incr Delay (d2), s/veh	30.0	0.4	0.3	0.5	3.9	2.0	0.7	0.4	0.2	0.2	0.3	18.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	2.7	1.0	1.3	7.6	3.7	2.0	5.4	1.0	1.0	3.9	11.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.9	27.4	25.9	52.9	39.1	34.8	56.0	47.6	42.9	50.8	37.8	61.4
LnGrp LOS	F	C	C	D	D	C	E	D	D	D	D	E
Approach Vol, veh/h	541			496			646			907		
Approach Delay, s/veh	48.3			39.0			48.2			47.7		
Approach LOS	D			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	37.1	15.4	50.4	16.8	37.4	22.5	43.3				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	12.0	33.0	12.0	36.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	4.5	14.4	5.0	8.8	6.6	27.3	16.5	18.3				
Green Ext Time (p_c), s	0.0	4.3	0.0	3.4	0.0	2.7	0.0	3.2				
Intersection Summary												
HCM 6th Ctrl Delay	46.3											
HCM 6th LOS	D											

Lanes, Volumes, Timings
10: Avenue 60 & Madison St.

Existing AM Peak hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	1	1	95	92	1
Future Volume (vph)	1	1	1	95	92	1
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		40	
Link Distance (ft)		1772	661		437	
Travel Time (s)		30.2	11.3		7.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)						
Sign Control		Stop	Stop		Stop	






Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Intersection Delay, s/veh	8.2
Intersection LOS	A





















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	1	1	95	92	1
Future Vol, veh/h	1	1	1	95	92	1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	1	1	114	111	1
Number of Lanes	0	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	7.9	7.5	9
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	50%	0%	0%	100%	0%
Vol Thru, %	50%	100%	0%	0%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	2	1	95	92	1
LT Vol	1	0	0	92	0
Through Vol	1	1	0	0	0
RT Vol	0	0	95	0	1
Lane Flow Rate	2	1	114	111	1
Geometry Grp	4	7	7	7	7
Degree of Util (X)	0.003	0.002	0.132	0.161	0.001
Departure Headway (Hd)	4.869	4.852	4.151	5.237	4.036
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	739	742	869	681	879
Service Time	2.873	2.552	1.851	2.999	1.797
HCM Lane V/C Ratio	0.003	0.001	0.131	0.163	0.001
HCM Control Delay	7.9	7.6	7.5	9	6.8
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0	0	0.5	0.6	0

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue









Existing AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	27	63	4	24	11	57	33	2	11	31	21
Future Volume (vph)	13	27	63	4	24	11	57	33	2	11	31	21
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

HCM 6th AWSC
11: Monroe St. & Avenue 60/60th Avenue

Existing AM Peak hour

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	27	63	4	24	11	57	33	2	11	31	21
Future Vol, veh/h	13	27	63	4	24	11	57	33	2	11	31	21
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	30	69	4	26	12	63	36	2	12	34	23
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	7.8	8.1	8.6	8
HCM LOS	A	A	A	A






Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	33%	0%	10%	100%	0%	0%
Vol Thru, %	0%	94%	68%	0%	62%	0%	100%	0%
Vol Right, %	0%	6%	0%	100%	28%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	57	35	40	63	39	11	31	21
LT Vol	57	0	13	0	4	11	0	0
Through Vol	0	33	27	0	24	0	31	0
RT Vol	0	2	0	63	11	0	0	21
Lane Flow Rate	63	38	44	69	43	12	34	23
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.097	0.054	0.064	0.085	0.06	0.019	0.049	0.029
Departure Headway (Hd)	5.602	5.059	5.26	4.396	5.079	5.679	5.177	4.474
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	641	709	682	816	705	631	693	801
Service Time	3.326	2.783	2.982	2.119	2.808	3.403	2.901	2.197
HCM Lane V/C Ratio	0.098	0.054	0.065	0.085	0.061	0.019	0.049	0.029
HCM Control Delay	8.9	8.1	8.3	7.5	8.1	8.5	8.2	7.3
HCM Lane LOS	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0.3	0.2	0.2	0.3	0.2	0.1	0.2	0.1

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

Existing AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	32	16	4	37	26	11	59	3	15	72	28
Future Volume (vph)	19	32	16	4	37	26	11	59	3	15	72	28
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	32	16	4	37	26	11	59	3	15	72	28
Future Vol, veh/h	19	32	16	4	37	26	11	59	3	15	72	28
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	38	19	5	44	31	13	70	4	18	86	33
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	8	7.8	8.1	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	15%	28%	6%	17%	0%
Vol Thru, %	81%	48%	55%	83%	0%
Vol Right, %	4%	24%	39%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	73	67	67	87	28
LT Vol	11	19	4	15	0
Through Vol	59	32	37	72	0
RT Vol	3	16	26	0	28
Lane Flow Rate	87	80	80	104	33
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.11	0.099	0.096	0.145	0.04
Departure Headway (Hd)	4.563	4.472	4.34	5.056	4.266
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	786	803	828	712	841
Service Time	2.583	2.489	2.356	2.773	1.984
HCM Lane V/C Ratio	0.111	0.1	0.097	0.146	0.039
HCM Control Delay	8.1	8	7.8	8.6	7.2
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.4	0.3	0.3	0.5	0.1

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.









Existing AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	62	5	10	37	13	10	64	7	38	81	6
Future Volume (vph)	0	62	5	10	37	13	10	64	7	38	81	6
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 8.5

Intersection LOS A



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	62	5	10	37	13	10	64	7	38	81	6
Future Vol, veh/h	0	62	5	10	37	13	10	64	7	38	81	6
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	73	6	12	44	15	12	75	8	45	95	7
Number of Lanes	1	1	1	0	1	0	1	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	1	3
HCM Control Delay	8.5	8.7	8.7	8.4
HCM LOS	A	A	A	A







Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	0%	0%	17%	100%	0%	0%
Vol Thru, %	0%	90%	100%	100%	0%	62%	0%	100%	82%
Vol Right, %	0%	10%	0%	0%	100%	22%	0%	0%	18%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	71	0	62	5	60	38	54	33
LT Vol	10	0	0	0	0	10	38	0	0
Through Vol	0	64	0	62	0	37	0	54	27
RT Vol	0	7	0	0	5	13	0	0	6
Lane Flow Rate	12	84	0	73	6	71	45	64	39
Geometry Grp	8	8	7	7	7	8	8	8	8
Degree of Util (X)	0.019	0.121	0	0.106	0.007	0.104	0.07	0.091	0.054
Departure Headway (Hd)	5.783	5.211	5.211	5.211	4.509	5.301	5.677	5.175	5.047
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	619	687	0	688	793	676	631	692	709
Service Time	3.518	2.946	2.942	2.942	2.24	3.037	3.411	2.909	2.781
HCM Lane V/C Ratio	0.019	0.122	0	0.106	0.008	0.105	0.071	0.092	0.055
HCM Control Delay	8.6	8.7	7.9	8.6	7.3	8.7	8.8	8.4	8.1
HCM Lane LOS	A	A	N	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0.4	0	0.4	0	0.3	0.2	0.3	0.2

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

Existing AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	109	14	18	209	51	29	89	4	50	129	78
Future Volume (vph)	19	109	14	18	209	51	29	89	4	50	129	78
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	14.3
Intersection LOS	B























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	109	14	18	209	51	29	89	4	50	129	78
Future Vol, veh/h	19	109	14	18	209	51	29	89	4	50	129	78
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	135	17	22	258	63	36	110	5	62	159	96
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	11.6	18	12.6	12.5
HCM LOS	B	C	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	24%	100%	0%	6%	28%	0%
Vol Thru, %	73%	0%	89%	75%	72%	0%
Vol Right, %	3%	0%	11%	18%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	122	19	123	278	179	78
LT Vol	29	19	0	18	50	0
Through Vol	89	0	109	209	129	0
RT Vol	4	0	14	51	0	78
Lane Flow Rate	151	23	152	343	221	96
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.285	0.046	0.274	0.592	0.405	0.154
Departure Headway (Hd)	6.822	7.093	6.502	6.213	6.595	5.741
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	523	502	550	580	544	621
Service Time	4.908	4.876	4.285	4.28	4.367	3.513
HCM Lane V/C Ratio	0.289	0.046	0.276	0.591	0.406	0.155
HCM Control Delay	12.6	10.2	11.8	18	13.8	9.6
HCM Lane LOS	B	B	B	C	B	A
HCM 95th-tile Q	1.2	0.1	1.1	3.8	1.9	0.5

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52









Existing AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	211	22	11	236	117	21	106	5	89	168	38
Future Volume (vph)	73	211	22	11	236	117	21	106	5	89	168	38
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh14.7

Intersection LOS B

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	73	211	22	11	236	117	21	106	5	89	168	38
Future Vol, veh/h	73	211	22	11	236	117	21	106	5	89	168	38
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	88	254	27	13	284	141	25	128	6	107	202	46
Number of Lanes	1	1	1	0	2	1	0	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay	17.3	13.8	15.5	12.7
HCM LOS	C	B	C	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	16%	100%	0%	0%	12%	0%	0%	100%	0%	0%
Vol Thru, %	80%	0%	100%	0%	88%	100%	0%	0%	100%	60%
Vol Right, %	4%	0%	0%	100%	0%	0%	100%	0%	0%	40%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	132	73	211	22	90	157	117	89	112	94
LT Vol	21	73	0	0	11	0	0	89	0	0
Through Vol	106	0	211	0	79	157	0	0	112	56
RT Vol	5	0	0	22	0	0	117	0	0	38
Lane Flow Rate	159	88	254	27	108	190	141	107	135	113
Geometry Grp	8	8	8	8	8	8	8	7	7	7
Degree of Util (X)	0.361	0.202	0.547	0.052	0.232	0.403	0.272	0.235	0.277	0.223
Departure Headway (Hd)	8.171	8.256	7.744	7.027	7.717	7.654	6.938	7.892	7.385	7.098
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	439	434	465	508	465	470	516	455	486	505
Service Time	5.937	6.02	5.508	4.791	5.478	5.416	4.699	5.649	5.142	4.855
HCM Lane V/C Ratio	0.362	0.203	0.546	0.053	0.232	0.404	0.273	0.235	0.278	0.224
HCM Control Delay	15.5	13.1	19.5	10.2	12.8	15.5	12.3	13.1	13	11.9
HCM Lane LOS	C	B	C	B	B	C	B	B	B	B
HCM 95th-tile Q	1.6	0.7	3.2	0.2	0.9	1.9	1.1	0.9	1.1	0.8

Lanes, Volumes, Timings
16: Monroe St. & 50th Avenue

Existing AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	147	29	25	272	121	18	210	14	67	211	27
Future Volume (vph)	20	147	29	25	272	121	18	210	14	67	211	27
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	20.5	20.5	20.5	20.5	20.5	11.5	11.5	20.5		11.5	20.5	
Total Split (s)	25.0	25.0	25.0	25.0	25.0	12.0	12.0	23.0		12.0	23.0	
Total Split (%)	41.7%	41.7%	41.7%	41.7%	41.7%	20.0%	20.0%	38.3%		20.0%	38.3%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

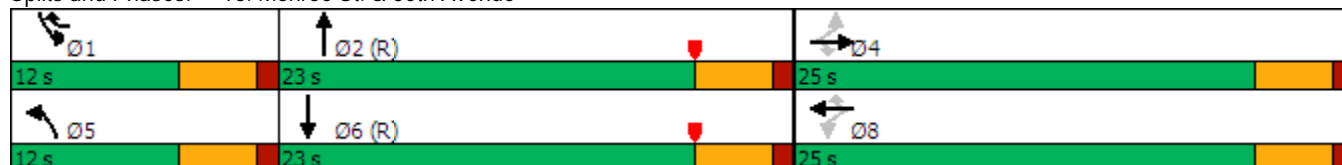
Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

























Splits and Phases: 16: Monroe St. & 50th Avenue



HCM 6th Signalized Intersection Summary

















16: Monroe St. & 50th Avenue

Existing AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	147	29	25	272	121	18	210	14	67	211	27
Future Volume (veh/h)	20	147	29	25	272	121	18	210	14	67	211	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	24	173	34	29	320	142	21	247	16	79	248	32
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	190	433	367	305	433	512	74	1546	100	163	1603	205
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.04	0.47	0.46	0.09	0.52	0.51
Sat Flow, veh/h	930	1821	1543	1175	1821	1543	1734	3300	213	1734	3086	394
Grp Volume(v), veh/h	24	173	34	29	320	142	21	129	134	79	138	142
Grp Sat Flow(s),veh/h/ln	930	1821	1543	1175	1821	1543	1734	1730	1783	1734	1730	1750
Q Serve(g_s), s	1.5	4.8	1.0	1.3	9.7	4.1	0.7	2.6	2.6	2.6	2.5	2.6
Cycle Q Clear(g_c), s	11.2	4.8	1.0	6.1	9.7	4.1	0.7	2.6	2.6	2.6	2.5	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		0.23
Lane Grp Cap(c), veh/h	190	433	367	305	433	512	74	810	835	163	899	909
V/C Ratio(X)	0.13	0.40	0.09	0.09	0.74	0.28	0.28	0.16	0.16	0.49	0.15	0.16
Avail Cap(c_a), veh/h	294	637	540	437	637	685	231	810	835	231	899	909
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.3	19.3	17.8	21.8	21.1	14.8	27.8	9.2	9.2	25.8	7.5	7.6
Incr Delay (d2), s/veh	0.3	0.6	0.1	0.1	2.5	0.3	2.1	0.4	0.4	2.2	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.8	0.3	0.3	3.8	1.2	0.3	0.8	0.8	1.0	0.7	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.6	19.9	17.9	21.9	23.7	15.1	29.9	9.6	9.6	28.1	7.9	7.9
LnGrp LOS	C	B	B	C	C	B	C	A	A	C	A	A
Approach Vol, veh/h	231				491				284			
Approach Delay, s/veh	20.3				21.1				11.1			
Approach LOS	C				C				B			
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	32.1		18.3	6.6	35.2		18.3				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	18.5		20.5	7.5	18.5		20.5				
Max Q Clear Time (g_c+I1), s	4.6	4.6		13.2	2.7	4.6		11.7				
Green Ext Time (p_c), s	0.0	1.0		0.6	0.0	1.1		1.5				
Intersection Summary												
HCM 6th Ctrl Delay	16.6											
HCM 6th LOS	B											

Lanes, Volumes, Timings
17: Jackson St. & 58th Avenue

Existing AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	30	7	1	32	2	2	35	2	10	62	11
Future Volume (vph)	5	30	7	1	32	2	2	35	2	10	62	11
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		5266			1079			1013			510	
Travel Time (s)		71.8			14.7			12.6			6.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	30	7	1	32	2	2	35	2	10	62	11
Future Vol, veh/h	5	30	7	1	32	2	2	35	2	10	62	11
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	32	7	1	34	2	2	37	2	11	66	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.4	7.4	7.4	7.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	12%	3%	12%
Vol Thru, %	90%	71%	91%	75%
Vol Right, %	5%	17%	6%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	39	42	35	83
LT Vol	2	5	1	10
Through Vol	35	30	32	62
RT Vol	2	7	2	11
Lane Flow Rate	41	45	37	88
Geometry Grp	1	1	1	1
Degree of Util (X)	0.048	0.051	0.043	0.099
Departure Headway (Hd)	4.123	4.11	4.164	4.053
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	861	862	850	879
Service Time	2.183	2.181	2.236	2.103
HCM Lane V/C Ratio	0.048	0.052	0.044	0.1
HCM Control Delay	7.4	7.4	7.4	7.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.2	0.1	0.3

Lanes, Volumes, Timings
1: Madison St. & Avenue 58

Existing PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	46	4	2	3	55	2	133	1	46	214	36
Future Volume (vph)	59	46	4	2	3	55	2	133	1	46	214	36
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Intersection Delay, s/veh	9.3											
Intersection LOS	A											















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↑		↰	↑↑		↰	↑↑	
Traffic Vol, veh/h	59	46	4	2	3	55	2	133	1	46	214	36
Future Vol, veh/h	59	46	4	2	3	55	2	133	1	46	214	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	64	50	4	2	3	60	2	145	1	50	233	39
Number of Lanes	1	1	1	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	9.6	8.6	9.3	9.4
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	98%	0%	100%	0%	0%	100%	2%	0%	100%
Vol Right, %	0%	0%	2%	0%	0%	100%	0%	0%	98%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	2	89	45	59	46	4	2	2	56	46	143
LT Vol	2	0	0	59	0	0	2	0	0	46	0
Through Vol	0	89	44	0	46	0	0	2	1	0	143
RT Vol	0	0	1	0	0	4	0	0	55	0	0
Lane Flow Rate	2	96	49	64	50	4	2	2	61	50	155
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.004	0.152	0.078	0.113	0.081	0.006	0.004	0.004	0.09	0.082	0.232
Departure Headway (Hd)	6.179	5.679	5.664	6.366	5.866	5.166	6.5	6	5.312	5.875	5.375
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	575	626	627	559	605	685	546	590	667	607	664
Service Time	3.962	3.462	3.447	4.158	3.658	2.958	4.297	3.797	3.109	3.644	3.144
HCM Lane V/C Ratio	0.003	0.153	0.078	0.114	0.083	0.006	0.004	0.003	0.091	0.082	0.233
HCM Control Delay	9	9.5	8.9	10	9.2	8	9.3	8.8	8.6	9.2	9.8
HCM Lane LOS	A	A	A	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0.5	0.3	0.4	0.3	0	0	0	0.3	0.3	0.9

Lanes, Volumes, Timings
2: Madison St. & Airport Bl.

Existing PM Peak hour

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	10	62	0	202	13	55	254
Future Volume (vph)	10	62	0	202	13	55	254
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		8			2		
Detector Phase	3	8	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	20.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	22.0	22.0	11.5	24.0	24.0	14.0	26.5
Total Split (%)	36.7%	36.7%	19.2%	40.0%	40.0%	23.3%	44.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 60

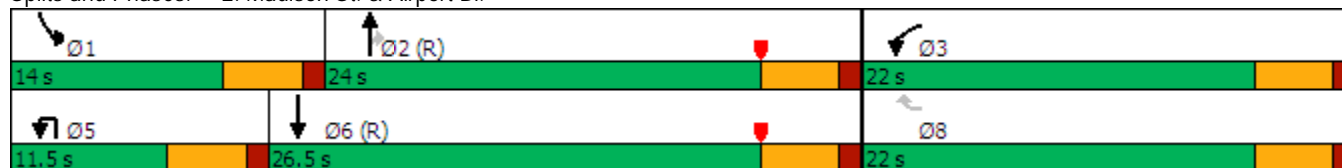
Actuated Cycle Length: 60

Offset: 14 (23%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55









Control Type: Actuated-Coordinated

Splits and Phases: 2: Madison St. & Airport Bl.


























HCM 6th Signalized Intersection Summary 2: Madison St. & Airport Bl.

Existing PM Peak hour

							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	10	62	0	202	13	55	254
Future Volume (veh/h)	10	62	0	202	13	55	254
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	11	70		227	15	62	285
Peak Hour Factor	0.89	0.89		0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	164	146		2151	960	145	2671
Arrive On Green	0.09	0.09		0.62	0.62	0.08	0.77
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	11	70		227	15	62	285
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	0.3	2.6		1.6	0.2	2.0	1.2
Cycle Q Clear(g_c), s	0.3	2.6		1.6	0.2	2.0	1.2
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	164	146		2151	960	145	2671
V/C Ratio(X)	0.07	0.48		0.11	0.02	0.43	0.11
Avail Cap(c_a), veh/h	520	463		2151	960	289	2671
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.7	25.8		4.6	4.3	26.1	1.7
Incr Delay (d2), s/veh	0.2	2.4		0.1	0.0	2.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.9		0.3	0.0	0.8	0.0
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	24.9	28.2		4.7	4.4	28.1	1.8
LnGrp LOS	C	C		A	A	C	A
Approach Vol, veh/h	81			242			347
Approach Delay, s/veh	27.7			4.7			6.5
Approach LOS	C			A			A
Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	9.0	41.3				50.3	9.7
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	9.5	19.5				22.0	17.5
Max Q Clear Time (g_c+I1), s	4.0	3.6				3.2	4.6
Green Ext Time (p_c), s	0.0	1.1				1.4	0.1
Intersection Summary							
HCM 6th Ctrl Delay			8.4				
HCM 6th LOS			A				
Notes							
User approved ignoring U-Turning movement.							

Lanes, Volumes, Timings
3: Madison St. & Avenue 54









Existing PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	196	236	17	104	51	219	210	53	30	104	11
Future Volume (vph)	13	196	236	17	104	51	219	210	53	30	104	11
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 15.9

Intersection LOS C

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	196	236	17	104	51	219	210	53	30	104	11
Future Vol, veh/h	13	196	236	17	104	51	219	210	53	30	104	11
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	220	265	19	117	57	246	236	60	34	117	12
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	18.6	12.4	15.7	12.3
HCM LOS	C	B	C	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	57%	0%	100%	22%	0%	100%	40%	0%	100%	76%
Vol Right, %	0%	0%	43%	0%	0%	78%	0%	0%	60%	0%	0%	24%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	219	140	123	13	131	301	17	69	86	30	69	46
LT Vol	219	0	0	13	0	0	17	0	0	30	0	0
Through Vol	0	140	70	0	131	65	0	69	35	0	69	35
RT Vol	0	0	53	0	0	236	0	0	51	0	0	11
Lane Flow Rate	246	157	138	15	147	339	19	78	96	34	78	51
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.533	0.319	0.269	0.032	0.302	0.645	0.046	0.175	0.205	0.081	0.177	0.114
Departure Headway (Hd)	7.798	7.298	6.996	7.903	7.403	6.855	8.587	8.087	7.67	8.667	8.167	7.998
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	463	492	514	453	486	528	417	443	468	413	439	448
Service Time	5.541	5.041	4.739	5.647	5.147	4.599	6.342	5.842	5.425	6.424	5.924	5.755
HCM Lane V/C Ratio	0.531	0.319	0.268	0.033	0.302	0.642	0.046	0.176	0.205	0.082	0.178	0.114
HCM Control Delay	19.1	13.4	12.3	10.9	13.3	21.3	11.8	12.6	12.4	12.2	12.7	11.8
HCM Lane LOS	C	B	B	B	B	C	B	B	B	B	B	B
HCM 95th-tile Q	3.1	1.4	1.1	0.1	1.3	4.6	0.1	0.6	0.8	0.3	0.6	0.4

Lanes, Volumes, Timings
4: Madison St. & Avenue 52

Existing PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	368	26	9	255	39	53	177	20	47	116	49
Future Volume (vph)	64	368	26	9	255	39	53	177	20	47	116	49
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	23.0	51.0	51.0	15.0	43.0	43.0	16.0	38.0	38.0	16.0	38.0	38.0
Total Split (%)	19.2%	42.5%	42.5%	12.5%	35.8%	35.8%	13.3%	31.7%	31.7%	13.3%	31.7%	31.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

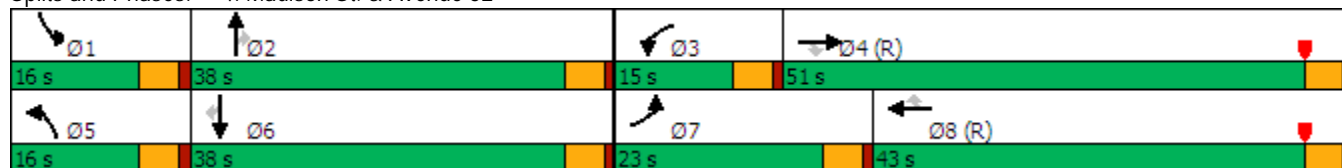
Actuated Cycle Length: 120

Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 85































Control Type: Actuated-Coordinated

Splits and Phases: 4: Madison St. & Avenue 52




HCM 6th Signalized Intersection Summary 4: Madison St. & Avenue 52

Existing PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 		 	 	
Traffic Volume (veh/h)	64	368	26	9	255	39	53	177	20	47	116	49
Future Volume (veh/h)	64	368	26	9	255	39	53	177	20	47	116	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	74	428	30	10	297	45	62	206	23	55	135	57
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	95	1742	777	29	1610	718	171	973	434	165	966	431
Arrive On Green	0.05	0.50	0.50	0.02	0.47	0.47	0.05	0.28	0.28	0.05	0.28	0.28
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	74	428	30	10	297	45	62	206	23	55	135	57
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	5.1	8.4	1.2	0.7	6.0	1.9	2.1	5.5	1.3	1.9	3.5	3.3
Cycle Q Clear(g_c), s	5.1	8.4	1.2	0.7	6.0	1.9	2.1	5.5	1.3	1.9	3.5	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	95	1742	777	29	1610	718	171	973	434	165	966	431
V/C Ratio(X)	0.78	0.25	0.04	0.35	0.18	0.06	0.36	0.21	0.05	0.33	0.14	0.13
Avail Cap(c_a), veh/h	267	1742	777	152	1610	718	322	973	434	322	966	431
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	16.9	15.1	58.4	18.8	17.7	55.1	33.0	31.5	55.2	32.4	32.4
Incr Delay (d2), s/veh	13.0	0.3	0.1	7.1	0.3	0.2	1.3	0.5	0.2	1.2	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	3.2	0.4	0.3	2.3	0.7	0.9	2.3	0.5	0.8	1.5	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.0	17.2	15.2	65.5	19.0	17.8	56.3	33.5	31.7	56.3	32.7	33.0
LnGrp LOS	E	B	B	E	B	B	E	C	C	E	C	C
Approach Vol, veh/h	532			352			291			247		
Approach Delay, s/veh	24.3			20.2			38.2			38.1		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.4	38.2	6.5	64.9	10.6	38.0	11.0	60.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.5	33.5	10.5	46.5	11.5	33.5	18.5	38.5				
Max Q Clear Time (g_c+I1), s	3.9	7.5	2.7	10.4	4.1	5.5	7.1	8.0				
Green Ext Time (p_c), s	0.1	1.2	0.0	2.8	0.1	0.9	0.1	1.8				
Intersection Summary												
HCM 6th Ctrl Delay	28.5											
HCM 6th LOS	C											

Lanes, Volumes, Timings
5: Madison St. & Avenue 50/50th Avenue

Existing PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	324	133	26	229	32	98	246	22	33	121	57
Future Volume (vph)	54	324	133	26	229	32	98	246	22	33	121	57
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	22.0	47.0	47.0	17.0	42.0	42.0	19.0	40.0	40.0	16.0	37.0	37.0
Total Split (%)	18.3%	39.2%	39.2%	14.2%	35.0%	35.0%	15.8%	33.3%	33.3%	13.3%	30.8%	30.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

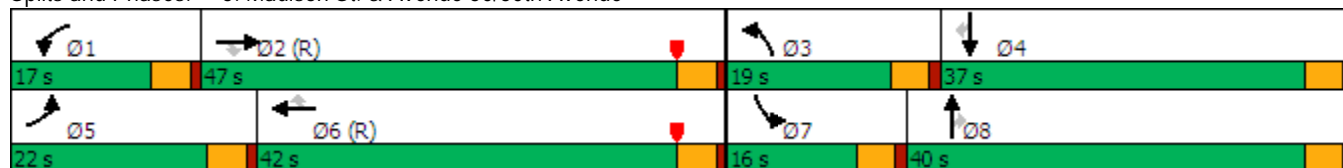
Actuated Cycle Length: 120

Offset: 64.5 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue




























HCM 6th Signalized Intersection Summary 5: Madison St. & Avenue 50/50th Avenue

Existing PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	324	133	26	229	32	98	246	22	33	121	57
Future Volume (veh/h)	54	324	133	26	229	32	98	246	22	33	121	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	57	341	140	27	241	34	103	259	23	35	127	60
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	86	1659	740	60	1607	717	190	1024	457	135	967	431
Arrive On Green	0.05	0.48	0.48	0.03	0.46	0.46	0.06	0.30	0.30	0.04	0.28	0.28
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	57	341	140	27	241	34	103	259	23	35	127	60
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	3.9	6.8	6.2	1.8	4.8	1.4	3.6	6.8	1.3	1.2	3.3	3.5
Cycle Q Clear(g_c), s	3.9	6.8	6.2	1.8	4.8	1.4	3.6	6.8	1.3	1.2	3.3	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	86	1659	740	60	1607	717	190	1024	457	135	967	431
V/C Ratio(X)	0.66	0.21	0.19	0.45	0.15	0.05	0.54	0.25	0.05	0.26	0.13	0.14
Avail Cap(c_a), veh/h	253	1659	740	181	1607	717	407	1024	457	322	967	431
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	18.0	17.9	56.8	18.5	17.6	55.1	32.2	30.2	55.9	32.3	32.4
Incr Delay (d2), s/veh	8.4	0.3	0.6	5.2	0.2	0.1	2.4	0.6	0.2	1.0	0.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	2.7	2.2	0.9	1.9	0.5	1.5	2.8	0.5	0.5	1.4	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.4	18.3	18.5	62.0	18.7	17.7	57.5	32.8	30.4	56.9	32.6	33.1
LnGrp LOS	E	B	B	E	B	B	E	C	C	E	C	C
Approach Vol, veh/h	538			302			385			222		
Approach Delay, s/veh	23.2			22.5			39.2			36.6		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.7	62.0	11.3	38.0	10.5	60.2	9.3	40.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	12.5	42.5	14.5	32.5	17.5	37.5	11.5	35.5				
Max Q Clear Time (g_c+I1), s	3.8	8.8	5.6	5.5	5.9	6.8	3.2	8.8				
Green Ext Time (p_c), s	0.0	2.6	0.2	0.8	0.1	1.5	0.0	1.5				
Intersection Summary												
HCM 6th Ctrl Delay	29.4											
HCM 6th LOS	C											

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54










Existing PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 		 	 	
Traffic Volume (vph)	30	24	2	30	10	295	6	154	50	355	148	2
Future Volume (vph)	30	24	2	30	10	295	6	154	50	355	148	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh16.9

Intersection LOS C





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	24	2	30	10	295	6	154	50	355	148	2
Future Vol, veh/h	30	24	2	30	10	295	6	154	50	355	148	2
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	37	29	2	37	12	360	7	188	61	433	180	2
Number of Lanes	1	2	0	1	1	1	0	2	0	2	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	12.3	22	13.3	15.6
HCM LOS	B	C	B	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	7%	0%	100%	0%	0%	100%	0%	0%	100%	100%	0%
Vol Thru, %	93%	61%	0%	100%	80%	0%	100%	0%	0%	0%	99%
Vol Right, %	0%	39%	0%	0%	20%	0%	0%	100%	0%	0%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	83	127	30	16	10	30	10	295	178	178	150
LT Vol	6	0	30	0	0	30	0	0	178	178	0
Through Vol	77	77	0	16	8	0	10	0	0	0	148
RT Vol	0	50	0	0	2	0	0	295	0	0	2
Lane Flow Rate	101	155	37	20	12	37	12	360	216	216	183
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.218	0.32	0.092	0.046	0.029	0.082	0.026	0.687	0.453	0.453	0.357
Departure Headway (Hd)	7.756	7.445	9.09	8.578	8.435	8.088	7.581	6.871	7.539	7.539	7.028
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	463	483	394	417	424	443	473	525	478	478	512
Service Time	5.504	5.192	6.854	6.342	6.199	5.828	5.321	4.61	5.282	5.282	4.77
HCM Lane V/C Ratio	0.218	0.321	0.094	0.048	0.028	0.084	0.025	0.686	0.452	0.452	0.357
HCM Control Delay	12.7	13.7	12.8	11.8	11.5	11.6	10.5	23.4	16.4	16.4	13.6
HCM Lane LOS	B	B	B	B	B	B	B	C	C	C	B
HCM 95th-tile Q	0.8	1.4	0.3	0.1	0.1	0.3	0.1	5.2	2.3	2.3	1.6

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

Existing PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	241	240	15	248	210	135	416	59	113	343	101
Future Volume (vph)	73	241	240	15	248	210	135	416	59	113	343	101
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											






















HCM 6th Roundabout
7: Jefferson St. & Avenue 52

Existing PM Peak hour

Intersection									
Intersection Delay, s/veh	9.7								
Intersection LOS	A								
Approach	EB		WB		NB		SB		
Entry Lanes	1		1		1		1		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	595		509		655		600		
Demand Flow Rate, veh/h	607		519		668		611		
Vehicles Circulating, veh/h	516		684		468		436		
Vehicles Exiting, veh/h	420		388		392		536		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	5.6		6.2		15.7		10.0		
Approach LOS	A		A		C		B		
Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Bypass	
Designated Moves	LT	R	LT	R	LT	R	LT	R	
Assumed Moves	LT	R	LT	R	LT	R	LT	R	
RT Channelized		Free		Free		Free		Free	
Lane Util	1.000		1.000		1.000		1.000		
Follow-Up Headway, s	2.609		2.609		2.609		2.609		
Critical Headway, s	4.976	263	4.976	231	4.976	64	4.976	111	
Entry Flow, veh/h	344	1887	288	1887	604	1887	500	1887	
Cap Entry Lane, veh/h	815	0.980	687	0.980	856	0.980	885	0.980	
Entry HV Adj Factor	0.979	258	0.981	226	0.980	63	0.981	109	
Flow Entry, veh/h	337	1850	283	1850	592	1850	491	1850	
Cap Entry, veh/h	798	0.139	674	0.122	839	0.034	868	0.059	
V/C Ratio	0.422	0.0	0.419	0.0	0.705	0.0	0.565	0.0	
Control Delay, s/veh	9.9	A	11.2	A	17.4	A	12.2	A	
LOS	A	0	B	0	C	0	B	0	
95th %tile Queue, veh	2		2		6		4		

Lanes, Volumes, Timings
8: Jefferson St. & Pomelo

Existing PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	2	21	9	1	34	3	689	7	15	620	55
Future Volume (vph)	54	2	21	9	1	34	3	689	7	15	620	55
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	50.0	50.0	50.0	50.0	50.0	50.0	18.0	50.0		20.0	52.0	
Total Split (%)	41.7%	41.7%	41.7%	41.7%	41.7%	41.7%	15.0%	41.7%		16.7%	43.3%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary

Area Type: Other

Cycle Length: 120

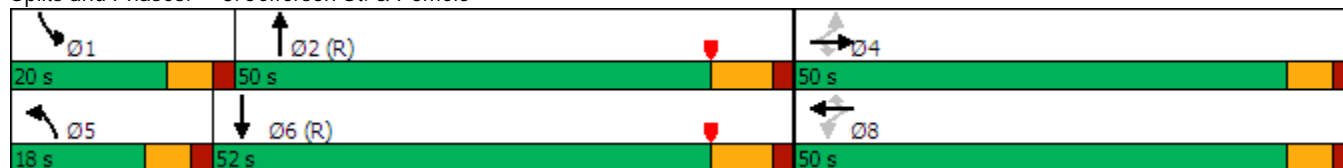
Actuated Cycle Length: 120

Offset: 90 (75%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110

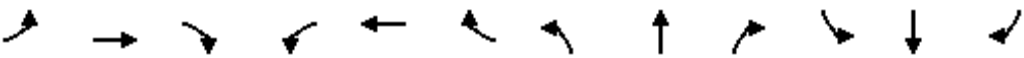
Control Type: Actuated-Coordinated

Splits and Phases: 8: Jefferson St. & Pomelo



























HCM 6th Signalized Intersection Summary 8: Jefferson St. & Pomelo

Existing PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↰	↑↑↑		↰	↑↑↑	
Traffic Volume (veh/h)	54	2	21	9	1	34	3	689	7	15	620	55
Future Volume (veh/h)	54	2	21	9	1	34	3	689	7	15	620	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	57	2	22	9	1	36	3	725	7	16	653	58
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	72	2	471	66	4	471	17	2493	24	72	2432	214
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.01	0.49	0.49	0.08	1.00	1.00
Sat Flow, veh/h	44	5	1543	30	14	1543	1734	5078	49	1734	4652	410
Grp Volume(v), veh/h	59	0	22	10	0	36	3	473	259	16	464	247
Grp Sat Flow(s),veh/h/ln	49	0	1543	44	0	1543	1734	1657	1812	1734	1657	1747
Q Serve(g_s), s	1.2	0.0	1.2	0.6	0.0	2.0	0.2	10.2	10.2	1.0	0.0	0.0
Cycle Q Clear(g_c), s	36.6	0.0	1.2	36.3	0.0	2.0	0.2	10.2	10.2	1.0	0.0	0.0
Prop In Lane	0.97		1.00	0.90		1.00	1.00		0.03	1.00		0.23
Lane Grp Cap(c), veh/h	74	0	471	71	0	471	17	1627	890	72	1733	913
V/C Ratio(X)	0.80	0.00	0.05	0.14	0.00	0.08	0.18	0.29	0.29	0.22	0.27	0.27
Avail Cap(c_a), veh/h	159	0	566	158	0	566	173	1627	890	202	1733	913
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	59.2	0.0	29.4	47.3	0.0	29.7	59.0	18.1	18.1	53.2	0.0	0.0
Incr Delay (d2), s/veh	32.7	0.0	0.1	1.9	0.0	0.1	10.9	0.5	0.8	2.9	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.5	0.3	0.0	0.8	0.1	3.7	4.1	0.5	0.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	91.9	0.0	29.5	49.2	0.0	29.8	69.8	18.6	19.0	56.1	0.3	0.6
LnGrp LOS	F	A	C	D	A	C	E	B	B	E	A	A
Approach Vol, veh/h	81			46			735			727		
Approach Delay, s/veh	75.0			34.0			18.9			1.7		
Approach LOS	E			C			B			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	65.6		43.4	7.1	69.4		43.4				
Change Period (Y+Rc), s	6.0	7.5		6.0	6.0	7.5		6.0				
Max Green Setting (Gmax), s	14.0	42.5		44.0	12.0	44.5		44.0				
Max Q Clear Time (g_c+I1), s	3.0	12.2		38.6	2.2	2.0		38.3				
Green Ext Time (p_c), s	0.0	8.7		0.2	0.0	9.2		0.1				
Intersection Summary												
HCM 6th Ctrl Delay	14.3											
HCM 6th LOS	B											

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

Existing PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	242	309	50	78	237	140	66	660	51	168	568	175
Future Volume (vph)	242	309	50	78	237	140	66	660	51	168	568	175
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	43.5	43.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	36.3%	36.3%	15.0%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

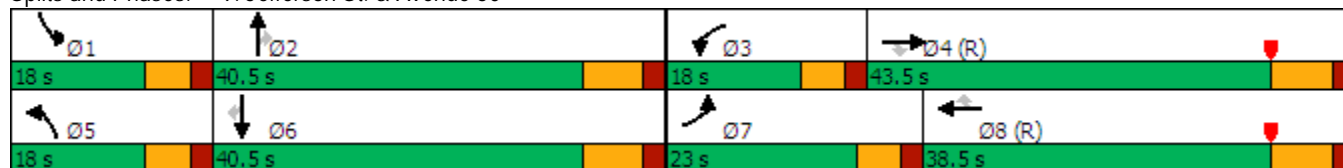
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 115

























Control Type: Actuated-Coordinated

Splits and Phases: 9: Jefferson St. & Avenue 50







HCM 6th Signalized Intersection Summary 9: Jefferson St. & Avenue 50

Existing PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	242	309	50	78	237	140	66	660	51	168	568	175
Future Volume (veh/h)	242	309	50	78	237	140	66	660	51	168	568	175
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	249	319	52	80	244	144	68	680	53	173	586	180
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	1350	602	161	622	527	155	956	297	335	1006	312
Arrive On Green	0.14	0.39	0.39	0.09	0.34	0.34	0.03	0.06	0.06	0.10	0.20	0.20
Sat Flow, veh/h	1734	3460	1543	1734	1821	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	249	319	52	80	244	144	68	680	53	173	586	180
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	17.0	7.4	2.6	5.3	12.2	8.1	4.6	16.1	3.9	5.9	12.8	12.6
Cycle Q Clear(g_c), s	17.0	7.4	2.6	5.3	12.2	8.1	4.6	16.1	3.9	5.9	12.8	12.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	1350	602	161	622	527	155	956	297	335	1006	312
V/C Ratio(X)	1.01	0.24	0.09	0.50	0.39	0.27	0.44	0.71	0.18	0.52	0.58	0.58
Avail Cap(c_a), veh/h	246	1350	602	173	622	527	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	24.6	23.1	51.7	30.0	28.7	55.3	52.9	47.2	51.3	43.3	43.2
Incr Delay (d2), s/veh	60.9	0.4	0.3	0.9	1.9	1.3	0.7	1.4	0.4	0.6	0.8	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.3	3.0	0.9	2.3	5.5	3.1	2.0	7.2	1.5	2.4	5.1	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	112.4	25.0	23.4	52.6	31.9	30.0	56.0	54.3	47.6	51.9	44.1	45.6
LnGrp LOS	F	C	C	D	C	C	E	D	D	D	D	D
Approach Vol, veh/h	620			468			801			939		
Approach Delay, s/veh	60.0			34.9			54.0			45.8		
Approach LOS	E			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	30.6	17.2	54.3	16.8	31.8	23.0	48.5				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	12.0	33.0	12.0	36.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	7.9	18.1	7.3	9.4	6.6	14.8	19.0	14.2				
Green Ext Time (p_c), s	0.1	5.0	0.0	3.9	0.0	5.4	0.0	3.1				
Intersection Summary												
HCM 6th Ctrl Delay	49.4											
HCM 6th LOS	D											

Lanes, Volumes, Timings
10: Avenue 60 & Madison St.

Existing PM Peak hour

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	3	3	77	155	1
Future Volume (vph)	1	3	3	77	155	1
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		40	
Link Distance (ft)		1772	661		437	
Travel Time (s)		30.2	11.3		7.4	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)						
Sign Control		Stop	Stop		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Intersection Delay, s/veh	9.1
Intersection LOS	A





















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↱	↱	↱	↱	↱
Traffic Vol, veh/h	1	3	3	77	155	1
Future Vol, veh/h	1	3	3	77	155	1
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	4	4	94	189	1
Number of Lanes	0	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	8.1	7.6	9.9
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	25%	0%	0%	100%	0%
Vol Thru, %	75%	100%	0%	0%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	4	3	77	155	1
LT Vol	1	0	0	155	0
Through Vol	3	3	0	0	0
RT Vol	0	0	77	0	1
Lane Flow Rate	5	4	94	189	1
Geometry Grp	4	7	7	7	7
Degree of Util (X)	0.007	0.005	0.114	0.273	0.001
Departure Headway (Hd)	5.031	5.074	4.371	5.208	4.007
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	715	709	824	684	883
Service Time	3.036	2.775	2.072	2.977	1.775
HCM Lane V/C Ratio	0.007	0.006	0.114	0.276	0.001
HCM Control Delay	8.1	7.8	7.6	9.9	6.8
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0	0	0.4	1.1	0

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue









Existing PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	63	48	2	18	9	30	50	3	17	54	13
Future Volume (vph)	15	63	48	2	18	9	30	50	3	17	54	13
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

HCM 6th AWSC
11: Monroe St. & Avenue 60/60th Avenue

Existing PM Peak hour

Intersection												
Intersection Delay, s/veh	8.3											
Intersection LOS	A											


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	63	48	2	18	9	30	50	3	17	54	13
Future Vol, veh/h	15	63	48	2	18	9	30	50	3	17	54	13
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	72	55	2	20	10	34	57	3	19	61	15
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	8.2	8.2	8.5	8.3
HCM LOS	A	A	A	A






Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	19%	0%	7%	100%	0%	0%
Vol Thru, %	0%	94%	81%	0%	62%	0%	100%	0%
Vol Right, %	0%	6%	0%	100%	31%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	53	78	48	29	17	54	13
LT Vol	30	0	15	0	2	17	0	0
Through Vol	0	50	63	0	18	0	54	0
RT Vol	0	3	0	48	9	0	0	13
Lane Flow Rate	34	60	89	55	33	19	61	15
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.054	0.087	0.129	0.067	0.047	0.031	0.089	0.019
Departure Headway (Hd)	5.725	5.183	5.229	4.432	5.165	5.726	5.223	4.52
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	626	691	686	808	692	626	686	791
Service Time	3.458	2.915	2.957	2.16	2.903	3.457	2.955	2.251
HCM Lane V/C Ratio	0.054	0.087	0.13	0.068	0.048	0.03	0.089	0.019
HCM Control Delay	8.8	8.4	8.7	7.5	8.2	8.6	8.5	7.3
HCM Lane LOS	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0.2	0.3	0.4	0.2	0.1	0.1	0.3	0.1

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

Existing PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	66	14	6	35	35	23	117	20	27	70	28
Future Volume (vph)	36	66	14	6	35	35	23	117	20	27	70	28
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	66	14	6	35	35	23	117	20	27	70	28
Future Vol, veh/h	36	66	14	6	35	35	23	117	20	27	70	28
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	88	19	8	47	47	31	156	27	36	93	37
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	9.4	8.7	9.9	9.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	14%	31%	8%	28%	0%
Vol Thru, %	73%	57%	46%	72%	0%
Vol Right, %	12%	12%	46%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	160	116	76	97	28
LT Vol	23	36	6	27	0
Through Vol	117	66	35	70	0
RT Vol	20	14	35	0	28
Lane Flow Rate	213	155	101	129	37
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.287	0.214	0.136	0.198	0.048
Departure Headway (Hd)	4.836	4.985	4.816	5.509	4.663
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	738	716	739	648	762
Service Time	2.897	3.048	2.884	3.274	2.427
HCM Lane V/C Ratio	0.289	0.216	0.137	0.199	0.049
HCM Control Delay	9.9	9.4	8.7	9.6	7.7
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	1.2	0.8	0.5	0.7	0.2

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.









Existing PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	51	8	11	42	25	8	131	26	33	110	7
Future Volume (vph)	4	51	8	11	42	25	8	131	26	33	110	7
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 9.2

Intersection LOS A



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	51	8	11	42	25	8	131	26	33	110	7
Future Vol, veh/h	4	51	8	11	42	25	8	131	26	33	110	7
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	59	9	13	48	29	9	151	30	38	126	8
Number of Lanes	1	1	1	0	1	0	1	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	1	3
HCM Control Delay	8.7	9.2	9.8	8.9
HCM LOS	A	A	A	A







Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	100%	0%	0%	14%	100%	0%	0%
Vol Thru, %	0%	83%	0%	100%	0%	54%	0%	100%	84%
Vol Right, %	0%	17%	0%	0%	100%	32%	0%	0%	16%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	8	157	4	51	8	78	33	73	44
LT Vol	8	0	4	0	0	11	33	0	0
Through Vol	0	131	0	51	0	42	0	73	37
RT Vol	0	26	0	0	8	25	0	0	7
Lane Flow Rate	9	180	5	59	9	90	38	84	50
Geometry Grp	8	8	7	7	7	8	8	8	8
Degree of Util (X)	0.015	0.263	0.008	0.09	0.012	0.138	0.062	0.127	0.074
Departure Headway (Hd)	5.874	5.255	6.04	5.538	4.836	5.534	5.913	5.41	5.298
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	607	680	590	644	735	644	603	659	673
Service Time	3.633	3.015	3.805	3.303	2.6	3.305	3.674	3.172	3.059
HCM Lane V/C Ratio	0.015	0.265	0.008	0.092	0.012	0.14	0.063	0.127	0.074
HCM Control Delay	8.7	9.9	8.9	8.9	7.7	9.2	9.1	9	8.5
HCM Lane LOS	A	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0	1.1	0	0.3	0	0.5	0.2	0.4	0.2

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

Existing PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	186	30	7	89	37	19	182	26	69	96	26
Future Volume (vph)	54	186	30	7	89	37	19	182	26	69	96	26
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	12.7
Intersection LOS	B























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	54	186	30	7	89	37	19	182	26	69	96	26
Future Vol, veh/h	54	186	30	7	89	37	19	182	26	69	96	26
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	59	204	33	8	98	41	21	200	29	76	105	29
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	12.5	11.7	14	12
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	8%	100%	0%	5%	42%	0%
Vol Thru, %	80%	0%	86%	67%	58%	0%
Vol Right, %	11%	0%	14%	28%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	227	54	216	133	165	26
LT Vol	19	54	0	7	69	0
Through Vol	182	0	186	89	96	0
RT Vol	26	0	30	37	0	26
Lane Flow Rate	249	59	237	146	181	29
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.432	0.111	0.404	0.259	0.328	0.044
Departure Headway (Hd)	6.229	6.726	6.12	6.381	6.522	5.598
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	576	532	586	560	549	637
Service Time	4.287	4.483	3.877	4.449	4.284	3.36
HCM Lane V/C Ratio	0.432	0.111	0.404	0.261	0.33	0.046
HCM Control Delay	14	10.3	13	11.7	12.5	8.6
HCM Lane LOS	B	B	B	B	B	A
HCM 95th-tile Q	2.2	0.4	1.9	1	1.4	0.1

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52










Existing PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	290	37	12	207	79	24	227	31	97	147	55
Future Volume (vph)	72	290	37	12	207	79	24	227	31	97	147	55
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh25.3

Intersection LOS D

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	72	290	37	12	207	79	24	227	31	97	147	55
Future Vol, veh/h	72	290	37	12	207	79	24	227	31	97	147	55
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	84	337	43	14	241	92	28	264	36	113	171	64
Number of Lanes	1	1	1	0	2	1	0	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach RightNB		SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay	32.9	16	36.1	14.4
HCM LOS	D	C	E	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	9%	100%	0%	0%	15%	0%	0%	100%	0%	0%
Vol Thru, %	80%	0%	100%	0%	85%	100%	0%	0%	100%	47%
Vol Right, %	11%	0%	0%	100%	0%	0%	100%	0%	0%	53%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	282	72	290	37	81	138	79	97	98	104
LT Vol	24	72	0	0	12	0	0	97	0	0
Through Vol	227	0	290	0	69	138	0	0	98	49
RT Vol	31	0	0	37	0	0	79	0	0	55
Lane Flow Rate	328	84	337	43	94	160	92	113	114	121
Geometry Grp	8	8	8	8	8	8	8	7	7	7
Degree of Util (X)	0.782	0.214	0.815	0.095	0.241	0.407	0.215	0.281	0.268	0.271
Departure Headway (Hd)	8.588	9.216	8.697	7.971	9.218	9.14	8.41	8.978	8.463	8.081
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	420	389	415	449	389	393	426	400	424	444
Service Time	6.345	6.977	6.458	5.732	6.986	6.909	6.178	6.74	6.224	5.843
HCM Lane V/C Ratio	0.781	0.216	0.812	0.096	0.242	0.407	0.216	0.282	0.269	0.273
HCM Control Delay	36.1	14.5	40.2	11.6	14.9	18.1	13.5	15.2	14.3	13.8
HCM Lane LOS	E	B	E	B	B	C	B	C	B	B
HCM 95th-tile Q	6.7	0.8	7.4	0.3	0.9	1.9	0.8	1.1	1.1	1.1

Lanes, Volumes, Timings
16: Monroe St. & 50th Avenue

Existing PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	334	30	11	218	123	24	374	51	127	209	20
Future Volume (vph)	37	334	30	11	218	123	24	374	51	127	209	20
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	20.5	20.5	20.5	20.5	20.5	11.5	11.5	20.5		11.5	20.5	
Total Split (s)	24.9	24.9	24.9	24.9	24.9	14.6	11.5	20.5		14.6	23.6	
Total Split (%)	41.5%	41.5%	41.5%	41.5%	41.5%	24.3%	19.2%	34.2%		24.3%	39.3%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

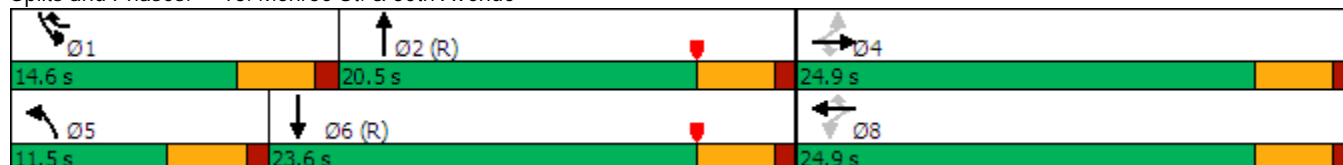
Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

























Splits and Phases: 16: Monroe St. & 50th Avenue



HCM 6th Signalized Intersection Summary

















16: Monroe St. & 50th Avenue

Existing PM Peak hour





												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	334	30	11	218	123	24	374	51	127	209	20
Future Volume (veh/h)	37	334	30	11	218	123	24	374	51	127	209	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	41	371	33	12	242	137	27	416	57	141	232	22
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	265	470	398	187	470	574	88	1309	178	198	1570	148
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.05	0.43	0.42	0.11	0.49	0.48
Sat Flow, veh/h	1004	1821	1543	981	1821	1543	1734	3060	417	1734	3197	300
Grp Volume(v), veh/h	41	371	33	12	242	137	27	234	239	141	125	129
Grp Sat Flow(s),veh/h/ln	1004	1821	1543	981	1821	1543	1734	1730	1746	1734	1730	1767
Q Serve(g_s), s	2.2	11.4	1.0	0.7	6.8	3.7	0.9	5.4	5.5	4.7	2.4	2.4
Cycle Q Clear(g_c), s	9.0	11.4	1.0	12.1	6.8	3.7	0.9	5.4	5.5	4.7	2.4	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.24	1.00		0.17
Lane Grp Cap(c), veh/h	265	470	398	187	470	574	88	740	747	198	850	868
V/C Ratio(X)	0.15	0.79	0.08	0.06	0.51	0.24	0.31	0.32	0.32	0.71	0.15	0.15
Avail Cap(c_a), veh/h	356	634	538	276	634	713	217	740	747	306	850	868
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	20.7	16.9	26.4	19.0	13.0	27.5	11.4	11.4	25.6	8.4	8.4
Incr Delay (d2), s/veh	0.3	4.8	0.1	0.1	0.9	0.2	2.0	1.1	1.1	4.7	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	4.6	0.3	0.2	2.5	1.0	0.4	1.8	1.8	1.9	0.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.2	25.5	17.0	26.5	19.9	13.2	29.4	12.5	12.5	30.4	8.7	8.8
LnGrp LOS	C	C	B	C	B	B	C	B	B	C	A	A
Approach Vol, veh/h	445			391			500			395		
Approach Delay, s/veh	24.7			17.8			13.4			16.5		
Approach LOS	C			B			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.8	29.7		19.5	7.0	33.5		19.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	10.1	16.0		20.4	7.0	19.1		20.4				
Max Q Clear Time (g_c+I1), s	6.7	7.5		13.4	2.9	4.4		14.1				
Green Ext Time (p_c), s	0.1	1.6		1.3	0.0	1.0		0.9				
Intersection Summary												
HCM 6th Ctrl Delay	18.0											
HCM 6th LOS	B											

Lanes, Volumes, Timings
17: Jackson St. & 58th Avenue

Existing PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	75	6	0	29	7	8	86	13	5	53	12
Future Volume (vph)	27	75	6	0	29	7	8	86	13	5	53	12
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		5266			1079			1013			510	
Travel Time (s)		71.8			14.7			12.6			6.3	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	75	6	0	29	7	8	86	13	5	53	12
Future Vol, veh/h	27	75	6	0	29	7	8	86	13	5	53	12
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	34	95	8	0	37	9	10	109	16	6	67	15
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.5	7.8	8.3	8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	25%	0%	7%
Vol Thru, %	80%	69%	81%	76%
Vol Right, %	12%	6%	19%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	107	108	36	70
LT Vol	8	27	0	5
Through Vol	86	75	29	53
RT Vol	13	6	7	12
Lane Flow Rate	135	137	46	89
Geometry Grp	1	1	1	1
Degree of Util (X)	0.166	0.171	0.057	0.109
Departure Headway (Hd)	4.401	4.512	4.485	4.422
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	817	796	799	812
Service Time	2.419	2.533	2.509	2.442
HCM Lane V/C Ratio	0.165	0.172	0.058	0.11
HCM Control Delay	8.3	8.5	7.8	8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.6	0.2	0.4

APPENDIX 3.3:

EXISTING (2019) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING (2019) AM PEAK HOUR WARRANTS**

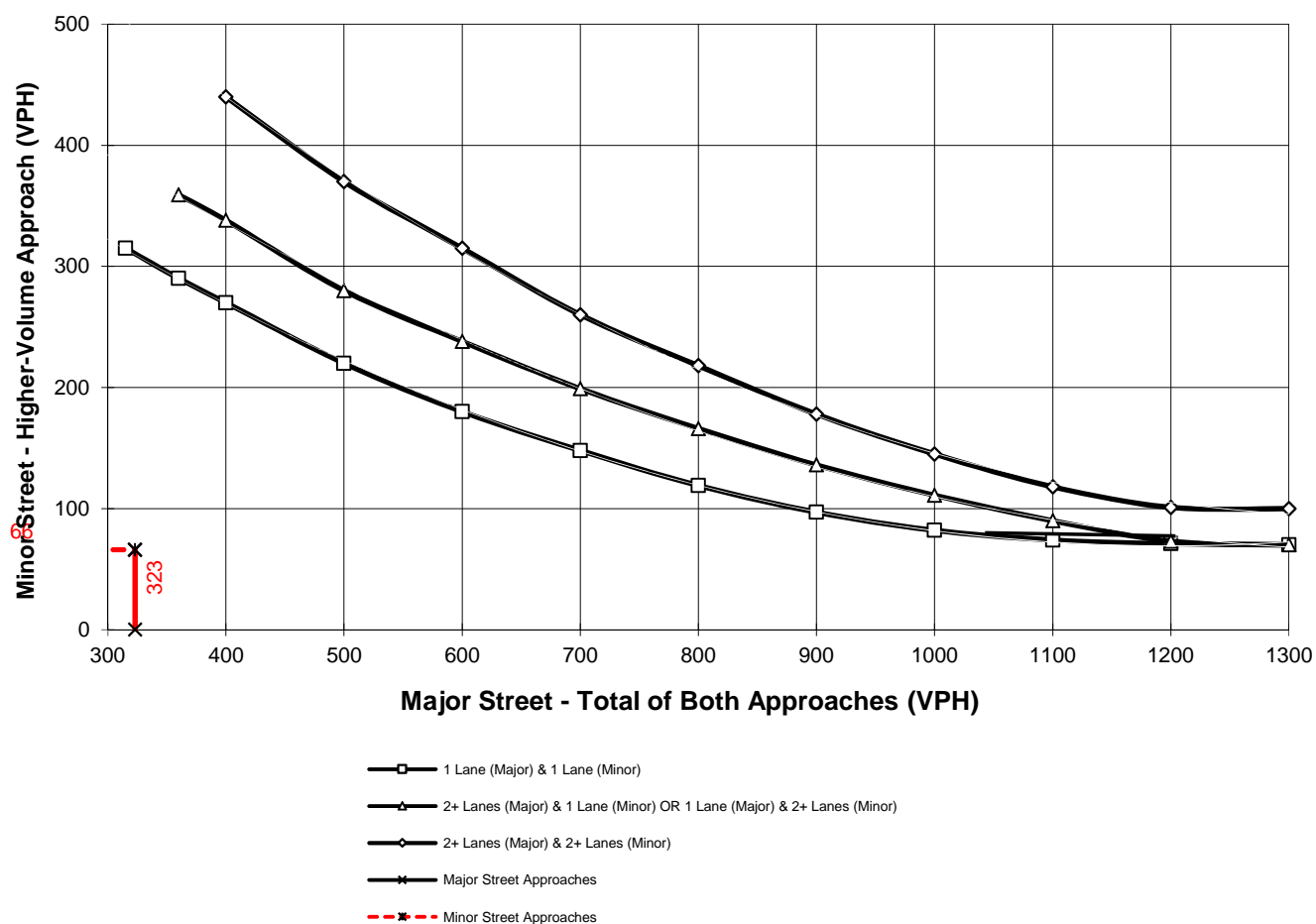
Major Street Name = **Madison St.**

Total of Both Approaches (VPH) = **323**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Avenue 58**

High Volume Approach (VPH) = **66**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #1

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING (2019) PM PEAK HOUR WARRANTS**

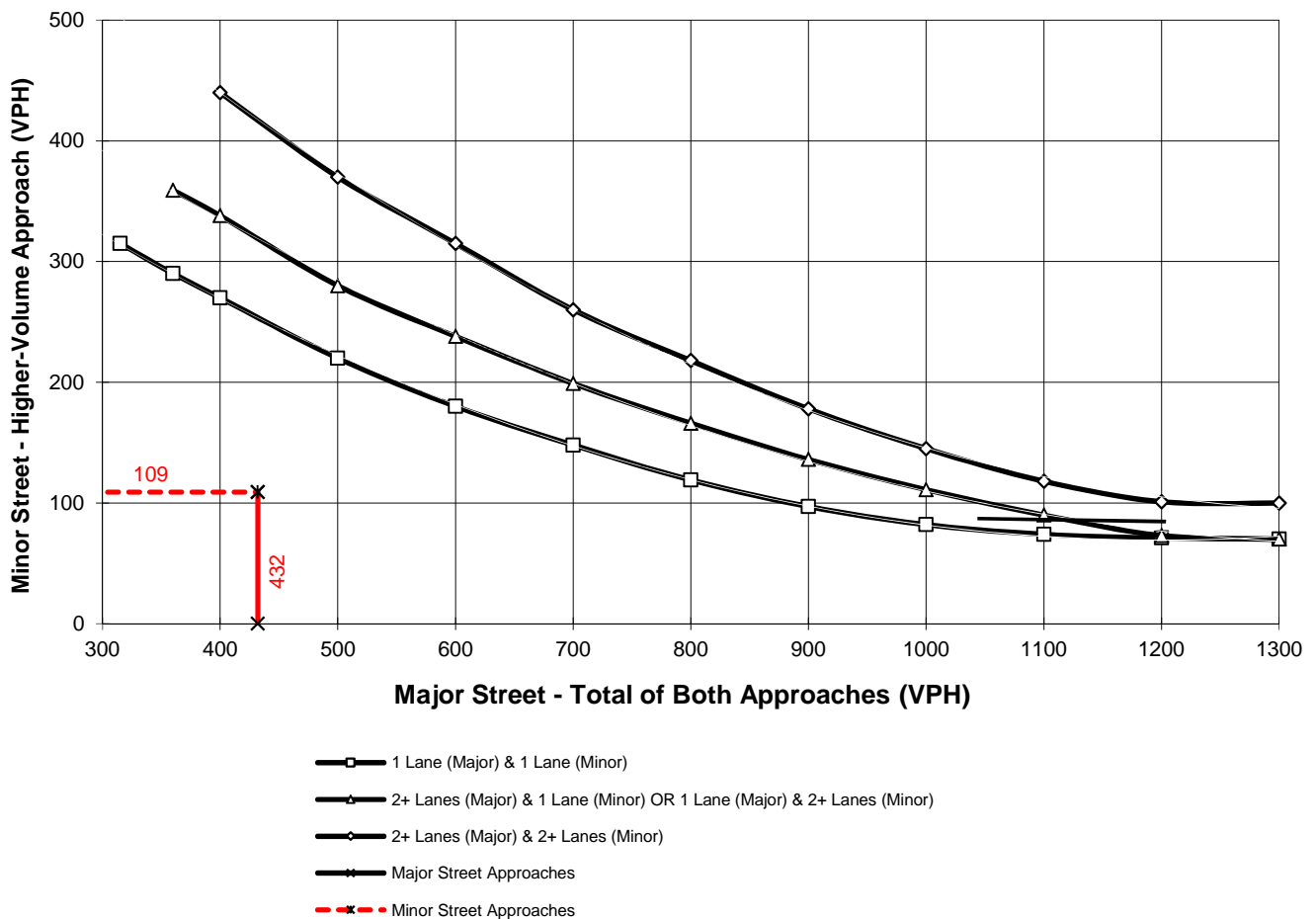
Major Street Name = **Madison St.**

Total of Both Approaches (VPH) = **432**
Number of Approach Lanes Major Street = **3**

Minor Street Name = **Avenue 58**

High Volume Approach (VPH) = **109**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #1

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING (2019) AM PEAK HOUR WARRANTS**

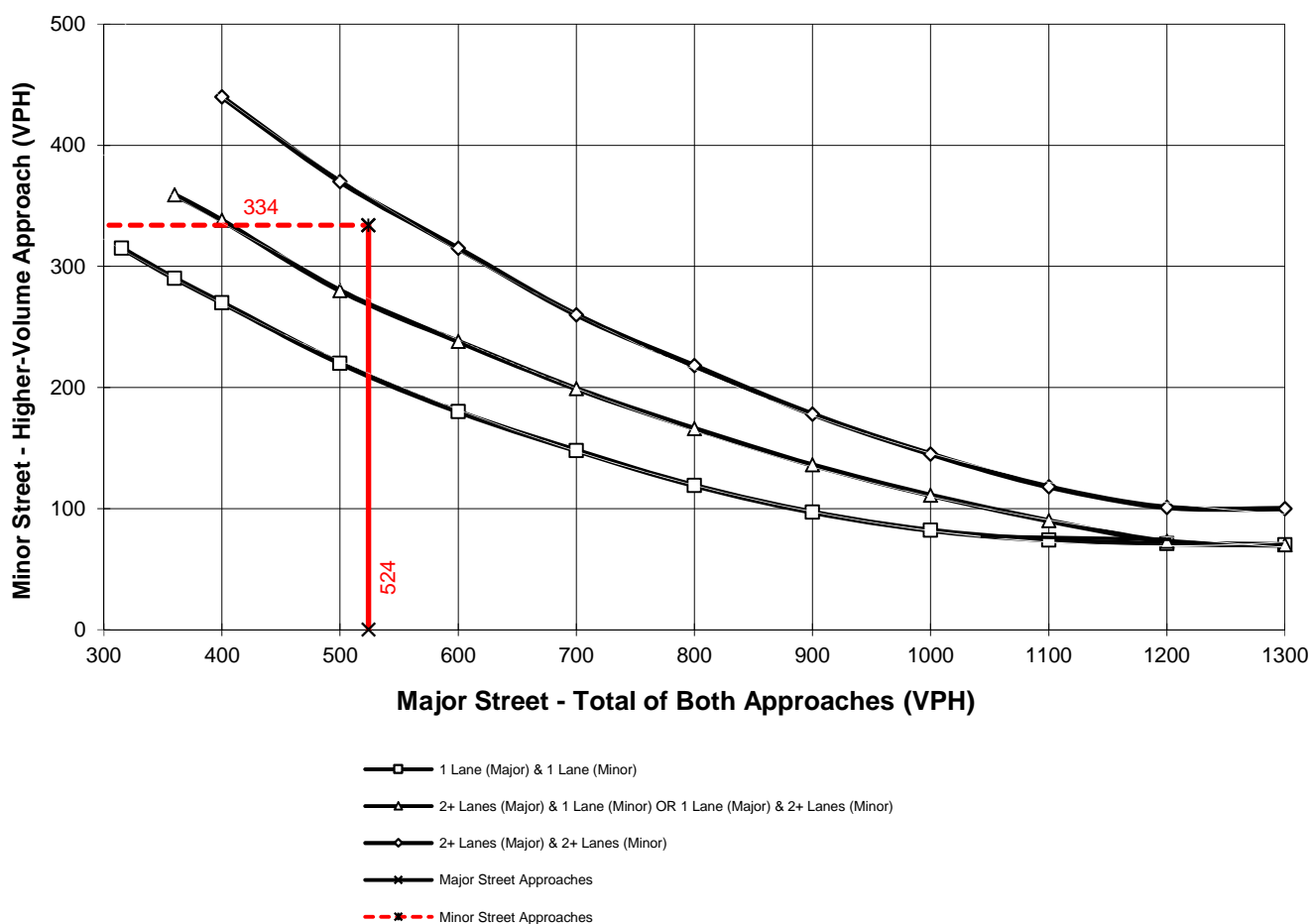
Major Street Name = **Avenue 54**

Total of Both Approaches (VPH) = **524**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Madison St.**

High Volume Approach (VPH) = **334**
Number of Approach Lanes Minor Street = **2**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #3

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

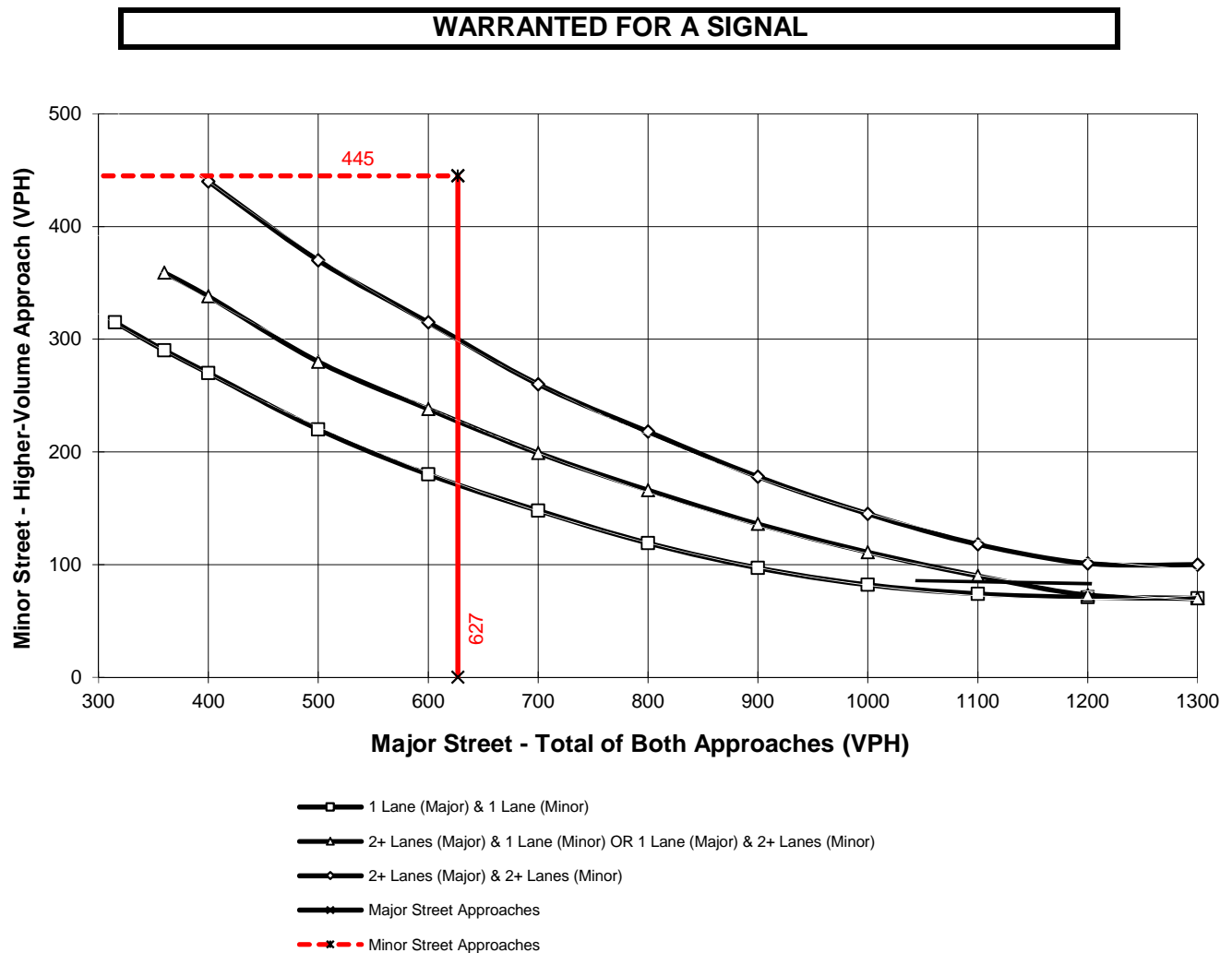
Traffic Conditions = **EXISTING (2019) PM PEAK HOUR WARRANTS**

Major Street Name = **Madison St.**

Total of Both Approaches (VPH) = **627**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Avenue 54**

High Volume Approach (VPH) = **445**
Number of Approach Lanes Minor Street = **2**



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #3

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING (2019) AM PEAK HOUR WARRANTS**

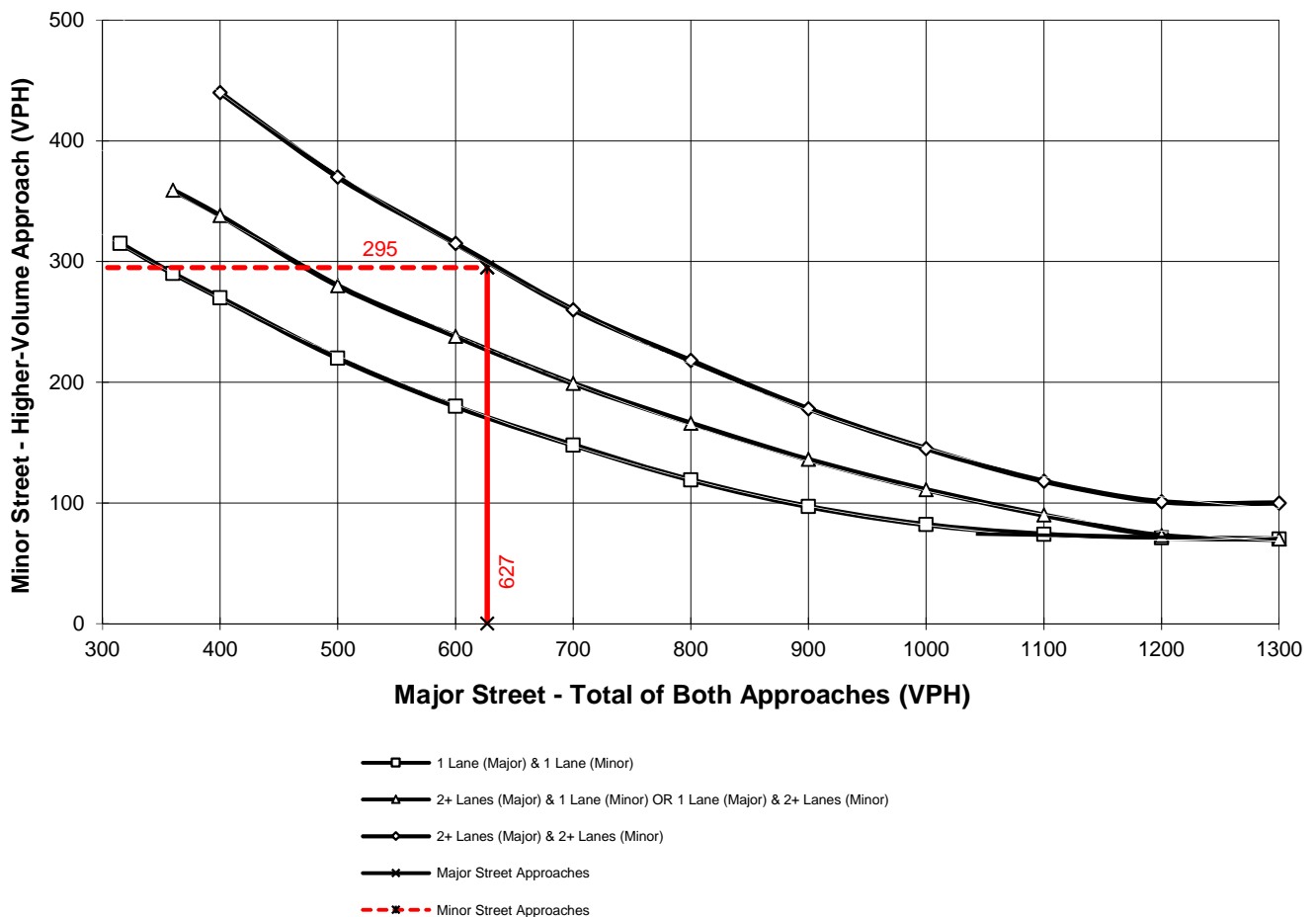
Major Street Name = **Jefferson St.**

Total of Both Approaches (VPH) = **627**
Number of Approach Lanes Major Street = **3**

Minor Street Name = **Avenue 54**

High Volume Approach (VPH) = **295**
Number of Approach Lanes Minor Street = **2**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #6

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING (2019) PM PEAK HOUR WARRANTS**

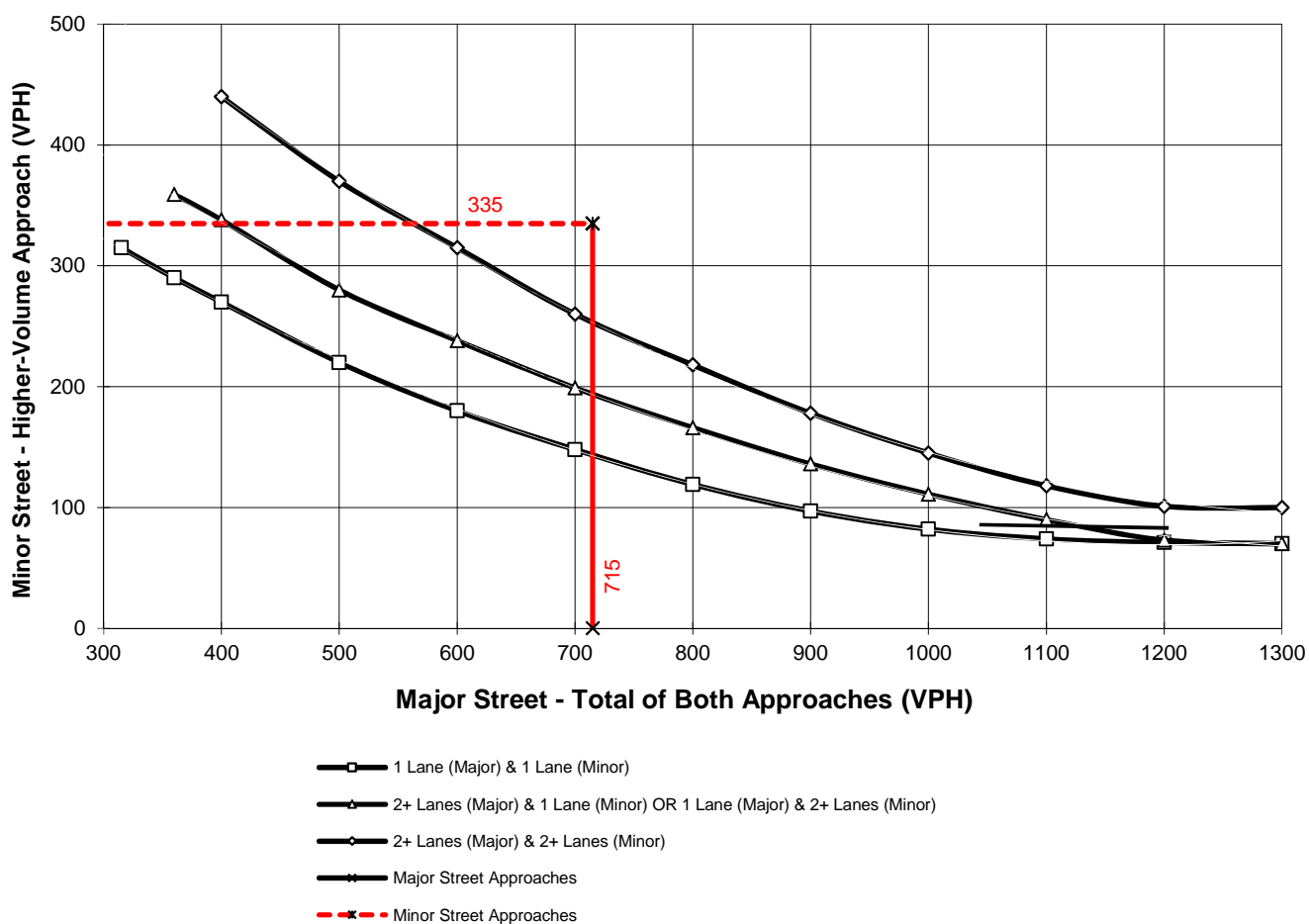
Major Street Name = **Jefferson St.**

Total of Both Approaches (VPH) = **715**
Number of Approach Lanes Major Street = **3**

Minor Street Name = **Avenue 54**

High Volume Approach (VPH) = **335**
Number of Approach Lanes Minor Street = **2**

WARRANTED FOR A SIGNAL



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #6

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING (2019) AM PEAK HOUR WARRANTS**

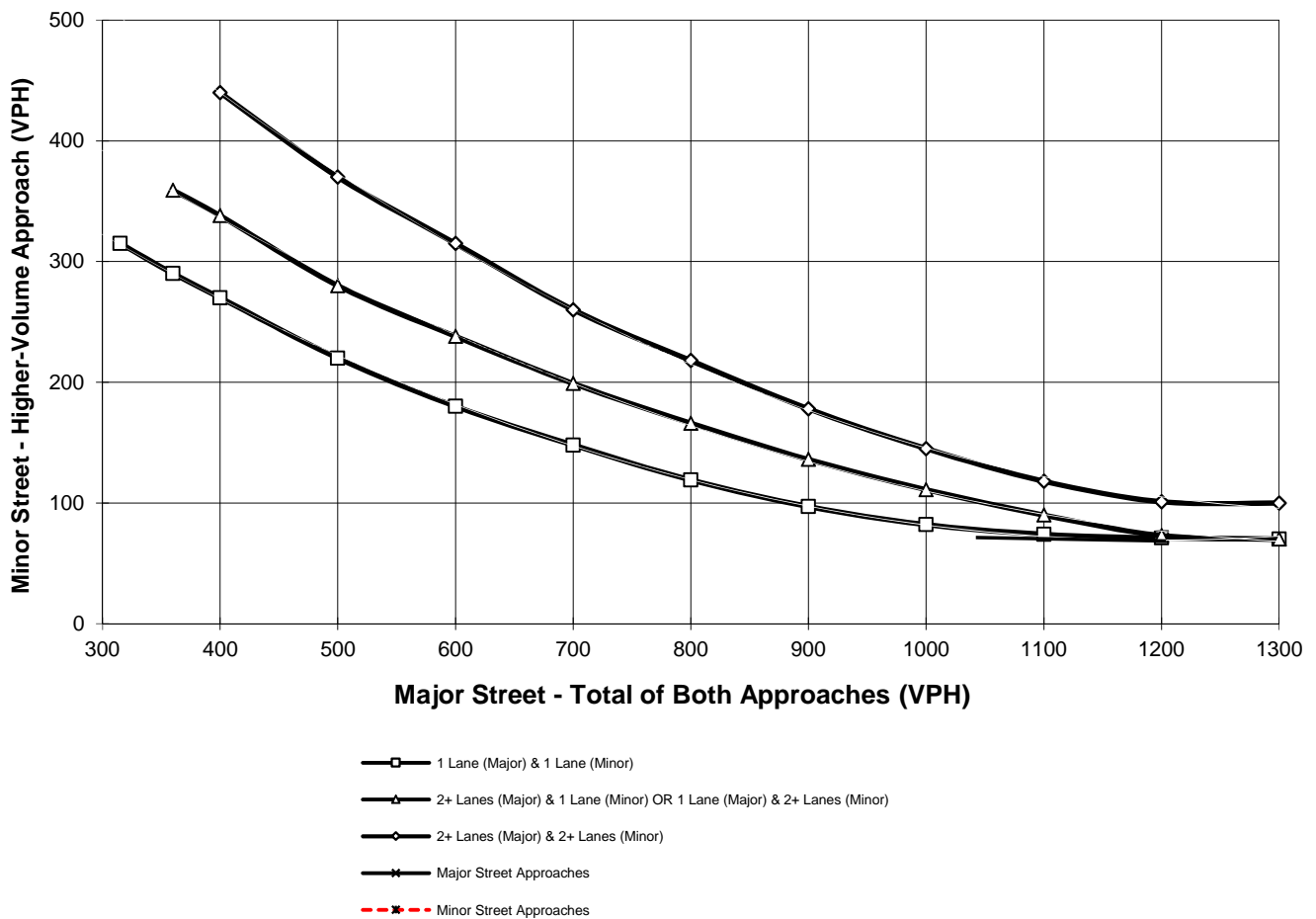
Major Street Name = **Avenue 60**

Total of Both Approaches (VPH) = **98**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Madison St.**

High Volume Approach (VPH) = **93**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #10

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING (2019) PM PEAK HOUR WARRANTS**

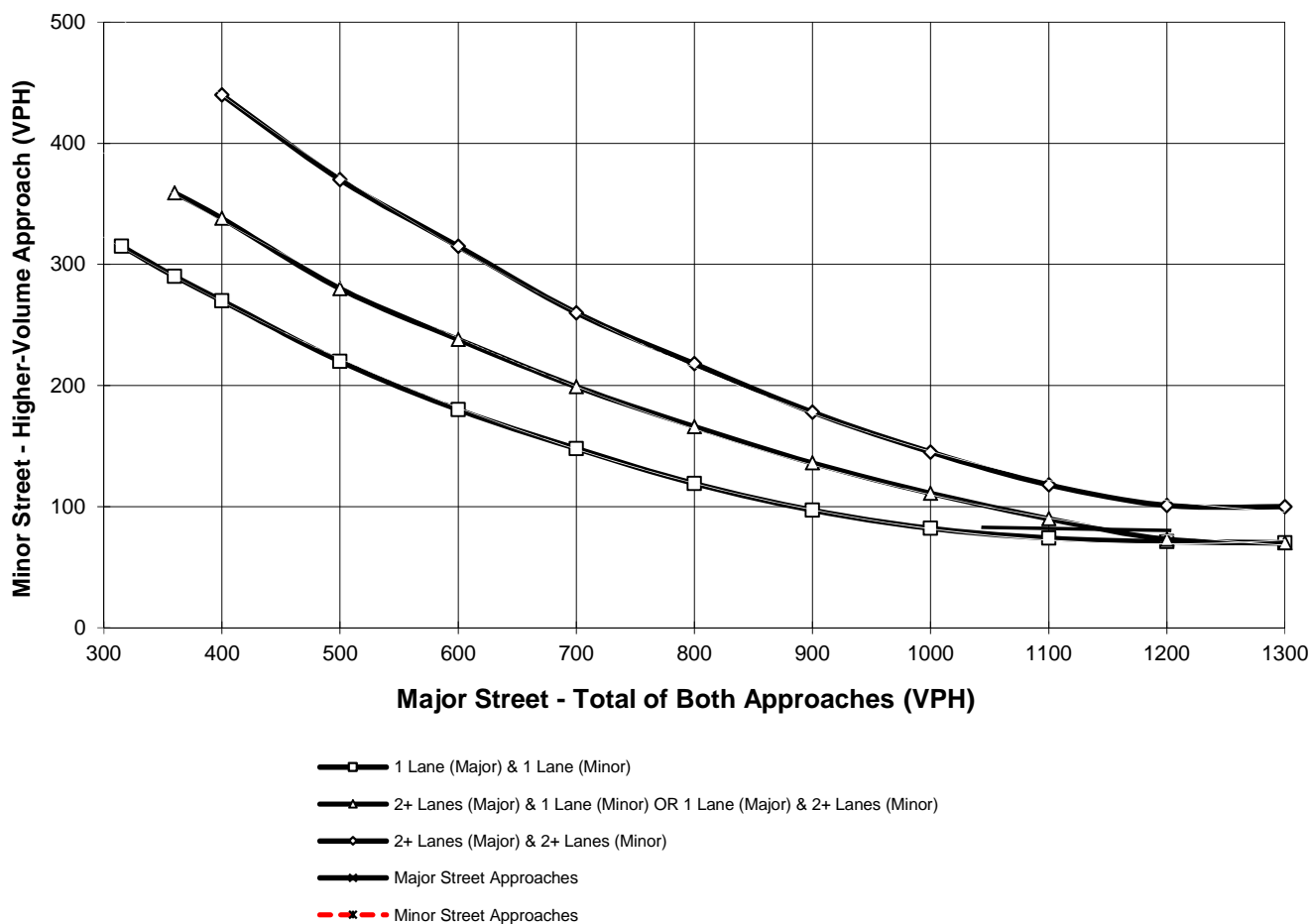
Major Street Name = **Madison St.**

Total of Both Approaches (VPH) = **156**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Avenue 60**

High Volume Approach (VPH) = **80**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #10

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

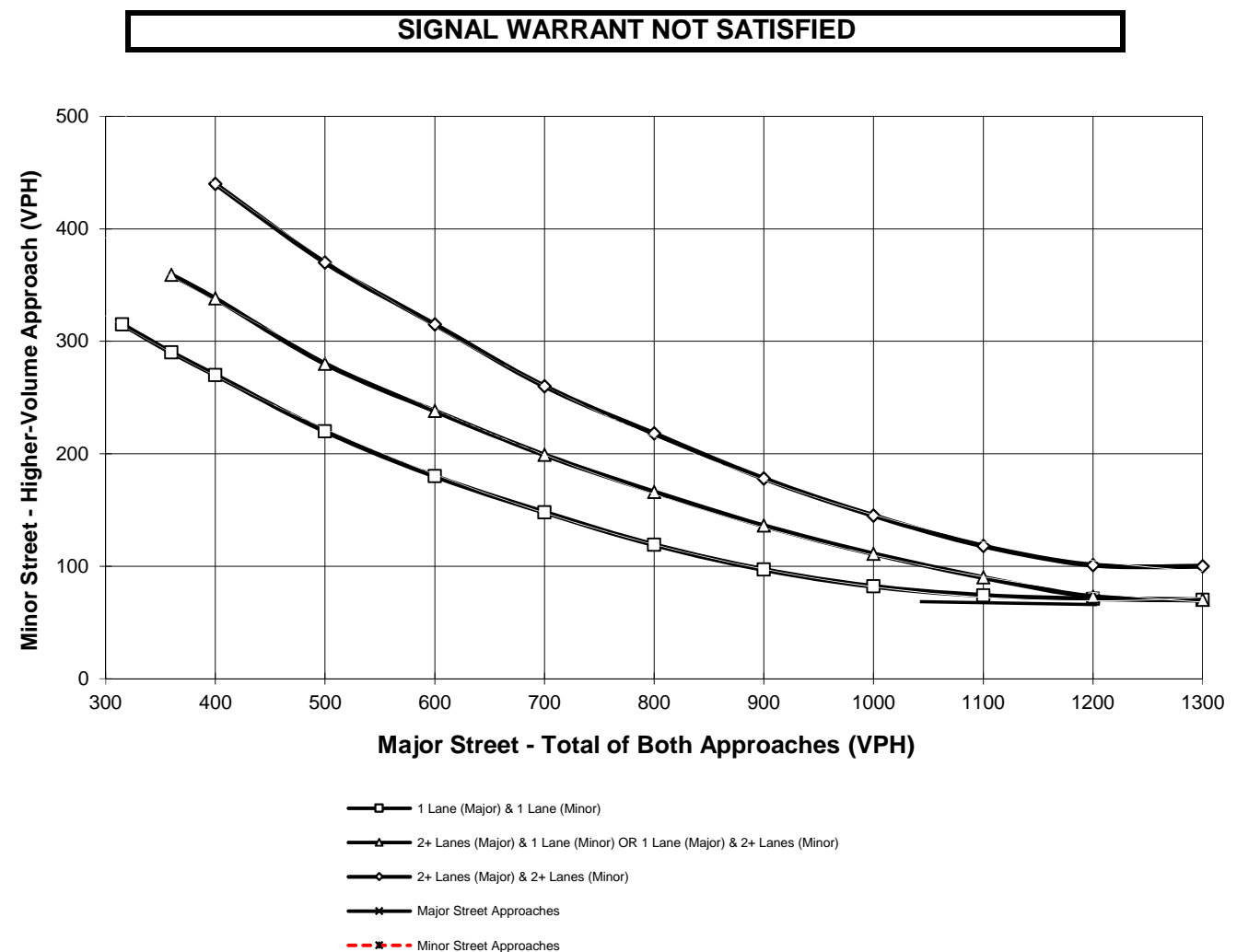
Traffic Conditions = **EXISTING (2019) AM PEAK HOUR WARRANTS**

Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **155**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Avenue 60**

High Volume Approach (VPH) = **103**
Number of Approach Lanes Minor Street = **1**



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #11

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING (2019) PM PEAK HOUR WARRANTS**

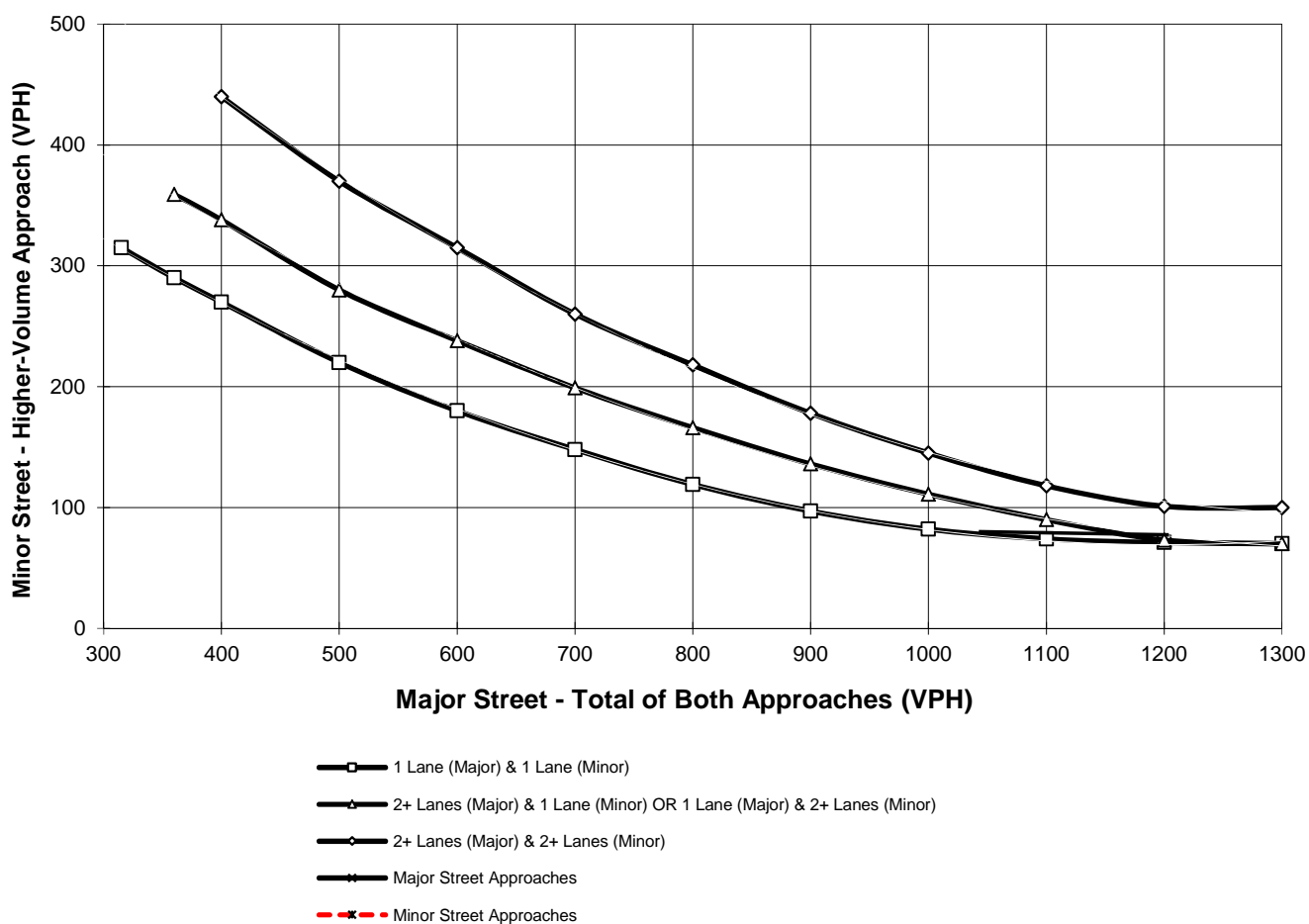
Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **167**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Avenue 60**

High Volume Approach (VPH) = **126**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #11

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING (2019) AM PEAK HOUR WARRANTS**

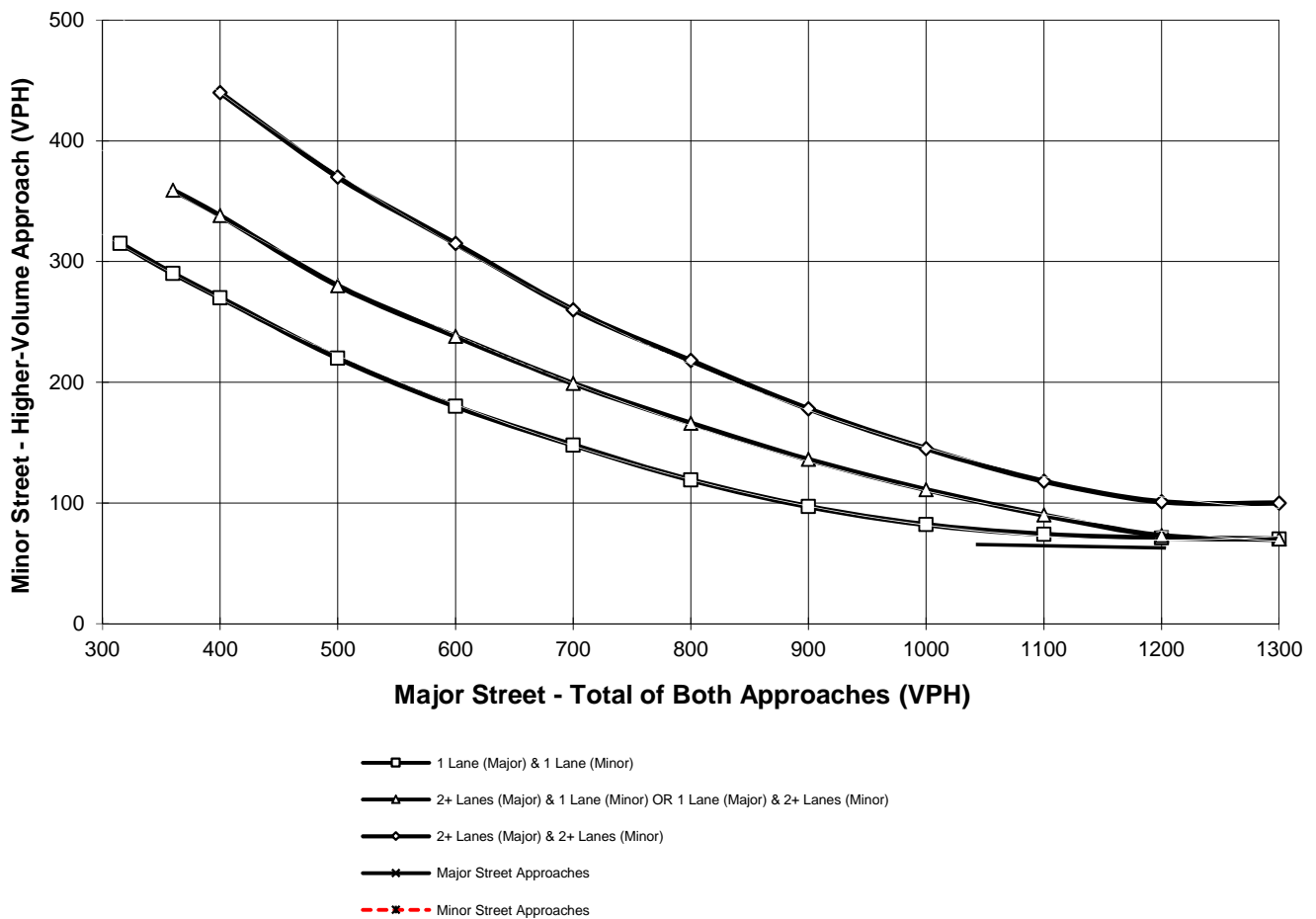
Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **188**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Avenue 58**

High Volume Approach (VPH) = **67**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #12

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING (2019) PM PEAK HOUR WARRANTS**

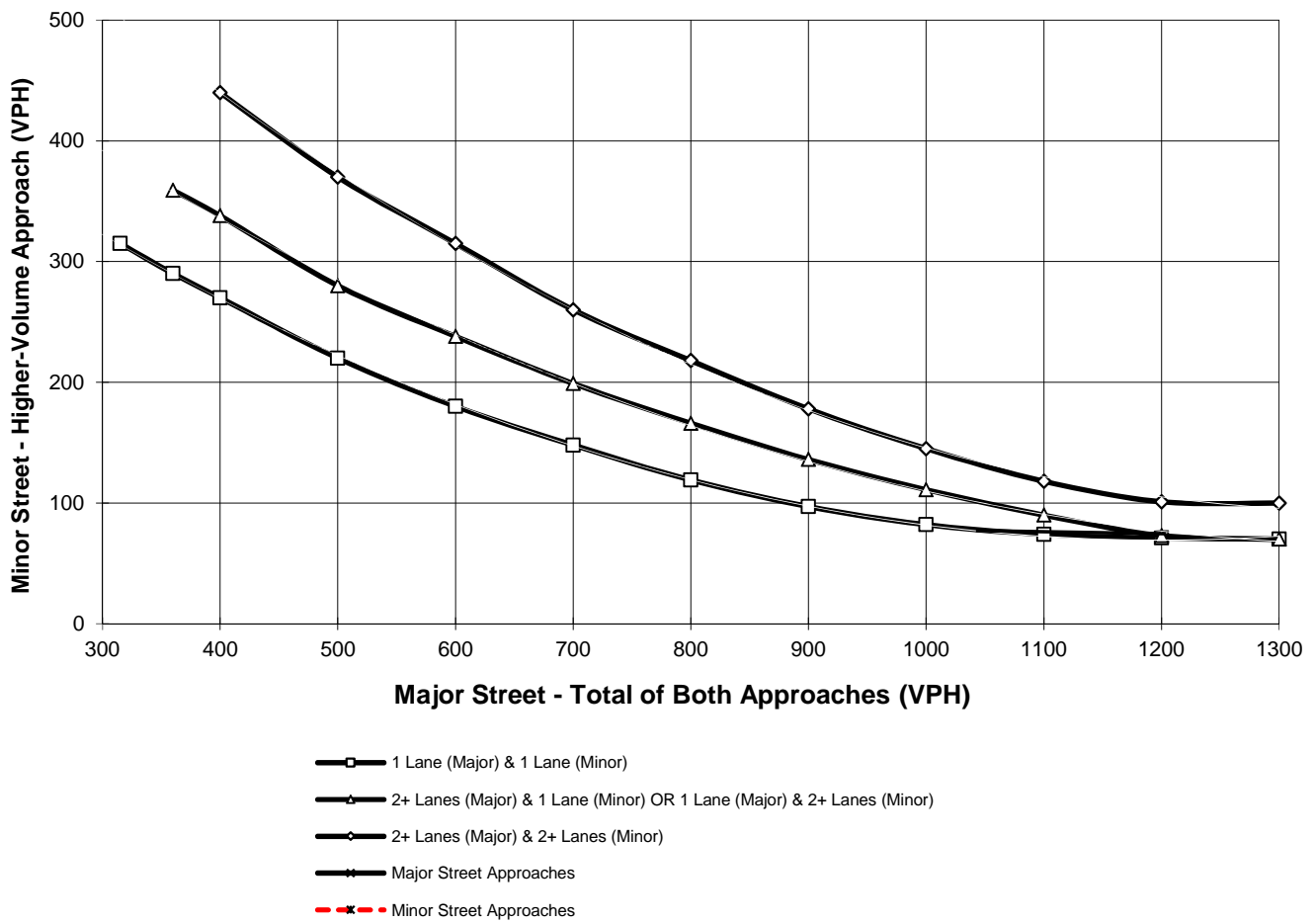
Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **285**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Avenue 58**

High Volume Approach (VPH) = **116**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #12

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING (2019) AM PEAK HOUR WARRANTS**

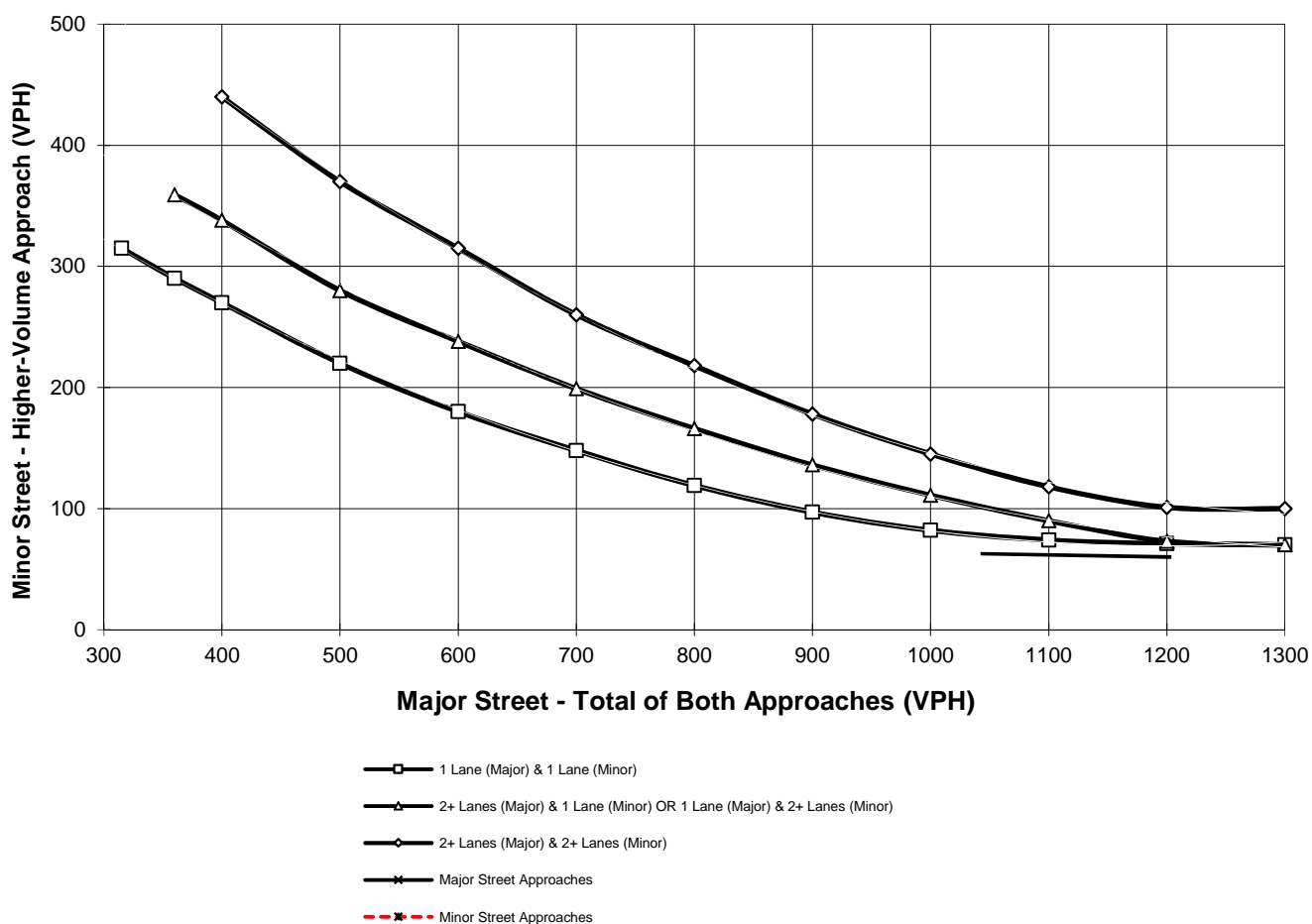
Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **206**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Airport Blvd.**

High Volume Approach (VPH) = **67**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #13

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING (2019) PM PEAK HOUR WARRANTS**

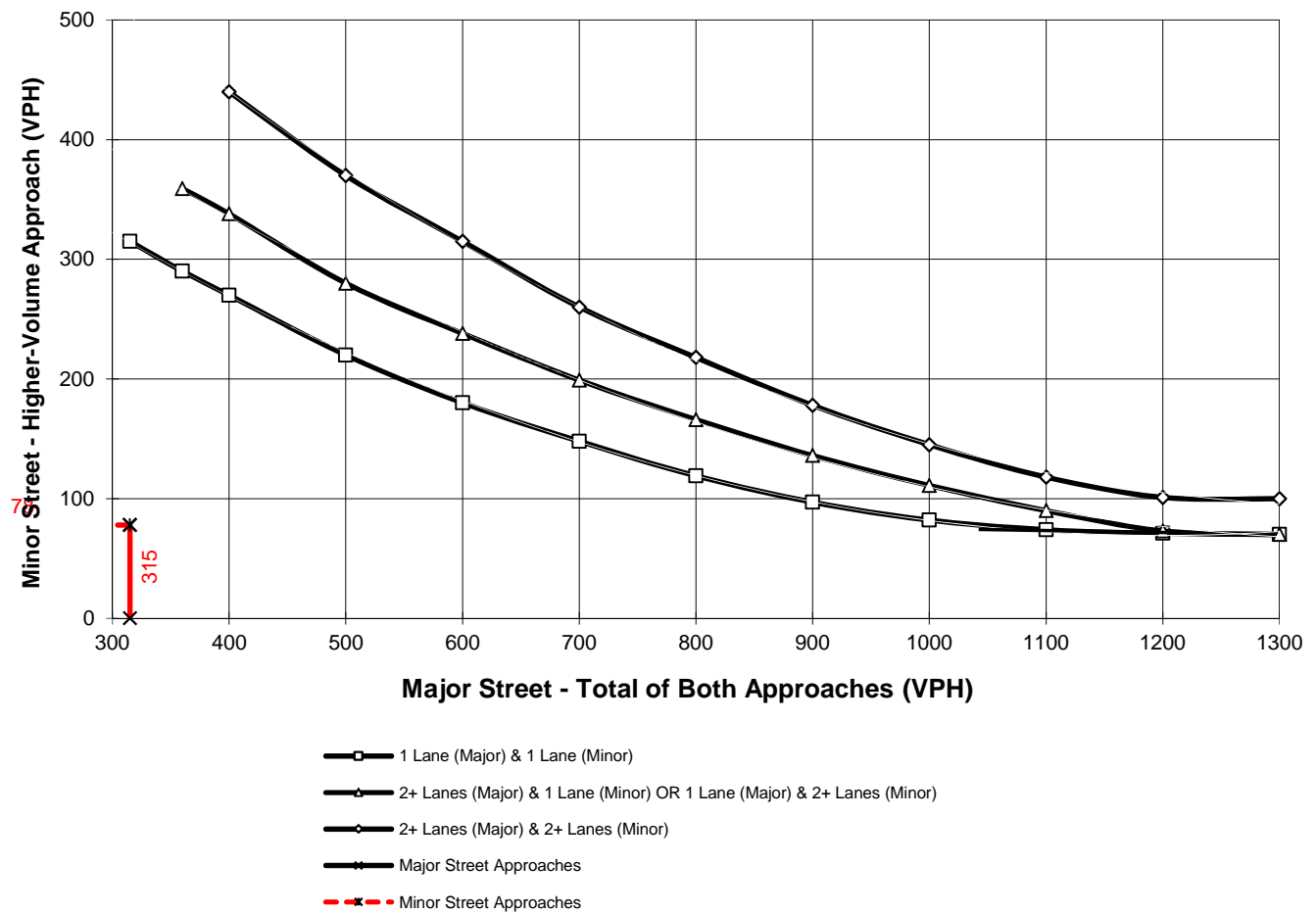
Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **315**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Airport Blvd.**

High Volume Approach (VPH) = **78**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #13

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING (2019) AM PEAK HOUR WARRANTS**

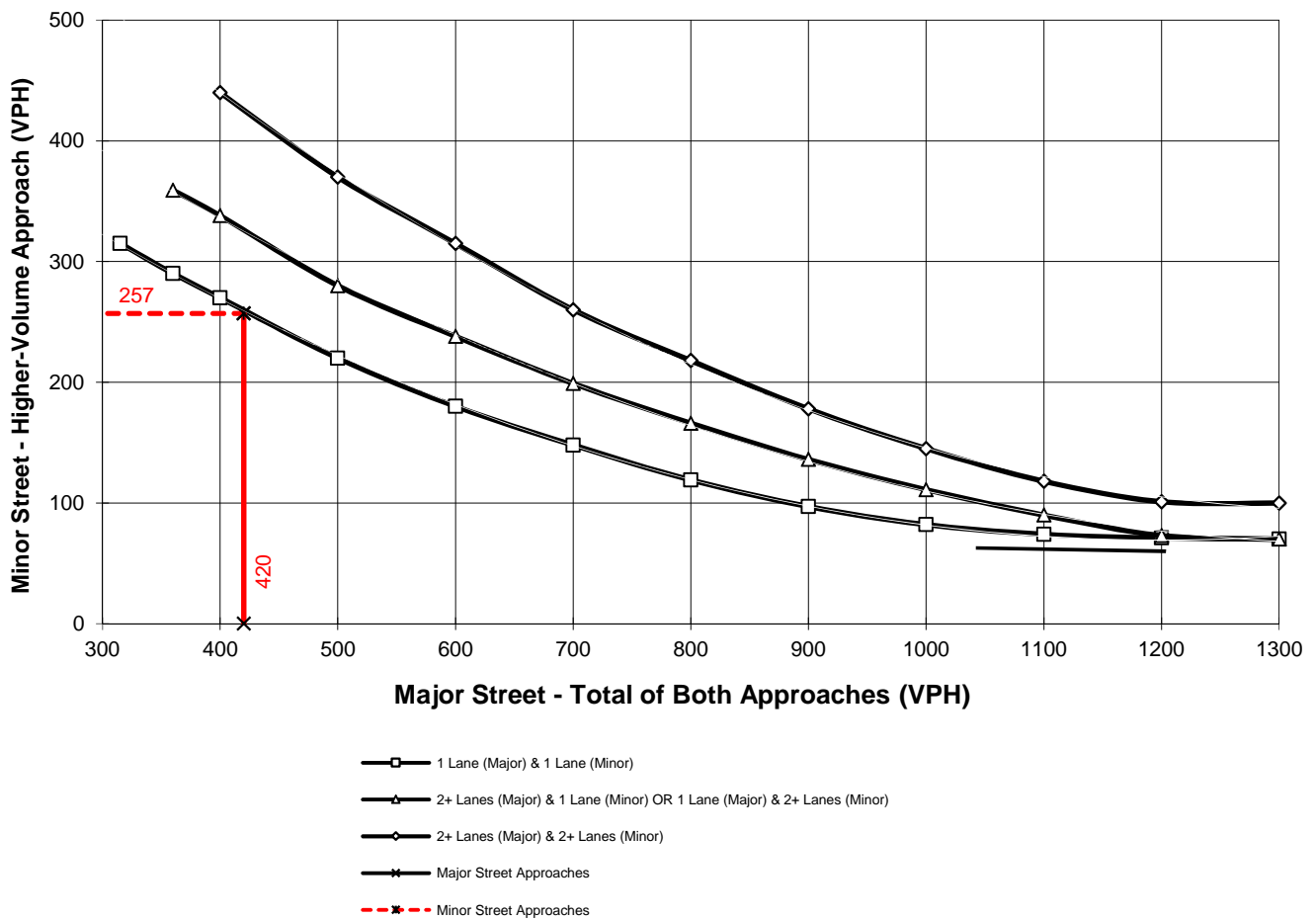
Major Street Name = **Avenue 54**

Total of Both Approaches (VPH) = **420**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Monroe St.**

High Volume Approach (VPH) = **257**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #14

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING (2019) PM PEAK HOUR WARRANTS**

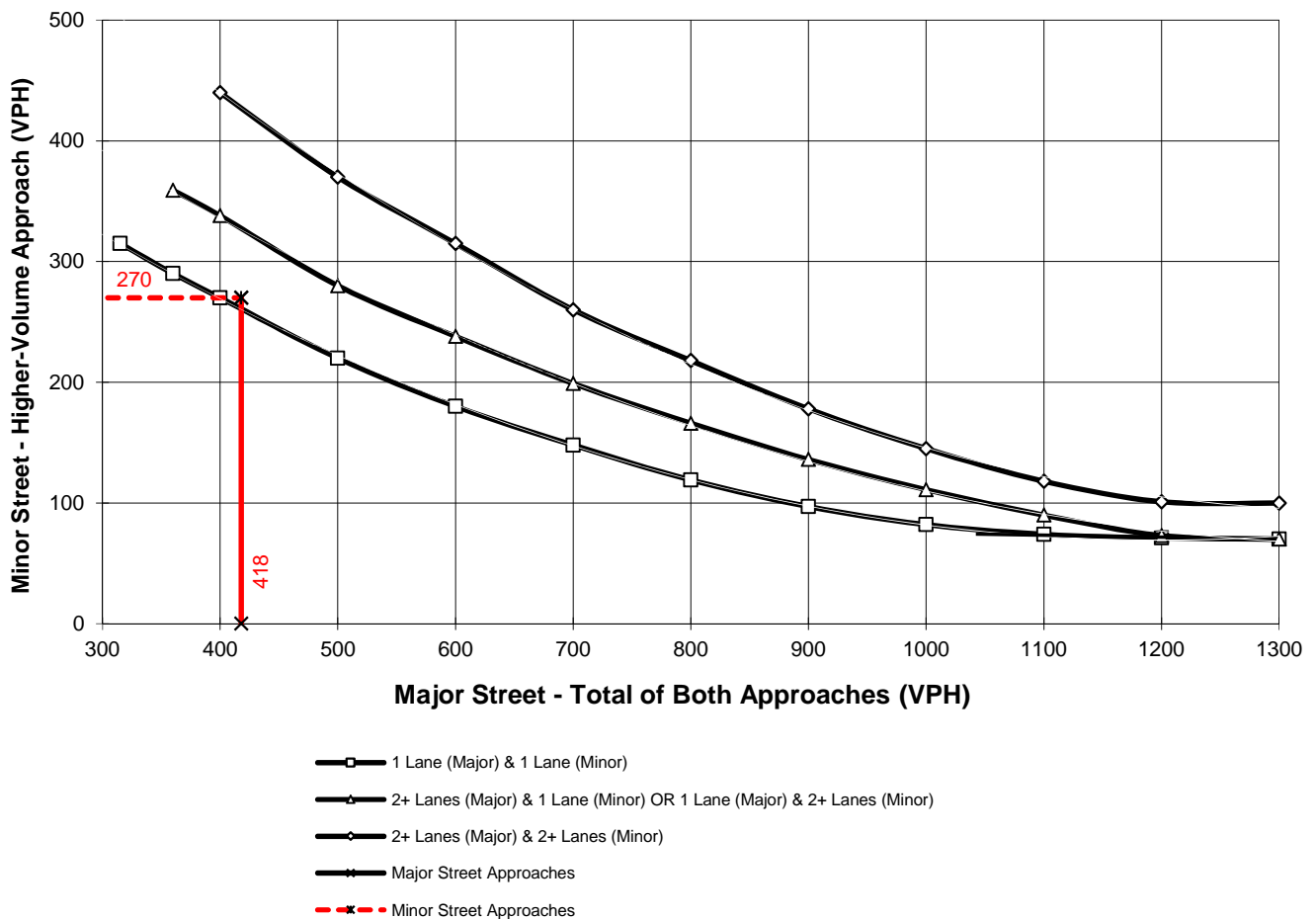
Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **418**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Avenue 54**

High Volume Approach (VPH) = **270**
Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #14

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

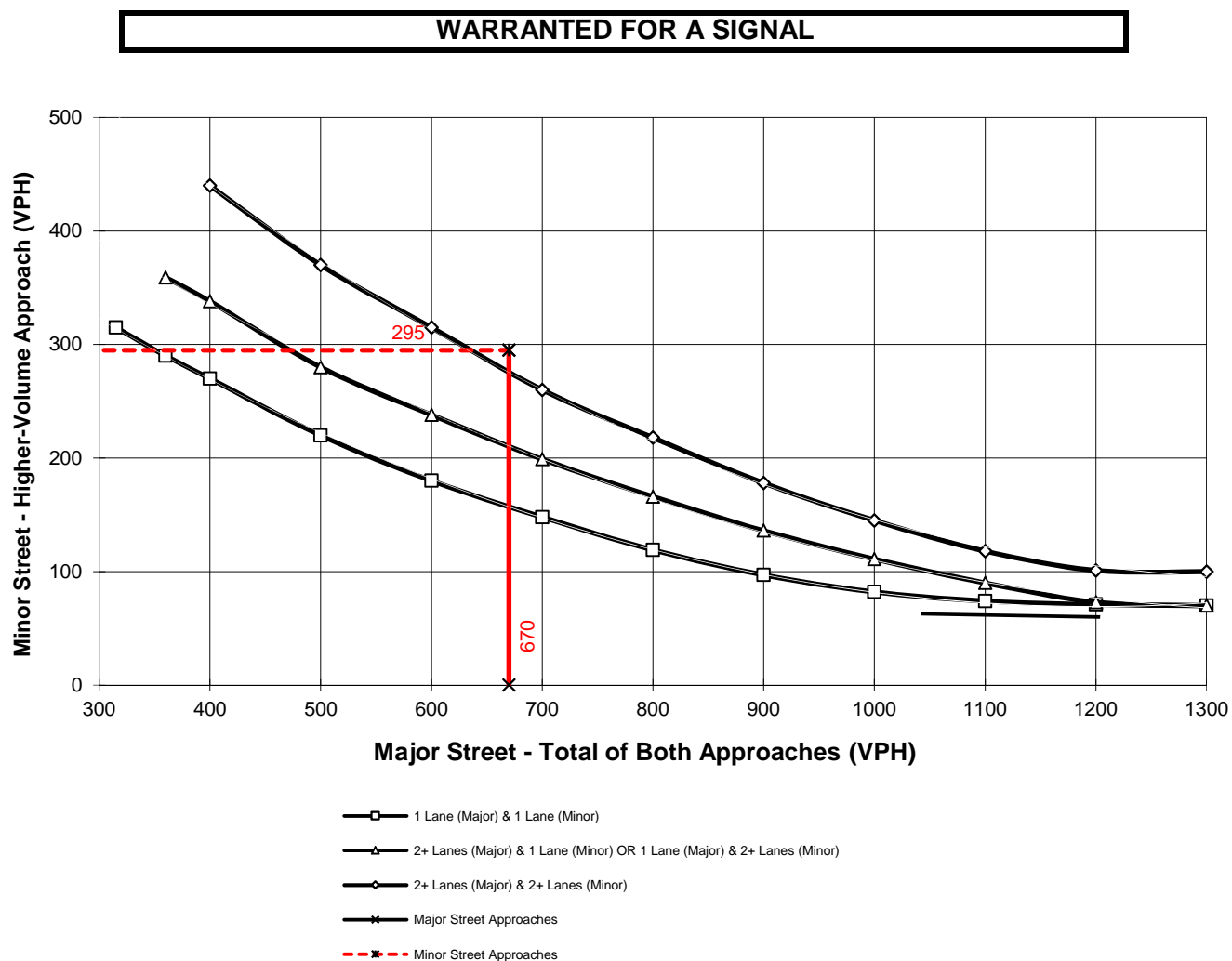
Traffic Conditions = **EXISTING (2019) AM PEAK HOUR WARRANTS**

Major Street Name = **Avenue 52**

Total of Both Approaches (VPH) = **670**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Monroe St.**

High Volume Approach (VPH) = **295**
Number of Approach Lanes Minor Street = **2**



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #15

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

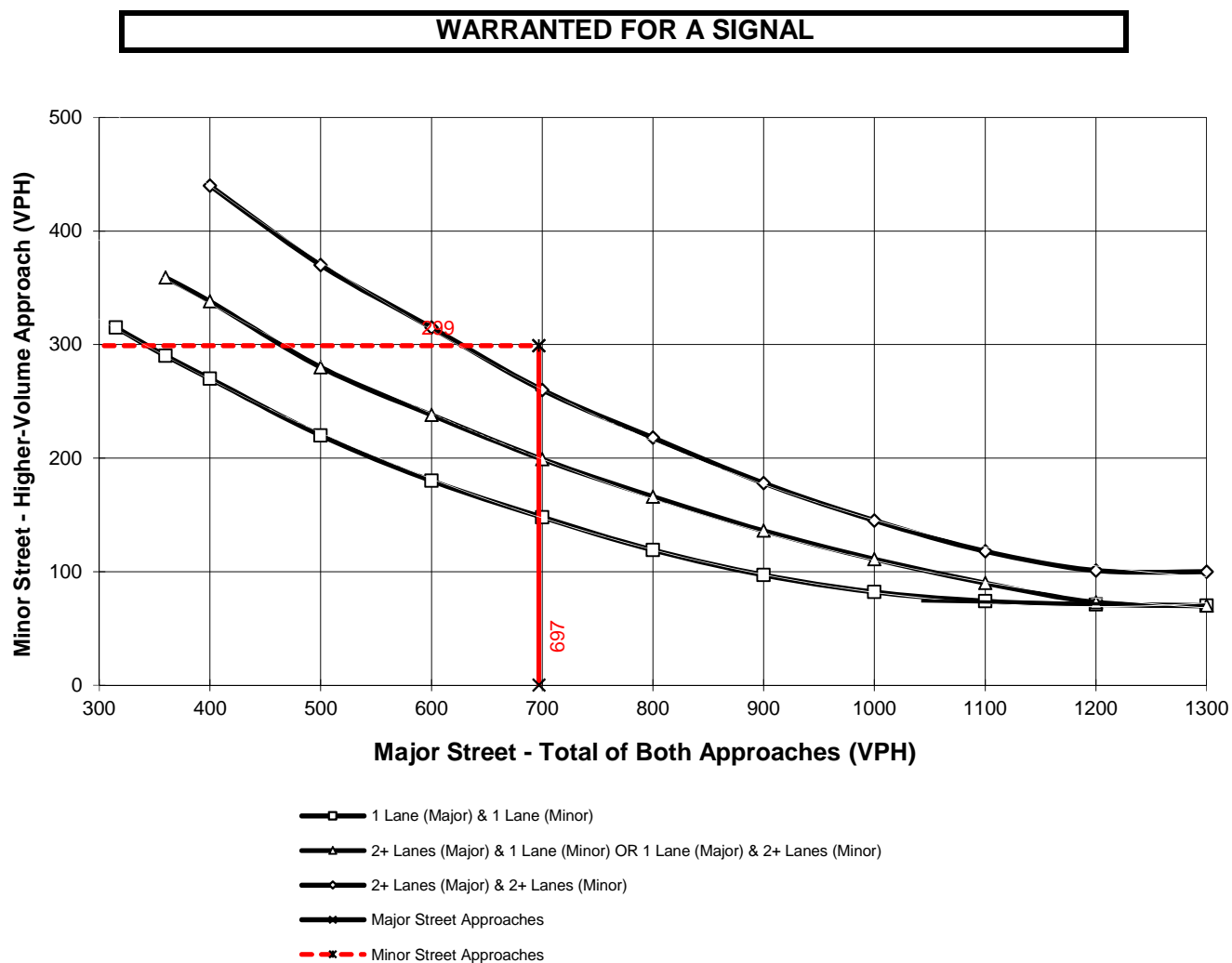
Traffic Conditions = **EXISTING (2019) PM PEAK HOUR WARRANTS**

Major Street Name = **Avenue 52**

Total of Both Approaches (VPH) = **697**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Monroe St.**

High Volume Approach (VPH) = **299**
Number of Approach Lanes Minor Street = **2**



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #15

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING (2019) AM PEAK HOUR WARRANTS**

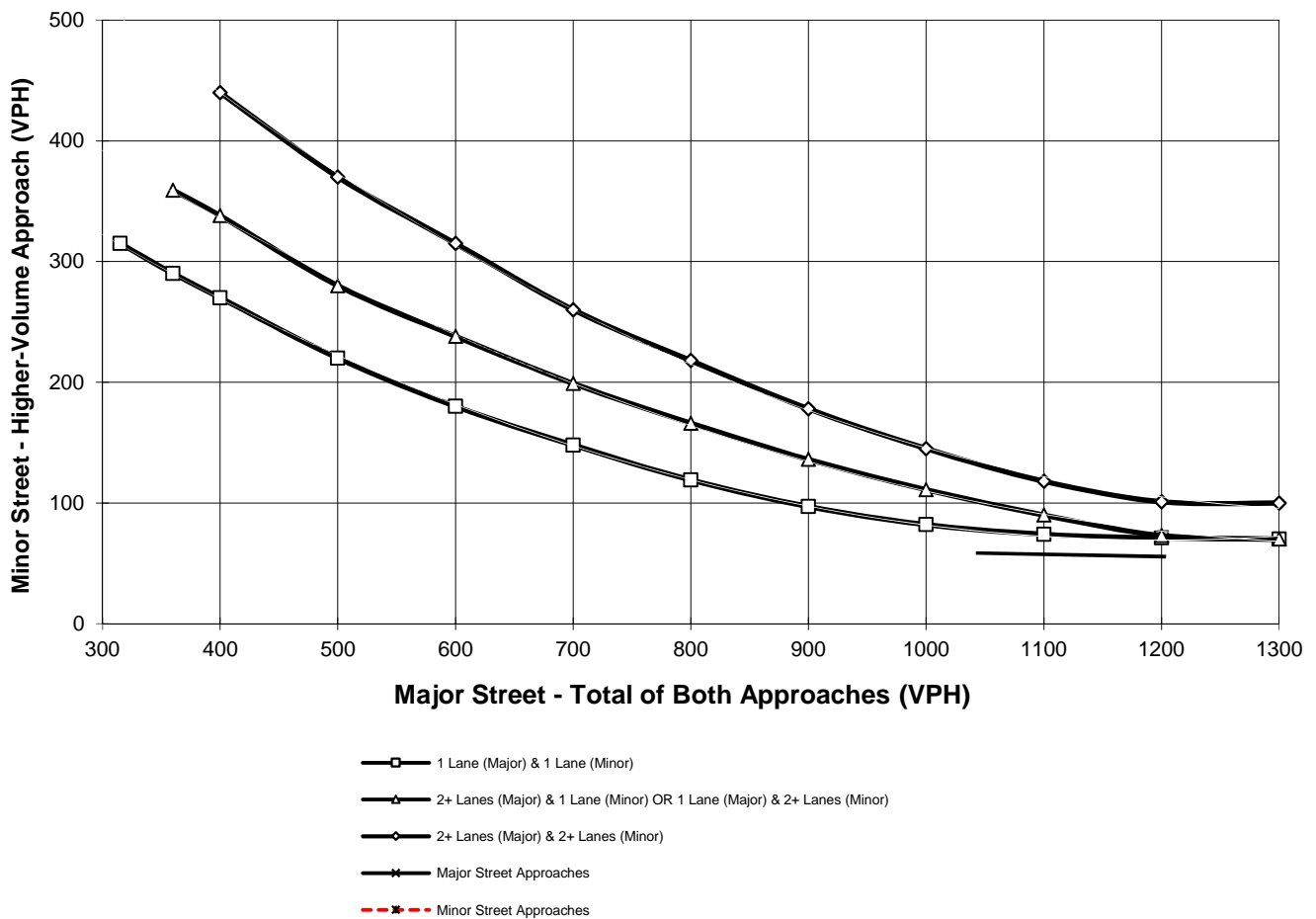
Major Street Name = **Jackson St.**

Total of Both Approaches (VPH) = **122**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **58th Avenue**

High Volume Approach (VPH) = **42**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #17

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING (2019) PM PEAK HOUR WARRANTS**

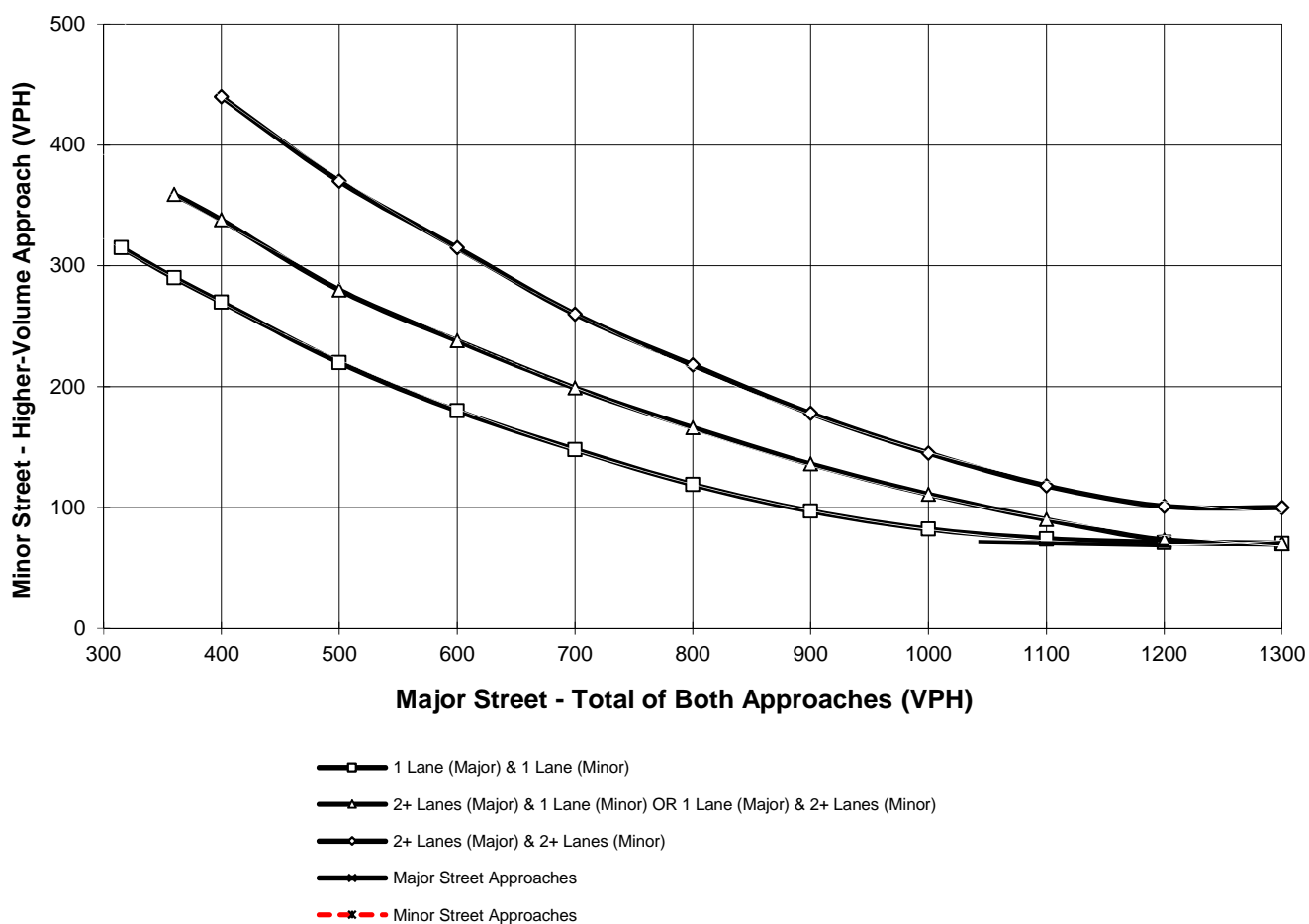
Major Street Name = **Jackson St.**

Total of Both Approaches (VPH) = **177**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **58th Avenue**

High Volume Approach (VPH) = **108**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #17

























APPENDIX 6.1:

E+P CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Lanes, Volumes, Timings
1: Madison St. & Avenue 58










Existing + Project AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	7	2	32	26	47	2	274	89	51	155	48
Future Volume (vph)	39	7	2	32	26	47	2	274	89	51	155	48
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

HCM 6th AWSC
1: Madison St. & Avenue 58

Existing + Project AM Peak hour

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	7	2	32	26	47	2	274	89	51	155	48
Future Vol, veh/h	39	7	2	32	26	47	2	274	89	51	155	48
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	41	7	2	34	28	50	2	291	95	54	165	51
Number of Lanes	1	1	1	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	10.2	9.5	10.5	9.6
HCM LOS	B	A	B	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	51%	0%	100%	0%	0%	100%	16%	0%	100%
Vol Right, %	0%	0%	49%	0%	0%	100%	0%	0%	84%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	2	183	180	39	7	2	32	17	56	51	103
LT Vol	2	0	0	39	0	0	32	0	0	51	0
Through Vol	0	183	91	0	7	0	0	17	9	0	103
RT Vol	0	0	89	0	0	2	0	0	47	0	0
Lane Flow Rate	2	194	192	41	7	2	34	18	59	54	110
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.004	0.307	0.285	0.081	0.014	0.003	0.065	0.033	0.096	0.096	0.179
Departure Headway (Hd)	6.192	5.692	5.347	7.042	6.542	5.842	6.914	6.414	5.823	6.374	5.874
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	581	635	675	509	547	613	519	559	616	563	612
Service Time	3.892	3.392	3.047	4.777	4.277	3.577	4.646	4.146	3.555	4.1	3.6
HCM Lane V/C Ratio	0.003	0.306	0.284	0.081	0.013	0.003	0.066	0.032	0.096	0.096	0.18
HCM Control Delay	8.9	10.9	10.2	10.4	9.4	8.6	10.1	9.4	9.2	9.8	9.9
HCM Lane LOS	A	B	B	B	A	A	B	A	A	A	A
HCM 95th-tile Q	0	1.3	1.2	0.3	0	0	0.2	0.1	0.3	0.3	0.6

Lanes, Volumes, Timings
2: Madison St. & Airport Bl.

Existing + Project AM Peak hour

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	17	60	1	323	21	75	247
Future Volume (vph)	17	60	1	323	21	75	247
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		3			2		
Detector Phase	3	3	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	11.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	16.0	16.0	13.0	28.0	28.0	16.0	31.0
Total Split (%)	26.7%	26.7%	21.7%	46.7%	46.7%	26.7%	51.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 60

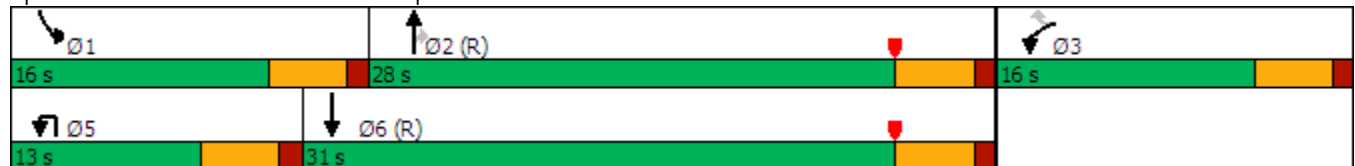
Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 45

Control Type: Actuated-Coordinated















Splits and Phases: 2: Madison St. & Airport Bl.



HCM 6th Signalized Intersection Summary
























2: Madison St. & Airport Bl.

Existing + Project AM Peak hour

							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	17	60	1	323	21	75	247
Future Volume (veh/h)	17	60	1	323	21	75	247
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	20	69		371	24	86	284
Peak Hour Factor	0.87	0.87		0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	171	152		2091	933	169	2658
Arrive On Green	0.10	0.10		0.60	0.60	0.10	0.77
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	20	69		371	24	86	284
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	0.6	2.5		2.9	0.4	2.8	1.2
Cycle Q Clear(g_c), s	0.6	2.5		2.9	0.4	2.8	1.2
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	171	152		2091	933	169	2658
V/C Ratio(X)	0.12	0.45		0.18	0.03	0.51	0.11
Avail Cap(c_a), veh/h	347	309		2091	933	347	2658
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.7	25.5		5.3	4.8	25.7	1.8
Incr Delay (d2), s/veh	0.3	2.1		0.2	0.1	2.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.9		0.6	0.1	1.1	0.0
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	25.0	27.6		5.4	4.8	28.1	1.8
LnGrp LOS	C	C		A	A	C	A
Approach Vol, veh/h	89			395			370
Approach Delay, s/veh	27.0			5.4			7.9
Approach LOS	C			A			A
Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	9.8	40.3				50.1	9.9
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	11.5	23.5				26.5	11.5
Max Q Clear Time (g_c+I1), s	4.8	4.9				3.2	4.5
Green Ext Time (p_c), s	0.1	2.0				1.5	0.1
Intersection Summary							
HCM 6th Ctrl Delay			8.8				
HCM 6th LOS			A				
Notes							
User approved pedestrian interval to be less than phase max green.							
User approved ignoring U-Turning movement.							

Lanes, Volumes, Timings
3: Madison St. & Avenue 54

Existing + Project AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	138	222	31	124	24	233	197	36	39	126	12
Future Volume (vph)	9	138	222	31	124	24	233	197	36	39	126	12
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											









HCM 6th AWSC
3: Madison St. & Avenue 54

Existing + Project AM Peak hour

Intersection

Intersection Delay, s/veh 15.2

Intersection LOS C

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	138	222	31	124	24	233	197	36	39	126	12
Future Vol, veh/h	9	138	222	31	124	24	233	197	36	39	126	12
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	155	249	35	139	27	262	221	40	44	142	13
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	16.9	12.3	16.1	12.3
HCM LOS	C	B	C	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	65%	0%	100%	17%	0%	100%	63%	0%	100%	78%
Vol Right, %	0%	0%	35%	0%	0%	83%	0%	0%	37%	0%	0%	22%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	233	131	102	9	92	268	31	83	65	39	84	54
LT Vol	233	0	0	9	0	0	31	0	0	39	0	0
Through Vol	0	131	66	0	92	46	0	83	41	0	84	42
RT Vol	0	0	36	0	0	222	0	0	24	0	0	12
Lane Flow Rate	262	148	114	10	103	301	35	93	73	44	94	61
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.56	0.295	0.221	0.022	0.215	0.577	0.082	0.205	0.157	0.103	0.208	0.131
Departure Headway (Hd)	7.702	7.202	6.954	7.979	7.479	6.899	8.459	7.959	7.702	8.435	7.935	7.78
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	469	499	516	449	480	524	424	450	465	425	452	461
Service Time	5.445	4.945	4.697	5.723	5.223	4.644	6.21	5.71	5.453	6.189	5.689	5.533
HCM Lane V/C Ratio	0.559	0.297	0.221	0.022	0.215	0.574	0.083	0.207	0.157	0.104	0.208	0.132
HCM Control Delay	19.9	12.9	11.7	10.9	12.3	18.7	12	12.8	11.9	12.2	12.8	11.7
HCM Lane LOS	C	B	B	B	B	C	B	B	B	B	B	B
HCM 95th-tile Q	3.4	1.2	0.8	0.1	0.8	3.6	0.3	0.8	0.6	0.3	0.8	0.4

Lanes, Volumes, Timings
4: Madison St. & Avenue 52

Existing + Project AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	282	30	19	257	52	75	153	25	38	124	44
Future Volume (vph)	55	282	30	19	257	52	75	153	25	38	124	44
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	23.0	50.0	50.0	17.0	44.0	44.0	18.0	37.0	37.0	16.0	35.0	35.0
Total Split (%)	19.2%	41.7%	41.7%	14.2%	36.7%	36.7%	15.0%	30.8%	30.8%	13.3%	29.2%	29.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

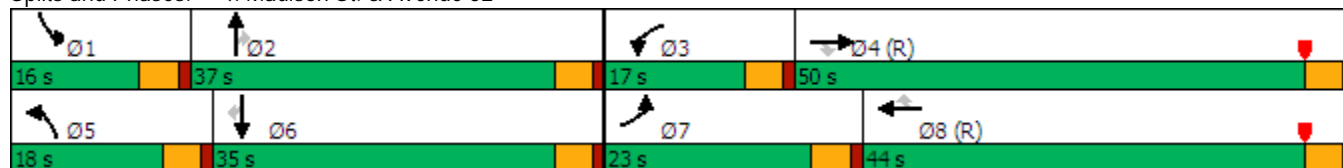
Actuated Cycle Length: 120

Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 85
























Control Type: Actuated-Coordinated

Splits and Phases: 4: Madison St. & Avenue 52




HCM 6th Signalized Intersection Summary 4: Madison St. & Avenue 52

Existing + Project AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	282	30	19	257	52	75	153	25	38	124	44
Future Volume (veh/h)	55	282	30	19	257	52	75	153	25	38	124	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	63	324	34	22	295	60	86	176	29	44	143	51
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	1744	778	53	1672	746	185	937	418	151	902	402
Arrive On Green	0.05	0.50	0.50	0.03	0.48	0.48	0.06	0.27	0.27	0.04	0.26	0.26
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	63	324	34	22	295	60	86	176	29	44	143	51
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	4.3	6.1	1.3	1.5	5.8	2.5	3.0	4.7	1.7	1.5	3.8	3.0
Cycle Q Clear(g_c), s	4.3	6.1	1.3	1.5	5.8	2.5	3.0	4.7	1.7	1.5	3.8	3.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	89	1744	778	53	1672	746	185	937	418	151	902	402
V/C Ratio(X)	0.71	0.19	0.04	0.42	0.18	0.08	0.46	0.19	0.07	0.29	0.16	0.13
Avail Cap(c_a), veh/h	267	1744	778	181	1672	746	379	937	418	322	902	402
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.1	16.3	15.1	57.1	17.5	16.7	55.0	33.6	32.5	55.5	34.2	33.9
Incr Delay (d2), s/veh	9.9	0.2	0.1	5.2	0.2	0.2	1.8	0.4	0.3	1.1	0.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	2.4	0.5	0.7	2.2	0.9	1.3	2.0	0.6	0.6	1.6	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.0	16.5	15.2	62.4	17.8	16.9	56.8	34.1	32.8	56.5	34.6	34.6
LnGrp LOS	E	B	B	E	B	B	E	C	C	E	C	C
Approach Vol, veh/h	421			377			291			238		
Approach Delay, s/veh	23.8			20.2			40.7			38.6		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.9	37.0	8.1	65.0	11.1	35.8	10.6	62.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.5	32.5	12.5	45.5	13.5	30.5	18.5	39.5				
Max Q Clear Time (g_c+I1), s	3.5	6.7	3.5	8.1	5.0	5.8	6.3	7.8				
Green Ext Time (p_c), s	0.0	1.0	0.0	2.1	0.1	0.9	0.1	1.8				
Intersection Summary												
HCM 6th Ctrl Delay	29.1											
HCM 6th LOS	C											

Lanes, Volumes, Timings
5: Madison St. & Avenue 50/50th Avenue

Existing + Project AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	259	60	22	253	17	90	162	24	24	148	68
Future Volume (vph)	47	259	60	22	253	17	90	162	24	24	148	68
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	22.0	47.0	47.0	18.0	43.0	43.0	19.0	39.0	39.0	16.0	36.0	36.0
Total Split (%)	18.3%	39.2%	39.2%	15.0%	35.8%	35.8%	15.8%	32.5%	32.5%	13.3%	30.0%	30.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

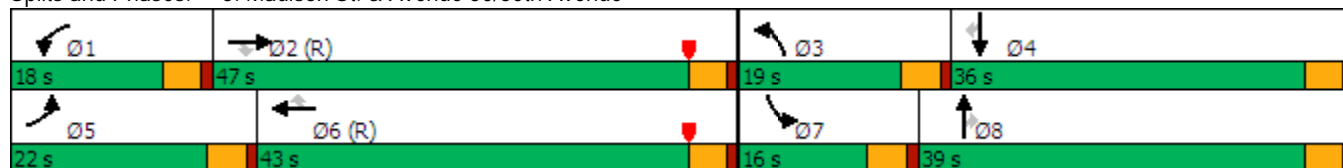
Actuated Cycle Length: 120

Offset: 64.5 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue




























HCM 6th Signalized Intersection Summary 5: Madison St. & Avenue 50/50th Avenue

Existing + Project AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	259	60	22	253	17	90	162	24	24	148	68
Future Volume (veh/h)	47	259	60	22	253	17	90	162	24	24	148	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	48	264	61	22	258	17	92	165	24	24	151	69
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	81	1730	772	53	1674	747	187	995	444	108	914	407
Arrive On Green	0.05	0.50	0.50	0.03	0.48	0.48	0.06	0.29	0.29	0.03	0.26	0.26
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	48	264	61	22	258	17	92	165	24	24	151	69
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	3.3	5.0	2.5	1.5	5.0	0.7	3.2	4.3	1.4	0.8	4.0	4.1
Cycle Q Clear(g_c), s	3.3	5.0	2.5	1.5	5.0	0.7	3.2	4.3	1.4	0.8	4.0	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	81	1730	772	53	1674	747	187	995	444	108	914	407
V/C Ratio(X)	0.59	0.15	0.08	0.42	0.15	0.02	0.49	0.17	0.05	0.22	0.17	0.17
Avail Cap(c_a), veh/h	253	1730	772	195	1674	747	407	995	444	322	914	407
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.1	16.2	15.6	57.1	17.3	16.2	55.0	32.0	30.9	56.6	34.0	34.0
Incr Delay (d2), s/veh	6.8	0.2	0.2	5.2	0.2	0.1	2.0	0.4	0.2	1.0	0.4	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	1.9	0.9	0.7	1.9	0.2	1.4	1.8	0.5	0.4	1.7	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.9	16.4	15.8	62.4	17.5	16.2	57.0	32.3	31.2	57.6	34.4	34.9
LnGrp LOS	E	B	B	E	B	B	E	C	C	E	C	C
Approach Vol, veh/h	373			297			281			244		
Approach Delay, s/veh	22.3			20.7			40.3			36.8		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.1	64.5	11.2	36.2	10.1	62.6	8.4	39.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	13.5	42.5	14.5	31.5	17.5	38.5	11.5	34.5				
Max Q Clear Time (g_c+I1), s	3.5	7.0	5.2	6.1	5.3	7.0	2.8	6.3				
Green Ext Time (p_c), s	0.0	1.8	0.1	1.0	0.1	1.5	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay	29.1											
HCM 6th LOS	C											

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54

Existing + Project AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 		 	 	
Traffic Volume (vph)	8	10	13	41	7	291	5	119	26	325	143	26
Future Volume (vph)	8	10	13	41	7	291	5	119	26	325	143	26
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											









HCM 6th AWSC
6: Jefferson St. & Avenue 54

Existing + Project AM Peak hour

Intersection

Intersection Delay, s/veh13.2

Intersection LOS B





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	10	13	41	7	291	5	119	26	325	143	26
Future Vol, veh/h	8	10	13	41	7	291	5	119	26	325	143	26
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	11	14	46	8	323	6	132	29	361	159	29
Number of Lanes	1	2	0	1	1	1	0	2	0	2	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	10.5	15.2	11.1	12.7
HCM LOS	B	C	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	8%	0%	100%	0%	0%	100%	0%	0%	100%	100%	0%
Vol Thru, %	92%	70%	0%	100%	20%	0%	100%	0%	0%	0%	85%
Vol Right, %	0%	30%	0%	0%	80%	0%	0%	100%	0%	0%	15%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	65	86	8	7	16	41	7	291	163	163	169
LT Vol	5	0	8	0	0	41	0	0	163	163	0
Through Vol	60	60	0	7	3	0	7	0	0	0	143
RT Vol	0	26	0	0	13	0	0	291	0	0	26
Lane Flow Rate	72	95	9	7	18	46	8	323	181	181	188
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.141	0.18	0.02	0.016	0.036	0.092	0.015	0.545	0.341	0.341	0.323
Departure Headway (Hd)	7.063	6.811	8.233	7.625	7.059	7.276	6.772	6.065	6.794	6.794	6.186
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	505	523	437	466	503	491	526	592	527	527	578
Service Time	4.842	4.591	5.933	5.425	4.859	5.048	4.543	3.836	4.556	4.556	3.948
HCM Lane V/C Ratio	0.143	0.182	0.021	0.015	0.036	0.094	0.015	0.546	0.343	0.343	0.325
HCM Control Delay	11	11.1	11.1	10.6	10.1	10.8	9.6	15.9	13.1	13.1	11.9
HCM Lane LOS	B	B	B	B	B	B	A	C	B	B	B
HCM 95th-tile Q	0.5	0.7	0.1	0	0.1	0.3	0	3.3	1.5	1.5	1.4

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

Existing + Project AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	96	281	208	4	258	235	168	329	15	132	323	46
Future Volume (vph)	96	281	208	4	258	235	168	329	15	132	323	46
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											























HCM 6th Roundabout
7: Jefferson St. & Avenue 52

Existing + Project AM Peak hour

Intersection									
Intersection Delay, s/veh	10.6								
Intersection LOS	B								
Approach	EB		WB		NB		SB		
Entry Lanes	1		1		1		1		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	629		534		551		538		
Demand Flow Rate, veh/h	641		545		562		549		
Vehicles Circulating, veh/h	503		651		558		472		
Vehicles Exiting, veh/h	468		453		358		466		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	7.3		5.6		17.8		11.9		
Approach LOS	A		A		C		B		
Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Bypass	
Designated Moves	LT	R	LT	R	LT	R	LT	R	
Assumed Moves	LT	R	LT	R	LT	R	LT	R	
RT Channelized		Free		Free		Free		Free	
Lane Util	1.000		1.000		1.000		1.000		
Follow-Up Headway, s	2.609		2.609		2.609		2.609		
Critical Headway, s	4.976	228	4.976	258	4.976	16	4.976	50	
Entry Flow, veh/h	413	1887	287	1887	546	1887	499	1887	
Cap Entry Lane, veh/h	826	0.980	710	0.980	781	0.980	853	0.980	
Entry HV Adj Factor	0.981	224	0.981	253	0.980	16	0.980	49	
Flow Entry, veh/h	405	1850	281	1850	535	1850	489	1850	
Cap Entry, veh/h	810	0.121	697	0.137	765	0.009	836	0.026	
V/C Ratio	0.500	0.0	0.404	0.0	0.699	0.0	0.585	0.0	
Control Delay, s/veh	11.3	A	10.6	A	18.4	A	13.1	A	
LOS	B	0	B	0	C	0	B	0	
95th %tile Queue, veh	3		2		6		4		

Lanes, Volumes, Timings 8: Jefferson St. & Pomelo

Existing + Project AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	1	2	4	1	12	13	634	13	36	518	45
Future Volume (vph)	30	1	2	4	1	12	13	634	13	36	518	45
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	59.0	59.0	59.0	59.0	59.0	59.0	20.0	41.0		20.0	41.0	
Total Split (%)	49.2%	49.2%	49.2%	49.2%	49.2%	49.2%	16.7%	34.2%		16.7%	34.2%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary

Area Type: Other

Cycle Length: 120

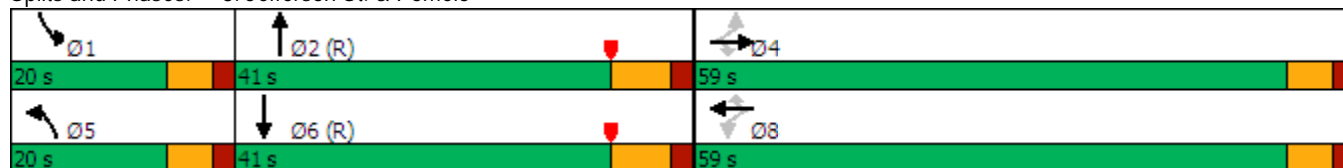
Actuated Cycle Length: 120

Offset: 90 (75%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110






















Control Type: Actuated-Coordinated

Splits and Phases: 8: Jefferson St. & Pomelo



























HCM 6th Signalized Intersection Summary 8: Jefferson St. & Pomelo

Existing + Project AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1	2	4	1	12	13	634	13	36	518	45
Future Volume (veh/h)	30	1	2	4	1	12	13	634	13	36	518	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	32	1	2	4	1	13	14	682	14	39	557	48
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	59	1	139	54	8	139	65	3383	69	126	3313	283
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.04	0.67	0.67	0.10	0.94	0.94
Sat Flow, veh/h	4	11	1543	3	85	1543	1734	5014	103	1734	4666	398
Grp Volume(v), veh/h	33	0	2	5	0	13	14	450	246	39	394	211
Grp Sat Flow(s),veh/h/ln	15	0	1543	88	0	1543	1734	1657	1803	1734	1657	1749
Q Serve(g_s), s	0.0	0.0	0.1	0.0	0.0	0.9	0.9	6.1	6.2	2.5	0.9	1.0
Cycle Q Clear(g_c), s	10.8	0.0	0.1	10.8	0.0	0.9	0.9	6.1	6.2	2.5	0.9	1.0
Prop In Lane	0.97		1.00	0.80		1.00	1.00		0.06	1.00		0.23
Lane Grp Cap(c), veh/h	60	0	139	62	0	139	65	2236	1216	126	2353	1242
V/C Ratio(X)	0.55	0.00	0.01	0.08	0.00	0.09	0.22	0.20	0.20	0.31	0.17	0.17
Avail Cap(c_a), veh/h	556	0	682	582	0	682	202	2236	1216	202	2353	1242
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.86	0.86	0.86
Uniform Delay (d), s/veh	59.7	0.0	49.7	50.2	0.0	50.1	56.1	7.4	7.4	51.4	1.0	1.0
Incr Delay (d2), s/veh	15.4	0.0	0.1	1.2	0.0	0.6	3.5	0.2	0.4	2.5	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.1	0.2	0.0	0.4	0.5	1.8	2.1	1.1	0.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.1	0.0	49.8	51.4	0.0	50.7	59.6	7.6	7.7	53.9	1.1	1.3
LnGrp LOS	E	A	D	D	A	D	E	A	A	D	A	A
Approach Vol, veh/h	35		18				710			644		
Approach Delay, s/veh	73.6		50.9				8.6			4.4		
Approach LOS	E		D				A			A		
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	14.7	88.4	16.8		10.5	92.7	16.8					
Change Period (Y+Rc), s	6.0	7.5	6.0		6.0	7.5	6.0					
Max Green Setting (Gmax), s	14.0	33.5	53.0		14.0	33.5	53.0					
Max Q Clear Time (g_c+I1), s	4.5	8.2	12.8		2.9	3.0	12.8					
Green Ext Time (p_c), s	0.1	7.7	0.3		0.0	7.0	0.1					
Intersection Summary												
HCM 6th Ctrl Delay	8.8											
HCM 6th LOS	A											
Notes												

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

Existing + Project AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	209	278	53	45	303	152	81	559	36	74	493	331
Future Volume (vph)	209	278	53	45	303	152	81	559	36	74	493	331
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	43.5	43.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	36.3%	36.3%	15.0%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

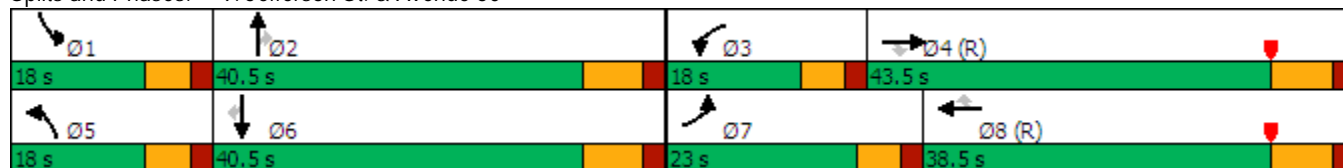
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 115































Control Type: Actuated-Coordinated

Splits and Phases: 9: Jefferson St. & Avenue 50



HCM 6th Signalized Intersection Summary 9: Jefferson St. & Avenue 50

Existing + Project AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  		 	  	
Traffic Volume (veh/h)	209	278	53	45	303	152	81	559	36	74	493	331
Future Volume (veh/h)	209	278	53	45	303	152	81	559	36	74	493	331
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	213	284	54	46	309	155	83	570	37	76	503	338
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	239	1222	545	136	535	454	163	1250	388	310	1241	385
Arrive On Green	0.14	0.35	0.35	0.08	0.29	0.29	0.03	0.08	0.08	0.09	0.25	0.25
Sat Flow, veh/h	1734	3460	1543	1734	1821	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	213	284	54	46	309	155	83	570	37	76	503	338
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	14.5	6.9	2.8	3.0	17.3	9.5	5.7	13.1	2.7	2.5	10.1	25.2
Cycle Q Clear(g_c), s	14.5	6.9	2.8	3.0	17.3	9.5	5.7	13.1	2.7	2.5	10.1	25.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	239	1222	545	136	535	454	163	1250	388	310	1241	385
V/C Ratio(X)	0.89	0.23	0.10	0.34	0.58	0.34	0.51	0.46	0.10	0.25	0.41	0.88
Avail Cap(c_a), veh/h	246	1222	545	173	535	454	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.9	27.3	26.0	52.3	36.0	33.2	55.4	47.2	42.4	50.6	37.6	43.3
Incr Delay (d2), s/veh	30.0	0.4	0.4	0.5	4.5	2.0	0.9	0.4	0.1	0.2	0.3	18.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	2.8	1.1	1.3	8.1	3.7	2.5	5.7	1.0	1.0	4.0	11.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.9	27.8	26.4	52.9	40.5	35.3	56.3	47.6	42.6	50.8	37.9	61.3
LnGrp LOS	F	C	C	D	D	D	E	D	D	D	D	E
Approach Vol, veh/h		551			510			690			917	
Approach Delay, s/veh		48.2			40.0			48.4			47.6	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	37.7	15.4	49.9	17.2	37.5	22.5	42.8				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	12.0	33.0	12.0	36.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	4.5	15.1	5.0	8.9	7.7	27.2	16.5	19.3				
Green Ext Time (p_c), s	0.0	4.5	0.0	3.5	0.0	2.7	0.0	3.1				
Intersection Summary												
HCM 6th Ctrl Delay			46.5									
HCM 6th LOS			D									

Lanes, Volumes, Timings
10: Avenue 60 & Madison St.






Existing + Project AM Peak hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	30	44	15	107	109	11
Future Volume (vph)	30	44	15	107	109	11
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		40	
Link Distance (ft)		1772	661		437	
Travel Time (s)		30.2	11.3		7.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)						
Sign Control		Stop	Stop		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Intersection Delay, s/veh	8.7
Intersection LOS	A





















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	30	44	15	107	109	11
Future Vol, veh/h	30	44	15	107	109	11
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	53	18	129	131	13
Number of Lanes	0	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	8.7	7.8	9.5
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	41%	0%	0%	100%	0%
Vol Thru, %	59%	100%	0%	0%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	74	15	107	109	11
LT Vol	30	0	0	109	0
Through Vol	44	15	0	0	0
RT Vol	0	0	107	0	11
Lane Flow Rate	89	18	129	131	13
Geometry Grp	4	7	7	7	7
Degree of Util (X)	0.123	0.025	0.155	0.204	0.016
Departure Headway (Hd)	4.986	5.031	4.328	5.58	4.376
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	720	713	830	645	819
Service Time	3.005	2.747	2.043	3.304	2.099
HCM Lane V/C Ratio	0.124	0.025	0.155	0.203	0.016
HCM Control Delay	8.7	7.9	7.8	9.7	7.2
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.4	0.1	0.5	0.8	0

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue









Existing + Project AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	57	77	4	38	11	62	33	2	11	31	26
Future Volume (vph)	27	57	77	4	38	11	62	33	2	11	31	26
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

HCM 6th AWSC
11: Monroe St. & Avenue 60/60th Avenue

Existing + Project AM Peak hour

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	57	77	4	38	11	62	33	2	11	31	26
Future Vol, veh/h	27	57	77	4	38	11	62	33	2	11	31	26
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	63	85	4	42	12	68	36	2	12	34	29
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	8.3	8.5	9	8.2
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	32%	0%	8%	100%	0%	0%
Vol Thru, %	0%	94%	68%	0%	72%	0%	100%	0%
Vol Right, %	0%	6%	0%	100%	21%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	62	35	84	77	53	11	31	26
LT Vol	62	0	27	0	4	11	0	0
Through Vol	0	33	57	0	38	0	31	0
RT Vol	0	2	0	77	11	0	0	26
Lane Flow Rate	68	38	92	85	58	12	34	29
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.111	0.057	0.137	0.105	0.086	0.02	0.051	0.037
Departure Headway (Hd)	5.845	5.301	5.34	4.478	5.294	5.925	5.422	4.717
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	613	675	671	799	676	603	659	757
Service Time	3.586	3.042	3.075	2.213	3.037	3.669	3.165	2.461
HCM Lane V/C Ratio	0.111	0.056	0.137	0.106	0.086	0.02	0.052	0.038
HCM Control Delay	9.3	8.4	8.9	7.7	8.5	8.8	8.5	7.6
HCM Lane LOS	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0.4	0.2	0.5	0.4	0.3	0.1	0.2	0.1






Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

Existing + Project AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	76	16	4	54	26	11	73	3	15	77	45
Future Volume (vph)	63	76	16	4	54	26	11	73	3	15	77	45
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh	8.9
Intersection LOS	A






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	63	76	16	4	54	26	11	73	3	15	77	45
Future Vol, veh/h	63	76	16	4	54	26	11	73	3	15	77	45
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	75	90	19	5	64	31	13	87	4	18	92	54
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	9.3	8.4	8.8	8.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	13%	41%	5%	16%	0%
Vol Thru, %	84%	49%	64%	84%	0%
Vol Right, %	3%	10%	31%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	87	155	84	92	45
LT Vol	11	63	4	15	0
Through Vol	73	76	54	77	0
RT Vol	3	16	26	0	45
Lane Flow Rate	104	185	100	110	54
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.142	0.242	0.129	0.164	0.069
Departure Headway (Hd)	4.926	4.728	4.642	5.396	4.609
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	725	758	769	663	774
Service Time	2.976	2.77	2.689	3.142	2.354
HCM Lane V/C Ratio	0.143	0.244	0.13	0.166	0.07
HCM Control Delay	8.8	9.3	8.4	9.2	7.7
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.5	0.9	0.4	0.6	0.2

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.

Existing + Project AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	62	5	15	37	13	10	107	21	38	95	6
Future Volume (vph)	0	62	5	15	37	13	10	107	21	38	95	6
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											









HCM 6th AWSC
13: Monroe St. & Airport Bl.

Existing + Project AM Peak hour

Intersection

Intersection Delay, s/veh 9

Intersection LOS A



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	62	5	15	37	13	10	107	21	38	95	6
Future Vol, veh/h	0	62	5	15	37	13	10	107	21	38	95	6
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	73	6	18	44	15	12	126	25	45	112	7
Number of Lanes	1	1	1	0	1	0	1	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	1	3
HCM Control Delay	8.8	9.1	9.4	8.7
HCM LOS	A	A	A	A







Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	0%	0%	23%	100%	0%	0%
Vol Thru, %	0%	84%	100%	100%	0%	57%	0%	100%	84%
Vol Right, %	0%	16%	0%	0%	100%	20%	0%	0%	16%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	128	0	62	5	65	38	63	38
LT Vol	10	0	0	0	0	15	38	0	0
Through Vol	0	107	0	62	0	37	0	63	32
RT Vol	0	21	0	0	5	13	0	0	6
Lane Flow Rate	12	151	0	73	6	76	45	75	44
Geometry Grp	8	8	7	7	7	8	8	8	8
Degree of Util (X)	0.019	0.219	0	0.11	0.008	0.118	0.073	0.111	0.064
Departure Headway (Hd)	5.851	5.233	5.43	5.43	4.728	5.576	5.846	5.343	5.231
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	610	684	0	657	753	639	611	668	682
Service Time	3.605	2.987	3.186	3.186	2.483	3.34	3.601	3.098	2.986
HCM Lane V/C Ratio	0.02	0.221	0	0.111	0.008	0.119	0.074	0.112	0.065
HCM Control Delay	8.7	9.5	8.2	8.9	7.5	9.1	9.1	8.8	8.3
HCM Lane LOS	A	A	N	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0.8	0	0.4	0	0.4	0.2	0.4	0.2

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

Existing + Project AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	123	14	18	214	51	29	132	4	50	143	78
Future Volume (vph)	19	123	14	18	214	51	29	132	4	50	143	78
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	16.3
Intersection LOS	C























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	123	14	18	214	51	29	132	4	50	143	78
Future Vol, veh/h	19	123	14	18	214	51	29	132	4	50	143	78
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	152	17	22	264	63	36	163	5	62	177	96
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	12.8	21.1	15	14
HCM LOS	B	C	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	18%	100%	0%	6%	26%	0%
Vol Thru, %	80%	0%	90%	76%	74%	0%
Vol Right, %	2%	0%	10%	18%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	165	19	137	283	193	78
LT Vol	29	19	0	18	50	0
Through Vol	132	0	123	214	143	0
RT Vol	4	0	14	51	0	78
Lane Flow Rate	204	23	169	349	238	96
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.405	0.049	0.328	0.646	0.462	0.164
Departure Headway (Hd)	7.162	7.571	6.986	6.657	6.979	6.132
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	503	473	514	542	517	585
Service Time	5.208	5.318	4.732	4.695	4.719	3.872
HCM Lane V/C Ratio	0.406	0.049	0.329	0.644	0.46	0.164
HCM Control Delay	15	10.7	13.1	21.1	15.6	10.1
HCM Lane LOS	B	B	B	C	C	B
HCM 95th-tile Q	1.9	0.2	1.4	4.6	2.4	0.6

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52









Existing + Project AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	225	22	11	241	117	21	149	5	89	182	38
Future Volume (vph)	73	225	22	11	241	117	21	149	5	89	182	38
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh16.8

Intersection LOS C

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	73	225	22	11	241	117	21	149	5	89	182	38
Future Vol, veh/h	73	225	22	11	241	117	21	149	5	89	182	38
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	88	271	27	13	290	141	25	180	6	107	219	46
Number of Lanes	1	1	1	0	2	1	0	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay	20.4	15.1	19.2	13.6
HCM LOS	C	C	C	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	12%	100%	0%	0%	12%	0%	0%	100%	0%	0%
Vol Thru, %	85%	0%	100%	0%	88%	100%	0%	0%	100%	61%
Vol Right, %	3%	0%	0%	100%	0%	0%	100%	0%	0%	39%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	175	73	225	22	91	161	117	89	121	99
LT Vol	21	73	0	0	11	0	0	89	0	0
Through Vol	149	0	225	0	80	161	0	0	121	61
RT Vol	5	0	0	22	0	0	117	0	0	38
Lane Flow Rate	211	88	271	27	110	194	141	107	146	119
Geometry Grp	8	8	8	8	8	8	8	7	7	7
Degree of Util (X)	0.493	0.213	0.617	0.055	0.25	0.437	0.29	0.246	0.315	0.247
Departure Headway (Hd)	8.423	8.704	8.19	7.469	8.191	8.129	7.409	8.265	7.756	7.481
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	426	411	439	477	436	441	482	433	462	478
Service Time	6.216	6.499	5.983	5.262	5.985	5.923	5.201	6.049	5.539	5.264
HCM Lane V/C Ratio	0.495	0.214	0.617	0.057	0.252	0.44	0.293	0.247	0.316	0.249
HCM Control Delay	19.2	13.9	23.4	10.7	13.7	17.2	13.2	13.8	14.1	12.7
HCM Lane LOS	C	B	C	B	B	C	B	B	B	B
HCM 95th-tile Q	2.7	0.8	4	0.2	1	2.2	1.2	1	1.3	1

Lanes, Volumes, Timings
16: Monroe St. & 50th Avenue

Existing + Project AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	147	29	30	272	121	18	239	28	67	221	27
Future Volume (vph)	20	147	29	30	272	121	18	239	28	67	221	27
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	20.5	20.5	20.5	20.5	20.5	11.5	11.5	20.5		11.5	20.5	
Total Split (s)	23.0	23.0	23.0	23.0	23.0	12.0	12.0	25.0		12.0	25.0	
Total Split (%)	38.3%	38.3%	38.3%	38.3%	38.3%	20.0%	20.0%	41.7%		20.0%	41.7%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

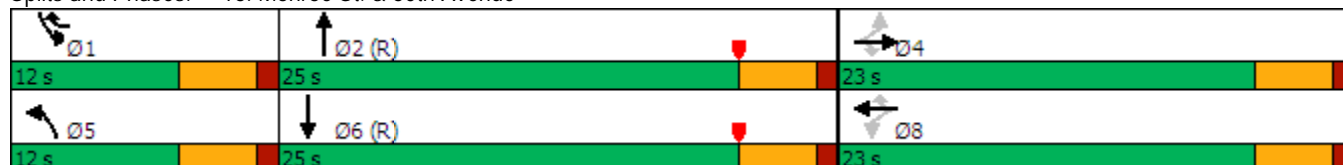
Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

























Splits and Phases: 16: Monroe St. & 50th Avenue



HCM 6th Signalized Intersection Summary

















16: Monroe St. & 50th Avenue

Existing + Project AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	147	29	30	272	121	18	239	28	67	221	27
Future Volume (veh/h)	20	147	29	30	272	121	18	239	28	67	221	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	24	173	34	35	320	142	21	281	33	79	260	32
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	188	430	365	303	430	509	74	1468	171	163	1617	197
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.04	0.47	0.46	0.09	0.52	0.51
Sat Flow, veh/h	930	1821	1543	1175	1821	1543	1734	3122	363	1734	3105	378
Grp Volume(v), veh/h	24	173	34	35	320	142	21	155	159	79	144	148
Grp Sat Flow(s),veh/h/ln	930	1821	1543	1175	1821	1543	1734	1730	1756	1734	1730	1753
Q Serve(g_s), s	1.5	4.8	1.0	1.6	9.8	4.1	0.7	3.1	3.2	2.6	2.6	2.7
Cycle Q Clear(g_c), s	11.2	4.8	1.0	6.4	9.8	4.1	0.7	3.1	3.2	2.6	2.6	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		0.22
Lane Grp Cap(c), veh/h	188	430	365	303	430	509	74	813	825	163	901	913
V/C Ratio(X)	0.13	0.40	0.09	0.12	0.74	0.28	0.28	0.19	0.19	0.49	0.16	0.16
Avail Cap(c_a), veh/h	263	577	489	398	577	633	231	813	825	231	901	913
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.4	19.3	17.9	22.0	21.2	14.8	27.8	9.3	9.3	25.8	7.5	7.6
Incr Delay (d2), s/veh	0.3	0.6	0.1	0.2	3.6	0.3	2.1	0.5	0.5	2.2	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.8	0.3	0.4	3.9	1.2	0.3	1.0	1.0	1.0	0.8	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.7	19.9	18.0	22.2	24.8	15.1	29.9	9.8	9.8	28.1	7.9	7.9
LnGrp LOS	C	B	B	C	C	B	C	A	A	C	A	A
Approach Vol, veh/h	231			497			335			371		
Approach Delay, s/veh	20.4			21.8			11.1			12.2		
Approach LOS	C			C			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	32.2		18.2	6.6	35.3		18.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	20.5		18.5	7.5	20.5		18.5				
Max Q Clear Time (g_c+I1), s	4.6	5.2		13.2	2.7	4.7		11.8				
Green Ext Time (p_c), s	0.0	1.3		0.4	0.0	1.2		1.3				
Intersection Summary												
HCM 6th Ctrl Delay	16.6											
HCM 6th LOS	B											

Lanes, Volumes, Timings
17: Jackson St. & 58th Avenue

Existing + Project AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	60	7	1	44	2	2	35	2	10	62	16
Future Volume (vph)	19	60	7	1	44	2	2	35	2	10	62	16
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		5266			1079			1013			510	
Travel Time (s)		71.8			14.7			12.6			6.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A










Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	19	60	7	1	44	2	2	35	2	10	62	16
Future Vol, veh/h	19	60	7	1	44	2	2	35	2	10	62	16
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	64	7	1	47	2	2	37	2	11	66	17
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.8	7.6	7.6	7.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	22%	2%	11%
Vol Thru, %	90%	70%	94%	70%
Vol Right, %	5%	8%	4%	18%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	39	86	47	88
LT Vol	2	19	1	10
Through Vol	35	60	44	62
RT Vol	2	7	2	16
Lane Flow Rate	41	91	50	94
Geometry Grp	1	1	1	1
Degree of Util (X)	0.05	0.107	0.059	0.107
Departure Headway (Hd)	4.332	4.202	4.218	4.123
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	831	841	835	856
Service Time	2.332	2.287	2.314	2.214
HCM Lane V/C Ratio	0.049	0.108	0.06	0.11
HCM Control Delay	7.6	7.8	7.6	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.4	0.2	0.4

Lanes, Volumes, Timings
18: Avenue 60 & S. Access

Existing + Project AM Peak hour




						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	24	72	0
Future Volume (vph)	0	0	0	24	72	0
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		25	
Link Distance (ft)		207	1772		380	
Travel Time (s)		3.5	30.2		10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
18: Avenue 60 & S. Access

Existing + Project AM Peak hour

Intersection

Int Delay, s/veh 6.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	24	72	0
Future Vol, veh/h	0	0	0	24	72	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	26	78	0












Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	26	0	13
Stage 1	-	-	13
Stage 2	-	-	0
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1588	-	1006
Stage 1	-	-	1010
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1588	-	1006
Mov Cap-2 Maneuver	-	-	1006
Stage 1	-	-	1010
Stage 2	-	-	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1588	-	-	-	1006
HCM Lane V/C Ratio	-	-	-	-	0.078
HCM Control Delay (s)	0	-	-	-	8.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.3







Lanes, Volumes, Timings
19: Madison St. & Main Access

Existing + Project AM Peak hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	207	15	19	158	115	67
Future Volume (vph)	207	15	19	158	115	67
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100	0	150			0
Storage Lanes	1	1	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	25			50	50	
Link Distance (ft)	499			880	143	
Travel Time (s)	13.6			12.0	2.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					











HCM 6th TWSC
19: Madison St. & Main Access

Existing + Project AM Peak hour

Intersection						
Int Delay, s/veh	5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	207	15	19	158	115	67
Future Vol, veh/h	207	15	19	158	115	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	225	16	21	172	125	73
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	290	99	198	0	-	0
Stage 1	162	-	-	-	-	-
Stage 2	128	-	-	-	-	-
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	677	937	1372	-	-	-
Stage 1	850	-	-	-	-	-
Stage 2	884	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	667	937	1372	-	-	-
Mov Cap-2 Maneuver	692	-	-	-	-	-
Stage 1	837	-	-	-	-	-
Stage 2	884	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	12.4	0.8		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1372	-	692	937	-	-
HCM Lane V/C Ratio	0.015	-	0.325	0.017	-	-
HCM Control Delay (s)	7.7	-	12.7	8.9	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	1.4	0.1	-	-






Lanes, Volumes, Timings
20: Project Access 1 & Avenue 58

Existing + Project AM Peak hour

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	51	5	16	60	5	2
Future Volume (vph)	51	5	16	60	5	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)		0	50		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			60		60	
Link Speed (mph)	50			50	25	
Link Distance (ft)	403			335	383	
Travel Time (s)	5.5			4.6	10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					











HCM 6th TWSC
20: Project Access 1 & Avenue 58

Existing + Project AM Peak hour

Intersection						
Int Delay, s/veh	1.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	51	5	16	60	5	2
Future Vol, veh/h	51	5	16	60	5	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	55	5	17	65	5	2
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	60	0	125	58
Stage 1	-	-	-	-	58	-
Stage 2	-	-	-	-	67	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1543	-	863	1008
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	948	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1543	-	854	1008
Mov Cap-2 Maneuver	-	-	-	-	819	-
Stage 1	-	-	-	-	953	-
Stage 2	-	-	-	-	948	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.5		9.2	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	865	-	-	1543	-	
HCM Lane V/C Ratio	0.009	-	-	0.011	-	
HCM Control Delay (s)	9.2	-	-	7.4	-	
HCM Lane LOS	A	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Lanes, Volumes, Timings
21: Project Access 2 & Avenue 58

Existing + Project AM Peak hour

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations				 		
Traffic Volume (vph)	45	8	0	76	0	3
Future Volume (vph)	45	8	0	76	0	3
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	50			50	25	
Link Distance (ft)	335			276	233	
Travel Time (s)	4.6			3.8	6.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					













HCM 6th TWSC
21: Project Access 2 & Avenue 58

Existing + Project AM Peak hour

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↱↱		↱
Traffic Vol, veh/h	45	8	0	76	0	3
Future Vol, veh/h	45	8	0	76	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	49	9	0	83	0	3
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	54
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	-	-	0	-	0	1013
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	1013
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		8.6	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	1013	-	-	-		
HCM Lane V/C Ratio	0.003	-	-	-		
HCM Control Delay (s)	8.6	-	-	-		
HCM Lane LOS	A	-	-	-		
HCM 95th %tile Q(veh)	0	-	-	-		

Lanes, Volumes, Timings
22: Madison St. & Project Access 3

Existing + Project AM Peak hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				 	  	
Traffic Volume (vph)	0	6	0	365	176	13
Future Volume (vph)	0	6	0	365	176	13
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	25			50	50	
Link Distance (ft)	210			251	288	
Travel Time (s)	5.7			3.4	3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

























HCM 6th TWSC
22: Madison St. & Project Access 3

Existing + Project AM Peak hour

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	6	0	365	176	13
Future Vol, veh/h	0	6	0	365	176	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	7	0	397	191	14
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	-	103	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	932	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	932	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	8.9	0	0			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR		
Capacity (veh/h)	-	932	-	-		
HCM Lane V/C Ratio	-	0.007	-	-		
HCM Control Delay (s)	-	8.9	-	-		
HCM Lane LOS	-	A	-	-		
HCM 95th %tile Q(veh)	-	0	-	-		

Lanes, Volumes, Timings
1: Madison St. & Avenue 58

Existing + Project PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	58	4	93	19	55	2	233	58	46	382	44
Future Volume (vph)	71	58	4	93	19	55	2	233	58	46	382	44
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

HCM 6th AWSC
1: Madison St. & Avenue 58

Existing + Project PM Peak hour

Intersection												
Intersection Delay, s/veh	12.8											
Intersection LOS	B											















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↑		↰	↑↑		↰	↑↑	
Traffic Vol, veh/h	71	58	4	93	19	55	2	233	58	46	382	44
Future Vol, veh/h	71	58	4	93	19	55	2	233	58	46	382	44
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	77	63	4	101	21	60	2	253	63	50	415	48
Number of Lanes	1	1	1	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	11.8	11.7	12.3	13.8
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	57%	0%	100%	0%	0%	100%	10%	0%	100%
Vol Right, %	0%	0%	43%	0%	0%	100%	0%	0%	90%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	2	155	136	71	58	4	93	13	61	46	255
LT Vol	2	0	0	71	0	0	93	0	0	46	0
Through Vol	0	155	78	0	58	0	0	13	6	0	255
RT Vol	0	0	58	0	0	4	0	0	55	0	0
Lane Flow Rate	2	169	147	77	63	4	101	14	67	50	277
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.004	0.321	0.268	0.169	0.129	0.008	0.219	0.028	0.123	0.097	0.498
Departure Headway (Hd)	7.345	6.845	6.546	7.875	7.375	6.675	7.793	7.293	6.665	6.98	6.48
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	485	522	546	453	483	532	458	488	534	511	554
Service Time	5.126	4.626	4.327	5.668	5.168	4.468	5.582	5.082	4.454	4.752	4.252
HCM Lane V/C Ratio	0.004	0.324	0.269	0.17	0.13	0.008	0.221	0.029	0.125	0.098	0.5
HCM Control Delay	10.2	12.9	11.7	12.3	11.3	9.5	12.8	10.3	10.4	10.5	15.6
HCM Lane LOS	B	B	B	B	B	A	B	B	B	B	C
HCM 95th-tile Q	0	1.4	1.1	0.6	0.4	0	0.8	0.1	0.4	0.3	2.8

Lanes, Volumes, Timings
2: Madison St. & Airport Bl.

Existing + Project PM Peak hour

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	29	62	1	293	26	55	403
Future Volume (vph)	29	62	1	293	26	55	403
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		8			2		
Detector Phase	3	8	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	20.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	22.0	22.0	12.0	24.0	24.0	14.0	26.0
Total Split (%)	36.7%	36.7%	20.0%	40.0%	40.0%	23.3%	43.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 60

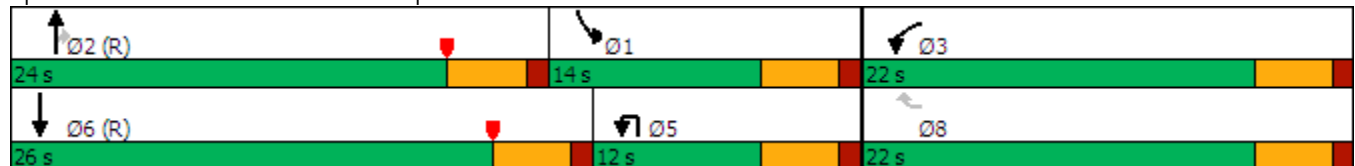
Actuated Cycle Length: 60

Offset: 28 (47%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55















Control Type: Actuated-Coordinated

Splits and Phases: 2: Madison St. & Airport Bl.
































HCM 6th Signalized Intersection Summary 2: Madison St. & Airport Bl.

Existing + Project PM Peak hour

							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	29	62	1	293	26	55	403
Future Volume (veh/h)	29	62	1	293	26	55	403
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	33	70		329	29	62	453
Peak Hour Factor	0.89	0.89		0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	180	161		1153	514	629	2639
Arrive On Green	0.10	0.10		0.33	0.33	0.36	0.76
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	33	70		329	29	62	453
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	1.0	2.6		4.2	0.5	1.4	2.1
Cycle Q Clear(g_c), s	1.0	2.6		4.2	0.5	1.4	2.1
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	180	161		1153	514	629	2639
V/C Ratio(X)	0.18	0.44		0.29	0.06	0.10	0.17
Avail Cap(c_a), veh/h	520	463		1153	514	629	2639
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.5	25.2		14.7	5.4	12.6	1.9
Incr Delay (d2), s/veh	0.5	1.9		0.6	0.2	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.9		1.4	0.2	0.5	0.1
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	25.0	27.1		15.4	5.6	12.7	2.1
LnGrp LOS	C	C		B	A	B	A
Approach Vol, veh/h	103			358			515
Approach Delay, s/veh	26.4			14.6			3.4
Approach LOS	C			B			A
Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	25.8	24.0				49.8	10.2
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	9.5	19.5				21.5	17.5
Max Q Clear Time (g_c+I1), s	3.4	6.2				4.1	4.6
Green Ext Time (p_c), s	0.0	1.5				2.4	0.2
Intersection Summary							
HCM 6th Ctrl Delay			9.9				
HCM 6th LOS			A				
Notes							
User approved ignoring U-Turning movement.							

Lanes, Volumes, Timings
3: Madison St. & Avenue 54

Existing + Project PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 		 	 	
Traffic Volume (vph)	13	196	286	36	104	51	249	258	66	30	184	11
Future Volume (vph)	13	196	286	36	104	51	249	258	66	30	184	11
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											









HCM 6th AWSC
3: Madison St. & Avenue 54

Existing + Project PM Peak hour

Intersection

Intersection Delay, s/veh 23.5

Intersection LOS C

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	196	286	36	104	51	249	258	66	30	184	11
Future Vol, veh/h	13	196	286	36	104	51	249	258	66	30	184	11
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	220	321	40	117	57	280	290	74	34	207	12
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	33.6	14.1	21.1	15.3
HCM LOS	D	B	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	57%	0%	100%	19%	0%	100%	40%	0%	100%	85%
Vol Right, %	0%	0%	43%	0%	0%	81%	0%	0%	60%	0%	0%	15%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	249	172	152	13	131	351	36	69	86	30	123	72
LT Vol	249	0	0	13	0	0	36	0	0	30	0	0
Through Vol	0	172	86	0	131	65	0	69	35	0	123	61
RT Vol	0	0	66	0	0	286	0	0	51	0	0	11
Lane Flow Rate	280	193	171	15	147	395	40	78	96	34	138	81
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.672	0.438	0.372	0.036	0.34	0.852	0.109	0.199	0.235	0.09	0.347	0.202
Departure Headway (Hd)	8.65	8.15	7.846	8.838	8.338	7.768	9.704	9.204	8.787	9.57	9.07	8.964
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	420	444	459	407	433	470	370	390	409	375	397	401
Service Time	6.37	5.87	5.566	6.558	6.058	5.488	7.454	6.954	6.538	7.32	6.82	6.714
HCM Lane V/C Ratio	0.667	0.435	0.373	0.037	0.339	0.84	0.108	0.2	0.235	0.091	0.348	0.202
HCM Control Delay	27.4	17.1	15.2	11.9	15.3	41.2	13.6	14.2	14.2	13.3	16.6	14
HCM Lane LOS	D	C	C	B	C	E	B	B	B	B	C	B
HCM 95th-tile Q	4.8	2.2	1.7	0.1	1.5	8.6	0.4	0.7	0.9	0.3	1.5	0.7

Lanes, Volumes, Timings
4: Madison St. & Avenue 52

Existing + Project PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	368	41	28	255	39	62	204	33	47	162	49
Future Volume (vph)	64	368	41	28	255	39	62	204	33	47	162	49
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	23.0	49.0	49.0	17.0	43.0	43.0	16.0	38.0	38.0	16.0	38.0	38.0
Total Split (%)	19.2%	40.8%	40.8%	14.2%	35.8%	35.8%	13.3%	31.7%	31.7%	13.3%	31.7%	31.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

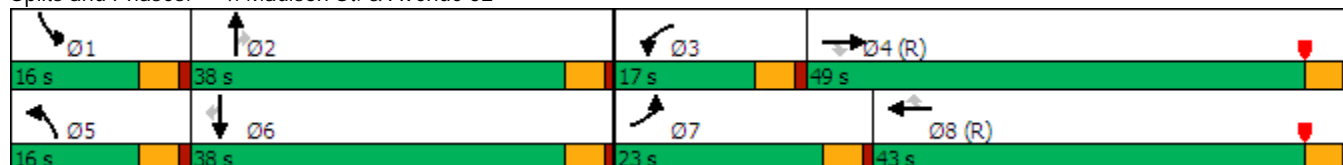
Actuated Cycle Length: 120

Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 4: Madison St. & Avenue 52



























HCM 6th Signalized Intersection Summary 4: Madison St. & Avenue 52

Existing + Project PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	368	41	28	255	39	62	204	33	47	162	49
Future Volume (veh/h)	64	368	41	28	255	39	62	204	33	47	162	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	74	428	48	33	297	45	72	237	38	55	188	57
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	95	1657	739	67	1603	715	178	980	437	165	966	431
Arrive On Green	0.05	0.48	0.48	0.04	0.46	0.46	0.05	0.28	0.28	0.05	0.28	0.28
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	74	428	48	33	297	45	72	237	38	55	188	57
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	5.1	8.8	2.0	2.2	6.0	1.9	2.5	6.3	2.2	1.9	5.0	3.3
Cycle Q Clear(g_c), s	5.1	8.8	2.0	2.2	6.0	1.9	2.5	6.3	2.2	1.9	5.0	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	95	1657	739	67	1603	715	178	980	437	165	966	431
V/C Ratio(X)	0.78	0.26	0.06	0.49	0.19	0.06	0.40	0.24	0.09	0.33	0.19	0.13
Avail Cap(c_a), veh/h	267	1657	739	181	1603	715	322	980	437	322	966	431
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	18.6	16.8	56.5	18.9	17.8	55.0	33.1	31.6	55.2	33.0	32.4
Incr Delay (d2), s/veh	13.0	0.4	0.2	5.4	0.3	0.2	1.5	0.6	0.4	1.2	0.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	3.5	0.7	1.0	2.3	0.7	1.1	2.6	0.8	0.8	2.1	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.0	19.0	17.0	61.9	19.2	18.0	56.4	33.7	32.0	56.3	33.4	33.0
LnGrp LOS	E	B	B	E	B	B	E	C	C	E	C	C
Approach Vol, veh/h	550			375			347			300		
Approach Delay, s/veh	25.5			22.8			38.2			37.5		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.4	38.5	9.2	62.0	10.9	38.0	11.0	60.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.5	33.5	12.5	44.5	11.5	33.5	18.5	38.5				
Max Q Clear Time (g_c+I1), s	3.9	8.3	4.2	10.8	4.5	7.0	7.1	8.0				
Green Ext Time (p_c), s	0.1	1.4	0.0	2.9	0.1	1.2	0.1	1.8				
Intersection Summary												
HCM 6th Ctrl Delay	30.0											
HCM 6th LOS	C											

Lanes, Volumes, Timings
5: Madison St. & Avenue 50/50th Avenue

Existing + Project PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	324	148	26	229	32	107	264	22	33	151	57
Future Volume (vph)	54	324	148	26	229	32	107	264	22	33	151	57
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	22.0	47.0	47.0	17.0	42.0	42.0	20.0	41.0	41.0	15.0	36.0	36.0
Total Split (%)	18.3%	39.2%	39.2%	14.2%	35.0%	35.0%	16.7%	34.2%	34.2%	12.5%	30.0%	30.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

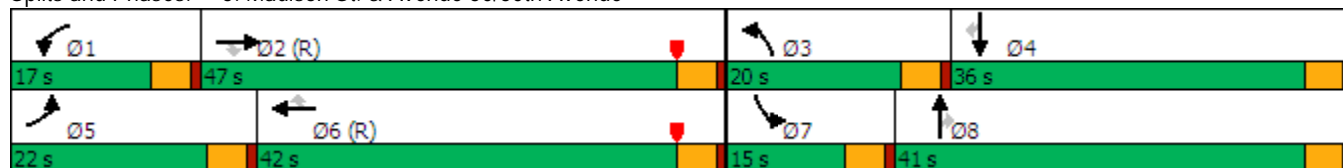
Actuated Cycle Length: 120

Offset: 64.5 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue



























HCM 6th Signalized Intersection Summary 5: Madison St. & Avenue 50/50th Avenue

Existing + Project PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	324	148	26	229	32	107	264	22	33	151	57
Future Volume (veh/h)	54	324	148	26	229	32	107	264	22	33	151	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	57	341	156	27	241	34	113	278	23	35	159	60
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	86	1630	727	60	1578	704	192	1052	469	135	994	443
Arrive On Green	0.05	0.47	0.47	0.03	0.46	0.46	0.06	0.30	0.30	0.04	0.29	0.29
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	57	341	156	27	241	34	113	278	23	35	159	60
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	3.9	6.9	7.1	1.8	4.9	1.5	3.9	7.3	1.3	1.2	4.1	3.5
Cycle Q Clear(g_c), s	3.9	6.9	7.1	1.8	4.9	1.5	3.9	7.3	1.3	1.2	4.1	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	86	1630	727	60	1578	704	192	1052	469	135	994	443
V/C Ratio(X)	0.66	0.21	0.21	0.45	0.15	0.05	0.59	0.26	0.05	0.26	0.16	0.14
Avail Cap(c_a), veh/h	253	1630	727	181	1578	704	435	1052	469	294	994	443
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	18.6	18.7	56.8	19.1	18.2	55.2	31.6	29.5	55.9	31.9	31.7
Incr Delay (d2), s/veh	8.4	0.3	0.7	5.2	0.2	0.1	2.9	0.6	0.2	1.0	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	2.7	2.5	0.9	1.9	0.5	1.7	3.0	0.5	0.5	1.7	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.4	18.9	19.4	62.0	19.3	18.3	58.1	32.2	29.7	56.9	32.3	32.3
LnGrp LOS	E	B	B	E	B	B	E	C	C	E	C	C
Approach Vol, veh/h	554			302			414			254		
Approach Delay, s/veh	23.7			23.0			39.1			35.7		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.7	61.0	11.3	39.0	10.5	59.2	9.3	41.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	12.5	42.5	15.5	31.5	17.5	37.5	10.5	36.5				
Max Q Clear Time (g_c+I1), s	3.8	9.1	5.9	6.1	5.9	6.9	3.2	9.3				
Green Ext Time (p_c), s	0.0	2.6	0.2	1.0	0.1	1.5	0.0	1.6				
Intersection Summary												
HCM 6th Ctrl Delay	29.8											
HCM 6th LOS	C											

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54

Existing + Project PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 		 		
Traffic Volume (vph)	30	24	2	30	10	325	6	154	50	405	148	2
Future Volume (vph)	30	24	2	30	10	325	6	154	50	405	148	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											










HCM 6th AWSC
6: Jefferson St. & Avenue 54

Existing + Project PM Peak hour

Intersection

Intersection Delay, s/veh20.1

Intersection LOS C





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	24	2	30	10	325	6	154	50	405	148	2
Future Vol, veh/h	30	24	2	30	10	325	6	154	50	405	148	2
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	37	29	2	37	12	396	7	188	61	494	180	2
Number of Lanes	1	2	0	1	1	1	0	2	0	2	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	12.7	28.6	13.9	17.7
HCM LOS	B	D	B	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	7%	0%	100%	0%	0%	100%	0%	0%	100%	100%	0%
Vol Thru, %	93%	61%	0%	100%	80%	0%	100%	0%	0%	0%	99%
Vol Right, %	0%	39%	0%	0%	20%	0%	0%	100%	0%	0%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	83	127	30	16	10	30	10	325	203	203	150
LT Vol	6	0	30	0	0	30	0	0	203	203	0
Through Vol	77	77	0	16	8	0	10	0	0	0	148
RT Vol	0	50	0	0	2	0	0	325	0	0	2
Lane Flow Rate	101	155	37	20	12	37	12	396	247	247	183
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.227	0.334	0.096	0.049	0.03	0.084	0.026	0.78	0.531	0.531	0.367
Departure Headway (Hd)	8.078	7.766	9.465	8.952	8.809	8.301	7.793	7.082	7.743	7.743	7.231
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	443	462	378	399	405	431	459	511	464	464	498
Service Time	5.84	5.528	7.244	6.731	6.587	6.055	5.547	4.836	5.498	5.498	4.986
HCM Lane V/C Ratio	0.228	0.335	0.098	0.05	0.03	0.086	0.026	0.775	0.532	0.532	0.367
HCM Control Delay	13.2	14.4	13.3	12.2	11.9	11.8	10.8	30.7	19	19	14.1
HCM Lane LOS	B	B	B	B	B	B	B	D	C	C	B
HCM 95th-tile Q	0.9	1.4	0.3	0.2	0.1	0.3	0.1	7.1	3.1	3.1	1.7

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

Existing + Project PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	256	240	15	257	210	135	443	59	113	389	101
Future Volume (vph)	73	256	240	15	257	210	135	443	59	113	389	101
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											























HCM 6th Roundabout
7: Jefferson St. & Avenue 52

Existing + Project PM Peak hour

Intersection									
Intersection Delay, s/veh	11.2								
Intersection LOS	B								
Approach	EB		WB		NB		SB		
Entry Lanes	1		1		1		1		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	611		518		684		649		
Demand Flow Rate, veh/h	623		529		698		661		
Vehicles Circulating, veh/h	566		714		484		446		
Vehicles Exiting, veh/h	430		404		442		566		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	6.4		6.8		18.3		11.8		
Approach LOS	A		A		C		B		
Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Bypass	
Designated Moves	LT	R	LT	R	LT	R	LT	R	
Assumed Moves	LT	R	LT	R	LT	R	LT	R	
RT Channelized		Free		Free		Free		Free	
Lane Util	1.000		1.000		1.000		1.000		
Follow-Up Headway, s	2.609		2.609		2.609		2.609		
Critical Headway, s	4.976	263	4.976	231	4.976	64	4.976	111	
Entry Flow, veh/h	360	1887	298	1887	634	1887	550	1887	
Cap Entry Lane, veh/h	775	0.980	666	0.980	842	0.980	876	0.980	
Entry HV Adj Factor	0.979	258	0.981	226	0.980	63	0.981	109	
Flow Entry, veh/h	353	1850	292	1850	621	1850	540	1850	
Cap Entry, veh/h	759	0.139	654	0.122	826	0.034	859	0.059	
V/C Ratio	0.465	0.0	0.447	0.0	0.753	0.0	0.628	0.0	
Control Delay, s/veh	11.1	A	12.1	A	20.1	A	14.1	A	
LOS	B	0	B	0	C	0	B	0	
95th %tile Queue, veh	2		2		7		5		

Lanes, Volumes, Timings 8: Jefferson St. & Pomelo

Existing + Project PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	2	21	9	1	34	3	716	7	15	666	55
Future Volume (vph)	54	2	21	9	1	34	3	716	7	15	666	55
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	58.0	58.0	58.0	58.0	58.0	58.0	18.0	42.0		20.0	44.0	
Total Split (%)	48.3%	48.3%	48.3%	48.3%	48.3%	48.3%	15.0%	35.0%		16.7%	36.7%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary

Area Type: Other

Cycle Length: 120

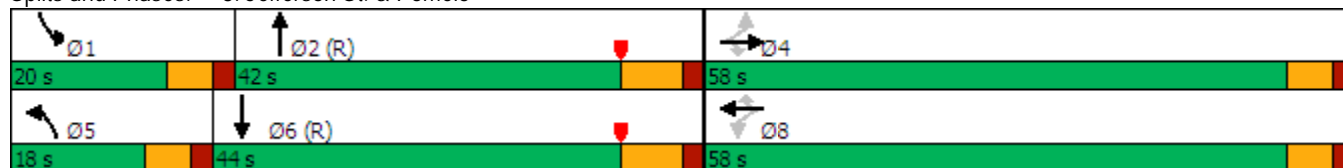
Actuated Cycle Length: 120

Offset: 30 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110





















Control Type: Actuated-Coordinated

Splits and Phases: 8: Jefferson St. & Pomelo



























HCM 6th Signalized Intersection Summary 8: Jefferson St. & Pomelo

Existing + Project PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	2	21	9	1	34	3	716	7	15	666	55
Future Volume (veh/h)	54	2	21	9	1	34	3	716	7	15	666	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	57	2	22	9	1	36	3	754	7	16	701	58
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	74	2	485	67	4	485	17	2449	23	72	2406	198
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.01	0.48	0.48	0.08	1.00	1.00
Sat Flow, veh/h	49	5	1543	32	14	1543	1734	5080	47	1734	4681	385
Grp Volume(v), veh/h	59	0	22	10	0	36	3	492	269	16	495	264
Grp Sat Flow(s),veh/h/ln	54	0	1543	47	0	1543	1734	1657	1813	1734	1657	1752
Q Serve(g_s), s	1.4	0.0	1.2	0.6	0.0	2.0	0.2	10.8	10.8	1.0	0.0	0.0
Cycle Q Clear(g_c), s	37.7	0.0	1.2	37.3	0.0	2.0	0.2	10.8	10.8	1.0	0.0	0.0
Prop In Lane	0.97		1.00	0.90		1.00	1.00		0.03	1.00		0.22
Lane Grp Cap(c), veh/h	76	0	485	72	0	485	17	1598	874	72	1703	900
V/C Ratio(X)	0.78	0.00	0.05	0.14	0.00	0.07	0.18	0.31	0.31	0.22	0.29	0.29
Avail Cap(c_a), veh/h	241	0	669	241	0	669	173	1598	874	202	1703	900
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	59.1	0.0	28.6	46.9	0.0	28.9	59.0	18.9	18.9	53.2	0.0	0.0
Incr Delay (d2), s/veh	29.5	0.0	0.1	1.9	0.0	0.1	10.9	0.5	0.9	2.9	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	0.5	0.3	0.0	0.8	0.1	3.9	4.4	0.5	0.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	88.7	0.0	28.7	48.8	0.0	29.0	69.8	19.4	19.8	56.1	0.4	0.7
LnGrp LOS	F	A	C	D	A	C	E	B	B	E	A	A
Approach Vol, veh/h	81		46				764				775	
Approach Delay, s/veh	72.4		33.3				19.7				1.6	
Approach LOS	E		C				B				A	
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	11.0	64.4	44.6		7.1	68.3	44.6					
Change Period (Y+Rc), s	6.0	7.5	6.0		6.0	7.5	6.0					
Max Green Setting (Gmax), s	14.0	34.5	52.0		12.0	36.5	52.0					
Max Q Clear Time (g_c+I1), s	3.0	12.8	39.7		2.2	2.0	39.3					
Green Ext Time (p_c), s	0.0	7.9	0.4		0.0	9.5	0.2					
Intersection Summary												
HCM 6th Ctrl Delay	14.3											
HCM 6th LOS	B											

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

Existing + Project PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	242	324	65	78	246	140	75	678	51	168	598	175
Future Volume (vph)	242	324	65	78	246	140	75	678	51	168	598	175
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	43.5	43.5	18.0	38.5	38.5	18.0	39.5	39.5	19.0	40.5	40.5
Total Split (%)	19.2%	36.3%	36.3%	15.0%	32.1%	32.1%	15.0%	32.9%	32.9%	15.8%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

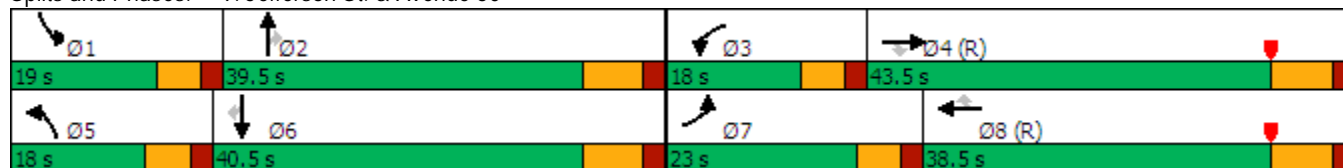
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 115

Control Type: Actuated-Coordinated































Splits and Phases: 9: Jefferson St. & Avenue 50



HCM 6th Signalized Intersection Summary

9: Jefferson St. & Avenue 50

Existing + Project PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  		 	  	
Traffic Volume (veh/h)	242	324	65	78	246	140	75	678	51	168	598	175
Future Volume (veh/h)	242	324	65	78	246	140	75	678	51	168	598	175
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	249	334	67	80	254	144	77	699	53	173	616	180
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	1341	598	161	617	523	160	968	301	335	1005	312
Arrive On Green	0.14	0.39	0.39	0.09	0.34	0.34	0.03	0.06	0.06	0.10	0.20	0.20
Sat Flow, veh/h	1734	3460	1543	1734	1821	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	249	334	67	80	254	144	77	699	53	173	616	180
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	17.0	7.9	3.3	5.3	12.9	8.2	5.2	16.6	3.9	5.9	13.5	12.6
Cycle Q Clear(g_c), s	17.0	7.9	3.3	5.3	12.9	8.2	5.2	16.6	3.9	5.9	13.5	12.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	1341	598	161	617	523	160	968	301	335	1005	312
V/C Ratio(X)	1.01	0.25	0.11	0.50	0.41	0.28	0.48	0.72	0.18	0.52	0.61	0.58
Avail Cap(c_a), veh/h	246	1341	598	173	617	523	173	1326	412	365	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	24.9	23.5	51.7	30.5	28.9	55.3	53.0	47.0	51.3	43.6	43.2
Incr Delay (d2), s/veh	60.9	0.4	0.4	0.9	2.0	1.3	0.8	1.6	0.4	0.5	0.9	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.3	3.2	1.2	2.3	5.8	3.1	2.3	7.4	1.5	2.4	5.4	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	112.4	25.4	23.9	52.6	32.5	30.2	56.2	54.6	47.4	51.7	44.5	45.6
LnGrp LOS	F	C	C	D	C	C	E	D	D	D	D	D
Approach Vol, veh/h	650				478				829			
Approach Delay, s/veh	58.6				35.2				54.3			
Approach LOS	E				D				D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	30.9	17.2	54.0	17.1	31.8	23.0	48.2				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	13.0	32.0	12.0	36.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	7.9	18.6	7.3	9.9	7.2	15.5	19.0	14.9				
Green Ext Time (p_c), s	0.1	4.8	0.0	4.2	0.0	5.5	0.0	3.1				
Intersection Summary												
HCM 6th Ctrl Delay			49.4									
HCM 6th LOS			D									
Notes												

Lanes, Volumes, Timings
10: Avenue 60 & Madison St.






Existing + Project PM Peak hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	19	30	49	104	176	31
Future Volume (vph)	19	30	49	104	176	31
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		40	
Link Distance (ft)		1772	661		437	
Travel Time (s)		30.2	11.3		7.4	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)						
Sign Control		Stop	Stop		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Intersection Delay, s/veh	9.5
Intersection LOS	A





















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	19	30	49	104	176	31
Future Vol, veh/h	19	30	49	104	176	31
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	37	60	127	215	38
Number of Lanes	0	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	8.9	8.3	10.6
HCM LOS	A	A	B

Lane	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	39%	0%	0%	100%	0%
Vol Thru, %	61%	100%	0%	0%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	49	49	104	176	31
LT Vol	19	0	0	176	0
Through Vol	30	49	0	0	0
RT Vol	0	0	104	0	31
Lane Flow Rate	60	60	127	215	38
Geometry Grp	4	7	7	7	7
Degree of Util (X)	0.089	0.088	0.162	0.335	0.046
Departure Headway (Hd)	5.332	5.307	4.602	5.624	4.42
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	672	676	780	640	808
Service Time	3.366	3.033	2.328	3.362	2.157
HCM Lane V/C Ratio	0.089	0.089	0.163	0.336	0.047
HCM Control Delay	8.9	8.5	8.2	11.2	7.4
HCM Lane LOS	A	A	A	B	A
HCM 95th-tile Q	0.3	0.3	0.6	1.5	0.1

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue









Existing + Project PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	88	57	2	56	9	45	50	3	17	54	28
Future Volume (vph)	24	88	57	2	56	9	45	50	3	17	54	28
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

HCM 6th AWSC
11: Monroe St. & Avenue 60/60th Avenue

Existing + Project PM Peak hour

Intersection												
Intersection Delay, s/veh	8.9											
Intersection LOS	A											


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	88	57	2	56	9	45	50	3	17	54	28
Future Vol, veh/h	24	88	57	2	56	9	45	50	3	17	54	28
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	100	65	2	64	10	51	57	3	19	61	32
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	8.9	9	9.1	8.6
HCM LOS	A	A	A	A






Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	21%	0%	3%	100%	0%	0%
Vol Thru, %	0%	94%	79%	0%	84%	0%	100%	0%
Vol Right, %	0%	6%	0%	100%	13%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	45	53	112	57	67	17	54	28
LT Vol	45	0	24	0	2	17	0	0
Through Vol	0	50	88	0	56	0	54	0
RT Vol	0	3	0	57	9	0	0	28
Lane Flow Rate	51	60	127	65	76	19	61	32
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.086	0.092	0.193	0.084	0.116	0.032	0.095	0.043
Departure Headway (Hd)	6.046	5.502	5.45	4.641	5.488	6.051	5.547	4.842
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	590	647	655	768	649	589	642	734
Service Time	3.812	3.268	3.204	2.395	3.255	3.817	3.313	2.607
HCM Lane V/C Ratio	0.086	0.093	0.194	0.085	0.117	0.032	0.095	0.044
HCM Control Delay	9.4	8.8	9.5	7.8	9	9	8.9	7.8
HCM Lane LOS	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0.3	0.3	0.7	0.3	0.4	0.1	0.3	0.1

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

Existing + Project PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	97	14	6	85	35	23	126	20	27	85	78
Future Volume (vph)	66	97	14	6	85	35	23	126	20	27	85	78
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	11
Intersection LOS	B






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	66	97	14	6	85	35	23	126	20	27	85	78
Future Vol, veh/h	66	97	14	6	85	35	23	126	20	27	85	78
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	88	129	19	8	113	47	31	168	27	36	113	104
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	11.8	10.4	11.5	10.2
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	14%	37%	5%	24%	0%
Vol Thru, %	75%	55%	67%	76%	0%
Vol Right, %	12%	8%	28%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	169	177	126	112	78
LT Vol	23	66	6	27	0
Through Vol	126	97	85	85	0
RT Vol	20	14	35	0	78
Lane Flow Rate	225	236	168	149	104
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.347	0.364	0.256	0.254	0.153
Departure Headway (Hd)	5.543	5.546	5.492	6.12	5.288
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	647	647	652	587	677
Service Time	3.588	3.591	3.542	3.865	3.032
HCM Lane V/C Ratio	0.348	0.365	0.258	0.254	0.154
HCM Control Delay	11.5	11.8	10.4	11	9
HCM Lane LOS	B	B	B	B	A
HCM 95th-tile Q	1.5	1.7	1	1	0.5

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.

Existing + Project PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	51	8	26	42	25	8	158	35	33	156	7
Future Volume (vph)	4	51	8	26	42	25	8	158	35	33	156	7
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											









HCM 6th AWSC
13: Monroe St. & Airport Bl.

Existing + Project PM Peak hour

Intersection

Intersection Delay, s/veh 10

Intersection LOS A



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	51	8	26	42	25	8	158	35	33	156	7
Future Vol, veh/h	4	51	8	26	42	25	8	158	35	33	156	7
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	59	9	30	48	29	9	182	40	38	179	8
Number of Lanes	1	1	1	0	1	0	1	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	1	3
HCM Control Delay	9.1	10	10.9	9.4
HCM LOS	A	A	B	A







Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	100%	0%	0%	28%	100%	0%	0%
Vol Thru, %	0%	82%	0%	100%	0%	45%	0%	100%	88%
Vol Right, %	0%	18%	0%	0%	100%	27%	0%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	8	193	4	51	8	93	33	104	59
LT Vol	8	0	4	0	0	26	33	0	0
Through Vol	0	158	0	51	0	42	0	104	52
RT Vol	0	35	0	0	8	25	0	0	7
Lane Flow Rate	9	222	5	59	9	107	38	120	68
Geometry Grp	8	8	7	7	7	8	8	8	8
Degree of Util (X)	0.015	0.335	0.008	0.096	0.013	0.179	0.065	0.189	0.105
Departure Headway (Hd)	6.166	5.536	6.418	5.915	5.21	6.013	6.186	5.682	5.599
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	584	654	560	608	689	600	583	636	644
Service Time	3.866	3.236	4.132	3.628	2.924	3.724	3.886	3.382	3.299
HCM Lane V/C Ratio	0.015	0.339	0.009	0.097	0.013	0.178	0.065	0.189	0.106
HCM Control Delay	9	11	9.2	9.3	8	10	9.3	9.7	9
HCM Lane LOS	A	B	A	A	A	A	A	A	A
HCM 95th-tile Q	0	1.5	0	0.3	0	0.6	0.2	0.7	0.4

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

Existing + Project PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	195	30	7	104	37	19	209	26	69	142	26
Future Volume (vph)	54	195	30	7	104	37	19	209	26	69	142	26
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	14.4
Intersection LOS	B























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	54	195	30	7	104	37	19	209	26	69	142	26
Future Vol, veh/h	54	195	30	7	104	37	19	209	26	69	142	26
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	59	214	33	8	114	41	21	230	29	76	156	29
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	13.8	13	16.2	14.1
HCM LOS	B	B	C	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	7%	100%	0%	5%	33%	0%
Vol Thru, %	82%	0%	87%	70%	67%	0%
Vol Right, %	10%	0%	13%	25%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	254	54	225	148	211	26
LT Vol	19	54	0	7	69	0
Through Vol	209	0	195	104	142	0
RT Vol	26	0	30	37	0	26
Lane Flow Rate	279	59	247	163	232	29
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.505	0.117	0.445	0.311	0.439	0.046
Departure Headway (Hd)	6.621	7.192	6.587	6.886	6.812	5.833
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	547	501	551	524	531	607
Service Time	4.621	4.892	4.287	4.9	4.512	3.632
HCM Lane V/C Ratio	0.51	0.118	0.448	0.311	0.437	0.048
HCM Control Delay	16.2	10.8	14.5	13	14.7	8.9
HCM Lane LOS	C	B	B	B	B	A
HCM 95th-tile Q	2.8	0.4	2.3	1.3	2.2	0.1

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52










Existing + Project PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	299	37	12	222	79	24	254	31	97	193	55
Future Volume (vph)	72	299	37	12	222	79	24	254	31	97	193	55
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh34.3

Intersection LOS D

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	72	299	37	12	222	79	24	254	31	97	193	55
Future Vol, veh/h	72	299	37	12	222	79	24	254	31	97	193	55
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	84	348	43	14	258	92	28	295	36	113	224	64
Number of Lanes	1	1	1	0	2	1	0	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay	46	18.3	55.1	16.4
HCM LOS	E	C	F	C

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	8%	100%	0%	0%	14%	0%	0%	100%	0%	0%
Vol Thru, %	82%	0%	100%	0%	86%	100%	0%	0%	100%	54%
Vol Right, %	10%	0%	0%	100%	0%	0%	100%	0%	0%	46%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	309	72	299	37	86	148	79	97	129	119
LT Vol	24	72	0	0	12	0	0	97	0	0
Through Vol	254	0	299	0	74	148	0	0	129	64
RT Vol	31	0	0	37	0	0	79	0	0	55
Lane Flow Rate	359	84	348	43	100	172	92	113	150	139
Geometry Grp	8	8	8	8	8	8	8	7	7	7
Degree of Util (X)	0.904	0.232	0.911	0.104	0.277	0.474	0.234	0.299	0.375	0.335
Departure Headway (Hd)	9.188	9.96	9.437	8.704	9.982	9.909	9.172	9.552	9.033	8.698
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	399	363	386	413	361	365	392	378	399	415
Service Time	6.888	7.675	7.152	6.419	7.719	7.645	6.908	7.27	6.751	6.416
HCM Lane V/C Ratio	0.9	0.231	0.902	0.104	0.277	0.471	0.235	0.299	0.376	0.335
HCM Control Delay	55.1	15.7	57.5	12.4	16.5	21.3	14.7	16.3	17.1	15.7
HCM Lane LOS	F	C	F	B	C	C	B	C	C	C
HCM 95th-tile Q	9.4	0.9	9.5	0.3	1.1	2.5	0.9	1.2	1.7	1.5

Lanes, Volumes, Timings
16: Monroe St. & 50th Avenue

Existing + Project PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	334	30	26	218	123	24	392	60	127	239	20
Future Volume (vph)	37	334	30	26	218	123	24	392	60	127	239	20
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	20.5	20.5	20.5	20.5	20.5	11.5	11.5	20.5		11.5	20.5	
Total Split (s)	24.9	24.9	24.9	24.9	24.9	14.6	11.5	20.5		14.6	23.6	
Total Split (%)	41.5%	41.5%	41.5%	41.5%	41.5%	24.3%	19.2%	34.2%		24.3%	39.3%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag						Lead	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

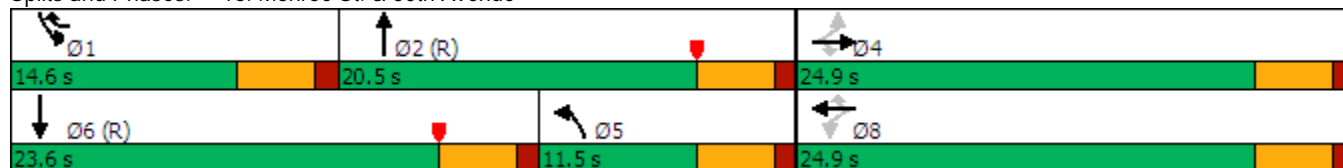
Actuated Cycle Length: 60

Offset: 14.6 (24%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

























Control Type: Actuated-Coordinated

Splits and Phases: 16: Monroe St. & 50th Avenue



















HCM 6th Signalized Intersection Summary
16: Monroe St. & 50th Avenue

Existing + Project PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	334	30	26	218	123	24	392	60	127	239	20
Future Volume (veh/h)	37	334	30	26	218	123	24	392	60	127	239	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	41	371	33	29	242	137	27	436	67	141	266	22
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	280	493	418	203	493	594	351	1250	191	198	1058	87
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.20	0.42	0.41	0.11	0.33	0.32
Sat Flow, veh/h	1004	1821	1543	981	1821	1543	1734	3009	460	1734	3237	266
Grp Volume(v), veh/h	41	371	33	29	242	137	27	250	253	141	141	147
Grp Sat Flow(s),veh/h/ln	1004	1821	1543	981	1821	1543	1734	1730	1738	1734	1730	1773
Q Serve(g_s), s	2.1	11.2	1.0	1.7	6.7	3.6	0.8	5.9	6.0	4.7	3.6	3.6
Cycle Q Clear(g_c), s	8.9	11.2	1.0	12.9	6.7	3.6	0.8	5.9	6.0	4.7	3.6	3.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.26	1.00		0.15
Lane Grp Cap(c), veh/h	280	493	418	203	493	594	351	719	722	198	565	579
V/C Ratio(X)	0.15	0.75	0.08	0.14	0.49	0.23	0.08	0.35	0.35	0.71	0.25	0.25
Avail Cap(c_a), veh/h	357	634	538	279	634	713	351	719	722	306	565	579
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.1	20.0	16.3	25.9	18.4	12.5	19.4	12.0	12.1	25.6	14.8	14.9
Incr Delay (d2), s/veh	0.2	3.8	0.1	0.3	0.8	0.2	0.1	1.3	1.3	4.7	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	4.4	0.3	0.4	2.4	1.0	0.3	2.0	2.0	1.9	1.3	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.4	23.8	16.4	26.3	19.2	12.7	19.5	13.3	13.4	30.4	15.9	15.9
LnGrp LOS	C	C	B	C	B	B	B	B	B	C	B	B
Approach Vol, veh/h	445			408			530			429		
Approach Delay, s/veh	23.1			17.5			13.7			20.7		
Approach LOS	C			B			B			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.8	28.9		20.2	16.2	23.6		20.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	10.1	16.0		20.4	7.0	19.1		20.4				
Max Q Clear Time (g_c+I1), s	6.7	8.0		13.2	2.8	5.6		14.9				
Green Ext Time (p_c), s	0.1	1.6		1.3	0.0	1.1		0.9				
Intersection Summary												
HCM 6th Ctrl Delay	18.5											
HCM 6th LOS	B											

Lanes, Volumes, Timings
17: Jackson St. & 58th Avenue

Existing + Project PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	97	6	0	64	7	8	86	13	5	53	27
Future Volume (vph)	36	97	6	0	64	7	8	86	13	5	53	27
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		5266			1079			1013			510	
Travel Time (s)		71.8			14.7			12.6			6.3	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A










Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	36	97	6	0	64	7	8	86	13	5	53	27
Future Vol, veh/h	36	97	6	0	64	7	8	86	13	5	53	27
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	46	123	8	0	81	9	10	109	16	6	67	34
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9	8.3	8.6	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	26%	0%	6%
Vol Thru, %	80%	70%	90%	62%
Vol Right, %	12%	4%	10%	32%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	107	139	71	85
LT Vol	8	36	0	5
Through Vol	86	97	64	53
RT Vol	13	6	7	27
Lane Flow Rate	135	176	90	108
Geometry Grp	1	1	1	1
Degree of Util (X)	0.174	0.226	0.116	0.136
Departure Headway (Hd)	4.633	4.633	4.652	4.548
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	773	774	769	788
Service Time	2.665	2.666	2.69	2.581
HCM Lane V/C Ratio	0.175	0.227	0.117	0.137
HCM Control Delay	8.6	9	8.3	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.9	0.4	0.5

Lanes, Volumes, Timings
18: Avenue 60 & S. Access

Existing + Project PM Peak hour




						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	76	45	0
Future Volume (vph)	0	0	0	76	45	0
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		25	
Link Distance (ft)		207	1772		380	
Travel Time (s)		3.5	30.2		10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
18: Avenue 60 & S. Access

Existing + Project PM Peak hour

Intersection

Int Delay, s/veh 3.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	76	45	0
Future Vol, veh/h	0	0	0	76	45	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	83	49	0












Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	83	0	0 42 42
Stage 1	-	-	- 42 -
Stage 2	-	-	- 0 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1514	-	- 969 1029
Stage 1	-	-	- 980 -
Stage 2	-	-	- - -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1514	-	- 969 1029
Mov Cap-2 Maneuver	-	-	- 969 -
Stage 1	-	-	- 980 -
Stage 2	-	-	- - -

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1514	-	-	-	969
HCM Lane V/C Ratio	-	-	-	-	0.05
HCM Control Delay (s)	0	-	-	-	8.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2







Lanes, Volumes, Timings
19: Madison St. & Main Access

Existing + Project PM Peak hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	150	13	45	143	266	213
Future Volume (vph)	150	13	45	143	266	213
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100	0	150			0
Storage Lanes	1	1	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	25			50	50	
Link Distance (ft)	499			880	140	
Travel Time (s)	13.6			12.0	1.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
19: Madison St. & Main Access

Existing + Project PM Peak hour

Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	150	13	45	143	266	213
Future Vol, veh/h	150	13	45	143	266	213
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	163	14	49	155	289	232











Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	581	261	521	0	-	0
Stage 1	405	-	-	-	-	-
Stage 2	176	-	-	-	-	-
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	445	738	1041	-	-	-
Stage 1	642	-	-	-	-	-
Stage 2	837	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	424	738	1041	-	-	-
Mov Cap-2 Maneuver	500	-	-	-	-	-
Stage 1	612	-	-	-	-	-
Stage 2	837	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.2	2.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1041	-	500	738	-	-
HCM Lane V/C Ratio	0.047	-	0.326	0.019	-	-
HCM Control Delay (s)	8.6	-	15.6	10	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	1.4	0.1	-	-






Lanes, Volumes, Timings
20: Project Access 1 & Avenue 58

Existing + Project PM Peak hour

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	121	8	27	38	23	12
Future Volume (vph)	121	8	27	38	23	12
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)		0	50		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			60		60	
Link Speed (mph)	50			50	25	
Link Distance (ft)	403			335	383	
Travel Time (s)	5.5			4.6	10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					











HCM 6th TWSC
20: Project Access 1 & Avenue 58

Existing + Project PM Peak hour

Intersection						
Int Delay, s/veh	2.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	121	8	27	38	23	12
Future Vol, veh/h	121	8	27	38	23	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	132	9	29	41	25	13
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	141	0	216	137
Stage 1	-	-	-	-	137	-
Stage 2	-	-	-	-	79	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1441	-	762	911
Stage 1	-	-	-	-	889	-
Stage 2	-	-	-	-	935	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1441	-	747	911
Mov Cap-2 Maneuver	-	-	-	-	746	-
Stage 1	-	-	-	-	871	-
Stage 2	-	-	-	-	935	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		3.1		9.8	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	795	-	-	1441	-	
HCM Lane V/C Ratio	0.048	-	-	0.02	-	
HCM Control Delay (s)	9.8	-	-	7.5	-	
HCM Lane LOS	A	-	-	A	-	
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-	

Lanes, Volumes, Timings
21: Project Access 2 & Avenue 58

Existing + Project PM Peak hour

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations				 		
Traffic Volume (vph)	118	15	0	65	0	15
Future Volume (vph)	118	15	0	65	0	15
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	50			50	25	
Link Distance (ft)	335			276	233	
Travel Time (s)	4.6			3.8	6.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					













HCM 6th TWSC
21: Project Access 2 & Avenue 58

Existing + Project PM Peak hour

Intersection						
Int Delay, s/veh	0.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶			↷↷		↶
Traffic Vol, veh/h	118	15	0	65	0	15
Future Vol, veh/h	118	15	0	65	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	128	16	0	71	0	16
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	136
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	-	-	0	-	0	912
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	912
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		9	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	912	-	-	-		
HCM Lane V/C Ratio	0.018	-	-	-		
HCM Control Delay (s)	9	-	-	-		
HCM Lane LOS	A	-	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	-		

Lanes, Volumes, Timings
22: Madison St. & Project Access 3

Existing + Project PM Peak hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				 	  	
Traffic Volume (vph)	0	29	0	293	450	29
Future Volume (vph)	0	29	0	293	450	29
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	25			50	50	
Link Distance (ft)	210			254	288	
Travel Time (s)	5.7			3.5	3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
22: Madison St. & Project Access 3

Existing + Project PM Peak hour

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	29	0	293	450	29
Future Vol, veh/h	0	29	0	293	450	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	32	0	318	489	32
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	261	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	738	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	738	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	10.1	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT EBLn1		SBT	SBR		
Capacity (veh/h)	- 738		-	-		
HCM Lane V/C Ratio	- 0.043		-	-		
HCM Control Delay (s)	- 10.1		-	-		
HCM Lane LOS	- B		-	-		
HCM 95th %tile Q(veh)	- 0.1		-	-		

APPENDIX 6.2:

E+P CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING + PROJECT AM PEAK HOUR WARRANTS**

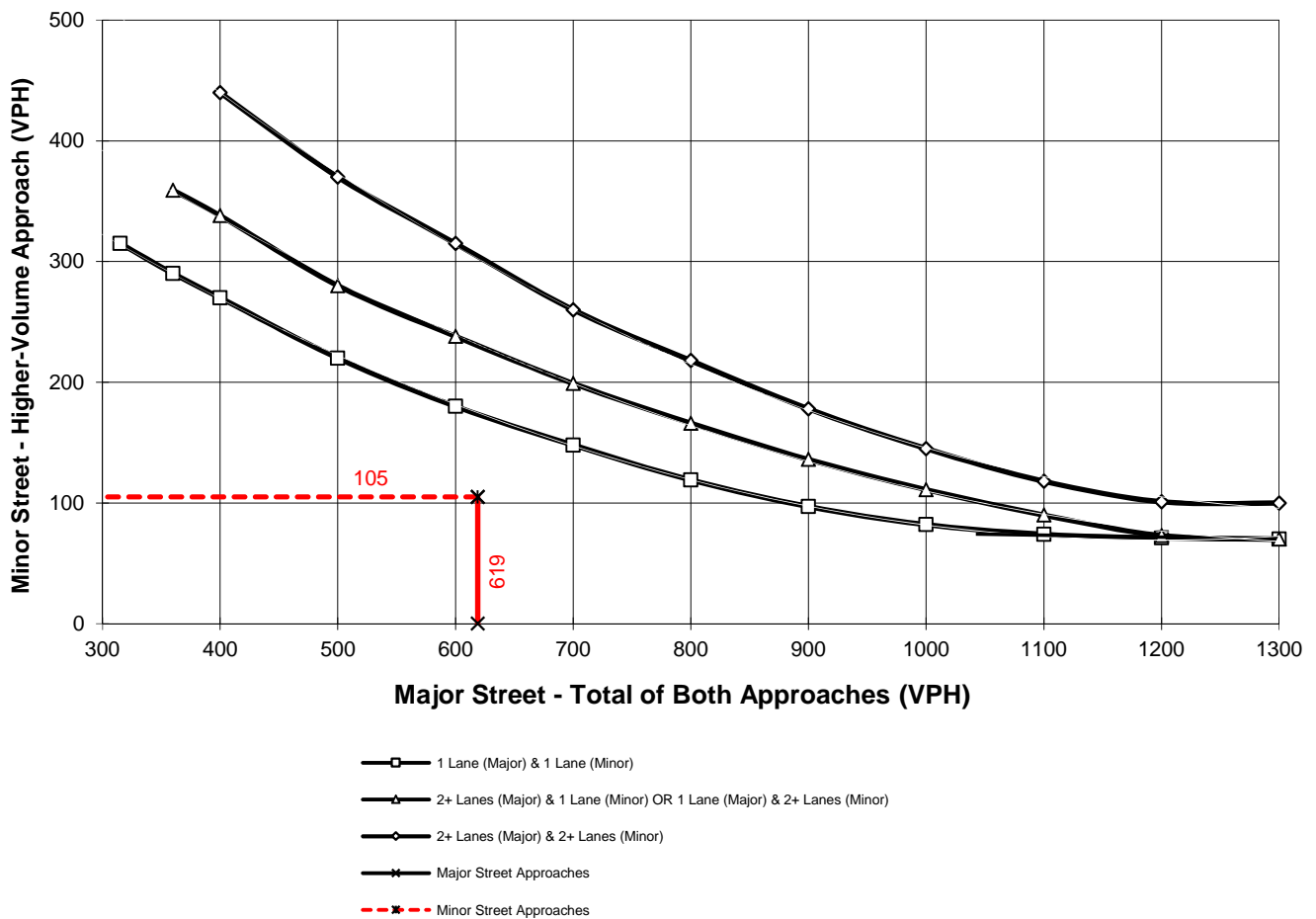
Major Street Name = **Madison St.**

Total of Both Approaches (VPH) = **619**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Avenue 58**

High Volume Approach (VPH) = **105**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #1

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING + PROJECT PM PEAK HOUR WARRANTS**

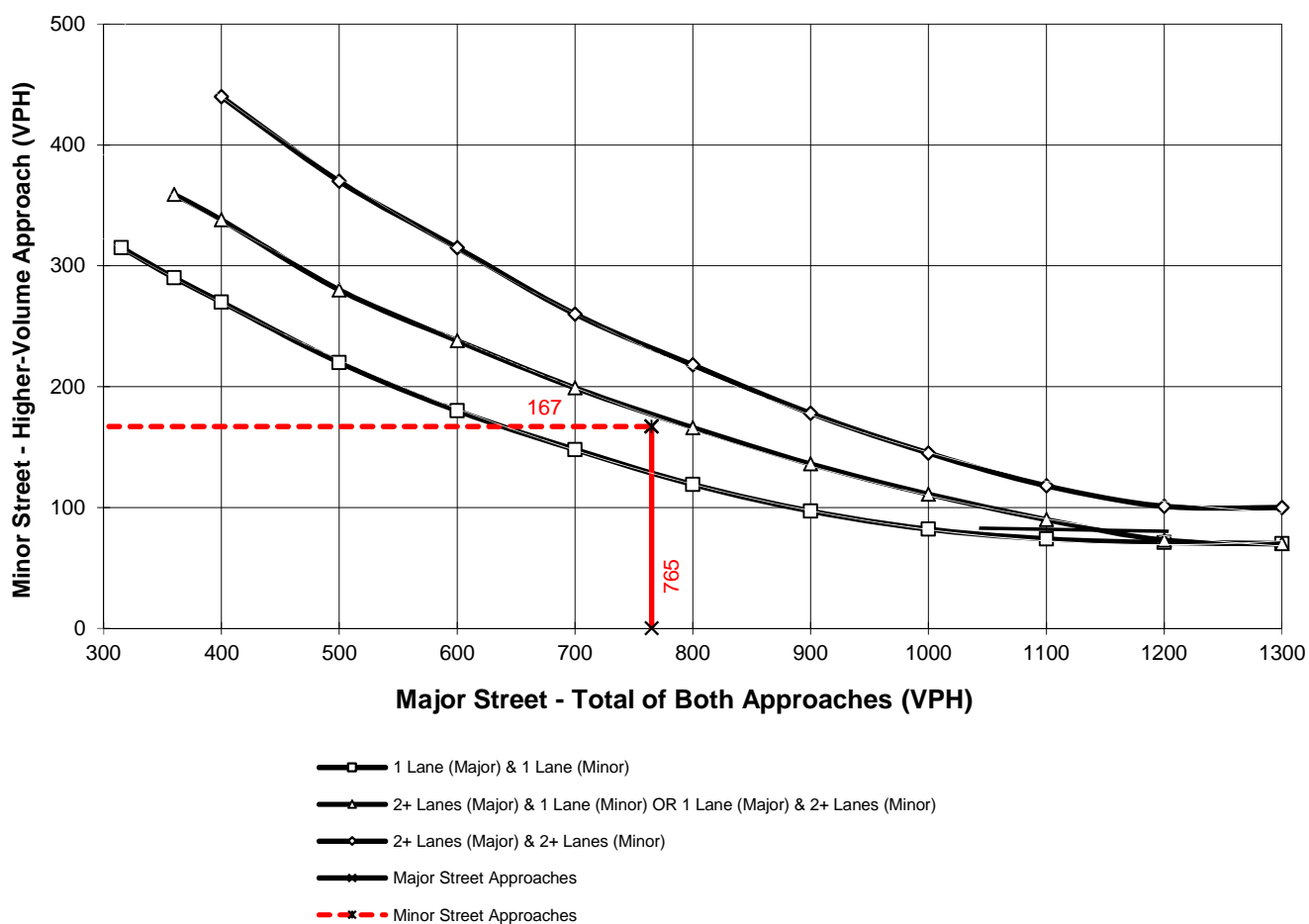
Major Street Name = **Madison St.**

Total of Both Approaches (VPH) = **765**
Number of Approach Lanes Major Street = **3**

Minor Street Name = **Avenue 58**

High Volume Approach (VPH) = **167**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #1

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING + PROJECT AM PEAK HOUR WARRANTS**

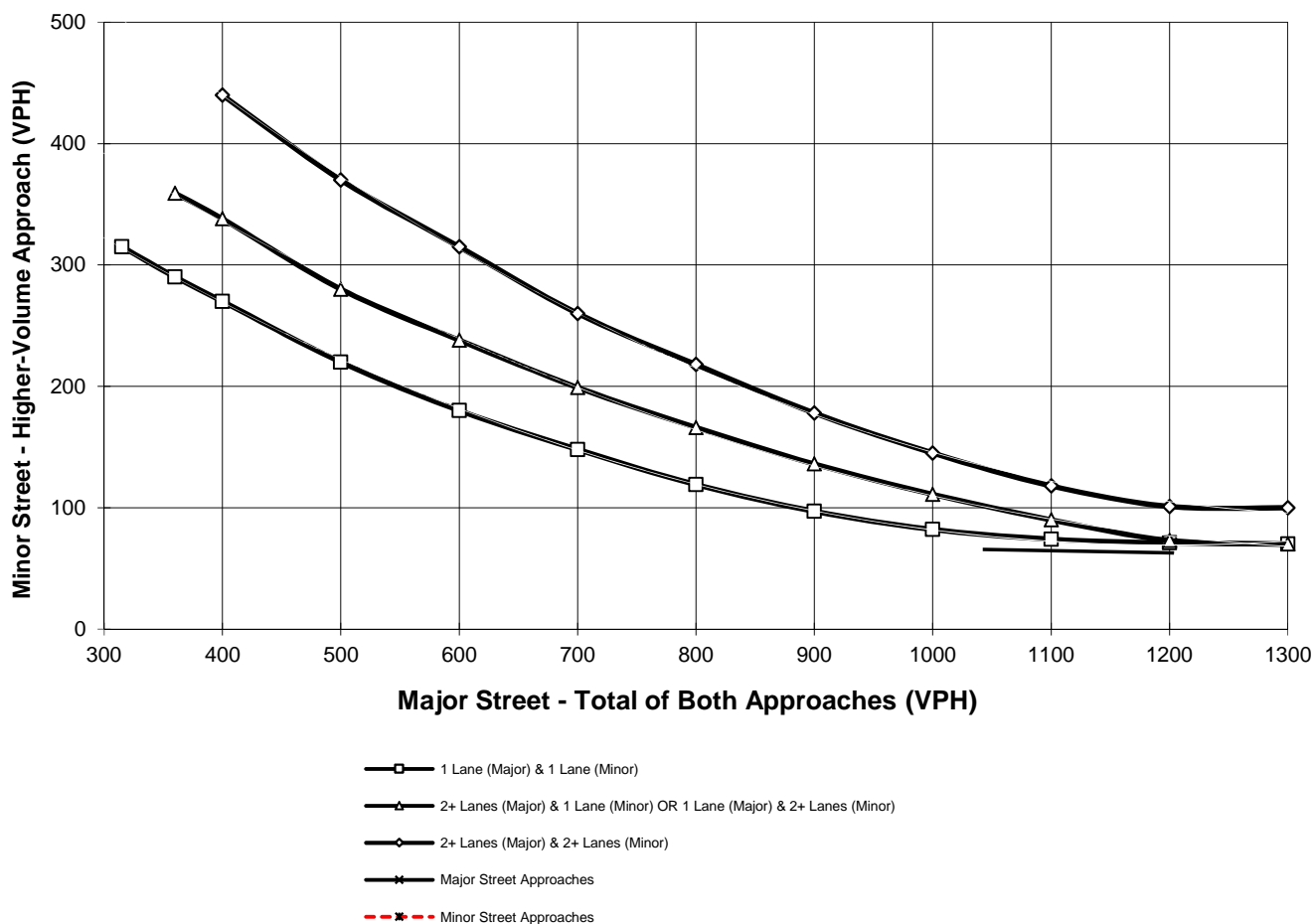
Major Street Name = **Avenue 60**

Total of Both Approaches (VPH) = **196**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Madison St.**

High Volume Approach (VPH) = **120**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #10

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING + PROJECT PM PEAK HOUR WARRANTS**

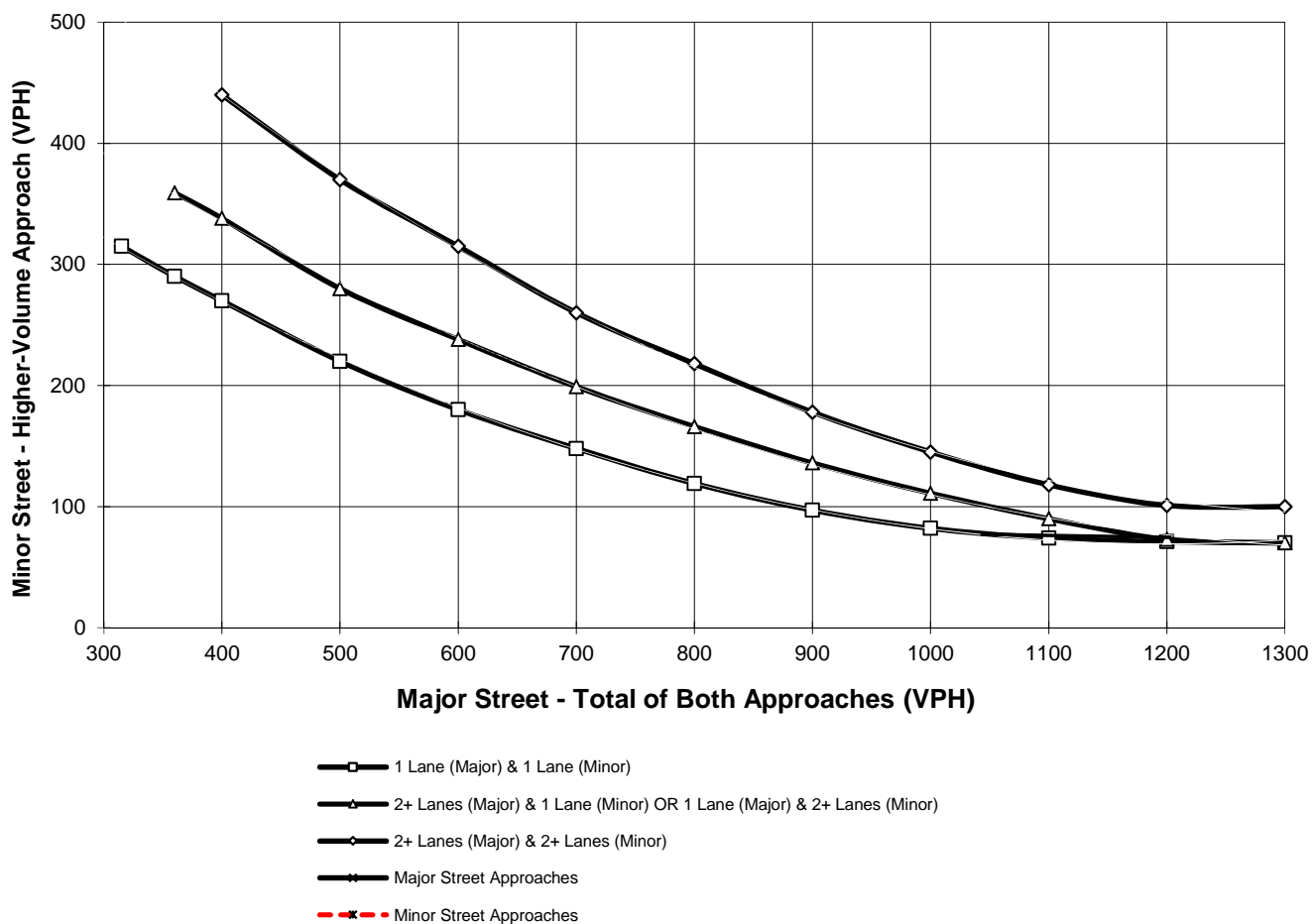
Major Street Name = **Madison St.**

Total of Both Approaches (VPH) = **207**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Avenue 60**

High Volume Approach (VPH) = **153**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #10

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING + PROJECT AM PEAK HOUR WARRANTS**

Major Street Name = **Avenue 60**

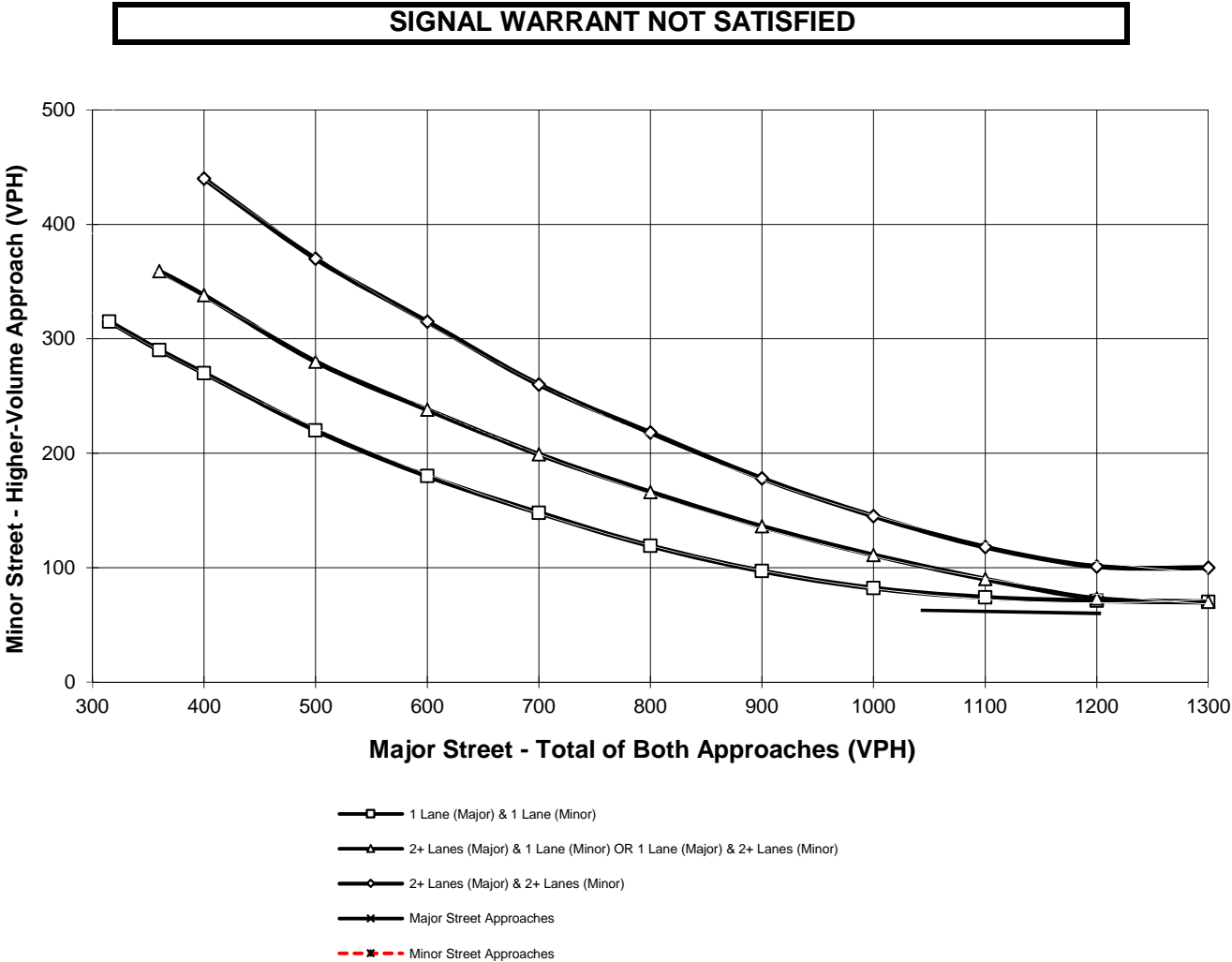
Minor Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **214**

Number of Approach Lanes Major Street = **1**

High Volume Approach (VPH) = **97**

Number of Approach Lanes Minor Street = **1**



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold 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 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING + PROJECT PM PEAK HOUR WARRANTS**

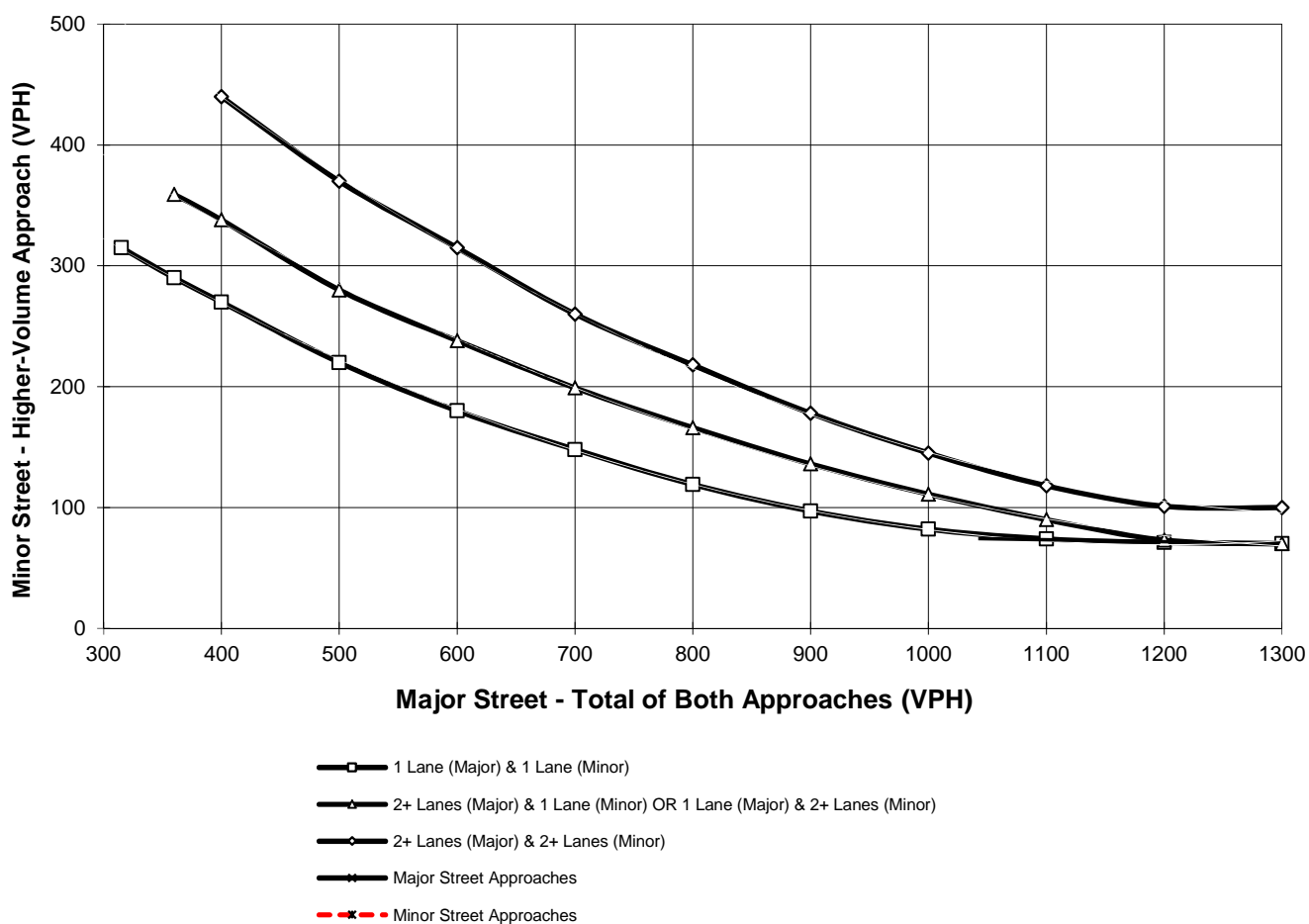
Major Street Name = **Avenue 60**

Total of Both Approaches (VPH) = **236**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Monroe St.**

High Volume Approach (VPH) = **99**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #11

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING + PROJECT AM PEAK HOUR WARRANTS**

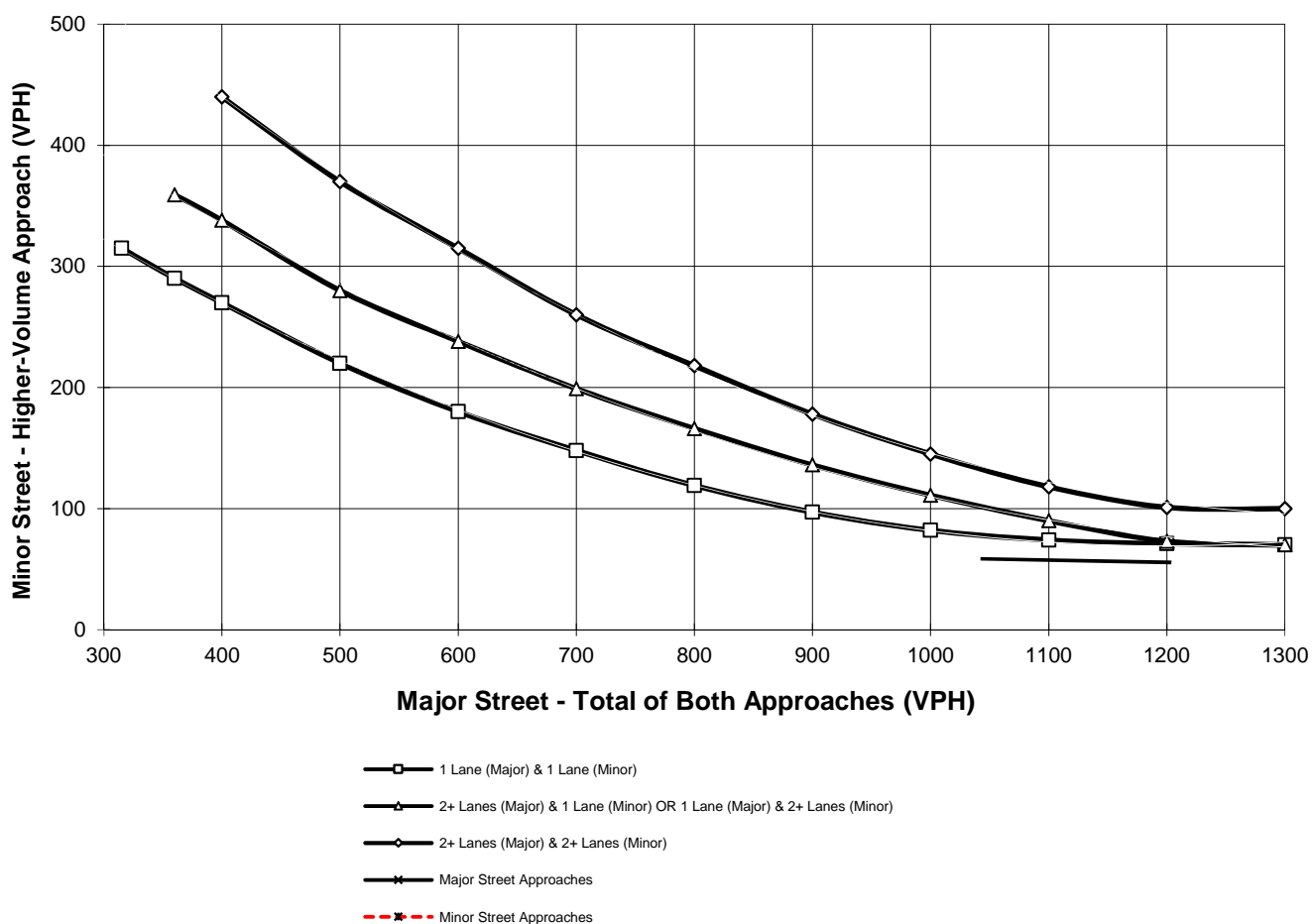
Major Street Name = **Avenue 58**

Total of Both Approaches (VPH) = **239**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Monroe St.**

High Volume Approach (VPH) = **137**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #12

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING + PROJECT PM PEAK HOUR WARRANTS**

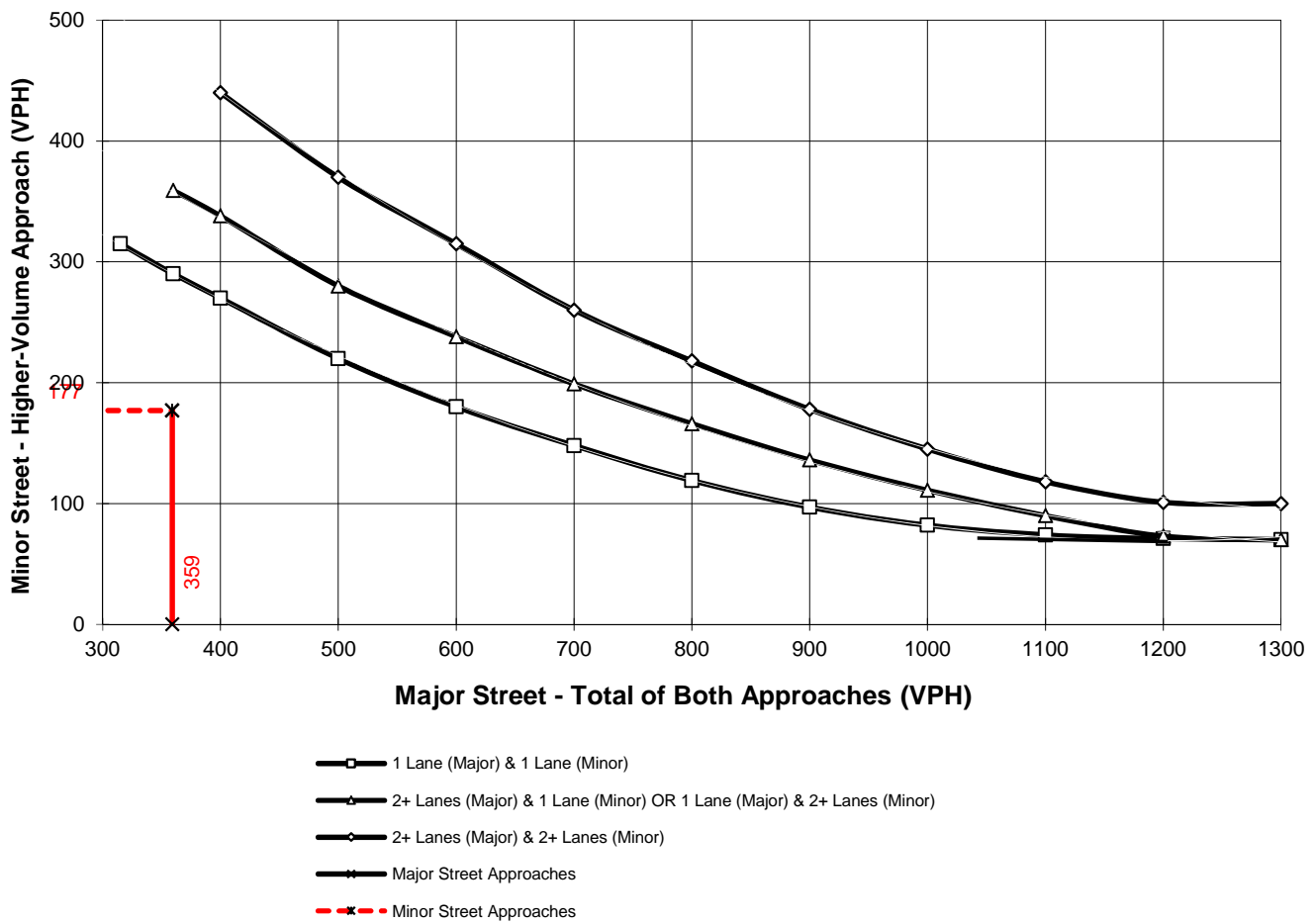
Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **359**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Avenue 58**

High Volume Approach (VPH) = **177**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #12

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING + PROJECT AM PEAK HOUR WARRANTS**

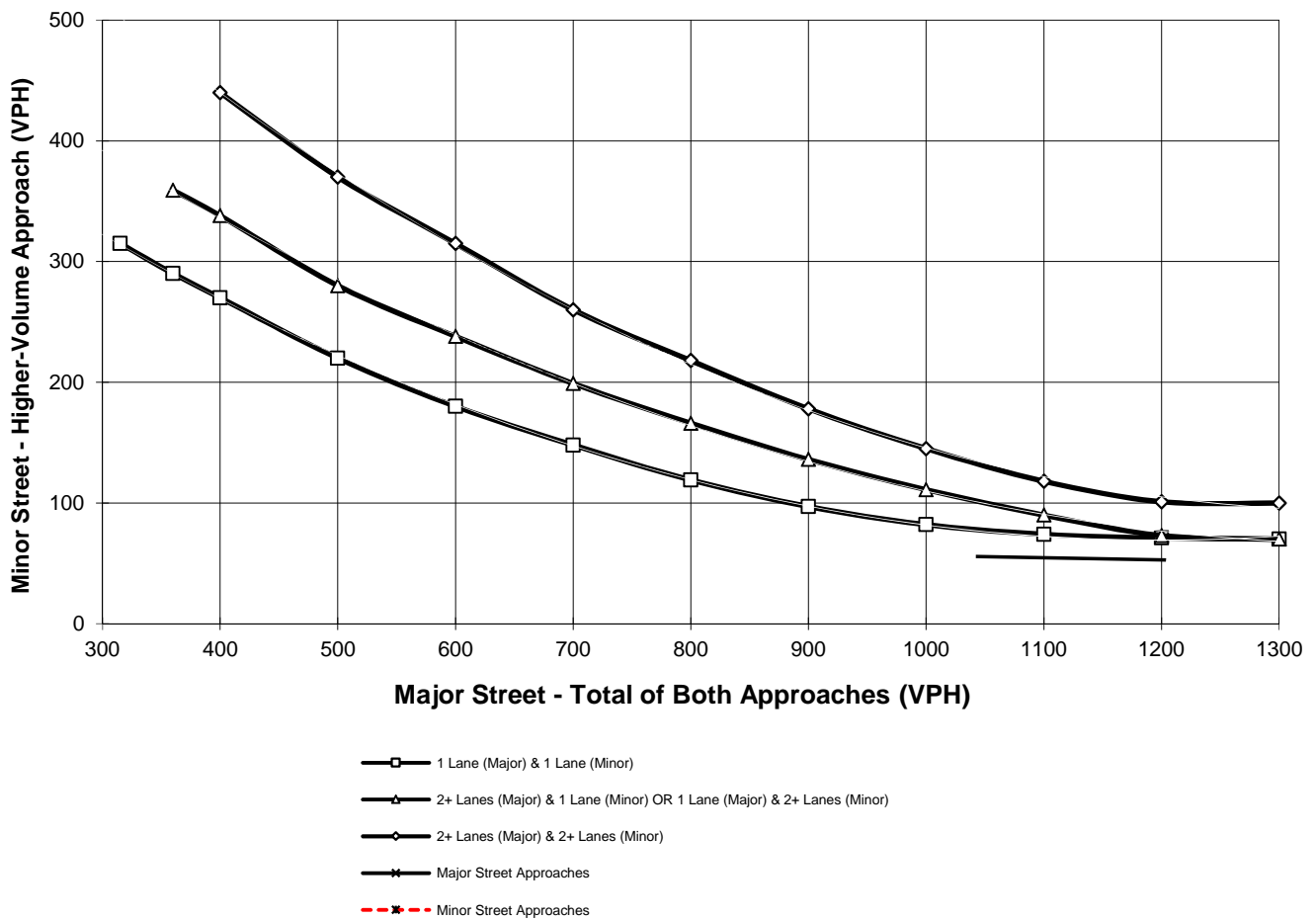
Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **277**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Airport Blvd.**

High Volume Approach (VPH) = **67**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #13

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING + PROJECT PM PEAK HOUR WARRANTS**

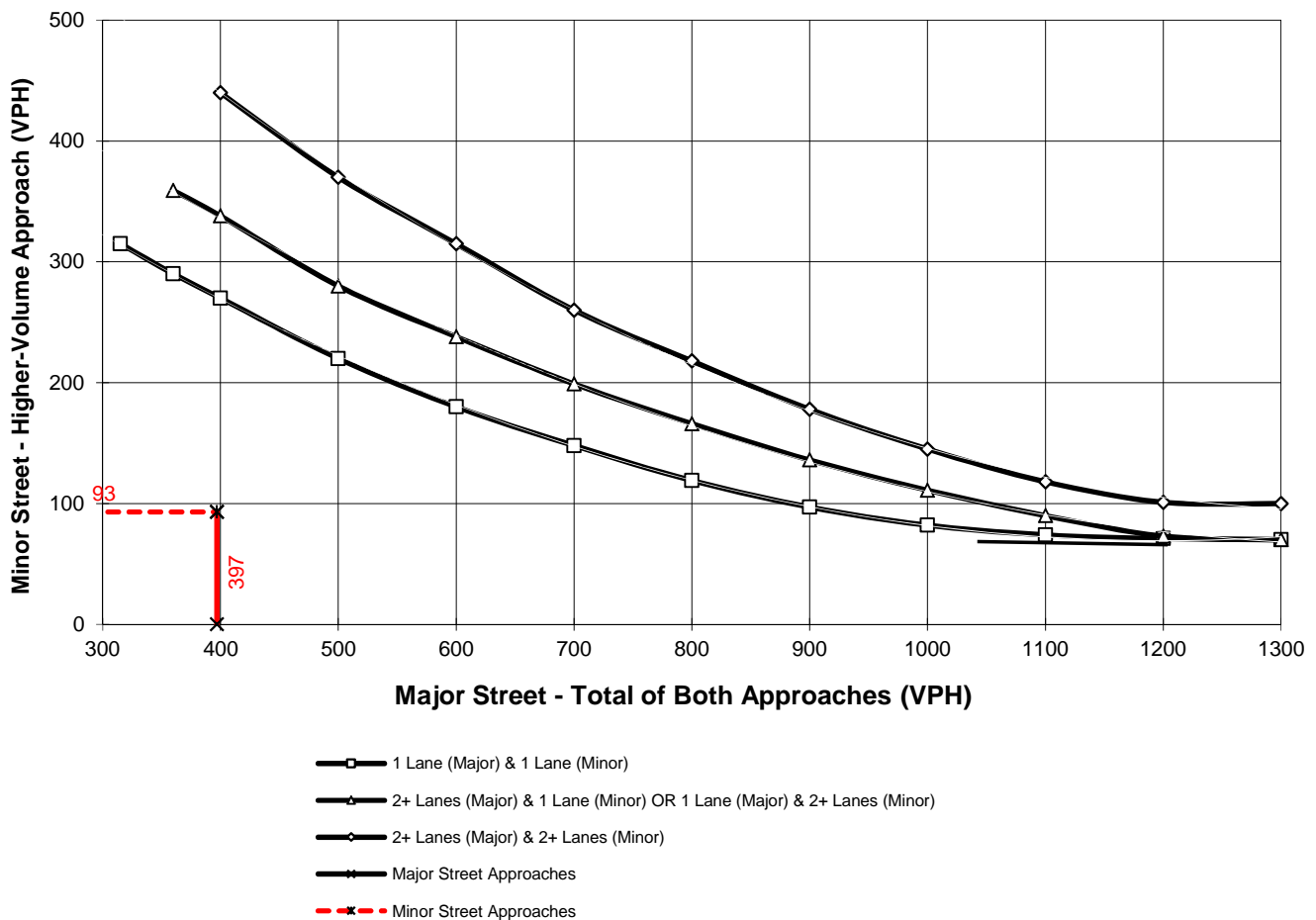
Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **397**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Airport Blvd.**

High Volume Approach (VPH) = **93**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #13

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING + PROJECT AM PEAK HOUR WARRANTS**

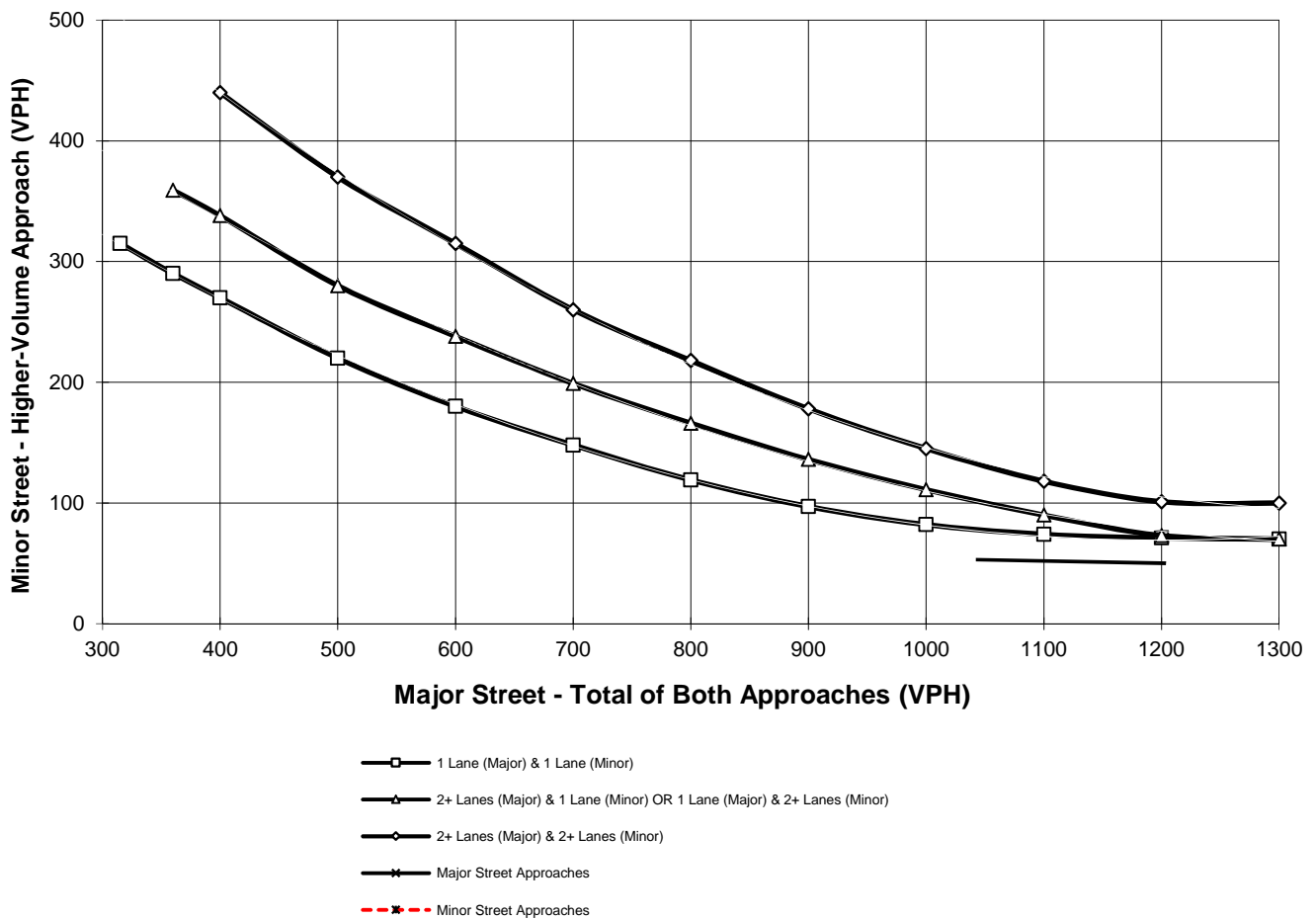
Major Street Name = **58th Avenue**

Total of Both Approaches (VPH) = **133**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Jackson St.**

High Volume Approach (VPH) = **88**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #17

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING + PROJECT PM PEAK HOUR WARRANTS**

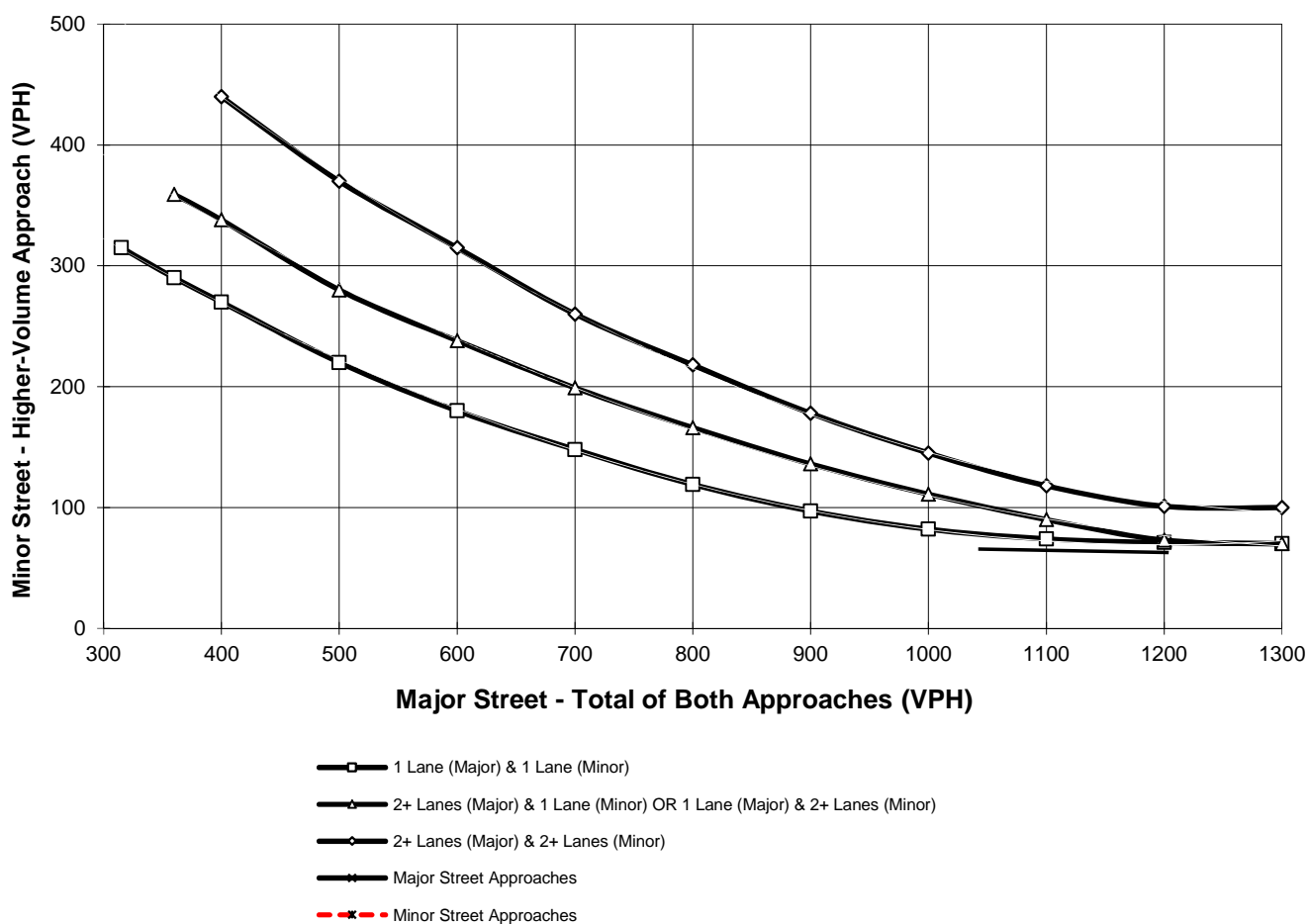
Major Street Name = **58th Avenue**

Total of Both Approaches (VPH) = **210**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Jackson St.**

High Volume Approach (VPH) = **107**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #17

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	CALC	TRAFFIC CONDITIONS	E+P
Jurisdiction: <u>City of La Quinta</u>				CHK	<u>JC</u>	DATE <u>10/08/19</u>
Major Street: <u>Avenue 60</u>						DATE
Minor Street: <u>S. Access</u>					Critical Approach Speed (Major)	<u>30</u> mph
					Critical Approach Speed (Minor)	<u>30</u> mph
Major Street Approach Lanes = <u>1</u> lane				Minor Street Approach Lanes: <u>1</u> lane		
Major Street Future ADT = <u>654</u> vpd				Minor Street Future ADT = <u>606</u> vpd		
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						<input style="width: 50px; height: 20px; border: 1px solid black;" type="text"/> or <input style="width: 50px; height: 20px; border: 1px solid black;" type="text"/>
In built up area of isolated community of < 10,000 population						URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN XX		RURAL		Minimum Requirements ADT			
CONDITION A - Minimum Vehicular Volume				Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	<u>Not Satisfied</u> XX						
Number of lanes for moving traffic on each approach							
<u>Major Street</u>	<u>Minor Street</u>			<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1 654	1 606			8,000	5,600	2,400	1,680
2 +	1			9,600	6,720	2,400	1,680
2 +	2 +			9,600	6,720	3,200	2,240
1	2 +			8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	<u>Not Satisfied</u> XX						
Number of lanes for moving traffic on each approach							
<u>Major Street</u>	<u>Minor Street</u>			<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1 654	1 606			12,000	8,400	1,200	850
2 +	1			14,400	10,080	1,200	850
2 +	2 +			14,400	10,080	1,600	1,120
1	2 +			12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B							
<u>Satisfied</u>	<u>Not Satisfied</u> XX						
No one condition satisfied, but following conditions fulfilled 80% of more				2 CONDITIONS 80%		2 CONDITIONS 80%	
		<u>A</u>	<u>B</u>				
		8%	5%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

P

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	CALC	TRAFFIC CONDITIONS	E+P
Jurisdiction: <u>City of La Quinta</u>				CHK	<u>JC</u>	DATE <u>10/08/19</u>
Major Street: <u>Madison St.</u>						DATE
Minor Street: <u>Main Access</u>					Critical Approach Speed (Major)	<u>50</u> mph
					Critical Approach Speed (Minor)	<u>30</u> mph
Major Street Approach Lanes = <u>2</u> lane				Minor Street Approach Lanes: <u>1</u> lane		
Major Street Future ADT = <u>6,614</u> vpd				Minor Street Future ADT = <u>2,186</u> vpd		
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						<input checked="" type="checkbox"/>
						or
In built up area of isolated community of < 10,000 population						<input type="checkbox"/>

RURAL (R)**(Based on Estimated Average Daily Traffic - See Note)**

URBAN		RURAL		Minimum Requirements ADT			
CONDITION A - Minimum Vehicular Volume		XX		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>		<u>Not Satisfied</u>	XX				
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach					
<u>Major Street</u>		<u>Minor Street</u>		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>1</u>		<u>1</u>		8,000	5,600	2,400	1,680
<u>2 + 6,614</u>		<u>1 2,186</u>		9,600	6,720	2,400	1,680 *
<u>2 +</u>		<u>2 +</u>		9,600	6,720	3,200	2,240
<u>1</u>		<u>2 +</u>		8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		XX		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>		<u>Not Satisfied</u>	XX				
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach					
<u>Major Street</u>		<u>Minor Street</u>		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>1</u>		<u>1</u>		12,000	8,400	1,200	850
<u>2 + 6,614</u>		<u>1 2,186</u>		14,400	10,080	1,200	850 *
<u>2 +</u>		<u>2 +</u>		14,400	10,080	1,600	1,120
<u>1</u>		<u>2 +</u>		12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B		XX		2 CONDITIONS 80%		2 CONDITIONS 80%	
<u>Satisfied</u>		<u>Not Satisfied</u>	XX				
No one condition satisfied, but following conditions fulfilled 80% of more							
		<u>A</u>	<u>B</u>				
		98%	66%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

P

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	CALC	TRAFFIC CONDITIONS	E+P
Jurisdiction: <u>City of La Quinta</u>				CHK	<u>JC</u>	DATE <u>10/08/19</u>
Major Street: <u>Avenue 58</u>						DATE
Minor Street: <u>Project Access 1</u>					Critical Approach Speed (Major)	<u>50</u> mph
					Critical Approach Speed (Minor)	<u>30</u> mph
Major Street Approach Lanes = <u>2</u> lane				Minor Street Approach Lanes: <u>1</u> lane		
Major Street Future ADT = <u>2,204</u> vpd				Minor Street Future ADT = <u>458</u> vpd		
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						<input checked="" type="checkbox"/>
						or
In built up area of isolated community of < 10,000 population						<input type="checkbox"/>

RURAL (R)**(Based on Estimated Average Daily Traffic - See Note)**

URBAN		RURAL		Minimum Requirements			
				ADT			
CONDITION A - Minimum Vehicular Volume		XX		Vehicles Per Day on		Vehicles Per Day	
Satisfied		Not Satisfied		Major Street		on Higher-Volume	
		XX		(Total of Both Approaches)		Minor Street Approach	
Number of lanes for moving traffic on each approach						(One Direction Only)	
Major Street	Minor Street			Urban	Rural	Urban	Rural
1	1			8,000	5,600	2,400	1,680
2 + 2,204	1 458			9,600	6,720	2,400	1,680
2 +	2 +			9,600	6,720	3,200	2,240
1	2 +			8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		XX		Vehicles Per Day		Vehicles Per Day	
Satisfied		Not Satisfied		on Major Street		on Higher-Volume	
				(Total of Both Approaches)		Minor Street Approach	
Number of lanes for moving traffic on each approach						(One Direction Only)	
Major Street	Minor Street			Urban	Rural	Urban	Rural
1	1			12,000	8,400	1,200	850
2 + 2,204	1 458			14,400	10,080	1,200	850
2 +	2 +			14,400	10,080	1,600	1,120
1	2 +			12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B		XX		2 CONDITIONS		2 CONDITIONS	
Satisfied		Not Satisfied		80%		80%	
No one condition satisfied, but following conditions fulfilled 80% of more							
		A	B				
		27%	22%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

P

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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APPENDIX 6.3:

EA WITHOUT AND WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

























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WITHOUT PROJECT CONDITIONS










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Lanes, Volumes, Timings
1: Madison St. & Avenue 58

EA (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	15	2	3	39	66	4	188	2	93	211	44
Future Volume (vph)	44	15	2	3	39	66	4	188	2	93	211	44
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Intersection Delay, s/veh	9.7											
Intersection LOS	A											















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	15	2	3	39	66	4	188	2	93	211	44
Future Vol, veh/h	44	15	2	3	39	66	4	188	2	93	211	44
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	47	16	2	3	41	70	4	200	2	99	224	47
Number of Lanes	1	1	1	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	10	9.3	9.9	9.7
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	97%	0%	100%	0%	0%	100%	16%	0%	100%
Vol Right, %	0%	0%	3%	0%	0%	100%	0%	0%	84%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	4	125	65	44	15	2	3	26	79	93	141
LT Vol	4	0	0	44	0	0	3	0	0	93	0
Through Vol	0	125	63	0	15	0	0	26	13	0	141
RT Vol	0	0	2	0	0	2	0	0	66	0	0
Lane Flow Rate	4	133	69	47	16	2	3	28	84	99	150
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.008	0.218	0.112	0.089	0.028	0.003	0.006	0.048	0.133	0.168	0.233
Departure Headway (Hd)	6.376	5.876	5.855	6.856	6.356	5.656	6.768	6.268	5.683	6.102	5.602
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	563	612	614	523	564	633	530	572	632	592	645
Service Time	4.099	3.599	3.577	4.588	4.088	3.388	4.496	3.996	3.411	3.802	3.302
HCM Lane V/C Ratio	0.007	0.217	0.112	0.09	0.028	0.003	0.006	0.049	0.133	0.167	0.233
HCM Control Delay	9.2	10.2	9.3	10.3	9.3	8.4	9.5	9.3	9.3	10	10
HCM Lane LOS	A	B	A	B	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0.8	0.4	0.3	0.1	0	0	0.2	0.5	0.6	0.9

Lanes, Volumes, Timings
2: Madison St. & Airport Bl.

EA (2026) AM Peak hour

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	24	84	1	283	16	128	356
Future Volume (vph)	24	84	1	283	16	128	356
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		3			2		
Detector Phase	3	3	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	11.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	17.0	17.0	13.0	27.0	27.0	16.0	30.0
Total Split (%)	28.3%	28.3%	21.7%	45.0%	45.0%	26.7%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 16 (27%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 45

Control Type: Actuated-Coordinated















Splits and Phases: 2: Madison St. & Airport Bl.



HCM 6th Signalized Intersection Summary
























2: Madison St. & Airport Bl.

EA (2026) AM Peak hour

							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	24	84	1	283	16	128	356
Future Volume (veh/h)	24	84	1	283	16	128	356
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	28	97		325	18	147	409
Peak Hour Factor	0.87	0.87		0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	192	170		1987	886	200	2617
Arrive On Green	0.11	0.11		0.64	0.64	0.13	0.84
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	28	97		325	18	147	409
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	0.9	3.6		2.3	0.3	4.9	1.3
Cycle Q Clear(g_c), s	0.9	3.6		2.3	0.3	4.9	1.3
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	192	170		1987	886	200	2617
V/C Ratio(X)	0.15	0.57		0.16	0.02	0.73	0.16
Avail Cap(c_a), veh/h	376	334		1987	886	347	2617
HCM Platoon Ratio	1.00	1.00		1.11	1.11	1.11	1.11
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	25.3		5.0	4.7	25.3	1.3
Incr Delay (d2), s/veh	0.3	3.0		0.2	0.0	5.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.3		0.5	0.1	2.0	0.1
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	24.5	28.3		5.2	4.7	30.4	1.4
LnGrp LOS	C	C		A	A	C	A
Approach Vol, veh/h	125			343			556
Approach Delay, s/veh	27.4			5.2			9.1
Approach LOS	C			A			A
Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	10.9	38.5				49.4	10.6
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	11.5	22.5				25.5	12.5
Max Q Clear Time (g_c+I1), s	6.9	4.3				3.3	5.6
Green Ext Time (p_c), s	0.1	1.7				2.3	0.2
Intersection Summary							
HCM 6th Ctrl Delay			10.0				
HCM 6th LOS			B				
Notes							
User approved pedestrian interval to be less than phase max green.							
User approved ignoring U-Turning movement.							

Lanes, Volumes, Timings
3: Madison St. & Avenue 54









EA (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	222	361	42	166	44	212	217	29	70	206	20
Future Volume (vph)	19	222	361	42	166	44	212	217	29	70	206	20
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh41.4

Intersection LOS E
























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	222	361	42	166	44	212	217	29	70	206	20
Future Vol, veh/h	19	222	361	42	166	44	212	217	29	70	206	20
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	249	406	47	187	49	238	244	33	79	231	22
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	79.1	16.2	21.4	17
HCM LOS	F	C	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	71%	0%	100%	17%	0%	100%	56%	0%	100%	77%
Vol Right, %	0%	0%	29%	0%	0%	83%	0%	0%	44%	0%	0%	23%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	212	145	101	19	148	435	42	111	99	70	137	89
LT Vol	212	0	0	19	0	0	42	0	0	70	0	0
Through Vol	0	145	72	0	148	74	0	111	55	0	137	69
RT Vol	0	0	29	0	0	361	0	0	44	0	0	20
Lane Flow Rate	238	163	114	21	166	489	47	124	112	79	154	100
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.622	0.402	0.276	0.055	0.404	1.107	0.132	0.331	0.288	0.216	0.403	0.256
Departure Headway (Hd)	9.636	9.136	8.936	9.237	8.737	8.156	10.26	9.76	9.45	10.142	9.642	9.484
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	376	397	404	390	414	450	352	371	383	356	375	382
Service Time	7.336	6.836	6.636	6.937	6.437	5.856	7.96	7.46	7.15	7.842	7.342	7.184
HCM Lane V/C Ratio	0.633	0.411	0.282	0.054	0.401	1.087	0.134	0.334	0.292	0.222	0.411	0.262
HCM Control Delay	26.9	17.8	15	12.5	17.2	103.1	14.5	17.2	15.9	15.6	18.7	15.4
HCM Lane LOS	D	C	B	B	C	F	B	C	C	C	C	C
HCM 95th-tile Q	4	1.9	1.1	0.2	1.9	16.8	0.5	1.4	1.2	0.8	1.9	1

Lanes, Volumes, Timings
3: Madison St. & Avenue 54

EA AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	222	361	42	166	44	212	217	29	70	206	20
Future Volume (vph)	19	222	361	42	166	44	212	217	29	70	206	20
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	
Minimum Split (s)	9.0	30.5		9.0	30.5	30.5	9.0	30.5	30.5	9.0	30.5	
Total Split (s)	11.0	46.0		15.0	50.0	50.0	25.0	39.0	39.0	20.0	34.0	
Total Split (%)	9.2%	38.3%		12.5%	41.7%	41.7%	20.8%	32.5%	32.5%	16.7%	28.3%	
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.0	3.5	3.5	3.0	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.5		4.0	4.5	4.5	4.0	4.5	4.5	4.0	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	Max	Max	None	Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

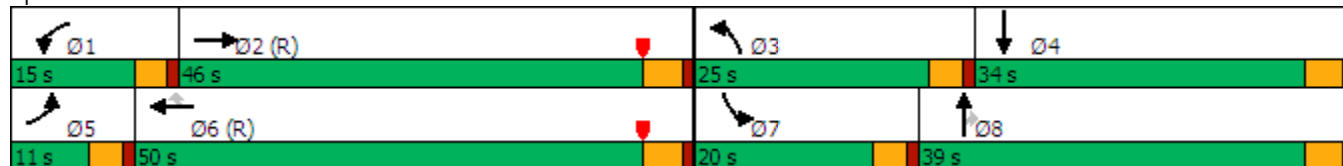
Actuated Cycle Length: 120

Offset: 71 (59%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated
























Splits and Phases: 3: Madison St. & Avenue 54



HCM 6th Signalized Intersection Summary

























3: Madison St. & Avenue 54

EA AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	222	361	42	166	44	212	217	29	70	206	20
Future Volume (veh/h)	19	222	361	42	166	44	212	217	29	70	206	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	21	249	406	47	187	49	238	244	33	79	231	22
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	36	826	737	60	1699	758	320	995	444	102	802	76
Arrive On Green	0.02	0.48	0.48	0.03	0.49	0.49	0.10	0.29	0.29	0.06	0.25	0.25
Sat Flow, veh/h	1734	1730	1543	1734	3460	1543	3365	3460	1543	1734	3195	302
Grp Volume(v), veh/h	21	249	406	47	187	49	238	244	33	79	124	129
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1734	1730	1767
Q Serve(g_s), s	1.4	10.5	22.4	3.2	3.5	2.0	8.3	6.5	1.9	5.4	6.9	7.1
Cycle Q Clear(g_c), s	1.4	10.5	22.4	3.2	3.5	2.0	8.3	6.5	1.9	5.4	6.9	7.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	36	826	737	60	1699	758	320	995	444	102	434	444
V/C Ratio(X)	0.58	0.30	0.55	0.78	0.11	0.06	0.74	0.25	0.07	0.78	0.29	0.29
Avail Cap(c_a), veh/h	101	826	737	159	1699	758	589	995	444	231	434	444
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.2	19.2	22.2	57.4	16.4	16.0	52.9	32.8	31.1	55.7	36.3	36.3
Incr Delay (d2), s/veh	24.6	0.8	2.6	35.4	0.1	0.2	7.1	0.6	0.3	23.0	1.6	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	4.1	7.9	2.0	1.3	0.7	3.7	2.7	0.7	2.9	3.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.8	20.0	24.9	92.9	16.6	16.2	60.0	33.4	31.5	78.7	37.9	38.0
LnGrp LOS	F	B	C	F	B	B	E	C	C	E	D	D
Approach Vol, veh/h	676			283			515			332		
Approach Delay, s/veh	24.9			29.2			45.5			47.6		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.2	61.8	15.4	34.6	6.5	63.4	11.0	39.0				
Change Period (Y+Rc), s	4.0	4.5	4.0	4.5	4.0	4.5	4.0	4.5				
Max Green Setting (Gmax), s	11.0	41.5	21.0	29.5	7.0	45.5	16.0	34.5				
Max Q Clear Time (g_c+I1), s	5.2	24.4	10.3	9.1	3.4	5.5	7.4	8.5				
Green Ext Time (p_c), s	0.1	3.4	1.2	1.1	0.0	1.2	0.2	1.4				
Intersection Summary												
HCM 6th Ctrl Delay	35.6											
HCM 6th LOS	D											

Lanes, Volumes, Timings
4: Madison St. & Avenue 52

EA (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	375	37	21	331	72	80	209	10	63	225	60
Future Volume (vph)	65	375	37	21	331	72	80	209	10	63	225	60
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	23.0	49.0	49.0	16.0	42.0	42.0	18.0	40.0	40.0	15.0	37.0	37.0
Total Split (%)	19.2%	40.8%	40.8%	13.3%	35.0%	35.0%	15.0%	33.3%	33.3%	12.5%	30.8%	30.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

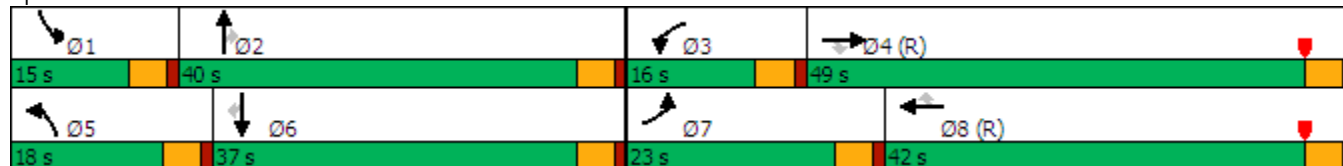
Actuated Cycle Length: 120

Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 4: Madison St. & Avenue 52




HCM 6th Signalized Intersection Summary 4: Madison St. & Avenue 52

EA (2026) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	375	37	21	331	72	80	209	10	63	225	60
Future Volume (veh/h)	65	375	37	21	331	72	80	209	10	63	225	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	75	431	43	24	380	83	92	240	11	72	259	69
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	96	1623	724	56	1543	688	187	1024	457	178	1015	453
Arrive On Green	0.06	0.47	0.47	0.03	0.45	0.45	0.06	0.30	0.30	0.05	0.29	0.29
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	75	431	43	24	380	83	92	240	11	72	259	69
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	5.1	9.1	1.8	1.6	8.2	3.8	3.2	6.3	0.6	2.5	6.9	4.0
Cycle Q Clear(g_c), s	5.1	9.1	1.8	1.6	8.2	3.8	3.2	6.3	0.6	2.5	6.9	4.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	96	1623	724	56	1543	688	187	1024	457	178	1015	453
V/C Ratio(X)	0.78	0.27	0.06	0.43	0.25	0.12	0.49	0.23	0.02	0.40	0.26	0.15
Avail Cap(c_a), veh/h	267	1623	724	166	1543	688	379	1024	457	294	1015	453
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	19.3	17.4	57.0	20.7	19.5	55.0	32.0	30.0	55.0	32.4	31.4
Incr Delay (d2), s/veh	12.9	0.4	0.2	5.2	0.4	0.4	2.0	0.5	0.1	1.5	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	3.6	0.6	0.8	3.2	1.3	1.4	2.6	0.2	1.1	2.9	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.9	19.7	17.6	62.2	21.1	19.8	57.0	32.5	30.1	56.4	33.0	32.1
LnGrp LOS	E	B	B	E	C	B	E	C	C	E	C	C
Approach Vol, veh/h	549			487			343			400		
Approach Delay, s/veh	26.3			22.9			39.0			37.1		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.9	40.0	8.4	60.8	11.2	39.7	11.1	58.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	35.5	11.5	44.5	13.5	32.5	18.5	37.5				
Max Q Clear Time (g_c+I1), s	4.5	8.3	3.6	11.1	5.2	8.9	7.1	10.2				
Green Ext Time (p_c), s	0.1	1.3	0.0	2.9	0.1	1.6	0.1	2.4				
Intersection Summary												
HCM 6th Ctrl Delay	30.2											
HCM 6th LOS	C											

Lanes, Volumes, Timings
5: Madison St. & Avenue 50/50th Avenue

EA (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	324	59	24	336	33	101	241	33	55	284	104
Future Volume (vph)	70	324	59	24	336	33	101	241	33	55	284	104
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	22.0	47.0	47.0	16.0	41.0	41.0	19.0	42.0	42.0	15.0	38.0	38.0
Total Split (%)	18.3%	39.2%	39.2%	13.3%	34.2%	34.2%	15.8%	35.0%	35.0%	12.5%	31.7%	31.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

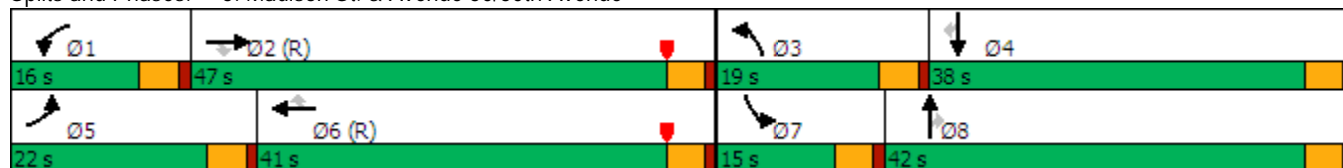
Actuated Cycle Length: 120

Offset: 64.5 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue





























HCM 6th Signalized Intersection Summary 5: Madison St. & Avenue 50/50th Avenue

EA (2026) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	324	59	24	336	33	101	241	33	55	284	104
Future Volume (veh/h)	70	324	59	24	336	33	101	241	33	55	284	104
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	71	331	60	24	343	34	103	246	34	56	290	106
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	92	1578	704	56	1506	672	190	1081	482	166	1057	471
Arrive On Green	0.05	0.46	0.46	0.03	0.44	0.44	0.06	0.31	0.31	0.05	0.31	0.31
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	71	331	60	24	343	34	103	246	34	56	290	106
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	4.9	6.9	2.6	1.6	7.5	1.5	3.6	6.3	1.9	1.9	7.6	6.1
Cycle Q Clear(g_c), s	4.9	6.9	2.6	1.6	7.5	1.5	3.6	6.3	1.9	1.9	7.6	6.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	92	1578	704	56	1506	672	190	1081	482	166	1057	471
V/C Ratio(X)	0.77	0.21	0.09	0.43	0.23	0.05	0.54	0.23	0.07	0.34	0.27	0.22
Avail Cap(c_a), veh/h	253	1578	704	166	1506	672	407	1081	482	294	1057	471
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.1	19.6	18.5	57.0	21.2	19.6	55.1	30.5	29.0	55.1	31.6	31.1
Incr Delay (d2), s/veh	12.9	0.3	0.2	5.2	0.4	0.1	2.4	0.5	0.3	1.2	0.6	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	2.7	0.9	0.8	2.9	0.5	1.5	2.6	0.7	0.8	3.2	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.0	19.9	18.7	62.2	21.6	19.7	57.5	31.0	29.3	56.3	32.2	32.2
LnGrp LOS	E	B	B	E	C	B	E	C	C	E	C	C
Approach Vol, veh/h	462			401			383			452		
Approach Delay, s/veh	27.3			23.9			38.0			35.2		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	59.2	11.3	41.1	10.8	56.7	10.4	42.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.5	42.5	14.5	33.5	17.5	36.5	10.5	37.5				
Max Q Clear Time (g_c+I1), s	3.6	8.9	5.6	9.6	6.9	9.5	3.9	8.3				
Green Ext Time (p_c), s	0.0	2.2	0.2	1.9	0.1	2.1	0.0	1.5				
Intersection Summary												
HCM 6th Ctrl Delay	31.0											
HCM 6th LOS	C											

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54










EA (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 		 	 	 
Traffic Volume (vph)	8	10	13	42	7	331	5	121	27	545	146	27
Future Volume (vph)	8	10	13	42	7	331	5	121	27	545	146	27
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh18.7

Intersection LOS C























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	10	13	42	7	331	5	121	27	545	146	27
Future Vol, veh/h	8	10	13	42	7	331	5	121	27	545	146	27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	11	14	47	8	368	6	134	30	606	162	30
Number of Lanes	1	2	0	1	1	1	0	2	0	2	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	11.5	22.2	12.3	18.6
HCM LOS	B	C	B	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	8%	0%	100%	0%	0%	100%	0%	0%	100%	100%	0%
Vol Thru, %	92%	69%	0%	100%	20%	0%	100%	0%	0%	0%	84%
Vol Right, %	0%	31%	0%	0%	80%	0%	0%	100%	0%	0%	16%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	66	88	8	7	16	42	7	331	273	273	173
LT Vol	5	0	8	0	0	42	0	0	273	273	0
Through Vol	61	61	0	7	3	0	7	0	0	0	146
RT Vol	0	27	0	0	13	0	0	331	0	0	27
Lane Flow Rate	73	97	9	7	18	47	8	368	303	303	192
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.16	0.208	0.023	0.018	0.041	0.104	0.016	0.697	0.606	0.606	0.352
Departure Headway (Hd)	7.939	7.684	9.18	8.669	8.099	8.023	7.517	6.82	7.211	7.211	6.601
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	452	468	390	413	442	448	477	533	503	503	546
Service Time	5.683	5.429	6.934	6.422	5.852	5.756	5.25	4.541	4.933	4.933	4.322
HCM Lane V/C Ratio	0.162	0.207	0.023	0.017	0.041	0.105	0.017	0.69	0.602	0.602	0.352
HCM Control Delay	12.2	12.4	12.2	11.6	11.2	11.7	10.4	23.8	20.4	20.4	12.9
HCM Lane LOS	B	B	B	B	B	B	B	C	C	C	B
HCM 95th-tile Q	0.6	0.8	0.1	0.1	0.1	0.3	0	5.4	4	4	1.6

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54

EA AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	10	13	42	7	331	5	121	27	545	146	27
Future Volume (vph)	8	10	13	42	7	331	5	121	27	545	146	27
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases		2			6	4	8	8		4	4	
Permitted Phases	2			6		6						4
Detector Phase	2	2		6	6	4	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	30.5	30.5		30.5	30.5	30.5	30.5	30.5		30.5	30.5	30.5
Total Split (s)	37.0	37.0		37.0	37.0	50.0	33.0	33.0		50.0	50.0	50.0
Total Split (%)	30.8%	30.8%		30.8%	30.8%	41.7%	27.5%	27.5%		41.7%	41.7%	41.7%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		None	None	Max	Max	Max		Max	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

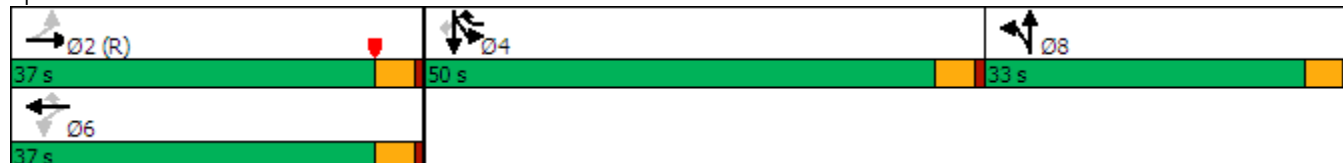
Actuated Cycle Length: 120

Offset: 84.5 (70%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 95






















Control Type: Actuated-Coordinated

Splits and Phases: 6: Jefferson St. & Avenue 54























HCM 6th Signalized Intersection Summary 6: Jefferson St. & Avenue 54

EA AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	10	13	42	7	331	5	121	27	545	146	27
Future Volume (veh/h)	8	10	13	42	7	331	5	121	27	545	146	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	9	11	14	47	8	368	6	134	30	606	162	30
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	329	469	418	426	493	1003	29	656	152	1276	1312	585
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.24	0.24	0.24	0.40	0.40	0.40
Sat Flow, veh/h	1007	1730	1543	1386	1821	1543	121	2761	639	3365	3460	1543
Grp Volume(v), veh/h	9	11	14	47	8	368	90	0	80	606	162	30
Grp Sat Flow(s),veh/h/ln	1007	1730	1543	1386	1821	1543	1815	0	1706	1682	1730	1543
Q Serve(g_s), s	0.8	0.6	0.8	3.1	0.4	13.2	4.8	0.0	4.5	16.0	3.6	1.4
Cycle Q Clear(g_c), s	1.2	0.6	0.8	3.9	0.4	13.2	4.8	0.0	4.5	16.0	3.6	1.4
Prop In Lane	1.00		1.00	1.00		1.00	0.07		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	329	469	418	426	493	1003	431	0	405	1276	1312	585
V/C Ratio(X)	0.03	0.02	0.03	0.11	0.02	0.37	0.21	0.00	0.20	0.47	0.12	0.05
Avail Cap(c_a), veh/h	329	469	418	426	493	1003	431	0	405	1276	1312	585
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.05
Upstream Filter(I)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.5	32.1	32.2	33.6	32.0	9.7	36.7	0.0	36.6	27.2	23.5	22.9
Incr Delay (d2), s/veh	0.2	0.1	0.1	0.1	0.0	0.2	1.1	0.0	1.1	1.3	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.3	1.0	0.2	9.9	2.2	0.0	1.9	6.2	1.4	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.6	32.2	32.3	33.7	32.1	9.9	37.8	0.0	37.7	28.5	23.7	23.0
LnGrp LOS	C	C	C	C	C	A	D	A	D	C	C	C
Approach Vol, veh/h	34			423			170			798		
Approach Delay, s/veh	32.4			12.9			37.7			27.3		
Approach LOS	C			B			D			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	37.0			50.0			37.0			33.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	32.5			45.5			32.5			28.5		
Max Q Clear Time (g_c+I1), s	3.2			18.0			15.2			6.8		
Green Ext Time (p_c), s	0.1			3.2			1.3			0.7		
Intersection Summary												
HCM 6th Ctrl Delay	24.4											
HCM 6th LOS	C											

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EA (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	335	303	10	282	277	200	292	22	186	455	70
Future Volume (vph)	103	335	303	10	282	277	200	292	22	186	455	70
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											






















HCM 6th Roundabout
7: Jefferson St. & Avenue 52

EA (2026) AM Peak hour

Intersection									
Intersection Delay, s/veh	18.5								
Intersection LOS	C								
Approach	EB		WB		NB		SB		
Entry Lanes	1		1		1		1		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	797		612		553		764		
Demand Flow Rate, veh/h	813		624		563		779		
Vehicles Circulating, veh/h	714		652		684		539		
Vehicles Exiting, veh/h	528		571		510		433		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	13.0		6.0		24.8		29.7		
Approach LOS	B		A		C		D		
Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Bypass	
Designated Moves	LT	R	LT	R	LT	R	LT	R	
Assumed Moves	LT	R	LT	R	LT	R	LT	R	
RT Channelized		Free		Free		Free		Free	
Lane Util	1.000		1.000		1.000		1.000		
Follow-Up Headway, s	2.609		2.609		2.609		2.609		
Critical Headway, s	4.976	333	4.976	304	4.976	24	4.976	76	
Entry Flow, veh/h	480	1887	320	1887	539	1887	703	1887	
Cap Entry Lane, veh/h	666	0.980	710	0.980	687	0.980	796	0.980	
Entry HV Adj Factor	0.981	326	0.981	298	0.981	24	0.980	75	
Flow Entry, veh/h	471	1850	314	1850	529	1850	689	1850	
Cap Entry, veh/h	653	0.176	696	0.161	674	0.013	781	0.041	
V/C Ratio	0.721	0.0	0.451	0.0	0.785	0.0	0.883	0.0	
Control Delay, s/veh	22.0	A	11.6	A	25.9	A	32.9	A	
LOS	C	1	B	1	D	0	D	0	
95th %tile Queue, veh	6		2		8		11		

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EA AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	335	303	10	282	277	200	292	22	186	455	70
Future Volume (vph)	103	335	303	10	282	277	200	292	22	186	455	70
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		100	0		100	0		0	0		0
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	60			60			60			60		
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											























HCM 6th Roundabout
7: Jefferson St. & Avenue 52

EA AM Peak hour
With Improvements

Intersection										
Intersection Delay, s/veh	7.8									
Intersection LOS	A									
Approach	EB		WB		NB		SB			
Entry Lanes	1		1		2		2			
Conflicting Circle Lanes	2		2		2		2			
Adj Approach Flow, veh/h	797		612		553		764			
Demand Flow Rate, veh/h	813		624		563		779			
Vehicles Circulating, veh/h	714		652		684		539			
Vehicles Exiting, veh/h	528		571		510		433			
Ped Vol Crossing Leg, #/h	0		0		0		0			
Ped Cap Adj	1.000		1.000		1.000		1.000			
Approach Delay, s/veh	9.0		4.8		8.9		8.3			
Approach LOS	A		A		A		A			
Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
Assumed Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
RT Channelized		Free		Free			Free			Free
Lane Util	1.000		1.000		0.469	0.531		0.469	0.531	
Follow-Up Headway, s	2.535		2.535		2.667	2.535		2.667	2.535	
Critical Headway, s	4.328	333	4.328	304	4.645	4.328	24	4.645	4.328	76
Entry Flow, veh/h	480	1887	320	1887	253	286	1887	330	373	1887
Cap Entry Lane, veh/h	774	0.980	816	0.980	719	794	0.980	822	898	0.980
Entry HV Adj Factor	0.981	326	0.981	298	0.982	0.980	24	0.982	0.979	75
Flow Entry, veh/h	471	1850	314	1850	249	280	1850	324	365	1850
Cap Entry, veh/h	759	0.176	800	0.161	707	778	0.013	807	880	0.041
V/C Ratio	0.620	0.0	0.392	0.0	0.352	0.360	0.0	0.401	0.415	0.0
Control Delay, s/veh	15.3	A	9.3	A	9.6	9.0	A	9.4	9.0	A
LOS	C	1	A	1	A	A	0	A	A	0
95th %tile Queue, veh	4		2		2	2		2	2	

Lanes, Volumes, Timings 8: Jefferson St. & Pomelo

EA (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	1	2	4	1	12	13	624	13	37	723	46
Future Volume (vph)	31	1	2	4	1	12	13	624	13	37	723	46
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	59.0	59.0	59.0	59.0	59.0	59.0	20.0	41.0		20.0	41.0	
Total Split (%)	49.2%	49.2%	49.2%	49.2%	49.2%	49.2%	16.7%	34.2%		16.7%	34.2%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary

Area Type: Other

Cycle Length: 120

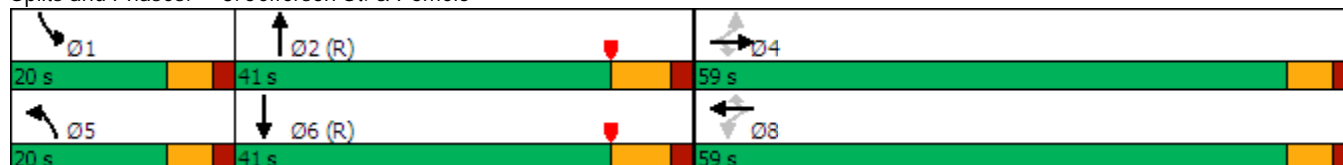
Actuated Cycle Length: 120

Offset: 90 (75%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110





















Control Type: Actuated-Coordinated

Splits and Phases: 8: Jefferson St. & Pomelo



























HCM 6th Signalized Intersection Summary 8: Jefferson St. & Pomelo

EA (2026) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	1	2	4	1	12	13	624	13	37	723	46
Future Volume (veh/h)	31	1	2	4	1	12	13	624	13	37	723	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	33	1	2	4	1	13	14	671	14	40	777	49
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	60	1	144	54	8	144	65	3360	70	128	3378	212
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.04	0.67	0.67	0.10	0.94	0.94
Sat Flow, veh/h	6	10	1543	4	82	1543	1734	5012	104	1734	4781	300
Grp Volume(v), veh/h	34	0	2	5	0	13	14	443	242	40	538	288
Grp Sat Flow(s),veh/h/ln	16	0	1543	86	0	1543	1734	1657	1802	1734	1657	1767
Q Serve(g_s), s	0.1	0.0	0.1	0.0	0.0	0.9	0.9	6.1	6.1	2.6	1.5	1.5
Cycle Q Clear(g_c), s	11.2	0.0	0.1	11.2	0.0	0.9	0.9	6.1	6.1	2.6	1.5	1.5
Prop In Lane	0.97		1.00	0.80		1.00	1.00		0.06	1.00		0.17
Lane Grp Cap(c), veh/h	61	0	144	62	0	144	65	2222	1208	128	2342	1249
V/C Ratio(X)	0.56	0.00	0.01	0.08	0.00	0.09	0.22	0.20	0.20	0.31	0.23	0.23
Avail Cap(c_a), veh/h	551	0	682	577	0	682	202	2222	1208	202	2342	1249
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.81	0.81	0.81
Uniform Delay (d), s/veh	59.7	0.0	49.4	49.9	0.0	49.7	56.1	7.5	7.5	51.3	1.1	1.1
Incr Delay (d2), s/veh	16.2	0.0	0.1	1.2	0.0	0.6	3.5	0.2	0.4	2.4	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.1	0.2	0.0	0.4	0.5	1.8	2.1	1.2	0.4	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.9	0.0	49.4	51.1	0.0	50.3	59.6	7.7	7.9	53.7	1.3	1.5
LnGrp LOS	E	A	D	D	A	D	E	A	A	D	A	A
Approach Vol, veh/h	36					18		699		866		
Approach Delay, s/veh	74.4					50.5		8.8		3.8		
Approach LOS	E					D		A		A		
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	14.8	87.9	17.3		10.5	92.3	17.3					
Change Period (Y+Rc), s	6.0	7.5	6.0		6.0	7.5	6.0					
Max Green Setting (Gmax), s	14.0	33.5	53.0		14.0	33.5	53.0					
Max Q Clear Time (g_c+I1), s	4.6	8.1	13.2		2.9	3.5	13.2					
Green Ext Time (p_c), s	0.1	7.5	0.3		0.0	10.0	0.1					
Intersection Summary												
HCM 6th Ctrl Delay	8.0											
HCM 6th LOS	A											
Notes												

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

EA (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	213	290	49	77	303	202	68	551	48	121	672	338
Future Volume (vph)	213	290	49	77	303	202	68	551	48	121	672	338
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	43.5	43.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	36.3%	36.3%	15.0%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120









Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 115































Control Type: Actuated-Coordinated

Splits and Phases: 9: Jefferson St. & Avenue 50

			
Ø1	Ø2	Ø3	Ø4 (R)
18 s	40.5 s	18 s	43.5 s
			
Ø5	Ø6	Ø7	Ø8 (R)
18 s	40.5 s	23 s	38.5 s

HCM 6th Signalized Intersection Summary 9: Jefferson St. & Avenue 50

EA (2026) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  		 	  	
Traffic Volume (veh/h)	213	290	49	77	303	202	68	551	48	121	672	338
Future Volume (veh/h)	213	290	49	77	303	202	68	551	48	121	672	338
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	217	296	50	79	309	206	69	562	49	123	686	345
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	242	1162	518	161	526	446	156	1233	383	331	1275	396
Arrive On Green	0.14	0.34	0.34	0.09	0.29	0.29	0.03	0.08	0.08	0.10	0.26	0.26
Sat Flow, veh/h	1734	3460	1543	1734	1821	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	217	296	50	79	309	206	69	562	49	123	686	345
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	14.8	7.5	2.7	5.2	17.4	13.1	4.7	12.9	3.5	4.1	14.3	25.7
Cycle Q Clear(g_c), s	14.8	7.5	2.7	5.2	17.4	13.1	4.7	12.9	3.5	4.1	14.3	25.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	242	1162	518	161	526	446	156	1233	383	331	1275	396
V/C Ratio(X)	0.90	0.25	0.10	0.49	0.59	0.46	0.44	0.46	0.13	0.37	0.54	0.87
Avail Cap(c_a), veh/h	246	1162	518	173	526	446	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.7	28.9	27.4	51.7	36.5	35.0	55.3	47.4	43.1	50.6	38.5	42.7
Incr Delay (d2), s/veh	30.8	0.5	0.4	0.9	4.7	3.4	0.7	0.4	0.2	0.3	0.5	17.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	3.1	1.0	2.2	8.2	5.2	2.1	5.6	1.4	1.7	5.6	11.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.6	29.5	27.7	52.6	41.3	38.4	56.0	47.7	43.3	50.9	39.0	60.3
LnGrp LOS	F	C	C	D	D	D	E	D	D	D	D	E
Approach Vol, veh/h	563			594			680			1154		
Approach Delay, s/veh	49.4			41.8			48.3			46.6		
Approach LOS	D			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.8	37.3	17.1	47.8	16.8	38.3	22.8	42.2				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	12.0	33.0	12.0	36.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	6.1	14.9	7.2	9.5	6.7	27.7	16.8	19.4				
Green Ext Time (p_c), s	0.1	4.5	0.0	3.6	0.0	3.1	0.0	3.4				
Intersection Summary												
HCM 6th Ctrl Delay	46.6											
HCM 6th LOS	D											

Lanes, Volumes, Timings
10: Avenue 60 & Madison St.

EA (2026) AM Peak hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	7	7	9	124	139	9
Future Volume (vph)	7	7	9	124	139	9
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		40	
Link Distance (ft)		1772	661		437	
Travel Time (s)		30.2	11.3		7.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)						
Sign Control		Stop	Stop		Stop	






Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Intersection Delay, s/veh	8.9
Intersection LOS	A





















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	7	9	124	139	9
Future Vol, veh/h	7	7	9	124	139	9
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	8	11	149	167	11
Number of Lanes	0	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	8.3	8	9.8
HCM LOS	A	A	A









Lane	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	50%	0%	0%	100%	0%
Vol Thru, %	50%	100%	0%	0%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	14	9	124	139	9
LT Vol	7	0	0	139	0
Through Vol	7	9	0	0	0
RT Vol	0	0	124	0	9
Lane Flow Rate	17	11	149	167	11
Geometry Grp	4	7	7	7	7
Degree of Util (X)	0.024	0.015	0.181	0.254	0.013
Departure Headway (Hd)	5.114	5.056	4.353	5.455	4.252
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	701	710	826	663	847
Service Time	3.136	2.77	2.067	3.155	1.952
HCM Lane V/C Ratio	0.024	0.015	0.18	0.252	0.013
HCM Control Delay	8.3	7.8	8	10	7
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.1	0	0.7	1	0

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

EA (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	52	111	4	51	26	93	74	2	25	71	50
Future Volume (vph)	28	52	111	4	51	26	93	74	2	25	71	50
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	52	111	4	51	26	93	74	2	25	71	50
Future Vol, veh/h	28	52	111	4	51	26	93	74	2	25	71	50
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	31	57	122	4	56	29	102	81	2	27	78	55
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	9.3	9.6	10.1	9.1
HCM LOS	A	A	B	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	35%	0%	5%	100%	0%	0%
Vol Thru, %	0%	97%	65%	0%	63%	0%	100%	0%
Vol Right, %	0%	3%	0%	100%	32%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	93	76	80	111	81	25	71	50
LT Vol	93	0	28	0	4	25	0	0
Through Vol	0	74	52	0	51	0	71	0
RT Vol	0	2	0	111	26	0	0	50
Lane Flow Rate	102	84	88	122	89	27	78	55
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.18	0.135	0.147	0.174	0.145	0.049	0.128	0.08
Departure Headway (Hd)	6.354	5.83	6.027	5.149	5.879	6.433	5.928	5.221
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	566	616	599	701	611	558	606	687
Service Time	4.079	3.554	3.727	2.849	3.607	4.158	3.652	2.945
HCM Lane V/C Ratio	0.18	0.136	0.147	0.174	0.146	0.048	0.129	0.08
HCM Control Delay	10.5	9.5	9.8	8.9	9.6	9.5	9.5	8.4
HCM Lane LOS	B	A	A	A	A	A	A	A
HCM 95th-tile Q	0.7	0.5	0.5	0.6	0.5	0.2	0.4	0.3

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EA (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	61	32	18	41	41	25	101	13	31	162	32
Future Volume (vph)	23	61	32	18	41	41	25	101	13	31	162	32
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh	9.8
Intersection LOS	A


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	23	61	32	18	41	41	25	101	13	31	162	32
Future Vol, veh/h	23	61	32	18	41	41	25	101	13	31	162	32
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	73	38	21	49	49	30	120	15	37	193	38
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	9.4	9.1	9.6	10.5
HCM LOS	A	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	18%	20%	18%	16%	0%
Vol Thru, %	73%	53%	41%	84%	0%
Vol Right, %	9%	28%	41%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	139	116	100	193	32
LT Vol	25	23	18	31	0
Through Vol	101	61	41	162	0
RT Vol	13	32	41	0	32
Lane Flow Rate	165	138	119	230	38
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.23	0.194	0.165	0.345	0.049
Departure Headway (Hd)	5.001	5.046	4.992	5.412	4.625
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	712	704	712	659	767
Service Time	3.083	3.123	3.072	3.186	2.399
HCM Lane V/C Ratio	0.232	0.196	0.167	0.349	0.05
HCM Control Delay	9.6	9.4	9.1	11	7.6
HCM Lane LOS	A	A	A	B	A
HCM 95th-tile Q	0.9	0.7	0.6	1.5	0.2

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EA AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	61	32	18	41	41	25	101	13	31	162	32
Future Volume (vph)	23	61	32	18	41	41	25	101	13	31	162	32
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	30.5	30.5		30.5	30.5		30.5	30.5		30.5	30.5	30.5
Total Split (s)	52.0	52.0		52.0	52.0		68.0	68.0		68.0	68.0	68.0
Total Split (%)	43.3%	43.3%		43.3%	43.3%		56.7%	56.7%		56.7%	56.7%	56.7%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)		4.5			4.5			4.5			4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

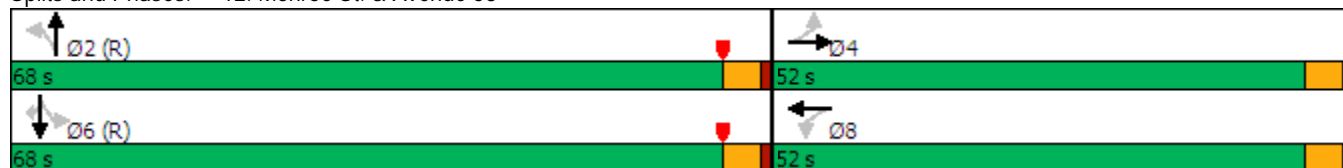
Actuated Cycle Length: 120

Offset: 119.5 (100%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 65


















Control Type: Actuated-Coordinated

Splits and Phases: 12: Monroe St. & Avenue 58
























HCM 6th Signalized Intersection Summary 12: Monroe St. & Avenue 58

EA AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	61	32	18	41	41	25	101	13	31	162	32
Future Volume (veh/h)	23	61	32	18	41	41	25	101	13	31	162	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	27	73	38	21	49	49	30	120	15	37	193	38
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	60	100	47	55	80	70	256	1006	123	236	1208	1272
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	0.82	0.82	0.82	0.82	0.82	0.82
Sat Flow, veh/h	235	991	466	194	790	689	268	1221	149	244	1466	1543
Grp Volume(v), veh/h	138	0	0	119	0	0	165	0	0	230	0	38
Grp Sat Flow(s),veh/h/ln	1693	0	0	1672	0	0	1638	0	0	1711	0	1543
Q Serve(g_s), s	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Cycle Q Clear(g_c), s	9.4	0.0	0.0	8.1	0.0	0.0	2.1	0.0	0.0	3.1	0.0	0.5
Prop In Lane	0.20		0.28	0.18		0.41	0.18		0.09	0.16		1.00
Lane Grp Cap(c), veh/h	207	0	0	204	0	0	1385	0	0	1444	0	1272
V/C Ratio(X)	0.67	0.00	0.00	0.58	0.00	0.00	0.12	0.00	0.00	0.16	0.00	0.03
Avail Cap(c_a), veh/h	683	0	0	672	0	0	1385	0	0	1444	0	1272
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.7	0.0	0.0	52.1	0.0	0.0	2.0	0.0	0.0	2.1	0.0	1.9
Incr Delay (d2), s/veh	3.7	0.0	0.0	2.6	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	0.0	0.0	3.6	0.0	0.0	0.4	0.0	0.0	0.6	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.3	0.0	0.0	54.8	0.0	0.0	2.2	0.0	0.0	2.4	0.0	2.0
LnGrp LOS	E	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	138			119			165			268		
Approach Delay, s/veh	56.3			54.8			2.2			2.3		
Approach LOS	E			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	103.4			16.6			103.4			16.6		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	63.5			47.5			63.5			47.5		
Max Q Clear Time (g_c+I1), s	4.1			11.4			5.1			10.1		
Green Ext Time (p_c), s	0.9			0.7			1.4			0.7		
Intersection Summary												
HCM 6th Ctrl Delay	22.1											
HCM 6th LOS	C											

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.









EA (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	112	13	15	66	34	12	129	11	67	177	13
Future Volume (vph)	0	112	13	15	66	34	12	129	11	67	177	13
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 10.6

Intersection LOS B



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	112	13	15	66	34	12	129	11	67	177	13
Future Vol, veh/h	0	112	13	15	66	34	12	129	11	67	177	13
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	132	15	18	78	40	14	152	13	79	208	15
Number of Lanes	1	1	1	0	1	0	1	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	1	3
HCM Control Delay	10.4	10.9	11.3	10.2
HCM LOS	B	B	B	B







Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	0%	0%	13%	100%	0%	0%
Vol Thru, %	0%	92%	100%	100%	0%	57%	0%	100%	82%
Vol Right, %	0%	8%	0%	0%	100%	30%	0%	0%	18%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	12	140	0	112	13	115	67	118	72
LT Vol	12	0	0	0	0	15	67	0	0
Through Vol	0	129	0	112	0	66	0	118	59
RT Vol	0	11	0	0	13	34	0	0	13
Lane Flow Rate	14	165	0	132	15	135	79	139	85
Geometry Grp	8	8	7	7	7	8	8	8	8
Degree of Util (X)	0.026	0.283	0	0.223	0.023	0.235	0.142	0.23	0.138
Departure Headway (Hd)	6.741	6.178	6.098	6.098	5.393	6.252	6.483	5.977	5.85
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	531	581	0	589	663	574	553	601	613
Service Time	4.482	3.919	3.836	3.836	3.131	3.996	4.22	3.714	3.586
HCM Lane V/C Ratio	0.026	0.284	0	0.224	0.023	0.235	0.143	0.231	0.139
HCM Control Delay	9.7	11.4	8.8	10.6	8.3	10.9	10.3	10.5	9.5
HCM Lane LOS	A	B	N	B	A	B	B	B	A
HCM 95th-tile Q	0.1	1.2	0	0.8	0.1	0.9	0.5	0.9	0.5

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EA (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	176	35	31	257	52	40	174	12	51	258	108
Future Volume (vph)	39	176	35	31	257	52	40	174	12	51	258	108
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	50.7
Intersection LOS	F



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	176	35	31	257	52	40	174	12	51	258	108
Future Vol, veh/h	39	176	35	31	257	52	40	174	12	51	258	108
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	217	43	38	317	64	49	215	15	63	319	133
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	25.2	85.5	34.3	46.4
HCM LOS	D	F	D	E

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	18%	100%	0%	9%	17%	0%
Vol Thru, %	77%	0%	83%	76%	83%	0%
Vol Right, %	5%	0%	17%	15%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	226	39	211	340	309	108
LT Vol	40	39	0	31	51	0
Through Vol	174	0	176	257	258	0
RT Vol	12	0	35	52	0	108
Lane Flow Rate	279	48	260	420	381	133
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.725	0.128	0.647	1.039	0.923	0.293
Departure Headway (Hd)	9.646	9.849	9.206	8.91	8.941	8.127
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	377	366	396	416	408	445
Service Time	7.646	7.549	6.906	6.839	6.641	5.827
HCM Lane V/C Ratio	0.74	0.131	0.657	1.01	0.934	0.299
HCM Control Delay	34.3	14	27.3	85.5	57.7	14.2
HCM Lane LOS	D	B	D	F	F	B
HCM 95th-tile Q	5.5	0.4	4.4	13.6	10	1.2

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EA AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	176	35	31	257	52	40	174	12	51	258	108
Future Volume (vph)	39	176	35	31	257	52	40	174	12	51	258	108
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	30.5	30.5		30.5	30.5		30.5	30.5		30.5	30.5	30.5
Total Split (s)	61.0	61.0		61.0	61.0		59.0	59.0		59.0	59.0	59.0
Total Split (%)	50.8%	50.8%		50.8%	50.8%		49.2%	49.2%		49.2%	49.2%	49.2%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)	4.5	4.5			4.5			4.5			4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120





Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated



















Splits and Phases: 14: Monroe St. & Avenue 54

 Ø2 (R)	 Ø4
59 s	61 s
 Ø6 (R)	 Ø8
59 s	61 s

HCM 6th Signalized Intersection Summary























14: Monroe St. & Avenue 54

EA AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	176	35	31	257	52	40	174	12	51	258	108
Future Volume (veh/h)	39	176	35	31	257	52	40	174	12	51	258	108
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	48	217	43	38	317	64	49	215	15	63	319	133
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	172	440	87	60	366	71	179	763	52	184	908	967
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.63	0.63	0.63	0.63	0.63	0.63
Sat Flow, veh/h	1002	1476	292	91	1225	237	229	1218	82	238	1450	1543
Grp Volume(v), veh/h	48	0	260	419	0	0	279	0	0	382	0	133
Grp Sat Flow(s),veh/h/ln	1002	0	1768	1553	0	0	1530	0	0	1687	0	1543
Q Serve(g_s), s	0.0	0.0	14.5	17.1	0.0	0.0	0.6	0.0	0.0	0.0	0.0	4.2
Cycle Q Clear(g_c), s	16.6	0.0	14.5	31.6	0.0	0.0	12.5	0.0	0.0	11.9	0.0	4.2
Prop In Lane	1.00		0.17	0.09		0.15	0.18		0.05	0.16		1.00
Lane Grp Cap(c), veh/h	172	0	528	496	0	0	994	0	0	1092	0	967
V/C Ratio(X)	0.28	0.00	0.49	0.84	0.00	0.00	0.28	0.00	0.00	0.35	0.00	0.14
Avail Cap(c_a), veh/h	345	0	833	786	0	0	994	0	0	1092	0	967
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.3	0.0	34.6	40.7	0.0	0.0	9.9	0.0	0.0	10.6	0.0	9.2
Incr Delay (d2), s/veh	0.9	0.0	0.7	4.9	0.0	0.0	0.7	0.0	0.0	0.9	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	6.0	11.9	0.0	0.0	3.1	0.0	0.0	4.5	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.2	0.0	35.3	45.7	0.0	0.0	10.6	0.0	0.0	11.5	0.0	9.5
LnGrp LOS	D	A	D	D	A	A	B	A	A	B	A	A
Approach Vol, veh/h	308			419			279			515		
Approach Delay, s/veh	35.5			45.7			10.6			10.9		
Approach LOS	D			D			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	79.7			40.3			79.7			40.3		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	54.5			56.5			54.5			56.5		
Max Q Clear Time (g_c+I1), s	14.5			18.6			13.9			33.6		
Green Ext Time (p_c), s	1.7			1.6			2.7			2.2		
Intersection Summary												
HCM 6th Ctrl Delay	25.4											
HCM 6th LOS	C											

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52










EA (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	279	47	20	300	133	47	184	9	110	305	39
Future Volume (vph)	84	279	47	20	300	133	47	184	9	110	305	39
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh39.4

Intersection LOS E























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	84	279	47	20	300	133	47	184	9	110	305	39
Future Vol, veh/h	84	279	47	20	300	133	47	184	9	110	305	39
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	101	336	57	24	361	160	57	222	11	133	367	47
Number of Lanes	1	1	1	0	2	1	0	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay	61.5	27.7	53.6	23.7
HCM LOS	F	D	F	C

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	20%	100%	0%	0%	17%	0%	0%	100%	0%	0%
Vol Thru, %	77%	0%	100%	0%	83%	100%	0%	0%	100%	72%
Vol Right, %	4%	0%	0%	100%	0%	0%	100%	0%	0%	28%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	240	84	279	47	120	200	133	110	203	141
LT Vol	47	84	0	0	20	0	0	110	0	0
Through Vol	184	0	279	0	100	200	0	0	203	102
RT Vol	9	0	0	47	0	0	133	0	0	39
Lane Flow Rate	289	101	336	57	145	241	160	133	245	169
Geometry Grp	8	8	8	8	8	8	8	7	7	7
Degree of Util (X)	0.859	0.315	0.997	0.156	0.432	0.715	0.442	0.375	0.657	0.445
Departure Headway (Hd)	10.695	11.21	10.681	9.942	10.767	10.679	9.937	10.178	9.656	9.453
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	338	321	340	360	334	337	362	354	375	381
Service Time	8.461	8.981	8.452	7.712	8.54	8.452	7.71	7.934	7.411	7.208
HCM Lane V/C Ratio	0.855	0.315	0.988	0.158	0.434	0.715	0.442	0.376	0.653	0.444
HCM Control Delay	53.6	19.1	82.2	14.6	21.5	36.3	20.4	18.9	29.2	19.6
HCM Lane LOS	F	C	F	B	C	E	C	C	D	C
HCM 95th-tile Q	7.8	1.3	11.1	0.5	2.1	5.2	2.2	1.7	4.5	2.2

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52

EA AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	279	47	20	300	133	47	184	9	110	305	39
Future Volume (vph)	84	279	47	20	300	133	47	184	9	110	305	39
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	2	2	2	6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	32.0	32.0	32.0	32.0	32.0	32.0	28.0	28.0		28.0	28.0	
Total Split (%)	53.3%	53.3%	53.3%	53.3%	53.3%	53.3%	46.7%	46.7%		46.7%	46.7%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5		4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max		Max	Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

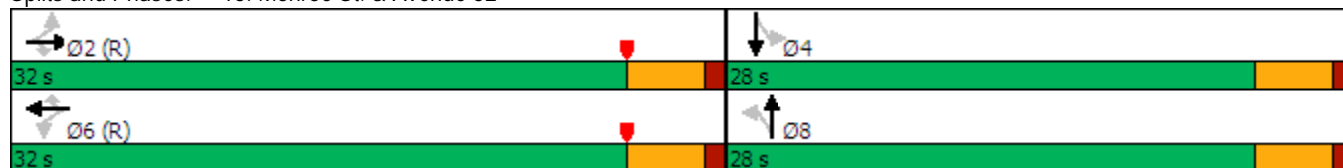
Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 45























Control Type: Actuated-Coordinated

Splits and Phases: 15: Monroe St. & Avenue 52



























HCM 6th Signalized Intersection Summary 15: Monroe St. & Avenue 52

EA AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	279	47	20	300	133	47	184	9	110	305	39
Future Volume (veh/h)	84	279	47	20	300	133	47	184	9	110	305	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	101	336	57	24	361	160	57	222	11	133	367	47
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	468	835	707	453	1586	707	153	533	24	557	1209	154
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	881	1821	1543	991	3460	1543	206	1362	62	1147	3088	393
Grp Volume(v), veh/h	101	336	57	24	361	160	290	0	0	133	204	210
Grp Sat Flow(s),veh/h/ln	881	1821	1543	991	1730	1543	1630	0	0	1147	1730	1750
Q Serve(g_s), s	4.7	7.4	1.2	1.0	3.8	3.8	0.0	0.0	0.0	0.0	4.9	5.0
Cycle Q Clear(g_c), s	8.5	7.4	1.2	8.3	3.8	3.8	7.0	0.0	0.0	5.4	4.9	5.0
Prop In Lane	1.00		1.00	1.00		1.00	0.20		0.04	1.00		0.22
Lane Grp Cap(c), veh/h	468	835	707	453	1586	707	710	0	0	557	678	686
V/C Ratio(X)	0.22	0.40	0.08	0.05	0.23	0.23	0.41	0.00	0.00	0.24	0.30	0.31
Avail Cap(c_a), veh/h	468	835	707	453	1586	707	710	0	0	557	678	686
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.4	10.8	9.1	13.6	9.8	9.8	13.2	0.0	0.0	12.7	12.6	12.6
Incr Delay (d2), s/veh	1.1	1.4	0.2	0.2	0.3	0.7	1.7	0.0	0.0	1.0	1.1	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	2.4	0.3	0.2	1.1	1.0	2.5	0.0	0.0	1.1	1.7	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.4	12.2	9.4	13.8	10.2	10.6	15.0	0.0	0.0	13.7	13.7	13.8
LnGrp LOS	B	B	A	B	B	B	B	A	A	B	B	B
Approach Vol, veh/h	494			545			290			547		
Approach Delay, s/veh	12.2			10.4			15.0			13.7		
Approach LOS	B			B			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	32.0			28.0			32.0			28.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	27.5			23.5			27.5			23.5		
Max Q Clear Time (g_c+I1), s	10.5			7.4			10.3			9.0		
Green Ext Time (p_c), s	2.2			2.3			2.4			1.3		
Intersection Summary												
HCM 6th Ctrl Delay	12.6											
HCM 6th LOS	B											

Lanes, Volumes, Timings
16: Monroe St. & 50th Avenue

EA (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	251	44	26	360	124	29	319	14	77	383	31
Future Volume (vph)	20	251	44	26	360	124	29	319	14	77	383	31
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	20.5	20.5	20.5	20.5	20.5	11.5	11.5	20.5		11.5	20.5	
Total Split (s)	26.0	26.0	26.0	26.0	26.0	12.0	11.5	22.0		12.0	22.5	
Total Split (%)	43.3%	43.3%	43.3%	43.3%	43.3%	20.0%	19.2%	36.7%		20.0%	37.5%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

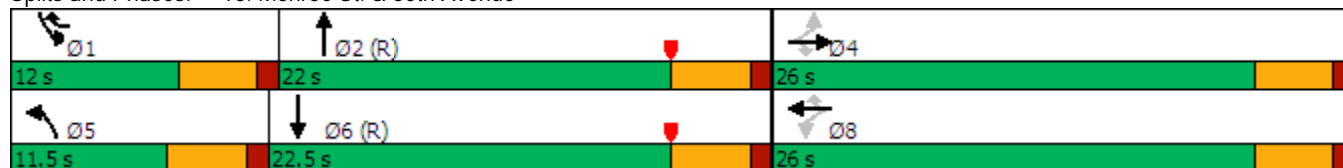
Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

























Control Type: Actuated-Coordinated

Splits and Phases: 16: Monroe St. & 50th Avenue



















HCM 6th Signalized Intersection Summary 16: Monroe St. & 50th Avenue

EA (2026) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	251	44	26	360	124	29	319	14	77	383	31
Future Volume (veh/h)	20	251	44	26	360	124	29	319	14	77	383	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	24	295	52	31	424	146	34	375	16	91	451	36
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	189	538	456	285	538	610	102	1369	58	172	1446	115
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.06	0.40	0.40	0.10	0.47	0.46
Sat Flow, veh/h	842	1821	1543	1034	1821	1543	1734	3381	144	1734	3246	258
Grp Volume(v), veh/h	24	295	52	31	424	146	34	191	200	91	240	247
Grp Sat Flow(s),veh/h/ln	842	1821	1543	1034	1821	1543	1734	1730	1795	1734	1730	1775
Q Serve(g_s), s	1.6	8.2	1.5	1.6	12.8	3.8	1.1	4.4	4.5	3.0	5.2	5.2
Cycle Q Clear(g_c), s	14.4	8.2	1.5	9.7	12.8	3.8	1.1	4.4	4.5	3.0	5.2	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.08	1.00		0.15
Lane Grp Cap(c), veh/h	189	538	456	285	538	610	102	701	727	172	771	791
V/C Ratio(X)	0.13	0.55	0.11	0.11	0.79	0.24	0.33	0.27	0.27	0.53	0.31	0.31
Avail Cap(c_a), veh/h	249	668	566	358	668	719	217	701	727	231	771	791
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.05
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.0	17.8	15.4	21.8	19.4	12.1	27.1	11.9	12.0	25.5	10.2	10.3
Incr Delay (d2), s/veh	0.3	0.9	0.1	0.2	5.0	0.2	1.9	1.0	0.9	2.5	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.9	0.4	0.3	5.2	1.0	0.5	1.5	1.6	1.2	1.7	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.3	18.6	15.5	22.0	24.4	12.3	29.0	12.9	12.9	28.0	11.3	11.3
LnGrp LOS	C	B	B	C	C	B	C	B	B	C	B	B
Approach Vol, veh/h	371				601				425			
Approach Delay, s/veh	18.7				21.4				14.2			
Approach LOS	B				C				B			
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	28.3		21.7	7.5	30.7		21.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	17.5		21.5	7.0	18.0		21.5				
Max Q Clear Time (g_c+I1), s	5.0	6.5		16.4	3.1	7.2		14.8				
Green Ext Time (p_c), s	0.0	1.4		0.8	0.0	1.9		1.6				
Intersection Summary												
HCM 6th Ctrl Delay	17.1											
HCM 6th LOS	B											

Lanes, Volumes, Timings
17: Jackson St. & 58th Avenue

EA (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	74	12	2	69	4	6	91	3	13	141	11
Future Volume (vph)	5	74	12	2	69	4	6	91	3	13	141	11
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		5266			1079			1013			510	
Travel Time (s)		71.8			14.7			12.6			6.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Intersection Delay, s/veh	8.4											
Intersection LOS	A											

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	5	74	12	2	69	4	6	91	3	13	141	11
Future Vol, veh/h	5	74	12	2	69	4	6	91	3	13	141	11
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	79	13	2	73	4	6	97	3	14	150	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.3	8.2	8.3	8.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	5%	3%	8%
Vol Thru, %	91%	81%	92%	85%
Vol Right, %	3%	13%	5%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	91	75	165
LT Vol	6	5	2	13
Through Vol	91	74	69	141
RT Vol	3	12	4	11
Lane Flow Rate	106	97	80	176
Geometry Grp	1	1	1	1
Degree of Util (X)	0.134	0.124	0.104	0.217
Departure Headway (Hd)	4.544	4.611	4.673	4.45
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	789	777	767	807
Service Time	2.571	2.639	2.701	2.474
HCM Lane V/C Ratio	0.134	0.125	0.104	0.218
HCM Control Delay	8.3	8.3	8.2	8.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.4	0.3	0.8

Lanes, Volumes, Timings
1: Madison St. & Avenue 58

EA (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	62	5	2	22	125	5	258	1	93	329	41
Future Volume (vph)	72	62	5	2	22	125	5	258	1	93	329	41
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Intersection Delay, s/veh	12.1											
Intersection LOS	B											















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↑		↰	↑↑		↰	↑↑	
Traffic Vol, veh/h	72	62	5	2	22	125	5	258	1	93	329	41
Future Vol, veh/h	72	62	5	2	22	125	5	258	1	93	329	41
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	78	67	5	2	24	136	5	280	1	101	358	45
Number of Lanes	1	1	1	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	11.5	11.4	12.3	12.4
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	99%	0%	100%	0%	0%	100%	6%	0%	100%
Vol Right, %	0%	0%	1%	0%	0%	100%	0%	0%	94%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	5	172	87	72	62	5	2	15	132	93	219
LT Vol	5	0	0	72	0	0	2	0	0	93	0
Through Vol	0	172	86	0	62	0	0	15	7	0	219
RT Vol	0	0	1	0	0	5	0	0	125	0	0
Lane Flow Rate	5	187	95	78	67	5	2	16	144	101	238
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.011	0.348	0.176	0.167	0.134	0.01	0.005	0.032	0.26	0.192	0.419
Departure Headway (Hd)	7.209	6.709	6.701	7.669	7.169	6.469	7.679	7.179	6.518	6.824	6.324
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	494	533	532	466	497	550	464	496	548	525	567
Service Time	4.984	4.484	4.476	5.45	4.95	4.25	5.46	4.96	4.298	4.588	4.088
HCM Lane V/C Ratio	0.01	0.351	0.179	0.167	0.135	0.009	0.004	0.032	0.263	0.192	0.42
HCM Control Delay	10.1	13.1	10.9	12	11.1	9.3	10.5	10.2	11.6	11.2	13.6
HCM Lane LOS	B	B	B	B	B	A	B	B	B	B	B
HCM 95th-tile Q	0	1.5	0.6	0.6	0.5	0	0	0.1	1	0.7	2.1

Lanes, Volumes, Timings
2: Madison St. & Airport Bl.

EA (2026) PM Peak hour

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	32	108	1	383	36	76	383
Future Volume (vph)	32	108	1	383	36	76	383
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		8			2		
Detector Phase	3	8	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	20.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	22.0	22.0	12.0	25.0	25.0	13.0	26.0
Total Split (%)	36.7%	36.7%	20.0%	41.7%	41.7%	21.7%	43.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 60

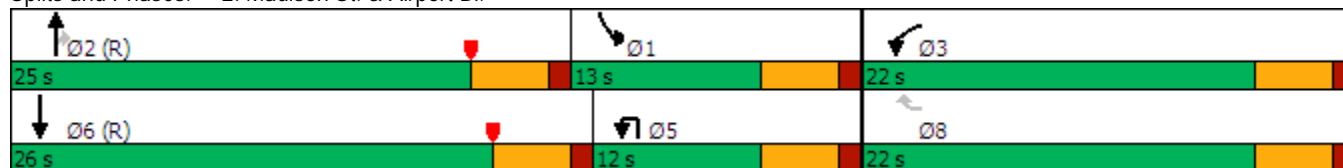
Actuated Cycle Length: 60

Offset: 28 (47%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated















Splits and Phases: 2: Madison St. & Airport Bl.



HCM 6th Signalized Intersection Summary
























2: Madison St. & Airport Bl.

EA (2026) PM Peak hour

							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	32	108	1	383	36	76	383
Future Volume (veh/h)	32	108	1	383	36	76	383
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	36	121		430	40	85	430
Peak Hour Factor	0.89	0.89		0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	202	180		1211	540	578	2596
Arrive On Green	0.12	0.12		0.37	0.37	0.35	0.79
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	36	121		430	40	85	430
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	1.1	4.5		5.4	0.6	2.0	1.8
Cycle Q Clear(g_c), s	1.1	4.5		5.4	0.6	2.0	1.8
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	202	180		1211	540	578	2596
V/C Ratio(X)	0.18	0.67		0.36	0.07	0.15	0.17
Avail Cap(c_a), veh/h	520	463		1211	540	578	2596
HCM Platoon Ratio	1.00	1.00		1.05	1.05	1.05	1.05
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	25.4		14.0	4.6	13.6	1.8
Incr Delay (d2), s/veh	0.4	4.3		0.8	0.3	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.7		1.8	0.3	0.7	0.1
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	24.3	29.7		14.9	4.9	13.8	1.9
LnGrp LOS	C	C		B	A	B	A
Approach Vol, veh/h	157			470			515
Approach Delay, s/veh	28.5			14.0			3.9
Approach LOS	C			B			A
Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	24.0	25.0				49.0	11.0
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	8.5	20.5				21.5	17.5
Max Q Clear Time (g_c+I1), s	4.0	7.4				3.8	6.5
Green Ext Time (p_c), s	0.1	2.1				2.3	0.3
Intersection Summary							
HCM 6th Ctrl Delay			11.4				
HCM 6th LOS			B				
Notes							
User approved ignoring U-Turning movement.							

Lanes, Volumes, Timings
3: Madison St. & Avenue 54









EA (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	267	389	30	167	106	323	384	84	61	189	18
Future Volume (vph)	24	267	389	30	167	106	323	384	84	61	189	18
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh86.3

Intersection LOS F























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	267	389	30	167	106	323	384	84	61	189	18
Future Vol, veh/h	24	267	389	30	167	106	323	384	84	61	189	18
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	300	437	34	188	119	363	431	94	69	212	20
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	176.4	23.9	54.8	21.1
HCM LOS	F	C	F	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	60%	0%	100%	19%	0%	100%	34%	0%	100%	78%
Vol Right, %	0%	0%	40%	0%	0%	81%	0%	0%	66%	0%	0%	22%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	323	256	212	24	178	478	30	111	162	61	126	81
LT Vol	323	0	0	24	0	0	30	0	0	61	0	0
Through Vol	0	256	128	0	178	89	0	111	56	0	126	63
RT Vol	0	0	84	0	0	389	0	0	106	0	0	18
Lane Flow Rate	363	288	238	27	200	537	34	125	182	69	142	91
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	1.011	0.763	0.614	0.08	0.569	1.445	0.11	0.391	0.545	0.226	0.447	0.283
Departure Headway (Hd)	10.649	10.149	9.872	10.849	10.349	9.688	12.225	11.725	11.266	12.342	11.842	11.687
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	345	360	369	332	350	376	295	309	322	293	306	309
Service Time	8.349	7.849	7.572	8.549	8.049	7.479	9.925	9.425	8.966	10.042	9.542	9.387
HCM Lane V/C Ratio	1.052	0.8	0.645	0.081	0.571	1.428	0.115	0.405	0.565	0.235	0.464	0.294
HCM Control Delay	85.5	39.1	27.1	14.5	25.9	240.6	16.4	21.8	26.7	18.6	23.8	18.9
HCM Lane LOS	F	E	D	B	D	F	C	C	D	C	C	C
HCM 95th-tile Q	11.6	6.1	3.9	0.3	3.4	27.7	0.4	1.8	3.1	0.9	2.2	1.1

Lanes, Volumes, Timings
3: Madison St. & Avenue 54

EA PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	267	389	30	167	106	323	384	84	61	189	18
Future Volume (vph)	24	267	389	30	167	106	323	384	84	61	189	18
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	
Minimum Split (s)	9.0	33.0		9.0	30.5	30.5	9.0	30.5	30.5	9.0	30.5	
Total Split (s)	10.0	46.0		14.0	50.0	50.0	28.0	44.0	44.0	16.0	32.0	
Total Split (%)	8.3%	38.3%		11.7%	41.7%	41.7%	23.3%	36.7%	36.7%	13.3%	26.7%	
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.0	3.5	3.5	3.0	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.5		4.0	4.5	4.5	4.0	4.5	4.5	4.0	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	Max	Max	None	Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

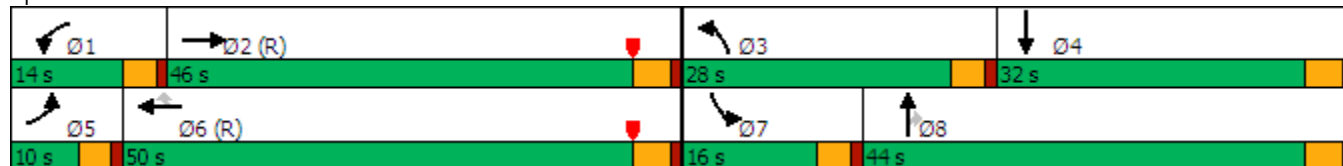
Actuated Cycle Length: 120

Offset: 57 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated
























Splits and Phases: 3: Madison St. & Avenue 54



HCM 6th Signalized Intersection Summary

























3: Madison St. & Avenue 54

EA PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	267	389	30	167	106	323	384	84	61	189	18
Future Volume (veh/h)	24	267	389	30	167	106	323	384	84	61	189	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	27	300	437	34	188	119	363	431	94	69	212	20
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	43	778	694	49	1568	700	457	1139	508	89	782	73
Arrive On Green	0.02	0.45	0.45	0.03	0.45	0.45	0.14	0.33	0.33	0.05	0.24	0.24
Sat Flow, veh/h	1734	1730	1543	1734	3460	1543	3365	3460	1543	1734	3198	299
Grp Volume(v), veh/h	27	300	437	34	188	119	363	431	94	69	114	118
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1734	1730	1767
Q Serve(g_s), s	1.9	13.9	26.1	2.3	3.8	5.5	12.5	11.5	5.2	4.7	6.4	6.5
Cycle Q Clear(g_c), s	1.9	13.9	26.1	2.3	3.8	5.5	12.5	11.5	5.2	4.7	6.4	6.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	43	778	694	49	1568	700	457	1139	508	89	423	432
V/C Ratio(X)	0.63	0.39	0.63	0.69	0.12	0.17	0.79	0.38	0.19	0.78	0.27	0.27
Avail Cap(c_a), veh/h	87	778	694	145	1568	700	673	1139	508	173	423	432
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.0	22.0	25.3	57.8	19.0	19.4	50.2	30.8	28.8	56.3	36.7	36.7
Incr Delay (d2), s/veh	24.7	1.2	3.7	31.4	0.2	0.5	7.1	1.0	0.8	26.0	1.6	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	5.5	9.5	1.4	1.4	2.0	5.5	4.7	2.0	2.6	2.8	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.7	23.2	29.1	89.2	19.1	20.0	57.3	31.8	29.6	82.3	38.2	38.3
LnGrp LOS	F	C	C	F	B	B	E	C	C	F	D	D
Approach Vol, veh/h	764			341			888			301		
Approach Delay, s/veh	28.7			26.4			42.0			48.3		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	58.5	20.3	33.8	7.0	58.9	10.1	44.0				
Change Period (Y+Rc), s	4.0	4.5	4.0	4.5	4.0	4.5	4.0	4.5				
Max Green Setting (Gmax), s	10.0	41.5	24.0	27.5	6.0	45.5	12.0	39.5				
Max Q Clear Time (g_c+I1), s	4.3	28.1	14.5	8.5	3.9	7.5	6.7	13.5				
Green Ext Time (p_c), s	0.0	3.5	1.8	1.0	0.0	1.4	0.1	2.8				
Intersection Summary												
HCM 6th Ctrl Delay	36.1											
HCM 6th LOS	D											

Lanes, Volumes, Timings
4: Madison St. & Avenue 52

EA (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	433	27	17	378	70	85	342	38	79	220	68
Future Volume (vph)	81	433	27	17	378	70	85	342	38	79	220	68
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	24.0	50.0	50.0	15.0	41.0	41.0	17.0	40.0	40.0	15.0	38.0	38.0
Total Split (%)	20.0%	41.7%	41.7%	12.5%	34.2%	34.2%	14.2%	33.3%	33.3%	12.5%	31.7%	31.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

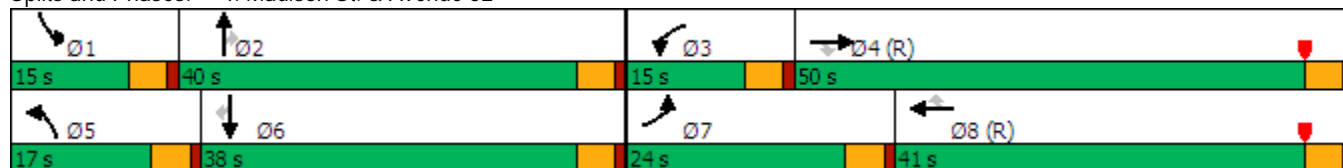
Actuated Cycle Length: 120

Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 4: Madison St. & Avenue 52



























HCM 6th Signalized Intersection Summary 4: Madison St. & Avenue 52

EA (2026) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	433	27	17	378	70	85	342	38	79	220	68
Future Volume (veh/h)	81	433	27	17	378	70	85	342	38	79	220	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	94	503	31	20	440	81	99	398	44	92	256	79
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	118	1627	726	49	1489	664	189	1024	457	187	1022	456
Arrive On Green	0.07	0.47	0.47	0.03	0.43	0.43	0.06	0.30	0.30	0.06	0.30	0.30
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	94	503	31	20	440	81	99	398	44	92	256	79
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	6.4	10.8	1.3	1.4	10.0	3.8	3.4	11.0	2.5	3.2	6.8	4.6
Cycle Q Clear(g_c), s	6.4	10.8	1.3	1.4	10.0	3.8	3.4	11.0	2.5	3.2	6.8	4.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	118	1627	726	49	1489	664	189	1024	457	187	1022	456
V/C Ratio(X)	0.80	0.31	0.04	0.41	0.30	0.12	0.52	0.39	0.10	0.49	0.25	0.17
Avail Cap(c_a), veh/h	282	1627	726	152	1489	664	350	1024	457	294	1022	456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.1	19.7	17.2	57.3	22.3	20.5	55.1	33.6	30.6	55.0	32.2	31.4
Incr Delay (d2), s/veh	11.4	0.5	0.1	5.3	0.5	0.4	2.2	1.1	0.4	2.0	0.6	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	4.3	0.5	0.6	3.9	1.3	1.5	4.6	0.9	1.4	2.8	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.5	20.2	17.3	62.6	22.8	20.9	57.3	34.7	31.0	57.0	32.8	32.2
LnGrp LOS	E	C	B	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h	628			541			541			427		
Approach Delay, s/veh	27.0			24.0			38.6			37.9		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.2	40.0	7.9	60.9	11.2	39.9	12.7	56.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	35.5	10.5	45.5	12.5	33.5	19.5	36.5				
Max Q Clear Time (g_c+I1), s	5.2	13.0	3.4	12.8	5.4	8.8	8.4	12.0				
Green Ext Time (p_c), s	0.1	2.4	0.0	3.3	0.1	1.6	0.1	2.7				
Intersection Summary												
HCM 6th Ctrl Delay	31.3											
HCM 6th LOS	C											

Lanes, Volumes, Timings
5: Madison St. & Avenue 50/50th Avenue

EA (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	429	136	34	352	77	118	446	31	73	255	94
Future Volume (vph)	89	429	136	34	352	77	118	446	31	73	255	94
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	24.0	47.0	47.0	16.0	39.0	39.0	19.0	41.0	41.0	16.0	38.0	38.0
Total Split (%)	20.0%	39.2%	39.2%	13.3%	32.5%	32.5%	15.8%	34.2%	34.2%	13.3%	31.7%	31.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

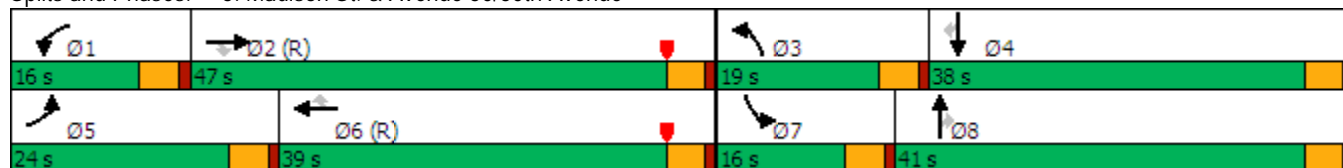
Actuated Cycle Length: 120

Offset: 64.5 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue




























HCM 6th Signalized Intersection Summary 5: Madison St. & Avenue 50/50th Avenue

EA (2026) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	429	136	34	352	77	118	446	31	73	255	94
Future Volume (veh/h)	89	429	136	34	352	77	118	446	31	73	255	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	94	452	143	36	371	81	124	469	33	77	268	99
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	118	1561	696	71	1467	654	193	1052	469	181	1040	464
Arrive On Green	0.07	0.45	0.45	0.04	0.42	0.42	0.06	0.30	0.30	0.05	0.30	0.30
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	94	452	143	36	371	81	124	469	33	77	268	99
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	6.4	9.9	6.7	2.4	8.3	3.8	4.3	13.1	1.8	2.7	7.0	5.8
Cycle Q Clear(g_c), s	6.4	9.9	6.7	2.4	8.3	3.8	4.3	13.1	1.8	2.7	7.0	5.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	118	1561	696	71	1467	654	193	1052	469	181	1040	464
V/C Ratio(X)	0.80	0.29	0.21	0.51	0.25	0.12	0.64	0.45	0.07	0.42	0.26	0.21
Avail Cap(c_a), veh/h	282	1561	696	166	1467	654	407	1052	469	322	1040	464
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.1	20.8	19.9	56.4	22.3	21.0	55.3	33.6	29.7	55.0	31.8	31.4
Incr Delay (d2), s/veh	11.4	0.5	0.7	5.6	0.4	0.4	3.5	1.4	0.3	1.6	0.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	3.9	2.4	1.1	3.3	1.4	1.9	5.5	0.7	1.1	2.9	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.5	21.3	20.6	61.9	22.7	21.4	58.9	35.0	30.0	56.5	32.4	32.4
LnGrp LOS	E	C	C	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h	689			488			626			444		
Approach Delay, s/veh	27.3			25.4			39.4			36.6		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.4	58.6	11.4	40.6	12.7	55.4	11.0	41.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.5	42.5	14.5	33.5	19.5	34.5	11.5	36.5				
Max Q Clear Time (g_c+I1), s	4.4	11.9	6.3	9.0	8.4	10.3	4.7	15.1				
Green Ext Time (p_c), s	0.0	3.3	0.2	1.8	0.1	2.4	0.1	2.8				
Intersection Summary												
HCM 6th Ctrl Delay	32.1											
HCM 6th LOS	C											

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54










EA (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 		 	 	
Traffic Volume (vph)	31	24	2	31	10	481	6	157	51	580	153	2
Future Volume (vph)	31	24	2	31	10	481	6	157	51	580	153	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh72.4

Intersection LOS F























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	24	2	31	10	481	6	157	51	580	153	2
Future Vol, veh/h	31	24	2	31	10	481	6	157	51	580	153	2
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	29	2	38	12	587	7	191	62	707	187	2
Number of Lanes	1	2	0	1	1	1	0	2	0	2	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	14.6	154.1	16.9	35
HCM LOS	B	F	C	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	7%	0%	100%	0%	0%	100%	0%	0%	100%	100%	0%
Vol Thru, %	93%	61%	0%	100%	80%	0%	100%	0%	0%	0%	99%
Vol Right, %	0%	39%	0%	0%	20%	0%	0%	100%	0%	0%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	85	130	31	16	10	31	10	481	290	290	155
LT Vol	6	0	31	0	0	31	0	0	290	290	0
Through Vol	79	79	0	16	8	0	10	0	0	0	153
RT Vol	0	51	0	0	2	0	0	481	0	0	2
Lane Flow Rate	103	158	38	20	12	38	12	587	354	354	189
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.261	0.387	0.111	0.055	0.034	0.095	0.029	1.281	0.809	0.809	0.406
Departure Headway (Hd)	9.608	9.297	11.208	10.688	10.543	9.08	8.571	7.859	8.873	8.873	8.359
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	376	390	322	337	342	396	419	463	410	410	433
Service Time	7.308	6.997	8.908	8.388	8.243	6.8	6.29	5.578	6.573	6.573	6.059
HCM Lane V/C Ratio	0.274	0.405	0.118	0.059	0.035	0.096	0.029	1.268	0.863	0.863	0.436
HCM Control Delay	15.7	17.7	15.3	14	13.6	12.8	11.5	166.2	39.9	39.9	16.7
HCM Lane LOS	C	C	C	B	B	B	B	F	E	E	C
HCM 95th-tile Q	1	1.8	0.4	0.2	0.1	0.3	0.1	24.9	7.3	7.3	1.9

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54

EA PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	24	2	31	10	481	6	157	51	580	153	2
Future Volume (vph)	31	24	2	31	10	481	6	157	51	580	153	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases		2			6	4	8	8		4	4	
Permitted Phases	2			6		6						4
Detector Phase	2	2		6	6	4	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	30.5	30.5		30.5	30.5	30.5	30.5	30.5		30.5	30.5	30.5
Total Split (s)	34.0	34.0		34.0	34.0	53.0	33.0	33.0		53.0	53.0	53.0
Total Split (%)	28.3%	28.3%		28.3%	28.3%	44.2%	27.5%	27.5%		44.2%	44.2%	44.2%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		None	None	Max	Max	Max		Max	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

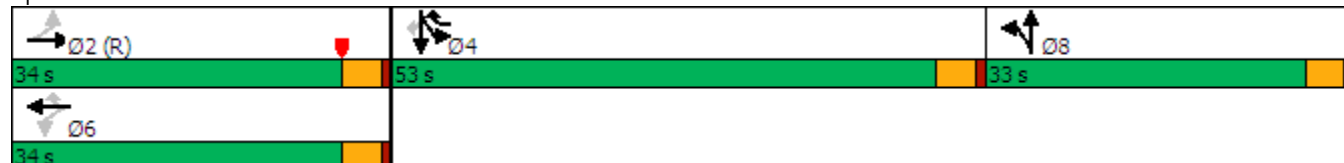
Actuated Cycle Length: 120

Offset: 84 (70%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 95






















Control Type: Actuated-Coordinated

Splits and Phases: 6: Jefferson St. & Avenue 54























HCM 6th Signalized Intersection Summary 6: Jefferson St. & Avenue 54

EA PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	24	2	31	10	481	6	157	51	580	153	2
Future Volume (veh/h)	31	24	2	31	10	481	6	157	51	580	153	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	38	29	2	38	12	587	7	191	62	707	187	2
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	257	808	55	389	448	1003	22	603	203	1360	1398	624
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.24	0.24	0.24	0.40	0.40	0.40
Sat Flow, veh/h	820	3287	224	1378	1821	1543	92	2540	853	3365	3460	1543
Grp Volume(v), veh/h	38	15	16	38	12	587	139	0	121	707	187	2
Grp Sat Flow(s),veh/h/ln	820	1730	1781	1378	1821	1543	1817	0	1668	1682	1730	1543
Q Serve(g_s), s	4.4	0.8	0.8	2.6	0.6	25.8	7.6	0.0	7.2	19.0	4.1	0.1
Cycle Q Clear(g_c), s	5.0	0.8	0.8	3.4	0.6	25.8	7.6	0.0	7.2	19.0	4.1	0.1
Prop In Lane	1.00		0.13	1.00		1.00	0.05		0.51	1.00		1.00
Lane Grp Cap(c), veh/h	257	425	438	389	448	1003	431	0	396	1360	1398	624
V/C Ratio(X)	0.15	0.04	0.04	0.10	0.03	0.59	0.32	0.00	0.31	0.52	0.13	0.00
Avail Cap(c_a), veh/h	257	425	438	389	448	1003	431	0	396	1360	1398	624
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.87	0.87	0.87	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.3	34.4	34.4	35.7	34.4	11.9	37.8	0.0	37.6	27.0	22.5	21.3
Incr Delay (d2), s/veh	1.2	0.2	0.2	0.2	0.0	1.2	2.0	0.0	2.0	1.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.3	0.4	0.9	0.3	17.5	3.4	0.0	3.0	7.3	1.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.5	34.6	34.6	35.9	34.4	13.1	39.7	0.0	39.6	28.4	22.7	21.3
LnGrp LOS	D	C	C	D	C	B	D	A	D	C	C	C
Approach Vol, veh/h	69			637			260			896		
Approach Delay, s/veh	36.2			14.8			39.7			27.2		
Approach LOS	D			B			D			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	34.0			53.0			34.0			33.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	29.5			48.5			29.5			28.5		
Max Q Clear Time (g_c+I1), s	7.0			21.0			27.8			9.6		
Green Ext Time (p_c), s	0.5			8.5			0.8			2.2		
Intersection Summary												
HCM 6th Ctrl Delay	25.0											
HCM 6th LOS	C											

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52





















EA (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	285	304	16	362	283	217	524	68	135	463	124
Future Volume (vph)	79	285	304	16	362	283	217	524	68	135	463	124
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											

Intersection									
Intersection Delay, s/veh	36.7								
Intersection LOS	E								
Approach	EB		WB		NB		SB		
Entry Lanes	1		1		1		1		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	718		710		869		776		
Demand Flow Rate, veh/h	733		724		886		792		
Vehicles Circulating, veh/h	673		899		547		652		
Vehicles Exiting, veh/h	635		460		525		661		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	8.9		17.6		70.6		42.0		
Approach LOS	A		C		F		E		
Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Bypass	
Designated Moves	LT	R	LT	R	LT	R	LT	R	
Assumed Moves	LT	R	LT	R	LT	R	LT	R	
RT Channelized		Free		Free		Free		Free	
Lane Util	1.000		1.000		1.000		1.000		
Follow-Up Headway, s	2.750		2.750		2.750		2.750		
Critical Headway, s	4.976	334	4.976	310	4.976	74	4.976	136	
Entry Flow, veh/h	399	1887	414	1887	812	1887	656	1887	
Cap Entry Lane, veh/h	668	0.980	533	0.980	757	0.980	682	0.980	
Entry HV Adj Factor	0.980	327	0.981	304	0.980	73	0.980	133	
Flow Entry, veh/h	391	1850	406	1850	796	1850	643	1850	
Cap Entry, veh/h	654	0.177	523	0.164	742	0.039	668	0.072	
V/C Ratio	0.598	0.0	0.777	0.0	1.072	0.0	0.962	0.0	
Control Delay, s/veh	16.3	A	30.8	A	77.1	A	50.7	A	
LOS	C	1	D	1	F	0	F	0	
95th %tile Queue, veh	4		7		21		14		

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EA PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	285	304	16	362	283	217	524	68	135	463	124
Future Volume (vph)	79	285	304	16	362	283	217	524	68	135	463	124
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											























HCM 6th Roundabout
7: Jefferson St. & Avenue 52

EA PM Peak hour
With Improvements

Intersection										
Intersection Delay, s/veh	8.6									
Intersection LOS	A									
Approach	EB		WB		NB		SB			
Entry Lanes	1		1		2		2			
Conflicting Circle Lanes	2		2		2		2			
Adj Approach Flow, veh/h	718		710		869		776			
Demand Flow Rate, veh/h	733		724		886		792			
Vehicles Circulating, veh/h	673		899		547		652			
Vehicles Exiting, veh/h	635		460		525		661			
Ped Vol Crossing Leg, #/h	0		0		0		0			
Ped Cap Adj	1.000		1.000		1.000		1.000			
Approach Delay, s/veh	6.3		10.0		9.6		8.5			
Approach LOS	A		B		A		A			
Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
Assumed Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
RT Channelized		Free		Free			Free			Free
Lane Util	1.000		1.000		0.470	0.530		0.470	0.530	
Follow-Up Headway, s	2.535		2.535		2.667	2.535		2.667	2.535	
Critical Headway, s	4.328	334	4.328	310	4.645	4.328	74	4.645	4.328	136
Entry Flow, veh/h	399	1887	414	1887	382	430	1887	308	348	1887
Cap Entry Lane, veh/h	801	0.980	661	0.980	816	892	0.980	741	816	0.980
Entry HV Adj Factor	0.980	327	0.981	304	0.979	0.981	73	0.981	0.979	133
Flow Entry, veh/h	391	1850	406	1850	374	422	1850	302	341	1850
Cap Entry, veh/h	785	0.177	649	0.164	799	875	0.039	727	799	0.072
V/C Ratio	0.498	0.0	0.626	0.0	0.468	0.482	0.0	0.416	0.427	0.0
Control Delay, s/veh	11.5	A	17.5	A	10.7	10.3	A	10.5	9.9	A
LOS	B	1	C	1	B	B	0	B	A	0
95th %tile Queue, veh	3		4		3	3		2	2	

Lanes, Volumes, Timings 8: Jefferson St. & Pomelo

EA (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	2	21	9	1	35	3	901	7	15	782	56
Future Volume (vph)	55	2	21	9	1	35	3	901	7	15	782	56
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	49.0	49.0	49.0	49.0	49.0	49.0	18.0	51.0		20.0	53.0	
Total Split (%)	40.8%	40.8%	40.8%	40.8%	40.8%	40.8%	15.0%	42.5%		16.7%	44.2%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary

Area Type: Other

Cycle Length: 120

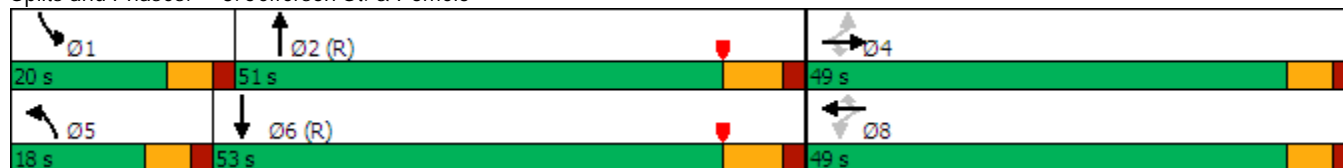
Actuated Cycle Length: 120

Offset: 30 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110





















Control Type: Actuated-Coordinated

Splits and Phases: 8: Jefferson St. & Pomelo



























HCM 6th Signalized Intersection Summary 8: Jefferson St. & Pomelo

EA (2026) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	2	21	9	1	35	3	901	7	15	782	56
Future Volume (veh/h)	55	2	21	9	1	35	3	901	7	15	782	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	58	2	22	9	1	37	3	948	7	16	823	59
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	72	2	476	66	4	476	17	2484	18	72	2462	176
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.01	0.51	0.51	0.08	1.00	1.00
Sat Flow, veh/h	43	5	1543	30	14	1543	1734	5091	38	1734	4736	338
Grp Volume(v), veh/h	60	0	22	10	0	37	3	617	338	16	575	307
Grp Sat Flow(s),veh/h/ln	48	0	1543	44	0	1543	1734	1657	1814	1734	1657	1760
Q Serve(g_s), s	1.2	0.0	1.2	0.6	0.0	2.0	0.2	13.5	13.5	1.0	0.0	0.0
Cycle Q Clear(g_c), s	37.0	0.0	1.2	36.7	0.0	2.0	0.2	13.5	13.5	1.0	0.0	0.0
Prop In Lane	0.97		1.00	0.90		1.00	1.00		0.02	1.00		0.19
Lane Grp Cap(c), veh/h	74	0	476	71	0	476	17	1617	885	72	1723	915
V/C Ratio(X)	0.81	0.00	0.05	0.14	0.00	0.08	0.18	0.38	0.38	0.22	0.33	0.34
Avail Cap(c_a), veh/h	143	0	553	142	0	553	173	1617	885	202	1723	915
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.05	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.84	0.84	0.84
Uniform Delay (d), s/veh	59.2	0.0	29.1	47.2	0.0	29.4	58.9	18.3	18.3	53.2	0.0	0.0
Incr Delay (d2), s/veh	34.7	0.0	0.1	1.9	0.0	0.1	10.9	0.7	1.2	2.8	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.5	0.3	0.0	0.8	0.1	4.8	5.4	0.5	0.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	93.9	0.0	29.2	49.1	0.0	29.6	69.8	19.0	19.5	56.0	0.4	0.8
LnGrp LOS	F	A	C	D	A	C	E	B	B	E	A	A
Approach Vol, veh/h	82					47		958		898		
Approach Delay, s/veh	76.6					33.7		19.3		1.6		
Approach LOS	E					C		B		A		
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	11.0	65.2	43.8		7.1	69.1	43.8					
Change Period (Y+Rc), s	6.0	7.5	6.0		6.0	7.5	6.0					
Max Green Setting (Gmax), s	14.0	43.5	43.0		12.0	45.5	43.0					
Max Q Clear Time (g_c+I1), s	3.0	15.5	39.0		2.2	2.0	38.7					
Green Ext Time (p_c), s	0.0	11.4	0.2		0.0	12.2	0.1					
Intersection Summary												
HCM 6th Ctrl Delay	14.0											
HCM 6th LOS	B											

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

EA (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	247	346	51	130	307	172	74	828	89	207	666	194
Future Volume (vph)	247	346	51	130	307	172	74	828	89	207	666	194
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	38.5	38.5	23.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	32.1%	32.1%	19.2%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120









Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 115






























Control Type: Actuated-Coordinated

Splits and Phases: 9: Jefferson St. & Avenue 50

			
Ø1	Ø2	Ø3	Ø4 (R)
18 s	40.5 s	23 s	38.5 s
			
Ø5	Ø6	Ø7	Ø8 (R)
18 s	40.5 s	23 s	38.5 s

HCM 6th Signalized Intersection Summary 9: Jefferson St. & Avenue 50

EA (2026) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  		 	  	
Traffic Volume (veh/h)	247	346	51	130	307	172	74	828	89	207	666	194
Future Volume (veh/h)	247	346	51	130	307	172	74	828	89	207	666	194
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	255	357	53	134	316	177	76	854	92	213	687	200
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	1203	537	171	555	471	160	1136	353	336	1175	365
Arrive On Green	0.14	0.35	0.35	0.10	0.30	0.30	0.03	0.08	0.08	0.10	0.24	0.24
Sat Flow, veh/h	1734	3460	1543	1734	1821	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	255	357	53	134	316	177	76	854	92	213	687	200
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	17.0	9.0	2.8	9.1	17.5	10.8	5.2	20.2	6.7	7.3	14.7	13.6
Cycle Q Clear(g_c), s	17.0	9.0	2.8	9.1	17.5	10.8	5.2	20.2	6.7	7.3	14.7	13.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	1203	537	171	555	471	160	1136	353	336	1175	365
V/C Ratio(X)	1.04	0.30	0.10	0.78	0.57	0.38	0.48	0.75	0.26	0.63	0.58	0.55
Avail Cap(c_a), veh/h	246	1203	537	246	555	471	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	28.5	26.4	52.8	35.1	32.7	55.3	52.1	45.9	51.9	40.6	40.2
Incr Delay (d2), s/veh	67.6	0.6	0.4	5.8	4.2	2.3	0.8	2.2	0.5	3.0	0.7	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.7	3.7	1.1	4.1	8.1	4.2	2.3	9.1	2.7	3.1	5.8	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	119.1	29.1	26.8	58.6	39.3	35.0	56.1	54.3	46.5	54.8	41.3	42.0
LnGrp LOS	F	C	C	E	D	D	E	D	D	D	D	D
Approach Vol, veh/h	665			627			1022			1100		
Approach Delay, s/veh	63.4			42.2			53.8			44.0		
Approach LOS	E			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	34.9	17.9	49.2	17.0	35.9	23.0	44.1				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	12.0	33.0	17.0	31.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	9.3	22.2	11.1	11.0	7.2	16.7	19.0	19.5				
Green Ext Time (p_c), s	0.1	5.2	0.0	3.9	0.0	6.0	0.0	3.3				
Intersection Summary												
HCM 6th Ctrl Delay	50.4											
HCM 6th LOS	D											
Notes												

Lanes, Volumes, Timings
10: Avenue 60 & Madison St.

EA (2026) PM Peak hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	10	19	18	112	244	7
Future Volume (vph)	10	19	18	112	244	7
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		40	
Link Distance (ft)		1772	661		437	
Travel Time (s)		30.2	11.3		7.4	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)						
Sign Control		Stop	Stop		Stop	






Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Intersection Delay, s/veh	11
Intersection LOS	B





















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	19	18	112	244	7
Future Vol, veh/h	10	19	18	112	244	7
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	23	22	137	298	9
Number of Lanes	0	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	8.8	8.5	12.6
HCM LOS	A	A	B









Lane	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	34%	0%	0%	100%	0%
Vol Thru, %	66%	100%	0%	0%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	29	18	112	244	7
LT Vol	10	0	0	244	0
Through Vol	19	18	0	0	0
RT Vol	0	0	112	0	7
Lane Flow Rate	35	22	137	298	9
Geometry Grp	4	7	7	7	7
Degree of Util (X)	0.054	0.033	0.18	0.455	0.01
Departure Headway (Hd)	5.485	5.458	4.753	5.501	4.298
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	652	657	755	655	831
Service Time	3.525	3.186	2.48	3.238	2.034
HCM Lane V/C Ratio	0.054	0.033	0.181	0.455	0.011
HCM Control Delay	8.8	8.4	8.5	12.8	7.1
HCM Lane LOS	A	A	A	B	A
HCM 95th-tile Q	0.2	0.1	0.7	2.4	0

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

EA (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	128	108	2	49	26	64	133	4	40	108	33
Future Volume (vph)	39	128	108	2	49	26	64	133	4	40	108	33
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	10.9
Intersection LOS	B


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	128	108	2	49	26	64	133	4	40	108	33
Future Vol, veh/h	39	128	108	2	49	26	64	133	4	40	108	33
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	145	123	2	56	30	73	151	5	45	123	38
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	11.1	10.5	11.3	10.5
HCM LOS	B	B	B	B






Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	23%	0%	3%	100%	0%	0%
Vol Thru, %	0%	97%	77%	0%	64%	0%	100%	0%
Vol Right, %	0%	3%	0%	100%	34%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	64	137	167	108	77	40	108	33
LT Vol	64	0	39	0	2	40	0	0
Through Vol	0	133	128	0	49	0	108	0
RT Vol	0	4	0	108	26	0	0	33
Lane Flow Rate	73	156	190	123	88	45	123	38
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.139	0.275	0.333	0.187	0.158	0.088	0.219	0.06
Departure Headway (Hd)	6.884	6.356	6.311	5.489	6.485	6.943	6.436	5.726
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	520	564	569	652	551	515	556	623
Service Time	4.639	4.11	4.06	3.238	4.247	4.7	4.192	3.482
HCM Lane V/C Ratio	0.14	0.277	0.334	0.189	0.16	0.087	0.221	0.061
HCM Control Delay	10.8	11.5	12.2	9.5	10.5	10.4	11	8.9
HCM Lane LOS	B	B	B	A	B	B	B	A
HCM 95th-tile Q	0.5	1.1	1.5	0.7	0.6	0.3	0.8	0.2

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EA (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	123	25	25	77	62	47	230	48	53	142	31
Future Volume (vph)	48	123	25	25	77	62	47	230	48	53	142	31
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	20.1
Intersection LOS	C


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	48	123	25	25	77	62	47	230	48	53	142	31
Future Vol, veh/h	48	123	25	25	77	62	47	230	48	53	142	31
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	64	164	33	33	103	83	63	307	64	71	189	41
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	16.6	14.8	27.3	16.5
HCM LOS	C	B	D	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	14%	24%	15%	27%	0%
Vol Thru, %	71%	63%	47%	73%	0%
Vol Right, %	15%	13%	38%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	325	196	164	195	31
LT Vol	47	48	25	53	0
Through Vol	230	123	77	142	0
RT Vol	48	25	62	0	31
Lane Flow Rate	433	261	219	260	41
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.765	0.498	0.415	0.52	0.073
Departure Headway (Hd)	6.358	6.867	6.84	7.205	6.348
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	568	523	523	499	561
Service Time	4.427	4.948	4.927	4.983	4.125
HCM Lane V/C Ratio	0.762	0.499	0.419	0.521	0.073
HCM Control Delay	27.3	16.6	14.8	17.6	9.6
HCM Lane LOS	D	C	B	C	A
HCM 95th-tile Q	6.9	2.7	2	3	0.2

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EA PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	123	25	25	77	62	47	230	48	53	142	31
Future Volume (vph)	48	123	25	25	77	62	47	230	48	53	142	31
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	30.5	30.5		30.5	30.5		30.5	30.5		30.5	30.5	30.5
Total Split (s)	49.0	49.0		49.0	49.0		71.0	71.0		71.0	71.0	71.0
Total Split (%)	40.8%	40.8%		40.8%	40.8%		59.2%	59.2%		59.2%	59.2%	59.2%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)		4.5			4.5			4.5			4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

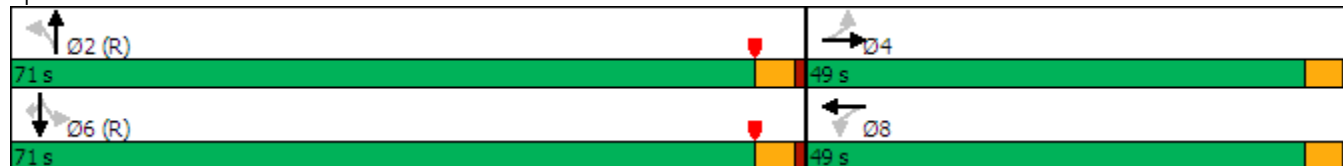
Actuated Cycle Length: 120

Offset: 119.5 (100%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 65


















Control Type: Actuated-Coordinated

Splits and Phases: 12: Monroe St. & Avenue 58
























HCM 6th Signalized Intersection Summary 12: Monroe St. & Avenue 58

EA PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	123	25	25	77	62	47	230	48	53	142	31
Future Volume (veh/h)	48	123	25	25	77	62	47	230	48	53	142	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	64	164	33	33	103	83	63	307	64	71	189	41
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	96	202	38	65	164	119	183	874	177	317	823	1117
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.72	0.72	0.72	0.72	0.72	0.72
Sat Flow, veh/h	290	1003	187	153	814	590	206	1207	244	385	1137	1543
Grp Volume(v), veh/h	261	0	0	219	0	0	434	0	0	260	0	41
Grp Sat Flow(s),veh/h/ln	1479	0	0	1557	0	0	1657	0	0	1522	0	1543
Q Serve(g_s), s	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
Cycle Q Clear(g_c), s	20.8	0.0	0.0	15.4	0.0	0.0	10.7	0.0	0.0	5.5	0.0	0.9
Prop In Lane	0.25		0.13	0.15		0.38	0.15		0.15	0.27		1.00
Lane Grp Cap(c), veh/h	335	0	0	348	0	0	1234	0	0	1140	0	1117
V/C Ratio(X)	0.78	0.00	0.00	0.63	0.00	0.00	0.35	0.00	0.00	0.23	0.00	0.04
Avail Cap(c_a), veh/h	604	0	0	617	0	0	1234	0	0	1140	0	1117
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.5	0.0	0.0	44.2	0.0	0.0	6.1	0.0	0.0	5.3	0.0	4.7
Incr Delay (d2), s/veh	4.0	0.0	0.0	1.9	0.0	0.0	0.8	0.0	0.0	0.5	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	0.0	0.0	6.2	0.0	0.0	3.4	0.0	0.0	1.8	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.4	0.0	0.0	46.1	0.0	0.0	6.8	0.0	0.0	5.8	0.0	4.8
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	261			219			434			301		
Approach Delay, s/veh	50.4			46.1			6.8			5.7		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	91.4			28.6			91.4			28.6		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	66.5			44.5			66.5			44.5		
Max Q Clear Time (g_c+I1), s	12.7			22.8			7.5			17.4		
Green Ext Time (p_c), s	2.7			1.3			1.7			1.4		
Intersection Summary												
HCM 6th Ctrl Delay	23.0											
HCM 6th LOS	C											

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.









EA (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	93	11	18	94	61	17	270	33	64	213	19
Future Volume (vph)	10	93	11	18	94	61	17	270	33	64	213	19
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh15.4

Intersection LOS C



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	93	11	18	94	61	17	270	33	64	213	19
Future Vol, veh/h	10	93	11	18	94	61	17	270	33	64	213	19
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	107	13	21	108	70	20	310	38	74	245	22
Number of Lanes	1	1	1	0	1	0	1	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	1	3
HCM Control Delay	11.5	14.4	20.4	12
HCM LOS	B	B	C	B







Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	100%	0%	0%	10%	100%	0%	0%
Vol Thru, %	0%	89%	0%	100%	0%	54%	0%	100%	79%
Vol Right, %	0%	11%	0%	0%	100%	35%	0%	0%	21%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	17	303	10	93	11	173	64	142	90
LT Vol	17	0	10	0	0	18	64	0	0
Through Vol	0	270	0	93	0	94	0	142	71
RT Vol	0	33	0	0	11	61	0	0	19
Lane Flow Rate	20	348	11	107	13	199	74	163	103
Geometry Grp	8	8	7	7	7	8	8	8	8
Degree of Util (X)	0.04	0.649	0.025	0.213	0.023	0.393	0.151	0.313	0.194
Departure Headway (Hd)	7.291	6.707	7.682	7.173	6.46	7.108	7.402	6.893	6.743
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	494	543	466	500	554	507	485	521	532
Service Time	4.991	4.407	5.429	4.919	4.206	4.854	5.146	4.637	4.487
HCM Lane V/C Ratio	0.04	0.641	0.024	0.214	0.023	0.393	0.153	0.313	0.194
HCM Control Delay	10.3	21	10.6	11.9	9.4	14.4	11.5	12.8	11.1
HCM Lane LOS	B	C	B	B	A	B	B	B	B
HCM 95th-tile Q	0.1	4.6	0.1	0.8	0.1	1.9	0.5	1.3	0.7

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EA (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	274	57	18	185	66	34	360	27	94	199	39
Future Volume (vph)	85	274	57	18	185	66	34	360	27	94	199	39
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	70.1
Intersection LOS	F



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	85	274	57	18	185	66	34	360	27	94	199	39
Future Vol, veh/h	85	274	57	18	185	66	34	360	27	94	199	39
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	93	301	63	20	203	73	37	396	30	103	219	43
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	45.2	40.2	137	40.8
HCM LOS	E	E	F	E

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	8%	100%	0%	7%	32%	0%
Vol Thru, %	86%	0%	83%	69%	68%	0%
Vol Right, %	6%	0%	17%	25%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	421	85	331	269	293	39
LT Vol	34	85	0	18	94	0
Through Vol	360	0	274	185	199	0
RT Vol	27	0	57	66	0	39
Lane Flow Rate	463	93	364	296	322	43
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	1.189	0.243	0.885	0.77	0.82	0.099
Departure Headway (Hd)	9.253	10.059	9.41	10.187	9.793	8.892
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	398	360	389	358	373	405
Service Time	7.253	7.759	7.11	8.187	7.493	6.592
HCM Lane V/C Ratio	1.163	0.258	0.936	0.827	0.863	0.106
HCM Control Delay	137	16	52.7	40.2	44.5	12.6
HCM Lane LOS	F	C	F	E	E	B
HCM 95th-tile Q	18.5	0.9	8.8	6.2	7.3	0.3

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EA PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	274	57	18	185	66	34	360	27	94	199	39
Future Volume (vph)	85	274	57	18	185	66	34	360	27	94	199	39
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	30.5	30.5		30.5	30.5		30.5	30.5		30.5	30.5	30.5
Total Split (s)	51.0	51.0		51.0	51.0		69.0	69.0		69.0	69.0	69.0
Total Split (%)	42.5%	42.5%		42.5%	42.5%		57.5%	57.5%		57.5%	57.5%	57.5%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)	4.5	4.5			4.5			4.5			4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

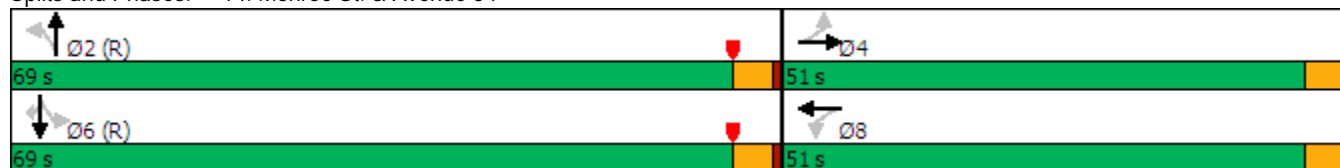
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 65



















Control Type: Actuated-Coordinated

Splits and Phases: 14: Monroe St. & Avenue 54

























HCM 6th Signalized Intersection Summary 14: Monroe St. & Avenue 54

EA PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	274	57	18	185	66	34	360	27	94	199	39
Future Volume (veh/h)	85	274	57	18	185	66	34	360	27	94	199	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	93	301	63	20	203	73	37	396	30	103	219	43
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	187	402	84	42	265	90	96	993	73	311	642	1003
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.65	0.65	0.65	0.65	0.65	0.65
Sat Flow, veh/h	1103	1460	306	36	964	327	98	1528	113	418	988	1543
Grp Volume(v), veh/h	93	0	364	296	0	0	463	0	0	322	0	43
Grp Sat Flow(s),veh/h/ln	1103	0	1766	1328	0	0	1739	0	0	1406	0	1543
Q Serve(g_s), s	2.4	0.0	22.6	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
Cycle Q Clear(g_c), s	28.9	0.0	22.6	26.9	0.0	0.0	14.6	0.0	0.0	12.6	0.0	1.2
Prop In Lane	1.00		0.17	0.07		0.25	0.08		0.06	0.32		1.00
Lane Grp Cap(c), veh/h	187	0	486	398	0	0	1162	0	0	953	0	1003
V/C Ratio(X)	0.50	0.00	0.75	0.74	0.00	0.00	0.40	0.00	0.00	0.34	0.00	0.04
Avail Cap(c_a), veh/h	311	0	684	584	0	0	1162	0	0	953	0	1003
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.3	0.0	39.7	39.3	0.0	0.0	9.9	0.0	0.0	9.3	0.0	7.6
Incr Delay (d2), s/veh	2.0	0.0	2.9	2.9	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	9.6	7.5	0.0	0.0	5.3	0.0	0.0	3.5	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.3	0.0	42.5	42.2	0.0	0.0	10.9	0.0	0.0	10.2	0.0	7.7
LnGrp LOS	D	A	D	D	A	A	B	A	A	B	A	A
Approach Vol, veh/h	457			296			463			365		
Approach Delay, s/veh	43.3			42.2			10.9			9.9		
Approach LOS	D			D			B			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	82.5			37.5			82.5			37.5		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	64.5			46.5			64.5			46.5		
Max Q Clear Time (g_c+I1), s	16.6			30.9			14.6			28.9		
Green Ext Time (p_c), s	2.8			2.0			2.2			1.4		
Intersection Summary												
HCM 6th Ctrl Delay	25.9											
HCM 6th LOS	C											

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52









EA (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	357	71	21	338	121	51	392	50	123	261	70
Future Volume (vph)	93	357	71	21	338	121	51	392	50	123	261	70
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 35.8

Intersection LOS F























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	93	357	71	21	338	121	51	392	50	123	261	70
Future Vol, veh/h	93	357	71	21	338	121	51	392	50	123	261	70
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	108	415	83	24	393	141	59	456	58	143	303	81
Number of Lanes	1	1	1	0	2	1	0	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay	117.5	36.5	353.6	25.3
HCM LOS	F	E	F	D

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	10%	100%	0%	0%	16%	0%	0%	100%	0%	0%
Vol Thru, %	80%	0%	100%	0%	84%	100%	0%	0%	100%	55%
Vol Right, %	10%	0%	0%	100%	0%	0%	100%	0%	0%	45%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	493	93	357	71	134	225	121	123	174	157
LT Vol	51	93	0	0	21	0	0	123	0	0
Through Vol	392	0	357	0	113	225	0	0	174	87
RT Vol	50	0	0	71	0	0	121	0	0	70
Lane Flow Rate	573	108	415	83	155	262	141	143	202	183
Geometry Grp	8	8	8	8	8	8	8	7	7	7
Degree of Util (X)	1.7	0.333	1.222	0.227	0.464	0.777	0.39	0.407	0.548	0.479
Departure Headway (Hd)	11.03	13.092	12.547	11.785	13.13	13.044	12.274	12.292	11.751	11.414
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	332	277	295	307	277	280	295	295	310	318
Service Time	8.73	10.792	10.247	9.485	10.83	10.744	9.974	9.992	9.451	9.114
HCM Lane V/C Ratio	1.726	0.39	1.407	0.27	0.56	0.936	0.478	0.485	0.652	0.575
HCM Control Delay	353.6	22.2	162.1	17.9	26.7	49.7	22.6	23.2	27.8	24.2
HCM Lane LOS	F	C	F	C	D	E	C	C	D	C
HCM 95th-tile Q	34.6	1.4	16.1	0.9	2.3	5.9	1.8	1.9	3.1	2.5

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52

EA PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	357	71	21	338	121	51	392	50	123	261	70
Future Volume (vph)	93	357	71	21	338	121	51	392	50	123	261	70
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	2	2	2	6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0		30.0	30.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0		30.0	30.0	
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5		4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max		Max	Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

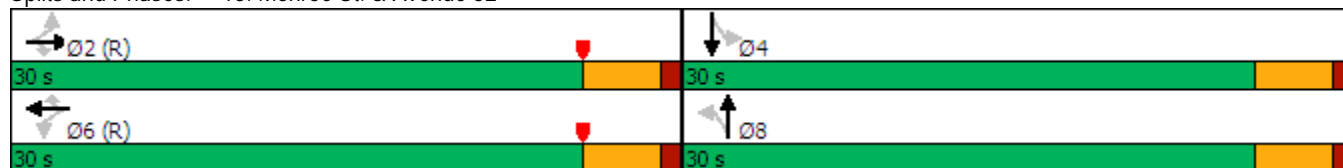
Actuated Cycle Length: 60

Offset: 55.5 (93%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated























Splits and Phases: 15: Monroe St. & Avenue 52



HCM 6th Signalized Intersection Summary

























15: Monroe St. & Avenue 52

EA PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	357	71	21	338	121	51	392	50	123	261	70
Future Volume (veh/h)	93	357	71	21	338	121	51	392	50	123	261	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	109	420	84	25	398	142	60	461	59	145	307	82
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	423	774	656	346	1471	656	114	600	73	370	1152	303
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	866	1821	1543	895	3460	1543	112	1413	173	882	2711	712
Grp Volume(v), veh/h	109	420	84	25	398	142	580	0	0	145	194	195
Grp Sat Flow(s),veh/h/ln	866	1821	1543	895	1730	1543	1697	0	0	882	1730	1693
Q Serve(g_s), s	5.6	10.3	2.0	1.3	4.5	3.5	8.8	0.0	0.0	0.0	4.4	4.5
Cycle Q Clear(g_c), s	10.1	10.3	2.0	11.6	4.5	3.5	17.6	0.0	0.0	16.1	4.4	4.5
Prop In Lane	1.00		1.00	1.00		1.00	0.10		0.10	1.00		0.42
Lane Grp Cap(c), veh/h	423	774	656	346	1471	656	788	0	0	370	735	719
V/C Ratio(X)	0.26	0.54	0.13	0.07	0.27	0.22	0.74	0.00	0.00	0.39	0.26	0.27
Avail Cap(c_a), veh/h	423	774	656	346	1471	656	788	0	0	370	735	719
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.5	12.9	10.5	17.2	11.2	10.9	14.8	0.0	0.0	14.5	11.2	11.2
Incr Delay (d2), s/veh	1.5	2.7	0.4	0.4	0.5	0.8	6.1	0.0	0.0	3.1	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.6	0.6	0.3	1.3	1.0	6.3	0.0	0.0	1.5	1.4	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.0	15.6	10.9	17.6	11.7	11.7	20.9	0.0	0.0	17.6	12.0	12.1
LnGrp LOS	B	B	B	B	B	B	C	A	A	B	B	B
Approach Vol, veh/h	613			565			580			534		
Approach Delay, s/veh	15.0			11.9			20.9			13.6		
Approach LOS	B			B			C			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	30.0			30.0			30.0			30.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	25.5			25.5			25.5			25.5		
Max Q Clear Time (g_c+I1), s	12.3			18.1			13.6			19.6		
Green Ext Time (p_c), s	2.6			1.7			2.2			1.8		
Intersection Summary												
HCM 6th Ctrl Delay	15.4											
HCM 6th LOS	B											

Lanes, Volumes, Timings
16: Monroe St. & 50th Avenue

EA (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	469	57	11	371	126	49	584	60	137	363	22
Future Volume (vph)	38	469	57	11	371	126	49	584	60	137	363	22
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	20.5	20.5	20.5	20.5	20.5	11.5	11.5	20.5		11.5	20.5	
Total Split (s)	26.0	26.0	26.0	26.0	26.0	12.4	11.5	21.6		12.4	22.5	
Total Split (%)	43.3%	43.3%	43.3%	43.3%	43.3%	20.7%	19.2%	36.0%		20.7%	37.5%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag						Lead	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

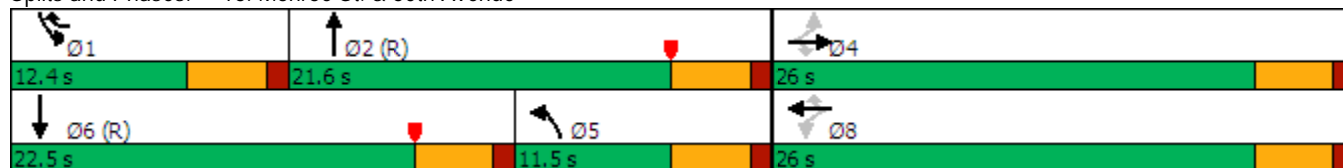
Actuated Cycle Length: 60

Offset: 14.6 (24%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60

























Control Type: Actuated-Coordinated

Splits and Phases: 16: Monroe St. & 50th Avenue



















HCM 6th Signalized Intersection Summary
16: Monroe St. & 50th Avenue

EA (2026) PM Peak hour





												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	469	57	11	371	126	49	584	60	137	363	22
Future Volume (veh/h)	38	469	57	11	371	126	49	584	60	137	363	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	42	521	63	12	412	140	54	649	67	152	403	24
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	240	609	517	177	609	698	272	1102	114	204	1023	61
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.16	0.35	0.34	0.12	0.32	0.30
Sat Flow, veh/h	856	1821	1543	831	1821	1543	1734	3166	326	1734	3319	197
Grp Volume(v), veh/h	42	521	63	12	412	140	54	354	362	152	209	218
Grp Sat Flow(s),veh/h/ln	856	1821	1543	831	1821	1543	1734	1730	1762	1734	1730	1786
Q Serve(g_s), s	2.7	16.0	1.7	0.8	11.7	3.3	1.6	10.1	10.1	5.1	5.6	5.7
Cycle Q Clear(g_c), s	14.3	16.0	1.7	16.8	11.7	3.3	1.6	10.1	10.1	5.1	5.6	5.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		0.11
Lane Grp Cap(c), veh/h	240	609	517	177	609	698	272	602	613	204	533	551
V/C Ratio(X)	0.18	0.85	0.12	0.07	0.68	0.20	0.20	0.59	0.59	0.75	0.39	0.40
Avail Cap(c_a), veh/h	267	668	566	203	668	747	272	602	613	243	533	551
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.3	18.6	13.8	26.4	17.2	9.9	22.0	16.0	16.1	25.4	15.9	16.0
Incr Delay (d2), s/veh	0.3	9.9	0.1	0.2	2.4	0.1	0.4	4.2	4.1	9.9	2.2	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	7.0	0.5	0.2	4.3	0.8	0.6	3.9	3.9	2.4	2.1	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.7	28.5	13.9	26.6	19.6	10.0	22.4	20.2	20.2	35.4	18.1	18.1
LnGrp LOS	C	C	B	C	B	B	C	C	C	D	B	B
Approach Vol, veh/h	626			564			770			579		
Approach Delay, s/veh	26.7			17.4			20.4			22.6		
Approach LOS	C			B			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	24.9		24.1	13.4	22.5		24.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.9	17.1		21.5	7.0	18.0		21.5				
Max Q Clear Time (g_c+I1), s	7.1	12.1		18.0	3.6	7.7		18.8				
Green Ext Time (p_c), s	0.0	1.7		1.1	0.0	1.5		0.8				
Intersection Summary												
HCM 6th Ctrl Delay				21.8								
HCM 6th LOS				C								

Lanes, Volumes, Timings
17: Jackson St. & 58th Avenue

EA (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	148	10	0	85	12	16	193	18	7	130	18
Future Volume (vph)	33	148	10	0	85	12	16	193	18	7	130	18
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		5266			1079			1013			510	
Travel Time (s)		71.8			14.7			12.6			6.3	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	148	10	0	85	12	16	193	18	7	130	18
Future Vol, veh/h	33	148	10	0	85	12	16	193	18	7	130	18
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	187	13	0	108	15	20	244	23	9	165	23
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.6	9.9	12	10.6
HCM LOS	B	A	B	B

























Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	17%	0%	5%
Vol Thru, %	85%	77%	88%	84%
Vol Right, %	8%	5%	12%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	227	191	97	155
LT Vol	16	33	0	7
Through Vol	193	148	85	130
RT Vol	18	10	12	18
Lane Flow Rate	287	242	123	196
Geometry Grp	1	1	1	1
Degree of Util (X)	0.418	0.366	0.19	0.292
Departure Headway (Hd)	5.239	5.444	5.58	5.352
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	687	660	642	671
Service Time	3.276	3.484	3.627	3.392
HCM Lane V/C Ratio	0.418	0.367	0.192	0.292
HCM Control Delay	12	11.6	9.9	10.6
HCM Lane LOS	B	B	A	B
HCM 95th-tile Q	2.1	1.7	0.7	1.2

WITH PROJECT CONDITIONS

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Lanes, Volumes, Timings
1: Madison St. & Avenue 58

EAP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	17	2	32	49	66	4	335	89	93	268	49
Future Volume (vph)	46	17	2	32	49	66	4	335	89	93	268	49
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Intersection Delay, s/veh	11.9											
Intersection LOS	B											















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↑		↰	↑↑		↰	↑↑	
Traffic Vol, veh/h	46	17	2	32	49	66	4	335	89	93	268	49
Future Vol, veh/h	46	17	2	32	49	66	4	335	89	93	268	49
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	18	2	34	52	70	4	356	95	99	285	52
Number of Lanes	1	1	1	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	11.2	10.6	12.8	11.6
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	56%	0%	100%	0%	0%	100%	20%	0%	100%
Vol Right, %	0%	0%	44%	0%	0%	100%	0%	0%	80%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	4	223	201	46	17	2	32	33	82	93	179
LT Vol	4	0	0	46	0	0	32	0	0	93	0
Through Vol	0	223	112	0	17	0	0	33	16	0	179
RT Vol	0	0	89	0	0	2	0	0	66	0	0
Lane Flow Rate	4	238	213	49	18	2	34	35	88	99	190
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.008	0.417	0.356	0.107	0.037	0.004	0.072	0.069	0.16	0.188	0.335
Departure Headway (Hd)	6.812	6.312	6.001	7.844	7.344	6.644	7.639	7.139	6.578	6.841	6.341
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	524	570	598	455	486	536	468	500	543	523	566
Service Time	4.565	4.065	3.754	5.619	5.119	4.419	5.407	4.907	4.346	4.594	4.094
HCM Lane V/C Ratio	0.008	0.418	0.356	0.108	0.037	0.004	0.073	0.07	0.162	0.189	0.336
HCM Control Delay	9.6	13.5	12.1	11.6	10.4	9.4	11	10.4	10.6	11.2	12.3
HCM Lane LOS	A	B	B	B	B	A	B	B	B	B	B
HCM 95th-tile Q	0	2	1.6	0.4	0.1	0	0.2	0.2	0.6	0.7	1.5

Lanes, Volumes, Timings
2: Madison St. & Airport Bl.

EAP AM Peak hour

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	31	84	1	415	31	128	406
Future Volume (vph)	31	84	1	415	31	128	406
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		3			2		
Detector Phase	3	3	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	11.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	16.0	16.0	13.0	28.0	28.0	16.0	31.0
Total Split (%)	26.7%	26.7%	21.7%	46.7%	46.7%	26.7%	51.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 45

Control Type: Actuated-Coordinated















Splits and Phases: 2: Madison St. & Airport Bl.



HCM 6th Signalized Intersection Summary




























2: Madison St. & Airport Bl.

EAP AM Peak hour

							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	31	84	1	415	31	128	406
Future Volume (veh/h)	31	84	1	415	31	128	406
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	36	97		477	36	147	467
Peak Hour Factor	0.87	0.87		0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	195	173		1980	883	201	2610
Arrive On Green	0.11	0.11		0.57	0.57	0.12	0.75
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	36	97		477	36	147	467
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	1.1	3.6		4.1	0.6	4.9	2.3
Cycle Q Clear(g_c), s	1.1	3.6		4.1	0.6	4.9	2.3
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	195	173		1980	883	201	2610
V/C Ratio(X)	0.18	0.56		0.24	0.04	0.73	0.18
Avail Cap(c_a), veh/h	347	309		1980	883	347	2610
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	25.2		6.4	5.6	25.6	2.1
Incr Delay (d2), s/veh	0.5	2.8		0.3	0.1	5.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.3		1.0	0.1	2.0	0.1
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	24.6	28.0		6.7	5.7	30.7	2.2
LnGrp LOS	C	C		A	A	C	A
Approach Vol, veh/h	133			513			614
Approach Delay, s/veh	27.1			6.6			9.1
Approach LOS	C			A			A
Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	10.9	38.3				49.3	10.7
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	11.5	23.5				26.5	11.5
Max Q Clear Time (g_c+I1), s	6.9	6.1				4.3	5.6
Green Ext Time (p_c), s	0.1	2.6				2.7	0.2
Intersection Summary							
HCM 6th Ctrl Delay			10.0				
HCM 6th LOS			A				
Notes							
User approved pedestrian interval to be less than phase max green.							
User approved ignoring U-Turning movement.							

Lanes, Volumes, Timings
3: Madison St. & Avenue 54









EAP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 			 	
Traffic Volume (vph)	19	222	378	49	166	44	256	290	44	70	232	20
Future Volume (vph)	19	222	378	49	166	44	256	290	44	70	232	20
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 57.7

Intersection LOS F
























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	222	378	49	166	44	256	290	44	70	232	20
Future Vol, veh/h	19	222	378	49	166	44	256	290	44	70	232	20
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	249	425	55	187	49	288	326	49	79	261	22
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	120.8	18	29.5	19.8
HCM LOS	F	C	D	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	69%	0%	100%	16%	0%	100%	56%	0%	100%	79%
Vol Right, %	0%	0%	31%	0%	0%	84%	0%	0%	44%	0%	0%	21%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	256	193	141	19	148	452	49	111	99	70	155	97
LT Vol	256	0	0	19	0	0	49	0	0	70	0	0
Through Vol	0	193	97	0	148	74	0	111	55	0	155	77
RT Vol	0	0	44	0	0	378	0	0	44	0	0	20
Lane Flow Rate	288	217	158	21	166	508	55	124	112	79	174	109
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.773	0.555	0.394	0.059	0.437	1.251	0.166	0.358	0.312	0.231	0.487	0.302
Departure Headway (Hd)	10.135	9.635	9.416	9.955	9.455	8.869	11.145	10.645	10.335	10.946	10.446	10.302
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	360	378	384	361	382	411	324	339	350	330	348	351
Service Time	7.835	7.335	7.116	7.679	7.179	6.593	8.845	8.345	8.035	8.646	8.146	8.002
HCM Lane V/C Ratio	0.8	0.574	0.411	0.058	0.435	1.236	0.17	0.366	0.32	0.239	0.5	0.311
HCM Control Delay	40.1	23.7	18.1	13.3	19.3	158.6	16.1	19.2	17.7	16.9	22.7	17.4
HCM Lane LOS	E	C	C	B	C	F	C	C	C	C	C	C
HCM 95th-tile Q	6.3	3.2	1.8	0.2	2.2	21.5	0.6	1.6	1.3	0.9	2.6	1.2

Lanes, Volumes, Timings
3: Madison St. & Avenue 54

EAP AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	222	378	49	166	44	256	290	44	70	232	20
Future Volume (vph)	19	222	378	49	166	44	256	290	44	70	232	20
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	
Minimum Split (s)	9.0	30.5		9.0	30.5	30.5	9.0	30.5	30.5	9.0	30.5	
Total Split (s)	11.0	46.0		15.0	50.0	50.0	25.0	39.0	39.0	20.0	34.0	
Total Split (%)	9.2%	38.3%		12.5%	41.7%	41.7%	20.8%	32.5%	32.5%	16.7%	28.3%	
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.0	3.5	3.5	3.0	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.5		4.0	4.5	4.5	4.0	4.5	4.5	4.0	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	Max	Max	None	Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

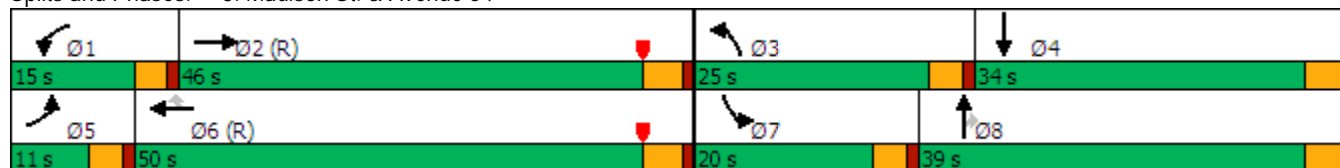
Actuated Cycle Length: 120

Offset: 71 (59%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated























Splits and Phases: 3: Madison St. & Avenue 54



HCM 6th Signalized Intersection Summary

























3: Madison St. & Avenue 54

EAP AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	222	378	49	166	44	256	290	44	70	232	20
Future Volume (veh/h)	19	222	378	49	166	44	256	290	44	70	232	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	21	249	425	55	187	49	288	326	49	79	261	22
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	36	797	711	71	1664	742	373	1031	460	102	795	66
Arrive On Green	0.02	0.46	0.46	0.04	0.48	0.48	0.11	0.30	0.30	0.06	0.25	0.25
Sat Flow, veh/h	1734	1730	1543	1734	3460	1543	3365	3460	1543	1734	3232	270
Grp Volume(v), veh/h	21	249	425	55	187	49	288	326	49	79	139	144
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1734	1730	1772
Q Serve(g_s), s	1.4	10.9	24.6	3.8	3.6	2.0	10.0	8.8	2.8	5.4	7.9	8.0
Cycle Q Clear(g_c), s	1.4	10.9	24.6	3.8	3.6	2.0	10.0	8.8	2.8	5.4	7.9	8.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	36	797	711	71	1664	742	373	1031	460	102	425	436
V/C Ratio(X)	0.58	0.31	0.60	0.78	0.11	0.07	0.77	0.32	0.11	0.78	0.33	0.33
Avail Cap(c_a), veh/h	101	797	711	159	1664	742	589	1031	460	231	425	436
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.2	20.4	24.1	57.0	17.1	16.7	51.9	32.7	30.5	55.7	37.1	37.1
Incr Delay (d2), s/veh	24.4	0.9	3.2	31.0	0.1	0.2	7.1	0.8	0.5	23.0	2.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	4.3	8.8	2.2	1.3	0.7	4.4	3.6	1.1	2.9	3.5	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.6	21.3	27.3	88.0	17.2	16.9	59.0	33.5	31.0	78.7	39.1	39.2
LnGrp LOS	F	C	C	F	B	B	E	C	C	E	D	D
Approach Vol, veh/h	695			291			663			362		
Approach Delay, s/veh	26.8			30.5			44.4			47.8		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.9	59.8	17.3	34.0	6.5	62.2	11.0	40.2				
Change Period (Y+Rc), s	4.0	4.5	4.0	4.5	4.0	4.5	4.0	4.5				
Max Green Setting (Gmax), s	11.0	41.5	21.0	29.5	7.0	45.5	16.0	34.5				
Max Q Clear Time (g_c+I1), s	5.8	26.6	12.0	10.0	3.4	5.6	7.4	10.8				
Green Ext Time (p_c), s	0.1	3.3	1.3	1.3	0.0	1.2	0.2	2.0				
Intersection Summary												
HCM 6th Ctrl Delay	36.9											
HCM 6th LOS	D											

Lanes, Volumes, Timings
4: Madison St. & Avenue 52

EAP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	375	42	28	331	72	94	252	25	63	239	60
Future Volume (vph)	65	375	42	28	331	72	94	252	25	63	239	60
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	23.0	49.0	49.0	16.0	42.0	42.0	18.0	40.0	40.0	15.0	37.0	37.0
Total Split (%)	19.2%	40.8%	40.8%	13.3%	35.0%	35.0%	15.0%	33.3%	33.3%	12.5%	30.8%	30.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

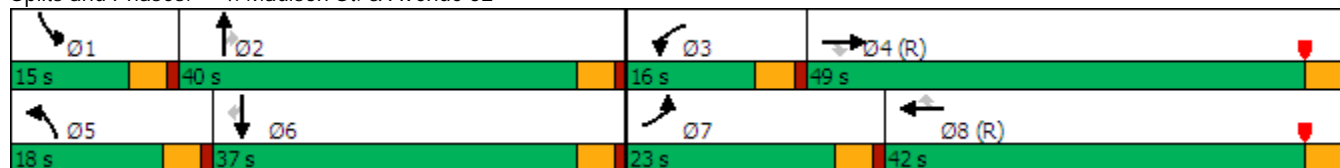
Actuated Cycle Length: 120

Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated

























Splits and Phases: 4: Madison St. & Avenue 52



HCM 6th Signalized Intersection Summary


4: Madison St. & Avenue 52

EAP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	375	42	28	331	72	94	252	25	63	239	60
Future Volume (veh/h)	65	375	42	28	331	72	94	252	25	63	239	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	75	431	48	32	380	83	108	290	29	72	275	69
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	96	1602	714	66	1543	688	191	1024	457	178	1011	451
Arrive On Green	0.06	0.46	0.46	0.04	0.45	0.45	0.06	0.30	0.30	0.05	0.29	0.29
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	75	431	48	32	380	83	108	290	29	72	275	69
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	5.1	9.2	2.1	2.2	8.2	3.8	3.8	7.7	1.6	2.5	7.3	4.0
Cycle Q Clear(g_c), s	5.1	9.2	2.1	2.2	8.2	3.8	3.8	7.7	1.6	2.5	7.3	4.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	96	1602	714	66	1543	688	191	1024	457	178	1011	451
V/C Ratio(X)	0.78	0.27	0.07	0.48	0.25	0.12	0.57	0.28	0.06	0.40	0.27	0.15
Avail Cap(c_a), veh/h	267	1602	714	166	1543	688	379	1024	457	294	1011	451
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	19.8	17.9	56.5	20.7	19.5	55.2	32.5	30.3	55.0	32.7	31.5
Incr Delay (d2), s/veh	12.9	0.4	0.2	5.3	0.4	0.4	2.6	0.7	0.3	1.5	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	3.6	0.7	1.0	3.2	1.3	1.6	3.2	0.6	1.1	3.1	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.9	20.2	18.0	61.9	21.1	19.8	57.8	33.2	30.6	56.4	33.3	32.2
LnGrp LOS	E	C	B	E	C	B	E	C	C	E	C	C
Approach Vol, veh/h	554			495			427			416		
Approach Delay, s/veh	26.6			23.5			39.2			37.1		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.9	40.0	9.1	60.0	11.3	39.6	11.1	58.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	35.5	11.5	44.5	13.5	32.5	18.5	37.5				
Max Q Clear Time (g_c+I1), s	4.5	9.7	4.2	11.2	5.8	9.3	7.1	10.2				
Green Ext Time (p_c), s	0.1	1.7	0.0	2.9	0.1	1.7	0.1	2.4				
Intersection Summary												
HCM 6th Ctrl Delay	31.0											
HCM 6th LOS	C											

Lanes, Volumes, Timings
5: Madison St. & Avenue 50/50th Avenue

EAP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	324	64	24	336	33	115	270	33	55	294	104
Future Volume (vph)	70	324	64	24	336	33	115	270	33	55	294	104
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	22.0	47.0	47.0	16.0	41.0	41.0	19.0	42.0	42.0	15.0	38.0	38.0
Total Split (%)	18.3%	39.2%	39.2%	13.3%	34.2%	34.2%	15.8%	35.0%	35.0%	12.5%	31.7%	31.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

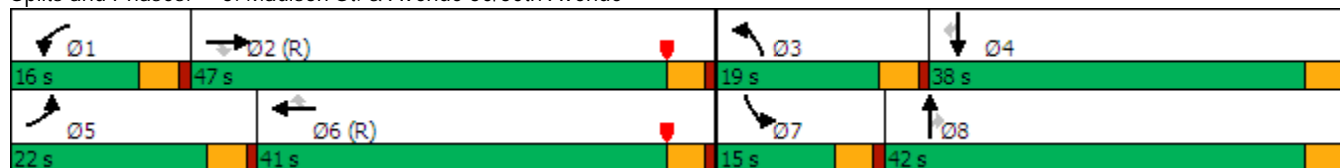
Actuated Cycle Length: 120

Offset: 64.5 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 85
























Control Type: Actuated-Coordinated

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue




























HCM 6th Signalized Intersection Summary 5: Madison St. & Avenue 50/50th Avenue

EAP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	324	64	24	336	33	115	270	33	55	294	104
Future Volume (veh/h)	70	324	64	24	336	33	115	270	33	55	294	104
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	71	331	65	24	343	34	117	276	34	56	300	106
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	92	1578	704	56	1506	672	192	1081	482	166	1054	470
Arrive On Green	0.05	0.46	0.46	0.03	0.44	0.44	0.06	0.31	0.31	0.05	0.30	0.30
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	71	331	65	24	343	34	117	276	34	56	300	106
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	4.9	6.9	2.9	1.6	7.5	1.5	4.1	7.2	1.9	1.9	7.9	6.2
Cycle Q Clear(g_c), s	4.9	6.9	2.9	1.6	7.5	1.5	4.1	7.2	1.9	1.9	7.9	6.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	92	1578	704	56	1506	672	192	1081	482	166	1054	470
V/C Ratio(X)	0.77	0.21	0.09	0.43	0.23	0.05	0.61	0.26	0.07	0.34	0.28	0.23
Avail Cap(c_a), veh/h	253	1578	704	166	1506	672	407	1081	482	294	1054	470
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.1	19.6	18.5	57.0	21.2	19.6	55.3	30.8	29.0	55.1	31.8	31.1
Incr Delay (d2), s/veh	12.9	0.3	0.3	5.2	0.4	0.1	3.1	0.6	0.3	1.2	0.7	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	2.7	1.0	0.8	2.9	0.5	1.8	2.9	0.7	0.8	3.3	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.0	19.9	18.8	62.2	21.6	19.7	58.3	31.4	29.3	56.3	32.4	32.3
LnGrp LOS	E	B	B	E	C	B	E	C	C	E	C	C
Approach Vol, veh/h	467			401			427			462		
Approach Delay, s/veh	27.2			23.9			38.6			35.3		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	59.2	11.4	41.1	10.8	56.7	10.4	42.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.5	42.5	14.5	33.5	17.5	36.5	10.5	37.5				
Max Q Clear Time (g_c+I1), s	3.6	8.9	6.1	9.9	6.9	9.5	3.9	9.2				
Green Ext Time (p_c), s	0.0	2.2	0.2	2.0	0.1	2.1	0.0	1.7				
Intersection Summary												
HCM 6th Ctrl Delay	31.3											
HCM 6th LOS	C											

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54









EAP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 		 	 	
Traffic Volume (vph)	8	10	13	42	7	375	5	121	27	562	146	27
Future Volume (vph)	8	10	13	42	7	375	5	121	27	562	146	27
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh22.2

Intersection LOS C























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	10	13	42	7	375	5	121	27	562	146	27
Future Vol, veh/h	8	10	13	42	7	375	5	121	27	562	146	27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	11	14	47	8	417	6	134	30	624	162	30
Number of Lanes	1	2	0	1	1	1	0	2	0	2	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	11.8	29.5	12.7	20.4
HCM LOS	B	D	B	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	8%	0%	100%	0%	0%	100%	0%	0%	100%	100%	0%
Vol Thru, %	92%	69%	0%	100%	20%	0%	100%	0%	0%	0%	84%
Vol Right, %	0%	31%	0%	0%	80%	0%	0%	100%	0%	0%	16%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	66	88	8	7	16	42	7	375	281	281	173
LT Vol	5	0	8	0	0	42	0	0	281	281	0
Through Vol	61	61	0	7	3	0	7	0	0	0	146
RT Vol	0	27	0	0	13	0	0	375	0	0	27
Lane Flow Rate	73	97	9	7	18	47	8	417	312	312	192
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.166	0.214	0.023	0.018	0.042	0.105	0.016	0.799	0.642	0.642	0.363
Departure Headway (Hd)	8.191	7.937	9.451	8.938	8.368	8.122	7.616	6.907	7.403	7.403	6.792
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	438	452	379	400	428	442	471	525	490	490	531
Service Time	5.939	5.684	7.209	6.696	6.125	5.856	5.349	4.64	5.137	5.137	4.527
HCM Lane V/C Ratio	0.167	0.215	0.024	0.018	0.042	0.106	0.017	0.794	0.637	0.637	0.362
HCM Control Delay	12.6	12.8	12.4	11.9	11.5	11.8	10.5	31.8	22.5	22.5	13.4
HCM Lane LOS	B	B	B	B	B	B	B	D	C	C	B
HCM 95th-tile Q	0.6	0.8	0.1	0.1	0.1	0.3	0	7.6	4.5	4.5	1.6

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54

EAP AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	10	13	42	7	375	5	121	27	562	146	27
Future Volume (vph)	8	10	13	42	7	375	5	121	27	562	146	27
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases		2			6	4	8	8		4	4	
Permitted Phases	2			6		6						4
Detector Phase	2	2		6	6	4	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	30.5	30.5		30.5	30.5	30.5	30.5	30.5		30.5	30.5	30.5
Total Split (s)	37.0	37.0		37.0	37.0	50.0	33.0	33.0		50.0	50.0	50.0
Total Split (%)	30.8%	30.8%		30.8%	30.8%	41.7%	27.5%	27.5%		41.7%	41.7%	41.7%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		None	None	Max	Max	Max		Max	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

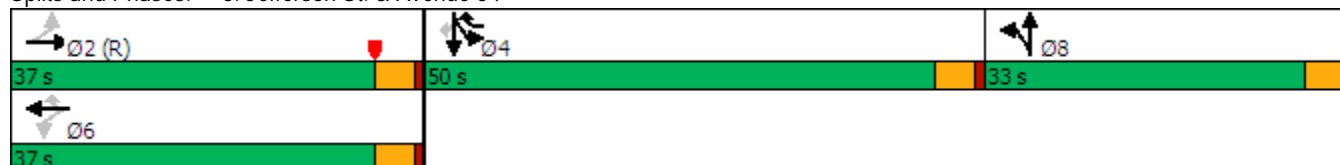
Actuated Cycle Length: 120

Offset: 84.5 (70%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 95























Control Type: Actuated-Coordinated

Splits and Phases: 6: Jefferson St. & Avenue 54























HCM 6th Signalized Intersection Summary 6: Jefferson St. & Avenue 54

EAP AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	10	13	42	7	375	5	121	27	562	146	27
Future Volume (veh/h)	8	10	13	42	7	375	5	121	27	562	146	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	9	11	14	47	8	417	6	134	30	624	162	30
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	318	469	418	426	493	1003	29	656	152	1276	1312	585
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.24	0.24	0.24	0.38	0.38	0.38
Sat Flow, veh/h	962	1730	1543	1386	1821	1543	121	2761	639	3365	3460	1543
Grp Volume(v), veh/h	9	11	14	47	8	417	90	0	80	624	162	30
Grp Sat Flow(s),veh/h/ln	962	1730	1543	1386	1821	1543	1815	0	1706	1682	1730	1543
Q Serve(g_s), s	0.8	0.6	0.8	3.1	0.4	15.5	4.8	0.0	4.5	17.0	3.7	1.5
Cycle Q Clear(g_c), s	1.2	0.6	0.8	3.9	0.4	15.5	4.8	0.0	4.5	17.0	3.7	1.5
Prop In Lane	1.00		1.00	1.00		1.00	0.07		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	318	469	418	426	493	1003	431	0	405	1276	1312	585
V/C Ratio(X)	0.03	0.02	0.03	0.11	0.02	0.42	0.21	0.00	0.20	0.49	0.12	0.05
Avail Cap(c_a), veh/h	318	469	418	426	493	1003	431	0	405	1276	1312	585
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.92	0.92	0.92	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.5	32.1	32.2	33.6	32.0	10.1	36.7	0.0	36.6	28.4	24.3	23.6
Incr Delay (d2), s/veh	0.2	0.1	0.1	0.1	0.0	0.3	1.1	0.0	1.1	1.3	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.3	1.0	0.2	11.7	2.2	0.0	1.9	6.6	1.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.7	32.2	32.3	33.7	32.1	10.3	37.8	0.0	37.7	29.7	24.5	23.8
LnGrp LOS	C	C	C	C	C	B	D	A	D	C	C	C
Approach Vol, veh/h	34			472			170			816		
Approach Delay, s/veh	32.4			13.0			37.7			28.5		
Approach LOS	C			B			D			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	37.0			50.0			37.0			33.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	32.5			45.5			32.5			28.5		
Max Q Clear Time (g_c+I1), s	3.2			19.0			17.5			6.8		
Green Ext Time (p_c), s	0.1			3.2			1.4			0.7		
Intersection Summary												
HCM 6th Ctrl Delay	24.7											
HCM 6th LOS	C											

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EAP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	340	303	10	296	277	200	335	22	186	469	70
Future Volume (vph)	103	340	303	10	296	277	200	335	22	186	469	70
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											






















HCM 6th Roundabout
7: Jefferson St. & Avenue 52

EAP AM Peak hour

Intersection									
Intersection Delay, s/veh	21.9								
Intersection LOS	C								
Approach	EB		WB		NB		SB		
Entry Lanes	1		1		1		1		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	803		627		599		779		
Demand Flow Rate, veh/h	819		639		610		794		
Vehicles Circulating, veh/h	729		699		690		554		
Vehicles Exiting, veh/h	543		577		525		480		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	14.0		6.9		32.1		34.4		
Approach LOS	B		A		D		D		
Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Bypass	
Designated Moves	LT	R	LT	R	LT	R	LT	R	
Assumed Moves	LT	R	LT	R	LT	R	LT	R	
RT Channelized		Free		Free		Free		Free	
Lane Util	1.000		1.000		1.000		1.000		
Follow-Up Headway, s	2.609		2.609		2.609		2.609		
Critical Headway, s	4.976	333	4.976	304	4.976	24	4.976	76	
Entry Flow, veh/h	486	1887	335	1887	586	1887	718	1887	
Cap Entry Lane, veh/h	656	0.980	676	0.980	683	0.980	784	0.980	
Entry HV Adj Factor	0.981	326	0.981	298	0.981	24	0.980	75	
Flow Entry, veh/h	477	1850	329	1850	575	1850	704	1850	
Cap Entry, veh/h	643	0.176	664	0.161	670	0.013	769	0.041	
V/C Ratio	0.741	0.0	0.495	0.0	0.858	0.0	0.916	0.0	
Control Delay, s/veh	23.5	A	13.1	A	33.4	A	38.1	A	
LOS	C	1	B	1	D	0	E	0	
95th %tile Queue, veh	7		3		10		13		

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EAP AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	340	303	10	296	277	200	335	22	186	469	70
Future Volume (vph)	103	340	303	10	296	277	200	335	22	186	469	70
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		100	0		100	0		0	0		0
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	60			60			60			60		
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											























HCM 6th Roundabout
7: Jefferson St. & Avenue 52

EAP AM Peak hour
With Improvements

Intersection										
Intersection Delay, s/veh	8.3									
Intersection LOS	A									
Approach	EB		WB		NB		SB			
Entry Lanes	1		1		2		2			
Conflicting Circle Lanes	2		2		2		2			
Adj Approach Flow, veh/h	803		627		599		779			
Demand Flow Rate, veh/h	819		639		610		794			
Vehicles Circulating, veh/h	729		699		690		554			
Vehicles Exiting, veh/h	543		577		525		480			
Ped Vol Crossing Leg, #/h	0		0		0		0			
Ped Cap Adj	1.000		1.000		1.000		1.000			
Approach Delay, s/veh	9.5		5.4		9.5		8.6			
Approach LOS	A		A		A		A			
Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
Assumed Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
RT Channelized		Free		Free			Free			Free
Lane Util	1.000		1.000		0.469	0.531		0.469	0.531	
Follow-Up Headway, s	2.535		2.535		2.667	2.535		2.667	2.535	
Critical Headway, s	4.328	333	4.328	304	4.645	4.328	24	4.645	4.328	76
Entry Flow, veh/h	486	1887	335	1887	275	311	1887	337	381	1887
Cap Entry Lane, veh/h	764	0.980	784	0.980	716	790	0.980	811	887	0.980
Entry HV Adj Factor	0.981	326	0.981	298	0.982	0.980	24	0.982	0.979	75
Flow Entry, veh/h	477	1850	329	1850	270	305	1850	331	373	1850
Cap Entry, veh/h	749	0.176	769	0.161	703	774	0.013	796	868	0.041
V/C Ratio	0.636	0.0	0.427	0.0	0.384	0.394	0.0	0.416	0.430	0.0
Control Delay, s/veh	16.0	A	10.3	A	10.2	9.6	A	9.8	9.4	A
LOS	C	1	B	1	B	A	0	A	A	0
95th %tile Queue, veh	5		2		2	2		2	2	

Lanes, Volumes, Timings 8: Jefferson St. & Pomelo

EAP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	1	2	4	1	12	13	667	13	37	737	46
Future Volume (vph)	31	1	2	4	1	12	13	667	13	37	737	46
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	61.0	61.0	61.0	61.0	61.0	61.0	20.0	39.0		20.0	39.0	
Total Split (%)	50.8%	50.8%	50.8%	50.8%	50.8%	50.8%	16.7%	32.5%		16.7%	32.5%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary

Area Type: Other

Cycle Length: 120







Actuated Cycle Length: 120

Offset: 90 (75%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110





















Control Type: Actuated-Coordinated

Splits and Phases: 8: Jefferson St. & Pomelo

 Ø1	 Ø2 (R)	 Ø4
20 s	39 s	61 s
 Ø5	 Ø6 (R)	 Ø8
20 s	39 s	61 s

























HCM 6th Signalized Intersection Summary 8: Jefferson St. & Pomelo

EAP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	1	2	4	1	12	13	667	13	37	737	46
Future Volume (veh/h)	31	1	2	4	1	12	13	667	13	37	737	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	33	1	2	4	1	13	14	717	14	40	792	49
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	60	1	145	54	8	145	65	3364	66	128	3382	208
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.04	0.67	0.67	0.07	0.71	0.71
Sat Flow, veh/h	7	10	1543	4	82	1543	1734	5020	98	1734	4787	295
Grp Volume(v), veh/h	34	0	2	5	0	13	14	473	258	40	547	294
Grp Sat Flow(s),veh/h/ln	17	0	1543	86	0	1543	1734	1657	1804	1734	1657	1768
Q Serve(g_s), s	0.1	0.0	0.1	0.0	0.0	0.9	0.9	6.6	6.6	2.6	7.0	7.0
Cycle Q Clear(g_c), s	11.3	0.0	0.1	11.2	0.0	0.9	0.9	6.6	6.6	2.6	7.0	7.0
Prop In Lane	0.97		1.00	0.80		1.00	1.00		0.05	1.00		0.17
Lane Grp Cap(c), veh/h	61	0	145	62	0	145	65	2221	1209	128	2341	1249
V/C Ratio(X)	0.56	0.00	0.01	0.08	0.00	0.09	0.22	0.21	0.21	0.31	0.23	0.24
Avail Cap(c_a), veh/h	574	0	707	602	0	707	202	2221	1209	202	2341	1249
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.81	0.81	0.81
Uniform Delay (d), s/veh	59.7	0.0	49.3	49.9	0.0	49.7	56.1	7.6	7.6	52.7	6.2	6.2
Incr Delay (d2), s/veh	16.1	0.0	0.1	1.2	0.0	0.6	3.5	0.2	0.4	2.4	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.1	0.2	0.0	0.4	0.5	2.0	2.2	1.2	2.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.8	0.0	49.4	51.1	0.0	50.3	59.6	7.8	8.0	55.1	6.4	6.6
LnGrp LOS	E	A	D	D	A	D	E	A	A	E	A	A
Approach Vol, veh/h	36			18			745			881		
Approach Delay, s/veh	74.4			50.5			8.9			8.7		
Approach LOS	E			D			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.8	87.9		17.3	10.5	92.2		17.3				
Change Period (Y+Rc), s	6.0	7.5		6.0	6.0	7.5		6.0				
Max Green Setting (Gmax), s	14.0	31.5		55.0	14.0	31.5		55.0				
Max Q Clear Time (g_c+I1), s	4.6	8.6		13.3	2.9	9.0		13.2				
Green Ext Time (p_c), s	0.1	7.7		0.3	0.0	9.0		0.1				
Intersection Summary												
HCM 6th Ctrl Delay	10.6											
HCM 6th LOS	B											
Notes												

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

EAP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	213	295	54	77	317	202	82	580	48	121	682	338
Future Volume (vph)	213	295	54	77	317	202	82	580	48	121	682	338
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	43.5	43.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	36.3%	36.3%	15.0%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120









Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 115

























Control Type: Actuated-Coordinated

Splits and Phases: 9: Jefferson St. & Avenue 50

			
Ø1	Ø2	Ø3	Ø4 (R)
18 s	40.5 s	18 s	43.5 s
			
Ø5	Ø6	Ø7	Ø8 (R)
18 s	40.5 s	23 s	38.5 s

HCM 6th Signalized Intersection Summary 9: Jefferson St. & Avenue 50

EAP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	295	54	77	317	202	82	580	48	121	682	338
Future Volume (veh/h)	213	295	54	77	317	202	82	580	48	121	682	338
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	217	301	55	79	323	206	84	592	49	123	696	345
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	242	1148	512	161	519	439	163	1253	389	331	1275	396
Arrive On Green	0.14	0.33	0.33	0.09	0.28	0.28	0.03	0.08	0.08	0.10	0.26	0.26
Sat Flow, veh/h	1734	3460	1543	1734	1821	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	217	301	55	79	323	206	84	592	49	123	696	345
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	14.8	7.6	3.0	5.2	18.5	13.2	5.7	13.6	3.5	4.1	14.5	25.7
Cycle Q Clear(g_c), s	14.8	7.6	3.0	5.2	18.5	13.2	5.7	13.6	3.5	4.1	14.5	25.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	242	1148	512	161	519	439	163	1253	389	331	1275	396
V/C Ratio(X)	0.90	0.26	0.11	0.49	0.62	0.47	0.52	0.47	0.13	0.37	0.55	0.87
Avail Cap(c_a), veh/h	246	1148	512	173	519	439	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.7	29.3	27.8	51.7	37.3	35.4	55.5	47.4	42.8	50.6	38.6	42.7
Incr Delay (d2), s/veh	30.8	0.6	0.4	0.9	5.6	3.6	0.9	0.4	0.2	0.3	0.5	17.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	3.1	1.1	2.2	8.8	5.3	2.5	6.0	1.4	1.7	5.7	11.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.6	29.9	28.2	52.6	42.9	39.0	56.4	47.8	43.0	50.9	39.1	60.2
LnGrp LOS	F	C	C	D	D	D	E	D	D	D	D	E
Approach Vol, veh/h	573		608				725		1164			
Approach Delay, s/veh	49.3		42.8				48.5		46.6			
Approach LOS	D		D				D		D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.8	37.8	17.1	47.3	17.3	38.3	22.8	41.7				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	12.0	33.0	12.0	36.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	6.1	15.6	7.2	9.6	7.7	27.7	16.8	20.5				
Green Ext Time (p_c), s	0.1	4.6	0.0	3.7	0.0	3.1	0.0	3.3				
Intersection Summary												
HCM 6th Ctrl Delay	46.8											
HCM 6th LOS	D											

Lanes, Volumes, Timings
10: Avenue 60 & Madison St.






EAP AM Peak hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	36	50	23	136	156	19
Future Volume (vph)	36	50	23	136	156	19
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		40	
Link Distance (ft)		1772	661		437	
Travel Time (s)		30.2	11.3		7.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)						
Sign Control		Stop	Stop		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Intersection Delay, s/veh	9.5
Intersection LOS	A





















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	36	50	23	136	156	19
Future Vol, veh/h	36	50	23	136	156	19
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	60	28	164	188	23
Number of Lanes	0	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	9.2	8.5	10.5
HCM LOS	A	A	B









Lane	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	42%	0%	0%	100%	0%
Vol Thru, %	58%	100%	0%	0%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	86	23	136	156	19
LT Vol	36	0	0	156	0
Through Vol	50	23	0	0	0
RT Vol	0	0	136	0	19
Lane Flow Rate	104	28	164	188	23
Geometry Grp	4	7	7	7	7
Degree of Util (X)	0.151	0.04	0.207	0.299	0.029
Departure Headway (Hd)	5.244	5.253	4.549	5.731	4.525
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	684	682	788	626	788
Service Time	3.279	2.982	2.278	3.473	2.268
HCM Lane V/C Ratio	0.152	0.041	0.208	0.3	0.029
HCM Control Delay	9.2	8.2	8.5	10.9	7.4
HCM Lane LOS	A	A	A	B	A
HCM 95th-tile Q	0.5	0.1	0.8	1.3	0.1

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

EAP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	82	125	4	65	26	98	74	2	25	71	55
Future Volume (vph)	42	82	125	4	65	26	98	74	2	25	71	55
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	82	125	4	65	26	98	74	2	25	71	55
Future Vol, veh/h	42	82	125	4	65	26	98	74	2	25	71	55
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	46	90	137	4	71	29	108	81	2	27	78	60
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	10	10.2	10.5	9.5
HCM LOS	A	B	B	A






Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	34%	0%	4%	100%	0%	0%
Vol Thru, %	0%	97%	66%	0%	68%	0%	100%	0%
Vol Right, %	0%	3%	0%	100%	27%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	98	76	124	125	95	25	71	55
LT Vol	98	0	42	0	4	25	0	0
Through Vol	0	74	82	0	65	0	71	0
RT Vol	0	2	0	125	26	0	0	55
Lane Flow Rate	108	84	136	137	104	27	78	60
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.199	0.142	0.232	0.2	0.178	0.051	0.135	0.093
Departure Headway (Hd)	6.651	6.126	6.127	5.253	6.142	6.732	6.226	5.517
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	540	585	586	683	584	532	576	649
Service Time	4.386	3.86	3.86	2.986	3.881	4.468	3.962	3.252
HCM Lane V/C Ratio	0.2	0.144	0.232	0.201	0.178	0.051	0.135	0.092
HCM Control Delay	11	9.9	10.7	9.3	10.2	9.8	9.9	8.8
HCM Lane LOS	B	A	B	A	B	A	A	A
HCM 95th-tile Q	0.7	0.5	0.9	0.7	0.6	0.2	0.5	0.3

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	105	32	18	58	41	25	115	13	31	167	49
Future Volume (vph)	67	105	32	18	58	41	25	115	13	31	167	49
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	67	105	32	18	58	41	25	115	13	31	167	49
Future Vol, veh/h	67	105	32	18	58	41	25	115	13	31	167	49
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	80	125	38	21	69	49	30	137	15	37	199	58
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	11.7	10	10.8	11.6
HCM LOS	B	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	16%	33%	15%	16%	0%
Vol Thru, %	75%	51%	50%	84%	0%
Vol Right, %	8%	16%	35%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	153	204	117	198	49
LT Vol	25	67	18	31	0
Through Vol	115	105	58	167	0
RT Vol	13	32	41	0	49
Lane Flow Rate	182	243	139	236	58
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.282	0.368	0.213	0.389	0.084
Departure Headway (Hd)	5.576	5.454	5.493	5.943	5.154
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	643	658	652	606	694
Service Time	3.619	3.496	3.541	3.681	2.892
HCM Lane V/C Ratio	0.283	0.369	0.213	0.389	0.084
HCM Control Delay	10.8	11.7	10	12.4	8.4
HCM Lane LOS	B	B	A	B	A
HCM 95th-tile Q	1.2	1.7	0.8	1.8	0.3

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAP AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	105	32	18	58	41	25	115	13	31	167	49
Future Volume (vph)	67	105	32	18	58	41	25	115	13	31	167	49
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	30.5	30.5		30.5	30.5		30.5	30.5		30.5	30.5	30.5
Total Split (s)	61.0	61.0		61.0	61.0		59.0	59.0		59.0	59.0	59.0
Total Split (%)	50.8%	50.8%		50.8%	50.8%		49.2%	49.2%		49.2%	49.2%	49.2%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)		4.5			4.5			4.5			4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120







Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated


















Splits and Phases: 12: Monroe St. & Avenue 58

		
Ø2 (R)		Ø4
59 s		61 s
		
Ø6 (R)		Ø8
59 s		61 s

HCM 6th Signalized Intersection Summary






















12: Monroe St. & Avenue 58

EAP AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	105	32	18	58	41	25	115	13	31	167	49
Future Volume (veh/h)	67	105	32	18	58	41	25	115	13	31	167	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	80	125	38	21	69	49	30	137	15	37	199	58
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	120	155	44	60	165	104	213	951	101	209	1102	1151
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.75	0.75	0.75	0.75	0.75	0.75
Sat Flow, veh/h	450	868	244	142	921	579	238	1274	136	234	1476	1543
Grp Volume(v), veh/h	243	0	0	139	0	0	182	0	0	236	0	58
Grp Sat Flow(s),veh/h/ln	1563	0	0	1642	0	0	1648	0	0	1710	0	1543
Q Serve(g_s), s	9.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
Cycle Q Clear(g_c), s	18.1	0.0	0.0	8.7	0.0	0.0	3.4	0.0	0.0	4.5	0.0	1.2
Prop In Lane	0.33		0.16	0.15		0.35	0.16		0.08	0.16		1.00
Lane Grp Cap(c), veh/h	319	0	0	328	0	0	1265	0	0	1311	0	1151
V/C Ratio(X)	0.76	0.00	0.00	0.42	0.00	0.00	0.14	0.00	0.00	0.18	0.00	0.05
Avail Cap(c_a), veh/h	774	0	0	796	0	0	1265	0	0	1311	0	1151
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.8	0.0	0.0	44.0	0.0	0.0	4.3	0.0	0.0	4.4	0.0	4.0
Incr Delay (d2), s/veh	3.7	0.0	0.0	0.9	0.0	0.0	0.2	0.0	0.0	0.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	0.0	0.0	3.8	0.0	0.0	1.0	0.0	0.0	1.4	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.5	0.0	0.0	44.9	0.0	0.0	4.5	0.0	0.0	4.7	0.0	4.1
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	243			139			182			294		
Approach Delay, s/veh	51.5			44.9			4.5			4.6		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	94.0			26.0			94.0			26.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	54.5			56.5			54.5			56.5		
Max Q Clear Time (g_c+I1), s	5.4			20.1			6.5			10.7		
Green Ext Time (p_c), s	1.0			1.3			1.5			0.9		
Intersection Summary												
HCM 6th Ctrl Delay	24.4											
HCM 6th LOS	C											

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.









EAP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	112	13	20	66	34	12	172	25	67	191	13
Future Volume (vph)	0	112	13	20	66	34	12	172	25	67	191	13
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 11.5

Intersection LOS B



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	112	13	20	66	34	12	172	25	67	191	13
Future Vol, veh/h	0	112	13	20	66	34	12	172	25	67	191	13
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	132	15	24	78	40	14	202	29	79	225	15
Number of Lanes	1	1	1	0	1	0	1	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	1	3
HCM Control Delay	10.8	11.6	13	10.7
HCM LOS	B	B	B	B







Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	0%	0%	17%	100%	0%	0%
Vol Thru, %	0%	87%	100%	100%	0%	55%	0%	100%	83%
Vol Right, %	0%	13%	0%	0%	100%	28%	0%	0%	17%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	12	197	0	112	13	120	67	127	77
LT Vol	12	0	0	0	0	20	67	0	0
Through Vol	0	172	0	112	0	66	0	127	64
RT Vol	0	25	0	0	13	34	0	0	13
Lane Flow Rate	14	232	0	132	15	141	79	150	90
Geometry Grp	8	8	7	7	7	8	8	8	8
Degree of Util (X)	0.027	0.403	0	0.234	0.024	0.258	0.147	0.259	0.153
Departure Headway (Hd)	6.864	6.267	6.391	6.391	5.684	6.583	6.728	6.222	6.101
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	520	572	0	560	627	544	532	577	586
Service Time	4.62	4.022	4.148	4.148	3.44	4.346	4.481	3.974	3.854
HCM Lane V/C Ratio	0.027	0.406	0	0.236	0.024	0.259	0.148	0.26	0.154
HCM Control Delay	9.8	13.2	9.1	11.1	8.6	11.6	10.6	11.2	10
HCM Lane LOS	A	B	N	B	A	B	B	B	A
HCM 95th-tile Q	0.1	1.9	0	0.9	0.1	1	0.5	1	0.5

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	190	35	31	262	52	40	217	12	51	272	108
Future Volume (vph)	39	190	35	31	262	52	40	217	12	51	272	108
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	66.1
Intersection LOS	F



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	190	35	31	262	52	40	217	12	51	272	108
Future Vol, veh/h	39	190	35	31	262	52	40	217	12	51	272	108
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	235	43	38	323	64	49	268	15	63	336	133
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	31.3	105.9	55.2	62.3
HCM LOS	D	F	F	F

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	15%	100%	0%	9%	16%	0%
Vol Thru, %	81%	0%	84%	76%	84%	0%
Vol Right, %	4%	0%	16%	15%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	269	39	225	345	323	108
LT Vol	40	39	0	31	51	0
Through Vol	217	0	190	262	272	0
RT Vol	12	0	35	52	0	108
Lane Flow Rate	332	48	278	426	399	133
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.882	0.133	0.722	1.096	1.002	0.306
Departure Headway (Hd)	10.108	10.44	9.801	9.495	9.504	8.69
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	362	346	372	388	383	416
Service Time	8.108	8.14	7.501	7.495	7.204	6.39
HCM Lane V/C Ratio	0.917	0.139	0.747	1.098	1.042	0.32
HCM Control Delay	55.2	14.7	34.2	105.9	78.1	15.2
HCM Lane LOS	F	B	D	F	F	C
HCM 95th-tile Q	8.5	0.5	5.5	15	12	1.3

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAP AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	190	35	31	262	52	40	217	12	51	272	108
Future Volume (vph)	39	190	35	31	262	52	40	217	12	51	272	108
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	30.5	30.5		30.5	30.5		30.5	30.5		30.5	30.5	30.5
Total Split (s)	59.0	59.0		59.0	59.0		61.0	61.0		61.0	61.0	61.0
Total Split (%)	49.2%	49.2%		49.2%	49.2%		50.8%	50.8%		50.8%	50.8%	50.8%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)	4.5	4.5			4.5			4.5			4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

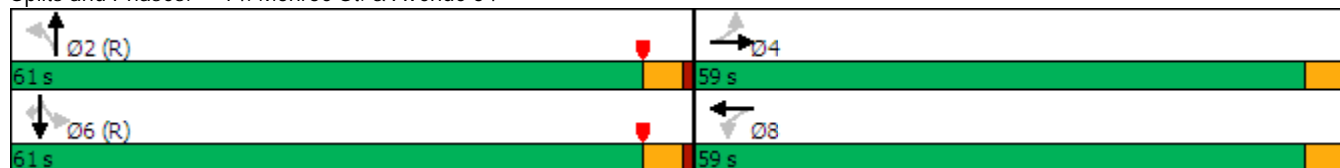
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated



















Splits and Phases: 14: Monroe St. & Avenue 54



HCM 6th Signalized Intersection Summary























14: Monroe St. & Avenue 54

EAP AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	190	35	31	262	52	40	217	12	51	272	108
Future Volume (veh/h)	39	190	35	31	262	52	40	217	12	51	272	108
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	48	235	43	38	323	64	49	268	15	63	336	133
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	172	459	84	59	372	71	154	818	44	173	900	954
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.62	0.62	0.62	0.62	0.62	0.62
Sat Flow, veh/h	997	1498	274	87	1212	230	193	1323	72	224	1455	1543
Grp Volume(v), veh/h	48	0	278	425	0	0	332	0	0	399	0	133
Grp Sat Flow(s),veh/h/ln	997	0	1772	1529	0	0	1588	0	0	1679	0	1543
Q Serve(g_s), s	0.0	0.0	15.5	17.1	0.0	0.0	0.4	0.0	0.0	0.0	0.0	4.3
Cycle Q Clear(g_c), s	16.9	0.0	15.5	32.6	0.0	0.0	13.2	0.0	0.0	12.9	0.0	4.3
Prop In Lane	1.00		0.15	0.09		0.15	0.15		0.05	0.16		1.00
Lane Grp Cap(c), veh/h	172	0	543	501	0	0	1016	0	0	1073	0	954
V/C Ratio(X)	0.28	0.00	0.51	0.85	0.00	0.00	0.33	0.00	0.00	0.37	0.00	0.14
Avail Cap(c_a), veh/h	319	0	805	749	0	0	1016	0	0	1073	0	954
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.7	0.0	34.2	40.3	0.0	0.0	10.7	0.0	0.0	11.2	0.0	9.6
Incr Delay (d2), s/veh	0.9	0.0	0.7	5.9	0.0	0.0	0.9	0.0	0.0	1.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	6.4	12.2	0.0	0.0	3.9	0.0	0.0	4.9	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.6	0.0	35.0	46.2	0.0	0.0	11.6	0.0	0.0	12.2	0.0	9.9
LnGrp LOS	D	A	C	D	A	A	B	A	A	B	A	A
Approach Vol, veh/h	326			425			332			532		
Approach Delay, s/veh	35.1			46.2			11.6			11.6		
Approach LOS	D			D			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	78.7			41.3			78.7			41.3		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	56.5			54.5			56.5			54.5		
Max Q Clear Time (g_c+I1), s	15.2			18.9			14.9			34.6		
Green Ext Time (p_c), s	2.0			1.7			2.8			2.2		
Intersection Summary												
HCM 6th Ctrl Delay	25.4											
HCM 6th LOS	C											

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52










EAP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	293	47	20	305	133	47	227	9	110	319	39
Future Volume (vph)	84	293	47	20	305	133	47	227	9	110	319	39
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh50.4

Intersection LOS F























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	84	293	47	20	305	133	47	227	9	110	319	39
Future Vol, veh/h	84	293	47	20	305	133	47	227	9	110	319	39
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	101	353	57	24	367	160	57	273	11	133	384	47
Number of Lanes	1	1	1	0	2	1	0	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay	73.8	29.5	89.5	25.9
HCM LOS	F	D	F	D

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	17%	100%	0%	0%	16%	0%	0%	100%	0%	0%
Vol Thru, %	80%	0%	100%	0%	84%	100%	0%	0%	100%	73%
Vol Right, %	3%	0%	0%	100%	0%	0%	100%	0%	0%	27%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	283	84	293	47	122	203	133	110	213	145
LT Vol	47	84	0	0	20	0	0	110	0	0
Through Vol	227	0	293	0	102	203	0	0	213	106
RT Vol	9	0	0	47	0	0	133	0	0	39
Lane Flow Rate	341	101	353	57	147	245	160	133	256	175
Geometry Grp	8	8	8	8	8	8	8	7	7	7
Degree of Util (X)	1.022	0.315	1.05	0.158	0.438	0.726	0.443	0.376	0.691	0.463
Departure Headway (Hd)	10.898	11.723	11.191	10.445	11.368	11.28	10.531	10.637	10.111	9.913
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	334	309	328	345	320	323	345	341	359	366
Service Time	8.598	9.423	8.891	8.145	9.068	8.98	8.231	8.337	7.811	7.613
HCM Lane V/C Ratio	1.021	0.327	1.076	0.165	0.459	0.759	0.464	0.39	0.713	0.478
HCM Control Delay	89.5	19.7	98.7	15.1	22.6	38.9	21.3	19.6	32.6	20.9
HCM Lane LOS	F	C	F	C	C	E	C	C	D	C
HCM 95th-tile Q	11.7	1.3	12.3	0.6	2.1	5.3	2.2	1.7	4.9	2.4

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52

EAP AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	293	47	20	305	133	47	227	9	110	319	39
Future Volume (vph)	84	293	47	20	305	133	47	227	9	110	319	39
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	2	2	2	6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	32.0	32.0	32.0	32.0	32.0	32.0	28.0	28.0		28.0	28.0	
Total Split (%)	53.3%	53.3%	53.3%	53.3%	53.3%	53.3%	46.7%	46.7%		46.7%	46.7%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5		4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max		Max	Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

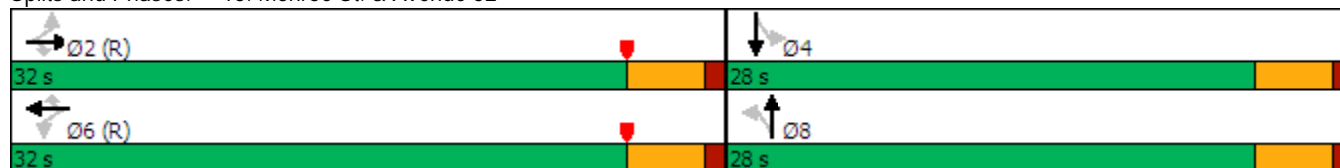
Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 45























Control Type: Actuated-Coordinated

Splits and Phases: 15: Monroe St. & Avenue 52



























HCM 6th Signalized Intersection Summary 15: Monroe St. & Avenue 52

EAP AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	293	47	20	305	133	47	227	9	110	319	39
Future Volume (veh/h)	84	293	47	20	305	133	47	227	9	110	319	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	101	353	57	24	367	160	57	273	11	133	384	47
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	465	835	707	440	1586	707	137	561	21	516	1216	148
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	876	1821	1543	976	3460	1543	171	1432	53	1095	3106	378
Grp Volume(v), veh/h	101	353	57	24	367	160	341	0	0	133	213	218
Grp Sat Flow(s),veh/h/ln	876	1821	1543	976	1730	1543	1657	0	0	1095	1730	1753
Q Serve(g_s), s	4.7	7.8	1.2	1.0	3.9	3.8	0.3	0.0	0.0	0.0	5.1	5.2
Cycle Q Clear(g_c), s	8.6	7.8	1.2	8.8	3.9	3.8	8.5	0.0	0.0	6.6	5.1	5.2
Prop In Lane	1.00		1.00	1.00		1.00	0.17		0.03	1.00		0.22
Lane Grp Cap(c), veh/h	465	835	707	440	1586	707	719	0	0	516	678	687
V/C Ratio(X)	0.22	0.42	0.08	0.05	0.23	0.23	0.47	0.00	0.00	0.26	0.31	0.32
Avail Cap(c_a), veh/h	465	835	707	440	1586	707	719	0	0	516	678	687
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.5	10.9	9.1	13.9	9.8	9.8	13.7	0.0	0.0	13.1	12.7	12.7
Incr Delay (d2), s/veh	1.1	1.6	0.2	0.2	0.3	0.7	2.2	0.0	0.0	1.2	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	2.6	0.3	0.2	1.1	1.0	3.1	0.0	0.0	1.2	1.8	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.5	12.5	9.4	14.1	10.2	10.6	15.9	0.0	0.0	14.3	13.9	13.9
LnGrp LOS	B	B	A	B	B	B	B	A	A	B	B	B
Approach Vol, veh/h	511			551			341			564		
Approach Delay, s/veh	12.3			10.5			15.9			14.0		
Approach LOS	B			B			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	32.0			28.0			32.0			28.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	27.5			23.5			27.5			23.5		
Max Q Clear Time (g_c+I1), s	10.6			8.6			10.8			10.5		
Green Ext Time (p_c), s	2.3			2.4			2.4			1.5		
Intersection Summary												
HCM 6th Ctrl Delay	12.9											
HCM 6th LOS	B											

Lanes, Volumes, Timings
16: Monroe St. & 50th Avenue

EAP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	251	44	31	360	124	29	348	28	77	393	31
Future Volume (vph)	20	251	44	31	360	124	29	348	28	77	393	31
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	20.5	20.5	20.5	20.5	20.5	11.5	11.5	20.5		11.5	20.5	
Total Split (s)	26.0	26.0	26.0	26.0	26.0	12.0	11.5	22.0		12.0	22.5	
Total Split (%)	43.3%	43.3%	43.3%	43.3%	43.3%	20.0%	19.2%	36.7%		20.0%	37.5%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

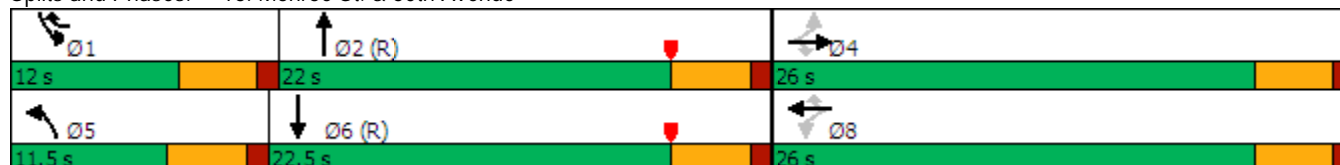
Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

























Control Type: Actuated-Coordinated

Splits and Phases: 16: Monroe St. & 50th Avenue



















HCM 6th Signalized Intersection Summary
16: Monroe St. & 50th Avenue

EAP AM Peak hour





												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	251	44	31	360	124	29	348	28	77	393	31
Future Volume (veh/h)	20	251	44	31	360	124	29	348	28	77	393	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	24	295	52	36	424	146	34	409	33	91	462	36
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	189	538	456	285	538	610	102	1313	106	172	1449	113
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.06	0.40	0.40	0.10	0.45	0.44
Sat Flow, veh/h	842	1821	1543	1034	1821	1543	1734	3244	261	1734	3253	253
Grp Volume(v), veh/h	24	295	52	36	424	146	34	217	225	91	245	253
Grp Sat Flow(s),veh/h/ln	842	1821	1543	1034	1821	1543	1734	1730	1774	1734	1730	1776
Q Serve(g_s), s	1.6	8.2	1.5	1.8	12.8	3.8	1.1	5.1	5.2	3.0	5.5	5.5
Cycle Q Clear(g_c), s	14.4	8.2	1.5	10.0	12.8	3.8	1.1	5.1	5.2	3.0	5.5	5.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.15	1.00		0.14
Lane Grp Cap(c), veh/h	189	538	456	285	538	610	102	701	718	172	771	791
V/C Ratio(X)	0.13	0.55	0.11	0.13	0.79	0.24	0.33	0.31	0.31	0.53	0.32	0.32
Avail Cap(c_a), veh/h	249	668	566	358	668	719	217	701	718	231	771	791
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.0	17.8	15.4	22.0	19.4	12.1	27.1	12.1	12.2	25.7	10.7	10.8
Incr Delay (d2), s/veh	0.3	0.9	0.1	0.2	5.0	0.2	1.9	1.2	1.1	2.5	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.9	0.4	0.4	5.2	1.0	0.5	1.8	1.8	1.2	1.8	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.3	18.6	15.5	22.2	24.4	12.3	29.0	13.3	13.3	28.2	11.8	11.8
LnGrp LOS	C	B	B	C	C	B	C	B	B	C	B	B
Approach Vol, veh/h	371				606				476			
Approach Delay, s/veh	18.7				21.4				14.4			
Approach LOS	B				C				B			
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	28.3		21.7	7.5	30.7		21.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	17.5		21.5	7.0	18.0		21.5				
Max Q Clear Time (g_c+I1), s	5.0	7.2		16.4	3.1	7.5		14.8				
Green Ext Time (p_c), s	0.0	1.6		0.8	0.0	1.9		1.7				
Intersection Summary												
HCM 6th Ctrl Delay	17.2											
HCM 6th LOS	B											

Lanes, Volumes, Timings
17: Jackson St. & 58th Avenue

EAP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	104	12	2	81	4	6	91	3	13	141	16
Future Volume (vph)	19	104	12	2	81	4	6	91	3	13	141	16
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		5266			1079			1013			510	
Travel Time (s)		71.8			14.7			12.6			6.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	104	12	2	81	4	6	91	3	13	141	16
Future Vol, veh/h	19	104	12	2	81	4	6	91	3	13	141	16
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	111	13	2	86	4	6	97	3	14	150	17
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.8	8.5	8.5	9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	14%	2%	8%
Vol Thru, %	91%	77%	93%	83%
Vol Right, %	3%	9%	5%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	135	87	170
LT Vol	6	19	2	13
Through Vol	91	104	81	141
RT Vol	3	12	4	16
Lane Flow Rate	106	144	93	181
Geometry Grp	1	1	1	1
Degree of Util (X)	0.139	0.187	0.122	0.23
Departure Headway (Hd)	4.708	4.696	4.762	4.586
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	761	763	751	781
Service Time	2.746	2.735	2.804	2.62
HCM Lane V/C Ratio	0.139	0.189	0.124	0.232
HCM Control Delay	8.5	8.8	8.5	9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.7	0.4	0.9

Lanes, Volumes, Timings
18: Avenue 60 & S. Access




EAP AM Peak hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	24	72	0
Future Volume (vph)	0	0	0	24	72	0
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		25	
Link Distance (ft)		207	1772		380	
Travel Time (s)		3.5	30.2		10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Int Delay, s/veh 6.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	24	72	0
Future Vol, veh/h	0	0	0	24	72	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	26	78	0












Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	26	0	0 13 13
Stage 1	-	-	- 13 -
Stage 2	-	-	- 0 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1588	-	- 1006 1067
Stage 1	-	-	- 1010 -
Stage 2	-	-	- - -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1588	-	- 1006 1067
Mov Cap-2 Maneuver	-	-	- 1006 -
Stage 1	-	-	- 1010 -
Stage 2	-	-	- - -

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1588	-	-	-	1006
HCM Lane V/C Ratio	-	-	-	-	0.078
HCM Control Delay (s)	0	-	-	-	8.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.3







Lanes, Volumes, Timings
19: Madison St. & Main Access

EAP AM Peak hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	207	15	19	221	228	67
Future Volume (vph)	207	15	19	221	228	67
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100	0	150			0
Storage Lanes	1	1	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	25			50	50	
Link Distance (ft)	499			880	125	
Travel Time (s)	13.6			12.0	1.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
19: Madison St. & Main Access

EAP AM Peak hour

Intersection						
Int Delay, s/veh	4.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	207	15	19	221	228	67
Future Vol, veh/h	207	15	19	221	228	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	225	16	21	240	248	73











Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	447	161	321	0	-	0
Stage 1	285	-	-	-	-	-
Stage 2	162	-	-	-	-	-
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	540	855	1236	-	-	-
Stage 1	738	-	-	-	-	-
Stage 2	850	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	531	855	1236	-	-	-
Mov Cap-2 Maneuver	592	-	-	-	-	-
Stage 1	725	-	-	-	-	-
Stage 2	850	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.4	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1236	-	592	855	-	-
HCM Lane V/C Ratio	0.017	-	0.38	0.019	-	-
HCM Control Delay (s)	8	-	14.8	9.3	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	1.8	0.1	-	-

Lanes, Volumes, Timings
20: Project Access 1 & Avenue 58

EAP AM Peak hour





						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	68	5	16	85	5	2
Future Volume (vph)	68	5	16	85	5	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)		0	50		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			60		60	
Link Speed (mph)	50			50	25	
Link Distance (ft)	403			335	383	
Travel Time (s)	5.5			4.6	10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
20: Project Access 1 & Avenue 58

EAP AM Peak hour

Intersection

Int Delay, s/veh 1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	68	5	16	85	5	2
Future Vol, veh/h	68	5	16	85	5	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	74	5	17	92	5	2











Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	79
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.13
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.219
Pot Cap-1 Maneuver	-	-	1518
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1518
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	842	-	-	1518	-
HCM Lane V/C Ratio	0.009	-	-	0.011	-
HCM Control Delay (s)	9.3	-	-	7.4	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
21: Project Access 2 & Avenue 58

EAP AM Peak hour

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations				 		
Traffic Volume (vph)	62	8	0	101	0	3
Future Volume (vph)	62	8	0	101	0	3
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	50			50	25	
Link Distance (ft)	335			276	233	
Travel Time (s)	4.6			3.8	6.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					













HCM 6th TWSC
21: Project Access 2 & Avenue 58

EAP AM Peak hour

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↱↱		↱
Traffic Vol, veh/h	62	8	0	101	0	3
Future Vol, veh/h	62	8	0	101	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	9	0	110	0	3
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	72
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	-	-	0	-	0	990
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	990
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		8.6	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	990	-	-	-		
HCM Lane V/C Ratio	0.003	-	-	-		
HCM Control Delay (s)	8.6	-	-	-		
HCM Lane LOS	A	-	-	-		
HCM 95th %tile Q(veh)	0	-	-	-		




Lanes, Volumes, Timings
22: Madison St. & Project Access 3

EAP AM Peak hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				 	  	
Traffic Volume (vph)	0	6	0	428	289	13
Future Volume (vph)	0	6	0	428	289	13
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	25			50	50	
Link Distance (ft)	210			268	288	
Travel Time (s)	5.7			3.7	3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

























HCM 6th TWSC
22: Madison St. & Project Access 3

EAP AM Peak hour










Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	6	0	428	289	13
Future Vol, veh/h	0	6	0	428	289	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	7	0	465	314	14
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	164	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	852	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	852	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.3	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT EBLn1		SBT	SBR		
Capacity (veh/h)	- 852		-	-		
HCM Lane V/C Ratio	- 0.008		-	-		
HCM Control Delay (s)	- 9.3		-	-		
HCM Lane LOS	- A		-	-		
HCM 95th %tile Q(veh)	- 0		-	-		

Lanes, Volumes, Timings
1: Madison St. & Avenue 58

EAP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	74	5	93	38	125	5	358	58	93	497	49
Future Volume (vph)	84	74	5	93	38	125	5	358	58	93	497	49
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Intersection Delay, s/veh	19.9											
Intersection LOS	C											















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	84	74	5	93	38	125	5	358	58	93	497	49
Future Vol, veh/h	84	74	5	93	38	125	5	358	58	93	497	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	91	80	5	101	41	136	5	389	63	101	540	53
Number of Lanes	1	1	1	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	14.5	14.6	19.2	23.8
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	67%	0%	100%	0%	0%	100%	9%	0%	100%
Vol Right, %	0%	0%	33%	0%	0%	100%	0%	0%	91%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	5	239	177	84	74	5	93	25	138	93	331
LT Vol	5	0	0	84	0	0	93	0	0	93	0
Through Vol	0	239	119	0	74	0	0	25	13	0	331
RT Vol	0	0	58	0	0	5	0	0	125	0	0
Lane Flow Rate	5	259	193	91	80	5	101	28	150	101	360
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.013	0.582	0.42	0.239	0.199	0.012	0.257	0.066	0.333	0.228	0.763
Departure Headway (Hd)	8.58	8.08	7.851	9.425	8.925	8.225	9.15	8.65	8.015	8.127	7.627
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	416	446	457	380	401	433	391	413	447	441	472
Service Time	6.355	5.855	5.626	7.213	6.713	6.013	6.931	6.431	5.795	5.894	5.394
HCM Lane V/C Ratio	0.012	0.581	0.422	0.239	0.2	0.012	0.258	0.068	0.336	0.229	0.763
HCM Control Delay	11.5	21.6	16.2	15.2	13.9	11.1	15.1	12	14.8	13.3	31.1
HCM Lane LOS	B	C	C	C	B	B	C	B	B	B	D
HCM 95th-tile Q	0	3.6	2	0.9	0.7	0	1	0.2	1.4	0.9	6.6

Lanes, Volumes, Timings
2: Madison St. & Airport Bl.

EAP PM Peak hour

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	51	108	1	474	49	76	532
Future Volume (vph)	51	108	1	474	49	76	532
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		8			2		
Detector Phase	3	8	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	20.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	22.0	22.0	12.0	25.0	25.0	13.0	26.0
Total Split (%)	36.7%	36.7%	20.0%	41.7%	41.7%	21.7%	43.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 60

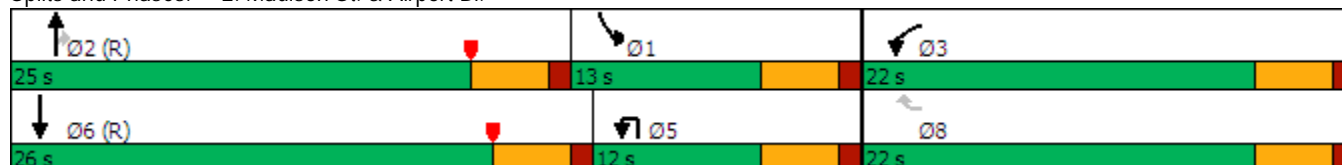
Actuated Cycle Length: 60

Offset: 28 (47%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 2: Madison St. & Airport Bl.



HCM 6th Signalized Intersection Summary
























2: Madison St. & Airport Bl.

EAP PM Peak hour

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	51	108	1	474	49	76	532
Future Volume (veh/h)	51	108	1	474	49	76	532
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	57	121		533	55	85	598
Peak Hour Factor	0.89	0.89		0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	206	184		1211	540	574	2587
Arrive On Green	0.12	0.12		0.35	0.35	0.33	0.75
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	57	121		533	55	85	598
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	1.8	4.5		7.1	0.8	2.1	3.2
Cycle Q Clear(g_c), s	1.8	4.5		7.1	0.8	2.1	3.2
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	206	184		1211	540	574	2587
V/C Ratio(X)	0.28	0.66		0.44	0.10	0.15	0.23
Avail Cap(c_a), veh/h	520	463		1211	540	574	2587
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	25.3		15.0	4.7	14.1	2.3
Incr Delay (d2), s/veh	0.7	4.0		1.2	0.4	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.6		2.4	0.4	0.7	0.2
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	24.8	29.3		16.1	5.1	14.2	2.5
LnGrp LOS	C	C		B	A	B	A
Approach Vol, veh/h	178			588			683
Approach Delay, s/veh	27.8			15.1			4.0
Approach LOS	C			B			A
Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	23.9	25.0				48.9	11.1
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	8.5	20.5				21.5	17.5
Max Q Clear Time (g_c+l1), s	4.1	9.1				5.2	6.5
Green Ext Time (p_c), s	0.1	2.5				3.2	0.3
Intersection Summary							
HCM 6th Ctrl Delay			11.4				
HCM 6th LOS			B				
Notes							
User approved ignoring U-Turning movement.							

Lanes, Volumes, Timings
3: Madison St. & Avenue 54









EAP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	267	439	49	167	106	353	432	97	61	269	18
Future Volume (vph)	24	267	439	49	167	106	353	432	97	61	269	18
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 31.8

Intersection LOS F























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	267	439	49	167	106	353	432	97	61	269	18
Future Vol, veh/h	24	267	439	49	167	106	353	432	97	61	269	18
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	300	493	55	188	119	397	485	109	69	302	20
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	277.8	27	89.3	30.4
HCM LOS	F	D	F	D

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	60%	0%	100%	17%	0%	100%	34%	0%	100%	83%
Vol Right, %	0%	0%	40%	0%	0%	83%	0%	0%	66%	0%	0%	17%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	353	288	241	24	178	528	49	111	162	61	179	108
LT Vol	353	0	0	24	0	0	49	0	0	61	0	0
Through Vol	0	288	144	0	178	89	0	111	56	0	179	90
RT Vol	0	0	97	0	0	439	0	0	106	0	0	18
Lane Flow Rate	397	324	271	27	200	593	55	125	182	69	201	121
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	1.178	0.918	0.748	0.087	0.62	1.746	0.191	0.417	0.582	0.236	0.666	0.396
Departure Headway (Hd)	11.636	11.136	10.854	11.909	11.409	10.827	13.413	12.913	12.454	13.402	12.902	12.785
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	317	327	336	303	318	344	269	280	292	269	282	283
Service Time	9.336	8.836	8.554	9.609	9.109	8.527	11.113	10.613	10.154	11.102	10.602	10.485
HCM Lane V/C Ratio	1.252	0.991	0.807	0.089	0.629	1.724	0.204	0.446	0.623	0.257	0.713	0.428
HCM Control Delay	142.5	65.7	39.7	15.7	31	372.9	19.3	24.5	31.1	20.2	38	23.6
HCM Lane LOS	F	F	E	C	D	F	C	C	D	C	E	C
HCM 95th-tile Q	15.6	9	5.7	0.3	3.9	36.9	0.7	2	3.4	0.9	4.4	1.8

Lanes, Volumes, Timings
3: Madison St. & Avenue 54

EAP PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	267	439	49	167	106	353	432	97	61	269	18
Future Volume (vph)	24	267	439	49	167	106	353	432	97	61	269	18
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	7.0		5.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	
Minimum Split (s)	9.0	33.0		9.0	30.5	30.5	9.0	30.5	30.5	9.0	30.5	
Total Split (s)	10.0	46.0		14.0	50.0	50.0	28.0	44.0	44.0	16.0	32.0	
Total Split (%)	8.3%	38.3%		11.7%	41.7%	41.7%	23.3%	36.7%	36.7%	13.3%	26.7%	
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.0	3.5	3.5	3.0	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.5		4.0	4.5	4.5	4.0	4.5	4.5	4.0	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	Max	Max	None	Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

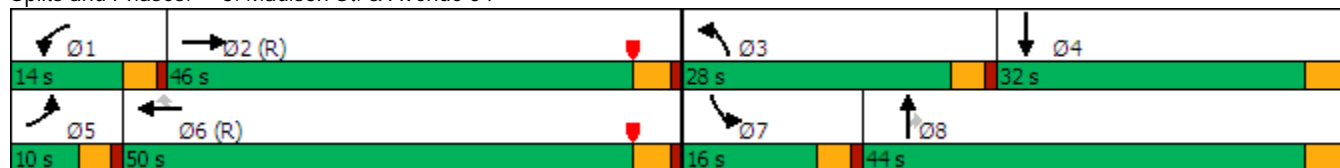
Actuated Cycle Length: 120

Offset: 57 (48%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated























Splits and Phases: 3: Madison St. & Avenue 54



HCM 6th Signalized Intersection Summary

























3: Madison St. & Avenue 54

EAP PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	267	439	49	167	106	353	432	97	61	269	18
Future Volume (veh/h)	24	267	439	49	167	106	353	432	97	61	269	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	27	300	493	55	188	119	397	485	109	69	302	20
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	43	756	675	71	1568	700	491	1139	508	89	772	51
Arrive On Green	0.02	0.44	0.44	0.04	0.45	0.45	0.15	0.33	0.33	0.05	0.23	0.23
Sat Flow, veh/h	1734	1730	1543	1734	3460	1543	3365	3460	1543	1734	3295	217
Grp Volume(v), veh/h	27	300	493	55	188	119	397	485	109	69	158	164
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1734	1730	1782
Q Serve(g_s), s	1.9	14.2	31.7	3.8	3.8	5.5	13.7	13.1	6.1	4.7	9.2	9.3
Cycle Q Clear(g_c), s	1.9	14.2	31.7	3.8	3.8	5.5	13.7	13.1	6.1	4.7	9.2	9.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	43	756	675	71	1568	700	491	1139	508	89	406	418
V/C Ratio(X)	0.63	0.40	0.73	0.78	0.12	0.17	0.81	0.43	0.21	0.78	0.39	0.39
Avail Cap(c_a), veh/h	87	756	675	145	1568	700	673	1139	508	173	406	418
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.82	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.0	23.0	27.9	57.0	19.0	19.4	49.6	31.4	29.1	56.3	38.7	38.7
Incr Delay (d2), s/veh	23.7	1.3	5.7	31.2	0.2	0.5	7.9	1.2	1.0	26.0	2.8	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	5.6	11.8	2.2	1.4	2.0	6.1	5.4	2.3	2.6	4.1	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.7	24.3	33.6	88.2	19.1	20.0	57.5	32.6	30.0	82.3	41.5	41.5
LnGrp LOS	F	C	C	F	B	B	E	C	C	F	D	D
Approach Vol, veh/h	820			362			991			391		
Approach Delay, s/veh	31.8			29.9			42.3			48.7		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.9	57.0	21.5	32.6	7.0	58.9	10.1	44.0				
Change Period (Y+Rc), s	4.0	4.5	4.0	4.5	4.0	4.5	4.0	4.5				
Max Green Setting (Gmax), s	10.0	41.5	24.0	27.5	6.0	45.5	12.0	39.5				
Max Q Clear Time (g_c+I1), s	5.8	33.7	15.7	11.3	3.9	7.5	6.7	15.1				
Green Ext Time (p_c), s	0.1	2.8	1.8	1.4	0.0	1.4	0.1	3.2				
Intersection Summary												
HCM 6th Ctrl Delay	38.2											
HCM 6th LOS	D											

Lanes, Volumes, Timings
4: Madison St. & Avenue 52

EAP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	433	42	36	378	70	94	369	51	79	266	68
Future Volume (vph)	81	433	42	36	378	70	94	369	51	79	266	68
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	24.0	50.0	50.0	15.0	41.0	41.0	17.0	40.0	40.0	15.0	38.0	38.0
Total Split (%)	20.0%	41.7%	41.7%	12.5%	34.2%	34.2%	14.2%	33.3%	33.3%	12.5%	31.7%	31.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

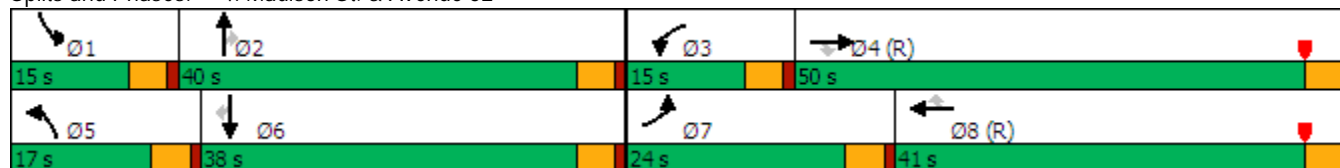
Actuated Cycle Length: 120

Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 4: Madison St. & Avenue 52



























HCM 6th Signalized Intersection Summary 4: Madison St. & Avenue 52

EAP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	433	42	36	378	70	94	369	51	79	266	68
Future Volume (veh/h)	81	433	42	36	378	70	94	369	51	79	266	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	94	503	49	42	440	81	109	429	59	92	309	79
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	118	1573	702	76	1489	664	191	1024	457	187	1020	455
Arrive On Green	0.07	0.45	0.45	0.04	0.43	0.43	0.06	0.30	0.30	0.06	0.29	0.29
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	94	503	49	42	440	81	109	429	59	92	309	79
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	6.4	11.1	2.1	2.8	10.0	3.8	3.8	12.0	3.4	3.2	8.3	4.6
Cycle Q Clear(g_c), s	6.4	11.1	2.1	2.8	10.0	3.8	3.8	12.0	3.4	3.2	8.3	4.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	118	1573	702	76	1489	664	191	1024	457	187	1020	455
V/C Ratio(X)	0.80	0.32	0.07	0.55	0.30	0.12	0.57	0.42	0.13	0.49	0.30	0.17
Avail Cap(c_a), veh/h	282	1573	702	152	1489	664	350	1024	457	294	1020	455
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.1	20.9	18.4	56.2	22.3	20.5	55.2	34.0	30.9	55.0	32.8	31.5
Incr Delay (d2), s/veh	11.4	0.5	0.2	6.1	0.5	0.4	2.7	1.3	0.6	2.0	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	4.4	0.8	1.3	3.9	1.3	1.6	5.0	1.3	1.4	3.5	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.5	21.4	18.6	62.3	22.8	20.9	57.8	35.2	31.5	57.0	33.5	32.3
LnGrp LOS	E	C	B	E	C	C	E	D	C	E	C	C
Approach Vol, veh/h	646			563			597			480		
Approach Delay, s/veh	27.8			25.5			39.0			37.8		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.2	40.0	9.8	59.1	11.3	39.9	12.7	56.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	35.5	10.5	45.5	12.5	33.5	19.5	36.5				
Max Q Clear Time (g_c+I1), s	5.2	14.0	4.8	13.1	5.8	10.3	8.4	12.0				
Green Ext Time (p_c), s	0.1	2.6	0.0	3.4	0.1	1.9	0.1	2.7				
Intersection Summary												
HCM 6th Ctrl Delay	32.2											
HCM 6th LOS	C											

Lanes, Volumes, Timings
5: Madison St. & Avenue 50/50th Avenue

EAP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	429	151	34	352	77	127	464	31	73	285	94
Future Volume (vph)	89	429	151	34	352	77	127	464	31	73	285	94
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	24.0	47.0	47.0	16.0	39.0	39.0	19.0	41.0	41.0	16.0	38.0	38.0
Total Split (%)	20.0%	39.2%	39.2%	13.3%	32.5%	32.5%	15.8%	34.2%	34.2%	13.3%	31.7%	31.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

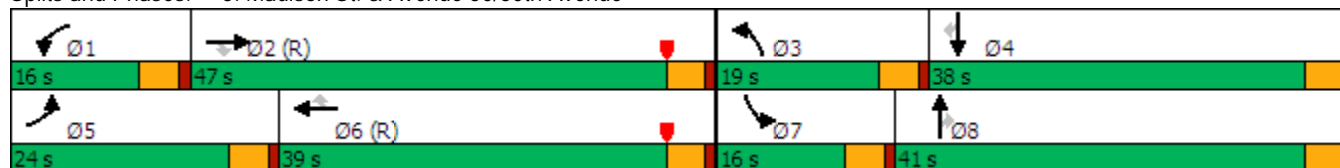
Actuated Cycle Length: 120

Offset: 64.5 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue




























HCM 6th Signalized Intersection Summary 5: Madison St. & Avenue 50/50th Avenue

EAP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	429	151	34	352	77	127	464	31	73	285	94
Future Volume (veh/h)	89	429	151	34	352	77	127	464	31	73	285	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	94	452	159	36	371	81	134	488	33	77	300	99
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	118	1561	696	71	1467	654	194	1052	469	181	1039	464
Arrive On Green	0.07	0.45	0.45	0.04	0.42	0.42	0.06	0.30	0.30	0.05	0.30	0.30
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	94	452	159	36	371	81	134	488	33	77	300	99
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	6.4	9.9	7.6	2.4	8.3	3.8	4.7	13.7	1.8	2.7	8.0	5.8
Cycle Q Clear(g_c), s	6.4	9.9	7.6	2.4	8.3	3.8	4.7	13.7	1.8	2.7	8.0	5.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	118	1561	696	71	1467	654	194	1052	469	181	1039	464
V/C Ratio(X)	0.80	0.29	0.23	0.51	0.25	0.12	0.69	0.46	0.07	0.42	0.29	0.21
Avail Cap(c_a), veh/h	282	1561	696	166	1467	654	407	1052	469	322	1039	464
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.1	20.8	20.1	56.4	22.3	21.0	55.5	33.8	29.7	55.0	32.2	31.4
Incr Delay (d2), s/veh	11.4	0.5	0.8	5.6	0.4	0.4	4.3	1.5	0.3	1.6	0.7	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	3.9	2.7	1.1	3.3	1.4	2.0	5.7	0.7	1.1	3.3	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.5	21.3	20.9	61.9	22.7	21.4	59.8	35.3	30.0	56.5	32.9	32.4
LnGrp LOS	E	C	C	E	C	C	E	D	C	E	C	C
Approach Vol, veh/h	705			488			655			476		
Approach Delay, s/veh	27.2			25.4			40.0			36.6		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.4	58.6	11.4	40.5	12.7	55.4	11.0	41.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.5	42.5	14.5	33.5	19.5	34.5	11.5	36.5				
Max Q Clear Time (g_c+I1), s	4.4	11.9	6.7	10.0	8.4	10.3	4.7	15.7				
Green Ext Time (p_c), s	0.0	3.4	0.2	2.0	0.1	2.4	0.1	2.9				
Intersection Summary												
HCM 6th Ctrl Delay	32.4											
HCM 6th LOS	C											

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54










EAP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 		 	 	
Traffic Volume (vph)	31	24	2	31	10	511	6	157	51	630	153	2
Future Volume (vph)	31	24	2	31	10	511	6	157	51	630	153	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh91.4

Intersection LOS F























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	24	2	31	10	511	6	157	51	630	153	2
Future Vol, veh/h	31	24	2	31	10	511	6	157	51	630	153	2
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	29	2	38	12	623	7	191	62	768	187	2
Number of Lanes	1	2	0	1	1	1	0	2	0	2	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	15	195.3	17.4	44.1
HCM LOS	B	F	C	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	7%	0%	100%	0%	0%	100%	0%	0%	100%	100%	0%
Vol Thru, %	93%	61%	0%	100%	80%	0%	100%	0%	0%	0%	99%
Vol Right, %	0%	39%	0%	0%	20%	0%	0%	100%	0%	0%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	85	130	31	16	10	31	10	511	315	315	155
LT Vol	6	0	31	0	0	31	0	0	315	315	0
Through Vol	79	79	0	16	8	0	10	0	0	0	153
RT Vol	0	51	0	0	2	0	0	511	0	0	2
Lane Flow Rate	103	158	38	20	12	38	12	623	384	384	189
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.263	0.389	0.113	0.055	0.034	0.097	0.03	1.387	0.882	0.882	0.407
Departure Headway (Hd)	9.931	9.621	11.547	11.026	10.88	9.233	8.724	8.011	9.073	9.073	8.559
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	364	376	312	327	331	391	413	461	403	403	423
Service Time	7.631	7.32	9.247	8.726	8.58	6.936	6.427	5.714	6.773	6.773	6.259
HCM Lane V/C Ratio	0.283	0.42	0.122	0.061	0.036	0.097	0.029	1.351	0.953	0.953	0.447
HCM Control Delay	16.1	18.3	15.7	14.4	14	12.9	11.7	210	50.8	50.8	17
HCM Lane LOS	C	C	C	B	B	B	B	F	F	F	C
HCM 95th-tile Q	1	1.8	0.4	0.2	0.1	0.3	0.1	29.6	8.9	8.9	1.9

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54

EAP PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	24	2	31	10	511	6	157	51	630	153	2
Future Volume (vph)	31	24	2	31	10	511	6	157	51	630	153	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases		2			6	4	8	8		4	4	
Permitted Phases	2			6		6						4
Detector Phase	2	2		6	6	4	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	30.5	30.5		30.5	30.5	30.5	30.5	30.5		30.5	30.5	30.5
Total Split (s)	34.0	34.0		34.0	34.0	53.0	33.0	33.0		53.0	53.0	53.0
Total Split (%)	28.3%	28.3%		28.3%	28.3%	44.2%	27.5%	27.5%		44.2%	44.2%	44.2%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		None	None	Max	Max	Max		Max	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 84 (70%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 95






















Control Type: Actuated-Coordinated

Splits and Phases: 6: Jefferson St. & Avenue 54























HCM 6th Signalized Intersection Summary 6: Jefferson St. & Avenue 54

EAP PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	24	2	31	10	511	6	157	51	630	153	2
Future Volume (veh/h)	31	24	2	31	10	511	6	157	51	630	153	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	38	29	2	38	12	623	7	191	62	768	187	2
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	251	808	55	389	448	1003	22	603	203	1360	1398	624
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.24	0.24	0.24	0.40	0.40	0.40
Sat Flow, veh/h	793	3287	224	1378	1821	1543	92	2540	853	3365	3460	1543
Grp Volume(v), veh/h	38	15	16	38	12	623	139	0	121	768	187	2
Grp Sat Flow(s),veh/h/ln	793	1730	1781	1378	1821	1543	1817	0	1668	1682	1730	1543
Q Serve(g_s), s	4.6	0.8	0.8	2.6	0.6	28.4	7.6	0.0	7.2	21.1	4.1	0.1
Cycle Q Clear(g_c), s	5.2	0.8	0.8	3.4	0.6	28.4	7.6	0.0	7.2	21.1	4.1	0.1
Prop In Lane	1.00		0.13	1.00		1.00	0.05		0.51	1.00		1.00
Lane Grp Cap(c), veh/h	251	425	438	389	448	1003	431	0	396	1360	1398	624
V/C Ratio(X)	0.15	0.04	0.04	0.10	0.03	0.62	0.32	0.00	0.31	0.56	0.13	0.00
Avail Cap(c_a), veh/h	251	425	438	389	448	1003	431	0	396	1360	1398	624
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.85	0.85	0.85	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.3	34.4	34.4	35.7	34.4	12.3	37.8	0.0	37.6	27.6	22.5	21.3
Incr Delay (d2), s/veh	1.3	0.2	0.2	0.2	0.0	1.5	2.0	0.0	2.0	1.7	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.3	0.4	0.9	0.3	18.6	3.4	0.0	3.0	8.2	1.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.6	34.6	34.6	35.9	34.4	13.8	39.7	0.0	39.6	29.3	22.7	21.3
LnGrp LOS	D	C	C	D	C	B	D	A	D	C	C	C
Approach Vol, veh/h	69			673				260			957	
Approach Delay, s/veh	36.2			15.4				39.7			28.0	
Approach LOS	D			B				D			C	
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	34.0			53.0			34.0			33.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	29.5			48.5			29.5			28.5		
Max Q Clear Time (g_c+I1), s	7.2			23.1			30.4			9.6		
Green Ext Time (p_c), s	0.5			8.9			0.0			2.2		
Intersection Summary												
HCM 6th Ctrl Delay	25.5											
HCM 6th LOS	C											

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EAP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	300	304	16	371	283	217	551	68	135	509	124
Future Volume (vph)	79	300	304	16	371	283	217	551	68	135	509	124
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											





















HCM 6th Roundabout
7: Jefferson St. & Avenue 52

EAP PM Peak hour

Intersection									
Intersection Delay, s/veh	40.4								
Intersection LOS	E								
Approach	EB		WB		NB		SB		
Entry Lanes	1		1		1		1		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	735		720		898		825		
Demand Flow Rate, veh/h	750		734		916		842		
Vehicles Circulating, veh/h	723		929		564		662		
Vehicles Exiting, veh/h	645		477		575		691		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	9.8		18.6		73.9		50.3		
Approach LOS	A		C		F		F		
Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Bypass	
Designated Moves	LT	R	LT	R	LT	R	LT	R	
Assumed Moves	LT	R	LT	R	LT	R	LT	R	
RT Channelized		Free		Free		Free		Free	
Lane Util	1.000		1.000		1.000		1.000		
Follow-Up Headway, s	2.609		2.609		2.609		2.609		
Critical Headway, s	4.976	334	4.976	310	4.976	74	4.976	136	
Entry Flow, veh/h	416	1887	424	1887	842	1887	706	1887	
Cap Entry Lane, veh/h	660	0.980	535	0.980	776	0.980	702	0.980	
Entry HV Adj Factor	0.980	327	0.981	304	0.980	73	0.980	133	
Flow Entry, veh/h	408	1850	416	1850	825	1850	692	1850	
Cap Entry, veh/h	647	0.177	525	0.164	761	0.039	689	0.072	
V/C Ratio	0.630	0.0	0.793	0.0	1.085	0.0	1.005	0.0	
Control Delay, s/veh	17.7	A	32.1	A	80.5	A	60.0	A	
LOS	C	1	D	1	F	0	F	0	
95th %tile Queue, veh	4		7		22		16		

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EAP PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	300	304	16	371	283	217	551	68	135	509	124
Future Volume (vph)	79	300	304	16	371	283	217	551	68	135	509	124
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		100	0		100	0		0	0		0
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	60			60			60			60		
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											

HCM 6th Roundabout
7: Jefferson St. & Avenue 52






















EAP PM Peak hour
With Improvements

Intersection										
Intersection Delay, s/veh	9.5									
Intersection LOS	A									
Approach	EB		WB		NB		SB			
Entry Lanes	1		1		2		2			
Conflicting Circle Lanes	2		2		2		2			
Adj Approach Flow, veh/h	735		720		898		825			
Demand Flow Rate, veh/h	750		734		916		842			
Vehicles Circulating, veh/h	723		929		564		662			
Vehicles Exiting, veh/h	645		477		575		691			
Ped Vol Crossing Leg, #/h	0		0		0		0			
Ped Cap Adj	1.000		1.000		1.000		1.000			
Approach Delay, s/veh	7.2		11.1		10.2		9.2			
Approach LOS	A		B		B		A			
Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
Assumed Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
RT Channelized		Free		Free			Free			Free
Lane Util	1.000		1.000		0.470	0.530		0.470	0.530	
Follow-Up Headway, s	2.535		2.535		2.667	2.535		2.667	2.535	
Critical Headway, s	4.328	334	4.328	310	4.645	4.328	74	4.645	4.328	136
Entry Flow, veh/h	416	1887	424	1887	396	446	1887	332	374	1887
Cap Entry Lane, veh/h	768	0.980	645	0.980	803	879	0.980	734	809	0.980
Entry HV Adj Factor	0.980	327	0.981	304	0.979	0.981	73	0.980	0.981	133
Flow Entry, veh/h	408	1850	416	1850	388	437	1850	325	367	1850
Cap Entry, veh/h	752	0.177	633	0.164	787	862	0.039	719	793	0.072
V/C Ratio	0.542	0.0	0.658	0.0	0.493	0.507	0.0	0.452	0.462	0.0
Control Delay, s/veh	13.0	A	19.2	A	11.4	10.9	A	11.3	10.7	A
LOS	B	1	C	1	B	B	0	B	B	0
95th %tile Queue, veh	3		5		3	3		2	2	

Lanes, Volumes, Timings

8: Jefferson St. & Pomelo

EAP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	2	21	9	1	35	3	928	7	15	828	56
Future Volume (vph)	55	2	21	9	1	35	3	928	7	15	828	56
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	49.0	49.0	49.0	49.0	49.0	49.0	18.0	51.0		20.0	53.0	
Total Split (%)	40.8%	40.8%	40.8%	40.8%	40.8%	40.8%	15.0%	42.5%		16.7%	44.2%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary

Area Type: Other

Cycle Length: 120

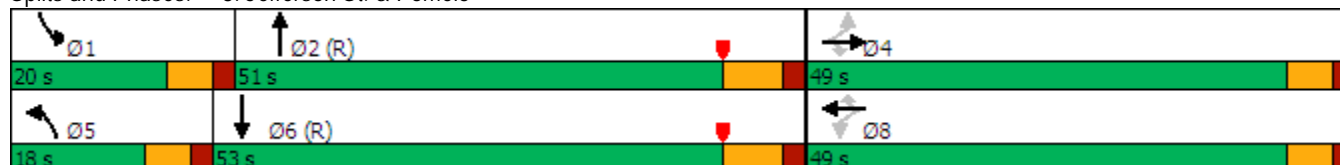
Actuated Cycle Length: 120

Offset: 30 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110


Control Type: Actuated-Coordinated

Splits and Phases: 8: Jefferson St. & Pomelo



























HCM 6th Signalized Intersection Summary 8: Jefferson St. & Pomelo

EAP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↰	↑↑↑		↰	↑↑↑	
Traffic Volume (veh/h)	55	2	21	9	1	35	3	928	7	15	828	56
Future Volume (veh/h)	55	2	21	9	1	35	3	928	7	15	828	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	58	2	22	9	1	37	3	977	7	16	872	59
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	72	2	476	66	4	476	17	2485	18	72	2473	167
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.01	0.49	0.49	0.08	1.00	1.00
Sat Flow, veh/h	43	5	1543	30	14	1543	1734	5093	36	1734	4757	321
Grp Volume(v), veh/h	60	0	22	10	0	37	3	636	348	16	607	324
Grp Sat Flow(s),veh/h/ln	48	0	1543	44	0	1543	1734	1657	1815	1734	1657	1763
Q Serve(g_s), s	1.2	0.0	1.2	0.6	0.0	2.0	0.2	14.6	14.6	1.0	0.0	0.0
Cycle Q Clear(g_c), s	37.0	0.0	1.2	36.7	0.0	2.0	0.2	14.6	14.6	1.0	0.0	0.0
Prop In Lane	0.97		1.00	0.90		1.00	1.00		0.02	1.00		0.18
Lane Grp Cap(c), veh/h	74	0	476	71	0	476	17	1617	885	72	1723	917
V/C Ratio(X)	0.81	0.00	0.05	0.14	0.00	0.08	0.18	0.39	0.39	0.22	0.35	0.35
Avail Cap(c_a), veh/h	143	0	553	142	0	553	173	1617	885	202	1723	917
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.83	0.83	0.83
Uniform Delay (d), s/veh	59.2	0.0	29.1	47.2	0.0	29.4	59.0	19.5	19.5	53.2	0.0	0.0
Incr Delay (d2), s/veh	34.7	0.0	0.1	1.9	0.0	0.1	10.9	0.7	1.3	2.7	0.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.5	0.3	0.0	0.8	0.1	5.3	5.9	0.5	0.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	93.9	0.0	29.2	49.1	0.0	29.6	69.8	20.2	20.8	56.0	0.5	0.9
LnGrp LOS	F	A	C	D	A	C	E	C	C	E	A	A
Approach Vol, veh/h	82				47				987			
Approach Delay, s/veh	76.6				33.7				20.5			
Approach LOS	E				C				C			
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	65.2		43.8	7.1	69.1		43.8				
Change Period (Y+Rc), s	6.0	7.5		6.0	6.0	7.5		6.0				
Max Green Setting (Gmax), s	14.0	43.5		43.0	12.0	45.5		43.0				
Max Q Clear Time (g_c+I1), s	3.0	16.6		39.0	2.2	2.0		38.7				
Green Ext Time (p_c), s	0.0	11.6		0.2	0.0	13.1		0.1				
Intersection Summary												
HCM 6th Ctrl Delay	14.4											
HCM 6th LOS	B											

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

EAP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	247	361	66	130	316	172	83	846	89	207	696	194
Future Volume (vph)	247	361	66	130	316	172	83	846	89	207	696	194
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	38.5	38.5	23.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	32.1%	32.1%	19.2%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120









Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 115

Control Type: Actuated-Coordinated































Splits and Phases: 9: Jefferson St. & Avenue 50

			
Ø1	Ø2	Ø3	Ø4 (R)
18 s	40.5 s	23 s	38.5 s
			
Ø5	Ø6	Ø7	Ø8 (R)
18 s	40.5 s	23 s	38.5 s

HCM 6th Signalized Intersection Summary

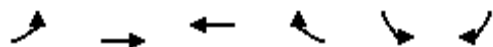
9: Jefferson St. & Avenue 50

EAP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  		 	  	
Traffic Volume (veh/h)	247	361	66	130	316	172	83	846	89	207	696	194
Future Volume (veh/h)	247	361	66	130	316	172	83	846	89	207	696	194
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	255	372	68	134	326	177	86	872	92	213	718	200
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	1193	532	171	550	466	164	1151	357	336	1179	366
Arrive On Green	0.14	0.34	0.34	0.10	0.30	0.30	0.03	0.08	0.08	0.10	0.24	0.24
Sat Flow, veh/h	1734	3460	1543	1734	1821	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	255	372	68	134	326	177	86	872	92	213	718	200
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	17.0	9.5	3.6	9.1	18.3	10.9	5.9	20.6	6.7	7.3	15.5	13.6
Cycle Q Clear(g_c), s	17.0	9.5	3.6	9.1	18.3	10.9	5.9	20.6	6.7	7.3	15.5	13.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	1193	532	171	550	466	164	1151	357	336	1179	366
V/C Ratio(X)	1.04	0.31	0.13	0.78	0.59	0.38	0.53	0.76	0.26	0.63	0.61	0.55
Avail Cap(c_a), veh/h	246	1193	532	246	550	466	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	28.9	27.0	52.8	35.6	33.0	55.5	52.1	45.7	51.9	40.8	40.1
Incr Delay (d2), s/veh	67.6	0.7	0.5	5.8	4.7	2.3	0.9	2.3	0.5	3.0	0.8	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.7	3.9	1.4	4.1	8.5	4.2	2.6	9.3	2.7	3.1	6.1	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	119.1	29.6	27.5	58.6	40.3	35.4	56.4	54.4	46.2	54.8	41.6	41.9
LnGrp LOS	F	C	C	E	D	D	E	D	D	D	D	D
Approach Vol, veh/h	695				637				1050			
Approach Delay, s/veh	62.2				42.8				53.9			
Approach LOS	E				D				D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	35.3	17.9	48.9	17.3	36.0	23.0	43.7				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	12.0	33.0	17.0	31.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	9.3	22.6	11.1	11.5	7.9	17.5	19.0	20.3				
Green Ext Time (p_c), s	0.1	5.2	0.0	4.2	0.0	6.1	0.0	3.2				
Intersection Summary												
HCM 6th Ctrl Delay	50.4											
HCM 6th LOS	D											
Notes												

Lanes, Volumes, Timings
10: Avenue 60 & Madison St.

EAP PM Peak hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	28	46	64	139	265	37
Future Volume (vph)	28	46	64	139	265	37
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		40	
Link Distance (ft)		1772	661		437	
Travel Time (s)		30.2	11.3		7.4	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)						
Sign Control		Stop	Stop		Stop	






Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Intersection Delay, s/veh	11.9
Intersection LOS	B





















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	28	46	64	139	265	37
Future Vol, veh/h	28	46	64	139	265	37
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	34	56	78	170	323	45
Number of Lanes	0	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	9.9	9.3	14.2
HCM LOS	A	A	B









Lane	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	38%	0%	0%	100%	0%
Vol Thru, %	62%	100%	0%	0%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	74	64	139	265	37
LT Vol	28	0	0	265	0
Through Vol	46	64	0	0	0
RT Vol	0	0	139	0	37
Lane Flow Rate	90	78	170	323	45
Geometry Grp	4	7	7	7	7
Degree of Util (X)	0.145	0.124	0.236	0.527	0.058
Departure Headway (Hd)	5.776	5.712	5.005	5.867	4.66
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	615	624	712	611	760
Service Time	3.86	3.479	2.772	3.648	2.441
HCM Lane V/C Ratio	0.146	0.125	0.239	0.529	0.059
HCM Control Delay	9.9	9.3	9.3	15.1	7.7
HCM Lane LOS	A	A	A	C	A
HCM 95th-tile Q	0.5	0.4	0.9	3.1	0.2

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

EAP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	153	117	2	87	26	79	133	4	40	108	48
Future Volume (vph)	48	153	117	2	87	26	79	133	4	40	108	48
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	12.1
Intersection LOS	B


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	48	153	117	2	87	26	79	133	4	40	108	48
Future Vol, veh/h	48	153	117	2	87	26	79	133	4	40	108	48
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	55	174	133	2	99	30	90	151	5	45	123	55
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	12.7	12	12.1	11.1
HCM LOS	B	B	B	B






Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	24%	0%	2%	100%	0%	0%
Vol Thru, %	0%	97%	76%	0%	76%	0%	100%	0%
Vol Right, %	0%	3%	0%	100%	23%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	79	137	201	117	115	40	108	48
LT Vol	79	0	48	0	2	40	0	0
Through Vol	0	133	153	0	87	0	108	0
RT Vol	0	4	0	117	26	0	0	48
Lane Flow Rate	90	156	228	133	131	45	123	55
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.182	0.293	0.421	0.214	0.25	0.093	0.234	0.093
Departure Headway (Hd)	7.317	6.785	6.629	5.802	6.884	7.384	6.874	6.161
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	487	526	541	614	518	482	519	577
Service Time	5.105	4.573	4.403	3.575	4.675	5.173	4.663	3.949
HCM Lane V/C Ratio	0.185	0.297	0.421	0.217	0.253	0.093	0.237	0.095
HCM Control Delay	11.7	12.4	14.2	10.2	12	10.9	11.8	9.6
HCM Lane LOS	B	B	B	B	B	B	B	A
HCM 95th-tile Q	0.7	1.2	2.1	0.8	1	0.3	0.9	0.3

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	154	25	25	127	62	47	239	48	53	157	81
Future Volume (vph)	78	154	25	25	127	62	47	239	48	53	157	81
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	39.8
Intersection LOS	E


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	78	154	25	25	127	62	47	239	48	53	157	81
Future Vol, veh/h	78	154	25	25	127	62	47	239	48	53	157	81
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	104	205	33	33	169	83	63	319	64	71	209	108
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	35.8	26.7	65	24
HCM LOS	E	D	F	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	14%	30%	12%	25%	0%
Vol Thru, %	72%	60%	59%	75%	0%
Vol Right, %	14%	10%	29%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	334	257	214	210	81
LT Vol	47	78	25	53	0
Through Vol	239	154	127	157	0
RT Vol	48	25	62	0	81
Lane Flow Rate	445	343	285	280	108
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.976	0.786	0.664	0.679	0.236
Departure Headway (Hd)	7.888	8.262	8.379	8.728	7.87
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	459	435	428	412	455
Service Time	5.965	6.347	6.47	6.512	5.654
HCM Lane V/C Ratio	0.969	0.789	0.666	0.68	0.237
HCM Control Delay	65	35.8	26.7	28.2	13.1
HCM Lane LOS	F	E	D	D	B
HCM 95th-tile Q	12.2	6.9	4.7	4.9	0.9

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAP PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	154	25	25	127	62	47	239	48	53	157	81
Future Volume (vph)	78	154	25	25	127	62	47	239	48	53	157	81
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	30.5	30.5		30.5	30.5		30.5	30.5		30.5	30.5	30.5
Total Split (s)	56.0	56.0		56.0	56.0		64.0	64.0		64.0	64.0	64.0
Total Split (%)	46.7%	46.7%		46.7%	46.7%		53.3%	53.3%		53.3%	53.3%	53.3%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)		4.5			4.5			4.5			4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

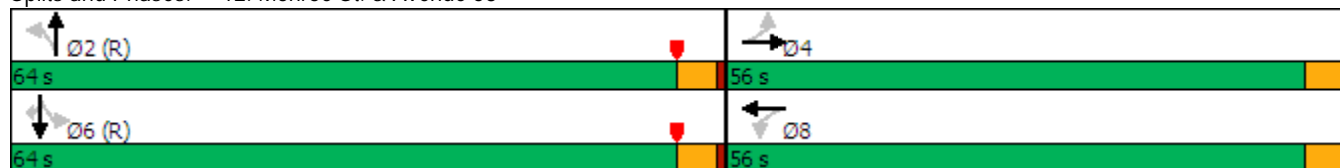
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated


















Splits and Phases: 12: Monroe St. & Avenue 58



HCM 6th Signalized Intersection Summary






















12: Monroe St. & Avenue 58

EAP PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	154	25	25	127	62	47	239	48	53	157	81
Future Volume (veh/h)	78	154	25	25	127	62	47	239	48	53	157	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	104	205	33	33	169	83	63	319	64	71	209	108
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	140	242	37	66	288	132	158	779	151	262	750	990
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.64	0.64	0.64	0.64	0.64	0.64
Sat Flow, veh/h	356	853	129	116	1016	465	192	1214	236	350	1169	1543
Grp Volume(v), veh/h	342	0	0	285	0	0	446	0	0	280	0	108
Grp Sat Flow(s),veh/h/ln	1338	0	0	1598	0	0	1641	0	0	1518	0	1543
Q Serve(g_s), s	12.3	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	3.2
Cycle Q Clear(g_c), s	30.2	0.0	0.0	17.9	0.0	0.0	14.7	0.0	0.0	8.6	0.0	3.2
Prop In Lane	0.30		0.10	0.12		0.29	0.14		0.14	0.25		1.00
Lane Grp Cap(c), veh/h	418	0	0	486	0	0	1088	0	0	1012	0	990
V/C Ratio(X)	0.82	0.00	0.00	0.59	0.00	0.00	0.41	0.00	0.00	0.28	0.00	0.11
Avail Cap(c_a), veh/h	639	0	0	723	0	0	1088	0	0	1012	0	990
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.1	0.0	0.0	37.0	0.0	0.0	10.3	0.0	0.0	9.1	0.0	8.3
Incr Delay (d2), s/veh	5.0	0.0	0.0	1.1	0.0	0.0	1.1	0.0	0.0	0.7	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	0.0	0.0	7.4	0.0	0.0	5.2	0.0	0.0	2.9	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.1	0.0	0.0	38.1	0.0	0.0	11.4	0.0	0.0	9.8	0.0	8.5
LnGrp LOS	D	A	A	D	A	A	B	A	A	A	A	A
Approach Vol, veh/h	342			285			446			388		
Approach Delay, s/veh	47.1			38.1			11.4			9.4		
Approach LOS	D			D			B			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	81.5			38.5			81.5			38.5		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	59.5			51.5			59.5			51.5		
Max Q Clear Time (g_c+I1), s	16.7			32.2			10.6			19.9		
Green Ext Time (p_c), s	2.8			1.8			2.0			1.9		
Intersection Summary												
HCM 6th Ctrl Delay	24.5											
HCM 6th LOS	C											

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.









EAP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	93	11	33	94	61	17	297	42	64	259	19
Future Volume (vph)	10	93	11	33	94	61	17	297	42	64	259	19
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 18.8

Intersection LOS C



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	93	11	33	94	61	17	297	42	64	259	19
Future Vol, veh/h	10	93	11	33	94	61	17	297	42	64	259	19
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	107	13	38	108	70	20	341	48	74	298	22
Number of Lanes	1	1	1	0	1	0	1	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	1	3
HCM Control Delay	12.2	16.5	27.4	13.3
HCM LOS	B	C	D	B







Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	100%	0%	0%	18%	100%	0%	0%
Vol Thru, %	0%	88%	0%	100%	0%	50%	0%	100%	82%
Vol Right, %	0%	12%	0%	0%	100%	32%	0%	0%	18%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	17	339	10	93	11	188	64	173	105
LT Vol	17	0	10	0	0	33	64	0	0
Through Vol	0	297	0	93	0	94	0	173	86
RT Vol	0	42	0	0	11	61	0	0	19
Lane Flow Rate	20	390	11	107	13	216	74	198	121
Geometry Grp	8	8	7	7	7	8	8	8	8
Degree of Util (X)	0.041	0.755	0.026	0.226	0.024	0.453	0.158	0.398	0.238
Departure Headway (Hd)	7.571	6.974	8.13	7.618	6.901	7.554	7.721	7.211	7.083
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	473	518	440	470	517	475	464	498	506
Service Time	5.319	4.722	5.89	5.377	4.66	5.308	5.474	4.964	4.835
HCM Lane V/C Ratio	0.042	0.753	0.025	0.228	0.025	0.455	0.159	0.398	0.239
HCM Control Delay	10.6	28.2	11.1	12.6	9.8	16.5	11.9	14.7	12
HCM Lane LOS	B	D	B	B	A	C	B	B	B
HCM 95th-tile Q	0.1	6.5	0.1	0.9	0.1	2.3	0.6	1.9	0.9

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	283	57	18	200	66	34	387	27	94	245	39
Future Volume (vph)	85	283	57	18	200	66	34	387	27	94	245	39
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	103.8
Intersection LOS	F



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	85	283	57	18	200	66	34	387	27	94	245	39
Future Vol, veh/h	85	283	57	18	200	66	34	387	27	94	245	39
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	93	311	63	20	220	73	37	425	30	103	269	43
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	60.3	55.6	203.7	70.6
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	8%	100%	0%	6%	28%	0%
Vol Thru, %	86%	0%	83%	70%	72%	0%
Vol Right, %	6%	0%	17%	23%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	448	85	340	284	339	39
LT Vol	34	85	0	18	94	0
Through Vol	387	0	283	200	245	0
RT Vol	27	0	57	66	0	39
Lane Flow Rate	492	93	374	312	373	43
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	1.353	0.256	0.96	0.86	0.982	0.103
Departure Headway (Hd)	9.893	10.883	10.232	11.185	10.447	9.564
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	369	333	359	328	350	377
Service Time	7.98	8.583	7.932	9.185	8.147	7.264
HCM Lane V/C Ratio	1.333	0.279	1.042	0.951	1.066	0.114
HCM Control Delay	203.7	17.3	71	55.6	77.2	13.4
HCM Lane LOS	F	C	F	F	F	B
HCM 95th-tile Q	23.7	1	10.4	7.8	10.9	0.3

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAP PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	283	57	18	200	66	34	387	27	94	245	39
Future Volume (vph)	85	283	57	18	200	66	34	387	27	94	245	39
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	30.5	30.5		30.5	30.5		30.5	30.5		30.5	30.5	30.5
Total Split (s)	51.0	51.0		51.0	51.0		69.0	69.0		69.0	69.0	69.0
Total Split (%)	42.5%	42.5%		42.5%	42.5%		57.5%	57.5%		57.5%	57.5%	57.5%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)	4.5	4.5			4.5			4.5			4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

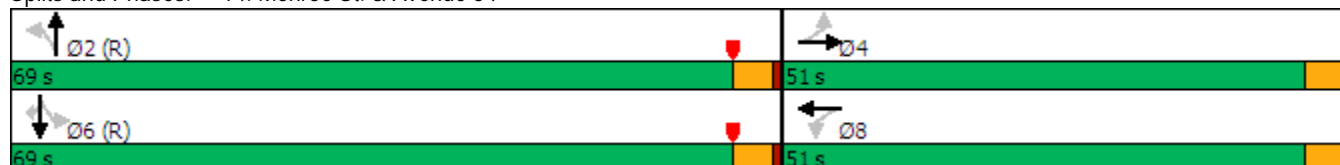
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated



















Splits and Phases: 14: Monroe St. & Avenue 54



HCM 6th Signalized Intersection Summary























14: Monroe St. & Avenue 54

EAP PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	283	57	18	200	66	34	387	27	94	245	39
Future Volume (veh/h)	85	283	57	18	200	66	34	387	27	94	245	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	93	311	63	20	220	73	37	425	30	103	269	43
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	186	417	84	42	282	89	90	990	68	271	687	990
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.64	0.64	0.64	0.64	0.64	0.64
Sat Flow, veh/h	1086	1470	298	35	996	314	90	1543	106	363	1070	1543
Grp Volume(v), veh/h	93	0	374	313	0	0	492	0	0	372	0	43
Grp Sat Flow(s),veh/h/ln	1086	0	1768	1344	0	0	1739	0	0	1433	0	1543
Q Serve(g_s), s	2.5	0.0	23.1	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
Cycle Q Clear(g_c), s	30.0	0.0	23.1	28.0	0.0	0.0	16.2	0.0	0.0	15.4	0.0	1.2
Prop In Lane	1.00		0.17	0.06		0.23	0.08		0.06	0.28		1.00
Lane Grp Cap(c), veh/h	186	0	501	413	0	0	1147	0	0	957	0	990
V/C Ratio(X)	0.50	0.00	0.75	0.76	0.00	0.00	0.43	0.00	0.00	0.39	0.00	0.04
Avail Cap(c_a), veh/h	299	0	685	586	0	0	1147	0	0	957	0	990
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.0	0.0	39.1	38.9	0.0	0.0	10.6	0.0	0.0	10.1	0.0	7.9
Incr Delay (d2), s/veh	2.1	0.0	3.0	3.6	0.0	0.0	1.2	0.0	0.0	1.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	9.8	8.8	0.0	0.0	5.9	0.0	0.0	4.3	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.0	0.0	42.0	42.5	0.0	0.0	11.8	0.0	0.0	11.3	0.0	8.0
LnGrp LOS	D	A	D	D	A	A	B	A	A	B	A	A
Approach Vol, veh/h	467			313			492			415		
Approach Delay, s/veh	42.8			42.5			11.8			11.0		
Approach LOS	D			D			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	81.5			38.5			81.5			38.5		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	64.5			46.5			64.5			46.5		
Max Q Clear Time (g_c+I1), s	18.2			32.0			17.4			30.0		
Green Ext Time (p_c), s	3.1			2.0			2.6			1.4		
Intersection Summary												
HCM 6th Ctrl Delay	25.9											
HCM 6th LOS	C											

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52









EAP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	366	71	21	353	121	51	419	50	123	307	70
Future Volume (vph)	93	366	71	21	353	121	51	419	50	123	307	70
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 58.1

Intersection LOS F























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	93	366	71	21	353	121	51	419	50	123	307	70
Future Vol, veh/h	93	366	71	21	353	121	51	419	50	123	307	70
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	108	426	83	24	410	141	59	487	58	143	357	81
Number of Lanes	1	1	1	0	2	1	0	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay	136.5	41.8	414.2	29.6
HCM LOS	F	E	F	D

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	10%	100%	0%	0%	15%	0%	0%	100%	0%	0%
Vol Thru, %	81%	0%	100%	0%	85%	100%	0%	0%	100%	59%
Vol Right, %	10%	0%	0%	100%	0%	0%	100%	0%	0%	41%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	520	93	366	71	139	235	121	123	205	172
LT Vol	51	93	0	0	21	0	0	123	0	0
Through Vol	419	0	366	0	118	235	0	0	205	102
RT Vol	50	0	0	71	0	0	121	0	0	70
Lane Flow Rate	605	108	426	83	161	274	141	143	238	200
Geometry Grp	8	8	8	8	8	8	8	7	7	7
Degree of Util (X)	1.837	0.341	1.285	0.233	0.49	0.826	0.398	0.41	0.65	0.531
Departure Headway (Hd)	11.371	13.666	13.117	12.348	13.753	13.669	12.892	12.745	12.2	11.89
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	327	265	281	293	264	268	281	285	297	307
Service Time	9.071	11.366	10.817	10.048	11.453	11.369	10.592	10.445	9.9	9.59
HCM Lane V/C Ratio	1.85	0.408	1.516	0.283	0.61	1.022	0.502	0.502	0.801	0.651
HCM Control Delay	414.2	23.3	188.1	18.8	29	58.5	23.9	24	35	27.3
HCM Lane LOS	F	C	F	C	D	F	C	C	D	D
HCM 95th-tile Q	38.8	1.5	17.4	0.9	2.5	6.6	1.8	1.9	4.2	2.9

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52

EAP PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	366	71	21	353	121	51	419	50	123	307	70
Future Volume (vph)	93	366	71	21	353	121	51	419	50	123	307	70
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	2	2	2	6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0		30.0	30.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0		30.0	30.0	
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5		4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max		Max	Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

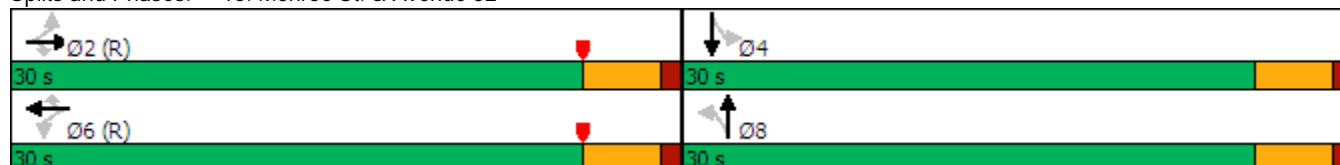
Actuated Cycle Length: 60

Offset: 55.5 (93%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 60























Control Type: Actuated-Coordinated

Splits and Phases: 15: Monroe St. & Avenue 52



























HCM 6th Signalized Intersection Summary 15: Monroe St. & Avenue 52

EAP PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	366	71	21	353	121	51	419	50	123	307	70
Future Volume (veh/h)	93	366	71	21	353	121	51	419	50	123	307	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	109	431	84	25	415	142	60	493	59	145	361	82
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	415	774	656	339	1471	656	111	606	69	345	1193	268
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	852	1821	1543	886	3460	1543	106	1425	163	856	2807	630
Grp Volume(v), veh/h	109	431	84	25	415	142	612	0	0	145	221	222
Grp Sat Flow(s),veh/h/ln	852	1821	1543	886	1730	1543	1694	0	0	856	1730	1708
Q Serve(g_s), s	5.8	10.7	2.0	1.3	4.7	3.5	10.4	0.0	0.0	0.0	5.0	5.2
Cycle Q Clear(g_c), s	10.5	10.7	2.0	12.0	4.7	3.5	19.2	0.0	0.0	18.1	5.0	5.2
Prop In Lane	1.00		1.00	1.00		1.00	0.10		0.10	1.00		0.37
Lane Grp Cap(c), veh/h	415	774	656	339	1471	656	786	0	0	345	735	726
V/C Ratio(X)	0.26	0.56	0.13	0.07	0.28	0.22	0.78	0.00	0.00	0.42	0.30	0.31
Avail Cap(c_a), veh/h	415	774	656	339	1471	656	786	0	0	345	735	726
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.7	13.0	10.5	17.5	11.3	10.9	15.3	0.0	0.0	15.1	11.4	11.4
Incr Delay (d2), s/veh	1.5	2.9	0.4	0.4	0.5	0.8	7.5	0.0	0.0	3.7	1.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.8	0.6	0.3	1.4	1.0	7.1	0.0	0.0	1.6	1.7	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.2	15.9	10.9	17.9	11.8	11.7	22.8	0.0	0.0	18.9	12.4	12.5
LnGrp LOS	B	B	B	B	B	B	C	A	A	B	B	B
Approach Vol, veh/h	624			582			612			588		
Approach Delay, s/veh	15.3			12.0			22.8			14.0		
Approach LOS	B			B			C			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	30.0			30.0			30.0			30.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	25.5			25.5			25.5			25.5		
Max Q Clear Time (g_c+I1), s	12.7			20.1			14.0			21.2		
Green Ext Time (p_c), s	2.6			1.5			2.3			1.5		
Intersection Summary												
HCM 6th Ctrl Delay	16.1											
HCM 6th LOS	B											

Lanes, Volumes, Timings
16: Monroe St. & 50th Avenue

EAP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	469	57	26	371	126	49	602	69	137	393	22
Future Volume (vph)	38	469	57	26	371	126	49	602	69	137	393	22
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	20.5	20.5	20.5	20.5	20.5	11.5	11.5	20.5		11.5	20.5	
Total Split (s)	26.0	26.0	26.0	26.0	26.0	12.4	11.5	21.6		12.4	22.5	
Total Split (%)	43.3%	43.3%	43.3%	43.3%	43.3%	20.7%	19.2%	36.0%		20.7%	37.5%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag						Lead	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

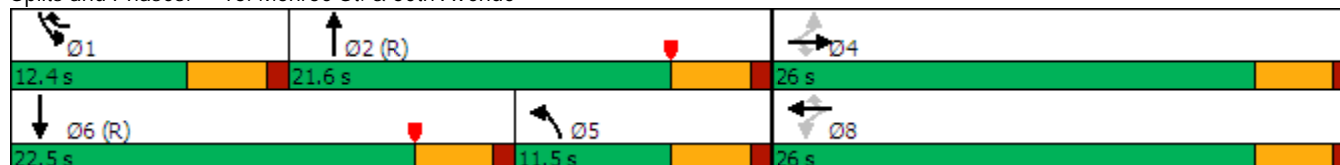
Actuated Cycle Length: 60

Offset: 14.6 (24%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

























Splits and Phases: 16: Monroe St. & 50th Avenue



HCM 6th Signalized Intersection Summary

















16: Monroe St. & 50th Avenue

EAP PM Peak hour





												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	469	57	26	371	126	49	602	69	137	393	22
Future Volume (veh/h)	38	469	57	26	371	126	49	602	69	137	393	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	42	521	63	29	412	140	54	669	77	152	437	24
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	253	630	534	190	630	715	252	1052	121	204	1028	56
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.15	0.34	0.33	0.12	0.31	0.30
Sat Flow, veh/h	856	1821	1543	831	1821	1543	1734	3127	360	1734	3336	183
Grp Volume(v), veh/h	42	521	63	29	412	140	54	370	376	152	226	235
Grp Sat Flow(s),veh/h/ln	856	1821	1543	831	1821	1543	1734	1730	1756	1734	1730	1788
Q Serve(g_s), s	2.6	15.7	1.7	2.0	11.5	3.2	1.6	10.8	10.9	5.1	6.2	6.3
Cycle Q Clear(g_c), s	14.1	15.7	1.7	17.7	11.5	3.2	1.6	10.8	10.9	5.1	6.2	6.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.20	1.00		0.10
Lane Grp Cap(c), veh/h	253	630	534	190	630	715	252	582	591	204	533	551
V/C Ratio(X)	0.17	0.83	0.12	0.15	0.65	0.20	0.21	0.64	0.64	0.75	0.42	0.43
Avail Cap(c_a), veh/h	270	668	566	207	668	747	252	582	591	243	533	551
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.5	18.0	13.4	26.1	16.6	9.5	22.6	16.8	16.9	25.6	16.5	16.5
Incr Delay (d2), s/veh	0.3	8.1	0.1	0.4	2.1	0.1	0.4	5.2	5.2	9.9	2.5	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	6.6	0.5	0.4	4.2	0.8	0.6	4.3	4.3	2.4	2.4	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.8	26.1	13.5	26.4	18.7	9.6	23.0	22.0	22.0	35.5	19.0	18.9
LnGrp LOS	C	C	B	C	B	A	C	C	C	D	B	B
Approach Vol, veh/h	626			581			800			613		
Approach Delay, s/veh	24.6			16.9			22.1			23.1		
Approach LOS	C			B			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.1	24.2		24.8	12.7	22.5		24.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.9	17.1		21.5	7.0	18.0		21.5				
Max Q Clear Time (g_c+I1), s	7.1	12.9		17.7	3.6	8.3		19.7				
Green Ext Time (p_c), s	0.0	1.6		1.2	0.0	1.6		0.6				
Intersection Summary												
HCM 6th Ctrl Delay	21.8											
HCM 6th LOS	C											

Lanes, Volumes, Timings
17: Jackson St. & 58th Avenue

EAP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	170	10	0	120	12	16	193	18	7	130	33
Future Volume (vph)	42	170	10	0	120	12	16	193	18	7	130	33
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		5266			1079			1013			510	
Travel Time (s)		71.8			14.7			12.6			6.3	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	12.4
Intersection LOS	B

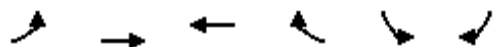
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	170	10	0	120	12	16	193	18	7	130	33
Future Vol, veh/h	42	170	10	0	120	12	16	193	18	7	130	33
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	53	215	13	0	152	15	20	244	23	9	165	42
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.2	11.1	13.1	11.6
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	19%	0%	4%
Vol Thru, %	85%	77%	91%	76%
Vol Right, %	8%	5%	9%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	227	222	132	170
LT Vol	16	42	0	7
Through Vol	193	170	120	130
RT Vol	18	10	12	33
Lane Flow Rate	287	281	167	215
Geometry Grp	1	1	1	1
Degree of Util (X)	0.445	0.442	0.27	0.337
Departure Headway (Hd)	5.575	5.668	5.819	5.63
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	644	632	613	635
Service Time	3.638	3.731	3.891	3.697
HCM Lane V/C Ratio	0.446	0.445	0.272	0.339
HCM Control Delay	13.1	13.2	11.1	11.6
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	2.3	2.3	1.1	1.5

Lanes, Volumes, Timings
18: Avenue 60 & S. Access

EAP PM Peak hour






Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	76	45	0
Future Volume (vph)	0	0	0	76	45	0
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		25	
Link Distance (ft)		207	1772		380	
Travel Time (s)		3.5	30.2		10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
18: Avenue 60 & S. Access

EAP PM Peak hour

Intersection

Int Delay, s/veh 3.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	76	45	0
Future Vol, veh/h	0	0	0	76	45	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	83	49	0












Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	83	0	0 42 42
Stage 1	-	-	- 42 -
Stage 2	-	-	- 0 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1514	-	- 969 1029
Stage 1	-	-	- 980 -
Stage 2	-	-	- - -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1514	-	- 969 1029
Mov Cap-2 Maneuver	-	-	- 969 -
Stage 1	-	-	- 980 -
Stage 2	-	-	- - -

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1514	-	-	-	969
HCM Lane V/C Ratio	-	-	-	-	0.05
HCM Control Delay (s)	0	-	-	-	8.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2







Lanes, Volumes, Timings
19: Madison St. & Main Access

EAP PM Peak hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	150	13	45	271	382	213
Future Volume (vph)	150	13	45	271	382	213
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100	0	150			0
Storage Lanes	1	1	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	25			50	50	
Link Distance (ft)	499			880	141	
Travel Time (s)	13.6			12.0	1.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
19: Madison St. & Main Access

EAP PM Peak hour

Intersection						
Int Delay, s/veh	3.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	150	13	45	271	382	213
Future Vol, veh/h	150	13	45	271	382	213
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	163	14	49	295	415	232











Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	777	324	647	0	-	0
Stage 1	531	-	-	-	-	-
Stage 2	246	-	-	-	-	-
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	334	672	934	-	-	-
Stage 1	554	-	-	-	-	-
Stage 2	772	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	317	672	934	-	-	-
Mov Cap-2 Maneuver	415	-	-	-	-	-
Stage 1	525	-	-	-	-	-
Stage 2	772	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.5	1.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	934	-	415	672	-	-
HCM Lane V/C Ratio	0.052	-	0.393	0.021	-	-
HCM Control Delay (s)	9.1	-	19.2	10.5	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.2	-	1.8	0.1	-	-






Lanes, Volumes, Timings
20: Project Access 1 & Avenue 58

EAP PM Peak hour

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	151	8	27	65	23	12
Future Volume (vph)	151	8	27	65	23	12
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)		0	50		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			60		60	
Link Speed (mph)	50			50	25	
Link Distance (ft)	403			335	383	
Travel Time (s)	5.5			4.6	10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					











HCM 6th TWSC
20: Project Access 1 & Avenue 58

EAP PM Peak hour

Intersection						
Int Delay, s/veh	1.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	151	8	27	65	23	12
Future Vol, veh/h	151	8	27	65	23	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	164	9	29	71	25	13
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	173	0	263	169
Stage 1	-	-	-	-	169	-
Stage 2	-	-	-	-	94	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1402	-	715	874
Stage 1	-	-	-	-	860	-
Stage 2	-	-	-	-	920	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1402	-	700	874
Mov Cap-2 Maneuver	-	-	-	-	713	-
Stage 1	-	-	-	-	842	-
Stage 2	-	-	-	-	920	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		2.2		10	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	761	-	-	1402	-	
HCM Lane V/C Ratio	0.05	-	-	0.021	-	
HCM Control Delay (s)	10	-	-	7.6	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-	

Lanes, Volumes, Timings
21: Project Access 2 & Avenue 58

EAP PM Peak hour

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations				 		
Traffic Volume (vph)	148	15	0	92	0	15
Future Volume (vph)	148	15	0	92	0	15
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	50			50	25	
Link Distance (ft)	335			276	233	
Travel Time (s)	4.6			3.8	6.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					












HCM 6th TWSC
21: Project Access 2 & Avenue 58

EAP PM Peak hour

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶			↷		↶
Traffic Vol, veh/h	148	15	0	92	0	15
Future Vol, veh/h	148	15	0	92	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	161	16	0	100	0	16
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	169
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	-	-	0	-	0	874
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	874
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		9.2	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1		EBT	EBR	WBT	
Capacity (veh/h)	874		-	-	-	
HCM Lane V/C Ratio	0.019		-	-	-	
HCM Control Delay (s)	9.2		-	-	-	
HCM Lane LOS	A		-	-	-	
HCM 95th %tile Q(veh)	0.1		-	-	-	

Lanes, Volumes, Timings
22: Madison St. & Project Access 3

EAP PM Peak hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				 	 	
Traffic Volume (vph)	0	29	0	421	566	29
Future Volume (vph)	0	29	0	421	566	29
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	25			50	50	
Link Distance (ft)	210			253	288	
Travel Time (s)	5.7			3.5	3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
22: Madison St. & Project Access 3

EAP PM Peak hour

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	29	0	421	566	29
Future Vol, veh/h	0	29	0	421	566	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	32	0	458	615	32
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	324	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	672	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	672	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	10.6	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT EBLn1		SBT	SBR		
Capacity (veh/h)	- 672		-	-		
HCM Lane V/C Ratio	- 0.047		-	-		
HCM Control Delay (s)	- 10.6		-	-		
HCM Lane LOS	- B		-	-		
HCM 95th %tile Q(veh)	- 0.1		-	-		

APPENDIX 6.4:

**EA WITHOUT AND WITH PROJECT CONDITIONS
TRAFFIC SIGNAL WARRANTS ANALYSIS WORKSHEETS**

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WITHOUT PROJECT CONDITIONS

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

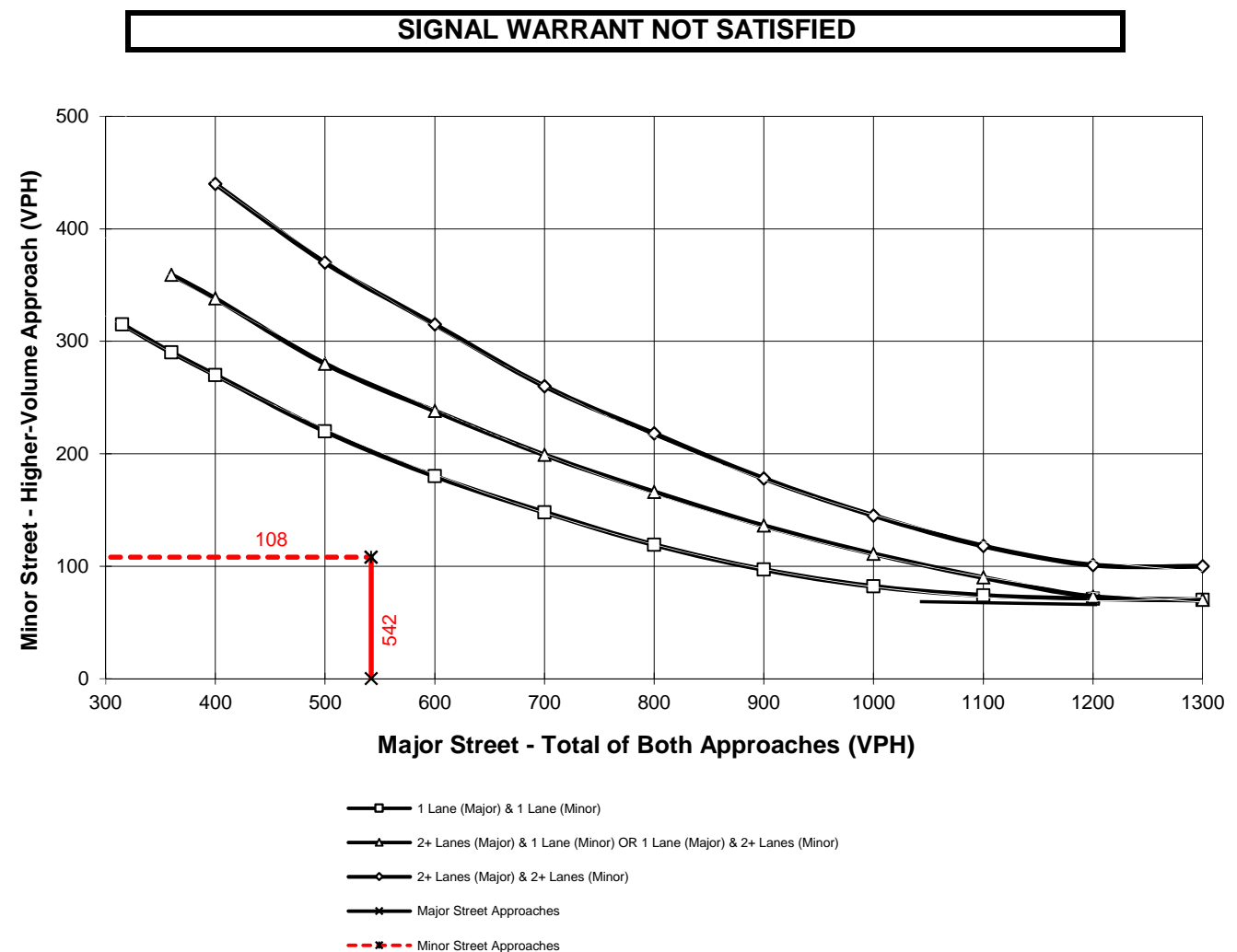
Traffic Conditions = **E+A (2026) AM PEAK HOUR WARRANTS**

Major Street Name = **Madison St.**

Total of Both Approaches (VPH) = **542**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Avenue 58**

High Volume Approach (VPH) = **108**
Number of Approach Lanes Minor Street = **1**



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #1

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **E+A (2026) PM PEAK HOUR WARRANTS**

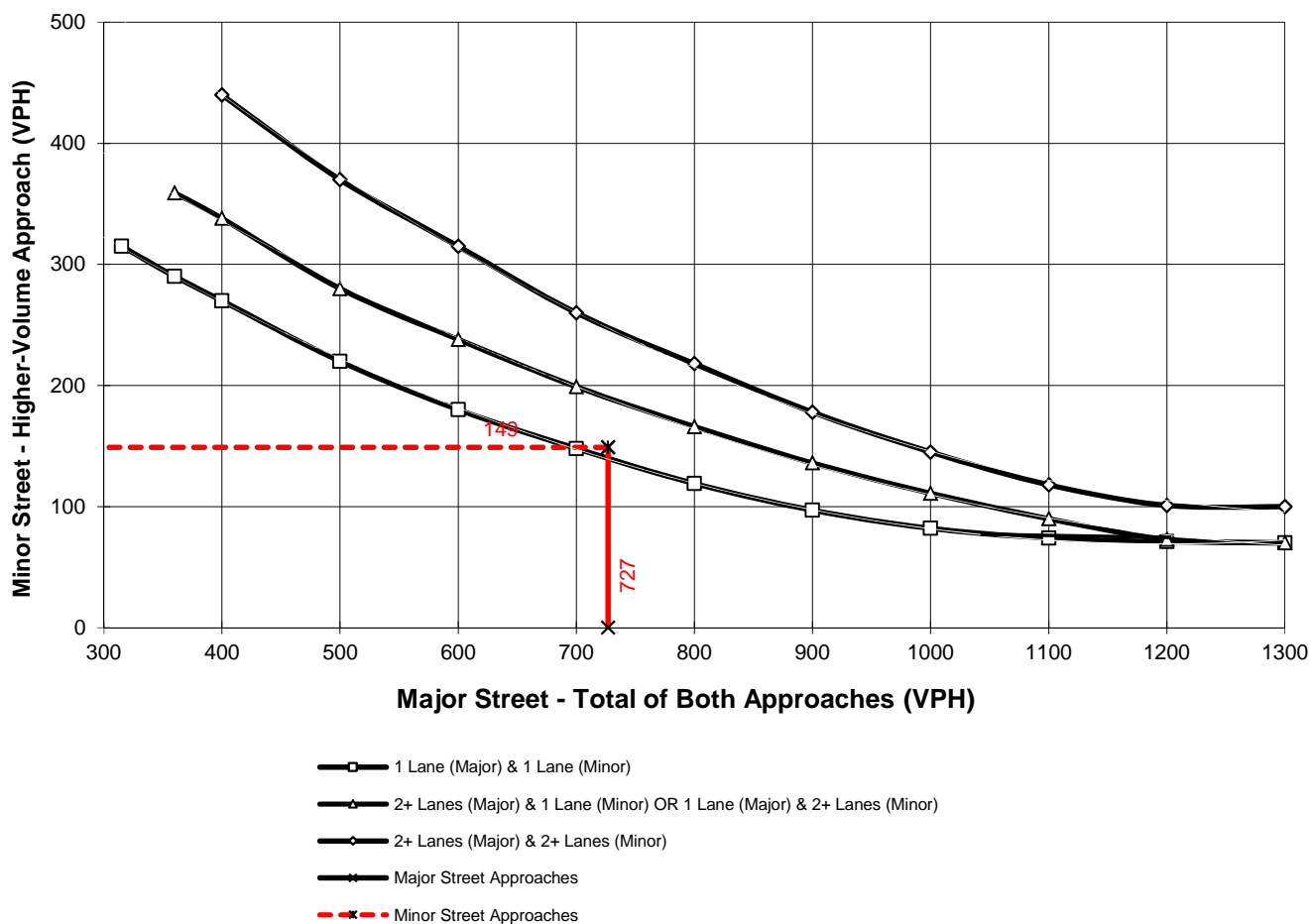
Major Street Name = **Madison St.**

Total of Both Approaches (VPH) = **727**
Number of Approach Lanes Major Street = **3**

Minor Street Name = **Avenue 58**

High Volume Approach (VPH) = **149**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #1

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **E+A (2026) AM PEAK HOUR WARRANTS**

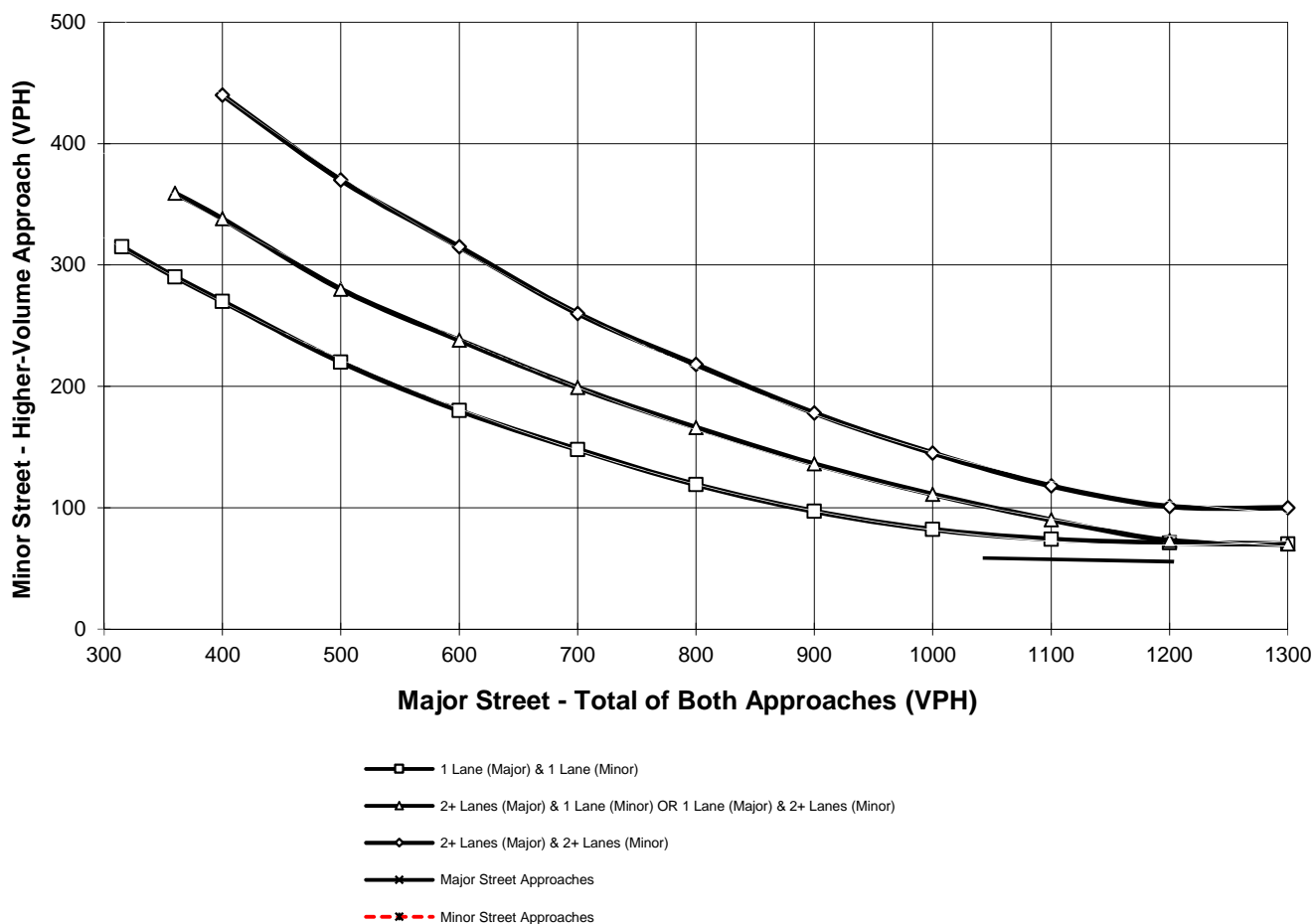
Major Street Name = **Madison St.**

Total of Both Approaches (VPH) = **148**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Avenue 60**

High Volume Approach (VPH) = **133**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #10

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

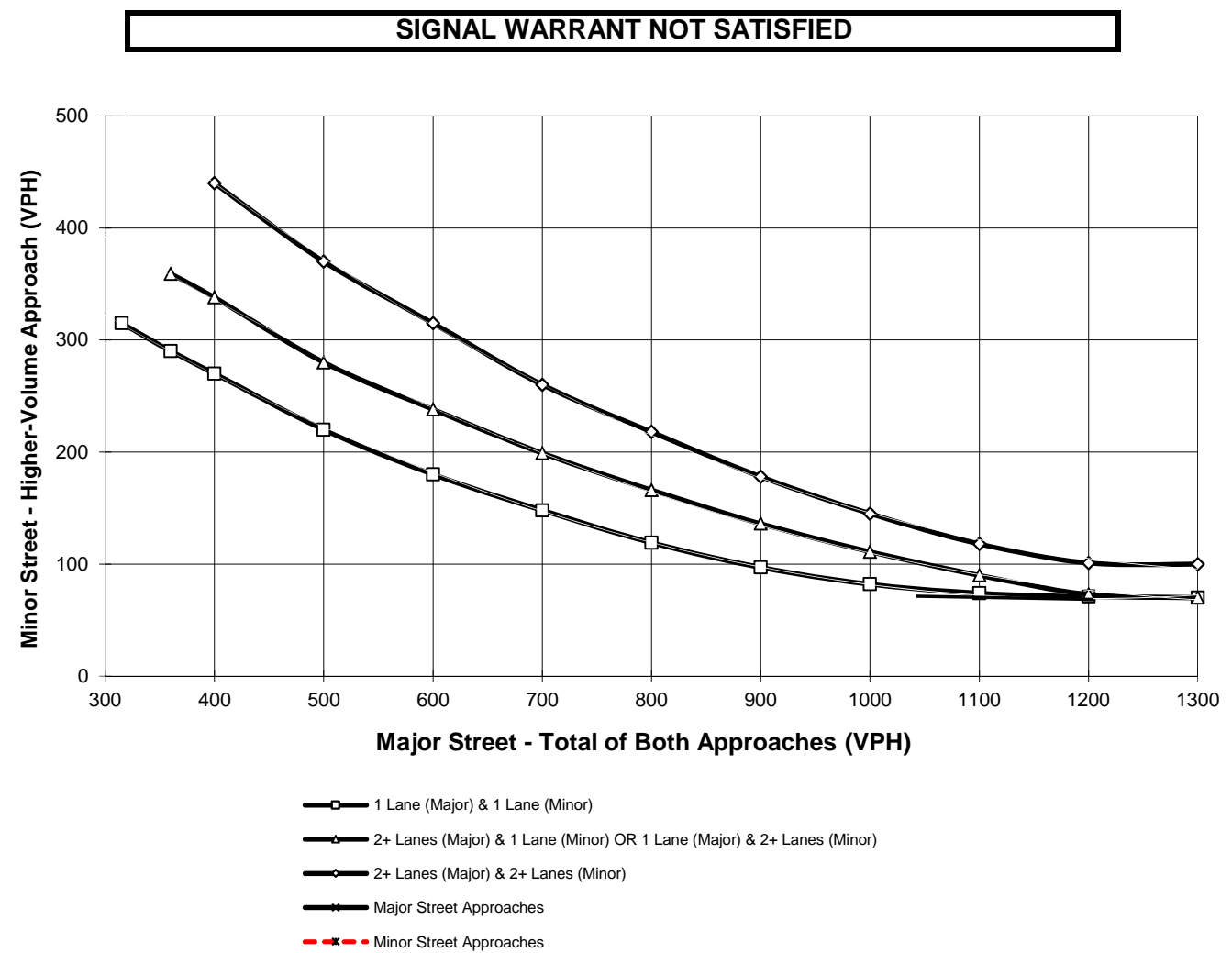
Traffic Conditions = **E+A (2026) PM PEAK HOUR WARRANTS**

Major Street Name = **Madison St.**

Total of Both Approaches (VPH) = **251**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Avenue 60**

High Volume Approach (VPH) = **130**
Number of Approach Lanes Minor Street = **1**



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #10

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

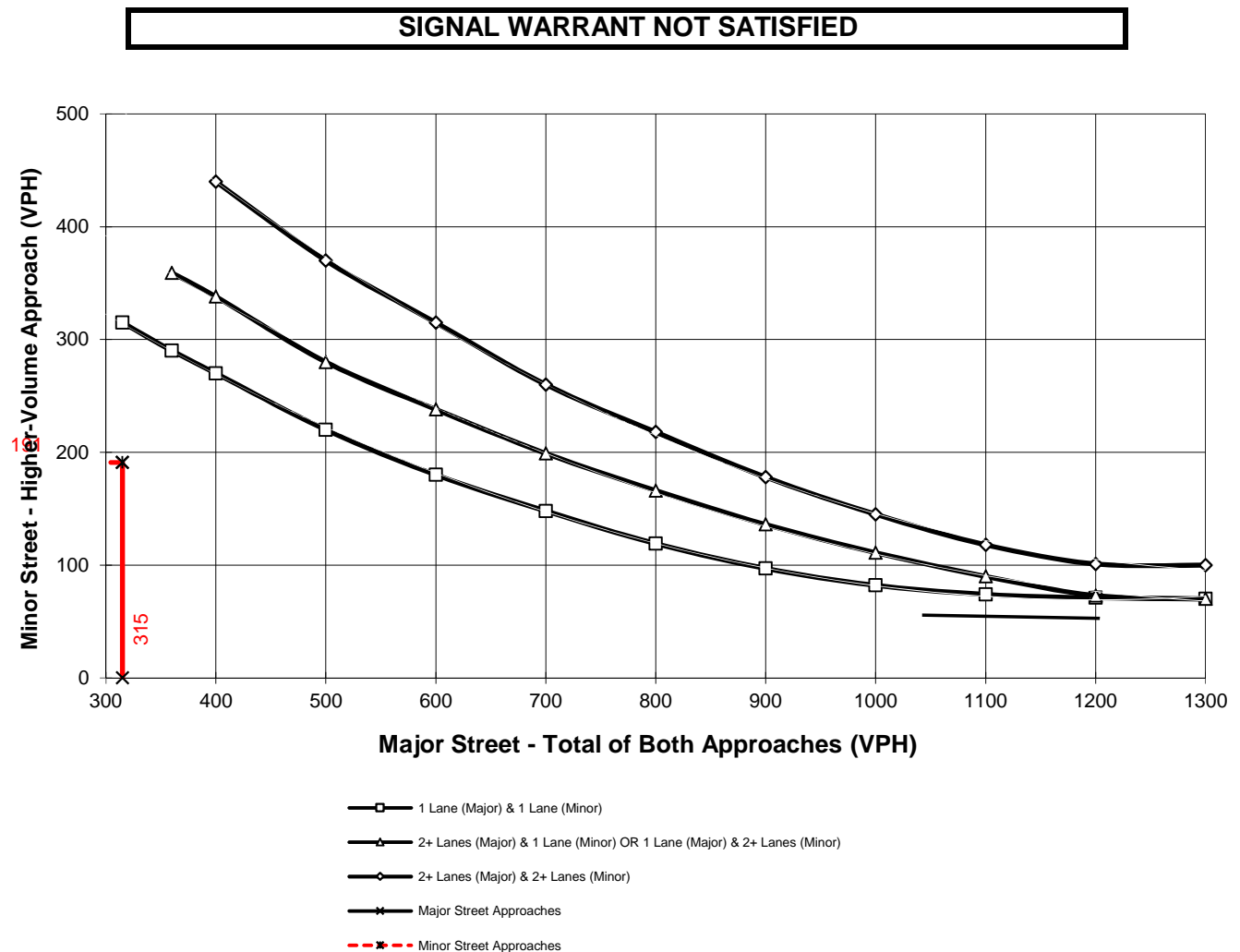
Traffic Conditions = **E+A (2026) AM PEAK HOUR WARRANTS**

Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **315**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Avenue 60**

High Volume Approach (VPH) = **191**
Number of Approach Lanes Minor Street = **1**



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #11

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **E+A (2026) AM PEAK HOUR WARRANTS**

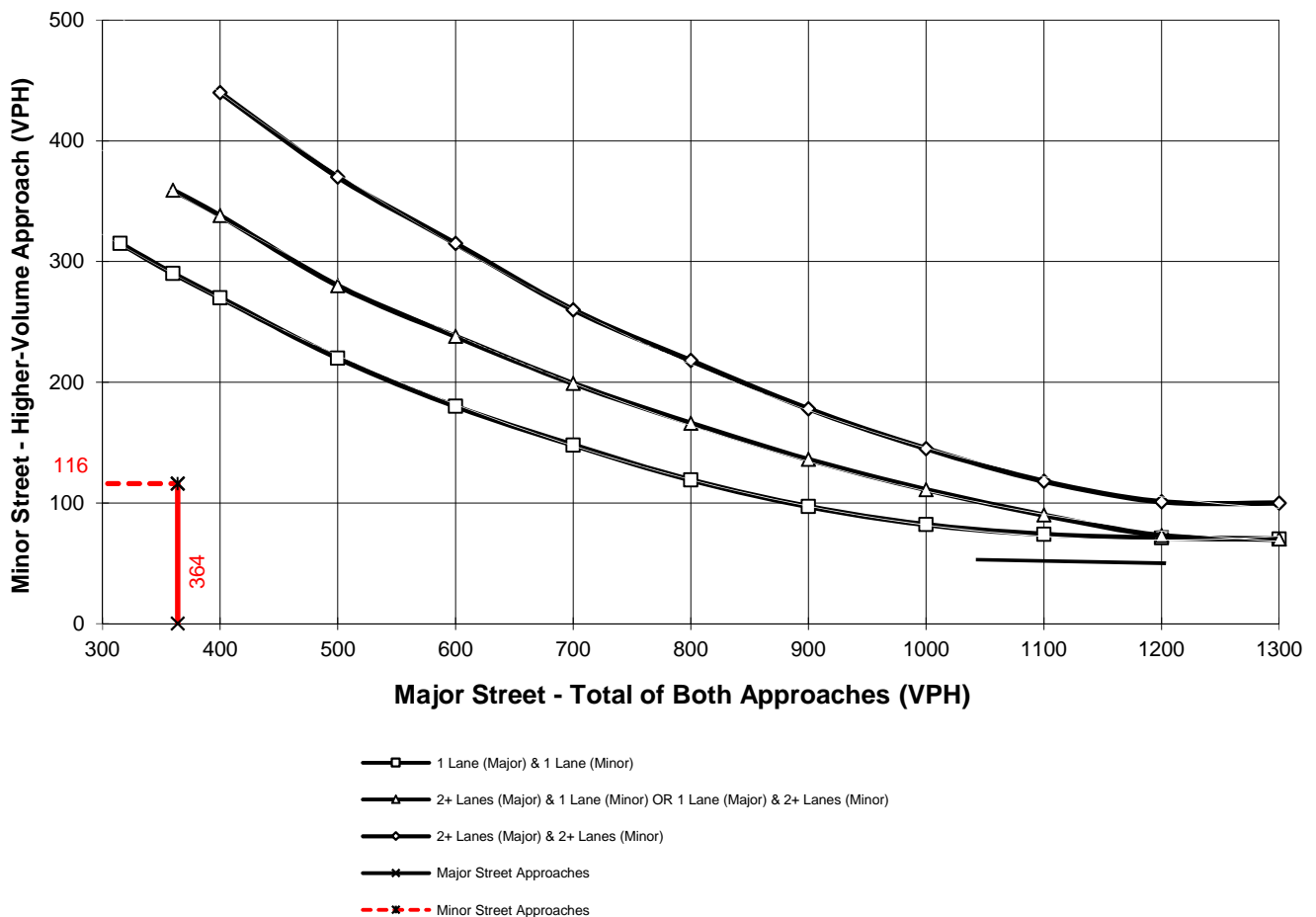
Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **364**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Avenue 58**

High Volume Approach (VPH) = **116**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #12

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **E+A (2026) PM PEAK HOUR WARRANTS**

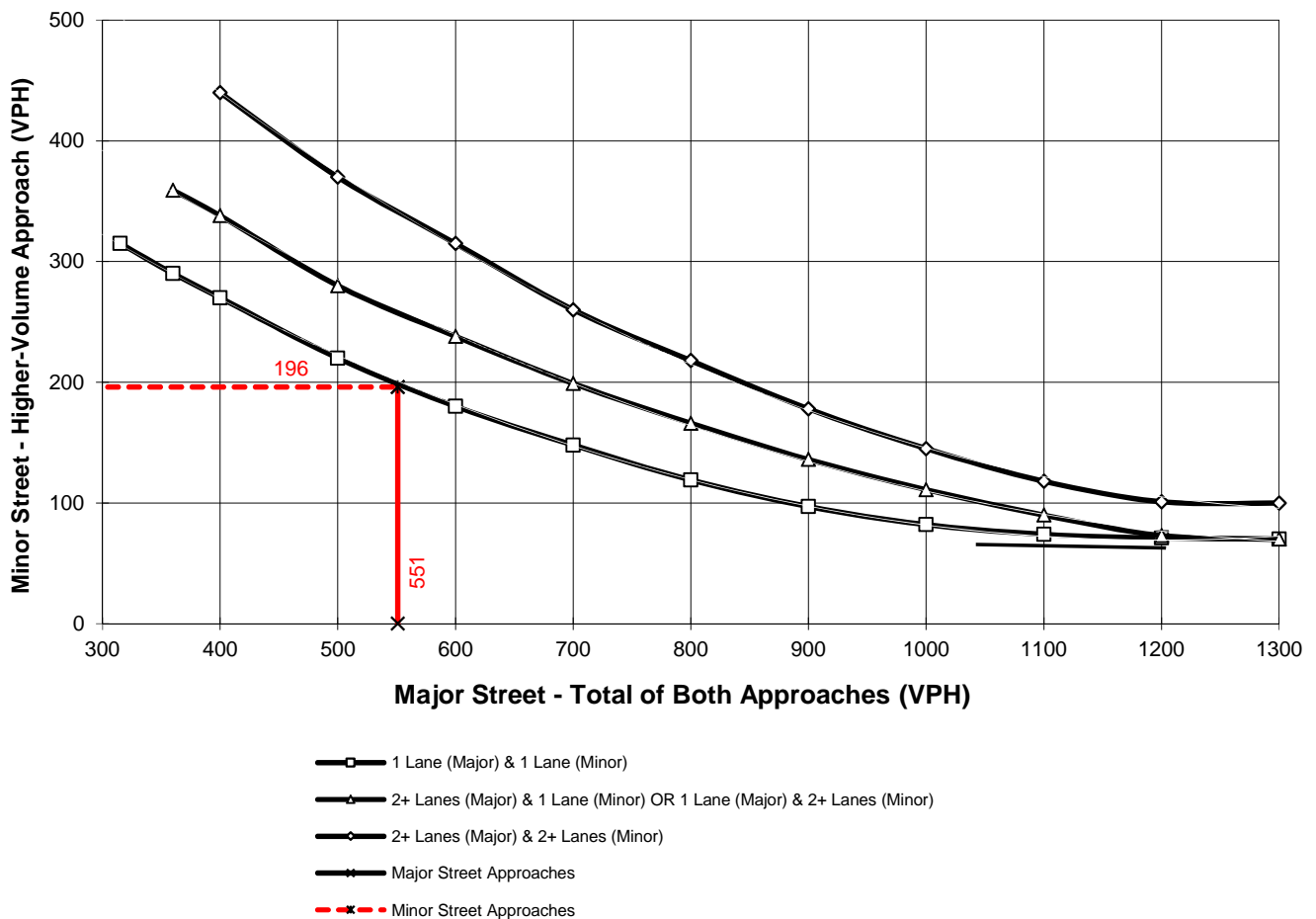
Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **551**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Avenue 58**

High Volume Approach (VPH) = **196**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #12

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **E+A (2026) AM PEAK HOUR WARRANTS**

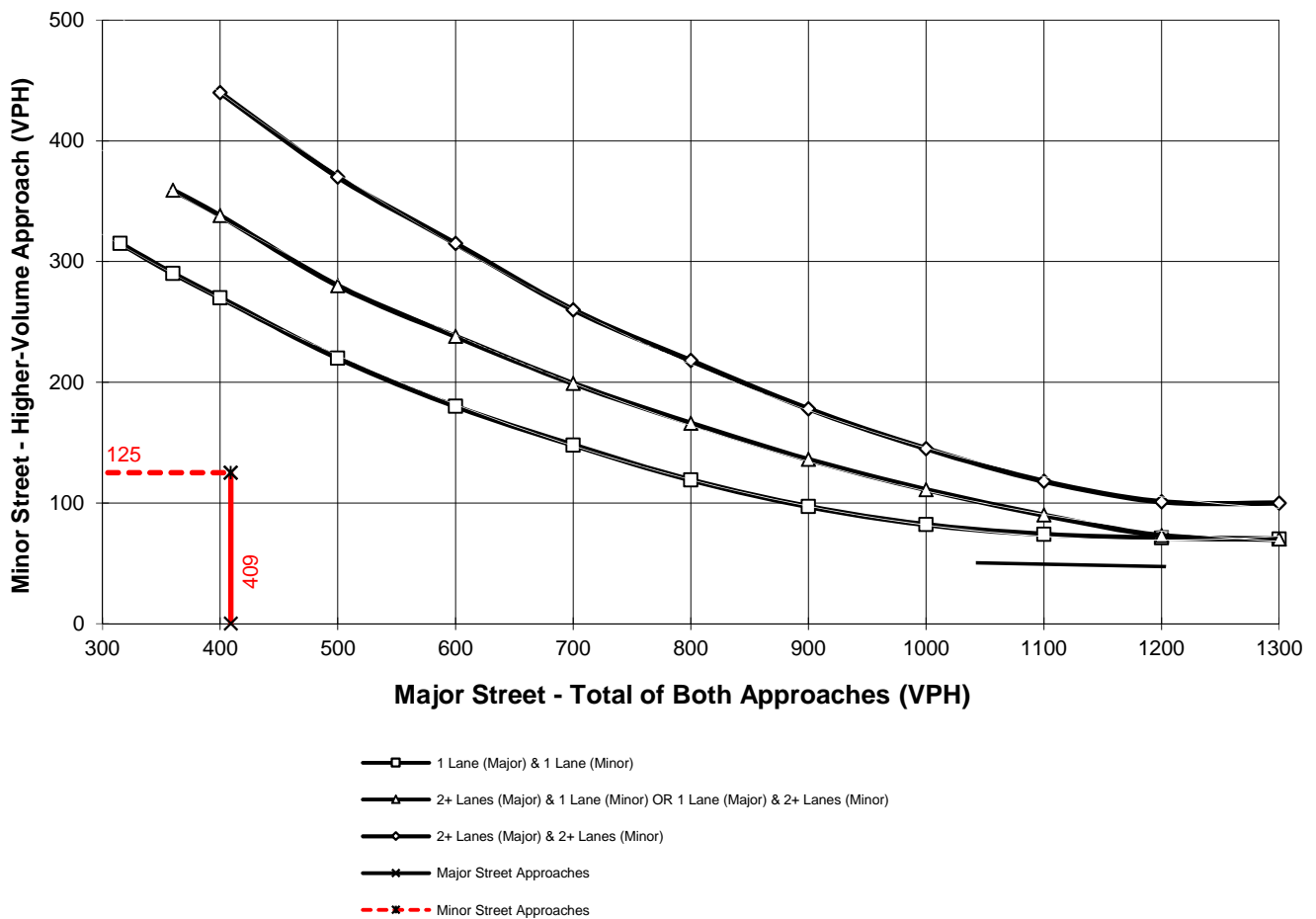
Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **409**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Airport Blvd.**

High Volume Approach (VPH) = **125**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #13

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **E+A (2026) PM PEAK HOUR WARRANTS**

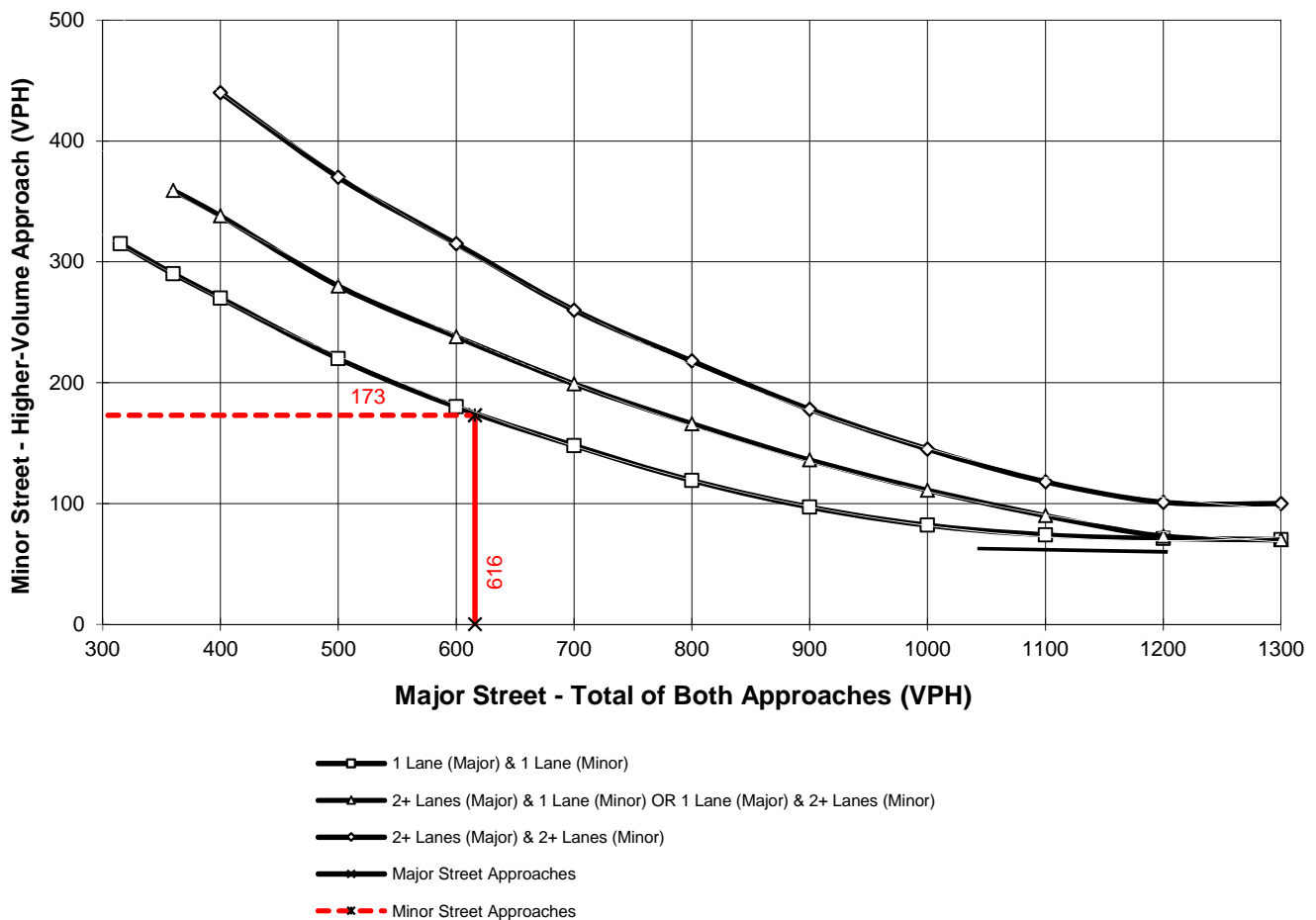
Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **616**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Airport Blvd.**

High Volume Approach (VPH) = **173**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #13

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **E+A (2026) AM PEAK HOUR WARRANTS**

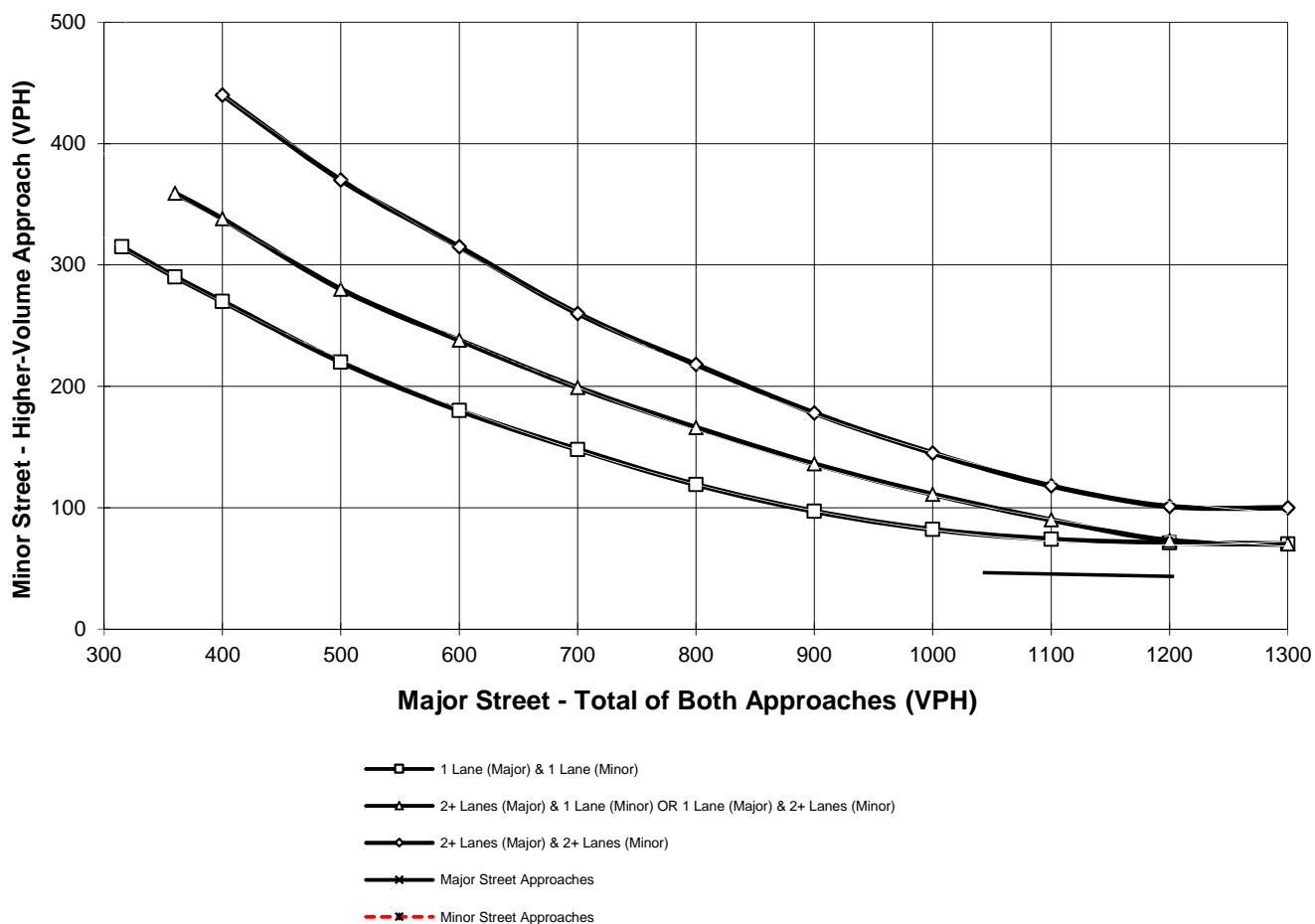
Major Street Name = **Jackson St.**

Total of Both Approaches (VPH) = **265**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **58th Avenue**

High Volume Approach (VPH) = **91**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #17

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **E+A (2026) PM PEAK HOUR WARRANTS**

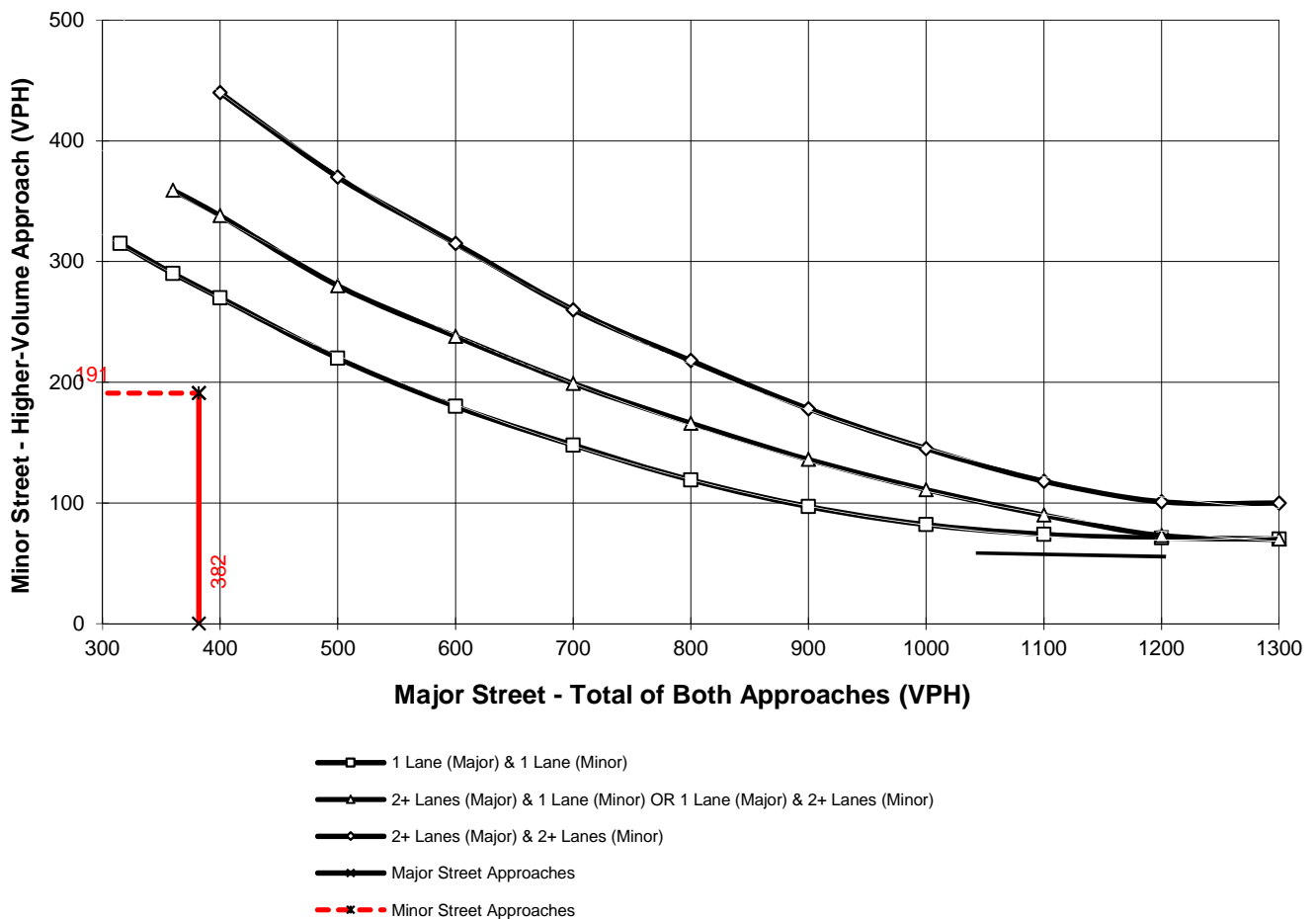
Major Street Name = **Jackson St.**

Total of Both Approaches (VPH) = **382**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **58th Avenue**

High Volume Approach (VPH) = **191**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #17

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WITH PROJECT CONDITIONS

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

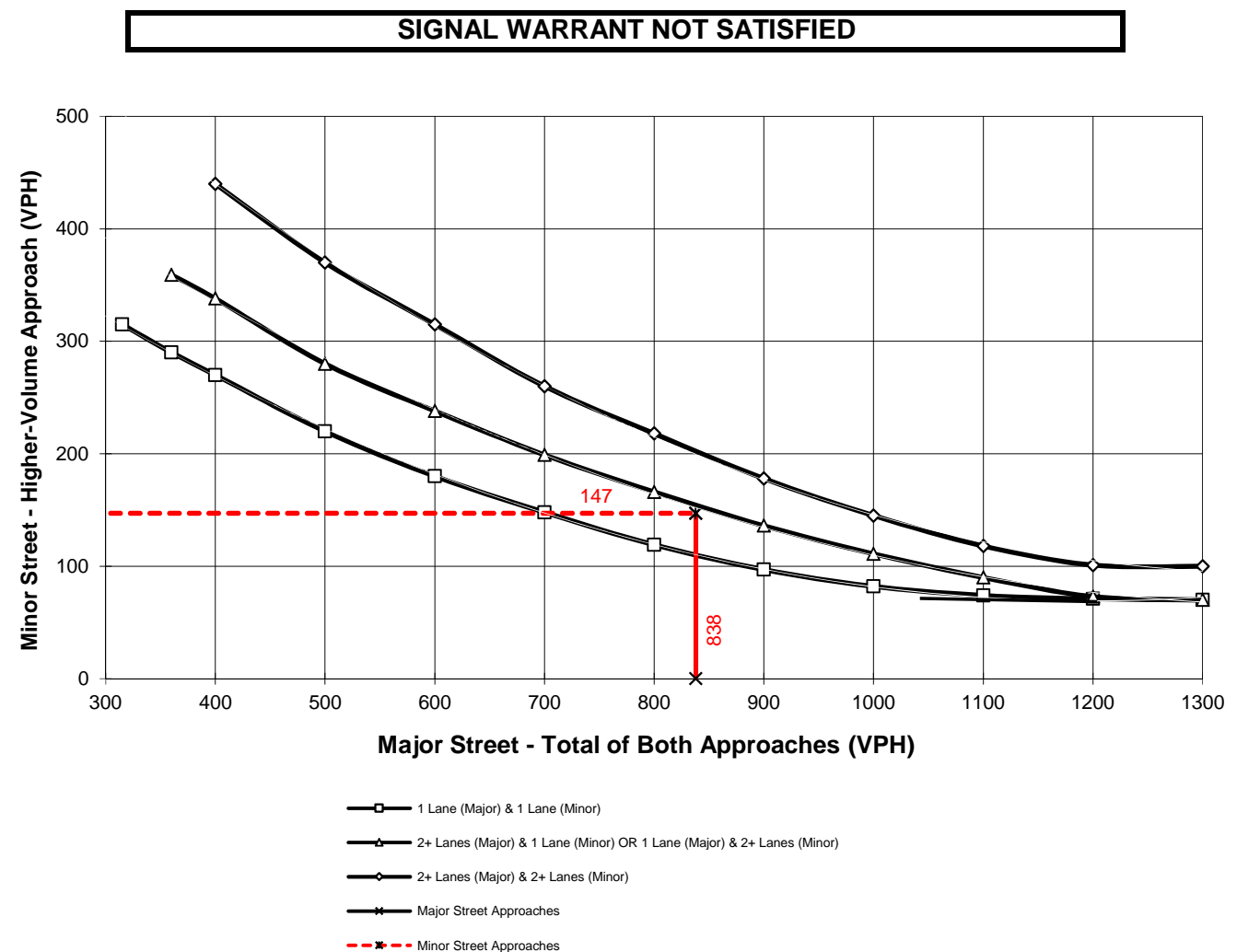
Traffic Conditions = **E+A+P (2026) AM PEAK HOUR WARRANTS**

Major Street Name = **Madison St.**

Total of Both Approaches (VPH) = **838**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Avenue 58**

High Volume Approach (VPH) = **147**
Number of Approach Lanes Minor Street = **1**



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #1

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **E+A+P (2026) PM PEAK HOUR WARRANTS**

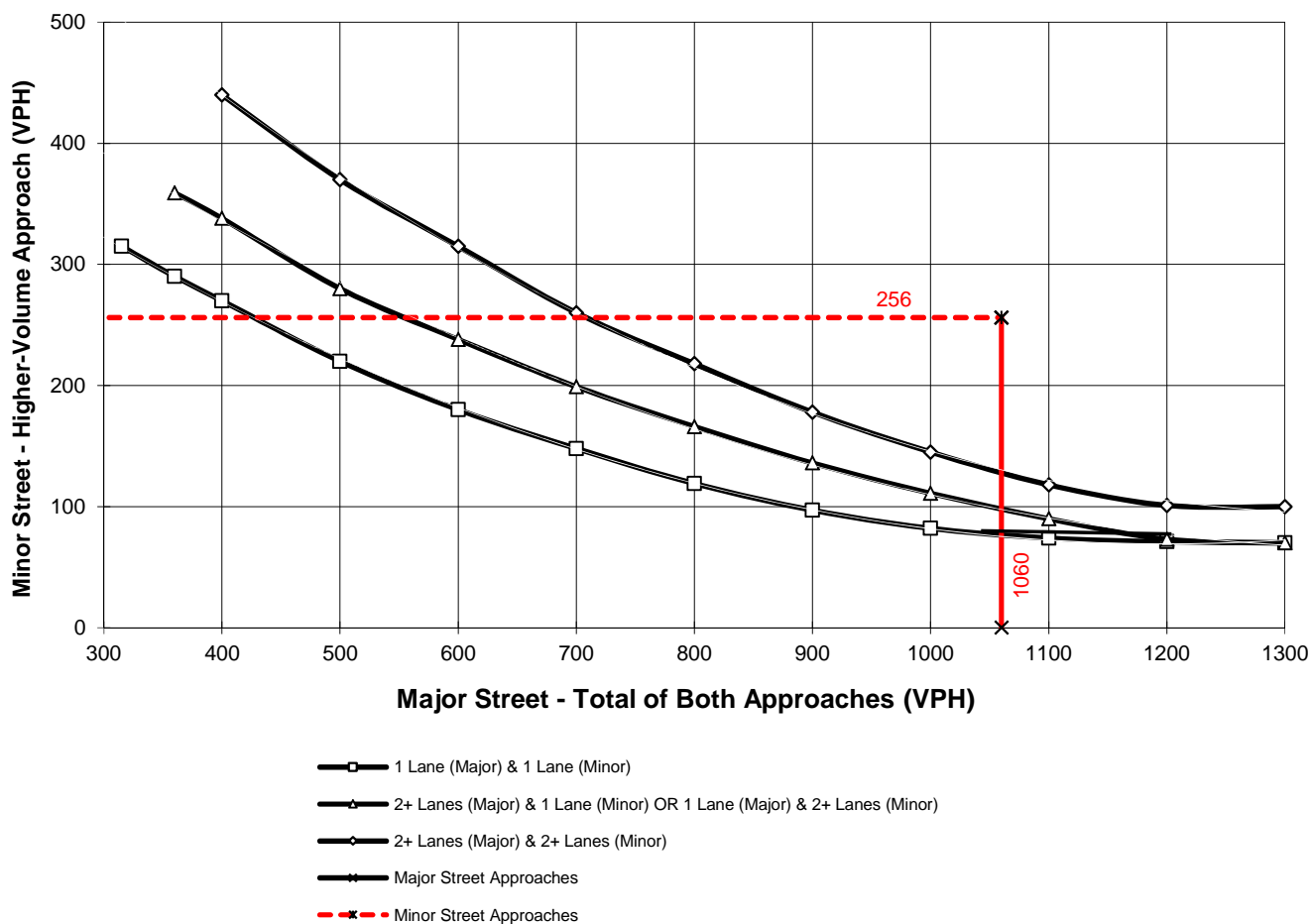
Major Street Name = **Madison St.**

Total of Both Approaches (VPH) = **1,060**
Number of Approach Lanes Major Street = **3**

Minor Street Name = **Avenue 58**

High Volume Approach (VPH) = **256**
Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #1

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **E+A+P (2026) AM PEAK HOUR WARRANTS**

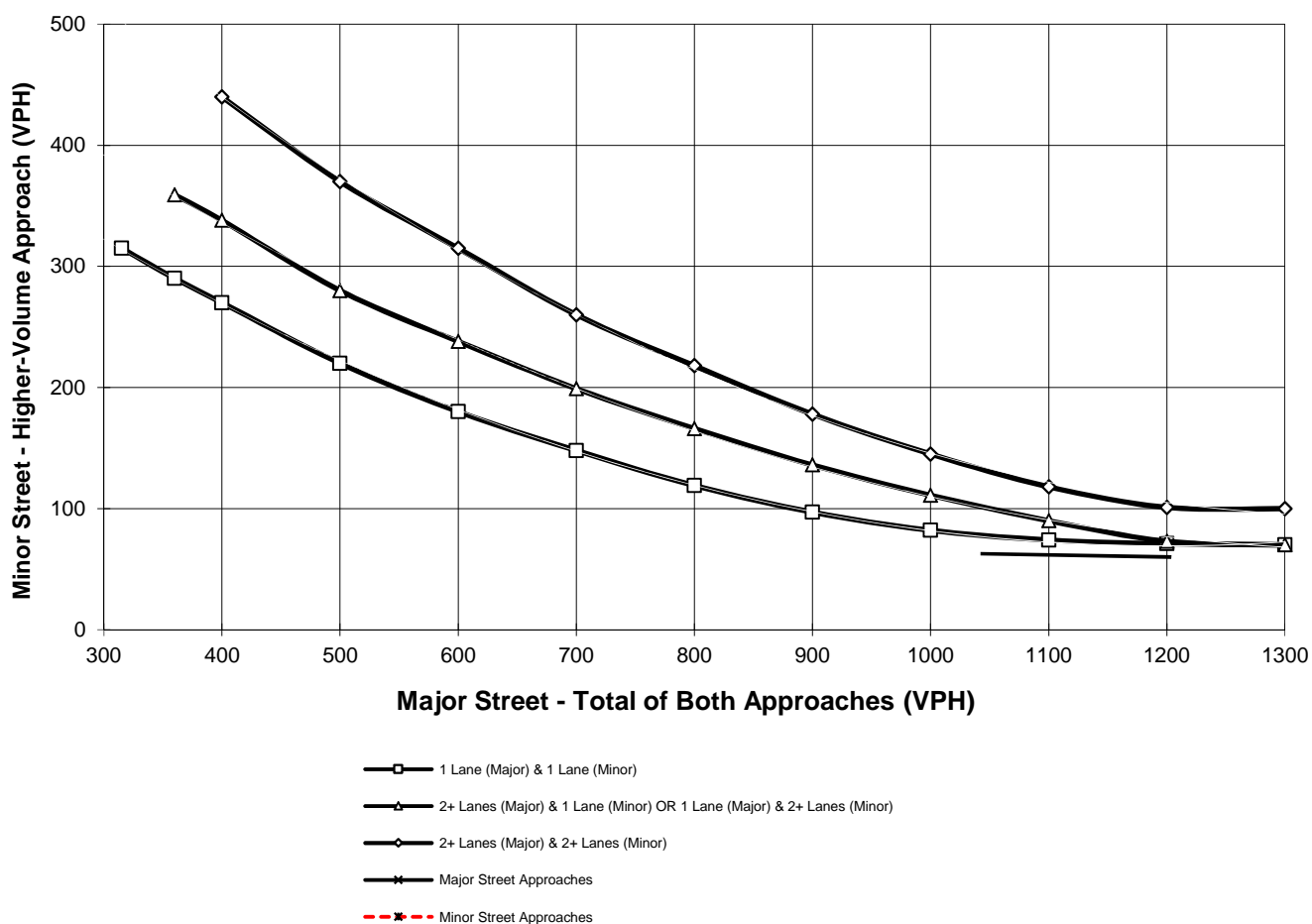
Major Street Name = **Avenue 60**

Total of Both Approaches (VPH) = **245**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Madison St.**

High Volume Approach (VPH) = **175**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #10

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **E+A+P (2026) PM PEAK HOUR WARRANTS**

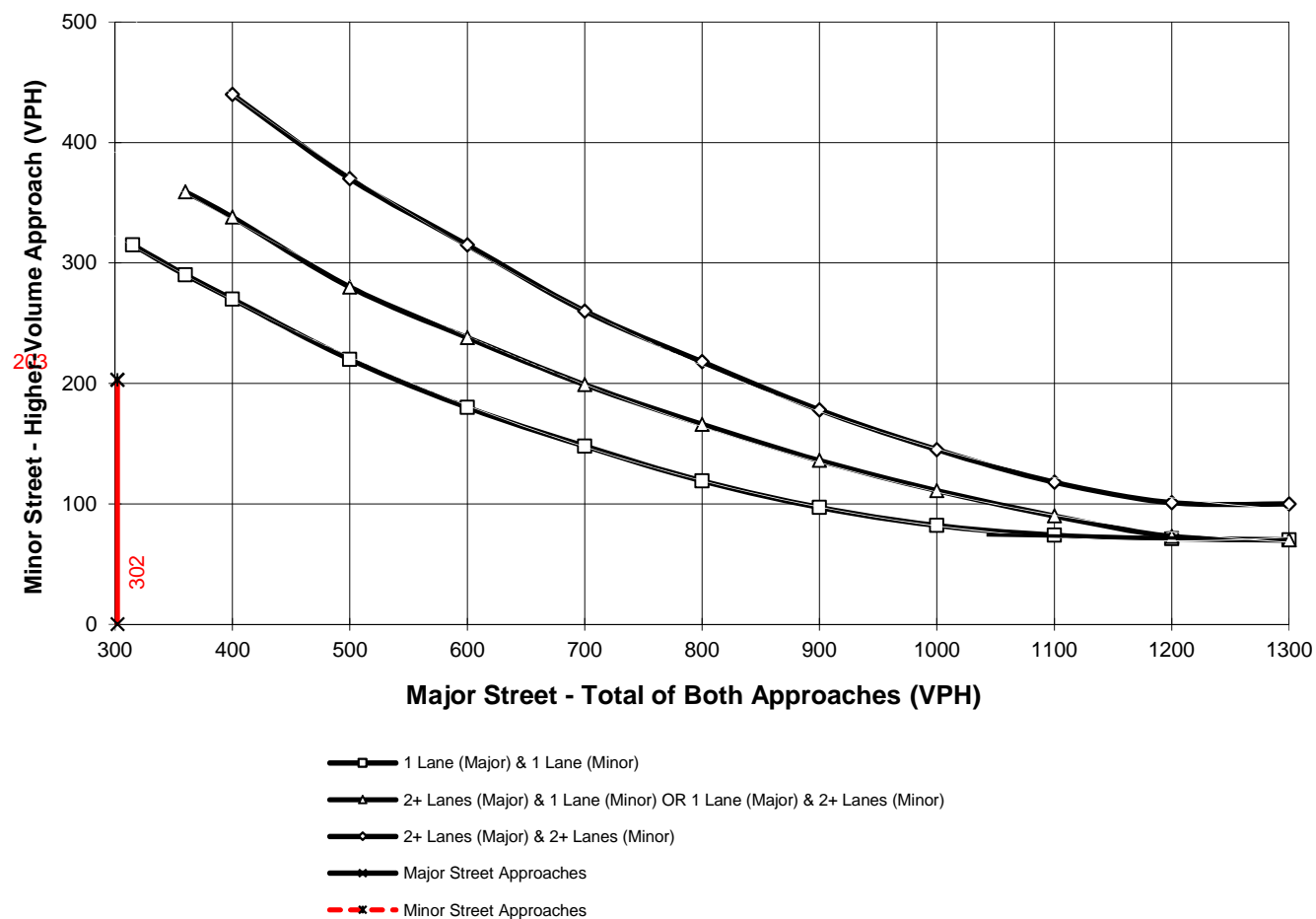
Major Street Name = **Madison St.**

Total of Both Approaches (VPH) = **302**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Avenue 60**

High Volume Approach (VPH) = **203**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #10

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **E+A+P (2026) AM PEAK HOUR WARRANTS**

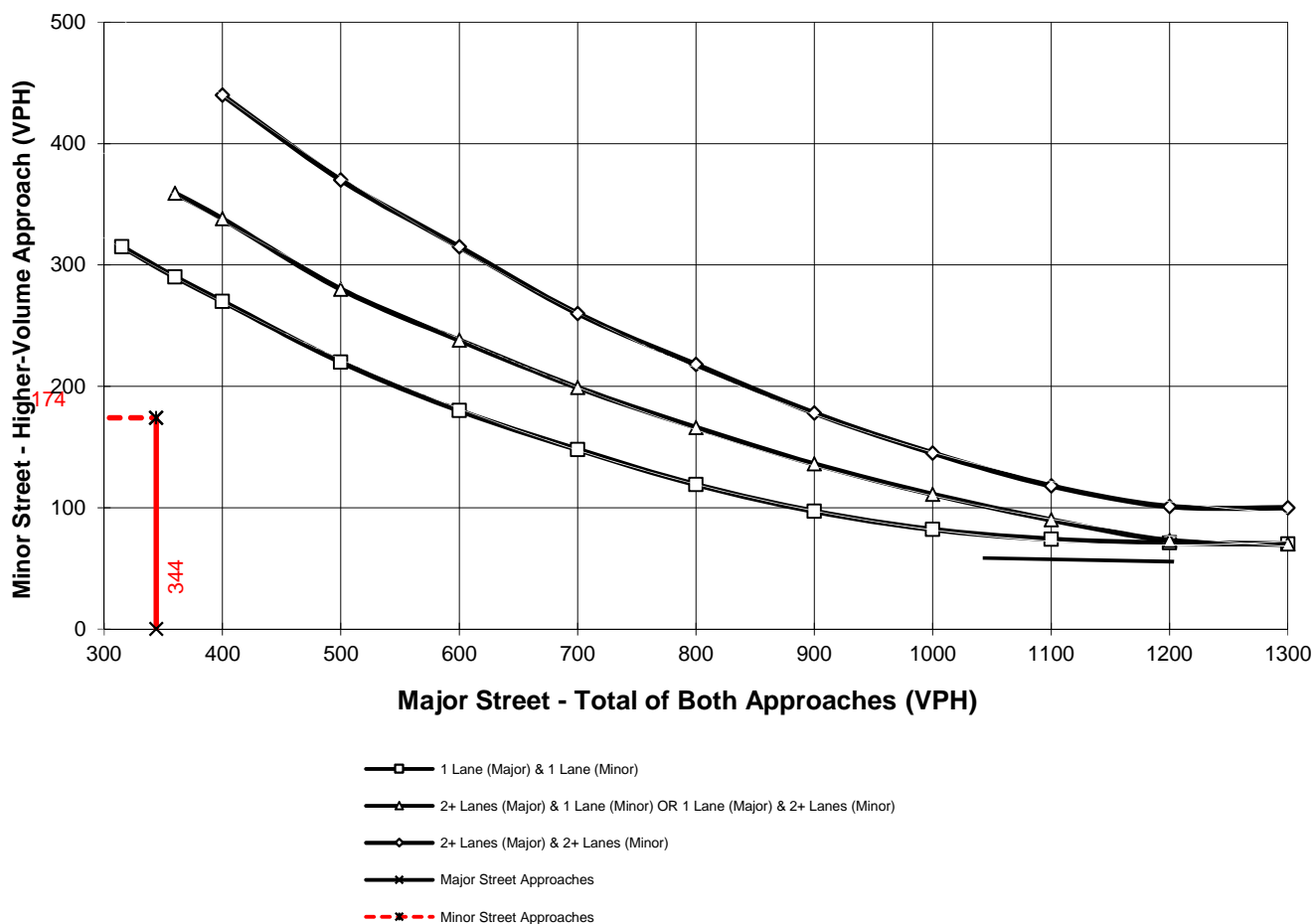
Major Street Name = **Avenue 60**

Total of Both Approaches (VPH) = **344**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Monroe St.**

High Volume Approach (VPH) = **174**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #11

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **E+A+P (2026) PM PEAK HOUR WARRANTS**

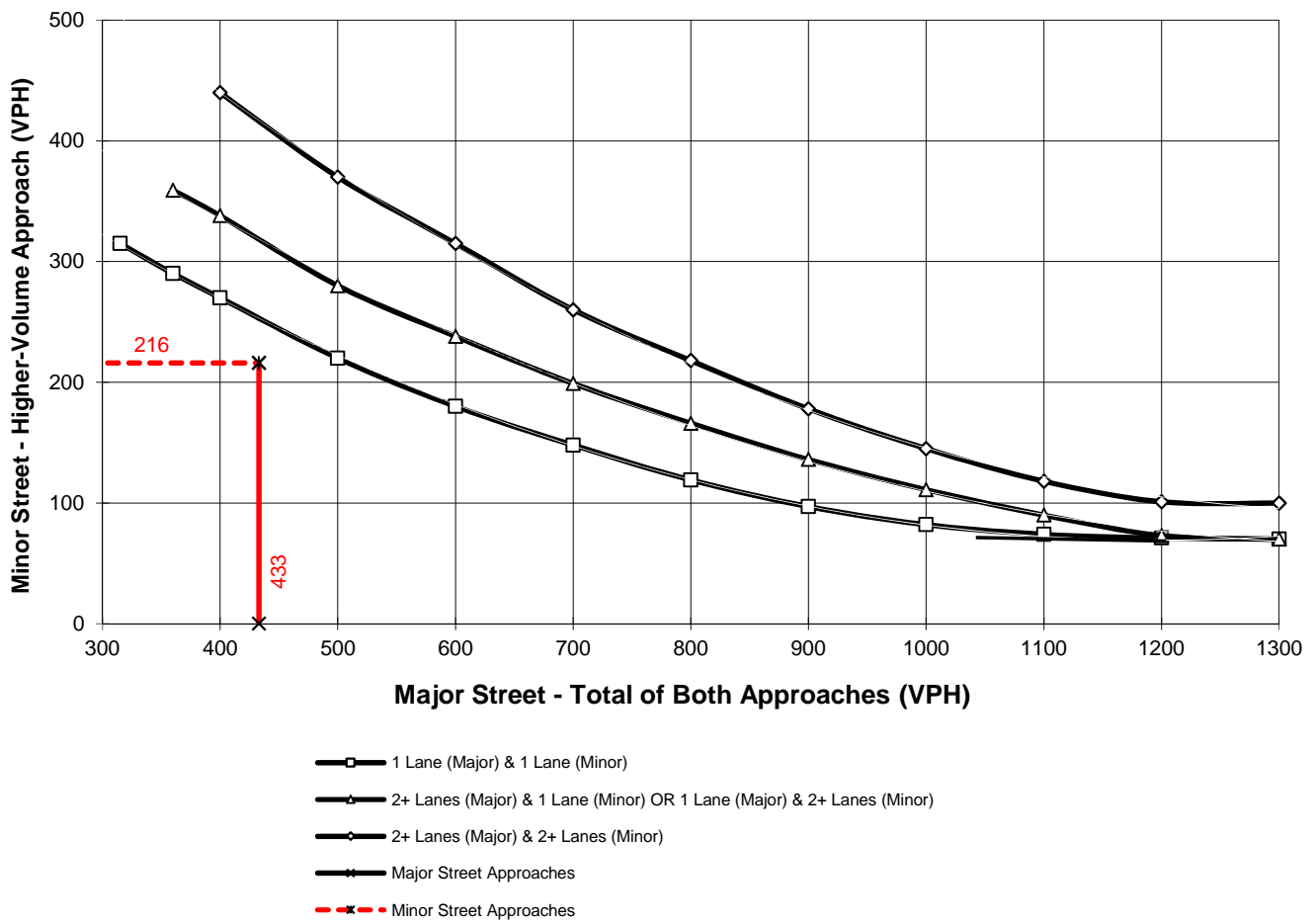
Major Street Name = **Avenue 60**

Total of Both Approaches (VPH) = **433**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Monroe St.**

High Volume Approach (VPH) = **216**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #11

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **E+A+P (2026) AM PEAK HOUR WARRANTS**

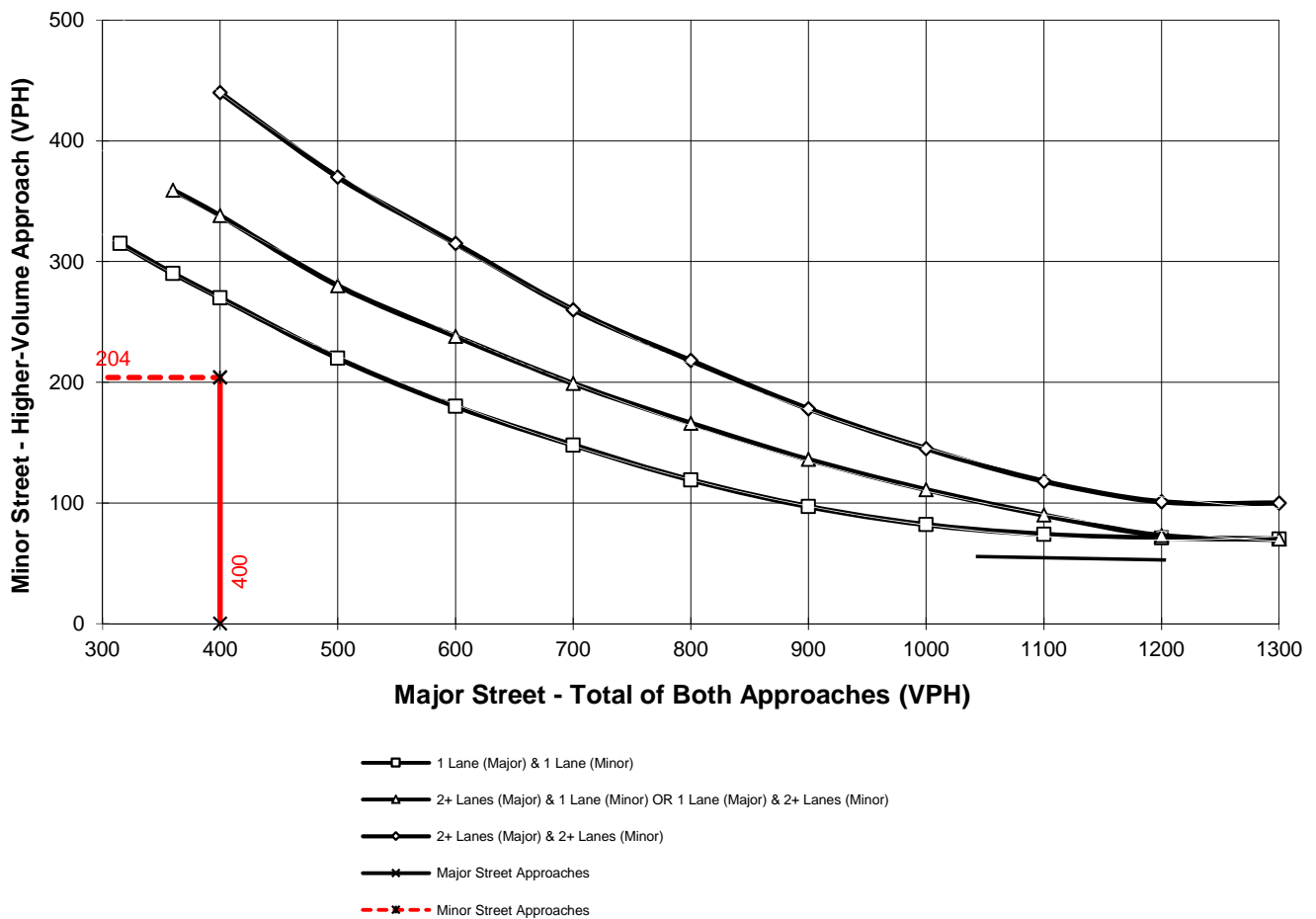
Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **400**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Avenue 58**

High Volume Approach (VPH) = **204**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #12

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

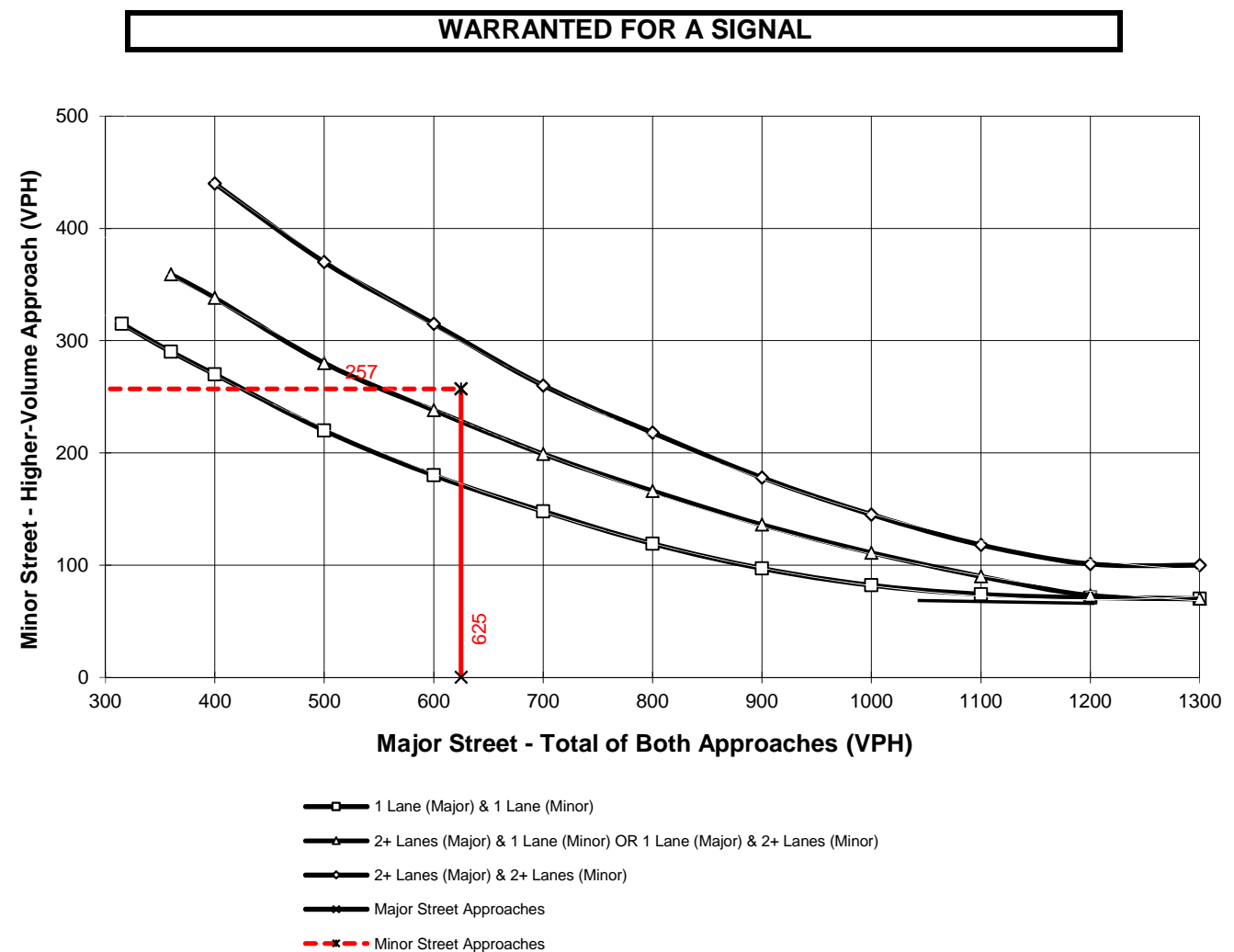
Traffic Conditions = **E+A+P (2026) PM PEAK HOUR WARRANTS**

Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **625**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Avenue 58**

High Volume Approach (VPH) = **257**
Number of Approach Lanes Minor Street = **1**



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #12

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **E+A+P (2026) AM PEAK HOUR WARRANTS**

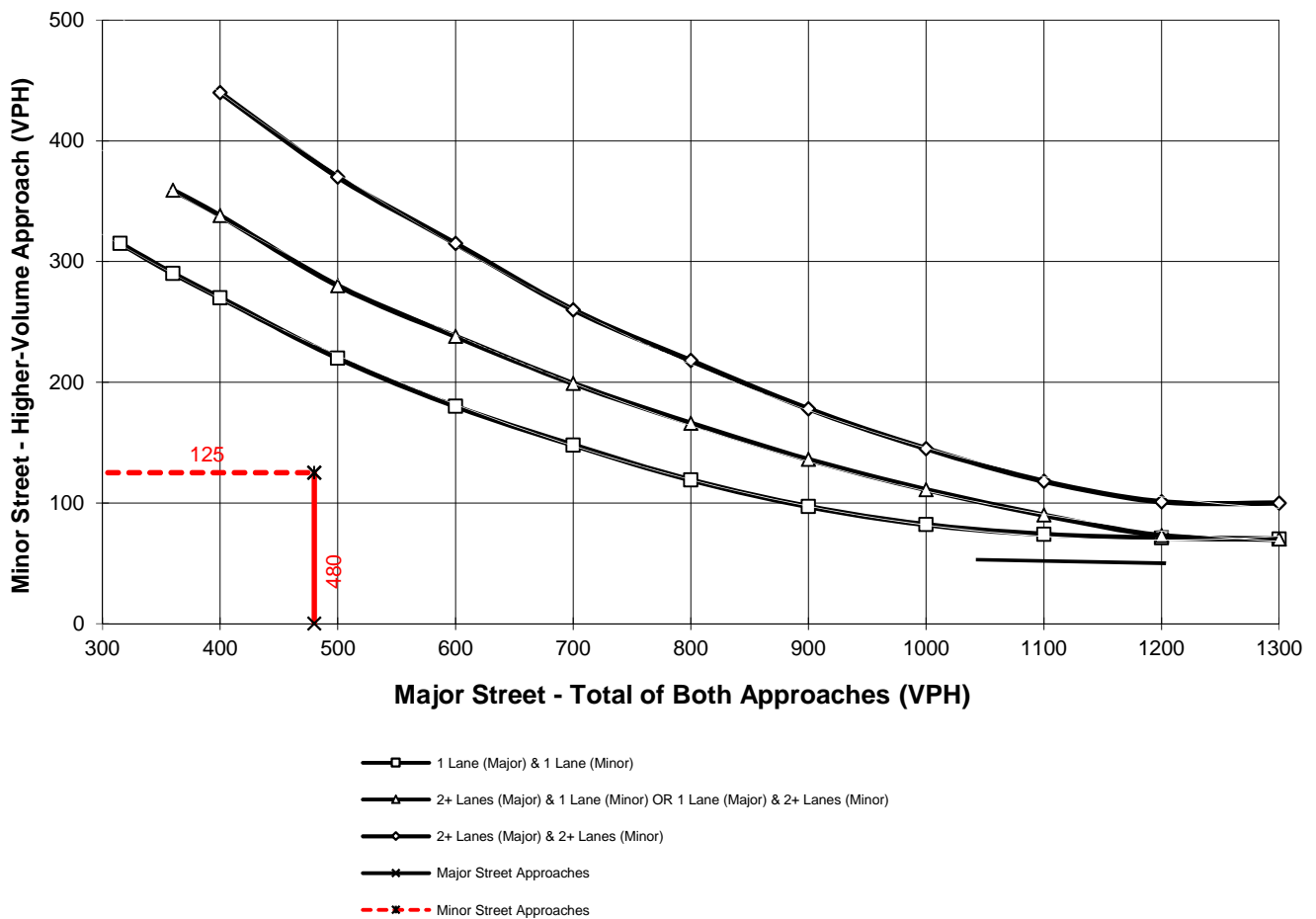
Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **480**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Airport Blvd.**

High Volume Approach (VPH) = **125**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #13

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

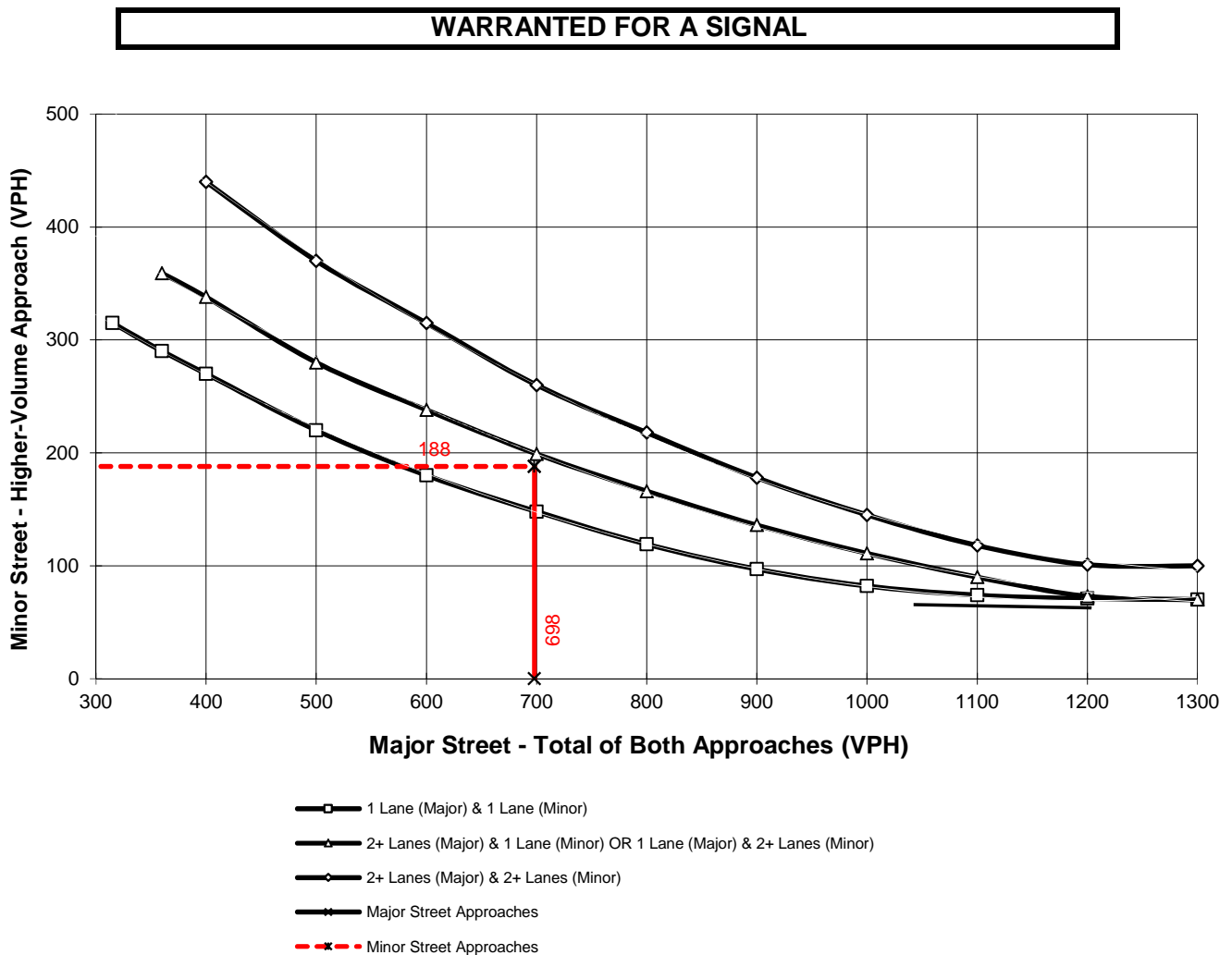
Traffic Conditions = **E+A+P (2026) PM PEAK HOUR WARRANTS**

Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **698**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Airport Blvd.**

High Volume Approach (VPH) = **188**
Number of Approach Lanes Minor Street = **1**



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #13

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **E+A+P (2026) AM PEAK HOUR WARRANTS**

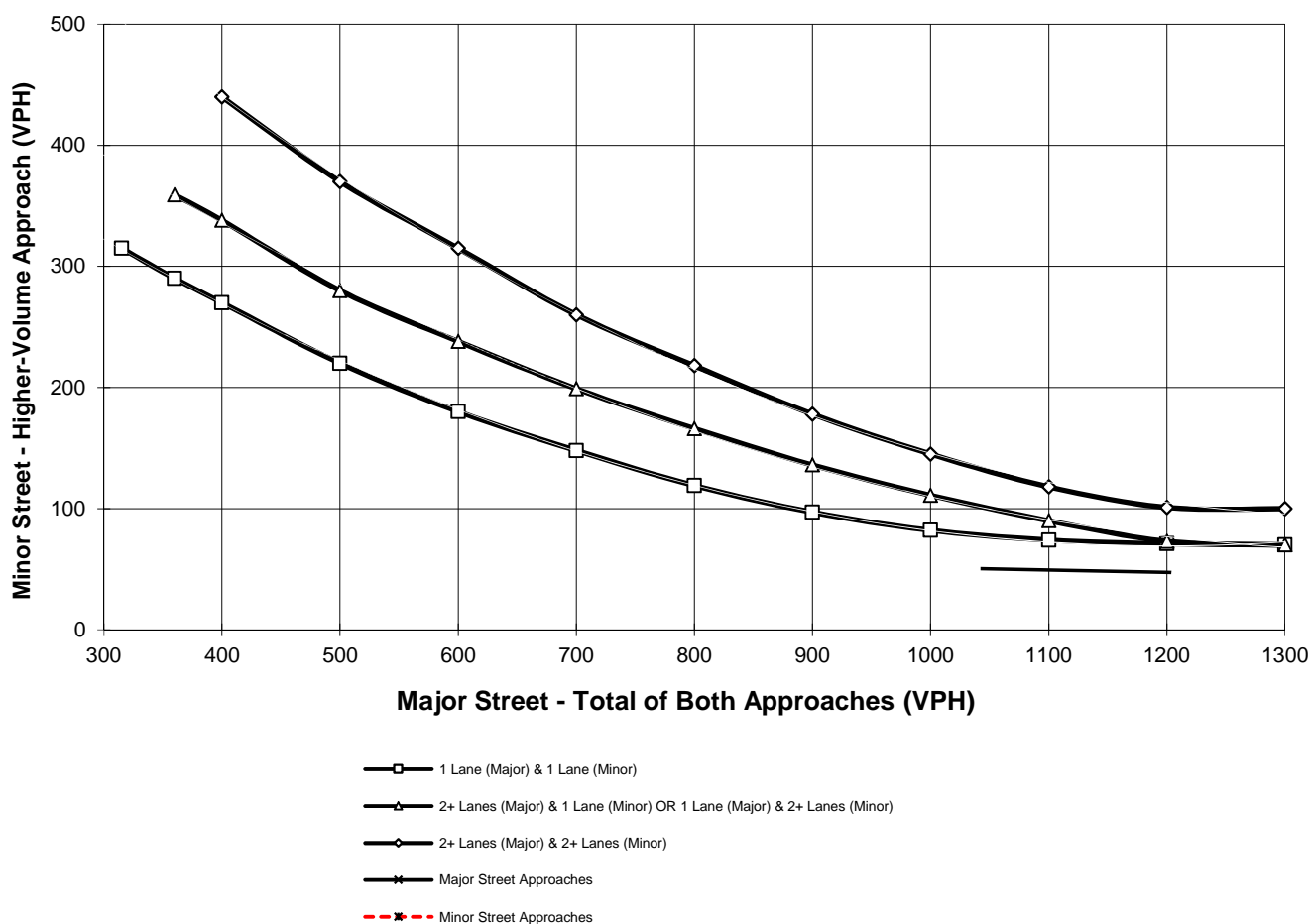
Major Street Name = **Jackson St.**

Total of Both Approaches (VPH) = **270**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **58th Avenue**

High Volume Approach (VPH) = **135**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #17

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **E+A+P (2026) PM PEAK HOUR WARRANTS**

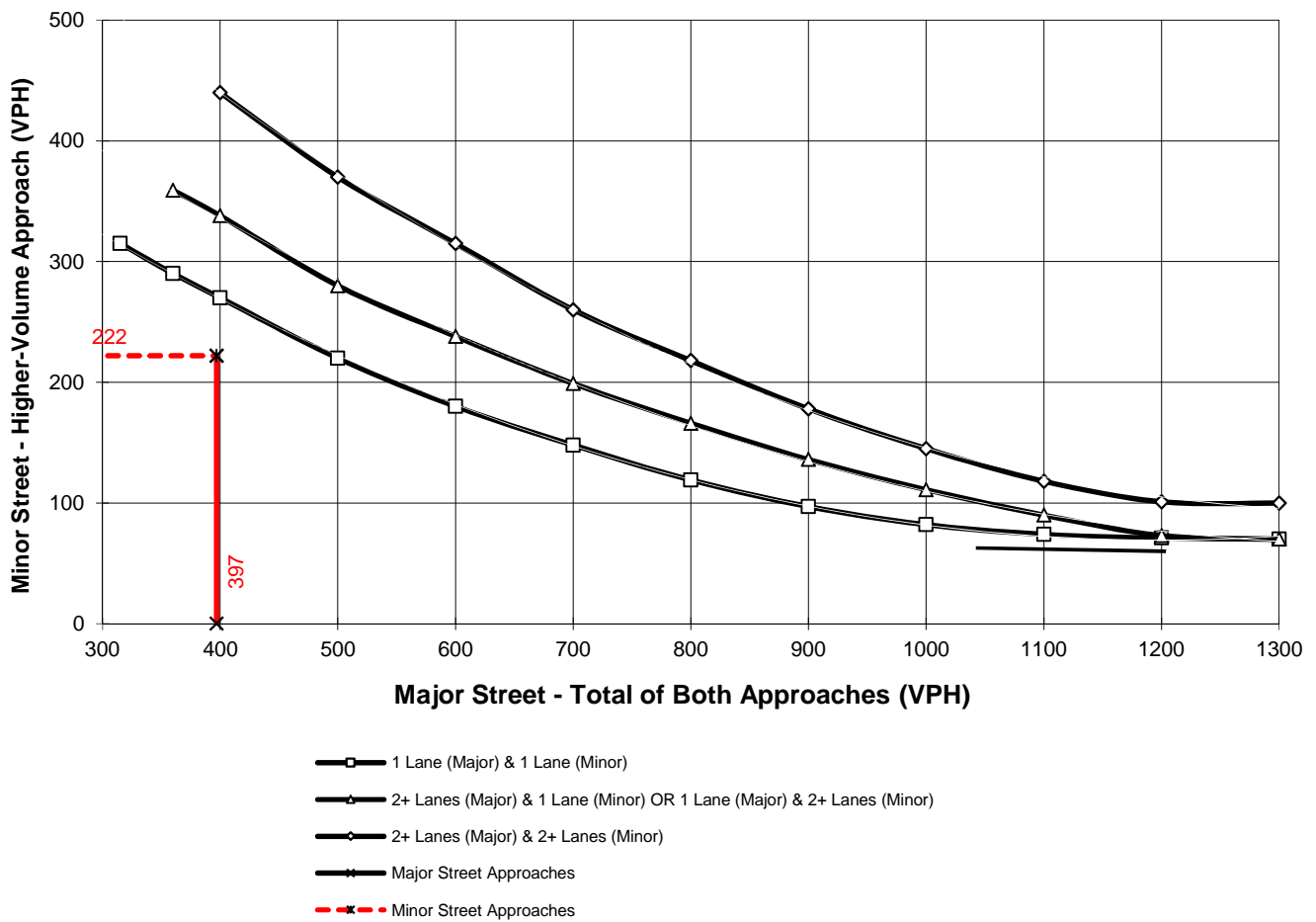
Major Street Name = **Jackson St.**

Total of Both Approaches (VPH) = **397**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **58th Avenue**

High Volume Approach (VPH) = **222**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #17

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	CALC	TRAFFIC CONDITIONS	EAP
Jurisdiction: <u>City of La Quinta</u>				CHK	<u>JC</u>	DATE <u>10/08/19</u>
Major Street: <u>Avenue 60</u>						DATE
Minor Street: <u>S. Access</u>					Critical Approach Speed (Major)	<u>30</u> mph
					Critical Approach Speed (Minor)	<u>30</u> mph
Major Street Approach Lanes = <u>1</u> lane				Minor Street Approach Lanes: <u>1</u> lane		
Major Street Future ADT = <u>892</u> vpd				Minor Street Future ADT = <u>606</u> vpd		
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						<input type="text"/> or <input type="text"/>
In built up area of isolated community of < 10,000 population						URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN XX		RURAL		Minimum Requirements ADT			
CONDITION A - Minimum Vehicular Volume				Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>		<u>Not Satisfied</u>					
		XX					
Number of lanes for moving traffic on each approach				<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>Major Street</u>		<u>Minor Street</u>					
1 892		1 606		8,000	5,600	2,400	1,680
2 +		1		9,600	6,720	2,400	1,680
2 +		2 +		9,600	6,720	3,200	2,240
1		2 +		8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>		<u>Not Satisfied</u>					
		XX					
Number of lanes for moving traffic on each approach				<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>Major Street</u>		<u>Minor Street</u>					
1 892		1 606		12,000	8,400	1,200	850
2 +		1		14,400	10,080	1,200	850
2 +		2 +		14,400	10,080	1,600	1,120
1		2 +		12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				2 CONDITIONS 80%		2 CONDITIONS 80%	
<u>Satisfied</u>		<u>Not Satisfied</u>					
		XX					
No one condition satisfied, but following conditions fulfilled 80% of more							
		A	B				
		11%	7%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	CALC	TRAFFIC CONDITIONS	EAP
Jurisdiction: <u>City of La Quinta</u>				CHK	<u>JC</u>	DATE <u>10/08/19</u>
Major Street: <u>Madison St.</u>						DATE
Minor Street: <u>Main Access</u>					Critical Approach Speed (Major)	<u>50</u> mph
					Critical Approach Speed (Minor)	<u>30</u> mph
Major Street Approach Lanes = <u>2</u> lane				Minor Street Approach Lanes: <u>1</u> lane		
Major Street Future ADT = <u>8,845</u> vpd				Minor Street Future ADT = <u>2,186</u> vpd		
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						<input checked="" type="checkbox"/>
						or
In built up area of isolated community of < 10,000 population						<input type="checkbox"/>

RURAL (R)**(Based on Estimated Average Daily Traffic - See Note)**

<u>URBAN</u>		<u>RURAL</u>		Minimum Requirements			
		XX		ADT			
CONDITION A - Minimum Vehicular Volume				Vehicles Per Day on Major Street		Vehicles Per Day on Higher-Volume Minor Street Approach	
<u>Satisfied</u>		<u>Not Satisfied</u>		(Total of Both Approaches)		(One Direction Only)	
XX				<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
Number of lanes for moving traffic on each approach				8,000	5,600	2,400	1,680
<u>Major Street</u>		<u>Minor Street</u>		9,600	6,720 *	2,400	1,680 *
1		1		9,600	6,720	3,200	2,240
2 + 8,845		1 2,186		8,000	5,600	3,200	2,240
2 +		2 +					
1		2 +					
CONDITION B - Interruption of Continuous Traffic				Vehicles Per Day on Major Street		Vehicles Per Day on Higher-Volume Minor Street Approach	
<u>Satisfied</u>		<u>Not Satisfied</u>		(Total of Both Approaches)		(One Direction Only)	
		XX		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
Number of lanes for moving traffic on each approach				12,000	8,400	1,200	850
<u>Major Street</u>		<u>Minor Street</u>		14,400	10,080	1,200	850 *
1		1		14,400	10,080	1,600	1,120
2 + 8,845		1 2,186		12,000	8,400	1,600	1,120
2 +		2 +					
1		2 +					
Combination of CONDITIONS A + B				2 CONDITIONS		2 CONDITIONS	
<u>Satisfied</u>		<u>Not Satisfied</u>		80%		80%	
XX							
No one condition satisfied, but following conditions fulfilled 80% of more							
		<u>A</u>	<u>B</u>				
		100%	88%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	CALC	TRAFFIC CONDITIONS	EAP
Jurisdiction: <u>City of La Quinta</u>				CHK	<u>JC</u>	DATE <u>10/08/19</u>
Major Street: <u>Avenue 58</u>						DATE
Minor Street: <u>Project Access 1</u>					Critical Approach Speed (Major)	<u>50</u> mph
					Critical Approach Speed (Minor)	<u>30</u> mph
Major Street Approach Lanes = <u>2</u> lane				Minor Street Approach Lanes: <u>1</u> lane		
Major Street Future ADT = <u>3,459</u> vpd				Minor Street Future ADT = <u>458</u> vpd		
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						<input checked="" type="checkbox"/>
						or
In built up area of isolated community of < 10,000 population						<input type="checkbox"/>

RURAL (R)**(Based on Estimated Average Daily Traffic - See Note)**

URBAN		RURAL		Minimum Requirements			
				ADT			
CONDITION A - Minimum Vehicular Volume		XX		Vehicles Per Day on		Vehicles Per Day	
Satisfied		Not Satisfied		Major Street		on Higher-Volume	
		XX		(Total of Both Approaches)		Minor Street Approach	
Number of lanes for moving traffic on each approach						(One Direction Only)	
Major Street	Minor Street			Urban	Rural	Urban	Rural
1	1			8,000	5,600	2,400	1,680
2 + 3,459	1 458			9,600	6,720	2,400	1,680
2 +	2 +			9,600	6,720	3,200	2,240
1	2 +			8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				Vehicles Per Day		Vehicles Per Day	
Satisfied		Not Satisfied		on Major Street		on Higher-Volume	
		XX		(Total of Both Approaches)		Minor Street Approach	
Number of lanes for moving traffic on each approach						(One Direction Only)	
Major Street	Minor Street			Urban	Rural	Urban	Rural
1	1			12,000	8,400	1,200	850
2 + 3,459	1 458			14,400	10,080	1,200	850
2 +	2 +			14,400	10,080	1,600	1,120
1	2 +			12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				2 CONDITIONS		2 CONDITIONS	
Satisfied		Not Satisfied		80%		80%	
		XX					
No one condition satisfied, but following conditions							
fulfilled 80% of more							
		A	B				
		27%	34%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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APPENDIX 6.5:

EAC (2021) WITHOUT AND WITH PROJECT PHASE 1 CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

























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WITHOUT PROJECT CONDITIONS










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Lanes, Volumes, Timings
1: Madison St. & Avenue 58

EAC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	64	7	10	55	60	17	236	6	73	195	69
Future Volume (vph)	111	64	7	10	55	60	17	236	6	73	195	69
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	10.9
Intersection LOS	B















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	111	64	7	10	55	60	17	236	6	73	195	69
Future Vol, veh/h	111	64	7	10	55	60	17	236	6	73	195	69
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	118	68	7	11	59	64	18	251	6	78	207	73
Number of Lanes	1	1	1	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	11.4	10.2	11.3	10.7
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	93%	0%	100%	0%	0%	100%	23%	0%	100%
Vol Right, %	0%	0%	7%	0%	0%	100%	0%	0%	77%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	17	157	85	111	64	7	10	37	78	73	130
LT Vol	17	0	0	111	0	0	10	0	0	73	0
Through Vol	0	157	79	0	64	0	0	37	18	0	130
RT Vol	0	0	6	0	0	7	0	0	60	0	0
Lane Flow Rate	18	167	90	118	68	7	11	39	83	78	138
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.035	0.299	0.16	0.236	0.127	0.012	0.022	0.074	0.147	0.146	0.241
Departure Headway (Hd)	6.925	6.425	6.375	7.192	6.692	5.992	7.367	6.867	6.331	6.784	6.284
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	516	557	561	498	534	595	485	520	564	528	570
Service Time	4.68	4.18	4.131	4.952	4.452	3.752	5.13	4.63	4.094	4.536	4.036
HCM Lane V/C Ratio	0.035	0.3	0.16	0.237	0.127	0.012	0.023	0.075	0.147	0.148	0.242
HCM Control Delay	9.9	11.9	10.4	12.2	10.4	8.8	10.3	10.2	10.2	10.7	11
HCM Lane LOS	A	B	B	B	B	A	B	B	B	B	B
HCM 95th-tile Q	0.1	1.2	0.6	0.9	0.4	0	0.1	0.2	0.5	0.5	0.9

Lanes, Volumes, Timings
2: Madison St. & Airport Bl.

EAC (2021) AM Peak hour

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	33	66	1	366	31	87	319
Future Volume (vph)	33	66	1	366	31	87	319
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		3			2		
Detector Phase	3	3	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	11.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	16.0	16.0	13.0	28.0	28.0	16.0	31.0
Total Split (%)	26.7%	26.7%	21.7%	46.7%	46.7%	26.7%	51.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 45

Control Type: Actuated-Coordinated















Splits and Phases: 2: Madison St. & Airport Bl.



HCM 6th Signalized Intersection Summary
























2: Madison St. & Airport Bl.

EAC (2021) AM Peak hour

							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	33	66	1	366	31	87	319
Future Volume (veh/h)	33	66	1	366	31	87	319
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	38	76		421	36	100	367
Peak Hour Factor	0.87	0.87		0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	187	166		2040	910	179	2627
Arrive On Green	0.11	0.11		0.59	0.59	0.11	0.80
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	38	76		421	36	100	367
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	1.2	2.8		3.4	0.6	3.3	1.5
Cycle Q Clear(g_c), s	1.2	2.8		3.4	0.6	3.3	1.5
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	187	166		2040	910	179	2627
V/C Ratio(X)	0.20	0.46		0.21	0.04	0.56	0.14
Avail Cap(c_a), veh/h	347	309		2040	910	347	2627
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.05	1.05
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.4	25.1		5.8	5.2	25.5	1.6
Incr Delay (d2), s/veh	0.5	2.0		0.2	0.1	2.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.0		0.8	0.1	1.3	0.1
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	25.0	27.1		6.0	5.3	28.2	1.7
LnGrp LOS	C	C		A	A	C	A
Approach Vol, veh/h	114			457			467
Approach Delay, s/veh	26.4			5.9			7.4
Approach LOS	C			A			A
Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	10.2	39.4				49.5	10.5
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	11.5	23.5				26.5	11.5
Max Q Clear Time (g_c+I1), s	5.3	5.4				3.5	4.8
Green Ext Time (p_c), s	0.1	2.3				2.0	0.1
Intersection Summary							
HCM 6th Ctrl Delay			8.8				
HCM 6th LOS			A				
Notes							
User approved pedestrian interval to be less than phase max green.							
User approved ignoring U-Turning movement.							

Lanes, Volumes, Timings
3: Madison St. & Avenue 54

EAC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	168	268	30	157	38	243	248	24	49	183	14
Future Volume (vph)	11	168	268	30	157	38	243	248	24	49	183	14
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											









HCM 6th AWSC
3: Madison St. & Avenue 54

EAC (2021) AM Peak hour

Intersection

Intersection Delay, s/veh 21.3

Intersection LOS C
























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	168	268	30	157	38	243	248	24	49	183	14
Future Vol, veh/h	11	168	268	30	157	38	243	248	24	49	183	14
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	189	301	34	176	43	273	279	27	55	206	16
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	28.6	14.7	20.8	15
HCM LOS	D	B	C	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	77%	0%	100%	17%	0%	100%	58%	0%	100%	81%
Vol Right, %	0%	0%	23%	0%	0%	83%	0%	0%	42%	0%	0%	19%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	243	165	107	11	112	324	30	105	90	49	122	75
LT Vol	243	0	0	11	0	0	30	0	0	49	0	0
Through Vol	0	165	83	0	112	56	0	105	52	0	122	61
RT Vol	0	0	24	0	0	268	0	0	38	0	0	14
Lane Flow Rate	273	186	120	12	126	364	34	118	101	55	137	84
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.659	0.422	0.267	0.03	0.293	0.789	0.089	0.294	0.245	0.144	0.339	0.205
Departure Headway (Hd)	8.685	8.185	8.027	8.881	8.381	7.802	9.49	8.99	8.696	9.409	8.909	8.778
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	418	442	449	405	430	466	378	400	413	382	404	409
Service Time	6.404	5.904	5.747	6.598	6.098	5.519	7.238	6.738	6.443	7.158	6.658	6.527
HCM Lane V/C Ratio	0.653	0.421	0.267	0.03	0.293	0.781	0.09	0.295	0.245	0.144	0.339	0.205
HCM Control Delay	26.7	16.8	13.7	11.9	14.5	34	13.2	15.5	14.3	13.7	16.2	13.8
HCM Lane LOS	D	C	B	B	B	D	B	C	B	B	C	B
HCM 95th-tile Q	4.6	2.1	1.1	0.1	1.2	7.1	0.3	1.2	1	0.5	1.5	0.8

Lanes, Volumes, Timings
3: Madison St. & Avenue 54

EAC (2021) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	168	268	30	157	38	243	248	24	49	183	14
Future Volume (vph)	11	168	268	30	157	38	243	248	24	49	183	14
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2			6		6			8			
Detector Phase	2	2		6	6	6	3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	
Minimum Split (s)	30.5	30.5		30.5	30.5	30.5	9.0	30.5	30.5	9.0	30.5	
Total Split (s)	50.0	50.0		50.0	50.0	50.0	32.0	49.0	49.0	21.0	38.0	
Total Split (%)	41.7%	41.7%		41.7%	41.7%	41.7%	26.7%	40.8%	40.8%	17.5%	31.7%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.0	3.5	3.5	3.0	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.0	4.5	4.5	4.0	4.5	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None	Max	Max	None	Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

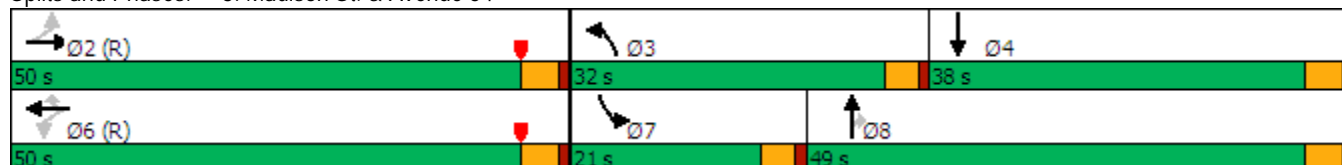
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated























Splits and Phases: 3: Madison St. & Avenue 54



HCM 6th Signalized Intersection Summary

























3: Madison St. & Avenue 54

EAC (2021) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	168	268	30	157	38	243	248	24	49	183	14
Future Volume (veh/h)	11	168	268	30	157	38	243	248	24	49	183	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	12	189	301	34	176	43	273	279	27	55	206	16
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	585	829	740	380	1659	740	369	1283	572	72	985	76
Arrive On Green	0.48	0.48	0.48	0.48	0.48	0.48	0.11	0.37	0.37	0.04	0.30	0.30
Sat Flow, veh/h	1162	1730	1543	906	3460	1543	3365	3460	1543	1734	3255	251
Grp Volume(v), veh/h	12	189	301	34	176	43	273	279	27	55	109	113
Grp Sat Flow(s),veh/h/ln	1162	1730	1543	906	1730	1543	1682	1730	1543	1734	1730	1776
Q Serve(g_s), s	0.7	7.7	15.1	3.0	3.3	1.8	9.4	6.6	1.3	3.8	5.6	5.7
Cycle Q Clear(g_c), s	4.0	7.7	15.1	18.2	3.3	1.8	9.4	6.6	1.3	3.8	5.6	5.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	585	829	740	380	1659	740	369	1283	572	72	523	537
V/C Ratio(X)	0.02	0.23	0.41	0.09	0.11	0.06	0.74	0.22	0.05	0.77	0.21	0.21
Avail Cap(c_a), veh/h	585	829	740	380	1659	740	785	1283	572	246	523	537
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.2	18.3	20.2	26.1	17.1	16.7	51.8	25.8	24.2	56.9	31.2	31.2
Incr Delay (d2), s/veh	0.1	0.6	1.5	0.5	0.1	0.2	6.1	0.4	0.2	29.7	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.0	5.3	0.7	1.3	0.6	4.2	2.7	0.5	2.2	2.4	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.3	18.8	21.7	26.5	17.3	16.9	57.8	26.2	24.3	86.6	32.1	32.1
LnGrp LOS	B	B	C	C	B	B	E	C	C	F	C	C
Approach Vol, veh/h	502			253			579			277		
Approach Delay, s/veh	20.5			18.4			41.0			42.9		
Approach LOS	C			B			D			D		
Timer - Assigned Phs	2		3	4		6		7	8			
Phs Duration (G+Y+Rc), s	62.0		17.2	40.8		62.0		9.0	49.0			
Change Period (Y+Rc), s	4.5		4.0	4.5		4.5		4.0	4.5			
Max Green Setting (Gmax), s	45.5		28.0	33.5		45.5		17.0	44.5			
Max Q Clear Time (g_c+I1), s	17.1		11.4	7.7		20.2		5.8	8.6			
Green Ext Time (p_c), s	2.8		1.7	1.0		1.2		0.1	1.7			
Intersection Summary												
HCM 6th Ctrl Delay	31.4											
HCM 6th LOS	C											

Lanes, Volumes, Timings
4: Madison St. & Avenue 52

EAC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	391	50	21	350	57	117	189	14	44	168	51
Future Volume (vph)	66	391	50	21	350	57	117	189	14	44	168	51
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	23.0	50.0	50.0	15.0	42.0	42.0	20.0	40.0	40.0	15.0	35.0	35.0
Total Split (%)	19.2%	41.7%	41.7%	12.5%	35.0%	35.0%	16.7%	33.3%	33.3%	12.5%	29.2%	29.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

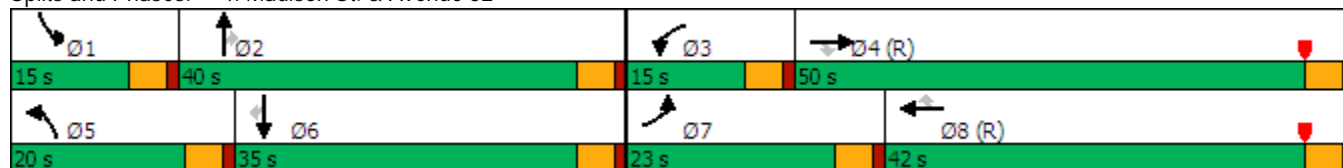
Actuated Cycle Length: 120

Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 4: Madison St. & Avenue 52
















HCM 6th Signalized Intersection Summary 4: Madison St. & Avenue 52

EAC (2021) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	391	50	21	350	57	117	189	14	44	168	51
Future Volume (veh/h)	66	391	50	21	350	57	117	189	14	44	168	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	76	449	57	24	402	66	134	217	16	51	193	59
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	97	1641	732	56	1559	695	194	1024	457	160	989	441
Arrive On Green	0.06	0.47	0.47	0.03	0.45	0.45	0.06	0.30	0.30	0.05	0.29	0.29
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	76	449	57	24	402	66	134	217	16	51	193	59
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	5.2	9.4	2.4	1.6	8.7	2.9	4.7	5.7	0.9	1.8	5.1	3.4
Cycle Q Clear(g_c), s	5.2	9.4	2.4	1.6	8.7	2.9	4.7	5.7	0.9	1.8	5.1	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	97	1641	732	56	1559	695	194	1024	457	160	989	441
V/C Ratio(X)	0.78	0.27	0.08	0.43	0.26	0.09	0.69	0.21	0.04	0.32	0.20	0.13
Avail Cap(c_a), veh/h	267	1641	732	152	1559	695	435	1024	457	294	989	441
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.9	19.0	17.2	57.0	20.5	18.9	55.5	31.7	30.1	55.3	32.4	31.8
Incr Delay (d2), s/veh	12.8	0.4	0.2	5.2	0.4	0.3	4.3	0.5	0.1	1.1	0.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	3.7	0.8	0.8	3.3	1.0	2.0	2.3	0.3	0.7	2.1	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.7	19.5	17.4	62.2	20.9	19.2	59.8	32.2	30.2	56.4	32.8	32.4
LnGrp LOS	E	B	B	E	C	B	E	C	C	E	C	C
Approach Vol, veh/h	582			492			367			303		
Approach Delay, s/veh	25.7			22.7			42.2			36.7		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.2	40.0	8.4	61.4	11.4	38.8	11.2	58.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	35.5	10.5	45.5	15.5	30.5	18.5	37.5				
Max Q Clear Time (g_c+I1), s	3.8	7.7	3.6	11.4	6.7	7.1	7.2	10.7				
Green Ext Time (p_c), s	0.0	1.2	0.0	3.0	0.2	1.2	0.1	2.5				
Intersection Summary												
HCM 6th Ctrl Delay	30.2											
HCM 6th LOS	C											

Lanes, Volumes, Timings
5: Madison St. & Avenue 50/50th Avenue

EAC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	317	57	32	310	21	83	203	45	30	196	90
Future Volume (vph)	63	317	57	32	310	21	83	203	45	30	196	90
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	22.0	48.0	48.0	17.0	43.0	43.0	18.0	40.0	40.0	15.0	37.0	37.0
Total Split (%)	18.3%	40.0%	40.0%	14.2%	35.8%	35.8%	15.0%	33.3%	33.3%	12.5%	30.8%	30.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

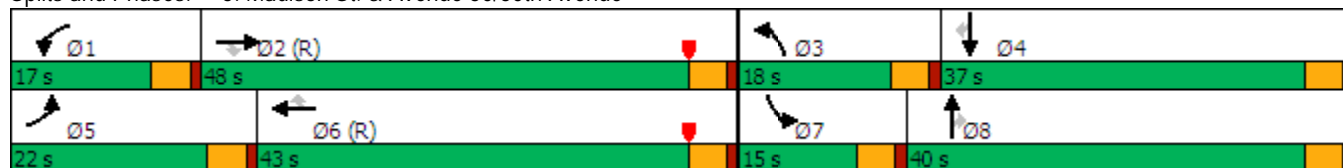
Actuated Cycle Length: 120

Offset: 64.5 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue
























HCM 6th Signalized Intersection Summary 5: Madison St. & Avenue 50/50th Avenue

EAC (2021) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	317	57	32	310	21	83	203	45	30	196	90
Future Volume (veh/h)	63	317	57	32	310	21	83	203	45	30	196	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	64	323	58	33	316	21	85	207	46	31	200	92
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	1653	737	67	1610	718	185	1024	457	126	964	430
Arrive On Green	0.05	0.48	0.48	0.04	0.47	0.47	0.05	0.30	0.30	0.04	0.28	0.28
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	64	323	58	33	316	21	85	207	46	31	200	92
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	4.4	6.5	2.4	2.2	6.5	0.9	2.9	5.4	2.6	1.1	5.3	5.5
Cycle Q Clear(g_c), s	4.4	6.5	2.4	2.2	6.5	0.9	2.9	5.4	2.6	1.1	5.3	5.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	89	1653	737	67	1610	718	185	1024	457	126	964	430
V/C Ratio(X)	0.72	0.20	0.08	0.49	0.20	0.03	0.46	0.20	0.10	0.25	0.21	0.21
Avail Cap(c_a), veh/h	253	1653	737	181	1610	718	379	1024	457	294	964	430
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.1	18.1	17.0	56.5	18.9	17.4	55.0	31.6	30.7	56.1	33.1	33.2
Incr Delay (d2), s/veh	10.3	0.3	0.2	5.4	0.3	0.1	1.8	0.4	0.4	1.0	0.5	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	2.5	0.9	1.1	2.5	0.3	1.3	2.2	1.0	0.5	2.2	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.3	18.3	17.2	61.9	19.2	17.5	56.8	32.1	31.1	57.1	33.6	34.3
LnGrp LOS	E	B	B	E	B	B	E	C	C	E	C	C
Approach Vol, veh/h	445			370			338			323		
Approach Delay, s/veh	25.1			22.9			38.2			36.1		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	61.8	11.1	37.9	10.7	60.3	9.0	40.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	12.5	43.5	13.5	32.5	17.5	38.5	10.5	35.5				
Max Q Clear Time (g_c+I1), s	4.2	8.5	4.9	7.5	6.4	8.5	3.1	7.4				
Green Ext Time (p_c), s	0.0	2.2	0.1	1.3	0.1	1.9	0.0	1.3				
Intersection Summary												
HCM 6th Ctrl Delay	29.9											
HCM 6th LOS	C											

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54









EAC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	10	13	43	7	338	5	250	30	396	192	27
Future Volume (vph)	8	10	13	43	7	338	5	250	30	396	192	27
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 18.8

Intersection LOS C























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	10	13	43	7	338	5	250	30	396	192	27
Future Vol, veh/h	8	10	13	43	7	338	5	250	30	396	192	27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	11	14	48	8	376	6	278	33	440	213	30
Number of Lanes	1	2	0	1	1	1	0	2	0	2	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	12	25.5	14.6	16.8
HCM LOS	B	D	B	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	4%	0%	100%	0%	0%	100%	0%	0%	100%	100%	0%
Vol Thru, %	96%	81%	0%	100%	20%	0%	100%	0%	0%	0%	88%
Vol Right, %	0%	19%	0%	0%	80%	0%	0%	100%	0%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	130	155	8	7	16	43	7	338	198	198	219
LT Vol	5	0	8	0	0	43	0	0	198	198	0
Through Vol	125	125	0	7	3	0	7	0	0	0	192
RT Vol	0	30	0	0	13	0	0	338	0	0	27
Lane Flow Rate	144	172	9	7	18	48	8	376	220	220	243
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.315	0.369	0.024	0.019	0.043	0.11	0.017	0.74	0.47	0.47	0.48
Departure Headway (Hd)	7.863	7.708	9.609	9.095	8.523	8.313	7.806	7.096	7.694	7.694	7.104
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	456	467	372	393	419	431	459	511	469	469	506
Service Time	5.617	5.462	7.383	6.869	6.296	6.062	5.554	4.844	5.443	5.443	4.854
HCM Lane V/C Ratio	0.316	0.368	0.024	0.018	0.043	0.111	0.017	0.736	0.469	0.469	0.48
HCM Control Delay	14.2	14.9	12.6	12	11.7	12.1	10.7	27.5	17.1	17.1	16.3
HCM Lane LOS	B	B	B	B	B	B	B	D	C	C	C
HCM 95th-tile Q	1.3	1.7	0.1	0.1	0.1	0.4	0.1	6.2	2.5	2.5	2.6

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54

EAC (2021) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	10	13	43	7	338	5	250	30	396	192	27
Future Volume (vph)	8	10	13	43	7	338	5	250	30	396	192	27
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases		2			6		8	8		4	4	
Permitted Phases	2			6		6						4
Detector Phase	2	2		6	6	6	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	30.5	30.5		30.5	30.5	30.5	30.5	30.5		30.5	30.5	30.5
Total Split (s)	49.0	49.0		49.0	49.0	49.0	34.0	34.0		37.0	37.0	37.0
Total Split (%)	40.8%	40.8%		40.8%	40.8%	40.8%	28.3%	28.3%		30.8%	30.8%	30.8%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		None	None	None	Max	Max		Max	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

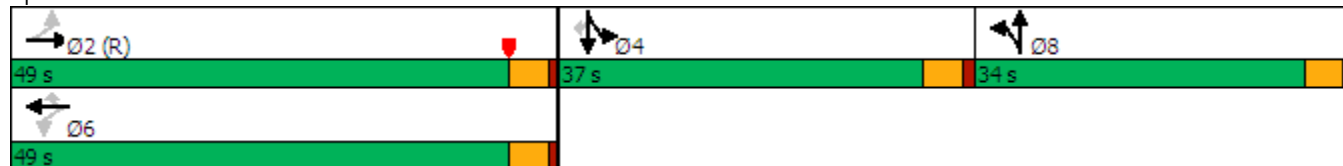
Actuated Cycle Length: 120

Offset: 84.5 (70%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 95






















Control Type: Actuated-Coordinated

Splits and Phases: 6: Jefferson St. & Avenue 54























HCM 6th Signalized Intersection Summary 6: Jefferson St. & Avenue 54

EAC (2021) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	10	13	43	7	338	5	250	30	396	192	27
Future Volume (veh/h)	8	10	13	43	7	338	5	250	30	396	192	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	9	11	14	48	8	376	6	278	33	440	213	30
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	428	642	572	566	675	572	16	766	95	911	937	418
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.25	0.25	0.25	0.27	0.27	0.27
Sat Flow, veh/h	999	1730	1543	1386	1821	1543	65	3117	387	3365	3460	1543
Grp Volume(v), veh/h	9	11	14	48	8	376	168	0	149	440	213	30
Grp Sat Flow(s),veh/h/ln	999	1730	1543	1386	1821	1543	1818	0	1752	1682	1730	1543
Q Serve(g_s), s	0.7	0.5	0.7	2.7	0.3	24.3	9.2	0.0	8.4	13.2	5.7	1.7
Cycle Q Clear(g_c), s	1.0	0.5	0.7	3.4	0.3	24.3	9.2	0.0	8.4	13.2	5.7	1.7
Prop In Lane	1.00		1.00	1.00		1.00	0.04		0.22	1.00		1.00
Lane Grp Cap(c), veh/h	428	642	572	566	675	572	447	0	431	911	937	418
V/C Ratio(X)	0.02	0.02	0.02	0.08	0.01	0.66	0.38	0.00	0.35	0.48	0.23	0.07
Avail Cap(c_a), veh/h	428	642	572	566	675	572	447	0	431	911	937	418
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.92	0.92	0.92	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.2	23.9	24.0	25.1	23.9	31.4	37.6	0.0	37.3	36.7	34.0	32.5
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.1	0.0	2.5	2.4	0.0	2.2	1.8	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.3	0.9	0.1	8.8	4.2	0.0	3.7	5.4	2.4	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.3	24.0	24.0	25.1	23.9	33.9	40.0	0.0	39.5	38.5	34.6	32.9
LnGrp LOS	C	C	C	C	C	C	D	A	D	D	C	C
Approach Vol, veh/h	34			432			317			683		
Approach Delay, s/veh	24.1			32.8			39.8			37.0		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	49.0			37.0			49.0			34.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	44.5			32.5			44.5			29.5		
Max Q Clear Time (g_c+I1), s	3.0			15.2			26.3			11.2		
Green Ext Time (p_c), s	0.1			2.6			1.3			1.4		
Intersection Summary												
HCM 6th Ctrl Delay	36.1											
HCM 6th LOS	D											

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EAC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	353	251	10	347	291	230	473	30	169	428	77
Future Volume (vph)	121	353	251	10	347	291	230	473	30	169	428	77
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											





















HCM 6th Roundabout
7: Jefferson St. & Avenue 52

EAC (2021) AM Peak hour

Intersection									
Intersection Delay, s/veh	42.8								
Intersection LOS	E								
Approach	EB		WB		NB		SB		
Entry Lanes	1		1		1		1		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	780		697		788		725		
Demand Flow Rate, veh/h	796		710		804		740		
Vehicles Circulating, veh/h	666		904		707		643		
Vehicles Exiting, veh/h	632		574		480		652		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	14.8		13.8		102.6		35.7		
Approach LOS	B		B		F		E		
Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Bypass	
Designated Moves	LT	R	LT	R	LT	R	LT	R	
Assumed Moves	LT	R	LT	R	LT	R	LT	R	
RT Channelized		Free		Free		Free		Free	
Lane Util	1.000		1.000		1.000		1.000		
Follow-Up Headway, s	2.609		2.609		2.609		2.609		
Critical Headway, s	4.976	275	4.976	319	4.976	33	4.976	85	
Entry Flow, veh/h	521	1887	391	1887	771	1887	655	1887	
Cap Entry Lane, veh/h	700	0.980	549	0.980	671	0.980	716	0.980	
Entry HV Adj Factor	0.980	270	0.981	313	0.980	32	0.980	83	
Flow Entry, veh/h	510	1850	384	1850	756	1850	642	1850	
Cap Entry, veh/h	685	0.146	538	0.169	658	0.017	702	0.045	
V/C Ratio	0.745	0.0	0.712	0.0	1.149	0.0	0.915	0.0	
Control Delay, s/veh	22.7	A	25.1	A	106.9	A	40.3	A	
LOS	C	1	D	1	F	0	E	0	
95th %tile Queue, veh	7		6		24		12		

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52























EAC (2021) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	353	251	10	347	291	230	473	30	169	428	77
Future Volume (vph)	121	353	251	10	347	291	230	473	30	169	428	77
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		100	0		100	0		0	0		0
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	60			60			60			60		
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											

Intersection										
Intersection Delay, s/veh	10.2									
Intersection LOS	B									
Approach	EB		WB		NB		SB			
Entry Lanes	1		1		2		2			
Conflicting Circle Lanes	2		2		2		2			
Adj Approach Flow, veh/h	780		697		788		725			
Demand Flow Rate, veh/h	796		710		804		740			
Vehicles Circulating, veh/h	666		904		707		643			
Vehicles Exiting, veh/h	632		574		480		652			
Ped Vol Crossing Leg, #/h	0		0		0		0			
Ped Cap Adj	1.000		1.000		1.000		1.000			
Approach Delay, s/veh	10.3		9.0		12.3		8.9			
Approach LOS	B		A		B		A			
Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
Assumed Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
RT Channelized		Free		Free			Free			Free
Lane Util	1.000		1.000		0.470	0.530		0.470	0.530	
Follow-Up Headway, s	2.535		2.535		2.667	2.535		2.667	2.535	
Critical Headway, s	4.328	275	4.328	319	4.645	4.328	33	4.645	4.328	85
Entry Flow, veh/h	521	1887	391	1887	362	409	1887	308	347	1887
Cap Entry Lane, veh/h	806	0.980	659	0.980	704	779	0.980	747	822	0.980
Entry HV Adj Factor	0.980	270	0.981	313	0.981	0.979	32	0.979	0.980	83
Flow Entry, veh/h	510	1850	384	1850	355	401	1850	302	340	1850
Cap Entry, veh/h	790	0.146	646	0.169	691	763	0.017	732	806	0.045
V/C Ratio	0.646	0.0	0.594	0.0	0.514	0.525	0.0	0.412	0.422	0.0
Control Delay, s/veh	15.7	A	16.4	A	13.2	12.5	A	10.4	9.8	A
LOS	C	1	C	1	B	B	0	B	A	0
95th %tile Queue, veh	5		4		3	3		2	2	

Lanes, Volumes, Timings
8: Jefferson St. & Pomelo

EAC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	1	2	4	1	16	13	853	13	40	690	51
Future Volume (vph)	37	1	2	4	1	16	13	853	13	40	690	51
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	52.0		20.0	54.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	15.0%	43.3%		16.7%	45.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary

Area Type: Other

Cycle Length: 120

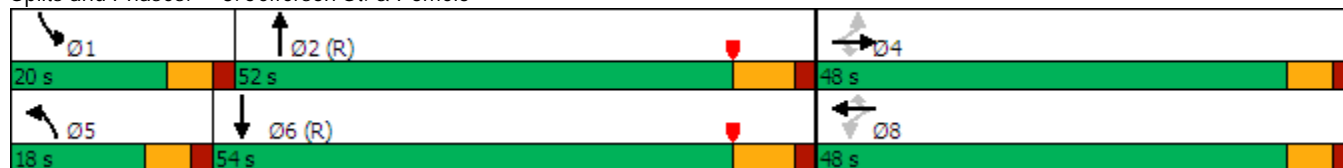
Actuated Cycle Length: 120

Offset: 90 (75%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110

























Control Type: Actuated-Coordinated

Splits and Phases: 8: Jefferson St. & Pomelo



























HCM 6th Signalized Intersection Summary 8: Jefferson St. & Pomelo

EAC (2021) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (veh/h)	37	1	2	4	1	16	13	853	13	40	690	51
Future Volume (veh/h)	37	1	2	4	1	16	13	853	13	40	690	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	40	1	2	4	1	17	14	917	14	43	742	55
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	62	1	199	55	8	199	65	3192	49	132	3173	234
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.04	0.63	0.63	0.15	1.00	1.00
Sat Flow, veh/h	24	6	1543	11	62	1543	1734	5045	77	1734	4724	348
Grp Volume(v), veh/h	41	0	2	5	0	17	14	602	329	43	519	278
Grp Sat Flow(s),veh/h/ln	30	0	1543	73	0	1543	1734	1657	1807	1734	1657	1758
Q Serve(g_s), s	0.3	0.0	0.1	0.1	0.0	1.2	0.9	9.8	9.8	2.7	0.0	0.0
Cycle Q Clear(g_c), s	15.4	0.0	0.1	15.3	0.0	1.2	0.9	9.8	9.8	2.7	0.0	0.0
Prop In Lane	0.98		1.00	0.80		1.00	1.00		0.04	1.00		0.20
Lane Grp Cap(c), veh/h	63	0	199	63	0	199	65	2097	1143	132	2226	1181
V/C Ratio(X)	0.65	0.00	0.01	0.08	0.00	0.09	0.22	0.29	0.29	0.33	0.23	0.24
Avail Cap(c_a), veh/h	374	0	540	391	0	540	173	2097	1143	202	2226	1181
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.81	0.81	0.81
Uniform Delay (d), s/veh	59.7	0.0	45.6	46.6	0.0	46.1	56.1	9.9	9.9	48.1	0.0	0.0
Incr Delay (d2), s/veh	21.5	0.0	0.0	1.1	0.0	0.4	3.5	0.3	0.6	2.4	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.1	0.2	0.0	0.5	0.5	3.1	3.5	1.2	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.2	0.0	45.7	47.7	0.0	46.5	59.6	10.2	10.5	50.6	0.2	0.4
LnGrp LOS	F	A	D	D	A	D	E	B	B	D	A	A
Approach Vol, veh/h	43		22			945			840			
Approach Delay, s/veh	79.5		46.7			11.1			2.8			
Approach LOS	E		D			B			A			
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	15.1	83.3	21.6		10.5	88.0	21.6					
Change Period (Y+Rc), s	6.0	7.5	6.0		6.0	7.5	6.0					
Max Green Setting (Gmax), s	14.0	44.5	42.0		12.0	46.5	42.0					
Max Q Clear Time (g_c+I1), s	4.7	11.8	17.4		2.9	2.0	17.3					
Green Ext Time (p_c), s	0.1	11.9	0.3		0.0	10.8	0.1					
Intersection Summary												
HCM 6th Ctrl Delay	9.3											
HCM 6th LOS	A											
Notes												

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

EAC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	256	283	74	60	308	195	121	727	59	118	638	362
Future Volume (vph)	256	283	74	60	308	195	121	727	59	118	638	362
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	43.5	43.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	36.3%	36.3%	15.0%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

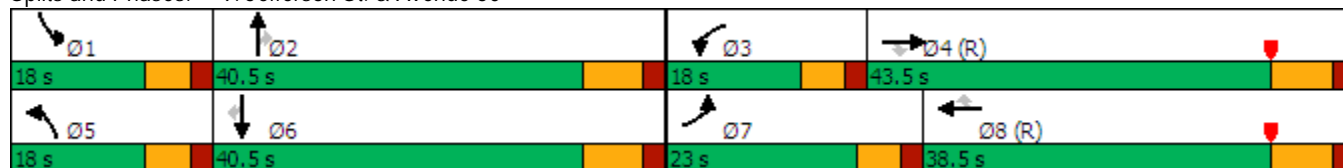
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 115































Control Type: Actuated-Coordinated

Splits and Phases: 9: Jefferson St. & Avenue 50












HCM 6th Signalized Intersection Summary 9: Jefferson St. & Avenue 50

EAC (2021) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  		 	  	
Traffic Volume (veh/h)	256	283	74	60	308	195	121	727	59	118	638	362
Future Volume (veh/h)	256	283	74	60	308	195	121	727	59	118	638	362
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	261	289	76	61	314	199	123	742	60	120	651	369
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	1126	502	151	493	418	171	1316	408	330	1315	408
Arrive On Green	0.14	0.33	0.33	0.09	0.27	0.27	0.03	0.09	0.09	0.10	0.26	0.26
Sat Flow, veh/h	1734	3460	1543	1734	1821	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	261	289	76	61	314	199	123	742	60	120	651	369
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	17.0	7.4	4.2	4.0	18.2	13.0	8.4	17.2	4.3	4.0	13.3	27.7
Cycle Q Clear(g_c), s	17.0	7.4	4.2	4.0	18.2	13.0	8.4	17.2	4.3	4.0	13.3	27.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	1126	502	151	493	418	171	1316	408	330	1315	408
V/C Ratio(X)	1.06	0.26	0.15	0.40	0.64	0.48	0.72	0.56	0.15	0.36	0.50	0.90
Avail Cap(c_a), veh/h	246	1126	502	173	493	418	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	29.8	28.7	51.8	38.6	36.7	56.4	48.1	42.2	50.6	37.4	42.7
Incr Delay (d2), s/veh	74.8	0.6	0.6	0.6	6.2	3.9	11.3	0.6	0.2	0.2	0.4	22.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	3.0	1.6	1.7	8.7	5.2	4.3	7.6	1.7	1.6	5.2	12.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	126.3	30.4	29.4	52.5	44.8	40.5	67.7	48.7	42.5	50.9	37.8	65.1
LnGrp LOS	F	C	C	D	D	D	E	D	D	D	D	E
Approach Vol, veh/h	626			574			925			1140		
Approach Delay, s/veh	70.2			44.1			50.9			48.0		
Approach LOS	E			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.8	39.3	16.4	46.5	17.8	39.2	23.0	40.0				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	12.0	33.0	12.0	36.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	6.0	19.2	6.0	9.4	10.4	29.7	19.0	20.2				
Green Ext Time (p_c), s	0.1	5.2	0.0	3.7	0.0	2.0	0.0	3.3				
Intersection Summary												
HCM 6th Ctrl Delay	52.4											
HCM 6th LOS	D											






Lanes, Volumes, Timings
10: Avenue 60 & Madison St.

EAC (2021) AM Peak hour

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	31	4	5	150	121	58
Future Volume (vph)	31	4	5	150	121	58
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		40	
Link Distance (ft)		1772	661		437	
Travel Time (s)		30.2	11.3		7.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)						
Sign Control		Stop	Stop		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Intersection Delay, s/veh	8.8
Intersection LOS	A





















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	31	4	5	150	121	58
Future Vol, veh/h	31	4	5	150	121	58
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	5	6	181	146	70
Number of Lanes	0	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	8.7	8.4	9.1
HCM LOS	A	A	A









Lane	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	89%	0%	0%	100%	0%
Vol Thru, %	11%	100%	0%	0%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	35	5	150	121	58
LT Vol	31	0	0	121	0
Through Vol	4	5	0	0	0
RT Vol	0	0	150	0	58
Lane Flow Rate	42	6	181	146	70
Geometry Grp	4	7	7	7	7
Degree of Util (X)	0.062	0.009	0.223	0.225	0.085
Departure Headway (Hd)	5.28	5.147	4.444	5.565	4.361
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	679	697	810	646	821
Service Time	3.305	2.864	2.161	3.293	2.089
HCM Lane V/C Ratio	0.062	0.009	0.223	0.226	0.085
HCM Control Delay	8.7	7.9	8.4	9.9	7.5
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.2	0	0.9	0.9	0.3

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

EAC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	39	85	4	48	155	95	63	2	71	62	27
Future Volume (vph)	16	39	85	4	48	155	95	63	2	71	62	27
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	39	85	4	48	155	95	63	2	71	62	27
Future Vol, veh/h	16	39	85	4	48	155	95	63	2	71	62	27
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	43	93	4	53	170	104	69	2	78	68	30
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	9.5	11.3	10.6	9.9
HCM LOS	A	B	B	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	29%	0%	2%	100%	0%	0%
Vol Thru, %	0%	97%	71%	0%	23%	0%	100%	0%
Vol Right, %	0%	3%	0%	100%	75%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	95	65	55	85	207	71	62	27
LT Vol	95	0	16	0	4	71	0	0
Through Vol	0	63	39	0	48	0	62	0
RT Vol	0	2	0	85	155	0	0	27
Lane Flow Rate	104	71	60	93	227	78	68	30
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.195	0.123	0.107	0.144	0.35	0.146	0.117	0.045
Departure Headway (Hd)	6.709	6.18	6.384	5.532	5.546	6.715	6.208	5.499
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	535	580	561	647	648	534	577	650
Service Time	4.449	3.919	4.128	3.275	3.285	4.456	3.949	3.24
HCM Lane V/C Ratio	0.194	0.122	0.107	0.144	0.35	0.146	0.118	0.046
HCM Control Delay	11.1	9.8	9.9	9.2	11.3	10.6	9.8	8.5
HCM Lane LOS	B	A	A	A	B	B	A	A
HCM 95th-tile Q	0.7	0.4	0.4	0.5	1.6	0.5	0.4	0.1

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	54	49	7	48	30	39	208	8	18	139	34
Future Volume (vph)	33	54	49	7	48	30	39	208	8	18	139	34
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	33	54	49	7	48	30	39	208	8	18	139	34
Future Vol, veh/h	33	54	49	7	48	30	39	208	8	18	139	34
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	39	64	58	8	57	36	46	248	10	21	165	40
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	10	9.4	12	10.3
HCM LOS	A	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	15%	24%	8%	11%	0%
Vol Thru, %	82%	40%	56%	89%	0%
Vol Right, %	3%	36%	35%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	255	136	85	157	34
LT Vol	39	33	7	18	0
Through Vol	208	54	48	139	0
RT Vol	8	49	30	0	34
Lane Flow Rate	304	162	101	187	40
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.433	0.239	0.152	0.295	0.055
Departure Headway (Hd)	5.138	5.322	5.406	5.675	4.909
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	704	675	663	635	731
Service Time	3.138	3.356	3.442	3.398	2.632
HCM Lane V/C Ratio	0.432	0.24	0.152	0.294	0.055
HCM Control Delay	12	10	9.4	10.8	7.9
HCM Lane LOS	B	A	A	B	A
HCM 95th-tile Q	2.2	0.9	0.5	1.2	0.2

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.









EAC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	94	7	17	59	19	11	196	26	49	142	8
Future Volume (vph)	0	94	7	17	59	19	11	196	26	49	142	8
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 11.1

Intersection LOS B



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	94	7	17	59	19	11	196	26	49	142	8
Future Vol, veh/h	0	94	7	17	59	19	11	196	26	49	142	8
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	111	8	20	69	22	13	231	31	58	167	9
Number of Lanes	1	1	1	0	1	0	1	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	1	3
HCM Control Delay	10.2	10.7	12.6	9.9
HCM LOS	B	B	B	A







Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	0%	0%	18%	100%	0%	0%
Vol Thru, %	0%	88%	100%	100%	0%	62%	0%	100%	86%
Vol Right, %	0%	12%	0%	0%	100%	20%	0%	0%	14%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	11	222	0	94	7	95	49	95	55
LT Vol	11	0	0	0	0	17	49	0	0
Through Vol	0	196	0	94	0	59	0	95	47
RT Vol	0	26	0	0	7	19	0	0	8
Lane Flow Rate	13	261	0	111	8	112	58	111	65
Geometry Grp	8	8	7	7	7	8	8	8	8
Degree of Util (X)	0.023	0.423	0	0.189	0.012	0.197	0.105	0.186	0.107
Departure Headway (Hd)	6.425	5.837	6.138	6.138	5.433	6.36	6.528	6.023	5.92
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	558	616	0	585	658	564	549	596	605
Service Time	4.159	3.571	3.873	3.873	3.168	4.1	4.263	3.758	3.655
HCM Lane V/C Ratio	0.023	0.424	0	0.19	0.012	0.199	0.106	0.186	0.107
HCM Control Delay	9.3	12.8	8.9	10.3	8.2	10.7	10	10.1	9.4
HCM Lane LOS	A	B	N	B	A	B	A	B	A
HCM 95th-tile Q	0.1	2.1	0	0.7	0	0.7	0.3	0.7	0.4

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	133	20	21	225	52	33	245	7	51	205	88
Future Volume (vph)	28	133	20	21	225	52	33	245	7	51	205	88
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	31.1
Intersection LOS	D



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	133	20	21	225	52	33	245	7	51	205	88
Future Vol, veh/h	28	133	20	21	225	52	33	245	7	51	205	88
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	35	164	25	26	278	64	41	302	9	63	253	109
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	17.4	40.4	37.6	24.9
HCM LOS	C	E	E	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	12%	100%	0%	7%	20%	0%
Vol Thru, %	86%	0%	87%	76%	80%	0%
Vol Right, %	2%	0%	13%	17%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	285	28	153	298	256	88
LT Vol	33	28	0	21	51	0
Through Vol	245	0	133	225	205	0
RT Vol	7	0	20	52	0	88
Lane Flow Rate	352	35	189	368	316	109
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.804	0.088	0.449	0.831	0.718	0.222
Departure Headway (Hd)	8.231	9.177	8.563	8.132	8.173	7.347
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	440	389	419	445	442	487
Service Time	6.308	6.963	6.348	6.204	5.948	5.121
HCM Lane V/C Ratio	0.8	0.09	0.451	0.827	0.715	0.224
HCM Control Delay	37.6	12.9	18.2	40.4	29.3	12.2
HCM Lane LOS	E	B	C	E	D	B
HCM 95th-tile Q	7.3	0.3	2.3	7.9	5.6	0.8

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAC (2021) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	133	20	21	225	52	33	245	7	51	205	88
Future Volume (vph)	28	133	20	21	225	52	33	245	7	51	205	88
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	30.0	30.0		30.0	30.0		33.0	33.0		30.0	30.0	30.0
Total Split (s)	58.0	58.0		58.0	58.0		62.0	62.0		62.0	62.0	62.0
Total Split (%)	48.3%	48.3%		48.3%	48.3%		51.7%	51.7%		51.7%	51.7%	51.7%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0			4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

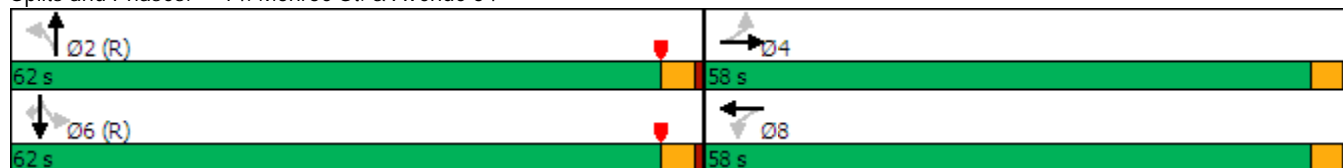
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated



















Splits and Phases: 14: Monroe St. & Avenue 54



HCM 6th Signalized Intersection Summary























14: Monroe St. & Avenue 54

EAC (2021) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	133	20	21	225	52	33	245	7	51	205	88
Future Volume (veh/h)	28	133	20	21	225	52	33	245	7	51	205	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	35	164	25	26	278	64	41	302	9	63	253	109
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	161	368	56	50	323	72	144	1033	30	236	926	1072
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.69	0.69	0.69	0.69	0.69	0.69
Sat Flow, veh/h	1039	1543	235	74	1354	301	159	1487	43	288	1332	1543
Grp Volume(v), veh/h	35	0	189	368	0	0	352	0	0	316	0	109
Grp Sat Flow(s),veh/h/ln	1039	0	1779	1728	0	0	1689	0	0	1620	0	1543
Q Serve(g_s), s	0.0	0.0	10.9	13.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8
Cycle Q Clear(g_c), s	11.0	0.0	10.9	24.7	0.0	0.0	8.8	0.0	0.0	7.7	0.0	2.8
Prop In Lane	1.00		0.13	0.07		0.17	0.12		0.03	0.20		1.00
Lane Grp Cap(c), veh/h	161	0	424	444	0	0	1207	0	0	1162	0	1072
V/C Ratio(X)	0.22	0.00	0.45	0.83	0.00	0.00	0.29	0.00	0.00	0.27	0.00	0.10
Avail Cap(c_a), veh/h	381	0	800	805	0	0	1207	0	0	1162	0	1072
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.0	0.0	38.9	44.1	0.0	0.0	6.9	0.0	0.0	6.8	0.0	6.0
Incr Delay (d2), s/veh	0.7	0.0	0.7	4.0	0.0	0.0	0.6	0.0	0.0	0.6	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	4.6	10.5	0.0	0.0	3.0	0.0	0.0	2.6	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.6	0.0	39.7	48.1	0.0	0.0	7.5	0.0	0.0	7.3	0.0	6.2
LnGrp LOS	D	A	D	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	224			368			352			425		
Approach Delay, s/veh	39.7			48.1			7.5			7.0		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	87.4			32.6			87.4			32.6		
Change Period (Y+Rc), s	4.0			4.0			4.0			4.0		
Max Green Setting (Gmax), s	58.0			54.0			58.0			54.0		
Max Q Clear Time (g_c+I1), s	10.8			13.0			9.7			26.7		
Green Ext Time (p_c), s	2.1			1.1			2.2			2.0		
Intersection Summary												
HCM 6th Ctrl Delay	23.5											
HCM 6th LOS	C											

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52










EAC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	295	28	22	312	126	28	240	31	97	241	59
Future Volume (vph)	98	295	28	22	312	126	28	240	31	97	241	59
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh50.3

Intersection LOS F























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	98	295	28	22	312	126	28	240	31	97	241	59
Future Vol, veh/h	98	295	28	22	312	126	28	240	31	97	241	59
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	118	355	34	27	376	152	34	289	37	117	290	71
Number of Lanes	1	1	1	0	2	1	0	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay	70.3	28.8	94.5	20.9
HCM LOS	F	D	F	C

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	9%	100%	0%	0%	17%	0%	0%	100%	0%	0%
Vol Thru, %	80%	0%	100%	0%	83%	100%	0%	0%	100%	58%
Vol Right, %	10%	0%	0%	100%	0%	0%	100%	0%	0%	42%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	299	98	295	28	126	208	126	97	161	139
LT Vol	28	98	0	0	22	0	0	97	0	0
Through Vol	240	0	295	0	104	208	0	0	161	80
RT Vol	31	0	0	28	0	0	126	0	0	59
Lane Flow Rate	360	118	355	34	152	251	152	117	194	168
Geometry Grp	8	8	8	8	8	8	8	7	7	7
Degree of Util (X)	1.046	0.359	1.032	0.092	0.445	0.728	0.411	0.331	0.521	0.438
Departure Headway (Hd)	10.456	11.431	10.910	10.156	11.058	10.965	10.218	10.628	10.101	9.789
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	349	316	334	355	328	333	355	340	360	371
Service Time	8.175	9.131	8.6	7.856	8.758	8.665	7.918	8.328	7.801	7.489
HCM Lane V/C Ratio	1.032	0.373	1.063	0.096	0.463	0.754	0.428	0.344	0.539	0.453
HCM Control Delay	94.5	20.4	92.3	13.9	22.3	38.1	19.9	18.5	23.3	19.9
HCM Lane LOS	F	C	F	B	C	E	C	C	C	C
HCM 95th-tile Q	12.6	1.6	12	0.3	2.2	5.4	1.9	1.4	2.9	2.2

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52

EAC (2021) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	295	28	22	312	126	28	240	31	97	241	59
Future Volume (vph)	98	295	28	22	312	126	28	240	31	97	241	59
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	2	2	2	6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	31.0	31.0	31.0	31.0	31.0	31.0	29.0	29.0		29.0	29.0	
Total Split (%)	51.7%	51.7%	51.7%	51.7%	51.7%	51.7%	48.3%	48.3%		48.3%	48.3%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5		4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max		Max	Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

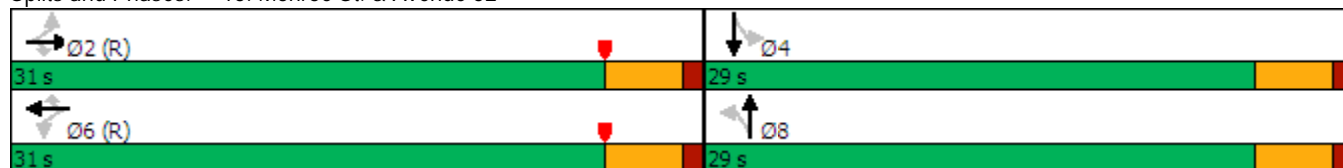
Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 45























Control Type: Actuated-Coordinated

Splits and Phases: 15: Monroe St. & Avenue 52



























HCM 6th Signalized Intersection Summary 15: Monroe St. & Avenue 52

EAC (2021) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	295	28	22	312	126	28	240	31	97	241	59
Future Volume (veh/h)	98	295	28	22	312	126	28	240	31	97	241	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	118	355	34	27	376	152	34	289	37	117	290	71
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	447	804	682	425	1528	682	100	597	72	511	1129	272
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	875	1821	1543	995	3460	1543	84	1462	177	1054	2765	666
Grp Volume(v), veh/h	118	355	34	27	376	152	360	0	0	117	180	181
Grp Sat Flow(s),veh/h/ln	875	1821	1543	995	1730	1543	1723	0	0	1054	1730	1701
Q Serve(g_s), s	5.9	8.1	0.8	1.2	4.1	3.7	0.0	0.0	0.0	0.0	4.1	4.2
Cycle Q Clear(g_c), s	9.9	8.1	0.8	9.3	4.1	3.7	8.9	0.0	0.0	6.2	4.1	4.2
Prop In Lane	1.00		1.00	1.00		1.00	0.09		0.10	1.00		0.39
Lane Grp Cap(c), veh/h	447	804	682	425	1528	682	769	0	0	511	706	695
V/C Ratio(X)	0.26	0.44	0.05	0.06	0.25	0.22	0.47	0.00	0.00	0.23	0.25	0.26
Avail Cap(c_a), veh/h	447	804	682	425	1528	682	769	0	0	511	706	695
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.6	11.6	9.6	14.8	10.5	10.4	13.1	0.0	0.0	12.3	11.7	11.8
Incr Delay (d2), s/veh	1.4	1.8	0.1	0.3	0.4	0.8	2.0	0.0	0.0	1.0	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.7	0.2	0.2	1.2	1.0	3.2	0.0	0.0	1.0	1.4	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.0	13.4	9.7	15.1	10.9	11.1	15.2	0.0	0.0	13.4	12.6	12.7
LnGrp LOS	B	B	A	B	B	B	B	A	A	B	B	B
Approach Vol, veh/h	507					555		360		478		
Approach Delay, s/veh	13.5					11.2		15.2		12.8		
Approach LOS	B					B		B		B		
Timer - Assigned Phs	2		4			6		8				
Phs Duration (G+Y+Rc), s	31.0		29.0			31.0		29.0				
Change Period (Y+Rc), s	4.5		4.5			4.5		4.5				
Max Green Setting (Gmax), s	26.5		24.5			26.5		24.5				
Max Q Clear Time (g_c+I1), s	11.9		8.2			11.3		10.9				
Green Ext Time (p_c), s	2.2		2.1			2.4		1.6				
Intersection Summary												
HCM 6th Ctrl Delay	13.0											
HCM 6th LOS	B											

Lanes, Volumes, Timings
16: Monroe St. & 50th Avenue

EAC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	201	33	27	318	123	22	365	17	70	305	41
Future Volume (vph)	30	201	33	27	318	123	22	365	17	70	305	41
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	20.5	20.5	20.5	20.5	20.5	11.5	11.5	20.5		11.5	20.5	
Total Split (s)	26.0	26.0	26.0	26.0	26.0	12.0	11.5	22.0		12.0	22.5	
Total Split (%)	43.3%	43.3%	43.3%	43.3%	43.3%	20.0%	19.2%	36.7%		20.0%	37.5%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

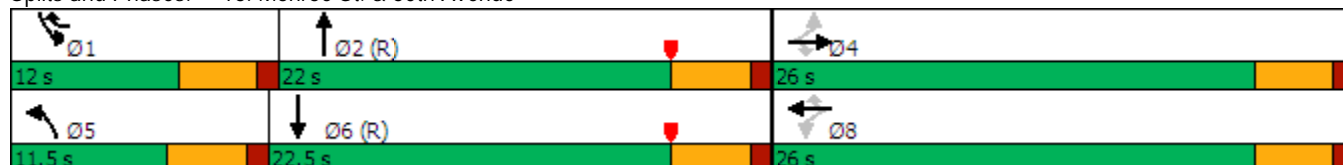
Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

























Control Type: Actuated-Coordinated

Splits and Phases: 16: Monroe St. & 50th Avenue



















HCM 6th Signalized Intersection Summary
16: Monroe St. & 50th Avenue

EAC (2021) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	201	33	27	318	123	22	365	17	70	305	41
Future Volume (veh/h)	30	201	33	27	318	123	22	365	17	70	305	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	35	236	39	32	374	145	26	429	20	82	359	48
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	201	506	429	308	506	576	86	1437	67	165	1452	193
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.05	0.43	0.42	0.10	0.47	0.46
Sat Flow, veh/h	882	1821	1543	1104	1821	1543	1734	3366	157	1734	3071	407
Grp Volume(v), veh/h	35	236	39	32	374	145	26	220	229	82	201	206
Grp Sat Flow(s),veh/h/ln	882	1821	1543	1104	1821	1543	1734	1730	1793	1734	1730	1748
Q Serve(g_s), s	2.3	6.5	1.1	1.5	11.2	3.9	0.9	5.0	5.0	2.7	4.2	4.2
Cycle Q Clear(g_c), s	13.4	6.5	1.1	7.9	11.2	3.9	0.9	5.0	5.0	2.7	4.2	4.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.09	1.00		0.23
Lane Grp Cap(c), veh/h	201	506	429	308	506	576	86	738	765	165	818	826
V/C Ratio(X)	0.17	0.47	0.09	0.10	0.74	0.25	0.30	0.30	0.30	0.50	0.25	0.25
Avail Cap(c_a), veh/h	279	668	566	406	668	713	217	738	765	231	818	826
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.8	18.0	16.0	21.3	19.7	13.0	27.5	11.3	11.3	25.8	9.4	9.5
Incr Delay (d2), s/veh	0.4	0.7	0.1	0.1	3.0	0.2	2.0	1.0	1.0	2.3	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.3	0.3	0.3	4.3	1.1	0.4	1.7	1.7	1.1	1.3	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.2	18.6	16.1	21.4	22.7	13.2	29.5	12.3	12.3	28.1	10.2	10.2
LnGrp LOS	C	B	B	C	C	B	C	B	B	C	B	B
Approach Vol, veh/h	310			551			475			489		
Approach Delay, s/veh	19.2			20.2			13.3			13.2		
Approach LOS	B			C			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	29.6		20.7	7.0	32.4		20.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	17.5		21.5	7.0	18.0		21.5				
Max Q Clear Time (g_c+I1), s	4.7	7.0		15.4	2.9	6.2		13.2				
Green Ext Time (p_c), s	0.0	1.7		0.7	0.0	1.6		1.7				
Intersection Summary												
HCM 6th Ctrl Delay	16.3											
HCM 6th LOS	B											

Lanes, Volumes, Timings
17: Jackson St. & 58th Avenue

EAC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	57	8	1	51	2	3	107	2	11	99	11
Future Volume (vph)	5	57	8	1	51	2	3	107	2	11	99	11
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		5266			1079			1013			510	
Travel Time (s)		71.8			14.7			12.6			6.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	57	8	1	51	2	3	107	2	11	99	11
Future Vol, veh/h	5	57	8	1	51	2	3	107	2	11	99	11
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	61	9	1	54	2	3	114	2	12	105	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8	7.9	8.1	8.1
HCM LOS	A	A	A	A










Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	7%	2%	9%
Vol Thru, %	96%	81%	94%	82%
Vol Right, %	2%	11%	4%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	112	70	54	121
LT Vol	3	5	1	11
Through Vol	107	57	51	99
RT Vol	2	8	2	11
Lane Flow Rate	119	74	57	129
Geometry Grp	1	1	1	1
Degree of Util (X)	0.145	0.093	0.073	0.155
Departure Headway (Hd)	4.375	4.506	4.561	4.335
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	822	797	787	829
Service Time	2.391	2.524	2.58	2.35
HCM Lane V/C Ratio	0.145	0.093	0.072	0.156
HCM Control Delay	8.1	8	7.9	8.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.3	0.2	0.5

Lanes, Volumes, Timings
1: Madison St. & Avenue 58

EAC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	112	111	21	10	84	111	13	223	7	93	347	119
Future Volume (vph)	112	111	21	10	84	111	13	223	7	93	347	119
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	14.2
Intersection LOS	B















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	112	111	21	10	84	111	13	223	7	93	347	119
Future Vol, veh/h	112	111	21	10	84	111	13	223	7	93	347	119
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	122	121	23	11	91	121	14	242	8	101	377	129
Number of Lanes	1	1	1	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	13.5	13	13.6	15.3
HCM LOS	B	B	B	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	91%	0%	100%	0%	0%	100%	20%	0%	100%
Vol Right, %	0%	0%	9%	0%	0%	100%	0%	0%	80%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	13	149	81	112	111	21	10	56	139	93	231
LT Vol	13	0	0	112	0	0	10	0	0	93	0
Through Vol	0	149	74	0	111	0	0	56	28	0	231
RT Vol	0	0	7	0	0	21	0	0	111	0	0
Lane Flow Rate	14	162	88	122	121	23	11	61	151	101	251
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.032	0.347	0.188	0.281	0.262	0.045	0.026	0.135	0.31	0.212	0.494
Departure Headway (Hd)	8.234	7.734	7.674	8.311	7.811	7.111	8.456	7.956	7.397	7.567	7.067
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	435	465	468	432	460	503	423	450	485	475	510
Service Time	5.987	5.487	5.427	6.06	5.56	4.86	6.207	5.707	5.148	5.309	4.809
HCM Lane V/C Ratio	0.032	0.348	0.188	0.282	0.263	0.046	0.026	0.136	0.311	0.213	0.492
HCM Control Delay	11.3	14.6	12.2	14.3	13.3	10.2	11.4	12	13.5	12.3	16.5
HCM Lane LOS	B	B	B	B	B	B	B	B	B	B	C
HCM 95th-tile Q	0.1	1.5	0.7	1.1	1	0.1	0.1	0.5	1.3	0.8	2.7

Lanes, Volumes, Timings
2: Madison St. & Airport Bl.

EAC (2021) PM Peak hour

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	46	73	1	363	40	60	472
Future Volume (vph)	46	73	1	363	40	60	472
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		8			2		
Detector Phase	3	8	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	20.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	22.0	22.0	12.0	25.0	25.0	13.0	26.0
Total Split (%)	36.7%	36.7%	20.0%	41.7%	41.7%	21.7%	43.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 60

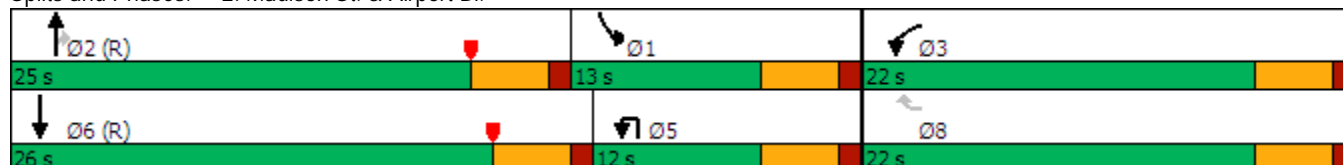
Actuated Cycle Length: 60

Offset: 28 (47%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 2: Madison St. & Airport Bl.






























HCM 6th Signalized Intersection Summary 2: Madison St. & Airport Bl.

EAC (2021) PM Peak hour

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	46	73	1	363	40	60	472
Future Volume (veh/h)	46	73	1	363	40	60	472
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	52	82		408	45	67	530
Peak Hour Factor	0.89	0.89		0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	195	174		1211	540	585	2610
Arrive On Green	0.11	0.11		0.35	0.35	0.34	0.75
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	52	82		408	45	67	530
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	1.6	3.0		5.2	0.7	1.6	2.7
Cycle Q Clear(g_c), s	1.6	3.0		5.2	0.7	1.6	2.7
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	195	174		1211	540	585	2610
V/C Ratio(X)	0.27	0.47		0.34	0.08	0.11	0.20
Avail Cap(c_a), veh/h	520	463		1211	540	585	2610
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.4	25.0		14.4	4.8	13.7	2.1
Incr Delay (d2), s/veh	0.7	2.0		0.8	0.3	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.0		1.8	0.4	0.5	0.2
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	25.1	26.9		15.1	5.1	13.8	2.3
LnGrp LOS	C	C		B	A	B	A
Approach Vol, veh/h	134			453			597
Approach Delay, s/veh	26.2			14.1			3.6
Approach LOS	C			B			A
Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	24.3	25.0				49.3	10.7
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	8.5	20.5				21.5	17.5
Max Q Clear Time (g_c+I1), s	3.6	7.2				4.7	5.0
Green Ext Time (p_c), s	0.0	2.0				2.8	0.3
Intersection Summary							
HCM 6th Ctrl Delay			10.2				
HCM 6th LOS			B				
Notes							
User approved ignoring U-Turning movement.							

Lanes, Volumes, Timings
3: Madison St. & Avenue 54









EAC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 			 	
Traffic Volume (vph)	16	239	327	22	136	69	278	337	64	47	254	13
Future Volume (vph)	16	239	327	22	136	69	278	337	64	47	254	13
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh47.6

Intersection LOS E
























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	239	327	22	136	69	278	337	64	47	254	13
Future Vol, veh/h	16	239	327	22	136	69	278	337	64	47	254	13
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	269	367	25	153	78	312	379	72	53	285	15
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	89	18.2	34	21.3
HCM LOS	F	C	D	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	64%	0%	100%	20%	0%	100%	40%	0%	100%	87%
Vol Right, %	0%	0%	36%	0%	0%	80%	0%	0%	60%	0%	0%	13%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	278	225	176	16	159	407	22	91	114	47	169	98
LT Vol	278	0	0	16	0	0	22	0	0	47	0	0
Through Vol	0	225	112	0	159	80	0	91	45	0	169	85
RT Vol	0	0	64	0	0	327	0	0	69	0	0	13
Lane Flow Rate	312	252	198	18	179	457	25	102	128	53	190	110
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.841	0.645	0.493	0.05	0.475	1.141	0.076	0.301	0.364	0.157	0.541	0.309
Departure Headway (Hd)	9.888	9.388	9.134	10.054	9.554	8.992	11.307	10.807	10.385	10.995	10.495	10.401
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	369	386	396	356	378	407	319	334	348	328	346	348
Service Time	7.588	7.088	6.834	7.81	7.31	6.748	9.007	8.507	8.085	8.695	8.195	8.101
HCM Lane V/C Ratio	0.846	0.653	0.5	0.051	0.474	1.123	0.078	0.305	0.368	0.162	0.549	0.316
HCM Control Delay	47.7	27.6	20.4	13.3	20.7	118.7	14.9	18.1	18.9	15.7	24.9	17.7
HCM Lane LOS	E	D	C	B	C	F	B	C	C	C	C	C
HCM 95th-tile Q	7.7	4.3	2.6	0.2	2.5	17	0.2	1.2	1.6	0.5	3.1	1.3

Lanes, Volumes, Timings
3: Madison St. & Avenue 54

EAC (2021) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	239	327	22	136	69	278	337	64	47	254	13
Future Volume (vph)	16	239	327	22	136	69	278	337	64	47	254	13
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2			6		6			8			
Detector Phase	2	2		6	6	6	3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	
Minimum Split (s)	30.5	30.5		30.5	30.5	30.5	9.0	30.5	30.5	9.0	30.5	
Total Split (s)	51.0	51.0		51.0	51.0	51.0	31.0	51.0	51.0	18.0	38.0	
Total Split (%)	42.5%	42.5%		42.5%	42.5%	42.5%	25.8%	42.5%	42.5%	15.0%	31.7%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.0	3.5	3.5	3.0	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.0	4.5	4.5	4.0	4.5	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None	Max	Max	None	Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

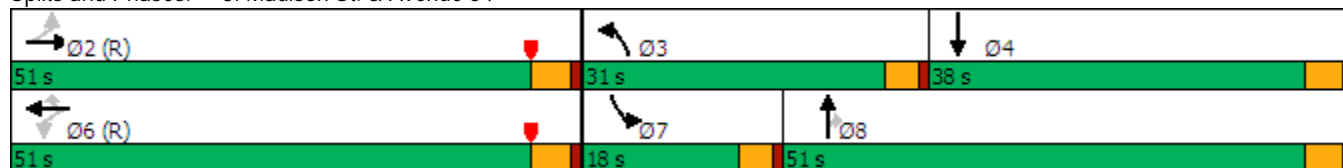
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated























Splits and Phases: 3: Madison St. & Avenue 54



HCM 6th Signalized Intersection Summary

























3: Madison St. & Avenue 54

EAC (2021) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	239	327	22	136	69	278	337	64	47	254	13
Future Volume (veh/h)	16	239	327	22	136	69	278	337	64	47	254	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	18	269	367	25	153	78	312	379	72	53	285	15
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	565	804	717	296	1607	717	411	1341	598	69	1020	53
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.12	0.39	0.39	0.04	0.31	0.31
Sat Flow, veh/h	1149	1730	1543	792	3460	1543	3365	3460	1543	1734	3344	175
Grp Volume(v), veh/h	18	269	367	25	153	78	312	379	72	53	147	153
Grp Sat Flow(s),veh/h/ln	1149	1730	1543	792	1730	1543	1682	1730	1543	1734	1730	1790
Q Serve(g_s), s	1.1	11.8	20.0	2.7	3.0	3.4	10.8	9.0	3.6	3.6	7.7	7.8
Cycle Q Clear(g_c), s	4.0	11.8	20.0	22.8	3.0	3.4	10.8	9.0	3.6	3.6	7.7	7.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	565	804	717	296	1607	717	411	1341	598	69	528	546
V/C Ratio(X)	0.03	0.33	0.51	0.08	0.10	0.11	0.76	0.28	0.12	0.77	0.28	0.28
Avail Cap(c_a), veh/h	565	804	717	296	1607	717	757	1341	598	202	528	546
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.78	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.1	20.4	22.6	30.6	18.0	18.1	51.0	25.3	23.6	57.1	31.7	31.7
Incr Delay (d2), s/veh	0.1	0.9	2.0	0.6	0.1	0.3	6.1	0.5	0.4	31.2	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	4.6	7.1	0.5	1.1	1.2	4.7	3.6	1.3	2.1	3.3	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.2	21.2	24.6	31.1	18.1	18.4	57.0	25.8	24.0	88.3	33.0	33.0
LnGrp LOS	B	C	C	C	B	B	E	C	C	F	C	C
Approach Vol, veh/h	654			256			763			353		
Approach Delay, s/veh	23.1			19.5			38.4			41.3		
Approach LOS	C			B			D			D		
Timer - Assigned Phs	2			3			4			6		
Phs Duration (G+Y+Rc), s	60.2			18.7			41.1			60.2		
Change Period (Y+Rc), s	4.5			4.0			4.5			4.5		
Max Green Setting (Gmax), s	46.5			27.0			33.5			46.5		
Max Q Clear Time (g_c+I1), s	22.0			12.8			9.8			24.8		
Green Ext Time (p_c), s	3.6			1.9			1.4			1.1		
Intersection Summary												
HCM 6th Ctrl Delay	31.6											
HCM 6th LOS	C											

Lanes, Volumes, Timings
4: Madison St. & Avenue 52

EAC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	482	85	18	393	46	95	267	30	55	215	63
Future Volume (vph)	73	482	85	18	393	46	95	267	30	55	215	63
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	24.0	50.0	50.0	15.0	41.0	41.0	17.0	40.0	40.0	15.0	38.0	38.0
Total Split (%)	20.0%	41.7%	41.7%	12.5%	34.2%	34.2%	14.2%	33.3%	33.3%	12.5%	31.7%	31.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

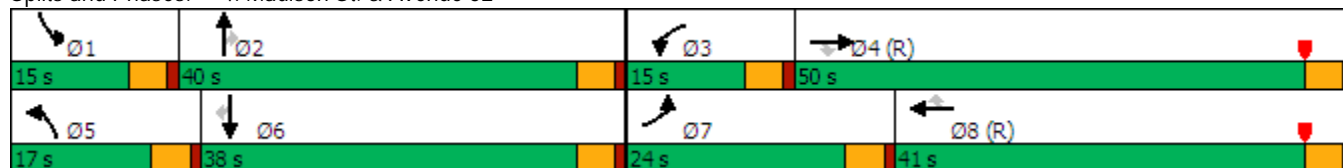
Actuated Cycle Length: 120

Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 4: Madison St. & Avenue 52



























HCM 6th Signalized Intersection Summary 4: Madison St. & Avenue 52

EAC (2021) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	482	85	18	393	46	95	267	30	55	215	63
Future Volume (veh/h)	73	482	85	18	393	46	95	267	30	55	215	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	85	560	99	21	457	53	110	310	35	64	250	73
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	108	1638	731	51	1525	680	191	1024	457	173	1005	448
Arrive On Green	0.06	0.47	0.47	0.03	0.44	0.44	0.06	0.30	0.30	0.05	0.29	0.29
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	85	560	99	21	457	53	110	310	35	64	250	73
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	5.8	12.2	4.3	1.4	10.2	2.4	3.8	8.3	2.0	2.2	6.6	4.2
Cycle Q Clear(g_c), s	5.8	12.2	4.3	1.4	10.2	2.4	3.8	8.3	2.0	2.2	6.6	4.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	108	1638	731	51	1525	680	191	1024	457	173	1005	448
V/C Ratio(X)	0.79	0.34	0.14	0.41	0.30	0.08	0.58	0.30	0.08	0.37	0.25	0.16
Avail Cap(c_a), veh/h	282	1638	731	152	1525	680	350	1024	457	294	1005	448
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.5	19.9	17.8	57.2	21.6	19.4	55.2	32.7	30.4	55.0	32.6	31.7
Incr Delay (d2), s/veh	12.0	0.6	0.4	5.3	0.5	0.2	2.7	0.8	0.3	1.3	0.6	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	4.8	1.5	0.7	4.0	0.8	1.6	3.5	0.7	0.9	2.8	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.5	20.4	18.2	62.5	22.1	19.7	57.9	33.4	30.8	56.3	33.2	32.5
LnGrp LOS	E	C	B	E	C	B	E	C	C	E	C	C
Approach Vol, veh/h	744			531			455			387		
Approach Delay, s/veh	25.5			23.5			39.1			36.9		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.7	40.0	8.0	61.3	11.3	39.3	12.0	57.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	35.5	10.5	45.5	12.5	33.5	19.5	36.5				
Max Q Clear Time (g_c+I1), s	4.2	10.3	3.4	14.2	5.8	8.6	7.8	12.2				
Green Ext Time (p_c), s	0.1	1.8	0.0	4.0	0.1	1.6	0.1	2.7				
Intersection Summary												
HCM 6th Ctrl Delay	30.0											
HCM 6th LOS	C											

Lanes, Volumes, Timings
5: Madison St. & Avenue 50/50th Avenue

EAC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	420	140	49	334	41	107	333	37	41	210	87
Future Volume (vph)	84	420	140	49	334	41	107	333	37	41	210	87
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	24.0	47.0	47.0	16.0	39.0	39.0	19.0	41.0	41.0	16.0	38.0	38.0
Total Split (%)	20.0%	39.2%	39.2%	13.3%	32.5%	32.5%	15.8%	34.2%	34.2%	13.3%	31.7%	31.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

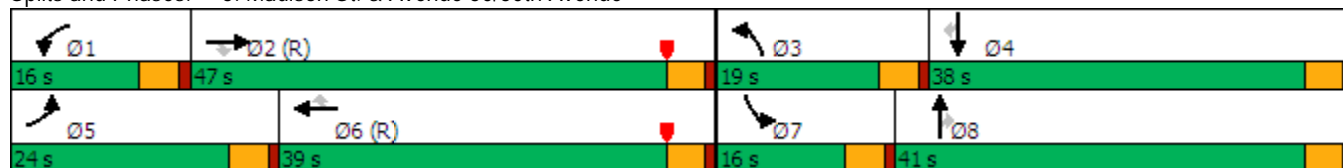
Actuated Cycle Length: 120

Offset: 64.5 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue
























HCM 6th Signalized Intersection Summary 5: Madison St. & Avenue 50/50th Avenue

EAC (2021) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	420	140	49	334	41	107	333	37	41	210	87
Future Volume (veh/h)	84	420	140	49	334	41	107	333	37	41	210	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	88	442	147	52	352	43	113	351	39	43	221	92
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	111	1569	700	83	1513	675	192	1052	469	149	1009	450
Arrive On Green	0.06	0.45	0.45	0.05	0.44	0.44	0.06	0.30	0.30	0.04	0.29	0.29
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	88	442	147	52	352	43	113	351	39	43	221	92
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	6.0	9.6	6.9	3.5	7.6	1.9	3.9	9.4	2.2	1.5	5.8	5.4
Cycle Q Clear(g_c), s	6.0	9.6	6.9	3.5	7.6	1.9	3.9	9.4	2.2	1.5	5.8	5.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	111	1569	700	83	1513	675	192	1052	469	149	1009	450
V/C Ratio(X)	0.79	0.28	0.21	0.62	0.23	0.06	0.59	0.33	0.08	0.29	0.22	0.20
Avail Cap(c_a), veh/h	282	1569	700	166	1513	675	407	1052	469	322	1009	450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.4	20.6	19.8	56.1	21.2	19.5	55.2	32.3	29.8	55.5	32.2	32.0
Incr Delay (d2), s/veh	11.8	0.4	0.7	7.4	0.4	0.2	2.9	0.9	0.3	1.0	0.5	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	3.8	2.5	1.7	3.0	0.7	1.7	3.9	0.8	0.6	2.4	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.1	21.0	20.5	63.5	21.5	19.7	58.1	33.2	30.2	56.5	32.7	33.0
LnGrp LOS	E	C	C	E	C	B	E	C	C	E	C	C
Approach Vol, veh/h		677			447			503			356	
Approach Delay, s/veh		26.9			26.2			38.5			35.6	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.3	58.9	11.3	39.5	12.2	57.0	9.8	41.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.5	42.5	14.5	33.5	19.5	34.5	11.5	36.5				
Max Q Clear Time (g_c+I1), s	5.5	11.6	5.9	7.8	8.0	9.6	3.5	11.4				
Green Ext Time (p_c), s	0.0	3.3	0.2	1.5	0.1	2.1	0.0	2.1				
Intersection Summary												
HCM 6th Ctrl Delay			31.3									
HCM 6th LOS			C									

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54









EAC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	24	2	34	10	386	6	252	53	486	303	2
Future Volume (vph)	31	24	2	34	10	386	6	252	53	486	303	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh49.7

Intersection LOS E






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	24	2	34	10	386	6	252	53	486	303	2
Future Vol, veh/h	31	24	2	34	10	386	6	252	53	486	303	2
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	29	2	41	12	471	7	307	65	593	370	2
Number of Lanes	1	2	0	1	1	1	0	2	0	2	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	15.3	99.8	21.4	36
HCM LOS	C	F	C	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	5%	0%	100%	0%	0%	100%	0%	0%	100%	100%	0%
Vol Thru, %	95%	70%	0%	100%	80%	0%	100%	0%	0%	0%	99%
Vol Right, %	0%	30%	0%	0%	20%	0%	0%	100%	0%	0%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	132	179	31	16	10	34	10	386	243	243	305
LT Vol	6	0	31	0	0	34	0	0	243	243	0
Through Vol	126	126	0	16	8	0	10	0	0	0	303
RT Vol	0	53	0	0	2	0	0	386	0	0	2
Lane Flow Rate	161	218	38	20	12	41	12	471	296	296	372
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.419	0.554	0.118	0.058	0.036	0.113	0.031	1.12	0.716	0.716	0.847
Departure Headway (Hd)	9.606	9.376	11.726	11.204	11.058	9.789	9.278	8.563	9.022	9.022	8.512
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	377	386	308	322	326	365	385	424	403	403	428
Service Time	7.306	7.076	9.426	8.904	8.758	7.567	7.056	6.341	6.722	6.722	6.212
HCM Lane V/C Ratio	0.427	0.565	0.123	0.062	0.037	0.112	0.031	1.111	0.734	0.734	0.869
HCM Control Delay	19.1	23.1	16	14.6	14.2	13.8	12.4	109.6	31.4	31.4	43.3
HCM Lane LOS	C	C	C	B	B	B	B	F	D	D	E
HCM 95th-tile Q	2	3.2	0.4	0.2	0.1	0.4	0.1	16.7	5.5	5.5	8.2

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54

EAC (2021) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	24	2	34	10	386	6	252	53	486	303	2
Future Volume (vph)	31	24	2	34	10	386	6	252	53	486	303	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases		2			6		8	8		4	4	
Permitted Phases	2			6		6						4
Detector Phase	2	2		6	6	6	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	30.5	30.5		30.5	30.5	30.5	30.5	30.5		30.5	30.5	30.5
Total Split (s)	48.0	48.0		48.0	48.0	48.0	33.0	33.0		39.0	39.0	39.0
Total Split (%)	40.0%	40.0%		40.0%	40.0%	40.0%	27.5%	27.5%		32.5%	32.5%	32.5%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		None	None	None	Max	Max		Max	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

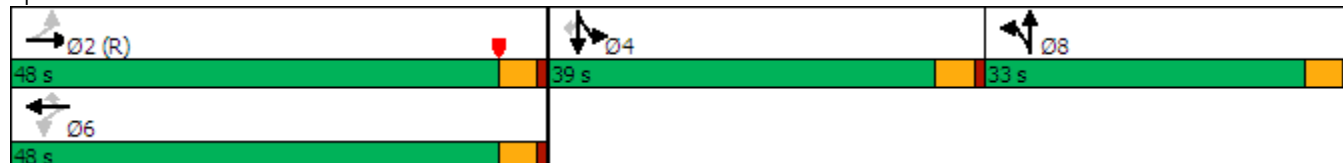
Actuated Cycle Length: 120

Offset: 84.5 (70%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 95























Control Type: Actuated-Coordinated

Splits and Phases: 6: Jefferson St. & Avenue 54























HCM 6th Signalized Intersection Summary 6: Jefferson St. & Avenue 54

EAC (2021) PM Peak hour
With Improvements

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	31	24	2	34	10	386	6	252	53	486	303	2	
Future Volume (veh/h)	31	24	2	34	10	386	6	252	53	486	303	2	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No			No			No			No			
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	
Adj Flow Rate, veh/h	38	29	2	41	12	471	7	307	65	593	370	2	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	387	1191	81	552	660	559	15	673	149	967	995	444	
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.24	0.24	0.24	0.29	0.29	0.29	
Sat Flow, veh/h	912	3287	224	1378	1821	1543	63	2835	628	3365	3460	1543	
Grp Volume(v), veh/h	38	15	16	41	12	471	202	0	177	593	370	2	
Grp Sat Flow(s),veh/h/ln	912	1730	1781	1378	1821	1543	1818	0	1708	1682	1730	1543	
Q Serve(g_s), s	3.3	0.7	0.7	2.4	0.5	33.6	11.4	0.0	10.6	18.3	10.2	0.1	
Cycle Q Clear(g_c), s	3.9	0.7	0.7	3.1	0.5	33.6	11.4	0.0	10.6	18.3	10.2	0.1	
Prop In Lane	1.00		0.13	1.00		1.00	0.03		0.37	1.00		1.00	
Lane Grp Cap(c), veh/h	387	627	646	552	660	559	432	0	406	967	995	444	
V/C Ratio(X)	0.10	0.02	0.02	0.07	0.02	0.84	0.47	0.00	0.44	0.61	0.37	0.00	
Avail Cap(c_a), veh/h	387	627	646	552	660	559	432	0	406	967	995	444	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	0.89	0.89	0.89	1.00	0.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	25.8	24.6	24.6	25.6	24.5	35.1	39.2	0.0	38.9	37.0	34.1	30.5	
Incr Delay (d2), s/veh	0.5	0.1	0.1	0.1	0.0	10.0	3.6	0.0	3.4	2.9	1.1	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.7	0.3	0.3	0.7	0.2	13.2	5.3	0.0	4.6	7.5	4.2	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	26.3	24.7	24.7	25.6	24.6	45.1	42.9	0.0	42.3	39.9	35.2	30.5	
LnGrp LOS	C	C	C	C	C	D	D	A	D	D	D	C	
Approach Vol, veh/h	69			524				379				965	
Approach Delay, s/veh	25.6			43.1				42.6				38.1	
Approach LOS	C			D				D				D	
Timer - Assigned Phs	2			4			6			8			
Phs Duration (G+Y+Rc), s	48.0			39.0			48.0			33.0			
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5			
Max Green Setting (Gmax), s	43.5			34.5			43.5			28.5			
Max Q Clear Time (g_c+I1), s	5.9			20.3			35.6			13.4			
Green Ext Time (p_c), s	0.3			3.7			1.2			1.6			
Intersection Summary													
HCM 6th Ctrl Delay	39.9												
HCM 6th LOS	D												

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52





















EAC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	104	360	317	30	362	280	191	590	70	184	594	138
Future Volume (vph)	104	360	317	30	362	280	191	590	70	184	594	138
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											

Intersection									
Intersection Delay, s/veh	78.7								
Intersection LOS	F								
Approach	EB		WB		NB		SB		
Entry Lanes	1		1		1		1		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	840		722		914		985		
Demand Flow Rate, veh/h	857		737		932		1005		
Vehicles Circulating, veh/h	887		970		711		639		
Vehicles Exiting, veh/h	606		597		685		761		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	27.8		22.4		145.4		101.5		
Approach LOS	D		C		F		F		
Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Bypass	
Designated Moves	LT	R	LT	R	LT	R	LT	R	
Assumed Moves	LT	R	LT	R	LT	R	LT	R	
RT Channelized		Free		Free		Free		Free	
Lane Util	1.000		1.000		1.000		1.000		
Follow-Up Headway, s	2.609		2.609		2.609		2.609		
Critical Headway, s	4.976	348	4.976	307	4.976	76	4.976	151	
Entry Flow, veh/h	509	1887	430	1887	856	1887	854	1887	
Cap Entry Lane, veh/h	558	0.980	513	0.980	668	0.980	719	0.980	
Entry HV Adj Factor	0.981	341	0.980	301	0.981	75	0.980	148	
Flow Entry, veh/h	499	1850	421	1850	839	1850	837	1850	
Cap Entry, veh/h	548	0.184	503	0.163	655	0.041	705	0.080	
V/C Ratio	0.912	0.0	0.838	0.0	1.281	0.0	1.188	0.0	
Control Delay, s/veh	46.8	A	38.4	A	158.4	A	119.5	A	
LOS	E	1	E	1	F	0	F	0	
95th %tile Queue, veh	11		8		33		28		

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EAC (2021) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	104	360	317	30	362	280	191	590	70	184	594	138
Future Volume (vph)	104	360	317	30	362	280	191	590	70	184	594	138
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		100	0		100	0		0	0		0
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	60			60			60			60		
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											























HCM 6th Roundabout
7: Jefferson St. & Avenue 52

EAC (2021) PM Peak hour
With Improvements

Intersection										
Intersection Delay, s/veh	12.8									
Intersection LOS	B									
Approach	EB		WB		NB		SB			
Entry Lanes	1		1		2		2			
Conflicting Circle Lanes	2		2		2		2			
Adj Approach Flow, veh/h	840		722		914		985			
Demand Flow Rate, veh/h	857		737		932		1005			
Vehicles Circulating, veh/h	887		970		711		639			
Vehicles Exiting, veh/h	606		597		685		761			
Ped Vol Crossing Leg, #/h	0		0		0		0			
Ped Cap Adj	1.000		1.000		1.000		1.000			
Approach Delay, s/veh	14.7		12.5		13.3		10.8			
Approach LOS	B		B		B		B			
Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
Assumed Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
RT Channelized		Free		Free			Free			Free
Lane Util	1.000		1.000		0.470	0.530		0.470	0.530	
Follow-Up Headway, s	2.535		2.535		2.667	2.535		2.667	2.535	
Critical Headway, s	4.328	348	4.328	307	4.645	4.328	76	4.645	4.328	151
Entry Flow, veh/h	509	1887	430	1887	402	454	1887	401	453	1887
Cap Entry Lane, veh/h	668	0.980	623	0.980	702	776	0.980	750	825	0.980
Entry HV Adj Factor	0.981	341	0.980	301	0.981	0.980	75	0.981	0.980	148
Flow Entry, veh/h	499	1850	421	1850	394	445	1850	393	444	1850
Cap Entry, veh/h	655	0.184	610	0.163	689	760	0.041	736	808	0.080
V/C Ratio	0.762	0.0	0.691	0.0	0.573	0.585	0.0	0.535	0.549	0.0
Control Delay, s/veh	24.7	A	21.5	A	14.9	14.1	A	13.0	12.5	A
LOS	C	1	C	1	B	B	0	B	B	0
95th %tile Queue, veh	7		5		4	4		3	3	

Lanes, Volumes, Timings
8: Jefferson St. & Pomelo

EAC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	2	21	9	1	42	3	970	7	23	978	68
Future Volume (vph)	66	2	21	9	1	42	3	970	7	23	978	68
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	49.0	49.0	49.0	49.0	49.0	49.0	18.0	51.0		20.0	53.0	
Total Split (%)	40.8%	40.8%	40.8%	40.8%	40.8%	40.8%	15.0%	42.5%		16.7%	44.2%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary

Area Type: Other

Cycle Length: 120

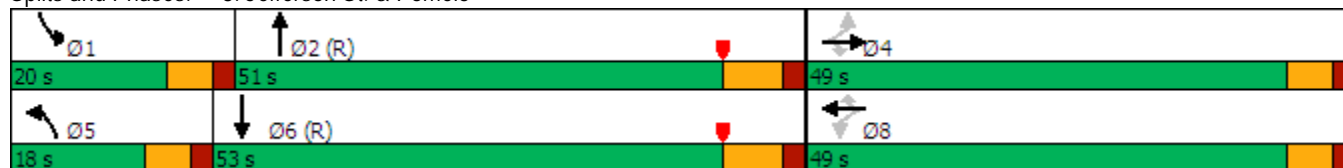
Actuated Cycle Length: 120

Offset: 30 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110


Control Type: Actuated-Coordinated

Splits and Phases: 8: Jefferson St. & Pomelo



























HCM 6th Signalized Intersection Summary 8: Jefferson St. & Pomelo

EAC (2021) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↱	↰↰↰		↱	↰↰↰	
Traffic Volume (veh/h)	66	2	21	9	1	42	3	970	7	23	978	68
Future Volume (veh/h)	66	2	21	9	1	42	3	970	7	23	978	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	69	2	22	9	1	44	3	1021	7	24	1029	72
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	73	1	527	67	4	527	17	2246	15	96	2308	161
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.01	0.44	0.44	0.02	0.16	0.16
Sat Flow, veh/h	42	4	1543	28	13	1543	1734	5094	35	1734	4744	332
Grp Volume(v), veh/h	71	0	22	10	0	44	3	664	364	24	718	383
Grp Sat Flow(s),veh/h/ln	45	0	1543	41	0	1543	1734	1657	1815	1734	1657	1761
Q Serve(g_s), s	1.3	0.0	1.1	0.6	0.0	2.3	0.2	16.8	16.8	1.6	23.5	23.6
Cycle Q Clear(g_c), s	41.0	0.0	1.1	40.7	0.0	2.3	0.2	16.8	16.8	1.6	23.5	23.6
Prop In Lane	0.97		1.00	0.90		1.00	1.00		0.02	1.00		0.19
Lane Grp Cap(c), veh/h	75	0	527	71	0	527	17	1461	800	96	1612	857
V/C Ratio(X)	0.95	0.00	0.04	0.14	0.00	0.08	0.18	0.45	0.45	0.25	0.45	0.45
Avail Cap(c_a), veh/h	98	0	553	95	0	553	173	1461	800	202	1612	857
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.74	0.74	0.74
Uniform Delay (d), s/veh	59.4	0.0	26.4	45.8	0.0	26.8	59.0	23.5	23.5	56.5	35.7	35.8
Incr Delay (d2), s/veh	75.2	0.0	0.1	1.9	0.0	0.1	10.9	1.0	1.9	2.2	0.7	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.0	0.4	0.3	0.0	0.9	0.1	6.3	7.1	0.8	10.5	11.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	134.6	0.0	26.5	47.7	0.0	26.9	69.8	24.5	25.3	58.6	36.4	37.0
LnGrp LOS	F	A	C	D	A	C	E	C	C	E	D	D
Approach Vol, veh/h	93			54			1031			1125		
Approach Delay, s/veh	109.0			30.8			24.9			37.1		
Approach LOS	F			C			C			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.6	59.6		47.8	7.1	65.0		47.8				
Change Period (Y+Rc), s	6.0	7.5		6.0	6.0	7.5		6.0				
Max Green Setting (Gmax), s	14.0	43.5		43.0	12.0	45.5		43.0				
Max Q Clear Time (g_c+I1), s	3.6	18.8		43.0	2.2	25.6		42.7				
Green Ext Time (p_c), s	0.0	11.7		0.0	0.0	11.1		0.0				
Intersection Summary												
HCM 6th Ctrl Delay	34.4											
HCM 6th LOS	C											

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

EAC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	362	344	131	113	297	190	125	879	73	274	827	225
Future Volume (vph)	362	344	131	113	297	190	125	879	73	274	827	225
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	40.5	40.5	21.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	33.8%	33.8%	17.5%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

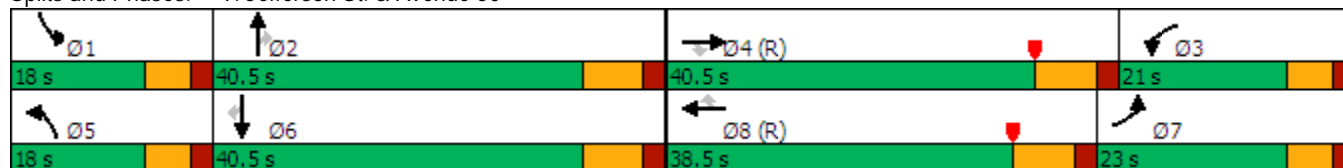
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 125

Control Type: Actuated-Coordinated

























Splits and Phases: 9: Jefferson St. & Avenue 50



HCM 6th Signalized Intersection Summary












9: Jefferson St. & Avenue 50

EAC (2021) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	362	344	131	113	297	190	125	879	73	274	827	225
Future Volume (veh/h)	362	344	131	113	297	190	125	879	73	274	827	225
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	373	355	135	116	306	196	129	906	75	282	853	232
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	409	523	233	498	369	313	171	1177	366	336	1184	368
Arrive On Green	0.24	0.15	0.15	0.29	0.20	0.20	0.03	0.08	0.08	0.10	0.24	0.24
Sat Flow, veh/h	1734	3460	1543	1734	1821	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	373	355	135	116	306	196	129	906	75	282	853	232
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	25.1	11.6	7.3	6.1	19.3	10.2	8.9	21.4	2.6	9.9	18.9	8.8
Cycle Q Clear(g_c), s	25.1	11.6	7.3	6.1	19.3	10.2	8.9	21.4	2.6	9.9	18.9	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	409	523	233	498	369	313	171	1177	366	336	1184	368
V/C Ratio(X)	0.91	0.68	0.58	0.23	0.83	0.63	0.75	0.77	0.21	0.84	0.72	0.63
Avail Cap(c_a), veh/h	409	952	424	498	470	399	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.7	48.2	26.7	32.7	45.9	23.5	56.6	52.1	10.2	53.0	42.0	12.1
Incr Delay (d2), s/veh	24.3	7.0	10.1	0.1	19.0	9.2	14.5	2.5	0.4	16.0	1.8	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.1	5.3	4.2	2.5	10.4	4.4	4.6	9.7	2.1	4.7	7.5	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.9	55.1	36.8	32.8	64.9	32.7	71.1	54.6	10.5	69.0	43.9	15.1
LnGrp LOS	E	E	D	C	E	C	E	D	B	E	D	B
Approach Vol, veh/h	863				618				1110			
Approach Delay, s/veh	58.2				48.7				53.6			
Approach LOS	E				D				D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	35.9	40.5	25.6	17.8	36.1	34.3	31.8				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	12.0	33.0	15.0	33.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	11.9	23.4	8.1	13.6	10.9	20.9	27.1	21.3				
Green Ext Time (p_c), s	0.0	5.0	0.0	4.5	0.0	6.1	0.0	3.0				
Intersection Summary												
HCM 6th Ctrl Delay	50.6											
HCM 6th LOS	D											
Notes												






Lanes, Volumes, Timings
10: Avenue 60 & Madison St.

EAC (2021) PM Peak hour

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	22	6	7	120	232	35
Future Volume (vph)	22	6	7	120	232	35
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		40	
Link Distance (ft)		1772	661		437	
Travel Time (s)		30.2	11.3		7.4	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)						
Sign Control		Stop	Stop		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Intersection Delay, s/veh	10.6
Intersection LOS	B





















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	6	7	120	232	35
Future Vol, veh/h	22	6	7	120	232	35
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	7	9	146	283	43
Number of Lanes	0	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	8.9	8.6	11.7
HCM LOS	A	A	B

Lane	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	79%	0%	0%	100%	0%
Vol Thru, %	21%	100%	0%	0%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	28	7	120	232	35
LT Vol	22	0	0	232	0
Through Vol	6	7	0	0	0
RT Vol	0	0	120	0	35
Lane Flow Rate	34	9	146	283	43
Geometry Grp	4	7	7	7	7
Degree of Util (X)	0.053	0.013	0.194	0.432	0.051
Departure Headway (Hd)	5.572	5.471	4.766	5.491	4.288
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	642	655	754	656	833
Service Time	3.613	3.199	2.494	3.229	2.025
HCM Lane V/C Ratio	0.053	0.014	0.194	0.431	0.052
HCM Control Delay	8.9	8.3	8.6	12.4	7.3
HCM Lane LOS	A	A	A	B	A
HCM 95th-tile Q	0.2	0	0.7	2.2	0.2

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

EAC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	95	94	2	36	117	57	97	3	186	95	17
Future Volume (vph)	20	95	94	2	36	117	57	97	3	186	95	17
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	12
Intersection LOS	B


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↱	↱		↱		↱	↱		↱	↱	↱
Traffic Vol, veh/h	20	95	94	2	36	117	57	97	3	186	95	17
Future Vol, veh/h	20	95	94	2	36	117	57	97	3	186	95	17
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	108	107	2	41	133	65	110	3	211	108	19
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	11.1	12	11.4	13
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	17%	0%	1%	100%	0%	0%
Vol Thru, %	0%	97%	83%	0%	23%	0%	100%	0%
Vol Right, %	0%	3%	0%	100%	75%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	57	100	115	94	155	186	95	17
LT Vol	57	0	20	0	2	186	0	0
Through Vol	0	97	95	0	36	0	95	0
RT Vol	0	3	0	94	117	0	0	17
Lane Flow Rate	65	114	131	107	176	211	108	19
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.133	0.216	0.248	0.179	0.311	0.409	0.194	0.031
Departure Headway (Hd)	7.371	6.839	6.839	6.043	6.361	6.969	6.461	5.751
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	484	522	521	590	562	514	553	619
Service Time	5.158	4.626	4.622	3.826	4.147	4.742	4.234	3.523
HCM Lane V/C Ratio	0.134	0.218	0.251	0.181	0.313	0.411	0.195	0.031
HCM Control Delay	11.3	11.5	11.9	10.2	12	14.5	10.8	8.7
HCM Lane LOS	B	B	B	B	B	B	B	A
HCM 95th-tile Q	0.5	0.8	1	0.6	1.3	2	0.7	0.1

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	96	53	12	67	41	69	235	28	33	243	46
Future Volume (vph)	51	96	53	12	67	41	69	235	28	33	243	46
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	23.8
Intersection LOS	C






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	↔
Traffic Vol, veh/h	51	96	53	12	67	41	69	235	28	33	243	46
Future Vol, veh/h	51	96	53	12	67	41	69	235	28	33	243	46
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	68	128	71	16	89	55	92	313	37	44	324	61
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	17.8	14.1	31.2	23.6
HCM LOS	C	B	D	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	21%	26%	10%	12%	0%
Vol Thru, %	71%	48%	56%	88%	0%
Vol Right, %	8%	27%	34%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	332	200	120	276	46
LT Vol	69	51	12	33	0
Through Vol	235	96	67	243	0
RT Vol	28	53	41	0	46
Lane Flow Rate	443	267	160	368	61
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.802	0.528	0.331	0.717	0.106
Departure Headway (Hd)	6.628	7.131	7.45	7.131	6.352
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	549	509	485	512	568
Service Time	4.628	5.131	5.464	4.831	4.052
HCM Lane V/C Ratio	0.807	0.525	0.33	0.719	0.107
HCM Control Delay	31.2	17.8	14.1	25.9	9.8
HCM Lane LOS	D	C	B	D	A
HCM 95th-tile Q	7.7	3	1.4	5.7	0.4

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.









EAC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	79	9	33	80	37	10	240	40	43	266	9
Future Volume (vph)	5	79	9	33	80	37	10	240	40	43	266	9
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh13.8

Intersection LOS B



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	79	9	33	80	37	10	240	40	43	266	9
Future Vol, veh/h	5	79	9	33	80	37	10	240	40	43	266	9
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	91	10	38	92	43	11	276	46	49	306	10
Number of Lanes	1	1	1	0	1	0	1	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	1
Conflicting Approach RightNB		SB	WB	EB
Conflicting Lanes Right	2	3	1	3
HCM Control Delay	10.9	13.3	17.1	12
HCM LOS	B	B	C	B







Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	100%	0%	0%	22%	100%	0%	0%
Vol Thru, %	0%	86%	0%	100%	0%	53%	0%	100%	91%
Vol Right, %	0%	14%	0%	0%	100%	25%	0%	0%	9%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	280	5	79	9	150	43	177	98
LT Vol	10	0	5	0	0	33	43	0	0
Through Vol	0	240	0	79	0	80	0	177	89
RT Vol	0	40	0	0	9	37	0	0	9
Lane Flow Rate	11	322	6	91	10	172	49	204	112
Geometry Grp	8	8	7	7	7	8	8	8	8
Degree of Util (X)	0.022	0.571	0.012	0.174	0.018	0.334	0.096	0.367	0.2
Departure Headway (Hd)	6.992	6.385	7.413	6.906	6.195	6.967	6.987	6.481	6.416
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	509	563	480	516	573	514	510	552	556
Service Time	4.77	4.162	5.203	4.695	3.983	4.754	4.766	4.259	4.194
HCM Lane V/C Ratio	0.022	0.572	0.013	0.176	0.017	0.335	0.096	0.37	0.201
HCM Control Delay	9.9	17.4	10.3	11.2	9.1	13.3	10.5	13	10.8
HCM Lane LOS	A	C	B	B	A	B	B	B	B
HCM 95th-tile Q	0.1	3.6	0	0.6	0.1	1.5	0.3	1.7	0.7

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	213	38	10	119	44	25	313	28	75	272	35
Future Volume (vph)	65	213	38	10	119	44	25	313	28	75	272	35
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	33.8
Intersection LOS	D



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	65	213	38	10	119	44	25	313	28	75	272	35
Future Vol, veh/h	65	213	38	10	119	44	25	313	28	75	272	35
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	71	234	42	11	131	48	27	344	31	82	299	38
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	21.7	19.5	47	37.7
HCM LOS	C	C	E	E

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	7%	100%	0%	6%	22%	0%
Vol Thru, %	86%	0%	85%	69%	78%	0%
Vol Right, %	8%	0%	15%	25%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	366	65	251	173	347	35
LT Vol	25	65	0	10	75	0
Through Vol	313	0	213	119	272	0
RT Vol	28	0	38	44	0	35
Lane Flow Rate	402	71	276	190	381	38
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.884	0.175	0.626	0.466	0.84	0.076
Departure Headway (Hd)	7.912	8.797	8.17	8.828	7.933	7.099
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	459	407	441	407	458	503
Service Time	5.981	6.566	5.938	6.916	5.699	4.865
HCM Lane V/C Ratio	0.876	0.174	0.626	0.467	0.832	0.076
HCM Control Delay	47	13.4	23.8	19.5	40.4	10.5
HCM Lane LOS	E	B	C	C	E	B
HCM 95th-tile Q	9.4	0.6	4.2	2.4	8.2	0.2

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAC (2021) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	213	38	10	119	44	25	313	28	75	272	35
Future Volume (vph)	65	213	38	10	119	44	25	313	28	75	272	35
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	30.0	30.0		30.0	30.0		30.0	30.0		30.0	30.0	30.0
Total Split (s)	47.0	47.0		47.0	47.0		73.0	73.0		73.0	73.0	73.0
Total Split (%)	39.2%	39.2%		39.2%	39.2%		60.8%	60.8%		60.8%	60.8%	60.8%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)	4.0	4.0			4.0			4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 60



















Control Type: Actuated-Coordinated

Splits and Phases: 14: Monroe St. & Avenue 54

























HCM 6th Signalized Intersection Summary
14: Monroe St. & Avenue 54

EAC (2021) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	213	38	10	119	44	25	313	28	75	272	35
Future Volume (veh/h)	65	213	38	10	119	44	25	313	28	75	272	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	71	234	42	11	131	48	27	344	31	82	299	38
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	165	286	51	36	183	63	92	1131	100	265	944	1147
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.74	0.74	0.74	0.74	0.74	0.74
Sat Flow, veh/h	1205	1503	270	21	961	332	81	1522	134	308	1271	1543
Grp Volume(v), veh/h	71	0	276	190	0	0	402	0	0	381	0	38
Grp Sat Flow(s),veh/h/ln	1205	0	1773	1314	0	0	1737	0	0	1578	0	1543
Q Serve(g_s), s	0.7	0.0	17.9	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
Cycle Q Clear(g_c), s	19.3	0.0	17.9	18.6	0.0	0.0	8.9	0.0	0.0	8.2	0.0	0.8
Prop In Lane	1.00		0.15	0.06		0.25	0.07		0.08	0.22		1.00
Lane Grp Cap(c), veh/h	165	0	337	282	0	0	1323	0	0	1209	0	1147
V/C Ratio(X)	0.43	0.00	0.82	0.67	0.00	0.00	0.30	0.00	0.00	0.32	0.00	0.03
Avail Cap(c_a), veh/h	367	0	635	564	0	0	1323	0	0	1209	0	1147
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.8	0.0	46.6	44.3	0.0	0.0	5.1	0.0	0.0	5.0	0.0	4.1
Incr Delay (d2), s/veh	1.8	0.0	4.9	2.8	0.0	0.0	0.6	0.0	0.0	0.7	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	8.0	5.1	0.0	0.0	2.7	0.0	0.0	2.5	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.6	0.0	51.5	47.1	0.0	0.0	5.7	0.0	0.0	5.7	0.0	4.1
LnGrp LOS	D	A	D	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	347			190			402			419		
Approach Delay, s/veh	51.1			47.1			5.7			5.5		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	93.2			26.8			93.2			26.8		
Change Period (Y+Rc), s	4.0			4.0			4.0			4.0		
Max Green Setting (Gmax), s	69.0			43.0			69.0			43.0		
Max Q Clear Time (g_c+I1), s	10.9			21.3			10.2			20.6		
Green Ext Time (p_c), s	2.4			1.5			2.5			0.9		
Intersection Summary												
HCM 6th Ctrl Delay	23.0											
HCM 6th LOS	C											

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52










EAC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	101	384	48	43	325	92	32	344	52	109	303	86
Future Volume (vph)	101	384	48	43	325	92	32	344	52	109	303	86
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 116

Intersection LOS F























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	101	384	48	43	325	92	32	344	52	109	303	86
Future Vol, veh/h	101	384	48	43	325	92	32	344	52	109	303	86
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	117	447	56	50	378	107	37	400	60	127	352	100
Number of Lanes	1	1	1	0	2	1	0	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay	151.2	35.7	261.4	27.7
HCM LOS	F	E	F	D

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	7%	100%	0%	0%	28%	0%	0%	100%	0%	0%
Vol Thru, %	80%	0%	100%	0%	72%	100%	0%	0%	100%	54%
Vol Right, %	12%	0%	0%	100%	0%	0%	100%	0%	0%	46%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	428	101	384	48	151	217	92	109	202	187
LT Vol	32	101	0	0	43	0	0	109	0	0
Through Vol	344	0	384	0	108	217	0	0	202	101
RT Vol	52	0	0	48	0	0	92	0	0	86
Lane Flow Rate	498	117	447	56	176	252	107	127	235	217
Geometry Grp	8	8	8	8	8	8	8	7	7	7
Degree of Util (X)	1.483	0.366	1.329	0.155	0.535	0.756	0.3	0.357	0.628	0.563
Departure Headway (Hd)	11.191	12.725	12.184	11.426	13.022	12.866	12.099	11.97	11.432	11.086
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	328	284	304	316	280	285	300	303	319	328
Service Time	8.891	10.425	9.884	9.126	10.722	10.566	9.799	9.67	9.132	8.786
HCM Lane V/C Ratio	1.518	0.412	1.47	0.177	0.629	0.884	0.357	0.419	0.737	0.662
HCM Control Delay	261.4	22.6	201.9	16.2	29.8	46.6	19.9	21.2	31.6	27.2
HCM Lane LOS	F	C	F	C	D	E	C	C	D	D
HCM 95th-tile Q	26.2	1.6	19.6	0.5	2.9	5.6	1.2	1.6	4	3.3

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52

EAC (2021) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	101	384	48	43	325	92	32	344	52	109	303	86
Future Volume (vph)	101	384	48	43	325	92	32	344	52	109	303	86
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	2	2	2	6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	29.0	29.0	29.0	29.0	29.0	29.0	31.0	31.0		31.0	31.0	
Total Split (%)	48.3%	48.3%	48.3%	48.3%	48.3%	48.3%	51.7%	51.7%		51.7%	51.7%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5		4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max		Max	Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

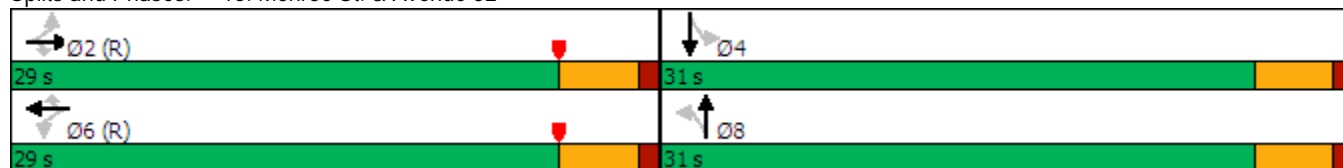
Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 45

Control Type: Actuated-Coordinated























Splits and Phases: 15: Monroe St. & Avenue 52



HCM 6th Signalized Intersection Summary

























15: Monroe St. & Avenue 52

EAC (2021) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	384	48	43	325	92	32	344	52	109	303	86
Future Volume (veh/h)	101	384	48	43	325	92	32	344	52	109	303	86
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	119	452	56	51	382	108	38	405	61	128	356	101
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	424	744	630	310	1413	630	95	636	92	444	1179	330
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.44	0.44	0.44	0.44	0.44	0.44
Sat Flow, veh/h	906	1821	1543	891	3460	1543	69	1441	208	927	2670	747
Grp Volume(v), veh/h	119	452	56	51	382	108	504	0	0	128	229	228
Grp Sat Flow(s),veh/h/ln	906	1821	1543	891	1730	1543	1718	0	0	927	1730	1687
Q Serve(g_s), s	6.0	11.7	1.3	2.9	4.4	2.7	1.4	0.0	0.0	0.0	5.1	5.2
Cycle Q Clear(g_c), s	10.4	11.7	1.3	14.6	4.4	2.7	13.3	0.0	0.0	10.3	5.1	5.2
Prop In Lane	1.00		1.00	1.00		1.00	0.08		0.12	1.00		0.44
Lane Grp Cap(c), veh/h	424	744	630	310	1413	630	823	0	0	444	764	745
V/C Ratio(X)	0.28	0.61	0.09	0.16	0.27	0.17	0.61	0.00	0.00	0.29	0.30	0.31
Avail Cap(c_a), veh/h	424	744	630	310	1413	630	823	0	0	444	764	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.3	14.0	10.9	19.7	11.8	11.3	13.0	0.0	0.0	12.2	10.8	10.8
Incr Delay (d2), s/veh	1.7	3.7	0.3	1.1	0.5	0.6	3.4	0.0	0.0	1.6	1.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	4.3	0.4	0.6	1.3	0.8	4.6	0.0	0.0	1.1	1.7	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.9	17.6	11.2	20.8	12.3	11.9	16.4	0.0	0.0	13.9	11.8	11.9
LnGrp LOS	B	B	B	C	B	B	B	A	A	B	B	B
Approach Vol, veh/h	627			541			504			585		
Approach Delay, s/veh	16.9			13.0			16.4			12.3		
Approach LOS	B			B			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	29.0			31.0			29.0			31.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	24.5			26.5			24.5			26.5		
Max Q Clear Time (g_c+I1), s	13.7			12.3			16.6			15.3		
Green Ext Time (p_c), s	2.4			2.6			1.7			2.2		
Intersection Summary												
HCM 6th Ctrl Delay	14.7											
HCM 6th LOS	B											

Lanes, Volumes, Timings
16: Monroe St. & 50th Avenue

EAC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	415	37	14	307	125	30	519	56	130	392	42
Future Volume (vph)	60	415	37	14	307	125	30	519	56	130	392	42
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	20.5	20.5	20.5	20.5	20.5	11.5	11.5	20.5		11.5	20.5	
Total Split (s)	26.0	26.0	26.0	26.0	26.0	12.4	11.5	21.6		12.4	22.5	
Total Split (%)	43.3%	43.3%	43.3%	43.3%	43.3%	20.7%	19.2%	36.0%		20.7%	37.5%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag						Lead	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

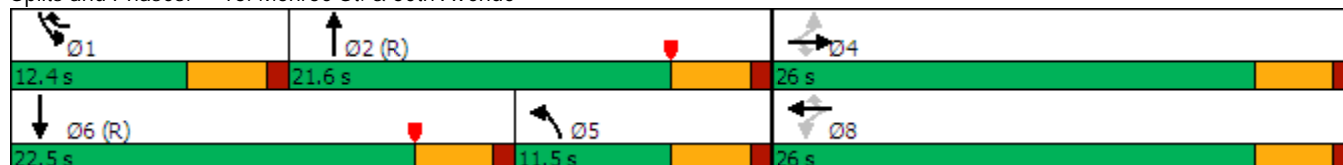
Actuated Cycle Length: 60

Offset: 14.6 (24%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

























Control Type: Actuated-Coordinated

Splits and Phases: 16: Monroe St. & 50th Avenue



















HCM 6th Signalized Intersection Summary
16: Monroe St. & 50th Avenue

EAC (2021) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	415	37	14	307	125	30	519	56	130	392	42
Future Volume (veh/h)	60	415	37	14	307	125	30	519	56	130	392	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	67	461	41	16	341	139	33	577	62	144	436	47
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	257	563	477	187	563	653	317	1187	127	198	972	104
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.18	0.38	0.37	0.11	0.31	0.30
Sat Flow, veh/h	915	1821	1543	896	1821	1543	1734	3152	338	1734	3152	338
Grp Volume(v), veh/h	67	461	41	16	341	139	33	316	323	144	238	245
Grp Sat Flow(s),veh/h/ln	915	1821	1543	896	1821	1543	1734	1730	1760	1734	1730	1760
Q Serve(g_s), s	4.0	14.1	1.1	1.0	9.6	3.4	1.0	8.4	8.4	4.8	6.6	6.7
Cycle Q Clear(g_c), s	13.6	14.1	1.1	15.1	9.6	3.4	1.0	8.4	8.4	4.8	6.6	6.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		0.19
Lane Grp Cap(c), veh/h	257	563	477	187	563	653	317	652	663	198	533	543
V/C Ratio(X)	0.26	0.82	0.09	0.09	0.61	0.21	0.10	0.49	0.49	0.73	0.45	0.45
Avail Cap(c_a), veh/h	310	668	566	239	668	742	317	652	663	243	533	543
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.4	19.2	14.7	26.2	17.6	11.0	20.4	14.3	14.3	25.7	16.6	16.7
Incr Delay (d2), s/veh	0.5	6.9	0.1	0.2	1.1	0.2	0.1	2.6	2.5	8.1	2.7	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	5.8	0.3	0.2	3.4	0.9	0.3	3.0	3.1	2.2	2.5	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.9	26.1	14.8	26.3	18.8	11.1	20.6	16.8	16.9	33.8	19.3	19.4
LnGrp LOS	C	C	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h	569			496			672			627		
Approach Delay, s/veh	25.0			16.9			17.0			22.7		
Approach LOS	C			B			B			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.9	26.6		22.5	15.0	22.5		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.9	17.1		21.5	7.0	18.0		21.5				
Max Q Clear Time (g_c+I1), s	6.8	10.4		16.1	3.0	8.7		17.1				
Green Ext Time (p_c), s	0.0	1.9		1.5	0.0	1.7		1.0				
Intersection Summary												
HCM 6th Ctrl Delay				20.4								
HCM 6th LOS				C								

Lanes, Volumes, Timings
17: Jackson St. & 58th Avenue

EAC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	110	7	0	65	8	10	149	14	5	136	13
Future Volume (vph)	29	110	7	0	65	8	10	149	14	5	136	13
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		5266			1079			1013			510	
Travel Time (s)		71.8			14.7			12.6			6.3	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	29	110	7	0	65	8	10	149	14	5	136	13
Future Vol, veh/h	29	110	7	0	65	8	10	149	14	5	136	13
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	37	139	9	0	82	10	13	189	18	6	172	16
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.9	9	10	9.7
HCM LOS	A	A	A	A

























Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	20%	0%	3%
Vol Thru, %	86%	75%	89%	88%
Vol Right, %	8%	5%	11%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	173	146	73	154
LT Vol	10	29	0	5
Through Vol	149	110	65	136
RT Vol	14	7	8	13
Lane Flow Rate	219	185	92	195
Geometry Grp	1	1	1	1
Degree of Util (X)	0.295	0.26	0.131	0.263
Departure Headway (Hd)	4.843	5.059	5.118	4.866
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	736	704	693	731
Service Time	2.912	3.136	3.207	2.938
HCM Lane V/C Ratio	0.298	0.263	0.133	0.267
HCM Control Delay	10	9.9	9	9.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.2	1	0.4	1.1

WITH PROJECT CONDITIONS

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Lanes, Volumes, Timings
1: Madison St. & Avenue 58

EAPC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	113	66	7	14	63	60	17	261	21	73	210	73
Future Volume (vph)	113	66	7	14	63	60	17	261	21	73	210	73
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	11.4
Intersection LOS	B















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↑		↰	↑↑		↰	↑↑	
Traffic Vol, veh/h	113	66	7	14	63	60	17	261	21	73	210	73
Future Vol, veh/h	113	66	7	14	63	60	17	261	21	73	210	73
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	120	70	7	15	67	64	18	278	22	78	223	78
Number of Lanes	1	1	1	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	11.8	10.6	11.9	11.2
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	81%	0%	100%	0%	0%	100%	26%	0%	100%
Vol Right, %	0%	0%	19%	0%	0%	100%	0%	0%	74%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	17	174	108	113	66	7	14	42	81	73	140
LT Vol	17	0	0	113	0	0	14	0	0	73	0
Through Vol	0	174	87	0	66	0	0	42	21	0	140
RT Vol	0	0	21	0	0	7	0	0	60	0	0
Lane Flow Rate	18	185	115	120	70	7	15	45	86	78	149
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.035	0.338	0.205	0.248	0.135	0.013	0.031	0.088	0.157	0.15	0.267
Departure Headway (Hd)	7.064	6.564	6.428	7.416	6.916	6.216	7.572	7.072	6.553	6.961	6.461
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	505	546	556	482	516	573	471	504	545	513	554
Service Time	4.83	4.33	4.194	5.187	4.687	3.987	5.35	4.85	4.331	4.727	4.227
HCM Lane V/C Ratio	0.036	0.339	0.207	0.249	0.136	0.012	0.032	0.089	0.158	0.152	0.269
HCM Control Delay	10.1	12.7	10.9	12.6	10.8	9.1	10.6	10.5	10.6	11	11.6
HCM Lane LOS	B	B	B	B	B	A	B	B	B	B	B
HCM 95th-tile Q	0.1	1.5	0.8	1	0.5	0	0.1	0.3	0.6	0.5	1.1

Lanes, Volumes, Timings
2: Madison St. & Airport Bl.

EAPC (2021) AM Peak hour

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	36	66	1	389	34	87	332
Future Volume (vph)	36	66	1	389	34	87	332
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		3			2		
Detector Phase	3	3	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	11.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	16.0	16.0	13.0	28.0	28.0	16.0	31.0
Total Split (%)	26.7%	26.7%	21.7%	46.7%	46.7%	26.7%	51.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 45















Control Type: Actuated-Coordinated

Splits and Phases: 2: Madison St. & Airport Bl.






























HCM 6th Signalized Intersection Summary 2: Madison St. & Airport Bl.

EAPC (2021) AM Peak hour

							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	36	66	1	389	34	87	332
Future Volume (veh/h)	36	66	1	389	34	87	332
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	41	76		447	39	100	382
Peak Hour Factor	0.87	0.87		0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	188	167		2037	908	179	2624
Arrive On Green	0.11	0.11		0.59	0.59	0.10	0.76
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	41	76		447	39	100	382
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	1.3	2.8		3.7	0.6	3.3	1.8
Cycle Q Clear(g_c), s	1.3	2.8		3.7	0.6	3.3	1.8
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	188	167		2037	908	179	2624
V/C Ratio(X)	0.22	0.45		0.22	0.04	0.56	0.15
Avail Cap(c_a), veh/h	347	309		2037	908	347	2624
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.4	25.1		5.8	5.2	25.6	2.0
Incr Delay (d2), s/veh	0.6	1.9		0.2	0.1	2.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.0		0.9	0.1	1.3	0.1
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	25.0	27.0		6.1	5.3	28.4	2.1
LnGrp LOS	C	C		A	A	C	A
Approach Vol, veh/h	117			486			482
Approach Delay, s/veh	26.3			6.0			7.5
Approach LOS	C			A			A
Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	10.2	39.3				49.5	10.5
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	11.5	23.5				26.5	11.5
Max Q Clear Time (g_c+I1), s	5.3	5.7				3.8	4.8
Green Ext Time (p_c), s	0.1	2.5				2.1	0.1
Intersection Summary							
HCM 6th Ctrl Delay			8.9				
HCM 6th LOS			A				
Notes							
User approved pedestrian interval to be less than phase max green.							
User approved ignoring U-Turning movement.							

Lanes, Volumes, Timings
3: Madison St. & Avenue 54









EAPC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 			 	
Traffic Volume (vph)	11	168	272	33	157	38	251	260	27	49	189	14
Future Volume (vph)	11	168	272	33	157	38	251	260	27	49	189	14
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 22.6

Intersection LOS C
























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	168	272	33	157	38	251	260	27	49	189	14
Future Vol, veh/h	11	168	272	33	157	38	251	260	27	49	189	14
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	189	306	37	176	43	282	292	30	55	212	16
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	30.9	15	22.1	15.4
HCM LOS	D	B	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	76%	0%	100%	17%	0%	100%	58%	0%	100%	82%
Vol Right, %	0%	0%	24%	0%	0%	83%	0%	0%	42%	0%	0%	18%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	251	173	114	11	112	328	33	105	90	49	126	77
LT Vol	251	0	0	11	0	0	33	0	0	49	0	0
Through Vol	0	173	87	0	112	56	0	105	52	0	126	63
RT Vol	0	0	27	0	0	272	0	0	38	0	0	14
Lane Flow Rate	282	195	128	12	126	369	37	118	101	55	142	87
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.688	0.448	0.288	0.031	0.298	0.813	0.099	0.299	0.25	0.146	0.356	0.214
Departure Headway (Hd)	8.783	8.283	8.117	9.021	8.521	7.941	9.647	9.147	8.852	9.552	9.052	8.924
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	412	436	444	398	423	457	372	393	406	375	398	402
Service Time	6.504	6.004	5.838	6.742	6.242	5.661	7.399	6.899	6.605	7.306	6.806	6.679
HCM Lane V/C Ratio	0.684	0.447	0.288	0.03	0.298	0.807	0.099	0.3	0.249	0.147	0.357	0.216
HCM Control Delay	28.8	17.6	14.1	12	14.8	37	13.5	15.8	14.5	13.9	16.8	14.1
HCM Lane LOS	D	C	B	B	B	E	B	C	B	B	C	B
HCM 95th-tile Q	5	2.3	1.2	0.1	1.2	7.6	0.3	1.2	1	0.5	1.6	0.8

Lanes, Volumes, Timings
3: Madison St. & Avenue 54

EAPC (2021) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	168	272	33	157	38	251	260	27	49	189	14
Future Volume (vph)	11	168	272	33	157	38	251	260	27	49	189	14
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2			6		6			8			
Detector Phase	2	2		6	6	6	3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	
Minimum Split (s)	30.5	30.5		30.5	30.5	30.5	9.0	30.5	30.5	9.0	30.5	
Total Split (s)	50.0	50.0		50.0	50.0	50.0	32.0	49.0	49.0	21.0	38.0	
Total Split (%)	41.7%	41.7%		41.7%	41.7%	41.7%	26.7%	40.8%	40.8%	17.5%	31.7%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.0	3.5	3.5	3.0	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.0	4.5	4.5	4.0	4.5	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None	Max	Max	None	Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

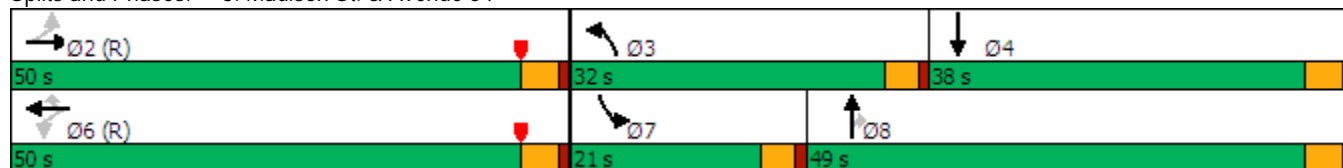
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated























Splits and Phases: 3: Madison St. & Avenue 54



HCM 6th Signalized Intersection Summary

























3: Madison St. & Avenue 54

EAPC (2021) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	168	272	33	157	38	251	260	27	49	189	14
Future Volume (veh/h)	11	168	272	33	157	38	251	260	27	49	189	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	12	189	306	37	176	43	282	292	30	55	212	16
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	585	829	740	376	1659	740	379	1283	572	72	977	73
Arrive On Green	0.48	0.48	0.48	0.48	0.48	0.48	0.11	0.37	0.37	0.04	0.30	0.30
Sat Flow, veh/h	1162	1730	1543	902	3460	1543	3365	3460	1543	1734	3263	244
Grp Volume(v), veh/h	12	189	306	37	176	43	282	292	30	55	112	116
Grp Sat Flow(s),veh/h/ln	1162	1730	1543	902	1730	1543	1682	1730	1543	1734	1730	1777
Q Serve(g_s), s	0.7	7.7	15.4	3.3	3.3	1.8	9.7	7.0	1.5	3.8	5.8	5.9
Cycle Q Clear(g_c), s	4.0	7.7	15.4	18.8	3.3	1.8	9.7	7.0	1.5	3.8	5.8	5.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	585	829	740	376	1659	740	379	1283	572	72	518	532
V/C Ratio(X)	0.02	0.23	0.41	0.10	0.11	0.06	0.74	0.23	0.05	0.77	0.22	0.22
Avail Cap(c_a), veh/h	585	829	740	376	1659	740	785	1283	572	246	518	532
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.2	18.3	20.3	26.4	17.1	16.7	51.6	25.9	24.2	56.9	31.5	31.5
Incr Delay (d2), s/veh	0.1	0.6	1.5	0.5	0.1	0.2	6.0	0.4	0.2	29.7	1.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.0	5.4	0.7	1.3	0.6	4.3	2.8	0.6	2.2	2.5	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.3	18.8	21.8	26.9	17.3	16.9	57.6	26.4	24.4	86.6	32.4	32.5
LnGrp LOS	B	B	C	C	B	B	E	C	C	F	C	C
Approach Vol, veh/h	507			256			604			283		
Approach Delay, s/veh	20.6			18.6			40.8			43.0		
Approach LOS	C			B			D			D		
Timer - Assigned Phs	2		3	4		6		7	8			
Phs Duration (G+Y+Rc), s	62.0		17.5	40.4		62.0		9.0	49.0			
Change Period (Y+Rc), s	4.5		4.0	4.5		4.5		4.0	4.5			
Max Green Setting (Gmax), s	45.5		28.0	33.5		45.5		17.0	44.5			
Max Q Clear Time (g_c+I1), s	17.4		11.7	7.9		20.8		5.8	9.0			
Green Ext Time (p_c), s	2.8		1.8	1.1		1.2		0.1	1.8			
Intersection Summary												
HCM 6th Ctrl Delay	31.5											
HCM 6th LOS	C											

Lanes, Volumes, Timings
4: Madison St. & Avenue 52

EAPC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	391	51	24	350	57	119	196	17	44	170	51
Future Volume (vph)	66	391	51	24	350	57	119	196	17	44	170	51
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	23.0	50.0	50.0	15.0	42.0	42.0	20.0	40.0	40.0	15.0	35.0	35.0
Total Split (%)	19.2%	41.7%	41.7%	12.5%	35.0%	35.0%	16.7%	33.3%	33.3%	12.5%	29.2%	29.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

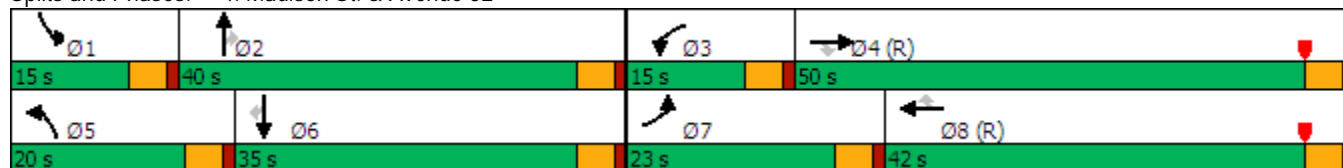
Actuated Cycle Length: 120

Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 4: Madison St. & Avenue 52
















HCM 6th Signalized Intersection Summary 4: Madison St. & Avenue 52

EAPC (2021) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	391	51	24	350	57	119	196	17	44	170	51
Future Volume (veh/h)	66	391	51	24	350	57	119	196	17	44	170	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	76	449	59	28	402	66	137	225	20	51	195	59
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	97	1630	727	61	1559	695	195	1024	457	160	988	441
Arrive On Green	0.06	0.47	0.47	0.04	0.45	0.45	0.06	0.30	0.30	0.05	0.29	0.29
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	76	449	59	28	402	66	137	225	20	51	195	59
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	5.2	9.5	2.5	1.9	8.7	2.9	4.8	5.9	1.1	1.8	5.1	3.4
Cycle Q Clear(g_c), s	5.2	9.5	2.5	1.9	8.7	2.9	4.8	5.9	1.1	1.8	5.1	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	97	1630	727	61	1559	695	195	1024	457	160	988	441
V/C Ratio(X)	0.78	0.28	0.08	0.46	0.26	0.09	0.70	0.22	0.04	0.32	0.20	0.13
Avail Cap(c_a), veh/h	267	1630	727	152	1559	695	435	1024	457	294	988	441
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.9	19.3	17.5	56.7	20.5	18.9	55.5	31.8	30.1	55.3	32.5	31.8
Incr Delay (d2), s/veh	12.8	0.4	0.2	5.2	0.4	0.3	4.6	0.5	0.2	1.1	0.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	3.7	0.9	0.9	3.3	1.0	2.1	2.4	0.4	0.7	2.1	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.7	19.7	17.7	61.9	20.9	19.2	60.1	32.3	30.3	56.4	32.9	32.5
LnGrp LOS	E	B	B	E	C	B	E	C	C	E	C	C
Approach Vol, veh/h	584			496			382			305		
Approach Delay, s/veh	25.9			23.0			42.2			36.7		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.2	40.0	8.7	61.0	11.5	38.8	11.2	58.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	35.5	10.5	45.5	15.5	30.5	18.5	37.5				
Max Q Clear Time (g_c+I1), s	3.8	7.9	3.9	11.5	6.8	7.1	7.2	10.7				
Green Ext Time (p_c), s	0.0	1.3	0.0	3.1	0.2	1.2	0.1	2.5				
Intersection Summary												
HCM 6th Ctrl Delay	30.5											
HCM 6th LOS	C											

Lanes, Volumes, Timings
5: Madison St. & Avenue 50/50th Avenue

EAPC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	317	58	32	310	21	85	208	45	30	197	90
Future Volume (vph)	63	317	58	32	310	21	85	208	45	30	197	90
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	22.0	48.0	48.0	17.0	43.0	43.0	18.0	40.0	40.0	15.0	37.0	37.0
Total Split (%)	18.3%	40.0%	40.0%	14.2%	35.8%	35.8%	15.0%	33.3%	33.3%	12.5%	30.8%	30.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

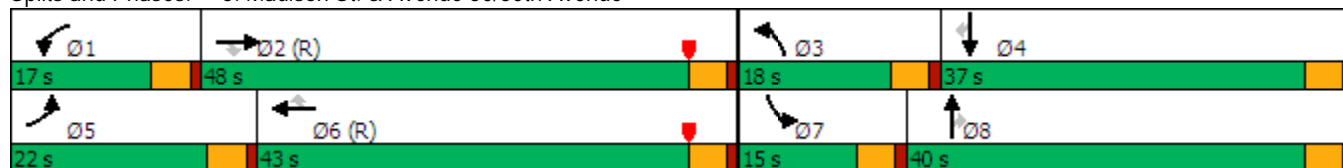
Actuated Cycle Length: 120

Offset: 64.5 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue




























HCM 6th Signalized Intersection Summary 5: Madison St. & Avenue 50/50th Avenue

EAPC (2021) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	317	58	32	310	21	85	208	45	30	197	90
Future Volume (veh/h)	63	317	58	32	310	21	85	208	45	30	197	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	64	323	59	33	316	21	87	212	46	31	201	92
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	1653	737	67	1610	718	185	1024	457	126	963	429
Arrive On Green	0.05	0.48	0.48	0.04	0.47	0.47	0.06	0.30	0.30	0.04	0.28	0.28
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	64	323	59	33	316	21	87	212	46	31	201	92
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	4.4	6.5	2.5	2.2	6.5	0.9	3.0	5.5	2.6	1.1	5.3	5.5
Cycle Q Clear(g_c), s	4.4	6.5	2.5	2.2	6.5	0.9	3.0	5.5	2.6	1.1	5.3	5.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	89	1653	737	67	1610	718	185	1024	457	126	963	429
V/C Ratio(X)	0.72	0.20	0.08	0.49	0.20	0.03	0.47	0.21	0.10	0.25	0.21	0.21
Avail Cap(c_a), veh/h	253	1653	737	181	1610	718	379	1024	457	294	963	429
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.1	18.1	17.0	56.5	18.9	17.4	55.0	31.7	30.7	56.1	33.2	33.2
Incr Delay (d2), s/veh	10.3	0.3	0.2	5.4	0.3	0.1	1.8	0.5	0.4	1.0	0.5	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	2.5	0.9	1.1	2.5	0.3	1.3	2.3	1.0	0.5	2.2	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.3	18.3	17.2	61.9	19.2	17.5	56.8	32.2	31.1	57.1	33.7	34.4
LnGrp LOS	E	B	B	E	B	B	E	C	C	E	C	C
Approach Vol, veh/h	446			370			345			324		
Approach Delay, s/veh	25.1			22.9			38.2			36.1		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	61.8	11.1	37.9	10.7	60.3	9.0	40.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	12.5	43.5	13.5	32.5	17.5	38.5	10.5	35.5				
Max Q Clear Time (g_c+I1), s	4.2	8.5	5.0	7.5	6.4	8.5	3.1	7.5				
Green Ext Time (p_c), s	0.0	2.2	0.1	1.4	0.1	1.9	0.0	1.3				
Intersection Summary												
HCM 6th Ctrl Delay	30.0											
HCM 6th LOS	C											

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54









EAPC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 		 	 	
Traffic Volume (vph)	8	10	13	43	7	346	5	250	30	400	192	27
Future Volume (vph)	8	10	13	43	7	346	5	250	30	400	192	27
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh19.3

Intersection LOS C






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	10	13	43	7	346	5	250	30	400	192	27
Future Vol, veh/h	8	10	13	43	7	346	5	250	30	400	192	27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	11	14	48	8	384	6	278	33	444	213	30
Number of Lanes	1	2	0	1	1	1	0	2	0	2	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	12	26.9	14.7	17
HCM LOS	B	D	B	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	4%	0%	100%	0%	0%	100%	0%	0%	100%	100%	0%
Vol Thru, %	96%	81%	0%	100%	20%	0%	100%	0%	0%	0%	88%
Vol Right, %	0%	19%	0%	0%	80%	0%	0%	100%	0%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	130	155	8	7	16	43	7	346	200	200	219
LT Vol	5	0	8	0	0	43	0	0	200	200	0
Through Vol	125	125	0	7	3	0	7	0	0	0	192
RT Vol	0	30	0	0	13	0	0	346	0	0	27
Lane Flow Rate	144	172	9	7	18	48	8	384	222	222	243
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.317	0.371	0.024	0.019	0.043	0.111	0.017	0.76	0.477	0.477	0.483
Departure Headway (Hd)	7.912	7.757	9.666	9.153	8.58	8.336	7.828	7.118	7.734	7.734	7.145
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	454	463	370	390	416	430	457	507	467	467	504
Service Time	5.669	5.514	7.444	6.929	6.357	6.085	5.577	4.867	5.485	5.485	4.896
HCM Lane V/C Ratio	0.317	0.371	0.024	0.018	0.043	0.112	0.018	0.757	0.475	0.475	0.482
HCM Control Delay	14.3	15.1	12.7	12.1	11.7	12.1	10.7	29.1	17.4	17.4	16.4
HCM Lane LOS	B	C	B	B	B	B	B	D	C	C	C
HCM 95th-tile Q	1.3	1.7	0.1	0.1	0.1	0.4	0.1	6.6	2.5	2.5	2.6

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54

EAPC (2021) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	10	13	43	7	346	5	250	30	400	192	27
Future Volume (vph)	8	10	13	43	7	346	5	250	30	400	192	27
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases		2			6		8	8		4	4	
Permitted Phases	2			6		6						4
Detector Phase	2	2		6	6	6	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	30.5	30.5		30.5	30.5	30.5	30.5	30.5		30.5	30.5	30.5
Total Split (s)	49.0	49.0		49.0	49.0	49.0	34.0	34.0		37.0	37.0	37.0
Total Split (%)	40.8%	40.8%		40.8%	40.8%	40.8%	28.3%	28.3%		30.8%	30.8%	30.8%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		None	None	None	Max	Max		Max	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

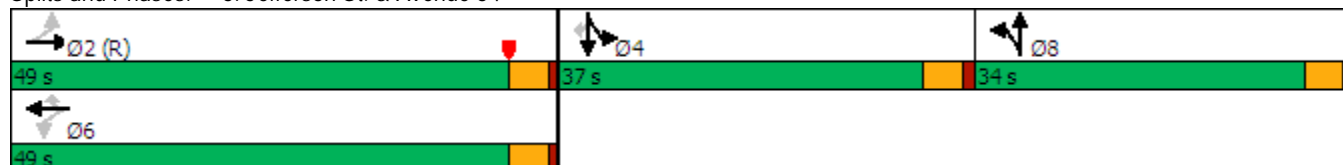
Actuated Cycle Length: 120

Offset: 84.5 (70%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 95






















Control Type: Actuated-Coordinated

Splits and Phases: 6: Jefferson St. & Avenue 54























HCM 6th Signalized Intersection Summary 6: Jefferson St. & Avenue 54

EAPC (2021) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	10	13	43	7	346	5	250	30	400	192	27
Future Volume (veh/h)	8	10	13	43	7	346	5	250	30	400	192	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	9	11	14	48	8	384	6	278	33	444	213	30
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	425	642	572	566	675	572	16	766	95	911	937	418
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.25	0.25	0.25	0.27	0.27	0.27
Sat Flow, veh/h	992	1730	1543	1386	1821	1543	65	3117	387	3365	3460	1543
Grp Volume(v), veh/h	9	11	14	48	8	384	168	0	149	444	213	30
Grp Sat Flow(s),veh/h/ln	992	1730	1543	1386	1821	1543	1818	0	1752	1682	1730	1543
Q Serve(g_s), s	0.7	0.5	0.7	2.7	0.3	25.0	9.2	0.0	8.4	13.3	5.7	1.7
Cycle Q Clear(g_c), s	1.0	0.5	0.7	3.4	0.3	25.0	9.2	0.0	8.4	13.3	5.7	1.7
Prop In Lane	1.00		1.00	1.00		1.00	0.04		0.22	1.00		1.00
Lane Grp Cap(c), veh/h	425	642	572	566	675	572	447	0	431	911	937	418
V/C Ratio(X)	0.02	0.02	0.02	0.08	0.01	0.67	0.38	0.00	0.35	0.49	0.23	0.07
Avail Cap(c_a), veh/h	425	642	572	566	675	572	447	0	431	911	937	418
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.91	0.91	0.91	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.2	23.9	24.0	25.1	23.9	31.6	37.6	0.0	37.3	36.8	34.0	32.5
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.1	0.0	2.8	2.4	0.0	2.2	1.9	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.3	0.9	0.1	9.1	4.2	0.0	3.7	5.4	2.4	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.3	24.0	24.0	25.1	23.9	34.4	40.0	0.0	39.5	38.6	34.6	32.9
LnGrp LOS	C	C	C	C	C	C	D	A	D	D	C	C
Approach Vol, veh/h	34			440			317			687		
Approach Delay, s/veh	24.1			33.2			39.8			37.1		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	49.0			37.0			49.0			34.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	44.5			32.5			44.5			29.5		
Max Q Clear Time (g_c+I1), s	3.0			15.3			27.0			11.2		
Green Ext Time (p_c), s	0.1			2.6			1.3			1.4		
Intersection Summary												
HCM 6th Ctrl Delay	36.2											
HCM 6th LOS	D											

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EAPC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	354	251	10	349	291	230	480	30	169	430	77
Future Volume (vph)	121	354	251	10	349	291	230	480	30	169	430	77
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											





















HCM 6th Roundabout
7: Jefferson St. & Avenue 52

EAPC (2021) AM Peak hour

Intersection									
Intersection Delay, s/veh	44.3								
Intersection LOS	E								
Approach	EB		WB		NB		SB		
Entry Lanes	1		1		1		1		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	781		699		795		727		
Demand Flow Rate, veh/h	797		712		811		742		
Vehicles Circulating, veh/h	668		911		708		645		
Vehicles Exiting, veh/h	634		575		482		659		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	15.0		14.3		106.7		36.4		
Approach LOS	B		B		F		E		
Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Bypass	
Designated Moves	LT	R	LT	R	LT	R	LT	R	
Assumed Moves	LT	R	LT	R	LT	R	LT	R	
RT Channelized		Free		Free		Free		Free	
Lane Util	1.000		1.000		1.000		1.000		
Follow-Up Headway, s	2.609		2.609		2.609		2.609		
Critical Headway, s	4.976	275	4.976	319	4.976	33	4.976	85	
Entry Flow, veh/h	522	1887	393	1887	778	1887	657	1887	
Cap Entry Lane, veh/h	698	0.980	545	0.980	670	0.980	715	0.980	
Entry HV Adj Factor	0.980	270	0.981	313	0.980	32	0.980	83	
Flow Entry, veh/h	511	1850	386	1850	763	1850	644	1850	
Cap Entry, veh/h	684	0.146	535	0.169	657	0.017	700	0.045	
V/C Ratio	0.748	0.0	0.721	0.0	1.161	0.0	0.919	0.0	
Control Delay, s/veh	22.9	A	25.8	A	111.2	A	41.1	A	
LOS	C	1	D	1	F	0	E	0	
95th %tile Queue, veh	7		6		25		12		

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EAPC (2021) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	354	251	10	349	291	230	480	30	169	430	77
Future Volume (vph)	121	354	251	10	349	291	230	480	30	169	430	77
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		100	0		100	0		0	0		0
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	60			60			60			60		
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											

























HCM 6th Roundabout
7: Jefferson St. & Avenue 52

EAPC (2021) AM Peak hour
With Improvements

Intersection										
Intersection Delay, s/veh	10.3									
Intersection LOS	B									
Approach	EB		WB		NB		SB			
Entry Lanes	1		1		2		2			
Conflicting Circle Lanes	2		2		2		2			
Adj Approach Flow, veh/h	781		699		795		727			
Demand Flow Rate, veh/h	797		712		811		742			
Vehicles Circulating, veh/h	668		911		708		645			
Vehicles Exiting, veh/h	634		575		482		659			
Ped Vol Crossing Leg, #/h	0		0		0		0			
Ped Cap Adj	1.000		1.000		1.000		1.000			
Approach Delay, s/veh	10.4		9.2		12.4		9.0			
Approach LOS	B		A		B		A			
Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
Assumed Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
RT Channelized		Free		Free			Free			Free
Lane Util	1.000		1.000		0.470	0.530		0.470	0.530	
Follow-Up Headway, s	2.535		2.535		2.667	2.535		2.667	2.535	
Critical Headway, s	4.328	275	4.328	319	4.645	4.328	33	4.645	4.328	85
Entry Flow, veh/h	522	1887	393	1887	366	412	1887	309	348	1887
Cap Entry Lane, veh/h	805	0.980	655	0.980	704	778	0.980	746	821	0.980
Entry HV Adj Factor	0.980	270	0.981	313	0.979	0.981	32	0.979	0.980	83
Flow Entry, veh/h	511	1850	386	1850	358	404	1850	303	341	1850
Cap Entry, veh/h	788	0.146	642	0.169	689	763	0.017	730	805	0.045
V/C Ratio	0.649	0.0	0.600	0.0	0.520	0.530	0.0	0.414	0.424	0.0
Control Delay, s/veh	15.8	A	16.7	A	13.3	12.5	A	10.4	9.8	A
LOS	C	1	C	1	B	B	0	B	A	0
95th %tile Queue, veh	5		4		3	3		2	2	

Lanes, Volumes, Timings
8: Jefferson St. & Pomelo

EAPC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (vph)	37	1	2	4	1	16	13	860	13	40	692	51
Future Volume (vph)	37	1	2	4	1	16	13	860	13	40	692	51
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	52.0		20.0	54.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	15.0%	43.3%		16.7%	45.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary

Area Type: Other

Cycle Length: 120

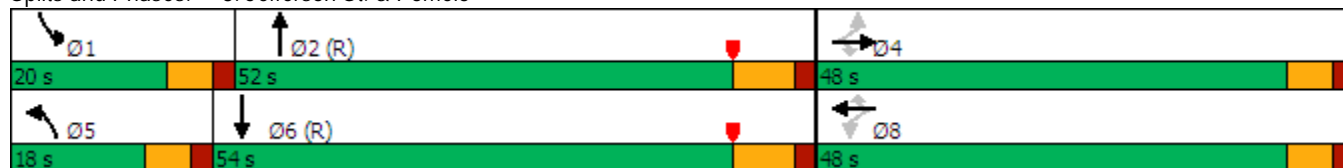
Actuated Cycle Length: 120

Offset: 90 (75%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110























Control Type: Actuated-Coordinated

Splits and Phases: 8: Jefferson St. & Pomelo



























HCM 6th Signalized Intersection Summary 8: Jefferson St. & Pomelo

EAPC (2021) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	1	2	4	1	16	13	860	13	40	692	51
Future Volume (veh/h)	37	1	2	4	1	16	13	860	13	40	692	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	40	1	2	4	1	17	14	925	14	43	744	55
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	62	1	199	55	8	199	65	3192	48	132	3173	233
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.04	0.63	0.63	0.15	1.00	1.00
Sat Flow, veh/h	24	6	1543	11	62	1543	1734	5046	76	1734	4725	348
Grp Volume(v), veh/h	41	0	2	5	0	17	14	607	332	43	521	278
Grp Sat Flow(s),veh/h/ln	30	0	1543	73	0	1543	1734	1657	1807	1734	1657	1759
Q Serve(g_s), s	0.3	0.0	0.1	0.1	0.0	1.2	0.9	9.9	9.9	2.7	0.0	0.0
Cycle Q Clear(g_c), s	15.4	0.0	0.1	15.3	0.0	1.2	0.9	9.9	9.9	2.7	0.0	0.0
Prop In Lane	0.98		1.00	0.80		1.00	1.00		0.04	1.00		0.20
Lane Grp Cap(c), veh/h	63	0	199	63	0	199	65	2097	1143	132	2226	1181
V/C Ratio(X)	0.65	0.00	0.01	0.08	0.00	0.09	0.22	0.29	0.29	0.33	0.23	0.24
Avail Cap(c_a), veh/h	374	0	540	391	0	540	173	2097	1143	202	2226	1181
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.81	0.81	0.81
Uniform Delay (d), s/veh	59.7	0.0	45.6	46.6	0.0	46.1	56.1	9.9	9.9	48.1	0.0	0.0
Incr Delay (d2), s/veh	21.5	0.0	0.0	1.1	0.0	0.4	3.5	0.3	0.6	2.4	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.1	0.2	0.0	0.5	0.5	3.2	3.5	1.2	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.2	0.0	45.7	47.7	0.0	46.5	59.6	10.3	10.6	50.6	0.2	0.4
LnGrp LOS	F	A	D	D	A	D	E	B	B	D	A	A
Approach Vol, veh/h	43		22				953				842	
Approach Delay, s/veh	79.5		46.7				11.1				2.8	
Approach LOS	E		D				B				A	
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	15.1	83.3	21.6		10.5	88.0	21.6					
Change Period (Y+Rc), s	6.0	7.5	6.0		6.0	7.5	6.0					
Max Green Setting (Gmax), s	14.0	44.5	42.0		12.0	46.5	42.0					
Max Q Clear Time (g_c+I1), s	4.7	11.9	17.4		2.9	2.0	17.3					
Green Ext Time (p_c), s	0.1	12.0	0.3		0.0	10.8	0.1					
Intersection Summary												
HCM 6th Ctrl Delay	9.4											
HCM 6th LOS	A											
Notes												

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

EAPC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	256	284	75	60	310	195	123	732	59	118	639	362
Future Volume (vph)	256	284	75	60	310	195	123	732	59	118	639	362
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	43.5	43.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	36.3%	36.3%	15.0%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120









Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 115

























Control Type: Actuated-Coordinated

Splits and Phases: 9: Jefferson St. & Avenue 50

			
Ø1	Ø2	Ø3	Ø4 (R)
18 s	40.5 s	18 s	43.5 s
			
Ø5	Ø6	Ø7	Ø8 (R)
18 s	40.5 s	23 s	38.5 s

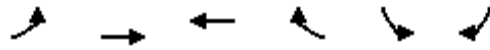
HCM 6th Signalized Intersection Summary
9: Jefferson St. & Avenue 50

EAPC (2021) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	256	284	75	60	310	195	123	732	59	118	639	362
Future Volume (veh/h)	256	284	75	60	310	195	123	732	59	118	639	362
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	261	290	77	61	316	199	126	747	60	120	652	369
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	1125	502	151	492	417	171	1316	409	330	1315	408
Arrive On Green	0.14	0.33	0.33	0.09	0.27	0.27	0.03	0.09	0.09	0.10	0.26	0.26
Sat Flow, veh/h	1734	3460	1543	1734	1821	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	261	290	77	61	316	199	126	747	60	120	652	369
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	17.0	7.4	4.3	4.0	18.4	13.0	8.6	17.3	4.3	4.0	13.3	27.7
Cycle Q Clear(g_c), s	17.0	7.4	4.3	4.0	18.4	13.0	8.6	17.3	4.3	4.0	13.3	27.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	1125	502	151	492	417	171	1316	409	330	1315	408
V/C Ratio(X)	1.06	0.26	0.15	0.40	0.64	0.48	0.74	0.57	0.15	0.36	0.50	0.90
Avail Cap(c_a), veh/h	246	1125	502	173	492	417	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	29.8	28.8	51.8	38.6	36.7	56.5	48.2	42.2	50.6	37.4	42.7
Incr Delay (d2), s/veh	74.8	0.6	0.6	0.6	6.3	3.9	12.9	0.6	0.2	0.2	0.4	22.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	3.0	1.6	1.7	8.8	5.2	4.4	7.7	1.7	1.6	5.2	12.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	126.3	30.4	29.4	52.5	44.9	40.5	69.4	48.8	42.5	50.9	37.8	65.1
LnGrp LOS	F	C	C	D	D	D	E	D	D	D	D	E
Approach Vol, veh/h		628			576			933			1141	
Approach Delay, s/veh		70.1			44.2			51.2			48.0	
Approach LOS		E			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.8	39.3	16.4	46.5	17.8	39.2	23.0	39.9				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	12.0	33.0	12.0	36.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	6.0	19.3	6.0	9.4	10.6	29.7	19.0	20.4				
Green Ext Time (p_c), s	0.1	5.2	0.0	3.8	0.0	2.0	0.0	3.3				
Intersection Summary												
HCM 6th Ctrl Delay			52.5									
HCM 6th LOS			D									

Lanes, Volumes, Timings
10: Avenue 60 & Madison St.

EAPC (2021) AM Peak hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	36	11	7	157	125	59
Future Volume (vph)	36	11	7	157	125	59
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		40	
Link Distance (ft)		1772	661		437	
Travel Time (s)		30.2	11.3		7.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)						
Sign Control		Stop	Stop		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Intersection Delay, s/veh	8.9
Intersection LOS	A





















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕	↕	↕	↕
Traffic Vol, veh/h	36	11	7	157	125	59
Future Vol, veh/h	36	11	7	157	125	59
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	13	8	189	151	71
Number of Lanes	0	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	8.8	8.6	9.3
HCM LOS	A	A	A









Lane	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	77%	0%	0%	100%	0%
Vol Thru, %	23%	100%	0%	0%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	47	7	157	125	59
LT Vol	36	0	0	125	0
Through Vol	11	7	0	0	0
RT Vol	0	0	157	0	59
Lane Flow Rate	57	8	189	151	71
Geometry Grp	4	7	7	7	7
Degree of Util (X)	0.083	0.012	0.235	0.235	0.087
Departure Headway (Hd)	5.29	5.183	4.479	5.628	4.424
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	678	692	804	639	810
Service Time	3.317	2.903	2.199	3.358	2.153
HCM Lane V/C Ratio	0.084	0.012	0.235	0.236	0.088
HCM Control Delay	8.8	8	8.6	10.1	7.6
HCM Lane LOS	A	A	A	B	A
HCM 95th-tile Q	0.3	0	0.9	0.9	0.3

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

EAPC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	45	87	4	54	155	96	63	2	71	62	28
Future Volume (vph)	18	45	87	4	54	155	96	63	2	71	62	28
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	45	87	4	54	155	96	63	2	71	62	28
Future Vol, veh/h	18	45	87	4	54	155	96	63	2	71	62	28
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	49	96	4	59	170	105	69	2	78	68	31
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	9.6	11.5	10.7	10
HCM LOS	A	B	B	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	29%	0%	2%	100%	0%	0%
Vol Thru, %	0%	97%	71%	0%	25%	0%	100%	0%
Vol Right, %	0%	3%	0%	100%	73%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	96	65	63	87	213	71	62	28
LT Vol	96	0	18	0	4	71	0	0
Through Vol	0	63	45	0	54	0	62	0
RT Vol	0	2	0	87	155	0	0	28
Lane Flow Rate	105	71	69	96	234	78	68	31
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.199	0.124	0.123	0.148	0.364	0.147	0.119	0.048
Departure Headway (Hd)	6.779	6.25	6.419	5.569	5.604	6.783	6.276	5.567
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	530	573	558	642	641	528	570	642
Service Time	4.524	3.994	4.167	3.317	3.348	4.529	4.022	3.313
HCM Lane V/C Ratio	0.198	0.124	0.124	0.15	0.365	0.148	0.119	0.048
HCM Control Delay	11.2	9.9	10.1	9.3	11.5	10.7	9.9	8.6
HCM Lane LOS	B	A	B	A	B	B	A	A
HCM 95th-tile Q	0.7	0.4	0.4	0.5	1.7	0.5	0.4	0.2






Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAPC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	62	49	7	53	30	39	210	8	18	140	38
Future Volume (vph)	41	62	49	7	53	30	39	210	8	18	140	38
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh	11
Intersection LOS	B






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	41	62	49	7	53	30	39	210	8	18	140	38
Future Vol, veh/h	41	62	49	7	53	30	39	210	8	18	140	38
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	74	58	8	63	36	46	250	10	21	167	45
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	10.5	9.6	12.3	10.4
HCM LOS	B	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	15%	27%	8%	11%	0%
Vol Thru, %	82%	41%	59%	89%	0%
Vol Right, %	3%	32%	33%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	257	152	90	158	38
LT Vol	39	41	7	18	0
Through Vol	210	62	53	140	0
RT Vol	8	49	30	0	38
Lane Flow Rate	306	181	107	188	45
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.443	0.272	0.164	0.302	0.063
Departure Headway (Hd)	5.214	5.404	5.499	5.775	5.009
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	691	664	651	623	715
Service Time	3.243	3.44	3.539	3.505	2.738
HCM Lane V/C Ratio	0.443	0.273	0.164	0.302	0.063
HCM Control Delay	12.3	10.5	9.6	11	8.1
HCM Lane LOS	B	B	A	B	A
HCM 95th-tile Q	2.3	1.1	0.6	1.3	0.2

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.









EAPC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	94	7	18	59	19	11	203	28	49	144	8
Future Volume (vph)	0	94	7	18	59	19	11	203	28	49	144	8
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 11.3

Intersection LOS B



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	94	7	18	59	19	11	203	28	49	144	8
Future Vol, veh/h	0	94	7	18	59	19	11	203	28	49	144	8
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	111	8	21	69	22	13	239	33	58	169	9
Number of Lanes	1	1	1	0	1	0	1	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	1	3
HCM Control Delay	10.3	10.8	13	10
HCM LOS	B	B	B	A







Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	0%	0%	19%	100%	0%	0%
Vol Thru, %	0%	88%	100%	100%	0%	61%	0%	100%	86%
Vol Right, %	0%	12%	0%	0%	100%	20%	0%	0%	14%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	11	231	0	94	7	96	49	96	56
LT Vol	11	0	0	0	0	18	49	0	0
Through Vol	0	203	0	94	0	59	0	96	48
RT Vol	0	28	0	0	7	19	0	0	8
Lane Flow Rate	13	272	0	111	8	113	58	113	66
Geometry Grp	8	8	7	7	7	8	8	8	8
Degree of Util (X)	0.023	0.442	0	0.19	0.013	0.201	0.105	0.19	0.109
Departure Headway (Hd)	6.444	5.853	6.184	6.184	5.478	6.412	6.566	6.061	5.96
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	556	614	0	581	653	559	546	592	602
Service Time	4.18	3.588	3.921	3.921	3.215	4.155	4.305	3.799	3.698
HCM Lane V/C Ratio	0.023	0.443	0	0.191	0.012	0.202	0.106	0.191	0.11
HCM Control Delay	9.3	13.2	8.9	10.4	8.3	10.8	10.1	10.2	9.4
HCM Lane LOS	A	B	N	B	A	B	B	B	A
HCM 95th-tile Q	0.1	2.3	0	0.7	0	0.7	0.3	0.7	0.4

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAPC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	135	20	21	226	52	33	252	7	51	207	88
Future Volume (vph)	28	135	20	21	226	52	33	252	7	51	207	88
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	33
Intersection LOS	D



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	135	20	21	226	52	33	252	7	51	207	88
Future Vol, veh/h	28	135	20	21	226	52	33	252	7	51	207	88
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	35	167	25	26	279	64	41	311	9	63	256	109
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	17.8	42.4	41.1	26
HCM LOS	C	E	E	D

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	11%	100%	0%	7%	20%	0%
Vol Thru, %	86%	0%	87%	76%	80%	0%
Vol Right, %	2%	0%	13%	17%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	292	28	155	299	258	88
LT Vol	33	28	0	21	51	0
Through Vol	252	0	135	226	207	0
RT Vol	7	0	20	52	0	88
Lane Flow Rate	360	35	191	369	319	109
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.831	0.089	0.461	0.844	0.731	0.224
Departure Headway (Hd)	8.301	9.278	8.664	8.227	8.26	7.434
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	436	385	413	439	436	480
Service Time	6.386	7.067	6.453	6.307	6.045	5.218
HCM Lane V/C Ratio	0.826	0.091	0.462	0.841	0.732	0.227
HCM Control Delay	41.1	13	18.7	42.4	30.6	12.4
HCM Lane LOS	E	B	C	E	D	B
HCM 95th-tile Q	7.9	0.3	2.4	8.2	5.8	0.9

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAPC (2021) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	135	20	21	226	52	33	252	7	51	207	88
Future Volume (vph)	28	135	20	21	226	52	33	252	7	51	207	88
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	30.5	30.5		30.5	30.5		30.5	30.5		30.5	30.5	30.5
Total Split (s)	58.0	58.0		58.0	58.0		62.0	62.0		62.0	62.0	62.0
Total Split (%)	48.3%	48.3%		48.3%	48.3%		51.7%	51.7%		51.7%	51.7%	51.7%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)	4.5	4.5			4.5			4.5			4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

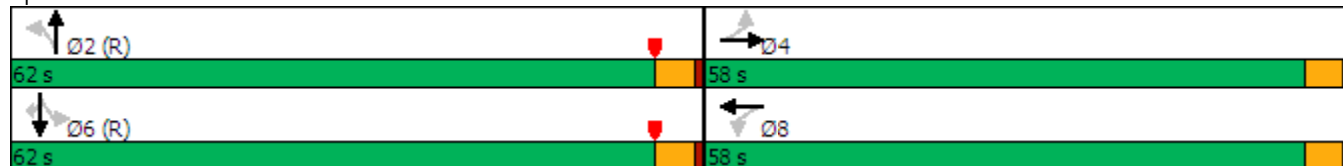
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 65



















Control Type: Actuated-Coordinated

Splits and Phases: 14: Monroe St. & Avenue 54

























HCM 6th Signalized Intersection Summary
14: Monroe St. & Avenue 54

EAPC (2021) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	135	20	21	226	52	33	252	7	51	207	88
Future Volume (veh/h)	28	135	20	21	226	52	33	252	7	51	207	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	35	167	25	26	279	64	41	311	9	63	256	109
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	161	370	55	50	324	72	139	1027	29	231	916	1059
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.69	0.69	0.69	0.69	0.69	0.69
Sat Flow, veh/h	1038	1548	232	74	1355	300	153	1497	42	284	1336	1543
Grp Volume(v), veh/h	35	0	192	369	0	0	361	0	0	319	0	109
Grp Sat Flow(s),veh/h/ln	1038	0	1779	1728	0	0	1692	0	0	1620	0	1543
Q Serve(g_s), s	0.0	0.0	11.0	13.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9
Cycle Q Clear(g_c), s	11.0	0.0	11.0	24.7	0.0	0.0	9.4	0.0	0.0	8.0	0.0	2.9
Prop In Lane	1.00		0.13	0.07		0.17	0.11		0.02	0.20		1.00
Lane Grp Cap(c), veh/h	161	0	425	445	0	0	1194	0	0	1147	0	1059
V/C Ratio(X)	0.22	0.00	0.45	0.83	0.00	0.00	0.30	0.00	0.00	0.28	0.00	0.10
Avail Cap(c_a), veh/h	376	0	793	798	0	0	1194	0	0	1147	0	1059
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.9	0.0	38.9	44.0	0.0	0.0	7.4	0.0	0.0	7.2	0.0	6.4
Incr Delay (d2), s/veh	0.7	0.0	0.8	4.0	0.0	0.0	0.7	0.0	0.0	0.6	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	4.7	10.5	0.0	0.0	3.2	0.0	0.0	2.8	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.6	0.0	39.7	48.1	0.0	0.0	8.0	0.0	0.0	7.8	0.0	6.6
LnGrp LOS	D	A	D	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	227		369			361			428			
Approach Delay, s/veh	39.7		48.1			8.0			7.5			
Approach LOS	D		D			A			A			
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	86.8		33.2		86.8		33.2					
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5					
Max Green Setting (Gmax), s	57.5		53.5		57.5		53.5					
Max Q Clear Time (g_c+I1), s	11.4		13.0		10.0		26.7					
Green Ext Time (p_c), s	2.1		1.1		2.2		2.0					
Intersection Summary												
HCM 6th Ctrl Delay	23.7											
HCM 6th LOS	C											

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52









EAPC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	297	28	22	313	126	28	247	31	97	243	59
Future Volume (vph)	98	297	28	22	313	126	28	247	31	97	243	59
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh53.1

Intersection LOS F























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	98	297	28	22	313	126	28	247	31	97	243	59
Future Vol, veh/h	98	297	28	22	313	126	28	247	31	97	243	59
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	118	358	34	27	377	152	34	298	37	117	293	71
Number of Lanes	1	1	1	0	2	1	0	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach RightNB		SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay	73	29.2	103.4	21.2
HCM LOS	F	D	F	C

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	9%	100%	0%	0%	17%	0%	0%	100%	0%	0%
Vol Thru, %	81%	0%	100%	0%	83%	100%	0%	0%	100%	58%
Vol Right, %	10%	0%	0%	100%	0%	0%	100%	0%	0%	42%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	306	98	297	28	126	209	126	97	162	140
LT Vol	28	98	0	0	22	0	0	97	0	0
Through Vol	247	0	297	0	104	209	0	0	162	81
RT Vol	31	0	0	28	0	0	126	0	0	59
Lane Flow Rate	369	118	358	34	152	251	152	117	195	169
Geometry Grp	8	8	8	8	8	8	8	7	7	7
Degree of Util (X)	1.075	0.361	1.043	0.092	0.447	0.732	0.413	0.331	0.527	0.441
Departure Headway (Hd)	10.501	11.516	10.984	10.24	11.156	11.063	10.316	10.706	10.179	9.868
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	347	314	333	352	326	329	351	338	357	368
Service Time	8.211	9.216	8.684	7.94	8.856	8.763	8.016	8.406	7.879	7.568
HCM Lane V/C Ratio	1.063	0.376	1.075	0.097	0.466	0.763	0.433	0.346	0.546	0.459
HCM Control Delay	103.4	20.6	95.8	14	22.6	38.8	20.1	18.6	23.7	20.1
HCM Lane LOS	F	C	F	B	C	E	C	C	C	C
HCM 95th-tile Q	13.5	1.6	12.2	0.3	2.2	5.5	2	1.4	2.9	2.2

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52

EAPC (2021) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	297	28	22	313	126	28	247	31	97	243	59
Future Volume (vph)	98	297	28	22	313	126	28	247	31	97	243	59
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	2	2	2	6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	31.0	31.0	31.0	31.0	31.0	31.0	29.0	29.0		29.0	29.0	
Total Split (%)	51.7%	51.7%	51.7%	51.7%	51.7%	51.7%	48.3%	48.3%		48.3%	48.3%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5		4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max		Max	Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

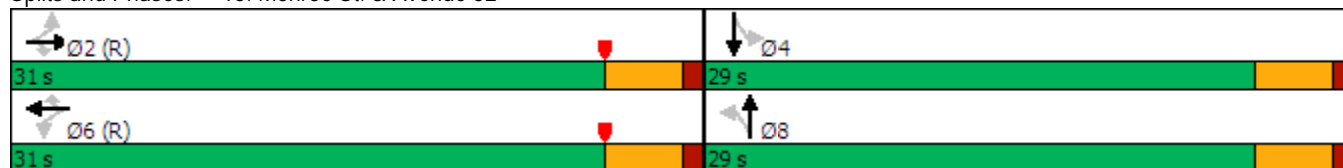
Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 45

Control Type: Actuated-Coordinated























Splits and Phases: 15: Monroe St. & Avenue 52



HCM 6th Signalized Intersection Summary

























15: Monroe St. & Avenue 52

EAPC (2021) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	297	28	22	313	126	28	247	31	97	243	59
Future Volume (veh/h)	98	297	28	22	313	126	28	247	31	97	243	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	118	358	34	27	377	152	34	298	37	117	293	71
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	446	804	682	423	1528	682	99	600	71	504	1132	270
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	874	1821	1543	992	3460	1543	82	1470	173	1045	2771	661
Grp Volume(v), veh/h	118	358	34	27	377	152	369	0	0	117	181	183
Grp Sat Flow(s),veh/h/ln	874	1821	1543	992	1730	1543	1725	0	0	1045	1730	1702
Q Serve(g_s), s	5.9	8.2	0.8	1.2	4.1	3.7	0.0	0.0	0.0	0.0	4.2	4.3
Cycle Q Clear(g_c), s	10.0	8.2	0.8	9.4	4.1	3.7	9.2	0.0	0.0	6.4	4.2	4.3
Prop In Lane	1.00		1.00	1.00		1.00	0.09		0.10	1.00		0.39
Lane Grp Cap(c), veh/h	446	804	682	423	1528	682	770	0	0	504	706	695
V/C Ratio(X)	0.26	0.45	0.05	0.06	0.25	0.22	0.48	0.00	0.00	0.23	0.26	0.26
Avail Cap(c_a), veh/h	446	804	682	423	1528	682	770	0	0	504	706	695
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.6	11.6	9.6	14.9	10.5	10.4	13.2	0.0	0.0	12.4	11.7	11.8
Incr Delay (d2), s/veh	1.4	1.8	0.1	0.3	0.4	0.8	2.1	0.0	0.0	1.1	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.7	0.2	0.2	1.2	1.0	3.3	0.0	0.0	1.0	1.4	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.1	13.4	9.7	15.2	10.9	11.1	15.4	0.0	0.0	13.5	12.6	12.7
LnGrp LOS	B	B	A	B	B	B	B	A	A	B	B	B
Approach Vol, veh/h	510			556			369			481		
Approach Delay, s/veh	13.6			11.2			15.4			12.8		
Approach LOS	B			B			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	31.0			29.0			31.0			29.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	26.5			24.5			26.5			24.5		
Max Q Clear Time (g_c+I1), s	12.0			8.4			11.4			11.2		
Green Ext Time (p_c), s	2.2			2.1			2.4			1.6		
Intersection Summary												
HCM 6th Ctrl Delay	13.0											
HCM 6th LOS	B											

Lanes, Volumes, Timings
16: Monroe St. & 50th Avenue

EAPC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	201	33	28	318	123	22	370	19	70	306	41
Future Volume (vph)	30	201	33	28	318	123	22	370	19	70	306	41
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	20.5	20.5	20.5	20.5	20.5	11.5	11.5	20.5		11.5	20.5	
Total Split (s)	26.0	26.0	26.0	26.0	26.0	12.0	11.5	22.0		12.0	22.5	
Total Split (%)	43.3%	43.3%	43.3%	43.3%	43.3%	20.0%	19.2%	36.7%		20.0%	37.5%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

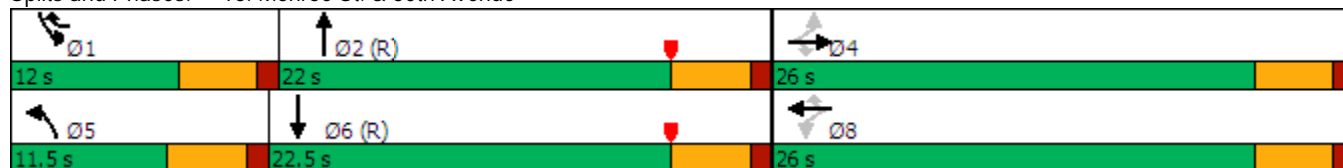
Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

























Control Type: Actuated-Coordinated

Splits and Phases: 16: Monroe St. & 50th Avenue



















HCM 6th Signalized Intersection Summary
16: Monroe St. & 50th Avenue

EAPC (2021) AM Peak hour





												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	201	33	28	318	123	22	370	19	70	306	41
Future Volume (veh/h)	30	201	33	28	318	123	22	370	19	70	306	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	35	236	39	33	374	145	26	435	22	82	360	48
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	201	506	429	308	506	576	86	1431	72	165	1452	192
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.05	0.43	0.42	0.10	0.47	0.46
Sat Flow, veh/h	882	1821	1543	1104	1821	1543	1734	3352	169	1734	3072	406
Grp Volume(v), veh/h	35	236	39	33	374	145	26	224	233	82	202	206
Grp Sat Flow(s),veh/h/ln	882	1821	1543	1104	1821	1543	1734	1730	1791	1734	1730	1748
Q Serve(g_s), s	2.3	6.5	1.1	1.5	11.2	3.9	0.9	5.1	5.1	2.7	4.2	4.2
Cycle Q Clear(g_c), s	13.4	6.5	1.1	8.0	11.2	3.9	0.9	5.1	5.1	2.7	4.2	4.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.09	1.00		0.23
Lane Grp Cap(c), veh/h	201	506	429	308	506	576	86	738	764	165	818	826
V/C Ratio(X)	0.17	0.47	0.09	0.11	0.74	0.25	0.30	0.30	0.30	0.50	0.25	0.25
Avail Cap(c_a), veh/h	279	668	566	406	668	713	217	738	764	231	818	826
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.8	18.0	16.0	21.3	19.7	13.0	27.5	11.3	11.3	25.8	9.4	9.5
Incr Delay (d2), s/veh	0.4	0.7	0.1	0.2	3.0	0.2	2.0	1.1	1.0	2.3	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.3	0.3	0.4	4.3	1.1	0.4	1.7	1.8	1.1	1.3	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.2	18.6	16.1	21.4	22.7	13.2	29.5	12.4	12.4	28.1	10.2	10.2
LnGrp LOS	C	B	B	C	C	B	C	B	B	C	B	B
Approach Vol, veh/h	310			552			483			490		
Approach Delay, s/veh	19.2			20.2			13.3			13.2		
Approach LOS	B			C			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	29.6		20.7	7.0	32.4		20.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	17.5		21.5	7.0	18.0		21.5				
Max Q Clear Time (g_c+I1), s	4.7	7.1		15.4	2.9	6.2		13.2				
Green Ext Time (p_c), s	0.0	1.7		0.7	0.0	1.6		1.7				
Intersection Summary												
HCM 6th Ctrl Delay	16.3											
HCM 6th LOS	B											

Lanes, Volumes, Timings
17: Jackson St. & 58th Avenue

EAPC (2021) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	63	8	1	55	2	3	107	2	11	99	12
Future Volume (vph)	7	63	8	1	55	2	3	107	2	11	99	12
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		5266			1079			1013			510	
Travel Time (s)		71.8			14.7			12.6			6.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	63	8	1	55	2	3	107	2	11	99	12
Future Vol, veh/h	7	63	8	1	55	2	3	107	2	11	99	12
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	67	9	1	59	2	3	114	2	12	105	13
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.1	8	8.2	8.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	9%	2%	9%
Vol Thru, %	96%	81%	95%	81%
Vol Right, %	2%	10%	3%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	112	78	58	122
LT Vol	3	7	1	11
Through Vol	107	63	55	99
RT Vol	2	8	2	12
Lane Flow Rate	119	83	62	130
Geometry Grp	1	1	1	1
Degree of Util (X)	0.146	0.104	0.078	0.157
Departure Headway (Hd)	4.411	4.528	4.579	4.365
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	815	793	784	824
Service Time	2.424	2.545	2.598	2.378
HCM Lane V/C Ratio	0.146	0.105	0.079	0.158
HCM Control Delay	8.2	8.1	8	8.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.3	0.3	0.6

Lanes, Volumes, Timings
18: Avenue 60 & S. Access

EAPC (2021) AM Peak hour






Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	4	12	0
Future Volume (vph)	0	0	0	4	12	0
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		25	
Link Distance (ft)		207	1772		380	
Travel Time (s)		3.5	30.2		10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
18: Avenue 60 & S. Access

EAPC (2021) AM Peak hour

Intersection

Int Delay, s/veh 6.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	4	12	0
Future Vol, veh/h	0	0	0	4	12	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	4	13	0












Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	4	0	0 2 2
Stage 1	-	-	- - 2 -
Stage 2	-	-	- - 0 -
Critical Hdwy	4.12	-	- - 6.42 6.22
Critical Hdwy Stg 1	-	-	- - 5.42 -
Critical Hdwy Stg 2	-	-	- - 5.42 -
Follow-up Hdwy	2.218	-	- - 3.518 3.318
Pot Cap-1 Maneuver	1618	-	- - 1021 1082
Stage 1	-	-	- - 1021 -
Stage 2	-	-	- - - -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1618	-	- - 1021 1082
Mov Cap-2 Maneuver	-	-	- - 1021 -
Stage 1	-	-	- - 1021 -
Stage 2	-	-	- - - -

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1618	-	-	-	1021
HCM Lane V/C Ratio	-	-	-	-	0.013
HCM Control Delay (s)	0	-	-	-	8.6
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0







Lanes, Volumes, Timings
19: Madison St. & Main Access

EAPC (2021) AM Peak hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	36	3	12	263	215	10
Future Volume (vph)	36	3	12	263	215	10
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100	0	150			0
Storage Lanes	1	1	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	25			50	50	
Link Distance (ft)	499			880	131	
Travel Time (s)	13.6			12.0	1.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
19: Madison St. & Main Access

EAPC (2021) AM Peak hour

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	36	3	12	263	215	10
Future Vol, veh/h	36	3	12	263	215	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	3	13	286	234	11











Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	409	123	245	0	-	0
Stage 1	240	-	-	-	-	-
Stage 2	169	-	-	-	-	-
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	570	905	1318	-	-	-
Stage 1	777	-	-	-	-	-
Stage 2	843	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	564	905	1318	-	-	-
Mov Cap-2 Maneuver	621	-	-	-	-	-
Stage 1	769	-	-	-	-	-
Stage 2	843	-	-	-	-	-





Approach	EB	NB	SB
HCM Control Delay, s	11	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1318	-	621	905	-	-
HCM Lane V/C Ratio	0.01	-	0.063	0.004	-	-
HCM Control Delay (s)	7.8	-	11.2	9	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	0	-	-

Lanes, Volumes, Timings
20: Project Access 1 & Avenue 58

EAPC (2021) AM Peak hour

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	188	4	12	142	3	2
Future Volume (vph)	188	4	12	142	3	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)		0	50		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			60		60	
Link Speed (mph)	50			50	25	
Link Distance (ft)	403			335	383	
Travel Time (s)	5.5			4.6	10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	188	4	12	142	3	2
Future Vol, veh/h	188	4	12	142	3	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	204	4	13	154	3	2

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	208
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.13
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.219
Pot Cap-1 Maneuver	-	-	1362
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1362
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	743	-	-	1362	-
HCM Lane V/C Ratio	0.007	-	-	0.01	-
HCM Control Delay (s)	9.9	-	-	7.7	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
21: Project Access 2 & Avenue 58












EAPC (2021) AM Peak hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱↱		↱
Traffic Volume (vph)	184	6	0	154	0	2
Future Volume (vph)	184	6	0	154	0	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	50			50	25	
Link Distance (ft)	335			276	233	
Travel Time (s)	4.6			3.8	6.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↱↱		↱
Traffic Vol, veh/h	184	6	0	154	0	2
Future Vol, veh/h	184	6	0	154	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	200	7	0	167	0	2
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	204
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	-	-	0	-	0	836
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	836
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		9.3	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	836	-	-	-		
HCM Lane V/C Ratio	0.003	-	-	-		
HCM Control Delay (s)	9.3	-	-	-		
HCM Lane LOS	A	-	-	-		
HCM 95th %tile Q(veh)	0	-	-	-		

Lanes, Volumes, Timings
22: Madison St. & Project Access 3

























EAPC (2021) AM Peak hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				 	 	
Traffic Volume (vph)	0	2	0	299	223	8
Future Volume (vph)	0	2	0	299	223	8
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	25			50	50	
Link Distance (ft)	210			263	288	
Travel Time (s)	5.7			3.6	3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	2	0	299	223	8
Future Vol, veh/h	0	2	0	299	223	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2	0	325	242	9
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	-	126	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	901	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	901	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	9	0	0			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR		
Capacity (veh/h)	-	901	-	-		
HCM Lane V/C Ratio	-	0.002	-	-		
HCM Control Delay (s)	-	9	-	-		
HCM Lane LOS	-	A	-	-		
HCM 95th %tile Q(veh)	-	0	-	-		

Lanes, Volumes, Timings
1: Madison St. & Avenue 58

EAPC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	118	117	21	23	92	111	13	241	17	93	376	123
Future Volume (vph)	118	117	21	23	92	111	13	241	17	93	376	123
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Intersection Delay, s/veh	15.6											
Intersection LOS	C											















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↑		↰	↑↑		↰	↑↑	
Traffic Vol, veh/h	118	117	21	23	92	111	13	241	17	93	376	123
Future Vol, veh/h	118	117	21	23	92	111	13	241	17	93	376	123
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	128	127	23	25	100	121	14	262	18	101	409	134
Number of Lanes	1	1	1	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	14.4	13.6	14.7	17.3
HCM LOS	B	B	B	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	83%	0%	100%	0%	0%	100%	22%	0%	100%
Vol Right, %	0%	0%	17%	0%	0%	100%	0%	0%	78%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	13	161	97	118	117	21	23	61	142	93	251
LT Vol	13	0	0	118	0	0	23	0	0	93	0
Through Vol	0	161	80	0	117	0	0	61	31	0	251
RT Vol	0	0	17	0	0	21	0	0	111	0	0
Lane Flow Rate	14	175	106	128	127	23	25	67	154	101	272
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.034	0.39	0.233	0.308	0.288	0.047	0.061	0.153	0.33	0.22	0.556
Departure Headway (Hd)	8.535	8.035	7.913	8.643	8.143	7.443	8.767	8.267	7.719	7.845	7.345
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	419	447	453	416	440	480	408	433	465	457	490
Service Time	6.297	5.797	5.675	6.408	5.908	5.208	6.534	6.034	5.486	5.599	5.099
HCM Lane V/C Ratio	0.033	0.391	0.234	0.308	0.289	0.048	0.061	0.155	0.331	0.221	0.555
HCM Control Delay	11.6	15.9	13.1	15.2	14.2	10.6	12.1	12.5	14.3	12.8	19
HCM Lane LOS	B	C	B	C	B	B	B	B	B	B	C
HCM 95th-tile Q	0.1	1.8	0.9	1.3	1.2	0.1	0.2	0.5	1.4	0.8	3.3

Lanes, Volumes, Timings
2: Madison St. & Airport Bl.

EAPC (2021) PM Peak hour

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	50	73	1	381	43	60	498
Future Volume (vph)	50	73	1	381	43	60	498
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		8			2		
Detector Phase	3	8	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	20.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	22.0	22.0	12.0	25.0	25.0	13.0	26.0
Total Split (%)	36.7%	36.7%	20.0%	41.7%	41.7%	21.7%	43.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 60

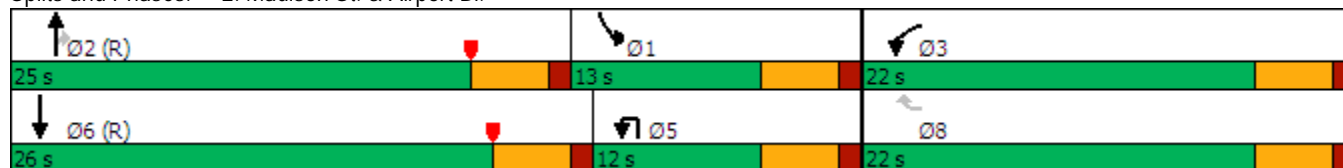
Actuated Cycle Length: 60

Offset: 28 (47%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 2: Madison St. & Airport Bl.


























HCM 6th Signalized Intersection Summary 2: Madison St. & Airport Bl.

EAPC (2021) PM Peak hour

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	50	73	1	381	43	60	498
Future Volume (veh/h)	50	73	1	381	43	60	498
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	56	82		428	48	67	560
Peak Hour Factor	0.89	0.89		0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	197	175		1211	540	584	2607
Arrive On Green	0.11	0.11		0.35	0.35	0.34	0.75
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	56	82		428	48	67	560
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	1.8	3.0		5.5	0.7	1.6	2.9
Cycle Q Clear(g_c), s	1.8	3.0		5.5	0.7	1.6	2.9
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	197	175		1211	540	584	2607
V/C Ratio(X)	0.28	0.47		0.35	0.09	0.11	0.21
Avail Cap(c_a), veh/h	520	463		1211	540	584	2607
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.4	24.9		14.5	4.8	13.7	2.2
Incr Delay (d2), s/veh	0.8	1.9		0.8	0.3	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.0		1.9	0.4	0.5	0.2
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	25.2	26.9		15.3	5.2	13.8	2.4
LnGrp LOS	C	C		B	A	B	A
Approach Vol, veh/h	138			476			627
Approach Delay, s/veh	26.2			14.3			3.6
Approach LOS	C			B			A
Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	24.2	25.0				49.2	10.8
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	8.5	20.5				21.5	17.5
Max Q Clear Time (g_c+I1), s	3.6	7.5				4.9	5.0
Green Ext Time (p_c), s	0.0	2.1				3.0	0.3
Intersection Summary							
HCM 6th Ctrl Delay			10.2				
HCM 6th LOS			B				
Notes							
User approved ignoring U-Turning movement.							

Lanes, Volumes, Timings
3: Madison St. & Avenue 54









EAPC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	239	336	26	136	69	284	345	67	47	267	13
Future Volume (vph)	16	239	336	26	136	69	284	345	67	47	267	13
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 53

Intersection LOS F
























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	239	336	26	136	69	284	345	67	47	267	13
Future Vol, veh/h	16	239	336	26	136	69	284	345	67	47	267	13
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	269	378	29	153	78	319	388	75	53	300	15
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	102.2	18.6	36.8	22.7
HCM LOS	F	C	E	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	63%	0%	100%	19%	0%	100%	40%	0%	100%	87%
Vol Right, %	0%	0%	37%	0%	0%	81%	0%	0%	60%	0%	0%	13%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	284	230	182	16	159	416	26	91	114	47	178	102
LT Vol	284	0	0	16	0	0	26	0	0	47	0	0
Through Vol	0	230	115	0	159	80	0	91	45	0	178	89
RT Vol	0	0	67	0	0	336	0	0	69	0	0	13
Lane Flow Rate	319	258	204	18	179	467	29	102	128	53	200	115
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.868	0.668	0.515	0.051	0.484	1.189	0.091	0.305	0.37	0.159	0.575	0.327
Departure Headway (Hd)	10.053	9.553	9.296	10.229	9.729	9.163	11.522	11.022	10.6	11.184	10.684	10.595
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	364	380	391	350	371	397	313	328	342	323	340	342
Service Time	7.753	7.253	6.996	7.986	7.486	6.92	9.222	8.722	8.3	8.884	8.384	8.295
HCM Lane V/C Ratio	0.876	0.679	0.522	0.051	0.482	1.176	0.093	0.311	0.374	0.164	0.588	0.336
HCM Control Delay	52.4	29.5	21.5	13.5	21.3	136.6	15.4	18.5	19.4	16	26.9	18.4
HCM Lane LOS	F	D	C	B	C	F	C	C	C	C	D	C
HCM 95th-tile Q	8.2	4.7	2.8	0.2	2.5	18.6	0.3	1.3	1.7	0.6	3.4	1.4

Lanes, Volumes, Timings
3: Madison St. & Avenue 54

EAPC (2021) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	239	336	26	136	69	284	345	67	47	267	13
Future Volume (vph)	16	239	336	26	136	69	284	345	67	47	267	13
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2			6		6			8			
Detector Phase	2	2		6	6	6	3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	5.0	7.0	7.0	5.0	7.0	
Minimum Split (s)	30.5	30.5		30.5	30.5	30.5	9.0	30.5	30.5	9.0	30.5	
Total Split (s)	51.0	51.0		51.0	51.0	51.0	31.0	51.0	51.0	18.0	38.0	
Total Split (%)	42.5%	42.5%		42.5%	42.5%	42.5%	25.8%	42.5%	42.5%	15.0%	31.7%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.0	3.5	3.5	3.0	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.0	4.5	4.5	4.0	4.5	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None	Max	Max	None	Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

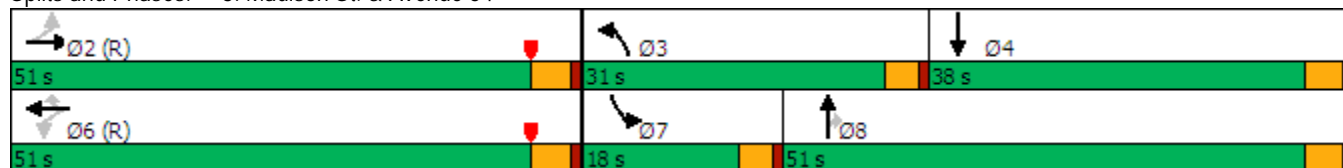
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated























Splits and Phases: 3: Madison St. & Avenue 54



HCM 6th Signalized Intersection Summary

























3: Madison St. & Avenue 54

EAPC (2021) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	239	336	26	136	69	284	345	67	47	267	13
Future Volume (veh/h)	16	239	336	26	136	69	284	345	67	47	267	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	18	269	378	29	153	78	319	388	75	53	300	15
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	565	804	717	288	1607	717	418	1341	598	69	1016	51
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.12	0.39	0.39	0.04	0.30	0.30
Sat Flow, veh/h	1149	1730	1543	784	3460	1543	3365	3460	1543	1734	3354	167
Grp Volume(v), veh/h	18	269	378	29	153	78	319	388	75	53	154	161
Grp Sat Flow(s),veh/h/ln	1149	1730	1543	784	1730	1543	1682	1730	1543	1734	1730	1791
Q Serve(g_s), s	1.1	11.8	20.8	3.3	3.0	3.4	11.0	9.3	3.8	3.6	8.2	8.3
Cycle Q Clear(g_c), s	4.0	11.8	20.8	24.1	3.0	3.4	11.0	9.3	3.8	3.6	8.2	8.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	565	804	717	288	1607	717	418	1341	598	69	524	542
V/C Ratio(X)	0.03	0.33	0.53	0.10	0.10	0.11	0.76	0.29	0.13	0.77	0.29	0.30
Avail Cap(c_a), veh/h	565	804	717	288	1607	717	757	1341	598	202	524	542
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.1	20.4	22.8	31.3	18.0	18.1	50.8	25.4	23.7	57.1	32.0	32.0
Incr Delay (d2), s/veh	0.1	0.9	2.1	0.7	0.1	0.3	6.0	0.5	0.4	31.2	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	4.6	7.3	0.6	1.1	1.2	4.8	3.7	1.4	2.1	3.5	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.2	21.2	24.9	32.0	18.1	18.4	56.9	25.9	24.1	88.3	33.4	33.4
LnGrp LOS	B	C	C	C	B	B	E	C	C	F	C	C
Approach Vol, veh/h	665			260			782			368		
Approach Delay, s/veh	23.3			19.8			38.4			41.3		
Approach LOS	C			B			D			D		
Timer - Assigned Phs	2		3	4	6		7	8				
Phs Duration (G+Y+Rc), s	60.2		18.9	40.8	60.2		8.8	51.0				
Change Period (Y+Rc), s	4.5		4.0	4.5	4.5		4.0	4.5				
Max Green Setting (Gmax), s	46.5		27.0	33.5	46.5		14.0	46.5				
Max Q Clear Time (g_c+I1), s	22.8		13.0	10.3	26.1		5.6	11.3				
Green Ext Time (p_c), s	3.7		1.9	1.5	1.1		0.1	2.6				
Intersection Summary												
HCM 6th Ctrl Delay	31.7											
HCM 6th LOS	C											

Lanes, Volumes, Timings
4: Madison St. & Avenue 52

EAPC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	482	87	22	393	46	96	271	33	55	221	63
Future Volume (vph)	73	482	87	22	393	46	96	271	33	55	221	63
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	24.0	50.0	50.0	15.0	41.0	41.0	17.0	40.0	40.0	15.0	38.0	38.0
Total Split (%)	20.0%	41.7%	41.7%	12.5%	34.2%	34.2%	14.2%	33.3%	33.3%	12.5%	31.7%	31.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

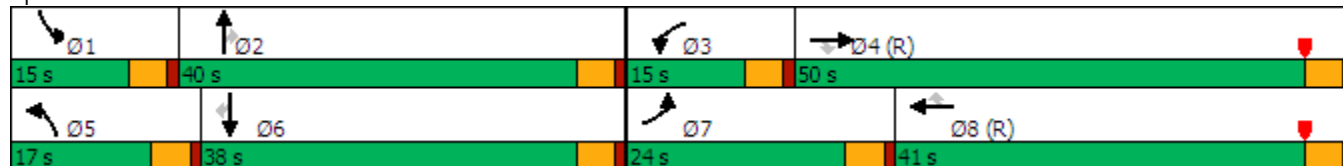
Actuated Cycle Length: 120

Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated

























Splits and Phases: 4: Madison St. & Avenue 52



HCM 6th Signalized Intersection Summary

























4: Madison St. & Avenue 52

EAPC (2021) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	482	87	22	393	46	96	271	33	55	221	63
Future Volume (veh/h)	73	482	87	22	393	46	96	271	33	55	221	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	85	560	101	26	457	53	112	315	38	64	257	73
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	108	1623	724	59	1525	680	192	1024	457	173	1005	448
Arrive On Green	0.06	0.47	0.47	0.03	0.44	0.44	0.06	0.30	0.30	0.05	0.29	0.29
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	85	560	101	26	457	53	112	315	38	64	257	73
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	5.8	12.3	4.5	1.8	10.2	2.4	3.9	8.5	2.1	2.2	6.8	4.2
Cycle Q Clear(g_c), s	5.8	12.3	4.5	1.8	10.2	2.4	3.9	8.5	2.1	2.2	6.8	4.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	108	1623	724	59	1525	680	192	1024	457	173	1005	448
V/C Ratio(X)	0.79	0.35	0.14	0.44	0.30	0.08	0.58	0.31	0.08	0.37	0.26	0.16
Avail Cap(c_a), veh/h	282	1623	724	152	1525	680	350	1024	457	294	1005	448
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.5	20.2	18.1	56.9	21.6	19.4	55.2	32.7	30.5	55.0	32.6	31.7
Incr Delay (d2), s/veh	12.0	0.6	0.4	5.2	0.5	0.2	2.8	0.8	0.4	1.3	0.6	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	4.9	1.6	0.8	4.0	0.8	1.7	3.5	0.8	0.9	2.8	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.5	20.8	18.5	62.0	22.1	19.7	58.0	33.5	30.9	56.3	33.3	32.5
LnGrp LOS	E	C	B	E	C	B	E	C	C	E	C	C
Approach Vol, veh/h	746			536			465			394		
Approach Delay, s/veh	25.8			23.8			39.2			36.9		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.7	40.0	8.6	60.8	11.3	39.3	12.0	57.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	35.5	10.5	45.5	12.5	33.5	19.5	36.5				
Max Q Clear Time (g_c+I1), s	4.2	10.5	3.8	14.3	5.9	8.8	7.8	12.2				
Green Ext Time (p_c), s	0.1	1.9	0.0	4.0	0.1	1.6	0.1	2.7				
Intersection Summary												
HCM 6th Ctrl Delay	30.2											
HCM 6th LOS	C											

Lanes, Volumes, Timings
5: Madison St. & Avenue 50/50th Avenue

EAPC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	420	142	49	334	41	108	336	37	41	214	87
Future Volume (vph)	84	420	142	49	334	41	108	336	37	41	214	87
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	24.0	47.0	47.0	16.0	39.0	39.0	19.0	41.0	41.0	16.0	38.0	38.0
Total Split (%)	20.0%	39.2%	39.2%	13.3%	32.5%	32.5%	15.8%	34.2%	34.2%	13.3%	31.7%	31.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

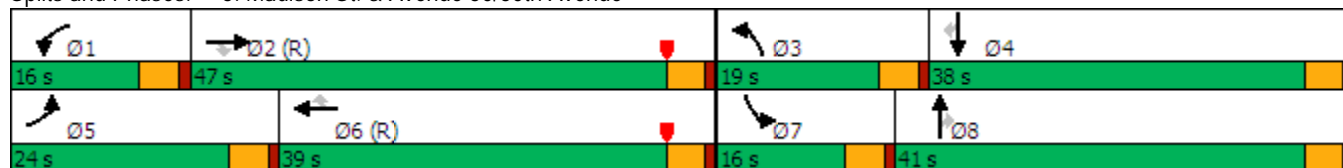
Actuated Cycle Length: 120

Offset: 64.5 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue




























HCM 6th Signalized Intersection Summary
5: Madison St. & Avenue 50/50th Avenue

EAPC (2021) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	420	142	49	334	41	108	336	37	41	214	87
Future Volume (veh/h)	84	420	142	49	334	41	108	336	37	41	214	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	88	442	149	52	352	43	114	354	39	43	225	92
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	111	1569	700	83	1513	675	192	1052	469	149	1009	450
Arrive On Green	0.06	0.45	0.45	0.05	0.44	0.44	0.06	0.30	0.30	0.04	0.29	0.29
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	88	442	149	52	352	43	114	354	39	43	225	92
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	6.0	9.6	7.0	3.5	7.6	1.9	4.0	9.5	2.2	1.5	5.9	5.4
Cycle Q Clear(g_c), s	6.0	9.6	7.0	3.5	7.6	1.9	4.0	9.5	2.2	1.5	5.9	5.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	111	1569	700	83	1513	675	192	1052	469	149	1009	450
V/C Ratio(X)	0.79	0.28	0.21	0.62	0.23	0.06	0.59	0.34	0.08	0.29	0.22	0.20
Avail Cap(c_a), veh/h	282	1569	700	166	1513	675	407	1052	469	322	1009	450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.4	20.6	19.8	56.1	21.2	19.5	55.2	32.4	29.8	55.5	32.2	32.0
Incr Delay (d2), s/veh	11.8	0.4	0.7	7.4	0.4	0.2	2.9	0.9	0.3	1.0	0.5	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	3.8	2.5	1.7	3.0	0.7	1.7	4.0	0.8	0.6	2.5	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.1	21.0	20.5	63.5	21.5	19.7	58.1	33.2	30.2	56.5	32.7	33.0
LnGrp LOS	E	C	C	E	C	B	E	C	C	E	C	C
Approach Vol, veh/h		679			447			507			360	
Approach Delay, s/veh		26.9			26.2			38.6			35.6	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.3	58.9	11.3	39.5	12.2	57.0	9.8	41.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.5	42.5	14.5	33.5	19.5	34.5	11.5	36.5				
Max Q Clear Time (g_c+I1), s	5.5	11.6	6.0	7.9	8.0	9.6	3.5	11.5				
Green Ext Time (p_c), s	0.0	3.3	0.2	1.5	0.1	2.1	0.0	2.1				
Intersection Summary												
HCM 6th Ctrl Delay			31.3									
HCM 6th LOS			C									

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54









EAPC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 		 	 	
Traffic Volume (vph)	31	24	2	34	10	392	6	252	53	495	303	2
Future Volume (vph)	31	24	2	34	10	392	6	252	53	495	303	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh52.1

Intersection LOS F























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	24	2	34	10	392	6	252	53	495	303	2
Future Vol, veh/h	31	24	2	34	10	392	6	252	53	495	303	2
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	29	2	41	12	478	7	307	65	604	370	2
Number of Lanes	1	2	0	1	1	1	0	2	0	2	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach RightNB		SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	15.4	106.6	21.6	36.9
HCM LOS	C	F	C	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	5%	0%	100%	0%	0%	100%	0%	0%	100%	100%	0%
Vol Thru, %	95%	70%	0%	100%	80%	0%	100%	0%	0%	0%	99%
Vol Right, %	0%	30%	0%	0%	20%	0%	0%	100%	0%	0%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	132	179	31	16	10	34	10	392	248	248	305
LT Vol	6	0	31	0	0	34	0	0	248	248	0
Through Vol	126	126	0	16	8	0	10	0	0	0	303
RT Vol	0	53	0	0	2	0	0	392	0	0	2
Lane Flow Rate	161	218	38	20	12	41	12	478	302	302	372
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.42	0.555	0.119	0.059	0.036	0.113	0.032	1.141	0.73	0.73	0.848
Departure Headway (Hd)	9.676	9.446	11.794	11.272	11.126	9.818	9.308	8.593	9.067	9.067	8.556
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	375	384	306	320	324	364	384	421	401	401	428
Service Time	7.376	7.146	9.494	8.972	8.826	7.603	7.092	6.377	6.767	6.767	6.256
HCM Lane V/C Ratio	0.429	0.568	0.124	0.063	0.037	0.113	0.031	1.135	0.753	0.753	0.869
HCM Control Delay	19.2	23.3	16.1	14.7	14.2	13.9	12.4	117	32.7	32.7	43.6
HCM Lane LOS	C	C	C	B	B	B	B	F	D	D	E
HCM 95th-tile Q	2	3.2	0.4	0.2	0.1	0.4	0.1	17.5	5.7	5.7	8.2

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54

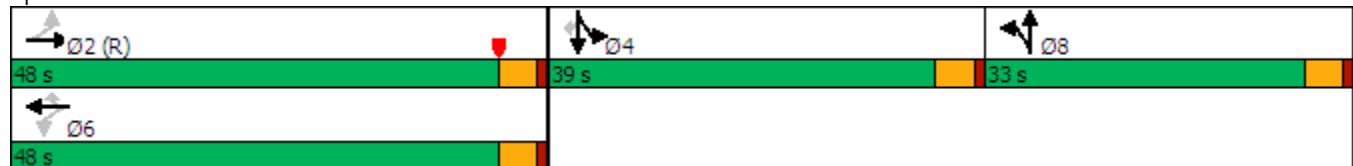
EAPC (2021) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	24	2	34	10	392	6	252	53	495	303	2
Future Volume (vph)	31	24	2	34	10	392	6	252	53	495	303	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases		2			6		8	8		4	4	
Permitted Phases	2			6		6						4
Detector Phase	2	2		6	6	6	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	30.5	30.5		30.5	30.5	30.5	30.5	30.5		30.5	30.5	30.5
Total Split (s)	48.0	48.0		48.0	48.0	48.0	33.0	33.0		39.0	39.0	39.0
Total Split (%)	40.0%	40.0%		40.0%	40.0%	40.0%	27.5%	27.5%		32.5%	32.5%	32.5%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		None	None	None	Max	Max		Max	Max	Max

Intersection Summary






















Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 84.5 (70%), Referenced to phase 2:EBTL, Start of Yellow
 Natural Cycle: 95
 Control Type: Actuated-Coordinated

Splits and Phases: 6: Jefferson St. & Avenue 54























HCM 6th Signalized Intersection Summary 6: Jefferson St. & Avenue 54

EAPC (2021) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	24	2	34	10	392	6	252	53	495	303	2
Future Volume (veh/h)	31	24	2	34	10	392	6	252	53	495	303	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	38	29	2	41	12	478	7	307	65	604	370	2
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	385	1191	81	552	660	559	15	673	149	967	995	444
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.24	0.24	0.24	0.29	0.29	0.29
Sat Flow, veh/h	906	3287	224	1378	1821	1543	63	2835	628	3365	3460	1543
Grp Volume(v), veh/h	38	15	16	41	12	478	202	0	177	604	370	2
Grp Sat Flow(s),veh/h/ln	906	1730	1781	1378	1821	1543	1818	0	1708	1682	1730	1543
Q Serve(g_s), s	3.4	0.7	0.7	2.4	0.5	34.3	11.4	0.0	10.6	18.7	10.2	0.1
Cycle Q Clear(g_c), s	3.9	0.7	0.7	3.1	0.5	34.3	11.4	0.0	10.6	18.7	10.2	0.1
Prop In Lane	1.00		0.13	1.00		1.00	0.03		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	385	627	646	552	660	559	432	0	406	967	995	444
V/C Ratio(X)	0.10	0.02	0.02	0.07	0.02	0.85	0.47	0.00	0.44	0.62	0.37	0.00
Avail Cap(c_a), veh/h	385	627	646	552	660	559	432	0	406	967	995	444
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.89	0.89	0.89	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.8	24.6	24.6	25.6	24.5	35.3	39.2	0.0	38.9	37.1	34.1	30.5
Incr Delay (d2), s/veh	0.5	0.1	0.1	0.1	0.0	11.1	3.6	0.0	3.4	3.0	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.3	0.3	0.7	0.2	13.7	5.3	0.0	4.6	7.7	4.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.3	24.7	24.7	25.6	24.6	46.4	42.9	0.0	42.3	40.2	35.2	30.5
LnGrp LOS	C	C	C	C	C	D	D	A	D	D	D	C
Approach Vol, veh/h	69			531				379			976	
Approach Delay, s/veh	25.6			44.3				42.6			38.3	
Approach LOS	C			D				D			D	
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	48.0			39.0			48.0			33.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	43.5			34.5			43.5			28.5		
Max Q Clear Time (g_c+I1), s	5.9			20.7			36.3			13.4		
Green Ext Time (p_c), s	0.3			3.7			1.2			1.6		
Intersection Summary												
HCM 6th Ctrl Delay	40.3											
HCM 6th LOS	D											

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EAPC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	104	362	317	30	363	280	191	594	70	184	600	138
Future Volume (vph)	104	362	317	30	363	280	191	594	70	184	600	138
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											






















HCM 6th Roundabout
7: Jefferson St. & Avenue 52

EAPC (2021) PM Peak hour

Intersection									
Intersection Delay, s/veh	81.2								
Intersection LOS	F								
Approach	EB		WB		NB		SB		
Entry Lanes	1		1		1		1		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	842		723		919		991		
Demand Flow Rate, veh/h	859		738		937		1011		
Vehicles Circulating, veh/h	893		975		713		640		
Vehicles Exiting, veh/h	607		599		691		766		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	29.0		23.0		149.3		104.8		
Approach LOS	D		C		F		F		
Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Bypass	
Designated Moves	LT	R	LT	R	LT	R	LT	R	
Assumed Moves	LT	R	LT	R	LT	R	LT	R	
RT Channelized		Free		Free		Free		Free	
Lane Util	1.000		1.000		1.000		1.000		
Follow-Up Headway, s	2.609		2.609		2.609		2.609		
Critical Headway, s	4.976	348	4.976	307	4.976	76	4.976	151	
Entry Flow, veh/h	511	1887	431	1887	861	1887	860	1887	
Cap Entry Lane, veh/h	555	0.980	510	0.980	667	0.980	718	0.980	
Entry HV Adj Factor	0.981	341	0.980	301	0.981	75	0.980	148	
Flow Entry, veh/h	501	1850	422	1850	844	1850	843	1850	
Cap Entry, veh/h	544	0.184	500	0.163	654	0.041	704	0.080	
V/C Ratio	0.921	0.0	0.844	0.0	1.291	0.0	1.197	0.0	
Control Delay, s/veh	48.7	A	39.3	A	162.6	A	123.2	A	
LOS	E	1	E	1	F	0	F	0	
95th %tile Queue, veh	11		9		33		28		

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EAPC (2021) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	104	362	317	30	363	280	191	594	70	184	600	138
Future Volume (vph)	104	362	317	30	363	280	191	594	70	184	600	138
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		100	0		100	0		0	0		0
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	60			60			60			60		
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											























HCM 6th Roundabout
7: Jefferson St. & Avenue 52

EAPC (2021) PM Peak hour
With Improvements

Intersection										
Intersection Delay, s/veh	13.0									
Intersection LOS	B									
Approach	EB		WB		NB		SB			
Entry Lanes	1		1		2		2			
Conflicting Circle Lanes	2		2		2		2			
Adj Approach Flow, veh/h	842		723		919		991			
Demand Flow Rate, veh/h	859		738		937		1011			
Vehicles Circulating, veh/h	893		975		713		640			
Vehicles Exiting, veh/h	607		599		691		766			
Ped Vol Crossing Leg, #/h	0		0		0		0			
Ped Cap Adj	1.000		1.000		1.000		1.000			
Approach Delay, s/veh	15.0		12.7		13.4		10.9			
Approach LOS	C		B		B		B			
Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
Assumed Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
RT Channelized		Free		Free			Free			Free
Lane Util	1.000		1.000		0.470	0.530		0.470	0.530	
Follow-Up Headway, s	2.535		2.535		2.667	2.535		2.667	2.535	
Critical Headway, s	4.328	348	4.328	307	4.645	4.328	76	4.645	4.328	151
Entry Flow, veh/h	511	1887	431	1887	405	456	1887	404	456	1887
Cap Entry Lane, veh/h	665	0.980	620	0.980	701	775	0.980	749	824	0.980
Entry HV Adj Factor	0.981	341	0.980	301	0.980	0.981	75	0.981	0.980	148
Flow Entry, veh/h	501	1850	422	1850	397	447	1850	396	447	1850
Cap Entry, veh/h	652	0.184	607	0.163	686	760	0.041	735	808	0.080
V/C Ratio	0.769	0.0	0.695	0.0	0.578	0.589	0.0	0.539	0.553	0.0
Control Delay, s/veh	25.3	A	21.8	A	15.1	14.2	A	13.2	12.6	A
LOS	D	1	C	1	C	B	0	B	B	0
95th %tile Queue, veh	7		6		4	4		3	3	

Lanes, Volumes, Timings
8: Jefferson St. & Pomelo

EAPC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	2	21	9	1	42	3	974	7	23	984	68
Future Volume (vph)	66	2	21	9	1	42	3	974	7	23	984	68
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	49.0	49.0	49.0	49.0	49.0	49.0	18.0	51.0		20.0	53.0	
Total Split (%)	40.8%	40.8%	40.8%	40.8%	40.8%	40.8%	15.0%	42.5%		16.7%	44.2%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary

Area Type: Other

Cycle Length: 120

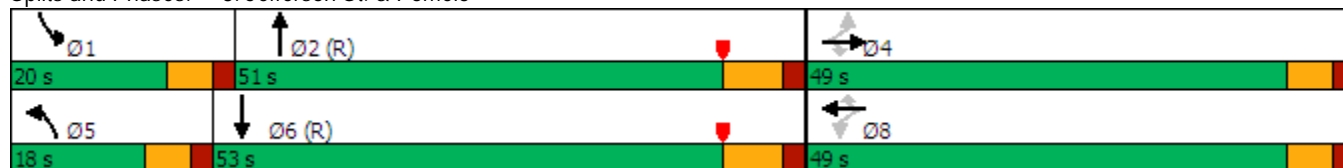
Actuated Cycle Length: 120

Offset: 30 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110

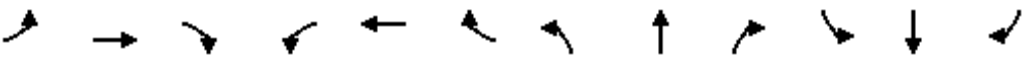
Control Type: Actuated-Coordinated

Splits and Phases: 8: Jefferson St. & Pomelo



























HCM 6th Signalized Intersection Summary 8: Jefferson St. & Pomelo

EAPC (2021) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↩	↩		↩	↩	↩	↩↩↩		↩	↩↩↩	
Traffic Volume (veh/h)	66	2	21	9	1	42	3	974	7	23	984	68
Future Volume (veh/h)	66	2	21	9	1	42	3	974	7	23	984	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	69	2	22	9	1	44	3	1025	7	24	1036	72
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	73	1	527	67	4	527	17	2246	15	96	2309	160
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.01	0.44	0.44	0.02	0.16	0.16
Sat Flow, veh/h	42	4	1543	28	13	1543	1734	5095	35	1734	4747	329
Grp Volume(v), veh/h	71	0	22	10	0	44	3	667	365	24	723	385
Grp Sat Flow(s),veh/h/ln	45	0	1543	41	0	1543	1734	1657	1815	1734	1657	1762
Q Serve(g_s), s	1.3	0.0	1.1	0.6	0.0	2.3	0.2	16.9	16.9	1.6	23.7	23.7
Cycle Q Clear(g_c), s	41.0	0.0	1.1	40.7	0.0	2.3	0.2	16.9	16.9	1.6	23.7	23.7
Prop In Lane	0.97		1.00	0.90		1.00	1.00		0.02	1.00		0.19
Lane Grp Cap(c), veh/h	75	0	527	71	0	527	17	1461	800	96	1612	857
V/C Ratio(X)	0.95	0.00	0.04	0.14	0.00	0.08	0.18	0.46	0.46	0.25	0.45	0.45
Avail Cap(c_a), veh/h	98	0	553	95	0	553	173	1461	800	202	1612	857
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.74	0.74	0.74
Uniform Delay (d), s/veh	59.4	0.0	26.4	45.8	0.0	26.8	59.0	23.5	23.5	56.5	35.8	35.8
Incr Delay (d2), s/veh	75.2	0.0	0.1	1.9	0.0	0.1	10.9	1.0	1.9	2.2	0.7	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.0	0.4	0.3	0.0	0.9	0.1	6.3	7.1	0.8	10.5	11.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	134.6	0.0	26.5	47.7	0.0	26.9	69.8	24.5	25.4	58.6	36.5	37.1
LnGrp LOS	F	A	C	D	A	C	E	C	C	E	D	D
Approach Vol, veh/h	93			54			1035			1132		
Approach Delay, s/veh	109.0			30.8			24.9			37.2		
Approach LOS	F			C			C			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.6	59.6		47.8	7.1	65.0		47.8				
Change Period (Y+Rc), s	6.0	7.5		6.0	6.0	7.5		6.0				
Max Green Setting (Gmax), s	14.0	43.5		43.0	12.0	45.5		43.0				
Max Q Clear Time (g_c+I1), s	3.6	18.9		43.0	2.2	25.7		42.7				
Green Ext Time (p_c), s	0.0	11.7		0.0	0.0	11.1		0.0				
Intersection Summary												
HCM 6th Ctrl Delay	34.4											
HCM 6th LOS	C											

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

EAPC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	362	346	133	113	298	190	126	882	73	274	831	225
Future Volume (vph)	362	346	133	113	298	190	126	882	73	274	831	225
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	40.5	40.5	21.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	33.8%	33.8%	17.5%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

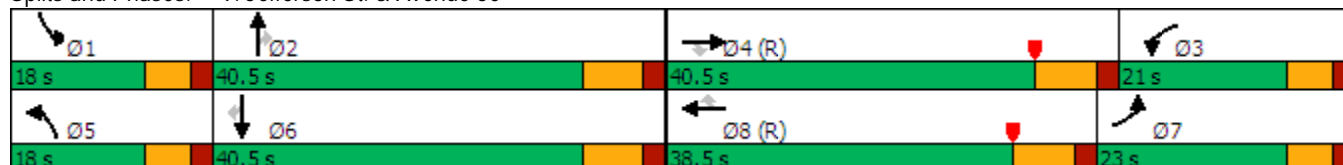
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 125

Control Type: Actuated-Coordinated

























Splits and Phases: 9: Jefferson St. & Avenue 50



HCM 6th Signalized Intersection Summary

9: Jefferson St. & Avenue 50

EAPC (2021) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	362	346	133	113	298	190	126	882	73	274	831	225
Future Volume (veh/h)	362	346	133	113	298	190	126	882	73	274	831	225
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	373	357	137	116	307	196	130	909	75	282	857	232
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	407	525	234	496	370	313	171	1180	366	336	1186	368
Arrive On Green	0.23	0.15	0.15	0.29	0.20	0.20	0.03	0.08	0.08	0.10	0.24	0.24
Sat Flow, veh/h	1734	3460	1543	1734	1821	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	373	357	137	116	307	196	130	909	75	282	857	232
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	25.2	11.7	7.4	6.1	19.4	10.2	8.9	21.5	2.6	9.9	19.0	8.8
Cycle Q Clear(g_c), s	25.2	11.7	7.4	6.1	19.4	10.2	8.9	21.5	2.6	9.9	19.0	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	407	525	234	496	370	313	171	1180	366	336	1186	368
V/C Ratio(X)	0.92	0.68	0.58	0.23	0.83	0.63	0.76	0.77	0.20	0.84	0.72	0.63
Avail Cap(c_a), veh/h	407	952	424	496	470	399	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	48.1	26.7	32.8	45.8	23.5	56.6	52.1	10.2	53.0	42.0	12.1
Incr Delay (d2), s/veh	25.0	6.9	10.2	0.1	19.1	9.1	15.1	2.6	0.4	16.0	1.9	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.1	5.4	4.3	2.5	10.5	4.4	4.7	9.8	2.1	4.7	7.6	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.8	55.1	37.0	32.9	64.9	32.6	71.7	54.7	10.6	69.0	43.9	15.2
LnGrp LOS	E	E	D	C	E	C	E	D	B	E	D	B
Approach Vol, veh/h	867				619				1114			
Approach Delay, s/veh	58.5				48.7				53.7			
Approach LOS	E				D				D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	36.0	40.3	25.7	17.8	36.1	34.2	31.9				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	12.0	33.0	15.0	33.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	11.9	23.5	8.1	13.7	10.9	21.0	27.2	21.4				
Green Ext Time (p_c), s	0.0	5.0	0.0	4.5	0.0	6.1	0.0	3.0				
Intersection Summary												
HCM 6th Ctrl Delay	50.7											
HCM 6th LOS	D											
Notes												

Lanes, Volumes, Timings
10: Avenue 60 & Madison St.

EAPC (2021) PM Peak hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	24	10	13	128	240	39
Future Volume (vph)	24	10	13	128	240	39
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		40	
Link Distance (ft)		1772	661		437	
Travel Time (s)		30.2	11.3		7.4	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)						
Sign Control		Stop	Stop		Stop	






Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Intersection Delay, s/veh	10.8
Intersection LOS	B





















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	24	10	13	128	240	39
Future Vol, veh/h	24	10	13	128	240	39
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	12	16	156	293	48
Number of Lanes	0	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	9.1	8.8	12
HCM LOS	A	A	B









Lane	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	71%	0%	0%	100%	0%
Vol Thru, %	29%	100%	0%	0%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	34	13	128	240	39
LT Vol	24	0	0	240	0
Through Vol	10	13	0	0	0
RT Vol	0	0	128	0	39
Lane Flow Rate	41	16	156	293	48
Geometry Grp	4	7	7	7	7
Degree of Util (X)	0.065	0.024	0.209	0.452	0.057
Departure Headway (Hd)	5.621	5.525	4.819	5.554	4.351
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	636	648	745	647	820
Service Time	3.667	3.257	2.551	3.297	2.093
HCM Lane V/C Ratio	0.064	0.025	0.209	0.453	0.059
HCM Control Delay	9.1	8.4	8.8	12.8	7.4
HCM Lane LOS	A	A	A	B	A
HCM 95th-tile Q	0.2	0.1	0.8	2.3	0.2

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

EAPC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	102	95	2	44	117	59	97	3	186	95	19
Future Volume (vph)	21	102	95	2	44	117	59	97	3	186	95	19
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	102	95	2	44	117	59	97	3	186	95	19
Future Vol, veh/h	21	102	95	2	44	117	59	97	3	186	95	19
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	116	108	2	50	133	67	110	3	211	108	22
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	11.4	12.5	11.6	13.2
HCM LOS	B	B	B	B






Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	17%	0%	1%	100%	0%	0%
Vol Thru, %	0%	97%	83%	0%	27%	0%	100%	0%
Vol Right, %	0%	3%	0%	100%	72%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	59	100	123	95	163	186	95	19
LT Vol	59	0	21	0	2	186	0	0
Through Vol	0	97	102	0	44	0	95	0
RT Vol	0	3	0	95	117	0	0	19
Lane Flow Rate	67	114	140	108	185	211	108	22
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.139	0.219	0.268	0.183	0.332	0.414	0.196	0.035
Departure Headway (Hd)	7.467	6.935	6.898	6.104	6.449	7.057	6.549	5.838
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	477	514	517	583	554	507	544	608
Service Time	5.262	4.729	4.688	3.893	4.241	4.841	4.333	3.621
HCM Lane V/C Ratio	0.14	0.222	0.271	0.185	0.334	0.416	0.199	0.036
HCM Control Delay	11.5	11.7	12.2	10.3	12.5	14.8	10.9	8.8
HCM Lane LOS	B	B	B	B	B	B	B	A
HCM 95th-tile Q	0.5	0.8	1.1	0.7	1.4	2	0.7	0.1

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAPC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	102	53	12	76	41	69	236	28	33	245	55
Future Volume (vph)	57	102	53	12	76	41	69	236	28	33	245	55
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	26.8
Intersection LOS	D






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	57	102	53	12	76	41	69	236	28	33	245	55
Future Vol, veh/h	57	102	53	12	76	41	69	236	28	33	245	55
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	76	136	71	16	101	55	92	315	37	44	327	73
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	19.8	15.2	36.5	26.1
HCM LOS	C	C	E	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	21%	27%	9%	12%	0%
Vol Thru, %	71%	48%	59%	88%	0%
Vol Right, %	8%	25%	32%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	333	212	129	278	55
LT Vol	69	57	12	33	0
Through Vol	236	102	76	245	0
RT Vol	28	53	41	0	55
Lane Flow Rate	444	283	172	371	73
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.842	0.574	0.367	0.753	0.133
Departure Headway (Hd)	6.824	7.309	7.674	7.317	6.537
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	528	492	468	493	547
Service Time	4.875	5.365	5.74	5.071	4.291
HCM Lane V/C Ratio	0.841	0.575	0.368	0.753	0.133
HCM Control Delay	36.5	19.8	15.2	29.2	10.3
HCM Lane LOS	E	C	C	D	B
HCM 95th-tile Q	8.7	3.6	1.7	6.4	0.5

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.









EAPC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	79	9	35	80	37	10	244	41	43	272	9
Future Volume (vph)	5	79	9	35	80	37	10	244	41	43	272	9
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh14.1

Intersection LOS B



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	79	9	35	80	37	10	244	41	43	272	9
Future Vol, veh/h	5	79	9	35	80	37	10	244	41	43	272	9
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	91	10	40	92	43	11	280	47	49	313	10
Number of Lanes	1	1	1	0	1	0	1	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	1	3
HCM Control Delay	11	13.4	17.6	12.1
HCM LOS	B	B	C	B







Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	100%	0%	0%	23%	100%	0%	0%
Vol Thru, %	0%	86%	0%	100%	0%	53%	0%	100%	91%
Vol Right, %	0%	14%	0%	0%	100%	24%	0%	0%	9%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	285	5	79	9	152	43	181	100
LT Vol	10	0	5	0	0	35	43	0	0
Through Vol	0	244	0	79	0	80	0	181	91
RT Vol	0	41	0	0	9	37	0	0	9
Lane Flow Rate	11	328	6	91	10	175	49	208	115
Geometry Grp	8	8	7	7	7	8	8	8	8
Degree of Util (X)	0.022	0.584	0.012	0.175	0.018	0.341	0.096	0.377	0.205
Departure Headway (Hd)	7.027	6.419	7.464	6.956	6.245	7.019	7.021	6.515	6.451
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	507	560	476	512	568	508	508	548	553
Service Time	4.806	4.198	5.257	4.749	4.037	4.808	4.804	4.297	4.232
HCM Lane V/C Ratio	0.022	0.586	0.013	0.178	0.018	0.344	0.096	0.38	0.208
HCM Control Delay	10	17.9	10.3	11.2	9.2	13.4	10.6	13.2	10.9
HCM Lane LOS	A	C	B	B	A	B	B	B	B
HCM 95th-tile Q	0.1	3.7	0	0.6	0.1	1.5	0.3	1.7	0.8

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAPC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	214	38	10	121	44	25	317	28	75	278	35
Future Volume (vph)	65	214	38	10	121	44	25	317	28	75	278	35
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	35.9
Intersection LOS	E



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	65	214	38	10	121	44	25	317	28	75	278	35
Future Vol, veh/h	65	214	38	10	121	44	25	317	28	75	278	35
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	71	235	42	11	133	48	27	348	31	82	305	38
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	22.2	20	50.3	40.5
HCM LOS	C	C	F	E

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	7%	100%	0%	6%	21%	0%
Vol Thru, %	86%	0%	85%	69%	79%	0%
Vol Right, %	8%	0%	15%	25%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	370	65	252	175	353	35
LT Vol	25	65	0	10	75	0
Through Vol	317	0	214	121	278	0
RT Vol	28	0	38	44	0	35
Lane Flow Rate	407	71	277	192	388	38
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.902	0.176	0.635	0.477	0.861	0.076
Departure Headway (Hd)	7.985	8.879	8.252	8.925	7.993	7.16
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	451	403	438	402	454	498
Service Time	6.06	6.655	6.027	7.022	5.766	4.933
HCM Lane V/C Ratio	0.902	0.176	0.632	0.478	0.855	0.076
HCM Control Delay	50.3	13.6	24.4	20	43.5	10.5
HCM Lane LOS	F	B	C	C	E	B
HCM 95th-tile Q	9.9	0.6	4.3	2.5	8.7	0.2

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAPC (2021) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	214	38	10	121	44	25	317	28	75	278	35
Future Volume (vph)	65	214	38	10	121	44	25	317	28	75	278	35
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	30.5	30.5		30.5	30.5		30.5	30.5		30.5	30.5	30.5
Total Split (s)	47.0	47.0		47.0	47.0		73.0	73.0		73.0	73.0	73.0
Total Split (%)	39.2%	39.2%		39.2%	39.2%		60.8%	60.8%		60.8%	60.8%	60.8%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)	4.5	4.5			4.5			4.5			4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

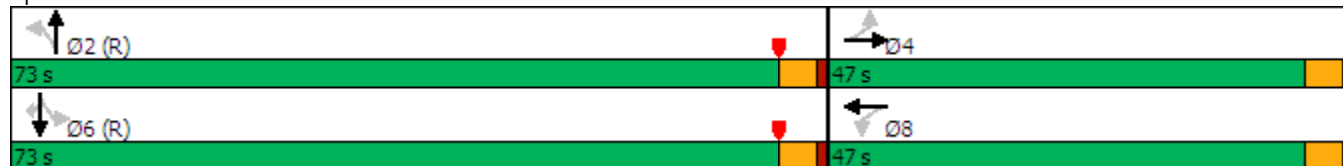
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated



















Splits and Phases: 14: Monroe St. & Avenue 54



HCM 6th Signalized Intersection Summary























14: Monroe St. & Avenue 54

EAPC (2021) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	214	38	10	121	44	25	317	28	75	278	35
Future Volume (veh/h)	65	214	38	10	121	44	25	317	28	75	278	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	71	235	42	11	133	48	27	348	31	82	305	38
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	165	287	51	36	184	63	90	1120	97	258	939	1133
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.73	0.73	0.73	0.73	0.73	0.73
Sat Flow, veh/h	1203	1504	269	21	965	329	79	1525	133	302	1279	1543
Grp Volume(v), veh/h	71	0	277	192	0	0	406	0	0	387	0	38
Grp Sat Flow(s),veh/h/ln	1203	0	1773	1314	0	0	1737	0	0	1581	0	1543
Q Serve(g_s), s	0.7	0.0	18.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
Cycle Q Clear(g_c), s	19.3	0.0	18.0	18.6	0.0	0.0	9.3	0.0	0.0	8.6	0.0	0.8
Prop In Lane	1.00		0.15	0.06		0.25	0.07		0.08	0.21		1.00
Lane Grp Cap(c), veh/h	165	0	338	282	0	0	1308	0	0	1197	0	1133
V/C Ratio(X)	0.43	0.00	0.82	0.68	0.00	0.00	0.31	0.00	0.00	0.32	0.00	0.03
Avail Cap(c_a), veh/h	361	0	628	557	0	0	1308	0	0	1197	0	1133
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.8	0.0	46.6	44.3	0.0	0.0	5.5	0.0	0.0	5.4	0.0	4.3
Incr Delay (d2), s/veh	1.8	0.0	4.9	2.9	0.0	0.0	0.6	0.0	0.0	0.7	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	8.0	5.2	0.0	0.0	2.9	0.0	0.0	2.7	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.5	0.0	51.5	47.2	0.0	0.0	6.1	0.0	0.0	6.1	0.0	4.4
LnGrp LOS	D	A	D	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	348			192			406			425		
Approach Delay, s/veh	51.1			47.2			6.1			5.9		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	92.6			27.4			92.6			27.4		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	68.5			42.5			68.5			42.5		
Max Q Clear Time (g_c+I1), s	11.3			21.3			10.6			20.6		
Green Ext Time (p_c), s	2.4			1.5			2.5			0.9		
Intersection Summary												
HCM 6th Ctrl Delay	23.2											
HCM 6th LOS	C											

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52









EAPC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	101	385	48	43	327	92	32	348	52	109	309	86
Future Volume (vph)	101	385	48	43	327	92	32	348	52	109	309	86
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 18.7

Intersection LOS F























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	101	385	48	43	327	92	32	348	52	109	309	86
Future Vol, veh/h	101	385	48	43	327	92	32	348	52	109	309	86
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	117	448	56	50	380	107	37	405	60	127	359	100
Number of Lanes	1	1	1	0	2	1	0	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay	153.8	36.3	269.1	28.3
HCM LOS	F	E	F	D

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	7%	100%	0%	0%	28%	0%	0%	100%	0%	0%
Vol Thru, %	81%	0%	100%	0%	72%	100%	0%	0%	100%	54%
Vol Right, %	12%	0%	0%	100%	0%	0%	100%	0%	0%	46%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	432	101	385	48	152	218	92	109	206	189
LT Vol	32	101	0	0	43	0	0	109	0	0
Through Vol	348	0	385	0	109	218	0	0	206	103
RT Vol	52	0	0	48	0	0	92	0	0	86
Lane Flow Rate	502	117	448	56	177	253	107	127	240	220
Geometry Grp	8	8	8	8	8	8	8	7	7	7
Degree of Util (X)	1.501	0.367	1.337	0.156	0.538	0.762	0.301	0.357	0.642	0.569
Departure Headway (Hd)	11.235	12.8	12.258	11.499	13.104	12.948	12.181	12.028	11.489	11.146
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	327	283	300	314	277	281	297	302	316	325
Service Time	8.935	10.5	9.958	9.199	10.804	10.648	9.881	9.728	9.189	8.846
HCM Lane V/C Ratio	1.535	0.413	1.493	0.178	0.639	0.9	0.36	0.421	0.759	0.677
HCM Control Delay	269.1	22.7	205.3	16.3	30.1	47.6	20	21.3	32.7	27.6
HCM Lane LOS	F	C	F	C	D	E	C	C	D	D
HCM 95th-tile Q	26.8	1.6	19.8	0.5	2.9	5.7	1.2	1.6	4.2	3.3

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52

EAPC (2021) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	101	385	48	43	327	92	32	348	52	109	309	86
Future Volume (vph)	101	385	48	43	327	92	32	348	52	109	309	86
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	2	2	2	6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	29.0	29.0	29.0	29.0	29.0	29.0	31.0	31.0		31.0	31.0	
Total Split (%)	48.3%	48.3%	48.3%	48.3%	48.3%	48.3%	51.7%	51.7%		51.7%	51.7%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5		4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max		Max	Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

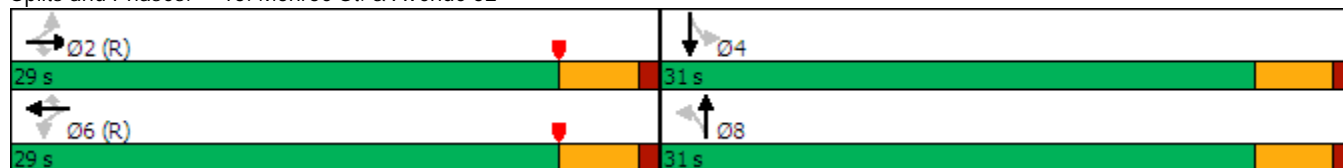
Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 45

Control Type: Actuated-Coordinated























Splits and Phases: 15: Monroe St. & Avenue 52



HCM 6th Signalized Intersection Summary

























15: Monroe St. & Avenue 52

EAPC (2021) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	385	48	43	327	92	32	348	52	109	309	86
Future Volume (veh/h)	101	385	48	43	327	92	32	348	52	109	309	86
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	119	453	56	51	385	108	38	409	61	128	364	101
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	422	744	630	309	1413	630	95	637	91	441	1185	325
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.44	0.44	0.44	0.44	0.44	0.44
Sat Flow, veh/h	904	1821	1543	891	3460	1543	69	1443	206	923	2684	735
Grp Volume(v), veh/h	119	453	56	51	385	108	508	0	0	128	233	232
Grp Sat Flow(s),veh/h/ln	904	1821	1543	891	1730	1543	1718	0	0	923	1730	1689
Q Serve(g_s), s	6.1	11.8	1.3	2.9	4.4	2.7	1.6	0.0	0.0	0.0	5.2	5.3
Cycle Q Clear(g_c), s	10.5	11.8	1.3	14.6	4.4	2.7	13.5	0.0	0.0	10.4	5.2	5.3
Prop In Lane	1.00		1.00	1.00		1.00	0.07		0.12	1.00		0.44
Lane Grp Cap(c), veh/h	422	744	630	309	1413	630	823	0	0	441	764	746
V/C Ratio(X)	0.28	0.61	0.09	0.16	0.27	0.17	0.62	0.00	0.00	0.29	0.30	0.31
Avail Cap(c_a), veh/h	422	744	630	309	1413	630	823	0	0	441	764	746
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.3	14.0	10.9	19.7	11.8	11.3	13.1	0.0	0.0	12.3	10.8	10.8
Incr Delay (d2), s/veh	1.7	3.7	0.3	1.1	0.5	0.6	3.5	0.0	0.0	1.7	1.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	4.3	0.4	0.6	1.4	0.8	4.7	0.0	0.0	1.1	1.7	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.0	17.7	11.2	20.9	12.3	11.9	16.5	0.0	0.0	13.9	11.8	11.9
LnGrp LOS	B	B	B	C	B	B	B	A	A	B	B	B
Approach Vol, veh/h	628			544			508			593		
Approach Delay, s/veh	17.0			13.0			16.5			12.3		
Approach LOS	B			B			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	29.0			31.0			29.0			31.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	24.5			26.5			24.5			26.5		
Max Q Clear Time (g_c+I1), s	13.8			12.4			16.6			15.5		
Green Ext Time (p_c), s	2.4			2.7			1.7			2.2		
Intersection Summary												
HCM 6th Ctrl Delay	14.7											
HCM 6th LOS	B											

Lanes, Volumes, Timings
16: Monroe St. & 50th Avenue

EAPC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	415	37	16	307	125	30	522	57	130	396	42
Future Volume (vph)	60	415	37	16	307	125	30	522	57	130	396	42
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	20.5	20.5	20.5	20.5	20.5	11.5	11.5	20.5		11.5	20.5	
Total Split (s)	26.0	26.0	26.0	26.0	26.0	12.4	11.5	21.6		12.4	22.5	
Total Split (%)	43.3%	43.3%	43.3%	43.3%	43.3%	20.7%	19.2%	36.0%		20.7%	37.5%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag						Lead	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

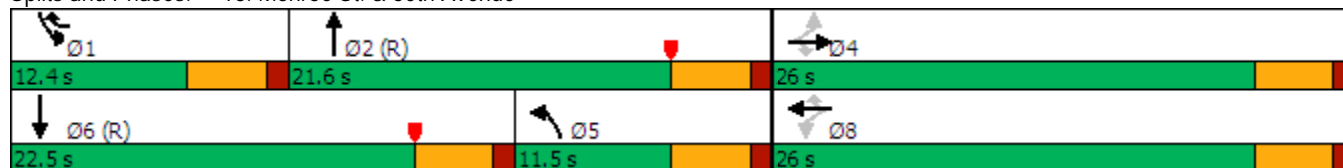
Actuated Cycle Length: 60

Offset: 14.6 (24%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

























Control Type: Actuated-Coordinated

Splits and Phases: 16: Monroe St. & 50th Avenue



















HCM 6th Signalized Intersection Summary
16: Monroe St. & 50th Avenue

EAPC (2021) PM Peak hour





												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	415	37	16	307	125	30	522	57	130	396	42
Future Volume (veh/h)	60	415	37	16	307	125	30	522	57	130	396	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	67	461	41	18	341	139	33	580	63	144	440	47
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	259	565	479	189	565	656	314	1181	128	198	973	103
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.18	0.38	0.37	0.11	0.31	0.30
Sat Flow, veh/h	915	1821	1543	896	1821	1543	1734	3149	341	1734	3155	336
Grp Volume(v), veh/h	67	461	41	18	341	139	33	318	325	144	240	247
Grp Sat Flow(s),veh/h/ln	915	1821	1543	896	1821	1543	1734	1730	1760	1734	1730	1761
Q Serve(g_s), s	4.0	14.0	1.1	1.1	9.5	3.4	1.0	8.4	8.5	4.8	6.7	6.8
Cycle Q Clear(g_c), s	13.6	14.0	1.1	15.2	9.5	3.4	1.0	8.4	8.5	4.8	6.7	6.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		0.19
Lane Grp Cap(c), veh/h	259	565	479	189	565	656	314	649	660	198	533	543
V/C Ratio(X)	0.26	0.82	0.09	0.10	0.60	0.21	0.10	0.49	0.49	0.73	0.45	0.45
Avail Cap(c_a), veh/h	310	668	566	239	668	742	314	649	660	243	533	543
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.3	19.1	14.7	26.1	17.6	10.9	20.5	14.3	14.4	25.7	16.7	16.7
Incr Delay (d2), s/veh	0.5	6.7	0.1	0.2	1.1	0.2	0.1	2.6	2.6	8.1	2.7	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	5.8	0.3	0.2	3.4	0.9	0.3	3.0	3.1	2.2	2.6	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.8	25.8	14.7	26.3	18.7	11.1	20.6	17.0	17.0	33.8	19.4	19.5
LnGrp LOS	C	C	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h	569			498			676			631		
Approach Delay, s/veh	24.8			16.8			17.2			22.7		
Approach LOS	C			B			B			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.9	26.5		22.6	14.9	22.5		22.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.9	17.1		21.5	7.0	18.0		21.5				
Max Q Clear Time (g_c+I1), s	6.8	10.5		16.0	3.0	8.8		17.2				
Green Ext Time (p_c), s	0.0	1.9		1.5	0.0	1.7		1.0				
Intersection Summary												
HCM 6th Ctrl Delay	20.4											
HCM 6th LOS	C											

Lanes, Volumes, Timings
17: Jackson St. & 58th Avenue

EAPC (2021) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	115	7	0	70	8	10	149	14	5	136	15
Future Volume (vph)	30	115	7	0	70	8	10	149	14	5	136	15
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		5266			1079			1013			510	
Travel Time (s)		71.8			14.7			12.6			6.3	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	9.8
Intersection LOS	A










Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	115	7	0	70	8	10	149	14	5	136	15
Future Vol, veh/h	30	115	7	0	70	8	10	149	14	5	136	15
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	146	9	0	89	10	13	189	18	6	172	19
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.1	9.1	10	9.8
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	20%	0%	3%
Vol Thru, %	86%	76%	90%	87%
Vol Right, %	8%	5%	10%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	173	152	78	156
LT Vol	10	30	0	5
Through Vol	149	115	70	136
RT Vol	14	7	8	15
Lane Flow Rate	219	192	99	197
Geometry Grp	1	1	1	1
Degree of Util (X)	0.297	0.272	0.141	0.269
Departure Headway (Hd)	4.884	5.082	5.147	4.897
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	729	700	688	727
Service Time	2.962	3.164	3.241	2.977
HCM Lane V/C Ratio	0.3	0.274	0.144	0.271
HCM Control Delay	10	10.1	9.1	9.8
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	1.2	1.1	0.5	1.1




Lanes, Volumes, Timings
18: Avenue 60 & S. Access

EAPC (2021) PM Peak hour

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	11	6	0
Future Volume (vph)	0	0	0	11	6	0
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		25	
Link Distance (ft)		207	1772		380	
Travel Time (s)		3.5	30.2		10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Int Delay, s/veh 3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	11	6	0
Future Vol, veh/h	0	0	0	11	6	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	12	7	0







Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	12	0	0 6 6
Stage 1	-	-	- 6 -
Stage 2	-	-	- 0 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1607	-	- 1015 1077
Stage 1	-	-	- 1017 -
Stage 2	-	-	- - -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1607	-	- 1015 1077
Mov Cap-2 Maneuver	-	-	- 1015 -
Stage 1	-	-	- 1017 -
Stage 2	-	-	- - -

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1607	-	-	-	1015
HCM Lane V/C Ratio	-	-	-	-	0.006
HCM Control Delay (s)	0	-	-	-	8.6
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0







Lanes, Volumes, Timings
19: Madison St. & Main Access

EAPC (2021) PM Peak hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	28	3	14	242	389	30
Future Volume (vph)	28	3	14	242	389	30
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100	0	150			0
Storage Lanes	1	1	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	25			50	50	
Link Distance (ft)	499			880	149	
Travel Time (s)	13.6			12.0	2.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
19: Madison St. & Main Access

EAPC (2021) PM Peak hour

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	28	3	14	242	389	30
Future Vol, veh/h	28	3	14	242	389	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	3	15	263	423	33











Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	602	228	456	0	-	0
Stage 1	440	-	-	-	-	-
Stage 2	162	-	-	-	-	-
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	431	775	1101	-	-	-
Stage 1	616	-	-	-	-	-
Stage 2	850	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	425	775	1101	-	-	-
Mov Cap-2 Maneuver	503	-	-	-	-	-
Stage 1	607	-	-	-	-	-
Stage 2	850	-	-	-	-	-





Approach	EB	NB	SB
HCM Control Delay, s	12.3	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1101	-	503	775	-	-
HCM Lane V/C Ratio	0.014	-	0.061	0.004	-	-
HCM Control Delay (s)	8.3	-	12.6	9.7	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	0	-	-

Lanes, Volumes, Timings
20: Project Access 1 & Avenue 58











EAPC (2021) PM Peak hour

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	249	4	13	214	12	6
Future Volume (vph)	249	4	13	214	12	6
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)		0	50		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			60		60	
Link Speed (mph)	50			50	25	
Link Distance (ft)	403			335	383	
Travel Time (s)	5.5			4.6	10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	249	4	13	214	12	6
Future Vol, veh/h	249	4	13	214	12	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	271	4	14	233	13	7
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	275	0	418	273
Stage 1	-	-	-	-	273	-
Stage 2	-	-	-	-	145	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1287	-	577	765
Stage 1	-	-	-	-	772	-
Stage 2	-	-	-	-	868	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1287	-	571	765
Mov Cap-2 Maneuver	-	-	-	-	626	-
Stage 1	-	-	-	-	764	-
Stage 2	-	-	-	-	868	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.4		10.6	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	666	-	-	1287	-	
HCM Lane V/C Ratio	0.029	-	-	0.011	-	
HCM Control Delay (s)	10.6	-	-	7.8	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	

Lanes, Volumes, Timings
21: Project Access 2 & Avenue 58










EAPC (2021) PM Peak hour

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations				 		
Traffic Volume (vph)	248	7	0	227	0	7
Future Volume (vph)	248	7	0	227	0	7
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	50			50	25	
Link Distance (ft)	335			276	233	
Travel Time (s)	4.6			3.8	6.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↱↱		↱
Traffic Vol, veh/h	248	7	0	227	0	7
Future Vol, veh/h	248	7	0	227	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	270	8	0	247	0	8
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	274
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	-	-	0	-	0	764
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	764
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		9.8	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	764	-	-	-		
HCM Lane V/C Ratio	0.01	-	-	-		
HCM Control Delay (s)	9.8	-	-	-		
HCM Lane LOS	A	-	-	-		
HCM 95th %tile Q(veh)	0	-	-	-		

Lanes, Volumes, Timings
22: Madison St. & Project Access 3

EAPC (2021) PM Peak hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	9	0	270	410	9
Future Volume (vph)	0	9	0	270	410	9
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	25			50	50	
Link Distance (ft)	210			245	288	
Travel Time (s)	5.7			3.3	3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
22: Madison St. & Project Access 3

EAPC (2021) PM Peak hour

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	9	0	270	410	9
Future Vol, veh/h	0	9	0	270	410	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	10	0	293	446	10
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	228	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	775	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	775	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.7	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT EBLn1		SBT	SBR		
Capacity (veh/h)	- 775		-	-		
HCM Lane V/C Ratio	- 0.013		-	-		
HCM Control Delay (s)	- 9.7		-	-		
HCM Lane LOS	- A		-	-		
HCM 95th %tile Q(veh)	- 0		-	-		

APPENDIX 6.6:

**EAC (2021) WITHOUT AND WITH PROJECT PHASE 1 CONDITIONS
TRAFFIC SIGNAL WARRANTS ANALYSIS WORKSHEETS**

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WITHOUT PROJECT CONDITIONS

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAC PHASE 1 (2021) AM PEAK HOUR WARRANTS**

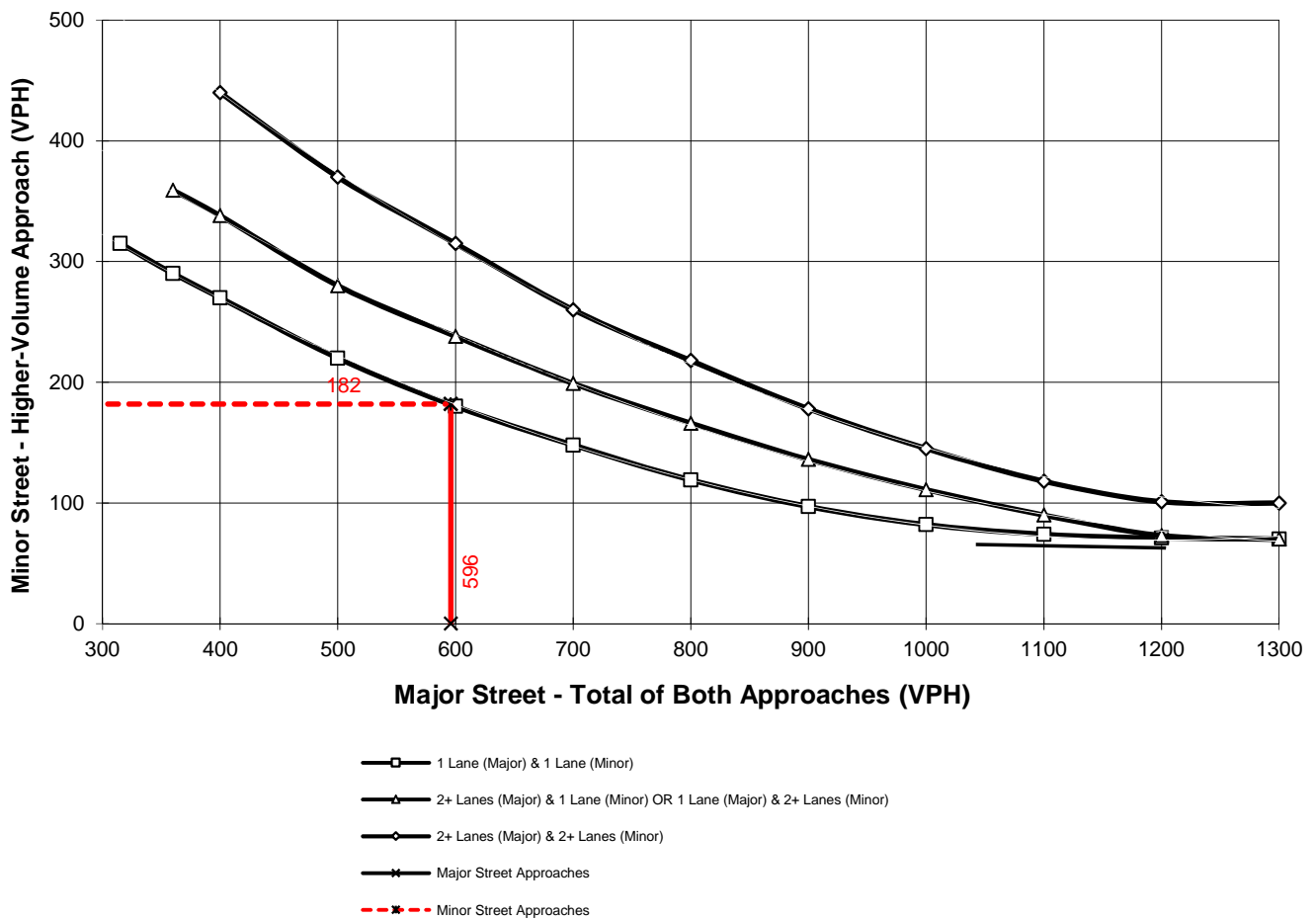
Major Street Name = **Madison St.**

Total of Both Approaches (VPH) = **596**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Avenue 58**

High Volume Approach (VPH) = **182**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #1

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAC PHASE 1 (2021) PM PEAK HOUR WARRANTS**

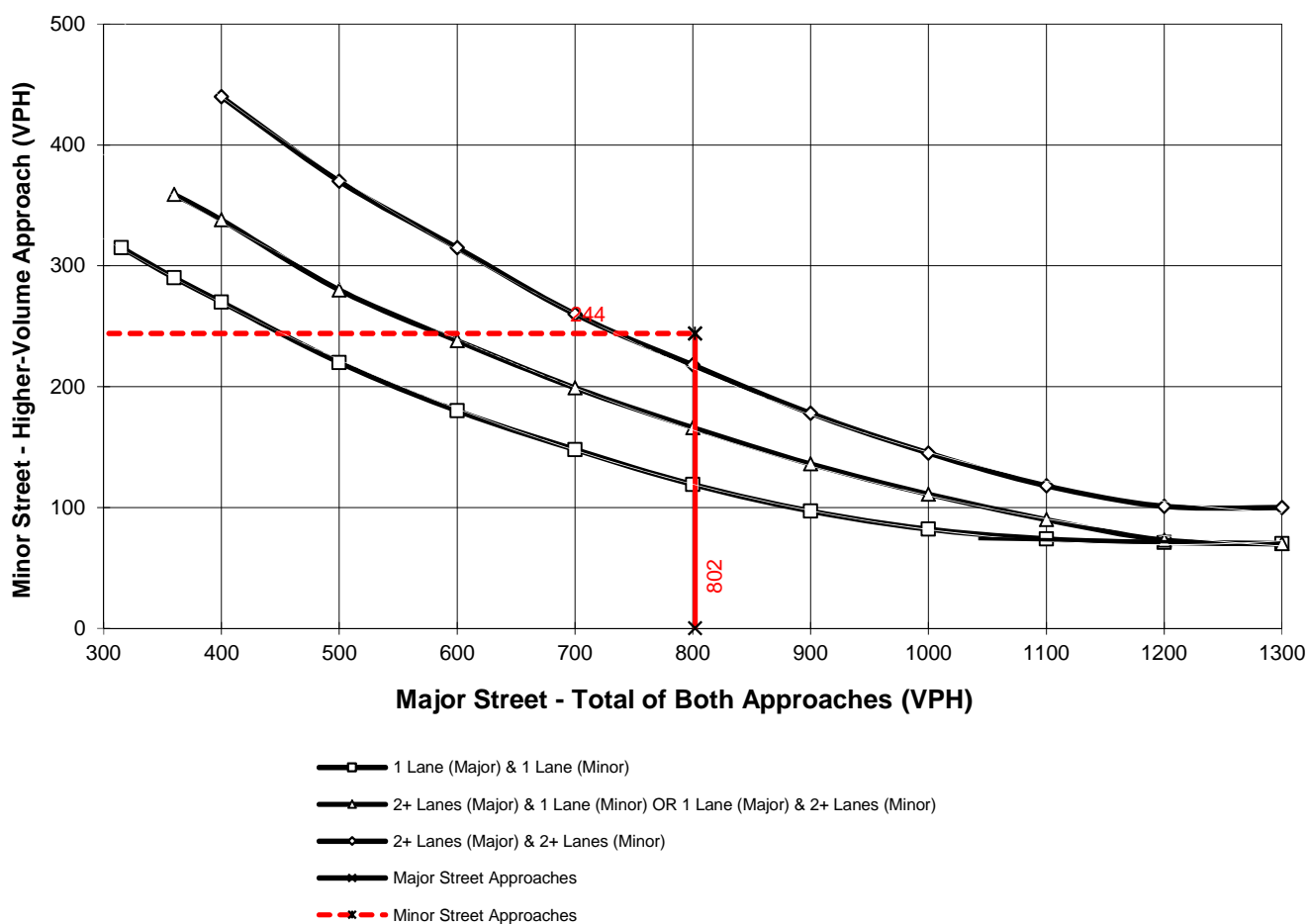
Major Street Name = **Madison St.**

Total of Both Approaches (VPH) = **802**
Number of Approach Lanes Major Street = **3**

Minor Street Name = **Avenue 58**

High Volume Approach (VPH) = **244**
Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #1

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAC PHASE 1 (2021) AM PEAK HOUR WARRANTS**

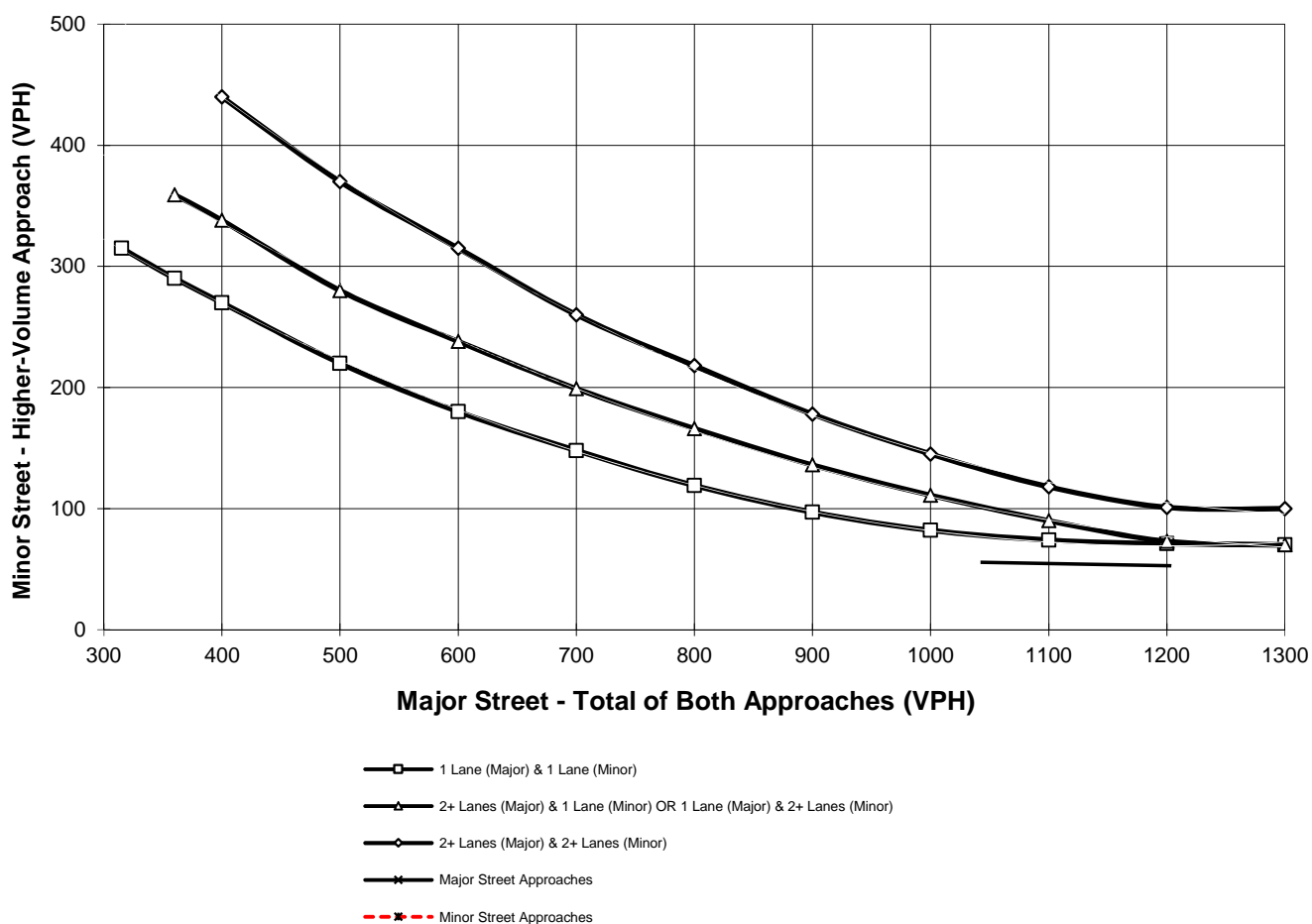
Major Street Name = **Avenue 60**

Total of Both Approaches (VPH) = **190**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Madison St.**

High Volume Approach (VPH) = **179**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #10

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = EAC PHASE 1 (2021) PM PEAK HOUR WARRANTS

Major Street Name = Madison St.

Total of Both Approaches (VPH) = 267

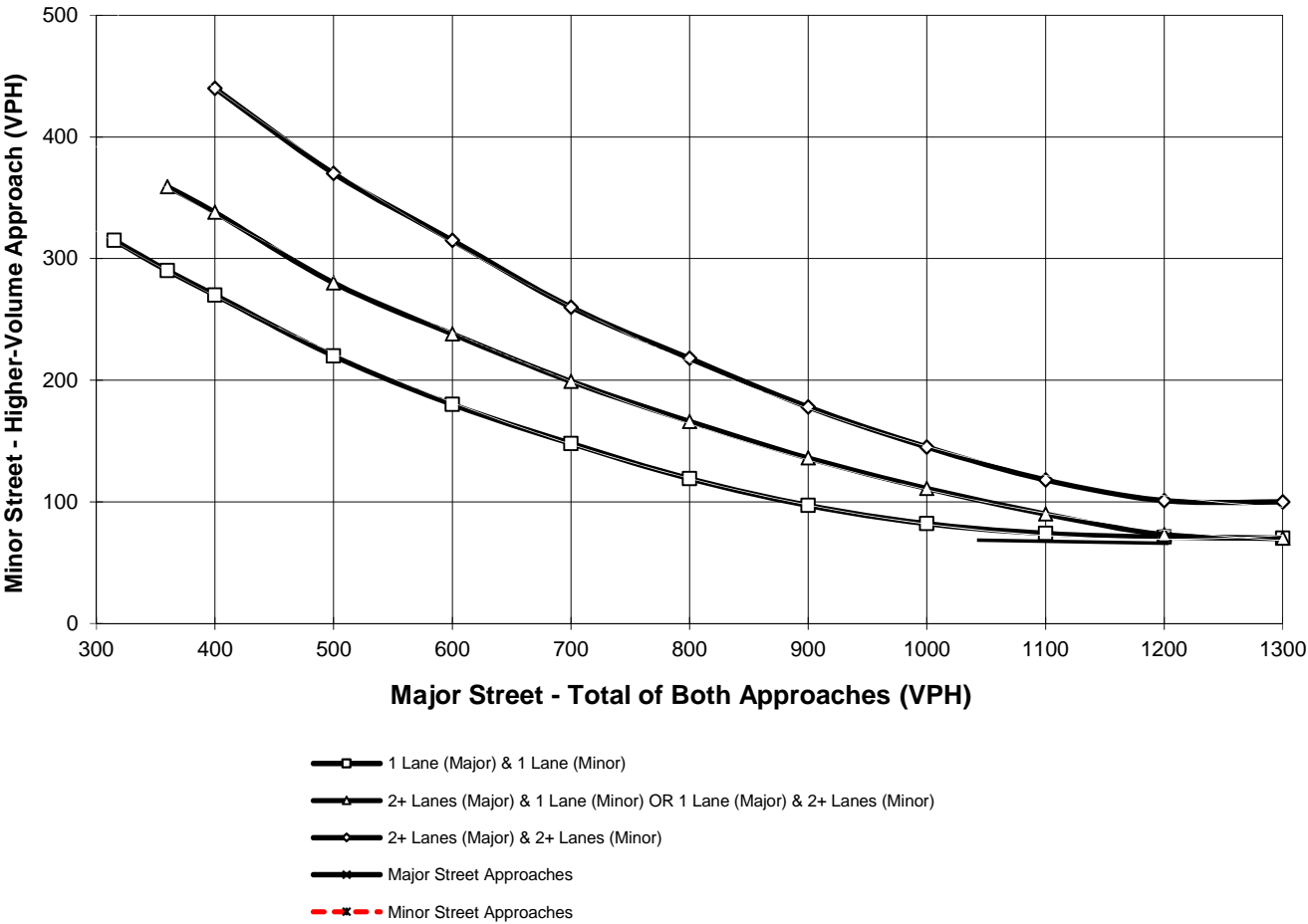
Number of Approach Lanes Major Street = 2

Minor Street Name = Avenue 60

High Volume Approach (VPH) = 127

Number of Approach Lanes Minor Street = 1

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold 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 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAC PHASE 1 (2021) PM PEAK HOUR WARRANTS**

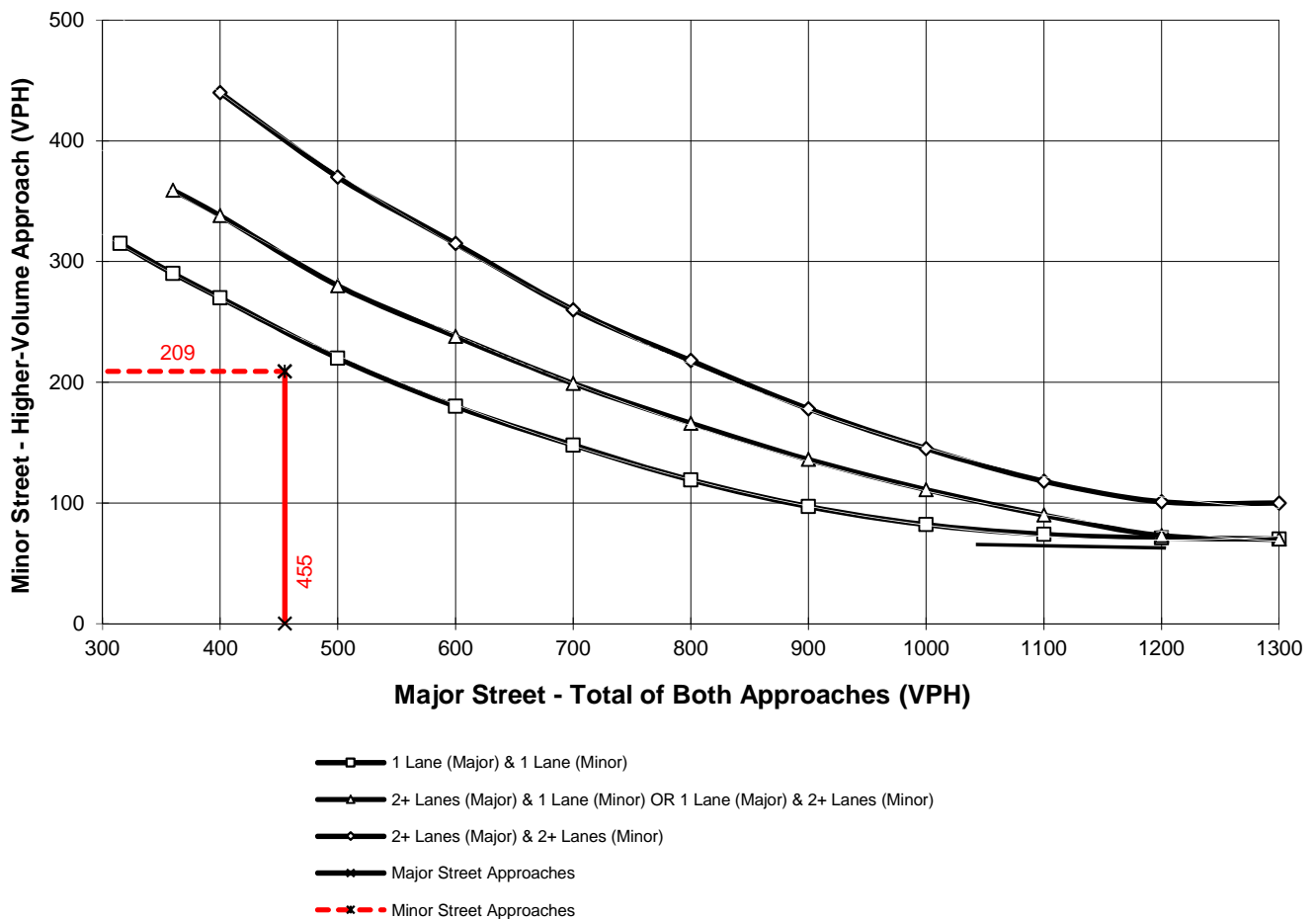
Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **455**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Avenue 60**

High Volume Approach (VPH) = **209**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #11

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

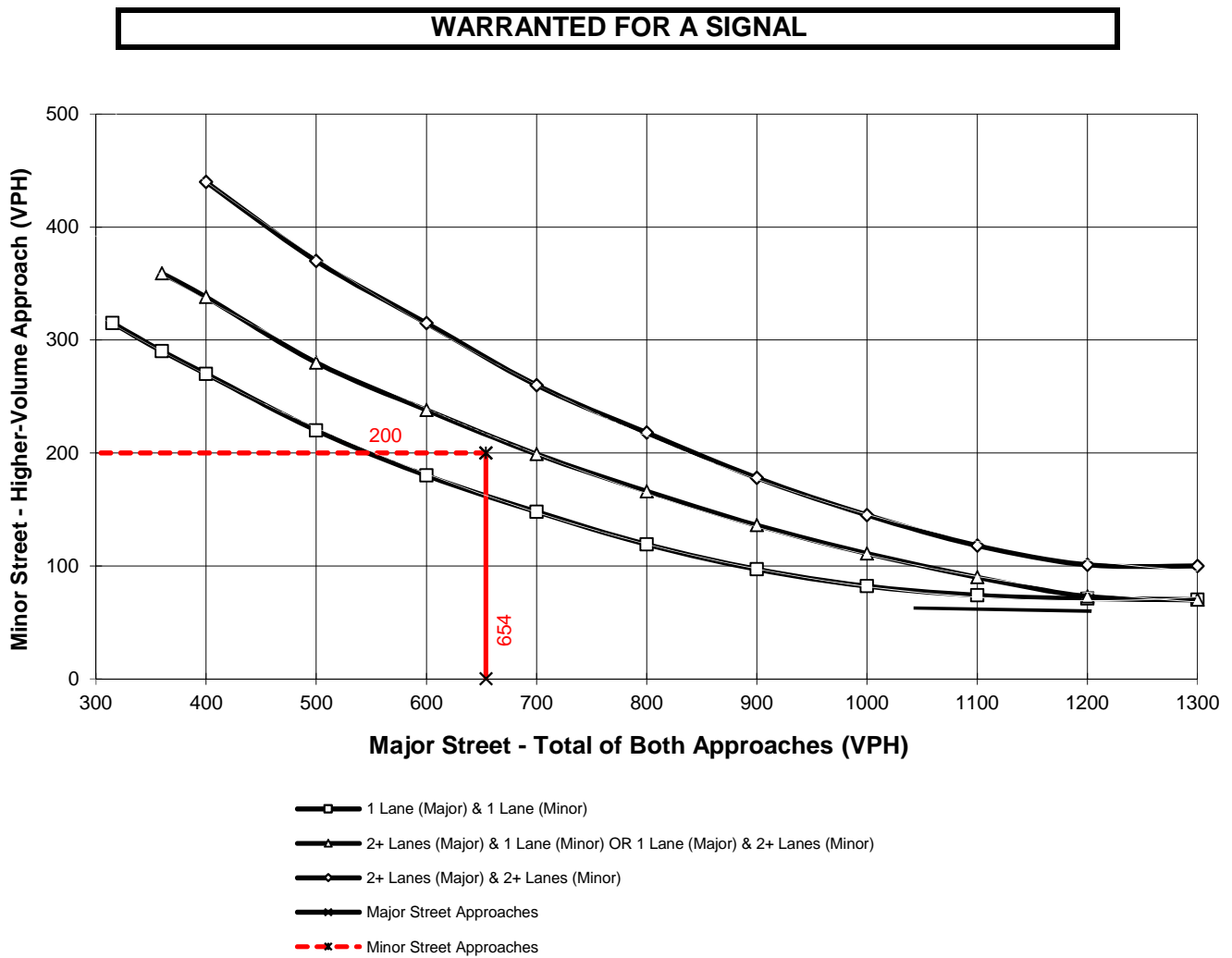
Traffic Conditions = **EAC PHASE 1 (2021) PM PEAK HOUR WARRANTS**

Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **654**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Avenue 58**

High Volume Approach (VPH) = **200**
Number of Approach Lanes Minor Street = **1**



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #12

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAC PHASE 1 (2021) AM PEAK HOUR WARRANTS**

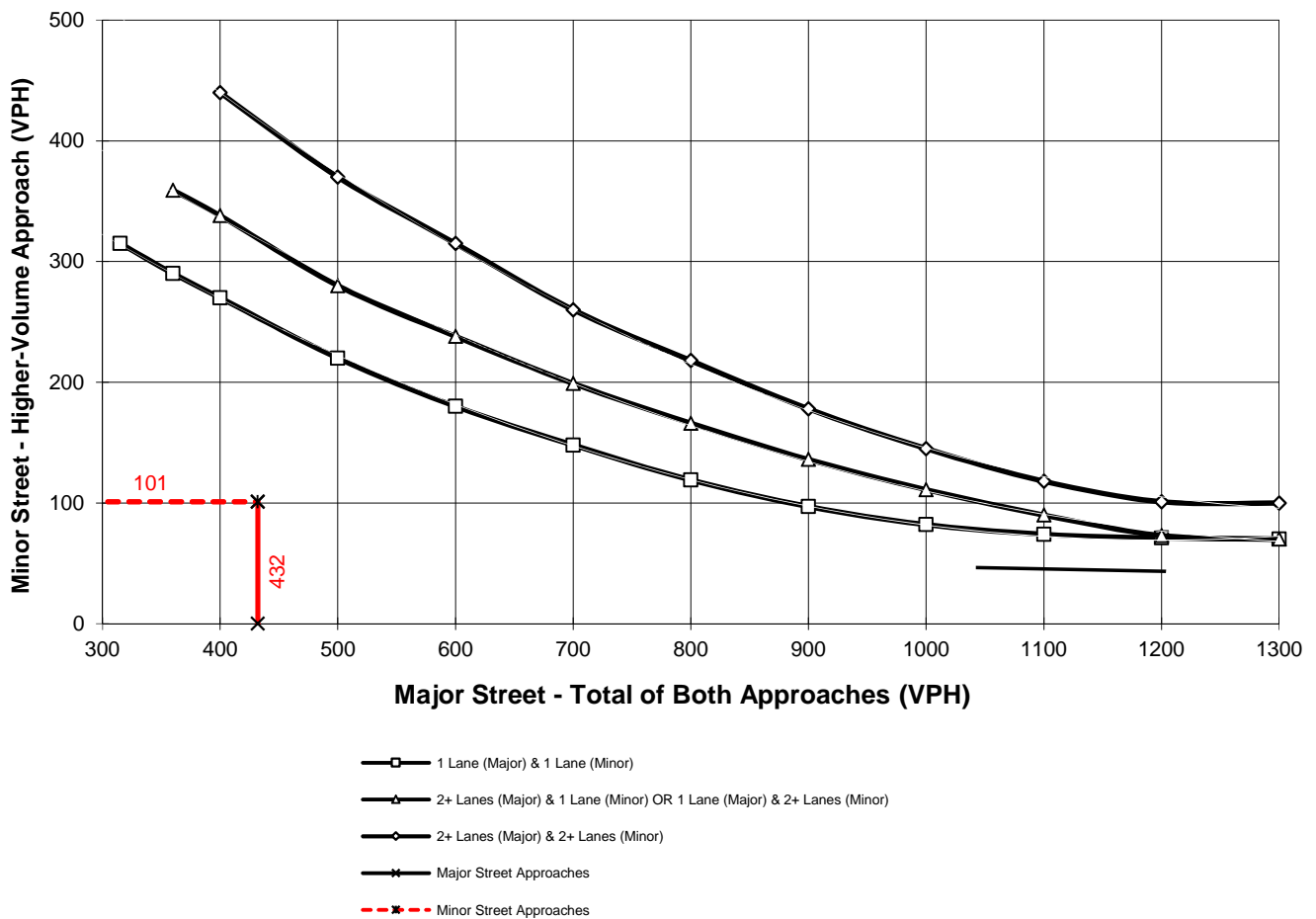
Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **432**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Airport Blvd.**

High Volume Approach (VPH) = **101**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #13

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAC PHASE 1 (2021) PM PEAK HOUR WARRANTS**

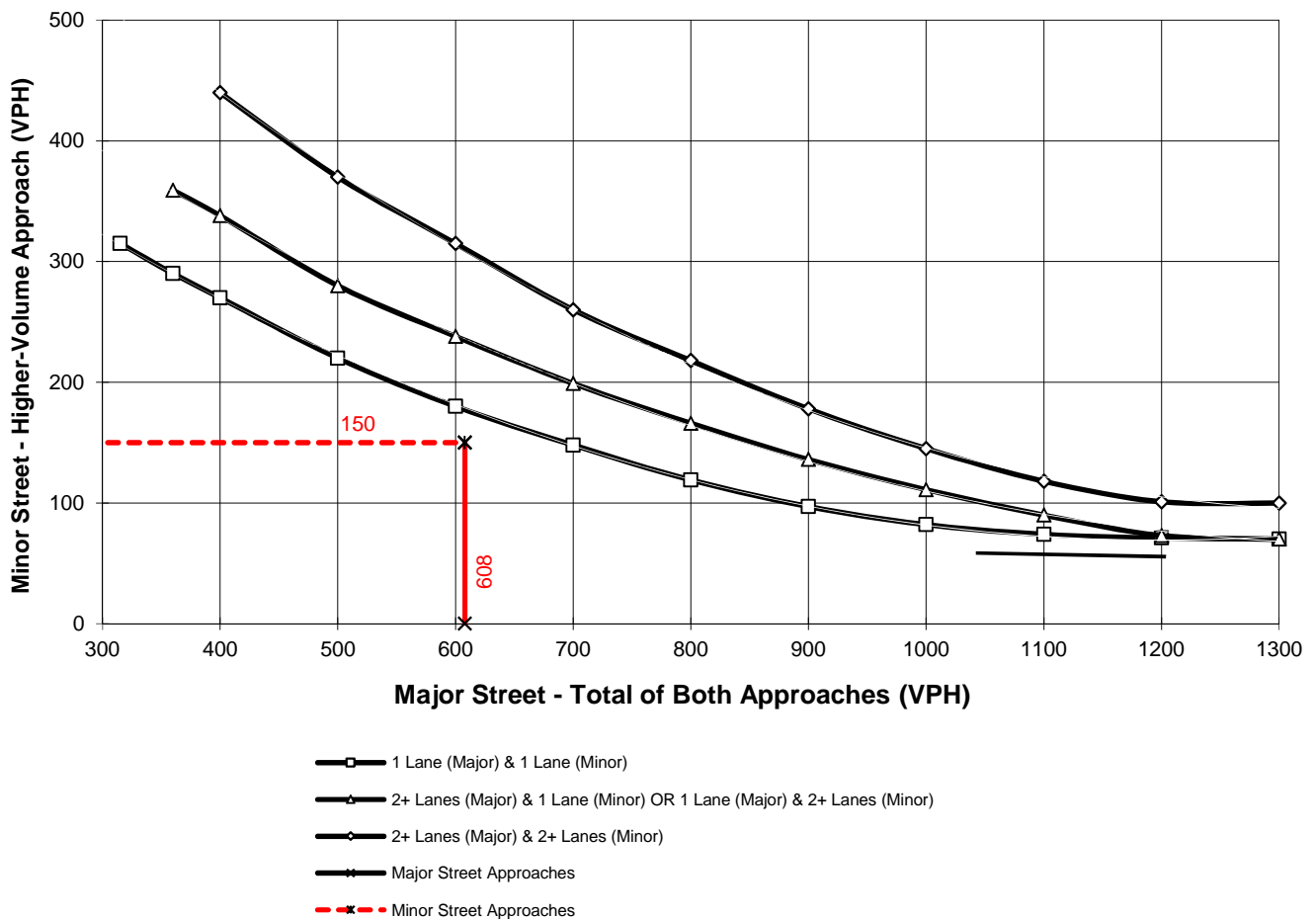
Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **608**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Airport Blvd.**

High Volume Approach (VPH) = **150**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #13

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAC PHASE 1 (2021) AM PEAK HOUR WARRANTS**

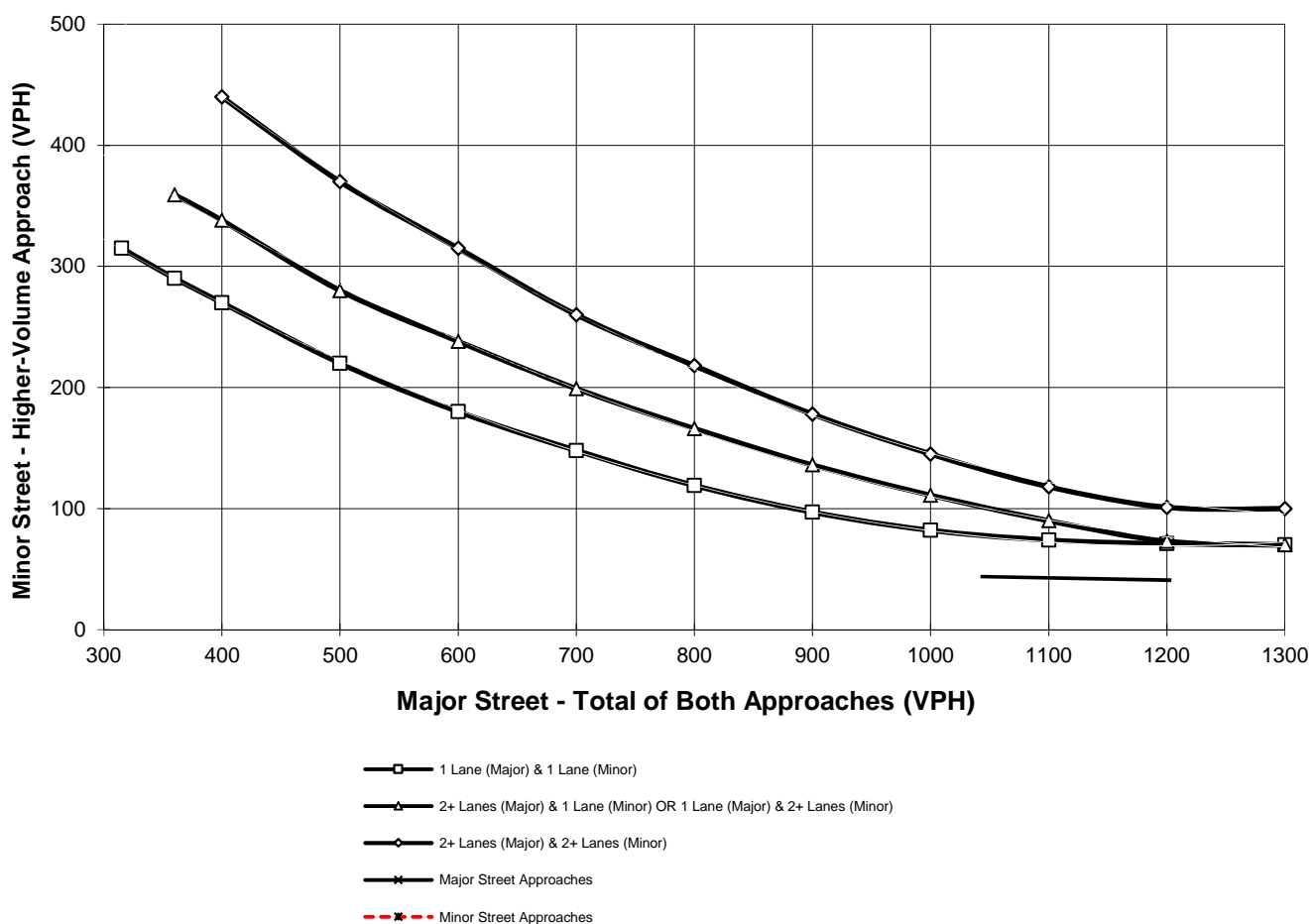
Major Street Name = **Jackson St.**

Total of Both Approaches (VPH) = **233**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **58th Avenue**

High Volume Approach (VPH) = **70**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #17

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAC PHASE 1 (2021) PM PEAK HOUR WARRANTS**

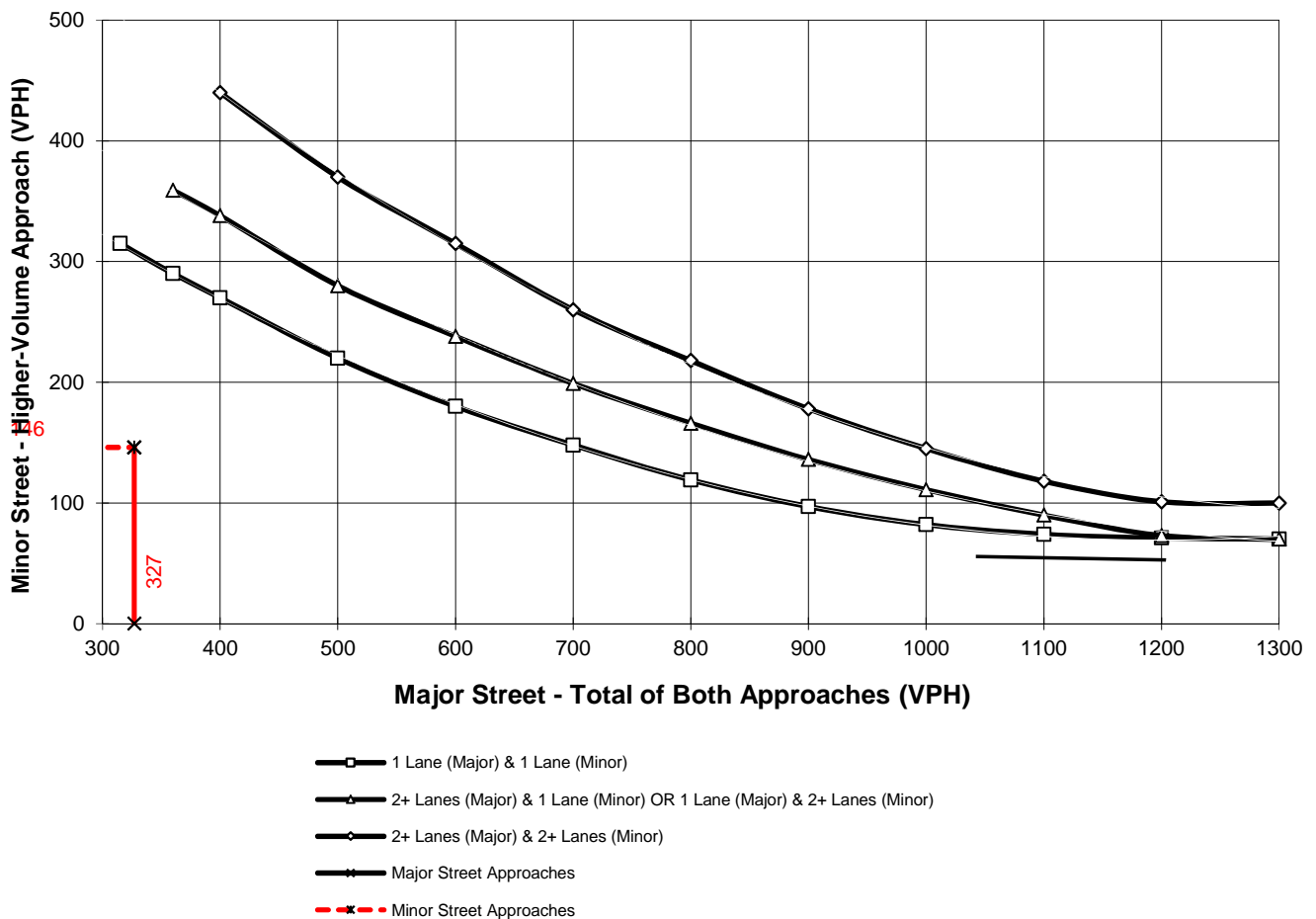
Major Street Name = **Jackson St.**

Total of Both Approaches (VPH) = **327**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **58th Avenue**

High Volume Approach (VPH) = **146**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #17

WITH PROJECT CONDITIONS

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAPC PHASE 1 (2021) AM PEAK HOUR WARRANTS**

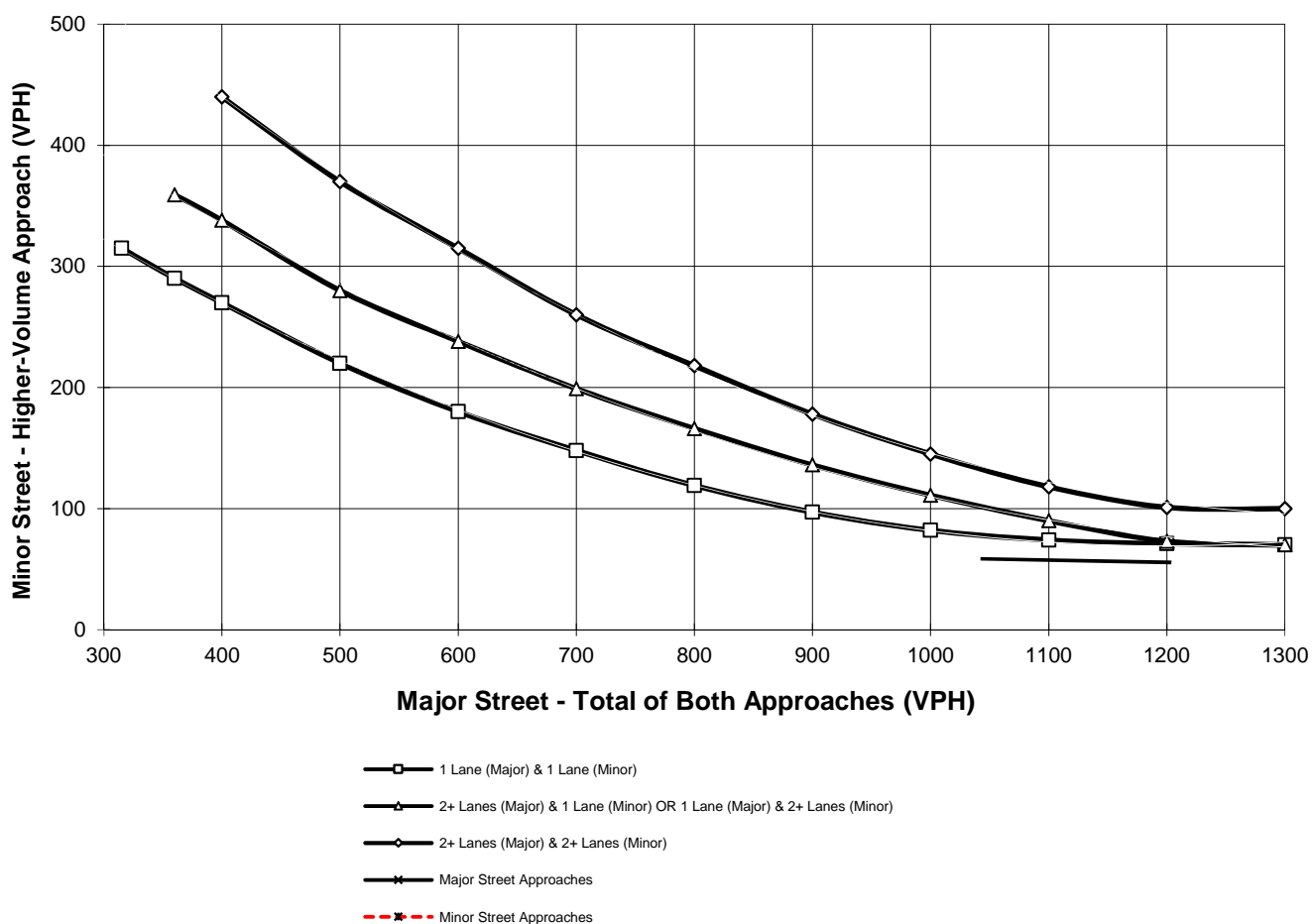
Major Street Name = **Avenue 60**

Total of Both Approaches (VPH) = **211**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Madison St.**

High Volume Approach (VPH) = **184**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #10

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions =
EAPC PHASE 1 (2021) PM PEAK HOUR WARRANTS

Major Street Name =
Madison St.

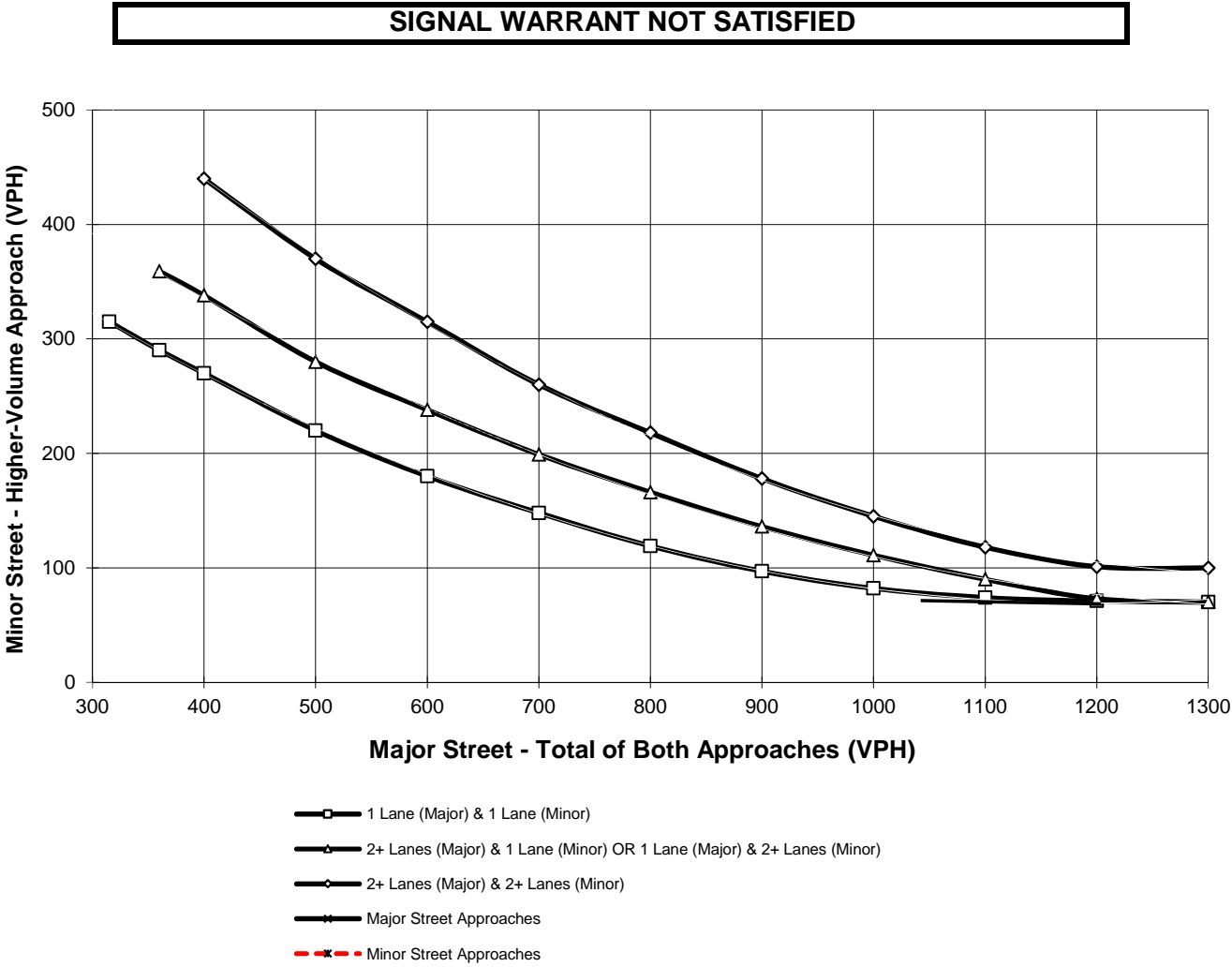
Minor Street Name =
Avenue 60

Total of Both Approaches (VPH) =
279

Number of Approach Lanes Major Street =
2

High Volume Approach (VPH) =
141

Number of Approach Lanes Minor Street =
1



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold 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 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAPC PHASE 1 (2021) AM PEAK HOUR WARRANTS**

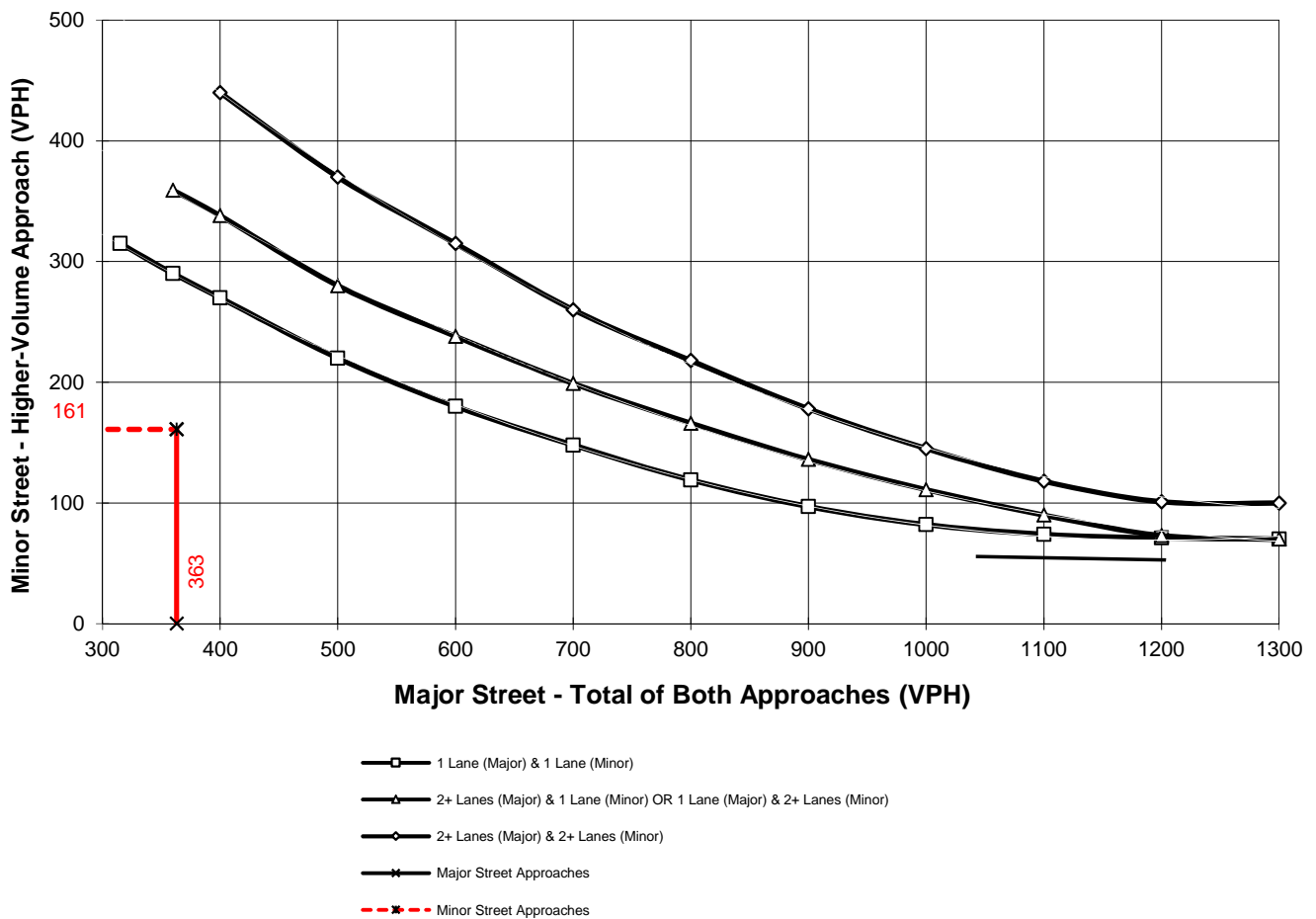
Major Street Name = **Avenue 60**

Total of Both Approaches (VPH) = **363**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Monroe St.**

High Volume Approach (VPH) = **161**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #11

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAPC PHASE 1 (2021) PM PEAK HOUR WARRANTS**

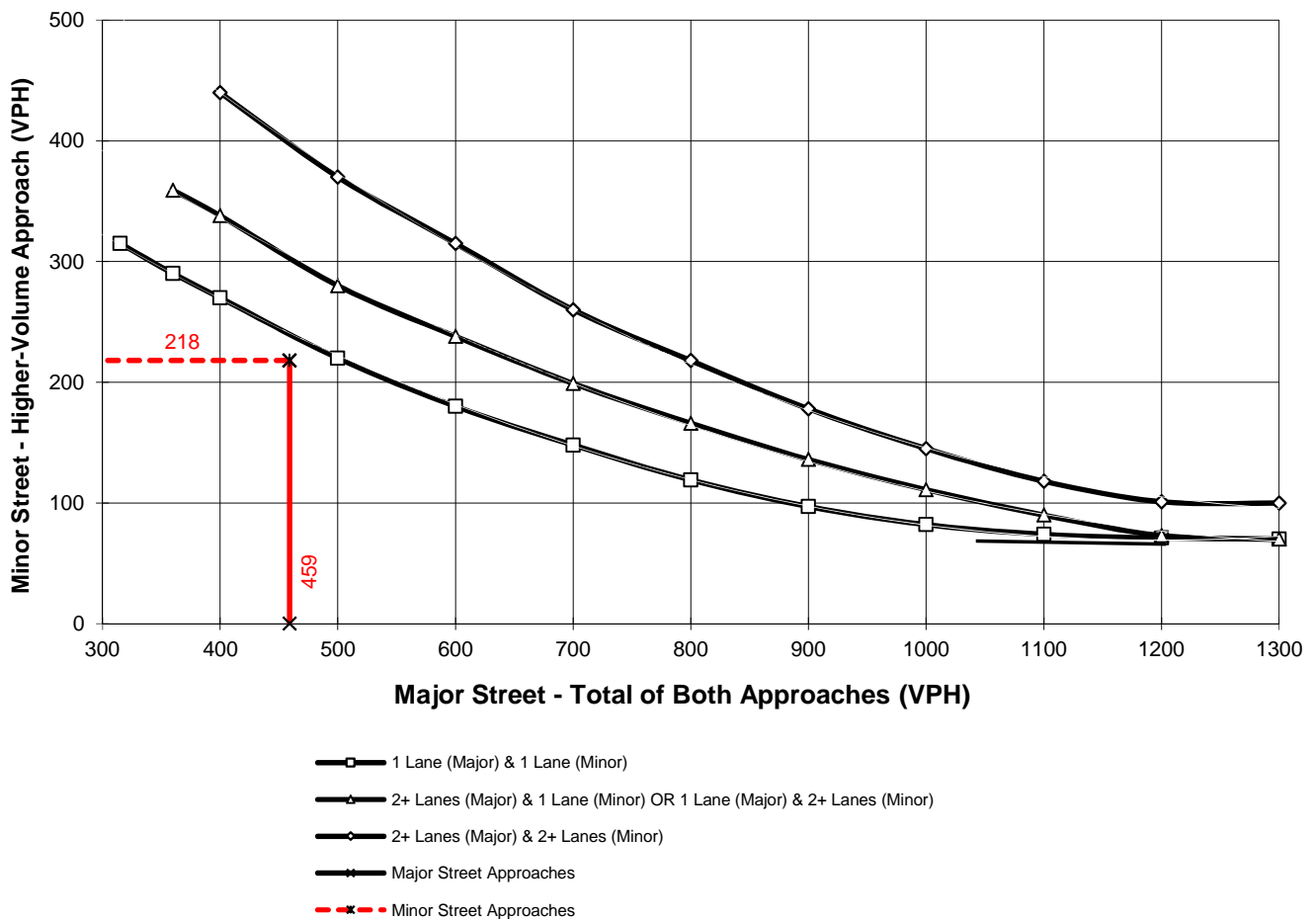
Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **459**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Avenue 60**

High Volume Approach (VPH) = **218**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #11

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAPC PHASE 1 (2021) AM PEAK HOUR WARRANTS**

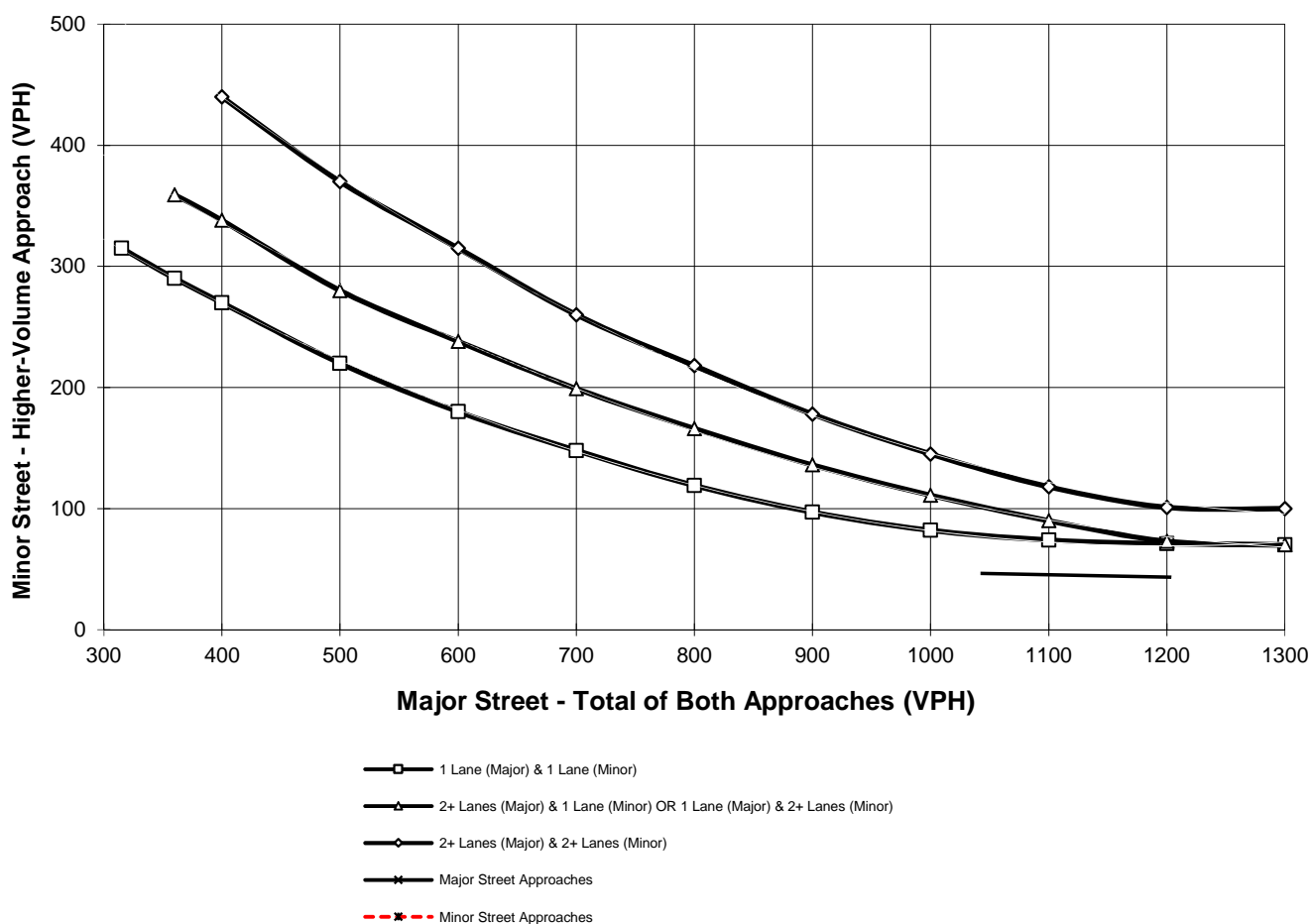
Major Street Name = **Jackson St.**

Total of Both Approaches (VPH) = **234**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **58th Avenue**

High Volume Approach (VPH) = **78**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #17

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAPC PHASE 1 (2021) PM PEAK HOUR WARRANTS**

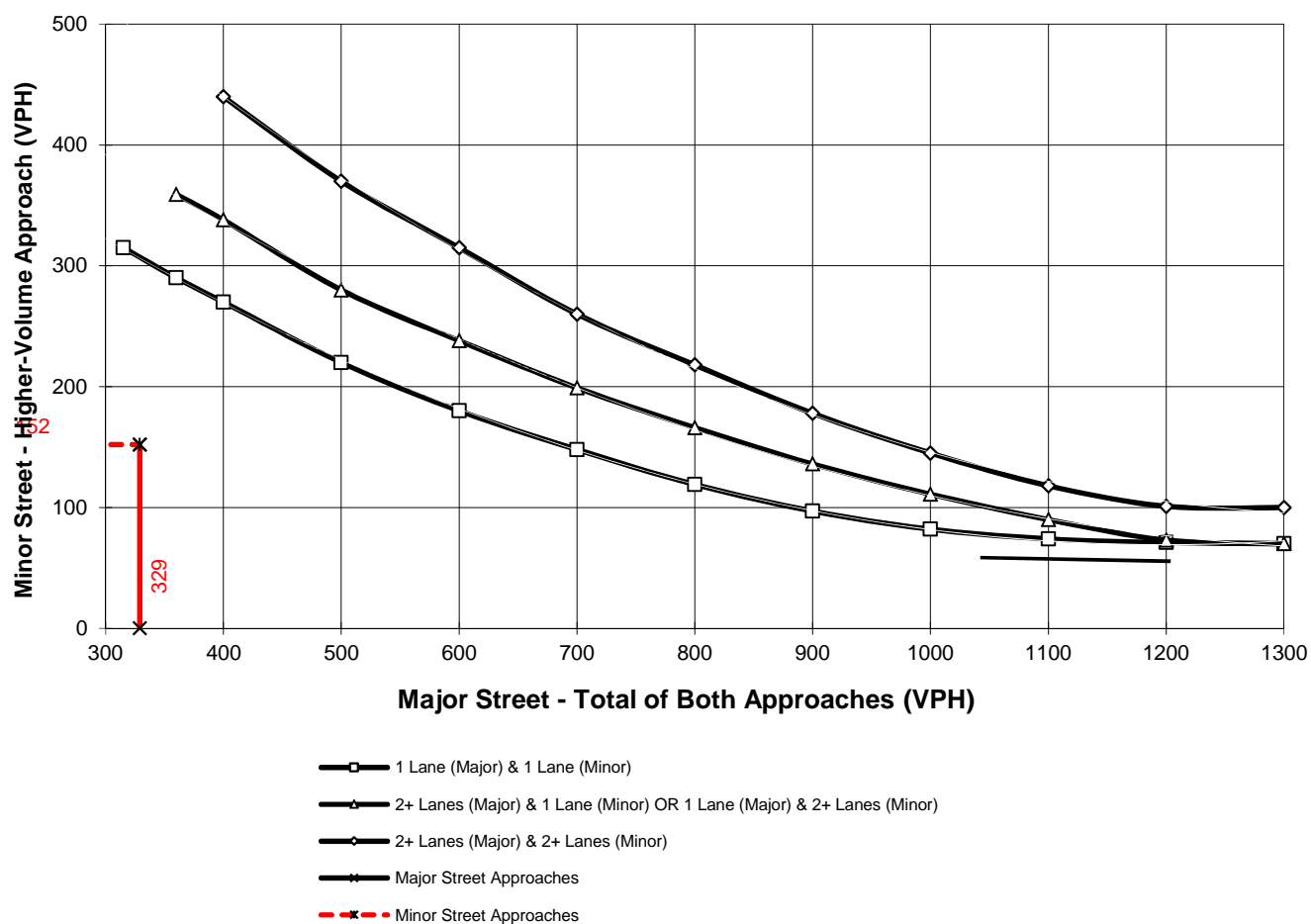
Major Street Name = **Jackson St.**

Total of Both Approaches (VPH) = **329**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **58th Avenue**

High Volume Approach (VPH) = **152**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #17

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	CALC	TRAFFIC CONDITIONS	EAPC (2021)
Jurisdiction: <u>City of La Quinta</u>				CHK	<u>JC</u>	DATE <u>10/08/19</u>
Major Street: <u>Madison St.</u>						DATE
Minor Street: <u>Main Access</u>						
					Critical Approach Speed (Major)	<u>50</u> mph
					Critical Approach Speed (Minor)	<u>30</u> mph
Major Street Approach Lanes = <u>2</u> lane				Minor Street Approach Lanes: <u>1</u> lane		
Major Street Future ADT = <u>7,072</u> vpd				Minor Street Future ADT = <u>511</u> vpd		
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						<input checked="" type="checkbox"/>
						or
In built up area of isolated community of < 10,000 population						<input type="checkbox"/>

RURAL (R)**(Based on Estimated Average Daily Traffic - See Note)**

<u>URBAN</u>		<u>RURAL</u>		Minimum Requirements			
CONDITION A - Minimum Vehicular Volume		XX		ADT			
<u>Satisfied</u>		<u>Not Satisfied</u>		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
		XX					
Number of lanes for moving traffic on each approach				<u>Urban</u>		<u>Urban</u>	
<u>Major Street</u>		<u>Minor Street</u>		<u>Rural</u>		<u>Rural</u>	
1		1		8,000		2,400	
2 + 7,072		1 511		9,600		2,400	
2 +		2 +		9,600		3,200	
1		2 +		8,000		3,200	
CONDITION B - Interruption of Continuous Traffic				Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>		<u>Not Satisfied</u>					
		XX					
Number of lanes for moving traffic on each approach				<u>Urban</u>		<u>Urban</u>	
<u>Major Street</u>		<u>Minor Street</u>		<u>Rural</u>		<u>Rural</u>	
1		1		12,000		1,200	
2 + 7,072		1 511		14,400		1,200	
2 +		2 +		14,400		1,600	
1		2 +		12,000		1,600	
Combination of CONDITIONS A + B				2 CONDITIONS 80%		2 CONDITIONS 80%	
<u>Satisfied</u>		<u>Not Satisfied</u>					
		XX					
No one condition satisfied, but following conditions fulfilled 80% of more							

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APPENDIX 6.7:

EAC (2023) WITHOUT AND WITH PROJECT PHASE 2 CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

























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WITHOUT PROJECT CONDITIONS










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Lanes, Volumes, Timings
1: Madison St. & Avenue 58

EAC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	113	65	7	10	62	65	18	252	6	84	225	69
Future Volume (vph)	113	65	7	10	62	65	18	252	6	84	225	69
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	11.4
Intersection LOS	B















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	113	65	7	10	62	65	18	252	6	84	225	69
Future Vol, veh/h	113	65	7	10	62	65	18	252	6	84	225	69
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	120	69	7	11	66	69	19	268	6	89	239	73
Number of Lanes	1	1	1	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	11.8	10.6	11.8	11.3
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	93%	0%	100%	0%	0%	100%	24%	0%	100%
Vol Right, %	0%	0%	7%	0%	0%	100%	0%	0%	76%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	18	168	90	113	65	7	10	41	86	84	150
LT Vol	18	0	0	113	0	0	10	0	0	84	0
Through Vol	0	168	84	0	65	0	0	41	21	0	150
RT Vol	0	0	6	0	0	7	0	0	65	0	0
Lane Flow Rate	19	179	96	120	69	7	11	44	91	89	160
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.038	0.328	0.174	0.248	0.133	0.013	0.022	0.086	0.165	0.172	0.284
Departure Headway (Hd)	7.102	6.602	6.555	7.412	6.912	6.212	7.567	7.067	6.536	6.911	6.411
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	502	543	545	483	517	573	471	504	546	517	559
Service Time	4.869	4.369	4.322	5.183	4.683	3.983	5.346	4.846	4.315	4.674	4.174
HCM Lane V/C Ratio	0.038	0.33	0.176	0.248	0.133	0.012	0.023	0.087	0.167	0.172	0.286
HCM Control Delay	10.2	12.6	10.7	12.6	10.8	9.1	10.5	10.5	10.6	11.1	11.7
HCM Lane LOS	B	B	B	B	B	A	B	B	B	B	B
HCM 95th-tile Q	0.1	1.4	0.6	1	0.5	0	0.1	0.3	0.6	0.6	1.2

Lanes, Volumes, Timings
2: Madison St. & Airport Bl.

EAC (2023) AM Peak hour

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	37	73	1	391	34	102	362
Future Volume (vph)	37	73	1	391	34	102	362
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		3			2		
Detector Phase	3	3	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	11.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	15.0	15.0	13.0	27.0	27.0	18.0	32.0
Total Split (%)	25.0%	25.0%	21.7%	45.0%	45.0%	30.0%	53.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary















Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 45
Control Type: Actuated-Coordinated

Splits and Phases: 2: Madison St. & Airport Bl.

 Ø1	 Ø2 (R)	 Ø3
18 s	27 s	15 s
 Ø5	 Ø6 (R)	
13 s	32 s	






























HCM 6th Signalized Intersection Summary 2: Madison St. & Airport Bl.

EAC (2023) AM Peak hour

							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	37	73	1	391	34	102	362
Future Volume (veh/h)	37	73	1	391	34	102	362
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	43	84		449	39	117	416
Peak Hour Factor	0.87	0.87		0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	192	171		2009	896	188	2615
Arrive On Green	0.11	0.11		0.61	0.61	0.11	0.79
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	43	84		449	39	117	416
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	1.4	3.1		3.5	0.6	3.9	1.7
Cycle Q Clear(g_c), s	1.4	3.1		3.5	0.6	3.9	1.7
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	192	171		2009	896	188	2615
V/C Ratio(X)	0.22	0.49		0.22	0.04	0.62	0.16
Avail Cap(c_a), veh/h	318	283		2009	896	405	2615
HCM Platoon Ratio	1.00	1.00		1.05	1.05	1.05	1.05
Upstream Filter(l)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	25.1		5.6	5.0	25.4	1.7
Incr Delay (d2), s/veh	0.6	2.2		0.3	0.1	3.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.1		0.8	0.1	1.6	0.1
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	24.9	27.2		5.9	5.1	28.8	1.8
LnGrp LOS	C	C		A	A	C	A
Approach Vol, veh/h	127			488			533
Approach Delay, s/veh	26.4			5.8			7.7
Approach LOS	C			A			A
Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	10.5	38.8				49.3	10.7
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	13.5	22.5				27.5	10.5
Max Q Clear Time (g_c+I1), s	5.9	5.5				3.7	5.1
Green Ext Time (p_c), s	0.1	2.5				2.4	0.1
Intersection Summary							
HCM 6th Ctrl Delay			9.0				
HCM 6th LOS			A				
Notes							
User approved pedestrian interval to be less than phase max green.							
User approved ignoring U-Turning movement.							

Lanes, Volumes, Timings
3: Madison St. & Avenue 54

EAC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 	 		 	
Traffic Volume (vph)	14	197	310	35	185	60	250	274	26	63	211	16
Future Volume (vph)	14	197	310	35	185	60	250	274	26	63	211	16
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											









HCM 6th AWSC
3: Madison St. & Avenue 54

EAC (2023) AM Peak hour

Intersection

Intersection Delay, s/veh33.9

Intersection LOS D























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	197	310	35	185	60	250	274	26	63	211	16
Future Vol, veh/h	14	197	310	35	185	60	250	274	26	63	211	16
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	221	348	39	208	67	281	308	29	71	237	18
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach RightNB		SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	58.8	17.8	26.8	17.9
HCM LOS	F	C	D	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	78%	0%	100%	17%	0%	100%	51%	0%	100%	81%
Vol Right, %	0%	0%	22%	0%	0%	83%	0%	0%	49%	0%	0%	19%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	250	183	117	14	131	376	35	123	122	63	141	86
LT Vol	250	0	0	14	0	0	35	0	0	63	0	0
Through Vol	0	183	91	0	131	66	0	123	62	0	141	70
RT Vol	0	0	26	0	0	310	0	0	60	0	0	16
Lane Flow Rate	281	205	132	16	148	422	39	139	137	71	158	97
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.747	0.517	0.326	0.042	0.375	1.005	0.115	0.385	0.367	0.203	0.432	0.262
Departure Headway (Hd)	9.568	9.068	8.913	9.653	9.153	8.575	10.491	10.004	9.668	10.349	9.849	9.719
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	376	396	402	370	393	422	345	363	376	346	365	369
Service Time	7.345	6.845	6.69	7.431	6.931	6.353	8.159	7.659	7.314	8.139	7.639	7.509
HCM Lane V/C Ratio	0.747	0.518	0.328	0.043	0.377	1	0.113	0.383	0.364	0.205	0.433	0.263
HCM Control Delay	35.9	21.2	16	12.9	17.4	75	14.5	18.8	17.8	15.8	20	16
HCM Lane LOS	E	C	C	B	C	F	B	C	C	C	C	C
HCM 95th-tile Q	5.9	2.9	1.4	0.1	1.7	12.7	0.4	1.8	1.6	0.7	2.1	1

Lanes, Volumes, Timings
3: Madison St. & Avenue 54

EAC (2023) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	197	310	35	185	60	250	274	26	63	211	16
Future Volume (vph)	14	197	310	35	185	60	250	274	26	63	211	16
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	30.5		11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	
Total Split (s)	14.0	43.0		15.0	44.0	44.0	28.0	42.0	42.0	20.0	34.0	
Total Split (%)	11.7%	35.8%		12.5%	36.7%	36.7%	23.3%	35.0%	35.0%	16.7%	28.3%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	Max	Max	None	Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

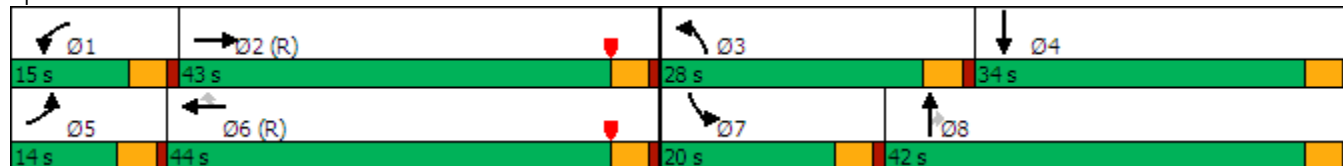
Actuated Cycle Length: 120

Offset: 54 (45%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated























Splits and Phases: 3: Madison St. & Avenue 54



HCM 6th Signalized Intersection Summary

























3: Madison St. & Avenue 54

EAC (2023) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	197	310	35	185	60	250	274	26	63	211	16
Future Volume (veh/h)	14	197	310	35	185	60	250	274	26	63	211	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	16	221	348	39	208	67	281	308	29	71	237	18
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	42	765	682	74	1593	711	350	1081	482	92	852	64
Arrive On Green	0.02	0.44	0.44	0.04	0.46	0.46	0.10	0.31	0.31	0.05	0.26	0.26
Sat Flow, veh/h	1734	1730	1543	1734	3460	1543	3365	3460	1543	1734	3261	246
Grp Volume(v), veh/h	16	221	348	39	208	67	281	308	29	71	125	130
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1734	1730	1777
Q Serve(g_s), s	1.1	9.8	19.5	2.6	4.1	2.9	9.8	8.1	1.6	4.9	6.9	7.0
Cycle Q Clear(g_c), s	1.1	9.8	19.5	2.6	4.1	2.9	9.8	8.1	1.6	4.9	6.9	7.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	42	765	682	74	1593	711	350	1081	482	92	452	464
V/C Ratio(X)	0.38	0.29	0.51	0.53	0.13	0.09	0.80	0.28	0.06	0.77	0.28	0.28
Avail Cap(c_a), veh/h	137	765	682	152	1593	711	659	1081	482	224	452	464
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.7	21.4	24.1	56.3	18.6	18.3	52.5	31.1	28.9	56.1	35.3	35.3
Incr Delay (d2), s/veh	4.7	0.8	2.3	5.8	0.2	0.3	4.3	0.7	0.2	12.9	1.5	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.9	7.0	1.2	1.6	1.0	4.2	3.3	0.6	2.4	3.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.4	22.2	26.4	62.1	18.7	18.5	56.8	31.8	29.1	69.0	36.8	36.8
LnGrp LOS	E	C	C	E	B	B	E	C	C	E	D	D
Approach Vol, veh/h	585			314			618			326		
Approach Delay, s/veh	25.8			24.1			43.1			43.8		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	57.6	17.0	35.9	7.4	59.8	10.8	42.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	38.5	23.5	29.5	9.5	39.5	15.5	37.5				
Max Q Clear Time (g_c+I1), s	4.6	21.5	11.8	9.0	3.1	6.1	6.9	10.1				
Green Ext Time (p_c), s	0.0	2.9	0.7	1.1	0.0	1.3	0.1	1.8				
Intersection Summary												
HCM 6th Ctrl Delay	34.5											
HCM 6th LOS	C											

Lanes, Volumes, Timings
4: Madison St. & Avenue 52

EAC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	420	53	23	380	63	122	233	14	51	204	56
Future Volume (vph)	69	420	53	23	380	63	122	233	14	51	204	56
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	23.0	49.0	49.0	15.0	41.0	41.0	20.0	41.0	41.0	15.0	36.0	36.0
Total Split (%)	19.2%	40.8%	40.8%	12.5%	34.2%	34.2%	16.7%	34.2%	34.2%	12.5%	30.0%	30.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

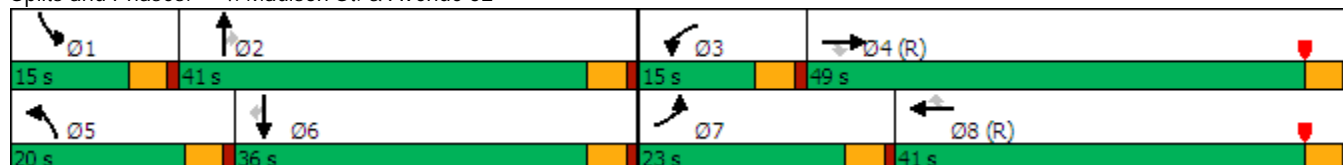
Actuated Cycle Length: 120

Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated

























Splits and Phases: 4: Madison St. & Avenue 52



HCM 6th Signalized Intersection Summary

























4: Madison St. & Avenue 52

EAC (2023) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	420	53	23	380	63	122	233	14	51	204	56
Future Volume (veh/h)	69	420	53	23	380	63	122	233	14	51	204	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	79	483	61	26	437	72	140	268	16	59	234	64
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	101	1598	713	59	1514	675	198	1052	469	169	1022	456
Arrive On Green	0.06	0.46	0.46	0.03	0.44	0.44	0.06	0.30	0.30	0.05	0.30	0.30
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	79	483	61	26	437	72	140	268	16	59	234	64
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	5.4	10.5	2.7	1.8	9.8	3.3	4.9	7.0	0.9	2.0	6.1	3.7
Cycle Q Clear(g_c), s	5.4	10.5	2.7	1.8	9.8	3.3	4.9	7.0	0.9	2.0	6.1	3.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	101	1598	713	59	1514	675	198	1052	469	169	1022	456
V/C Ratio(X)	0.79	0.30	0.09	0.44	0.29	0.11	0.71	0.25	0.03	0.35	0.23	0.14
Avail Cap(c_a), veh/h	267	1598	713	152	1514	675	435	1052	469	294	1022	456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.8	20.2	18.1	56.9	21.7	19.9	55.4	31.5	29.4	55.1	31.9	31.1
Incr Delay (d2), s/veh	12.5	0.5	0.2	5.2	0.5	0.3	4.6	0.6	0.1	1.2	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	4.1	0.9	0.8	3.8	1.2	2.1	2.9	0.3	0.9	2.5	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.3	20.7	18.3	62.0	22.2	20.2	60.0	32.1	29.5	56.3	32.5	31.7
LnGrp LOS	E	C	B	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h	623			535			424			357		
Approach Delay, s/veh	26.5			23.9			41.2			36.3		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.5	41.0	8.6	59.9	11.6	40.0	11.5	57.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	36.5	10.5	44.5	15.5	31.5	18.5	36.5				
Max Q Clear Time (g_c+I1), s	4.0	9.0	3.8	12.5	6.9	8.1	7.4	11.8				
Green Ext Time (p_c), s	0.1	1.5	0.0	3.3	0.2	1.4	0.1	2.7				
Intersection Summary												
HCM 6th Ctrl Delay	30.8											
HCM 6th LOS	C											

Lanes, Volumes, Timings
5: Madison St. & Avenue 50/50th Avenue

EAC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	335	61	32	333	25	98	241	48	39	237	99
Future Volume (vph)	69	335	61	32	333	25	98	241	48	39	237	99
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	22.0	47.0	47.0	17.0	42.0	42.0	18.0	41.0	41.0	15.0	38.0	38.0
Total Split (%)	18.3%	39.2%	39.2%	14.2%	35.0%	35.0%	15.0%	34.2%	34.2%	12.5%	31.7%	31.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

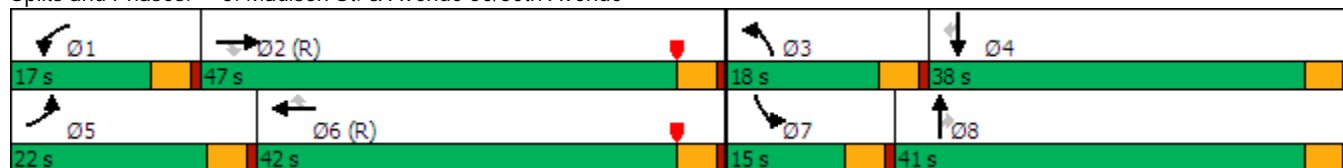
Actuated Cycle Length: 120

Offset: 64.5 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue




























HCM 6th Signalized Intersection Summary 5: Madison St. & Avenue 50/50th Avenue

EAC (2023) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	335	61	32	333	25	98	241	48	39	237	99
Future Volume (veh/h)	69	335	61	32	333	25	98	241	48	39	237	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	70	342	62	33	340	26	100	246	49	40	242	101
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	91	1605	716	67	1558	695	189	1052	469	145	1006	449
Arrive On Green	0.05	0.46	0.46	0.04	0.45	0.45	0.06	0.30	0.30	0.04	0.29	0.29
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	70	342	62	33	340	26	100	246	49	40	242	101
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	4.8	7.1	2.7	2.2	7.2	1.1	3.5	6.4	2.7	1.4	6.4	6.0
Cycle Q Clear(g_c), s	4.8	7.1	2.7	2.2	7.2	1.1	3.5	6.4	2.7	1.4	6.4	6.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	91	1605	716	67	1558	695	189	1052	469	145	1006	449
V/C Ratio(X)	0.77	0.21	0.09	0.49	0.22	0.04	0.53	0.23	0.10	0.28	0.24	0.22
Avail Cap(c_a), veh/h	253	1605	716	181	1558	695	379	1052	469	294	1006	449
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.1	19.1	18.0	56.5	20.1	18.4	55.1	31.3	30.0	55.6	32.4	32.3
Incr Delay (d2), s/veh	12.5	0.3	0.2	5.4	0.3	0.1	2.3	0.5	0.4	1.0	0.6	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	2.8	1.0	1.1	2.8	0.4	1.5	2.6	1.0	0.6	2.7	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.6	19.4	18.2	61.9	20.4	18.5	57.4	31.8	30.5	56.6	33.0	33.4
LnGrp LOS	E	B	B	E	C	B	E	C	C	E	C	C
Approach Vol, veh/h	474			399			395			383		
Approach Delay, s/veh	26.5			23.7			38.1			35.6		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	60.2	11.3	39.4	10.8	58.5	9.7	41.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	12.5	42.5	13.5	33.5	17.5	37.5	10.5	36.5				
Max Q Clear Time (g_c+I1), s	4.2	9.1	5.5	8.4	6.8	9.2	3.4	8.4				
Green Ext Time (p_c), s	0.0	2.3	0.1	1.6	0.1	2.0	0.0	1.5				
Intersection Summary												
HCM 6th Ctrl Delay	30.7											
HCM 6th LOS	C											

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54









EAC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 		 	 	
Traffic Volume (vph)	8	10	13	43	7	378	5	250	30	467	192	27
Future Volume (vph)	8	10	13	43	7	378	5	250	30	467	192	27
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh24.1

Intersection LOS C






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	10	13	43	7	378	5	250	30	467	192	27
Future Vol, veh/h	8	10	13	43	7	378	5	250	30	467	192	27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	11	14	48	8	420	6	278	33	519	213	30
Number of Lanes	1	2	0	1	1	1	0	2	0	2	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	12.5	37.4	15.6	19.8
HCM LOS	B	E	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	4%	0%	100%	0%	0%	100%	0%	0%	100%	100%	0%
Vol Thru, %	96%	81%	0%	100%	20%	0%	100%	0%	0%	0%	88%
Vol Right, %	0%	19%	0%	0%	80%	0%	0%	100%	0%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	130	155	8	7	16	43	7	378	234	234	219
LT Vol	5	0	8	0	0	43	0	0	234	234	0
Through Vol	125	125	0	7	3	0	7	0	0	0	192
RT Vol	0	30	0	0	13	0	0	378	0	0	27
Lane Flow Rate	144	172	9	7	18	48	8	420	259	259	243
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.332	0.388	0.025	0.02	0.045	0.114	0.017	0.859	0.573	0.573	0.498
Departure Headway (Hd)	8.272	8.117	10.1	9.584	9.01	8.584	8.076	7.365	7.951	7.951	7.361
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	433	443	353	372	395	417	442	491	454	454	489
Service Time	6.043	5.888	7.898	7.382	6.808	6.346	5.838	5.127	5.714	5.714	5.124
HCM Lane V/C Ratio	0.333	0.388	0.025	0.019	0.046	0.115	0.018	0.855	0.57	0.57	0.497
HCM Control Delay	15.1	16	13.2	12.6	12.2	12.5	11	40.7	20.9	20.9	17.3
HCM Lane LOS	C	C	B	B	B	B	B	E	C	C	C
HCM 95th-tile Q	1.4	1.8	0.1	0.1	0.1	0.4	0.1	8.9	3.5	3.5	2.7

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54

EAC (2023) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	10	13	43	7	378	5	250	30	467	192	27
Future Volume (vph)	8	10	13	43	7	378	5	250	30	467	192	27
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases		4			8		2	2		6	6	
Permitted Phases	4			8		8						6
Detector Phase	4	4		8	8	8	2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	30.5	30.5		30.5	30.5	30.5	30.5	30.5		30.5	30.5	30.5
Total Split (s)	45.0	45.0		45.0	45.0	45.0	37.0	37.0		38.0	38.0	38.0
Total Split (%)	37.5%	37.5%		37.5%	37.5%	37.5%	30.8%	30.8%		31.7%	31.7%	31.7%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None	None	C-Max	C-Max		Max	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

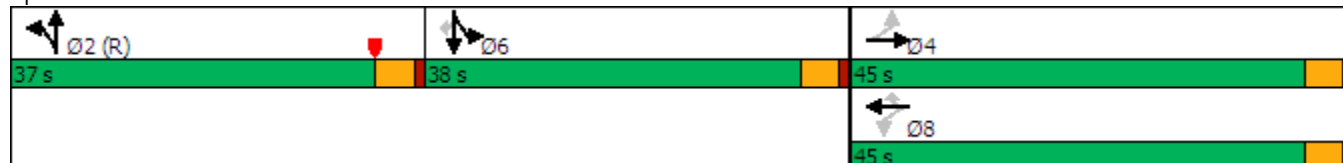
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Yellow

Natural Cycle: 95























Control Type: Actuated-Coordinated

Splits and Phases: 6: Jefferson St. & Avenue 54























HCM 6th Signalized Intersection Summary 6: Jefferson St. & Avenue 54

EAC (2023) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	10	13	43	7	378	5	250	30	467	192	27
Future Volume (veh/h)	8	10	13	43	7	378	5	250	30	467	192	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	9	11	14	48	8	420	6	278	33	519	213	30
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	335	502	448	453	528	448	21	992	123	939	966	431
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.32	0.32	0.32	0.28	0.28	0.28
Sat Flow, veh/h	960	1730	1543	1386	1821	1543	65	3117	387	3365	3460	1543
Grp Volume(v), veh/h	9	11	14	48	8	420	168	0	149	519	213	30
Grp Sat Flow(s),veh/h/ln	960	1730	1543	1386	1821	1543	1818	0	1752	1682	1730	1543
Q Serve(g_s), s	0.8	0.5	0.8	3.1	0.4	31.9	8.3	0.0	7.6	15.8	5.7	1.7
Cycle Q Clear(g_c), s	1.2	0.5	0.8	3.9	0.4	31.9	8.3	0.0	7.6	15.8	5.7	1.7
Prop In Lane	1.00		1.00	1.00		1.00	0.04		0.22	1.00		1.00
Lane Grp Cap(c), veh/h	335	502	448	453	528	448	579	0	557	939	966	431
V/C Ratio(X)	0.03	0.02	0.03	0.11	0.02	0.94	0.29	0.00	0.27	0.55	0.22	0.07
Avail Cap(c_a), veh/h	381	584	521	519	615	521	579	0	557	939	966	431
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.90	0.90	0.90	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.8	30.4	30.5	31.9	30.4	41.5	30.7	0.0	30.5	36.9	33.2	31.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	21.6	1.3	0.0	1.2	2.3	0.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.3	1.0	0.2	14.0	3.7	0.0	3.2	6.4	2.3	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.8	30.5	30.5	32.0	30.4	63.1	32.0	0.0	31.7	39.2	33.7	32.1
LnGrp LOS	C	C	C	C	C	E	C	A	C	D	C	C
Approach Vol, veh/h	34			476			317			762		
Approach Delay, s/veh	30.6			59.4			31.8			37.4		
Approach LOS	C			E			C			D		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	42.7			39.3			38.0			39.3		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	32.5			40.5			33.5			40.5		
Max Q Clear Time (g_c+I1), s	10.3			3.2			17.8			33.9		
Green Ext Time (p_c), s	1.5			0.1			2.8			1.0		
Intersection Summary												
HCM 6th Ctrl Delay	42.7											
HCM 6th LOS	D											

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52






















EAC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	372	277	12	366	303	239	489	32	183	474	83
Future Volume (vph)	123	372	277	12	366	303	239	489	32	183	474	83
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											

Intersection									
Intersection Delay, s/veh	59.8								
Intersection LOS	F								
Approach	EB		WB		NB		SB		
Entry Lanes	1		1		1		1		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	830		733		817		796		
Demand Flow Rate, veh/h	847		748		834		812		
Vehicles Circulating, veh/h	734		934		744		677		
Vehicles Exiting, veh/h	664		609		533		672		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	20.2		17.2		135.5		62.7		
Approach LOS	C		C		F		F		
Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Bypass	
Designated Moves	LT	R	LT	R	LT	R	LT	R	
Assumed Moves	LT	R	LT	R	LT	R	LT	R	
RT Channelized		Free		Free		Free		Free	
Lane Util	1.000		1.000		1.000		1.000		
Follow-Up Headway, s	2.609		2.609		2.609		2.609		
Critical Headway, s	4.976	304	4.976	333	4.976	35	4.976	91	
Entry Flow, veh/h	543	1887	415	1887	799	1887	721	1887	
Cap Entry Lane, veh/h	653	0.980	532	0.980	646	0.980	692	0.980	
Entry HV Adj Factor	0.980	298	0.981	326	0.981	34	0.980	89	
Flow Entry, veh/h	532	1850	407	1850	783	1850	707	1850	
Cap Entry, veh/h	639	0.161	522	0.176	634	0.018	678	0.048	
V/C Ratio	0.832	0.0	0.780	0.0	1.237	0.0	1.042	0.0	
Control Delay, s/veh	31.4	A	31.0	A	141.4	A	70.6	A	
LOS	D	1	D	1	F	0	F	0	
95th %tile Queue, veh	9		7		29		18		

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EAC (2023) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	372	277	12	366	303	239	489	32	183	474	83
Future Volume (vph)	123	372	277	12	366	303	239	489	32	183	474	83
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		100	0		100	0		0	0		0
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	60			60			60			60		
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											























HCM 6th Roundabout
7: Jefferson St. & Avenue 52

EAC (2023) AM Peak hour
With Improvements

Intersection										
Intersection Delay, s/veh	11.7									
Intersection LOS	B									
Approach	EB		WB		NB		SB			
Entry Lanes	1		1		2		2			
Conflicting Circle Lanes	2		2		2		2			
Adj Approach Flow, veh/h	830		733		817		796			
Demand Flow Rate, veh/h	847		748		834		812			
Vehicles Circulating, veh/h	734		934		744		677			
Vehicles Exiting, veh/h	664		609		533		672			
Ped Vol Crossing Leg, #/h	0		0		0		0			
Ped Cap Adj	1.000		1.000		1.000		1.000			
Approach Delay, s/veh	12.5		10.4		13.5		10.2			
Approach LOS	B		B		B		B			
Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
Assumed Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
RT Channelized		Free		Free			Free			Free
Lane Util	1.000		1.000		0.471	0.529		0.470	0.530	
Follow-Up Headway, s	2.535		2.535		2.667	2.535		2.667	2.535	
Critical Headway, s	4.328	304	4.328	333	4.645	4.328	35	4.645	4.328	91
Entry Flow, veh/h	543	1887	415	1887	376	423	1887	339	382	1887
Cap Entry Lane, veh/h	761	0.980	642	0.980	681	754	0.980	724	799	0.980
Entry HV Adj Factor	0.980	298	0.981	326	0.979	0.982	34	0.980	0.981	89
Flow Entry, veh/h	532	1850	407	1850	368	415	1850	332	375	1850
Cap Entry, veh/h	745	0.161	630	0.176	667	741	0.018	710	783	0.048
V/C Ratio	0.714	0.0	0.646	0.0	0.552	0.561	0.0	0.468	0.478	0.0
Control Delay, s/veh	19.5	A	18.8	A	14.6	13.7	A	11.8	11.1	A
LOS	C	1	C	1	B	B	0	B	B	0
95th %tile Queue, veh	6		5		3	4		3	3	

Lanes, Volumes, Timings
8: Jefferson St. & Pomelo

EAC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	1	2	4	1	16	13	874	13	40	757	51
Future Volume (vph)	37	1	2	4	1	16	13	874	13	40	757	51
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	52.0		20.0	54.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	15.0%	43.3%		16.7%	45.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary

Area Type: Other

Cycle Length: 120

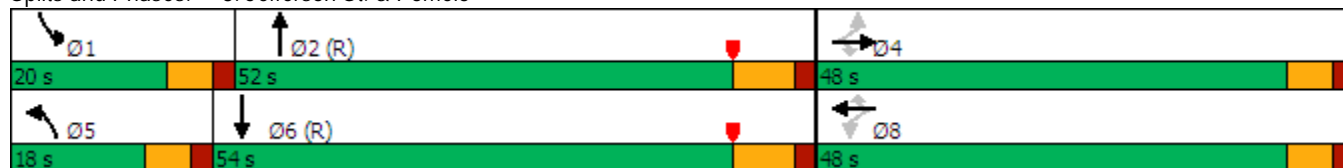
Actuated Cycle Length: 120

Offset: 110 (92%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110





















Control Type: Actuated-Coordinated

Splits and Phases: 8: Jefferson St. & Pomelo



























HCM 6th Signalized Intersection Summary 8: Jefferson St. & Pomelo

EAC (2023) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	1	2	4	1	16	13	874	13	40	757	51
Future Volume (veh/h)	37	1	2	4	1	16	13	874	13	40	757	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	40	1	2	4	1	17	14	940	14	43	814	55
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	62	1	199	55	8	199	65	3193	48	132	3195	215
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.04	0.63	0.63	0.05	0.45	0.45
Sat Flow, veh/h	24	6	1543	11	62	1543	1734	5047	75	1734	4758	320
Grp Volume(v), veh/h	41	0	2	5	0	17	14	617	337	43	566	303
Grp Sat Flow(s),veh/h/ln	30	0	1543	73	0	1543	1734	1657	1808	1734	1657	1763
Q Serve(g_s), s	0.3	0.0	0.1	0.1	0.0	1.2	0.9	10.1	10.1	2.9	12.7	12.8
Cycle Q Clear(g_c), s	15.4	0.0	0.1	15.3	0.0	1.2	0.9	10.1	10.1	2.9	12.7	12.8
Prop In Lane	0.98		1.00	0.80		1.00	1.00		0.04	1.00		0.18
Lane Grp Cap(c), veh/h	63	0	199	63	0	199	65	2097	1144	132	2226	1184
V/C Ratio(X)	0.65	0.00	0.01	0.08	0.00	0.09	0.22	0.29	0.29	0.33	0.25	0.26
Avail Cap(c_a), veh/h	374	0	540	391	0	540	173	2097	1144	202	2226	1184
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.76	0.76	0.76
Uniform Delay (d), s/veh	59.7	0.0	45.6	46.6	0.0	46.1	56.1	9.9	10.0	54.0	14.3	14.4
Incr Delay (d2), s/veh	21.5	0.0	0.0	1.1	0.0	0.4	3.5	0.4	0.7	2.3	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.1	0.2	0.0	0.5	0.5	3.2	3.6	1.3	4.7	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.2	0.0	45.7	47.7	0.0	46.5	59.6	10.3	10.6	56.3	14.6	14.8
LnGrp LOS	F	A	D	D	A	D	E	B	B	E	B	B
Approach Vol, veh/h	43		22				968			912		
Approach Delay, s/veh	79.5		46.7				11.1			16.6		
Approach LOS	E		D				B			B		
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	15.1	83.3	21.6		10.5	88.0	21.6					
Change Period (Y+Rc), s	6.0	7.5	6.0		6.0	7.5	6.0					
Max Green Setting (Gmax), s	14.0	44.5	42.0		12.0	46.5	42.0					
Max Q Clear Time (g_c+I1), s	4.9	12.1	17.4		2.9	14.8	17.3					
Green Ext Time (p_c), s	0.1	12.2	0.3		0.0	10.9	0.1					
Intersection Summary												
HCM 6th Ctrl Delay	15.6											
HCM 6th LOS	B											
Notes												

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

EAC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	256	290	74	68	319	209	121	743	63	131	696	362
Future Volume (vph)	256	290	74	68	319	209	121	743	63	131	696	362
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	43.5	43.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	36.3%	36.3%	15.0%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120









Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 115






























Control Type: Actuated-Coordinated

Splits and Phases: 9: Jefferson St. & Avenue 50

			
Ø1	Ø2	Ø3	Ø4 (R)
18 s	40.5 s	18 s	43.5 s
			
Ø5	Ø6	Ø7	Ø8 (R)
18 s	40.5 s	23 s	38.5 s

HCM 6th Signalized Intersection Summary 9: Jefferson St. & Avenue 50

EAC (2023) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  		 	  	
Traffic Volume (veh/h)	256	290	74	68	319	209	121	743	63	131	696	362
Future Volume (veh/h)	256	290	74	68	319	209	121	743	63	131	696	362
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	261	296	76	69	326	213	123	758	64	134	710	369
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	1113	496	156	491	417	171	1316	408	333	1318	409
Arrive On Green	0.14	0.32	0.32	0.09	0.27	0.27	0.03	0.09	0.09	0.10	0.27	0.27
Sat Flow, veh/h	1734	3460	1543	1734	1821	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	261	296	76	69	326	213	123	758	64	134	710	369
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	17.0	7.6	4.2	4.5	19.1	14.0	8.4	17.6	4.6	4.5	14.7	27.7
Cycle Q Clear(g_c), s	17.0	7.6	4.2	4.5	19.1	14.0	8.4	17.6	4.6	4.5	14.7	27.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	1113	496	156	491	417	171	1316	408	333	1318	409
V/C Ratio(X)	1.06	0.27	0.15	0.44	0.66	0.51	0.72	0.58	0.16	0.40	0.54	0.90
Avail Cap(c_a), veh/h	246	1113	496	173	491	417	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	30.2	29.0	51.7	39.0	37.1	56.4	48.3	42.4	50.7	37.8	42.6
Incr Delay (d2), s/veh	74.8	0.6	0.7	0.7	6.9	4.4	11.3	0.7	0.2	0.3	0.5	22.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	3.1	1.6	2.0	9.2	5.6	4.3	7.8	1.8	1.8	5.7	12.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	126.3	30.8	29.7	52.5	45.9	41.5	67.7	49.0	42.6	51.0	38.3	64.7
LnGrp LOS	F	C	C	D	D	D	E	D	D	D	D	E
Approach Vol, veh/h	633			608			945			1213		
Approach Delay, s/veh	70.0			45.1			51.0			47.7		
Approach LOS	E			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.9	39.3	16.8	46.1	17.8	39.3	23.0	39.9				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	12.0	33.0	12.0	36.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	6.5	19.6	6.5	9.6	10.4	29.7	19.0	21.1				
Green Ext Time (p_c), s	0.1	5.3	0.0	3.8	0.0	2.1	0.0	3.3				
Intersection Summary												
HCM 6th Ctrl Delay	52.3											
HCM 6th LOS	D											
Notes												

Lanes, Volumes, Timings
10: Avenue 60 & Madison St.

EAC (2023) AM Peak hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	32	5	6	158	133	60
Future Volume (vph)	32	5	6	158	133	60
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		40	
Link Distance (ft)		1772	661		437	
Travel Time (s)		30.2	11.3		7.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)						
Sign Control		Stop	Stop		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Intersection Delay, s/veh	9
Intersection LOS	A





















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕	↕	↕	↕
Traffic Vol, veh/h	32	5	6	158	133	60
Future Vol, veh/h	32	5	6	158	133	60
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	6	7	190	160	72
Number of Lanes	0	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	8.7	8.6	9.4
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	86%	0%	0%	100%	0%
Vol Thru, %	14%	100%	0%	0%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	37	6	158	133	60
LT Vol	32	0	0	133	0
Through Vol	5	6	0	0	0
RT Vol	0	0	158	0	60
Lane Flow Rate	45	7	190	160	72
Geometry Grp	4	7	7	7	7
Degree of Util (X)	0.066	0.01	0.238	0.249	0.088
Departure Headway (Hd)	5.336	5.197	4.494	5.6	4.396
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	671	690	800	643	815
Service Time	3.367	2.918	2.214	3.33	2.126
HCM Lane V/C Ratio	0.067	0.01	0.237	0.249	0.088
HCM Control Delay	8.7	8	8.6	10.2	7.6
HCM Lane LOS	A	A	A	B	A
HCM 95th-tile Q	0.2	0	0.9	1	0.3

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

EAC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	46	98	7	55	159	105	197	10	75	116	35
Future Volume (vph)	20	46	98	7	55	159	105	197	10	75	116	35
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	13
Intersection LOS	B


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰↱		↰	↱		↰	↱	↰
Traffic Vol, veh/h	20	46	98	7	55	159	105	197	10	75	116	35
Future Vol, veh/h	20	46	98	7	55	159	105	197	10	75	116	35
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	51	108	8	60	175	115	216	11	82	127	38
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	11.2	14.6	13.9	11.7
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	30%	0%	3%	100%	0%	0%
Vol Thru, %	0%	95%	70%	0%	25%	0%	100%	0%
Vol Right, %	0%	5%	0%	100%	72%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	105	207	66	98	221	75	116	35
LT Vol	105	0	20	0	7	75	0	0
Through Vol	0	197	46	0	55	0	116	0
RT Vol	0	10	0	98	159	0	0	35
Lane Flow Rate	115	227	73	108	243	82	127	38
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.236	0.43	0.15	0.197	0.446	0.174	0.251	0.068
Departure Headway (Hd)	7.356	6.811	7.465	6.599	6.608	7.593	7.082	6.368
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	489	530	481	544	546	473	507	563
Service Time	5.091	4.546	5.206	4.34	4.344	5.33	4.82	4.105
HCM Lane V/C Ratio	0.235	0.428	0.152	0.199	0.445	0.173	0.25	0.067
HCM Control Delay	12.4	14.6	11.5	11	14.6	11.9	12.2	9.6
HCM Lane LOS	B	B	B	B	B	B	B	A
HCM 95th-tile Q	0.9	2.1	0.5	0.7	2.3	0.6	1	0.2

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	61	54	16	49	34	42	318	27	23	197	35
Future Volume (vph)	34	61	54	16	49	34	42	318	27	23	197	35
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	15.7
Intersection LOS	C


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	34	61	54	16	49	34	42	318	27	23	197	35
Future Vol, veh/h	34	61	54	16	49	34	42	318	27	23	197	35
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	40	73	64	19	58	40	50	379	32	27	235	42
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	11.8	10.9	20.1	13
HCM LOS	B	B	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	11%	23%	16%	10%	0%
Vol Thru, %	82%	41%	49%	90%	0%
Vol Right, %	7%	36%	34%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	387	149	99	220	35
LT Vol	42	34	16	23	0
Through Vol	318	61	49	197	0
RT Vol	27	54	34	0	35
Lane Flow Rate	461	177	118	262	42
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.696	0.3	0.204	0.445	0.062
Departure Headway (Hd)	5.44	6.083	6.234	6.114	5.35
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	663	587	572	587	665
Service Time	3.497	4.162	4.321	3.879	3.114
HCM Lane V/C Ratio	0.695	0.302	0.206	0.446	0.063
HCM Control Delay	20.1	11.8	10.9	13.7	8.5
HCM Lane LOS	C	B	B	B	A
HCM 95th-tile Q	5.6	1.3	0.8	2.3	0.2

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAC (2023) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	61	54	16	49	34	42	318	27	23	197	35
Future Volume (vph)	34	61	54	16	49	34	42	318	27	23	197	35
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	30.5	30.5		30.5	30.5		37.0	37.0		30.5	30.5	30.5
Total Split (s)	43.0	43.0		43.0	43.0		77.0	77.0		77.0	77.0	77.0
Total Split (%)	35.8%	35.8%		35.8%	35.8%		64.2%	64.2%		64.2%	64.2%	64.2%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)		4.5			4.5			4.5			4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

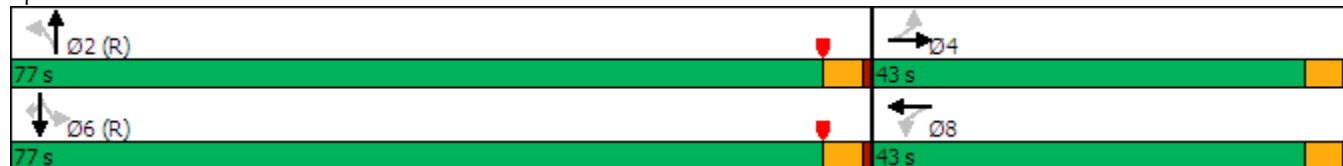
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated


















Splits and Phases: 12: Monroe St. & Avenue 58



HCM 6th Signalized Intersection Summary






















12: Monroe St. & Avenue 58

EAC (2023) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	61	54	16	49	34	42	318	27	23	197	35
Future Volume (veh/h)	34	61	54	16	49	34	42	318	27	23	197	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	40	73	64	19	58	40	50	379	32	27	235	42
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	73	98	76	55	119	72	154	1143	94	146	1243	1232
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.80	0.80	0.80	0.80	0.80	0.80
Sat Flow, veh/h	287	770	599	162	937	571	151	1432	118	141	1558	1543
Grp Volume(v), veh/h	177	0	0	117	0	0	461	0	0	262	0	42
Grp Sat Flow(s),veh/h/ln	1655	0	0	1669	0	0	1701	0	0	1699	0	1543
Q Serve(g_s), s	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
Cycle Q Clear(g_c), s	12.4	0.0	0.0	7.7	0.0	0.0	8.4	0.0	0.0	4.1	0.0	0.7
Prop In Lane	0.23		0.36	0.16		0.34	0.11		0.07	0.10		1.00
Lane Grp Cap(c), veh/h	247	0	0	247	0	0	1391	0	0	1389	0	1232
V/C Ratio(X)	0.72	0.00	0.00	0.47	0.00	0.00	0.33	0.00	0.00	0.19	0.00	0.03
Avail Cap(c_a), veh/h	552	0	0	558	0	0	1391	0	0	1389	0	1232
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.0	0.0	0.0	49.1	0.0	0.0	3.3	0.0	0.0	2.9	0.0	2.5
Incr Delay (d2), s/veh	3.9	0.0	0.0	1.4	0.0	0.0	0.6	0.0	0.0	0.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.0	0.0	3.4	0.0	0.0	2.1	0.0	0.0	1.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.9	0.0	0.0	50.5	0.0	0.0	3.9	0.0	0.0	3.2	0.0	2.6
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	177			117			461			304		
Approach Delay, s/veh	54.9			50.5			3.9			3.1		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	100.3			19.7			100.3			19.7		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	72.5			38.5			72.5			38.5		
Max Q Clear Time (g_c+I1), s	10.4			14.4			6.1			9.7		
Green Ext Time (p_c), s	2.9			0.9			1.6			0.7		
Intersection Summary												
HCM 6th Ctrl Delay	17.3											
HCM 6th LOS	B											

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.









EAC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	108	12	21	66	25	19	295	35	56	196	9
Future Volume (vph)	0	108	12	21	66	25	19	295	35	56	196	9
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 15.6

Intersection LOS C



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	108	12	21	66	25	19	295	35	56	196	9
Future Vol, veh/h	0	108	12	21	66	25	19	295	35	56	196	9
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	127	14	25	78	29	22	347	41	66	231	11
Number of Lanes	1	1	1	0	1	0	1	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	1	3
HCM Control Delay	11.6	12.6	21.1	11.5
HCM LOS	B	B	C	B







Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	0%	0%	19%	100%	0%	0%
Vol Thru, %	0%	89%	100%	100%	0%	59%	0%	100%	88%
Vol Right, %	0%	11%	0%	0%	100%	22%	0%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	19	330	0	108	12	112	56	131	74
LT Vol	19	0	0	0	0	21	56	0	0
Through Vol	0	295	0	108	0	66	0	131	65
RT Vol	0	35	0	0	12	25	0	0	9
Lane Flow Rate	22	388	0	127	14	132	66	154	87
Geometry Grp	8	8	7	7	7	8	8	8	8
Degree of Util (X)	0.043	0.681	0	0.243	0.024	0.266	0.131	0.285	0.16
Departure Headway (Hd)	6.898	6.315	6.891	6.891	6.181	7.281	7.177	6.669	6.583
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	516	567	0	517	574	497	496	535	540
Service Time	4.68	4.097	4.688	4.688	3.977	4.981	4.969	4.46	4.374
HCM Lane V/C Ratio	0.043	0.684	0	0.246	0.024	0.266	0.133	0.288	0.161
HCM Control Delay	10	21.7	9.7	11.9	9.1	12.6	11.1	12.1	10.6
HCM Lane LOS	A	C	N	B	A	B	B	B	B
HCM 95th-tile Q	0.1	5.2	0	0.9	0.1	1.1	0.4	1.2	0.6

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	151	38	28	238	52	69	309	17	51	254	96
Future Volume (vph)	34	151	38	28	238	52	69	309	17	51	254	96
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	89.9
Intersection LOS	F



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	151	38	28	238	52	69	309	17	51	254	96
Future Vol, veh/h	34	151	38	28	238	52	69	309	17	51	254	96
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	186	47	35	294	64	85	381	21	63	314	119
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	25.7	80.2	170.9	53.5
HCM LOS	D	F	F	F

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	17%	100%	0%	9%	17%	0%
Vol Thru, %	78%	0%	80%	75%	83%	0%
Vol Right, %	4%	0%	20%	16%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	395	34	189	318	305	96
LT Vol	69	34	0	28	51	0
Through Vol	309	0	151	238	254	0
RT Vol	17	0	38	52	0	96
Lane Flow Rate	488	42	233	393	377	119
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	1.278	0.118	0.614	1	0.948	0.273
Departure Headway (Hd)	9.263	10.75	10.106	10.029	9.599	8.815
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	395	335	359	365	380	410
Service Time	7.263	8.45	7.806	8.029	7.299	6.515
HCM Lane V/C Ratio	1.235	0.125	0.649	1.077	0.992	0.29
HCM Control Delay	170.9	14.9	27.6	80.2	65.7	14.8
HCM Lane LOS	F	B	D	F	F	B
HCM 95th-tile Q	22	0.4	3.9	11.6	10.4	1.1

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAC (2023) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	151	38	28	238	52	69	309	17	51	254	96
Future Volume (vph)	34	151	38	28	238	52	69	309	17	51	254	96
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	50.0	50.0		50.0	50.0		70.0	70.0		70.0	70.0	70.0
Total Split (%)	41.7%	41.7%		41.7%	41.7%		58.3%	58.3%		58.3%	58.3%	58.3%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)	4.5	4.5			4.5			4.5			4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

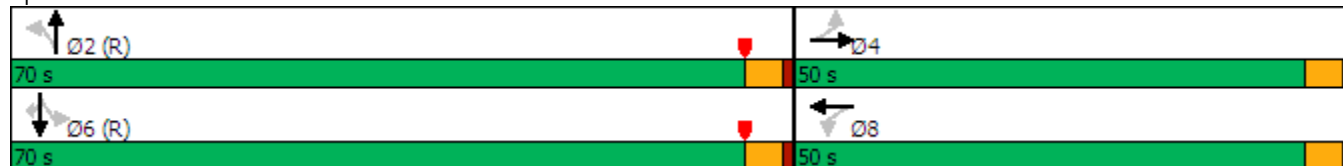
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 50



















Control Type: Actuated-Coordinated

Splits and Phases: 14: Monroe St. & Avenue 54

























HCM 6th Signalized Intersection Summary 14: Monroe St. & Avenue 54

EAC (2023) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	151	38	28	238	52	69	309	17	51	254	96
Future Volume (veh/h)	34	151	38	28	238	52	69	309	17	51	254	96
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No				No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	42	186	47	35	294	64	85	381	21	63	314	119
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	166	385	97	57	338	71	187	817	44	185	899	1004
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.65	0.65	0.65	0.65	0.65	0.65
Sat Flow, veh/h	1023	1403	354	89	1234	257	233	1256	67	231	1382	1543
Grp Volume(v), veh/h	42	0	233	393	0	0	487	0	0	377	0	119
Grp Sat Flow(s),veh/h/ln	1023	0	1757	1581	0	0	1556	0	0	1612	0	1543
Q Serve(g_s), s	0.0	0.0	13.3	15.8	0.0	0.0	8.2	0.0	0.0	0.0	0.0	3.5
Cycle Q Clear(g_c), s	13.9	0.0	13.3	29.1	0.0	0.0	19.4	0.0	0.0	11.2	0.0	3.5
Prop In Lane	1.00		0.20	0.09		0.16	0.17		0.04	0.17		1.00
Lane Grp Cap(c), veh/h	166	0	482	466	0	0	1048	0	0	1084	0	1004
V/C Ratio(X)	0.25	0.00	0.48	0.84	0.00	0.00	0.46	0.00	0.00	0.35	0.00	0.12
Avail Cap(c_a), veh/h	274	0	666	643	0	0	1048	0	0	1084	0	1004
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.6	0.0	36.4	42.2	0.0	0.0	10.5	0.0	0.0	9.2	0.0	7.9
Incr Delay (d2), s/veh	0.8	0.0	0.8	7.3	0.0	0.0	1.5	0.0	0.0	0.9	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	5.5	11.6	0.0	0.0	6.1	0.0	0.0	4.0	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.4	0.0	37.2	49.6	0.0	0.0	12.0	0.0	0.0	10.1	0.0	8.2
LnGrp LOS	D	A	D	D	A	A	B	A	A	B	A	A
Approach Vol, veh/h	275			393				487			496	
Approach Delay, s/veh	37.2			49.6				12.0			9.6	
Approach LOS	D			D				B			A	
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	82.6			37.4			82.6			37.4		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	65.5			45.5			65.5			45.5		
Max Q Clear Time (g_c+I1), s	21.4			15.9			13.2			31.1		
Green Ext Time (p_c), s	3.2			1.3			2.7			1.8		
Intersection Summary												
HCM 6th Ctrl Delay	24.4											
HCM 6th LOS	C											

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52









EAC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	101	314	38	27	329	131	43	285	41	103	286	59
Future Volume (vph)	101	314	38	27	329	131	43	285	41	103	286	59
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh81.1

Intersection LOS F























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	101	314	38	27	329	131	43	285	41	103	286	59
Future Vol, veh/h	101	314	38	27	329	131	43	285	41	103	286	59
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	122	378	46	33	396	158	52	343	49	124	345	71
Number of Lanes	1	1	1	0	2	1	0	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay	92.8	34.6	195.5	25.4
HCM LOS	F	D	F	D

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	12%	100%	0%	0%	20%	0%	0%	100%	0%	0%
Vol Thru, %	77%	0%	100%	0%	80%	100%	0%	0%	100%	62%
Vol Right, %	11%	0%	0%	100%	0%	0%	100%	0%	0%	38%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	369	101	314	38	137	219	131	103	191	154
LT Vol	43	101	0	0	27	0	0	103	0	0
Through Vol	285	0	314	0	110	219	0	0	191	95
RT Vol	41	0	0	38	0	0	131	0	0	59
Lane Flow Rate	445	122	378	46	165	264	158	124	230	186
Geometry Grp	8	8	8	8	8	8	8	7	7	7
Degree of Util (X)	1.324	0.378	1.124	0.127	0.492	0.783	0.437	0.354	0.623	0.491
Departure Headway (Hd)	10.981	12.413	11.875	11.121	12.14	12.033	11.276	11.422	10.889	10.603
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	333	292	310	325	300	304	322	316	333	342
Service Time	8.681	10.113	9.575	8.821	9.84	9.733	8.976	9.122	8.589	8.303
HCM Lane V/C Ratio	1.336	0.418	1.219	0.142	0.55	0.868	0.491	0.392	0.691	0.544
HCM Control Delay	195.5	22.5	124.8	15.4	26	47.3	22.4	20.3	30	23.1
HCM Lane LOS	F	C	F	C	D	E	C	C	D	C
HCM 95th-tile Q	21	1.7	13.9	0.4	2.6	6.2	2.1	1.5	4	2.6

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52

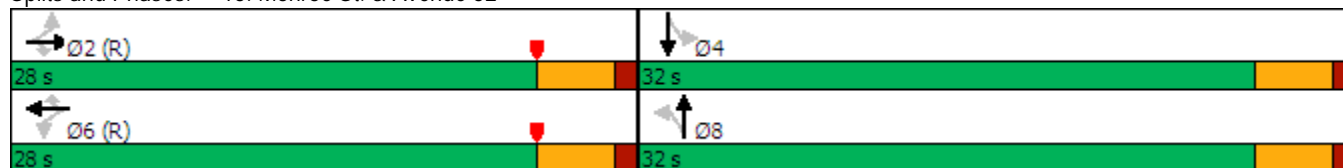
EAC (2023) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	101	314	38	27	329	131	43	285	41	103	286	59
Future Volume (vph)	101	314	38	27	329	131	43	285	41	103	286	59
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	2	2	2	6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	28.0	28.0	28.0	28.0	28.0	28.0	32.0	32.0		32.0	32.0	
Total Split (%)	46.7%	46.7%	46.7%	46.7%	46.7%	46.7%	53.3%	53.3%		53.3%	53.3%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5		4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max		Max	Max	

Intersection Summary























Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 60
 Offset: 27 (45%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
 Natural Cycle: 45
 Control Type: Actuated-Coordinated

Splits and Phases: 15: Monroe St. & Avenue 52



























HCM 6th Signalized Intersection Summary 15: Monroe St. & Avenue 52

EAC (2023) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	314	38	27	329	131	43	285	41	103	286	59
Future Volume (veh/h)	101	314	38	27	329	131	43	285	41	103	286	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	122	378	46	33	396	158	52	343	49	124	345	71
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	387	713	604	344	1355	604	121	633	85	519	1313	267
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	854	1821	1543	963	3460	1543	117	1382	186	992	2864	583
Grp Volume(v), veh/h	122	378	46	33	396	158	444	0	0	124	207	209
Grp Sat Flow(s),veh/h/ln	854	1821	1543	963	1730	1543	1685	0	0	992	1730	1716
Q Serve(g_s), s	6.9	9.6	1.1	1.6	4.7	4.2	0.3	0.0	0.0	0.0	4.4	4.5
Cycle Q Clear(g_c), s	11.6	9.6	1.1	11.2	4.7	4.2	10.8	0.0	0.0	7.2	4.4	4.5
Prop In Lane	1.00		1.00	1.00		1.00	0.12		0.11	1.00		0.34
Lane Grp Cap(c), veh/h	387	713	604	344	1355	604	839	0	0	519	793	787
V/C Ratio(X)	0.31	0.53	0.08	0.10	0.29	0.26	0.53	0.00	0.00	0.24	0.26	0.27
Avail Cap(c_a), veh/h	387	713	604	344	1355	604	839	0	0	519	793	787
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.5	14.0	11.4	18.3	12.5	12.4	11.7	0.0	0.0	10.7	10.0	10.0
Incr Delay (d2), s/veh	2.1	2.8	0.2	0.6	0.5	1.1	2.4	0.0	0.0	1.1	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	3.5	0.3	0.4	1.5	1.3	3.7	0.0	0.0	0.9	1.4	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.6	16.8	11.7	18.9	13.1	13.4	14.1	0.0	0.0	11.8	10.8	10.9
LnGrp LOS	B	B	B	B	B	B	B	A	A	B	B	B
Approach Vol, veh/h	546			587			444			540		
Approach Delay, s/veh	16.8			13.5			14.1			11.1		
Approach LOS	B			B			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	28.0			32.0			28.0			32.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	23.5			27.5			23.5			27.5		
Max Q Clear Time (g_c+I1), s	13.6			9.2			13.2			12.8		
Green Ext Time (p_c), s	2.0			2.6			2.1			2.2		
Intersection Summary												
HCM 6th Ctrl Delay	13.9											
HCM 6th LOS	B											

Lanes, Volumes, Timings
16: Monroe St. & 50th Avenue

EAC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	229	37	30	342	123	25	412	25	73	357	42
Future Volume (vph)	30	229	37	30	342	123	25	412	25	73	357	42
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	20.5	20.5	20.5	20.5	20.5	11.5	11.5	20.5		11.5	20.5	
Total Split (s)	27.0	27.0	27.0	27.0	27.0	11.5	11.5	21.5		11.5	21.5	
Total Split (%)	45.0%	45.0%	45.0%	45.0%	45.0%	19.2%	19.2%	35.8%		19.2%	35.8%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 60







Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

























Control Type: Actuated-Coordinated

Splits and Phases: 16: Monroe St. & 50th Avenue

 Ø1	 Ø2 (R)	 Ø4
11.5 s	21.5 s	27 s
 Ø5	 Ø6 (R)	 Ø8
11.5 s	21.5 s	27 s

















HCM 6th Signalized Intersection Summary
16: Monroe St. & 50th Avenue

EAC (2023) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	229	37	30	342	123	25	412	25	73	357	42
Future Volume (veh/h)	30	229	37	30	342	123	25	412	25	73	357	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	35	269	44	35	402	145	29	485	29	86	420	49
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	201	536	454	303	536	604	92	1355	81	169	1414	164
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.05	0.41	0.40	0.10	0.45	0.44
Sat Flow, veh/h	860	1821	1543	1067	1821	1543	1734	3318	198	1734	3124	362
Grp Volume(v), veh/h	35	269	44	35	402	145	29	252	262	86	232	237
Grp Sat Flow(s),veh/h/ln	860	1821	1543	1067	1821	1543	1734	1730	1786	1734	1730	1756
Q Serve(g_s), s	2.3	7.3	1.2	1.7	12.0	3.8	1.0	6.1	6.1	2.8	5.1	5.1
Cycle Q Clear(g_c), s	14.3	7.3	1.2	9.0	12.0	3.8	1.0	6.1	6.1	2.8	5.1	5.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.11	1.00		0.21
Lane Grp Cap(c), veh/h	201	536	454	303	536	604	92	707	729	169	783	795
V/C Ratio(X)	0.17	0.50	0.10	0.12	0.75	0.24	0.32	0.36	0.36	0.51	0.30	0.30
Avail Cap(c_a), veh/h	278	698	592	398	698	742	217	707	729	217	783	795
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.6	17.5	15.4	21.3	19.2	12.3	27.4	12.3	12.3	25.7	10.4	10.4
Incr Delay (d2), s/veh	0.4	0.7	0.1	0.2	3.3	0.2	1.9	1.4	1.4	2.4	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.6	0.4	0.4	4.6	1.0	0.4	2.1	2.1	1.1	1.6	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.1	18.3	15.5	21.4	22.5	12.5	29.3	13.7	13.7	28.1	11.3	11.4
LnGrp LOS	C	B	B	C	C	B	C	B	B	C	B	B
Approach Vol, veh/h	348			582			543			555		
Approach Delay, s/veh	18.7			19.9			14.5			14.0		
Approach LOS	B			B			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.8	28.5		21.7	7.2	31.2		21.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.0	17.0		22.5	7.0	17.0		22.5				
Max Q Clear Time (g_c+I1), s	4.8	8.1		16.3	3.0	7.1		14.0				
Green Ext Time (p_c), s	0.0	1.8		0.9	0.0	1.7		1.8				
Intersection Summary												
HCM 6th Ctrl Delay	16.6											
HCM 6th LOS	B											

Lanes, Volumes, Timings
17: Jackson St. & 58th Avenue

EAC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	76	10	2	63	3	4	129	2	12	123	14
Future Volume (vph)	13	76	10	2	63	3	4	129	2	12	123	14
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		5266			1079			1013			510	
Travel Time (s)		71.8			14.7			12.6			6.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	76	10	2	63	3	4	129	2	12	123	14
Future Vol, veh/h	13	76	10	2	63	3	4	129	2	12	123	14
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	81	11	2	67	3	4	137	2	13	131	15
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.5	8.3	8.6	8.6
HCM LOS	A	A	A	A










Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	13%	3%	8%
Vol Thru, %	96%	77%	93%	83%
Vol Right, %	1%	10%	4%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	135	99	68	149
LT Vol	4	13	2	12
Through Vol	129	76	63	123
RT Vol	2	10	3	14
Lane Flow Rate	144	105	72	159
Geometry Grp	1	1	1	1
Degree of Util (X)	0.181	0.137	0.095	0.197
Departure Headway (Hd)	4.537	4.683	4.738	4.484
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	791	766	756	800
Service Time	2.563	2.714	2.771	2.511
HCM Lane V/C Ratio	0.182	0.137	0.095	0.199
HCM Control Delay	8.6	8.5	8.3	8.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.5	0.3	0.7

Lanes, Volumes, Timings
1: Madison St. & Avenue 58

EAC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	115	21	10	90	129	13	257	7	106	379	121
Future Volume (vph)	115	115	21	10	90	129	13	257	7	106	379	121
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Intersection Delay, s/veh	15.9											
Intersection LOS	C											















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	115	115	21	10	90	129	13	257	7	106	379	121
Future Vol, veh/h	115	115	21	10	90	129	13	257	7	106	379	121
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	125	125	23	11	98	140	14	279	8	115	412	132
Number of Lanes	1	1	1	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	14.5	14.3	15.2	17.5
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	92%	0%	100%	0%	0%	100%	19%	0%	100%
Vol Right, %	0%	0%	8%	0%	0%	100%	0%	0%	81%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	13	171	93	115	115	21	10	60	159	106	253
LT Vol	13	0	0	115	0	0	10	0	0	106	0
Through Vol	0	171	86	0	115	0	0	60	30	0	253
RT Vol	0	0	7	0	0	21	0	0	129	0	0
Lane Flow Rate	14	186	101	125	125	23	11	65	173	115	275
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.034	0.418	0.224	0.303	0.285	0.048	0.027	0.151	0.372	0.252	0.563
Departure Headway (Hd)	8.576	8.076	8.023	8.721	8.221	7.521	8.824	8.324	7.756	7.877	7.377
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	417	445	446	411	436	475	405	430	463	455	489
Service Time	6.342	5.842	5.789	6.489	5.989	5.289	6.593	6.093	5.525	5.632	5.132
HCM Lane V/C Ratio	0.034	0.418	0.226	0.304	0.287	0.048	0.027	0.151	0.374	0.253	0.562
HCM Control Delay	11.6	16.6	13.1	15.3	14.3	10.7	11.8	12.6	15.1	13.3	19.3
HCM Lane LOS	B	C	B	C	B	B	B	B	C	B	C
HCM 95th-tile Q	0.1	2	0.8	1.3	1.2	0.2	0.1	0.5	1.7	1	3.4

Lanes, Volumes, Timings
2: Madison St. & Airport Bl.

EAC (2023) PM Peak hour

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	51	85	1	411	46	66	507
Future Volume (vph)	51	85	1	411	46	66	507
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		8			2		
Detector Phase	3	8	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	20.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	21.0	21.0	12.0	26.0	26.0	13.0	27.0
Total Split (%)	35.0%	35.0%	20.0%	43.3%	43.3%	21.7%	45.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 60

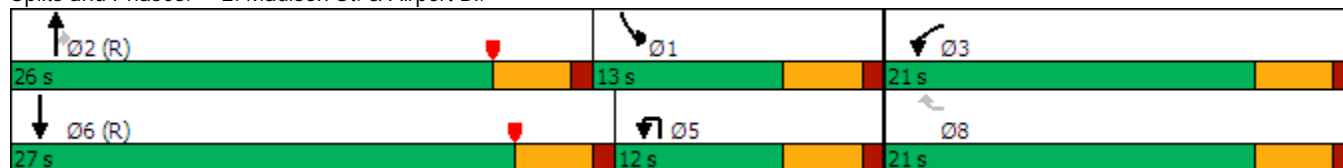
Actuated Cycle Length: 60

Offset: 28 (47%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55









Control Type: Actuated-Coordinated

Splits and Phases: 2: Madison St. & Airport Bl.






























HCM 6th Signalized Intersection Summary 2: Madison St. & Airport Bl.

EAC (2023) PM Peak hour

							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	51	85	1	411	46	66	507
Future Volume (veh/h)	51	85	1	411	46	66	507
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	57	96		462	52	74	570
Peak Hour Factor	0.89	0.89		0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	201	179		1269	566	551	2598
Arrive On Green	0.12	0.12		0.37	0.37	0.32	0.75
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	57	96		462	52	74	570
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	1.8	3.5		5.9	0.8	1.8	2.9
Cycle Q Clear(g_c), s	1.8	3.5		5.9	0.8	1.8	2.9
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	201	179		1269	566	551	2598
V/C Ratio(X)	0.28	0.54		0.36	0.09	0.13	0.22
Avail Cap(c_a), veh/h	491	437		1269	566	551	2598
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.2	25.0		13.9	4.4	14.6	2.2
Incr Delay (d2), s/veh	0.8	2.5		0.8	0.3	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.2		1.9	0.4	0.6	0.2
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	25.0	27.5		14.7	4.7	14.7	2.4
LnGrp LOS	C	C		B	A	B	A
Approach Vol, veh/h	153			514			644
Approach Delay, s/veh	26.6			13.7			3.8
Approach LOS	C			B			A
Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	23.0	26.0				49.0	11.0
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	8.5	21.5				22.5	16.5
Max Q Clear Time (g_c+I1), s	3.8	7.9				4.9	5.5
Green Ext Time (p_c), s	0.0	2.4				3.1	0.3
Intersection Summary							
HCM 6th Ctrl Delay			10.4				
HCM 6th LOS			B				
Notes							
User approved ignoring U-Turning movement.							

Lanes, Volumes, Timings
3: Madison St. & Avenue 54









EAC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 			 	
Traffic Volume (vph)	19	278	369	25	164	95	306	384	72	74	277	15
Future Volume (vph)	19	278	369	25	164	95	306	384	72	74	277	15
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh85.7

Intersection LOS F
























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	278	369	25	164	95	306	384	72	74	277	15
Future Vol, veh/h	19	278	369	25	164	95	306	384	72	74	277	15
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	312	415	28	184	107	344	431	81	83	311	17
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	178.9	23.9	55.4	27.2
HCM LOS	F	C	F	D

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	64%	0%	100%	20%	0%	100%	37%	0%	100%	86%
Vol Right, %	0%	0%	36%	0%	0%	80%	0%	0%	63%	0%	0%	14%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	306	256	200	19	185	462	25	109	150	74	185	107
LT Vol	306	0	0	19	0	0	25	0	0	74	0	0
Through Vol	0	256	128	0	185	93	0	109	55	0	185	92
RT Vol	0	0	72	0	0	369	0	0	95	0	0	15
Lane Flow Rate	344	288	225	21	208	519	28	123	168	83	207	121
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.996	0.795	0.606	0.066	0.616	1.454	0.094	0.393	0.518	0.269	0.644	0.371
Departure Headway (Hd)	11.04	10.54	10.288	11.151	10.651	10.091	12.571	12.071	11.627	12.365	11.865	11.767
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	330	345	353	321	339	363	287	300	313	293	307	308
Service Time	8.74	8.24	7.988	8.924	8.424	7.865	10.271	9.771	9.327	10.065	9.565	9.467
HCM Lane V/C Ratio	1.042	0.835	0.637	0.065	0.614	1.43	0.098	0.41	0.537	0.283	0.674	0.393
HCM Control Delay	83.2	43.9	27.6	14.7	29.2	245.7	16.6	22.4	26.2	19.6	33.7	21.2
HCM Lane LOS	F	E	D	B	D	F	C	C	D	C	D	C
HCM 95th-tile Q	11	6.6	3.8	0.2	3.9	27.2	0.3	1.8	2.8	1.1	4.2	1.7

Lanes, Volumes, Timings
3: Madison St. & Avenue 54

EAC (2023) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	278	369	25	164	95	306	384	72	74	277	15
Future Volume (vph)	19	278	369	25	164	95	306	384	72	74	277	15
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	
Total Split (s)	14.0	45.0		14.0	45.0	45.0	30.0	40.0	40.0	21.0	31.0	
Total Split (%)	11.7%	37.5%		11.7%	37.5%	37.5%	25.0%	33.3%	33.3%	17.5%	25.8%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

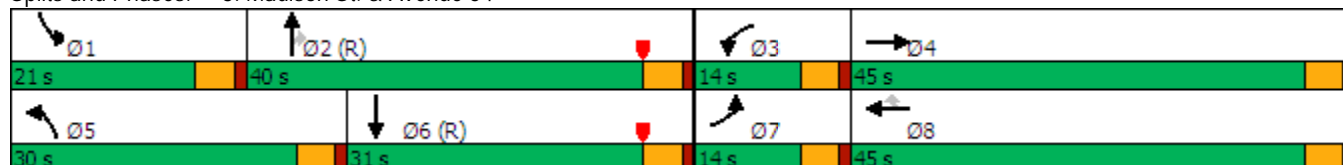
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated























Splits and Phases: 3: Madison St. & Avenue 54



HCM 6th Signalized Intersection Summary

























3: Madison St. & Avenue 54

EAC (2023) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	278	369	25	164	95	306	384	72	74	277	15
Future Volume (veh/h)	19	278	369	25	164	95	306	384	72	74	277	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	21	312	415	28	184	107	344	431	81	83	311	17
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	51	512	457	61	1045	466	417	1585	707	105	1318	72
Arrive On Green	0.03	0.30	0.30	0.04	0.30	0.30	0.12	0.46	0.46	0.06	0.39	0.39
Sat Flow, veh/h	1734	1730	1543	1734	3460	1543	3365	3460	1543	1734	3337	182
Grp Volume(v), veh/h	21	312	415	28	184	107	344	431	81	83	161	167
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1734	1730	1788
Q Serve(g_s), s	1.4	18.6	31.1	1.9	4.7	6.2	12.0	9.3	3.6	5.7	7.4	7.5
Cycle Q Clear(g_c), s	1.4	18.6	31.1	1.9	4.7	6.2	12.0	9.3	3.6	5.7	7.4	7.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	51	512	457	61	1045	466	417	1585	707	105	683	706
V/C Ratio(X)	0.41	0.61	0.91	0.46	0.18	0.23	0.83	0.27	0.11	0.79	0.24	0.24
Avail Cap(c_a), veh/h	137	584	521	137	1168	521	715	1585	707	238	683	706
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.73	0.73	0.73	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.2	36.3	40.7	56.7	30.9	31.4	51.3	20.1	18.6	55.6	24.2	24.2
Incr Delay (d2), s/veh	3.9	1.1	14.5	5.2	0.1	0.2	4.2	0.4	0.3	12.3	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	7.6	12.9	0.9	1.9	2.2	5.1	3.6	1.3	2.8	3.1	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.1	37.4	55.1	61.9	31.0	31.7	55.5	20.5	18.9	67.9	25.0	25.0
LnGrp LOS	E	D	E	E	C	C	E	C	B	E	C	C
Approach Vol, veh/h	748			319			856			411		
Approach Delay, s/veh	47.9			33.9			34.4			33.7		
Approach LOS	D			C			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.8	59.5	8.7	40.0	19.4	51.9	8.0	40.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	16.5	35.5	9.5	40.5	25.5	26.5	9.5	40.5				
Max Q Clear Time (g_c+I1), s	7.7	11.3	3.9	33.1	14.0	9.5	3.4	8.2				
Green Ext Time (p_c), s	0.1	2.7	0.0	2.4	0.9	1.4	0.0	1.3				
Intersection Summary												
HCM 6th Ctrl Delay	38.5											
HCM 6th LOS	D											

Lanes, Volumes, Timings
4: Madison St. & Avenue 52

EAC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	509	85	20	433	54	104	322	35	63	262	68
Future Volume (vph)	78	509	85	20	433	54	104	322	35	63	262	68
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	23.0	51.0	51.0	15.0	43.0	43.0	17.0	40.0	40.0	14.0	37.0	37.0
Total Split (%)	19.2%	42.5%	42.5%	12.5%	35.8%	35.8%	14.2%	33.3%	33.3%	11.7%	30.8%	30.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

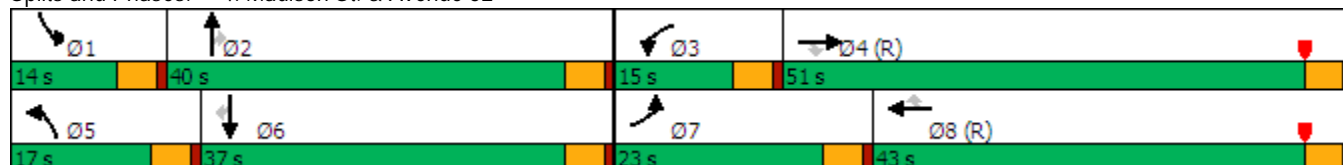
Actuated Cycle Length: 120

Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated

























Splits and Phases: 4: Madison St. & Avenue 52



HCM 6th Signalized Intersection Summary

























4: Madison St. & Avenue 52

EAC (2023) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	509	85	20	433	54	104	322	35	63	262	68
Future Volume (veh/h)	78	509	85	20	433	54	104	322	35	63	262	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	91	592	99	23	503	63	121	374	41	73	305	79
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	1625	725	54	1505	671	193	1024	457	179	1009	450
Arrive On Green	0.07	0.47	0.47	0.03	0.43	0.43	0.06	0.30	0.30	0.05	0.29	0.29
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	91	592	99	23	503	63	121	374	41	73	305	79
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	6.2	13.1	4.4	1.6	11.5	2.9	4.2	10.2	2.3	2.5	8.2	4.6
Cycle Q Clear(g_c), s	6.2	13.1	4.4	1.6	11.5	2.9	4.2	10.2	2.3	2.5	8.2	4.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	115	1625	725	54	1505	671	193	1024	457	179	1009	450
V/C Ratio(X)	0.79	0.36	0.14	0.42	0.33	0.09	0.63	0.37	0.09	0.41	0.30	0.18
Avail Cap(c_a), veh/h	267	1625	725	152	1505	671	350	1024	457	266	1009	450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.2	20.4	18.0	57.1	22.4	20.0	55.3	33.4	30.6	55.0	33.0	31.7
Incr Delay (d2), s/veh	11.6	0.6	0.4	5.2	0.6	0.3	3.3	1.0	0.4	1.5	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	5.2	1.5	0.7	4.5	1.0	1.8	4.3	0.9	1.1	3.4	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.9	21.0	18.4	62.3	23.0	20.3	58.6	34.4	31.0	56.5	33.8	32.6
LnGrp LOS	E	C	B	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h	782			589			536			457		
Approach Delay, s/veh	26.0			24.3			39.6			37.2		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.9	40.0	8.2	60.9	11.4	39.5	12.4	56.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	9.5	35.5	10.5	46.5	12.5	32.5	18.5	38.5				
Max Q Clear Time (g_c+I1), s	4.5	12.2	3.6	15.1	6.2	10.2	8.2	13.5				
Green Ext Time (p_c), s	0.1	2.2	0.0	4.2	0.1	1.9	0.1	3.1				
Intersection Summary												
HCM 6th Ctrl Delay	30.8											
HCM 6th LOS	C											

Lanes, Volumes, Timings
5: Madison St. & Avenue 50/50th Avenue

EAC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	449	149	51	368	53	119	393	40	52	254	97
Future Volume (vph)	94	449	149	51	368	53	119	393	40	52	254	97
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	24.0	48.0	48.0	18.0	42.0	42.0	18.0	40.0	40.0	14.0	36.0	36.0
Total Split (%)	20.0%	40.0%	40.0%	15.0%	35.0%	35.0%	15.0%	33.3%	33.3%	11.7%	30.0%	30.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

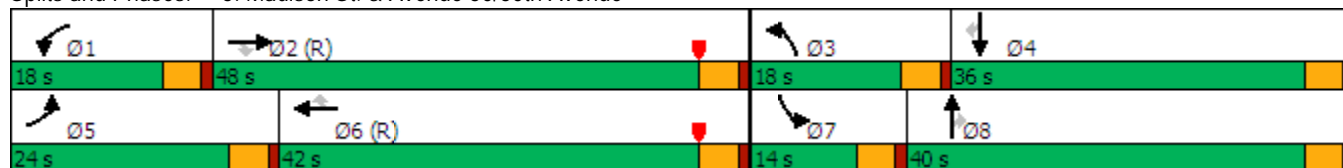
Actuated Cycle Length: 120

Offset: 64.5 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue




























HCM 6th Signalized Intersection Summary 5: Madison St. & Avenue 50/50th Avenue

EAC (2023) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	449	149	51	368	53	119	393	40	52	254	97
Future Volume (veh/h)	94	449	149	51	368	53	119	393	40	52	254	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	99	473	157	54	387	56	125	414	42	55	267	102
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	124	1579	704	84	1501	670	193	1024	457	165	994	444
Arrive On Green	0.07	0.46	0.46	0.05	0.43	0.43	0.06	0.30	0.30	0.05	0.29	0.29
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	99	473	157	54	387	56	125	414	42	55	267	102
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	6.7	10.3	7.4	3.7	8.6	2.6	4.4	11.5	2.4	1.9	7.2	6.1
Cycle Q Clear(g_c), s	6.7	10.3	7.4	3.7	8.6	2.6	4.4	11.5	2.4	1.9	7.2	6.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	124	1579	704	84	1501	670	193	1024	457	165	994	444
V/C Ratio(X)	0.80	0.30	0.22	0.64	0.26	0.08	0.65	0.40	0.09	0.33	0.27	0.23
Avail Cap(c_a), veh/h	282	1579	704	195	1501	670	379	1024	457	266	994	444
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	20.5	19.7	56.0	21.7	20.0	55.4	33.8	30.6	55.2	33.0	32.6
Incr Delay (d2), s/veh	11.2	0.5	0.7	7.8	0.4	0.2	3.6	1.2	0.4	1.2	0.7	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	4.1	2.6	1.7	3.4	0.9	1.9	4.8	0.9	0.8	3.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.1	21.0	20.5	63.8	22.1	20.2	59.0	35.0	31.0	56.3	33.7	33.8
LnGrp LOS	E	C	C	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h	729			497			581			424		
Approach Delay, s/veh	27.0			26.4			39.9			36.7		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.3	59.3	11.4	39.0	13.1	56.6	10.4	40.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	13.5	43.5	13.5	31.5	19.5	37.5	9.5	35.5				
Max Q Clear Time (g_c+I1), s	5.7	12.3	6.4	9.2	8.7	10.6	3.9	13.5				
Green Ext Time (p_c), s	0.0	3.5	0.2	1.7	0.1	2.4	0.0	2.4				
Intersection Summary												
HCM 6th Ctrl Delay	32.1											
HCM 6th LOS	C											

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54









EAC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 		 	 	
Traffic Volume (vph)	31	24	2	34	10	448	6	252	53	567	303	2
Future Volume (vph)	31	24	2	34	10	448	6	252	53	567	303	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 79.4

Intersection LOS F






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	24	2	34	10	448	6	252	53	567	303	2
Future Vol, veh/h	31	24	2	34	10	448	6	252	53	567	303	2
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	29	2	41	12	546	7	307	65	691	370	2
Number of Lanes	1	2	0	1	1	1	0	2	0	2	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	16	181.4	23.3	46.1
HCM LOS	C	F	C	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	5%	0%	100%	0%	0%	100%	0%	0%	100%	100%	0%
Vol Thru, %	95%	70%	0%	100%	80%	0%	100%	0%	0%	0%	99%
Vol Right, %	0%	30%	0%	0%	20%	0%	0%	100%	0%	0%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	132	179	31	16	10	34	10	448	284	284	305
LT Vol	6	0	31	0	0	34	0	0	284	284	0
Through Vol	126	126	0	16	8	0	10	0	0	0	303
RT Vol	0	53	0	0	2	0	0	448	0	0	2
Lane Flow Rate	161	218	38	20	12	41	12	546	346	346	372
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.43	0.57	0.121	0.06	0.037	0.117	0.033	1.349	0.841	0.841	0.853
Departure Headway (Hd)	10.292	10.062	12.409	11.885	11.738	10.115	9.604	8.889	9.477	9.477	8.965
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	353	360	291	303	307	354	372	410	384	384	405
Service Time	7.992	7.762	10.109	9.585	9.438	7.889	7.378	6.663	7.177	7.177	6.665
HCM Lane V/C Ratio	0.456	0.606	0.131	0.066	0.039	0.116	0.032	1.332	0.901	0.901	0.919
HCM Control Delay	20.5	25.3	16.8	15.3	14.9	14.2	12.7	197.9	46.2	46.2	45.9
HCM Lane LOS	C	D	C	C	B	B	B	F	E	E	E
HCM 95th-tile Q	2.1	3.4	0.4	0.2	0.1	0.4	0.1	25.5	7.8	7.8	8.2

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54

EAC (2023) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	24	2	34	10	448	6	252	53	567	303	2
Future Volume (vph)	31	24	2	34	10	448	6	252	53	567	303	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases		2			6		8	8		4	4	
Permitted Phases	2			6		6						4
Detector Phase	2	2		6	6	6	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5		22.5	22.5	22.5
Total Split (s)	52.0	52.0		52.0	52.0	52.0	26.0	26.0		42.0	42.0	42.0
Total Split (%)	43.3%	43.3%		43.3%	43.3%	43.3%	21.7%	21.7%		35.0%	35.0%	35.0%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		None	None	None	Max	Max		Max	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

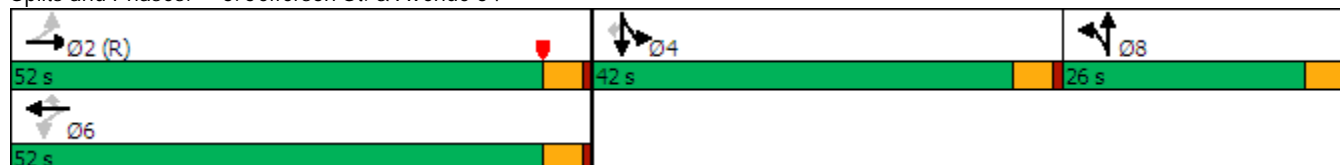
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 70























Control Type: Actuated-Coordinated

Splits and Phases: 6: Jefferson St. & Avenue 54























HCM 6th Signalized Intersection Summary 6: Jefferson St. & Avenue 54

EAC (2023) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	24	2	34	10	448	6	252	53	567	303	2
Future Volume (veh/h)	31	24	2	34	10	448	6	252	53	567	303	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	38	29	2	41	12	546	7	307	65	691	370	2
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	394	1301	89	598	721	611	11	508	112	1051	1081	482
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.18	0.18	0.18	0.31	0.31	0.31
Sat Flow, veh/h	851	3287	224	1378	1821	1543	63	2835	628	3365	3460	1543
Grp Volume(v), veh/h	38	15	16	41	12	546	202	0	177	691	370	2
Grp Sat Flow(s),veh/h/ln	851	1730	1781	1378	1821	1543	1818	0	1708	1682	1730	1543
Q Serve(g_s), s	3.4	0.6	0.7	2.2	0.5	39.7	12.3	0.0	11.4	21.3	9.9	0.1
Cycle Q Clear(g_c), s	3.9	0.6	0.7	2.9	0.5	39.7	12.3	0.0	11.4	21.3	9.9	0.1
Prop In Lane	1.00		0.13	1.00		1.00	0.03		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	394	685	705	598	721	611	326	0	306	1051	1081	482
V/C Ratio(X)	0.10	0.02	0.02	0.07	0.02	0.89	0.62	0.00	0.58	0.66	0.34	0.00
Avail Cap(c_a), veh/h	394	685	705	598	721	611	326	0	306	1051	1081	482
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.82	0.82	0.82	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.2	22.1	22.1	23.0	22.0	33.9	45.5	0.0	45.1	35.7	31.8	28.4
Incr Delay (d2), s/veh	0.5	0.1	0.1	0.0	0.0	13.3	8.6	0.0	7.7	3.2	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.3	0.3	0.7	0.2	15.9	6.1	0.0	5.3	8.7	4.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.7	22.2	22.2	23.0	22.1	47.2	54.1	0.0	52.8	38.9	32.6	28.4
LnGrp LOS	C	C	C	C	C	D	D	A	D	D	C	C
Approach Vol, veh/h	69			599			379			1063		
Approach Delay, s/veh	23.0			45.0			53.5			36.7		
Approach LOS	C			D			D			D		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	52.0			42.0			52.0			26.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	47.5			37.5			47.5			21.5		
Max Q Clear Time (g_c+I1), s	5.9			23.3			41.7			14.3		
Green Ext Time (p_c), s	0.3			4.0			1.2			1.1		
Intersection Summary												
HCM 6th Ctrl Delay	41.6											
HCM 6th LOS	D											

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EAC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	381	335	31	400	300	213	632	73	190	645	144
Future Volume (vph)	105	381	335	31	400	300	213	632	73	190	645	144
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											





















HCM 6th Roundabout
7: Jefferson St. & Avenue 52

EAC (2023) PM Peak hour

Intersection									
Intersection Delay, s/veh	120.3								
Intersection LOS	F								
Approach	EB		WB		NB		SB		
Entry Lanes	1		1		1		1		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	883		786		987		1053		
Demand Flow Rate, veh/h	900		802		1008		1074		
Vehicles Circulating, veh/h	950		1043		741		707		
Vehicles Exiting, veh/h	673		626		742		809		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	43.1		41.2		204.7		164.8		
Approach LOS	E		E		F		F		
Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Bypass	
Designated Moves	LT	R	LT	R	LT	R	LT	R	
Assumed Moves	LT	R	LT	R	LT	R	LT	R	
RT Channelized		Free		Free		Free		Free	
Lane Util	1.000		1.000		1.000		1.000		
Follow-Up Headway, s	2.609		2.609		2.609		2.609		
Critical Headway, s	4.976	367	4.976	329	4.976	80	4.976	158	
Entry Flow, veh/h	533	1887	473	1887	928	1887	916	1887	
Cap Entry Lane, veh/h	524	0.980	476	0.980	648	0.980	671	0.980	
Entry HV Adj Factor	0.981	360	0.980	323	0.980	78	0.980	155	
Flow Entry, veh/h	523	1850	463	1850	909	1850	898	1850	
Cap Entry, veh/h	514	0.195	467	0.175	635	0.042	658	0.084	
V/C Ratio	1.018	0.0	0.993	0.0	1.432	0.0	1.365	0.0	
Control Delay, s/veh	72.8	A	69.9	A	222.3	A	193.2	A	
LOS	F	1	F	1	F	0	F	0	
95th %tile Queue, veh	15		13		42		39		

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EAC (2023) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	381	335	31	400	300	213	632	73	190	645	144
Future Volume (vph)	105	381	335	31	400	300	213	632	73	190	645	144
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		100	0		100	0		0	0		0
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	60			60			60			60		
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											























HCM 6th Roundabout
7: Jefferson St. & Avenue 52

EAC (2023) PM Peak hour
With Improvements

Intersection										
Intersection Delay, s/veh	16.6									
Intersection LOS	C									
Approach	EB		WB		NB		SB			
Entry Lanes	1		1		2		2			
Conflicting Circle Lanes	2		2		2		2			
Adj Approach Flow, veh/h	883		786		987		1053			
Demand Flow Rate, veh/h	900		802		1008		1074			
Vehicles Circulating, veh/h	950		1043		741		707			
Vehicles Exiting, veh/h	673		626		742		809			
Ped Vol Crossing Leg, #/h	0		0		0		0			
Ped Cap Adj	1.000		1.000		1.000		1.000			
Approach Delay, s/veh	19.7		18.6		15.8		13.4			
Approach LOS	C		C		C		B			
Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
Assumed Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
RT Channelized		Free		Free			Free			Free
Lane Util	1.000		1.000		0.470	0.530		0.471	0.529	
Follow-Up Headway, s	2.535		2.535		2.667	2.535		2.667	2.535	
Critical Headway, s	4.328	367	4.328	329	4.645	4.328	80	4.645	4.328	158
Entry Flow, veh/h	533	1887	473	1887	436	492	1887	431	485	1887
Cap Entry Lane, veh/h	633	0.980	585	0.980	683	756	0.980	704	779	0.980
Entry HV Adj Factor	0.981	360	0.980	323	0.980	0.980	78	0.979	0.981	155
Flow Entry, veh/h	523	1850	463	1850	427	482	1850	422	476	1850
Cap Entry, veh/h	621	0.195	573	0.175	669	741	0.042	690	764	0.084
V/C Ratio	0.842	0.0	0.808	0.0	0.639	0.650	0.0	0.612	0.623	0.0
Control Delay, s/veh	33.2	A	31.6	A	17.6	16.7	A	16.1	15.3	A
LOS	D	1	D	1	C	C	0	C	C	0
95th %tile Queue, veh	9		8		5	5		4	4	

Lanes, Volumes, Timings 8: Jefferson St. & Pomelo

EAC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	2	21	9	1	42	3	1040	7	23	1043	68
Future Volume (vph)	66	2	21	9	1	42	3	1040	7	23	1043	68
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	54.0		18.0	54.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	15.0%	45.0%		15.0%	45.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary

Area Type: Other

Cycle Length: 120

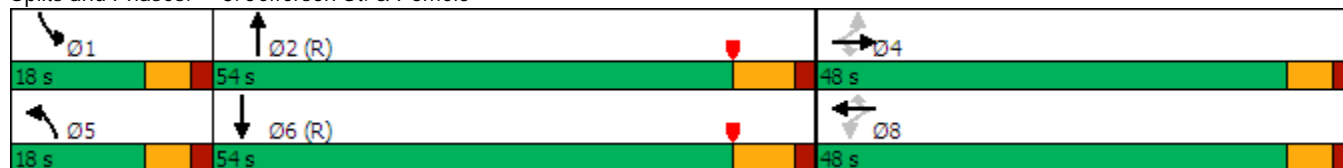
Actuated Cycle Length: 120

Offset: 30 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110

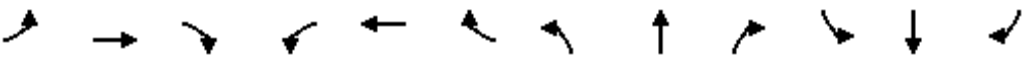
Control Type: Actuated-Coordinated

Splits and Phases: 8: Jefferson St. & Pomelo



























HCM 6th Signalized Intersection Summary 8: Jefferson St. & Pomelo

EAC (2023) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↱	↑↑↑		↱	↑↑↑	
Traffic Volume (veh/h)	66	2	21	9	1	42	3	1040	7	23	1043	68
Future Volume (veh/h)	66	2	21	9	1	42	3	1040	7	23	1043	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	69	2	22	9	1	44	3	1095	7	24	1098	72
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	73	1	524	66	4	524	17	2258	14	96	2329	153
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.01	0.44	0.44	0.02	0.16	0.16
Sat Flow, veh/h	41	4	1543	27	13	1543	1734	5097	33	1734	4767	312
Grp Volume(v), veh/h	71	0	22	10	0	44	3	712	390	24	763	407
Grp Sat Flow(s),veh/h/ln	44	0	1543	40	0	1543	1734	1657	1815	1734	1657	1765
Q Serve(g_s), s	1.2	0.0	1.1	0.6	0.0	2.3	0.2	18.3	18.3	1.6	25.1	25.1
Cycle Q Clear(g_c), s	40.7	0.0	1.1	40.4	0.0	2.3	0.2	18.3	18.3	1.6	25.1	25.1
Prop In Lane	0.97		1.00	0.90		1.00	1.00		0.02	1.00		0.18
Lane Grp Cap(c), veh/h	74	0	524	71	0	524	17	1468	804	96	1619	862
V/C Ratio(X)	0.96	0.00	0.04	0.14	0.00	0.08	0.18	0.48	0.48	0.25	0.47	0.47
Avail Cap(c_a), veh/h	89	0	540	86	0	540	173	1468	804	173	1619	862
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.72	0.72	0.72
Uniform Delay (d), s/veh	59.4	0.0	26.6	45.9	0.0	27.0	59.0	23.7	23.7	56.5	36.3	36.3
Incr Delay (d2), s/veh	81.4	0.0	0.1	1.9	0.0	0.1	10.9	1.1	2.1	2.1	0.7	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	0.4	0.3	0.0	0.9	0.1	6.8	7.7	0.8	11.2	12.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	140.7	0.0	26.6	47.8	0.0	27.1	69.8	24.9	25.8	58.6	37.0	37.6
LnGrp LOS	F	A	C	D	A	C	E	C	C	E	D	D
Approach Vol, veh/h	93			54			1105			1194		
Approach Delay, s/veh	113.7			30.9			25.3			37.6		
Approach LOS	F			C			C			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.6	60.0		47.4	7.1	65.5		47.4				
Change Period (Y+Rc), s	6.0	7.5		6.0	6.0	7.5		6.0				
Max Green Setting (Gmax), s	12.0	46.5		42.0	12.0	46.5		42.0				
Max Q Clear Time (g_c+I1), s	3.6	20.3		42.7	2.2	27.1		42.4				
Green Ext Time (p_c), s	0.0	13.0		0.0	0.0	11.5		0.0				
Intersection Summary												
HCM 6th Ctrl Delay	34.8											
HCM 6th LOS	C											

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

EAC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	362	363	131	127	322	199	127	938	83	285	874	231
Future Volume (vph)	362	363	131	127	322	199	127	938	83	285	874	231
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	39.5	39.5	22.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	32.9%	32.9%	18.3%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

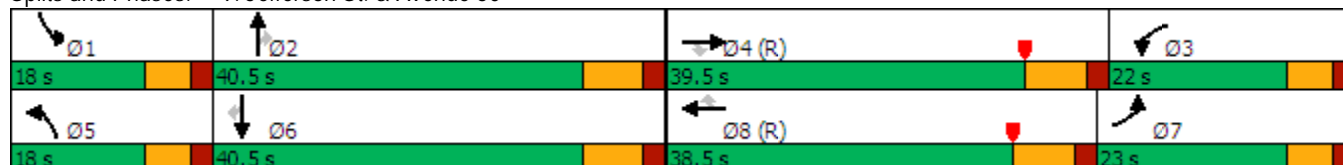
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 125































Control Type: Actuated-Coordinated

Splits and Phases: 9: Jefferson St. & Avenue 50



HCM 6th Signalized Intersection Summary 9: Jefferson St. & Avenue 50

EAC (2023) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  		 	  	
Traffic Volume (veh/h)	362	363	131	127	322	199	127	938	83	285	874	231
Future Volume (veh/h)	362	363	131	127	322	199	127	938	83	285	874	231
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	373	374	135	131	332	205	131	967	86	294	901	238
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	541	241	472	392	332	171	1225	380	336	1231	382
Arrive On Green	0.21	0.16	0.16	0.27	0.22	0.22	0.03	0.08	0.08	0.10	0.25	0.25
Sat Flow, veh/h	1734	3460	1543	1734	1821	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	373	374	135	131	332	205	131	967	86	294	901	238
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	25.6	12.3	7.3	7.1	21.0	10.5	9.0	22.9	3.1	10.3	20.0	9.3
Cycle Q Clear(g_c), s	25.6	12.3	7.3	7.1	21.0	10.5	9.0	22.9	3.1	10.3	20.0	9.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	370	541	241	472	392	332	171	1225	380	336	1231	382
V/C Ratio(X)	1.01	0.69	0.56	0.28	0.85	0.62	0.77	0.79	0.23	0.87	0.73	0.62
Avail Cap(c_a), veh/h	370	923	412	472	470	399	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	47.9	26.3	34.4	45.2	22.7	56.7	52.1	10.6	53.3	41.5	12.9
Incr Delay (d2), s/veh	48.6	7.1	9.1	0.1	19.8	8.4	15.7	3.0	0.4	20.8	2.1	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.6	5.6	4.1	2.9	11.3	4.4	4.7	10.4	2.4	5.2	8.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	95.7	55.0	35.3	34.5	65.1	31.0	72.4	55.1	11.1	74.1	43.5	15.9
LnGrp LOS	F	D	D	C	E	C	E	E	B	E	D	B
Approach Vol, veh/h	882					668		1184		1433		
Approach Delay, s/veh	69.2					48.6		53.8		45.2		
Approach LOS	E					D		D		D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	37.1	38.7	26.3	17.8	37.2	31.6	33.3				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	12.0	33.0	16.0	32.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	12.3	24.9	9.1	14.3	11.0	22.0	27.6	23.0				
Green Ext Time (p_c), s	0.0	4.7	0.0	4.5	0.0	6.0	0.0	2.8				
Intersection Summary												
HCM 6th Ctrl Delay	53.3											
HCM 6th LOS	D											
Notes												

Lanes, Volumes, Timings
10: Avenue 60 & Madison St.






EAC (2023) PM Peak hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	24	10	10	130	256	36
Future Volume (vph)	24	10	10	130	256	36
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		40	
Link Distance (ft)		1772	661		437	
Travel Time (s)		30.2	11.3		7.4	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)						
Sign Control		Stop	Stop		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Intersection Delay, s/veh	11.2
Intersection LOS	B





















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	24	10	10	130	256	36
Future Vol, veh/h	24	10	10	130	256	36
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	12	12	159	312	44
Number of Lanes	0	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	9.1	8.9	12.6
HCM LOS	A	A	B

Lane	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	71%	0%	0%	100%	0%
Vol Thru, %	29%	100%	0%	0%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	34	10	130	256	36
LT Vol	24	0	0	256	0
Through Vol	10	10	0	0	0
RT Vol	0	0	130	0	36
Lane Flow Rate	41	12	159	312	44
Geometry Grp	4	7	7	7	7
Degree of Util (X)	0.065	0.019	0.214	0.482	0.053
Departure Headway (Hd)	5.674	5.575	4.869	5.555	4.352
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	630	642	737	646	820
Service Time	3.723	3.31	2.604	3.298	2.094
HCM Lane V/C Ratio	0.065	0.019	0.216	0.483	0.054
HCM Control Delay	9.1	8.4	8.9	13.4	7.3
HCM Lane LOS	A	A	A	B	A
HCM 95th-tile Q	0.2	0.1	0.8	2.6	0.2

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

EAC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	113	110	11	44	122	66	202	10	192	249	22
Future Volume (vph)	26	113	110	11	44	122	66	202	10	192	249	22
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	18
Intersection LOS	C


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↱	↱		↱		↱	↱		↱	↱	↱
Traffic Vol, veh/h	26	113	110	11	44	122	66	202	10	192	249	22
Future Vol, veh/h	26	113	110	11	44	122	66	202	10	192	249	22
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	128	125	13	50	139	75	230	11	218	283	25
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	14.8	17.4	18.6	19.7
HCM LOS	B	C	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	19%	0%	6%	100%	0%	0%
Vol Thru, %	0%	95%	81%	0%	25%	0%	100%	0%
Vol Right, %	0%	5%	0%	100%	69%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	66	212	139	110	177	192	249	22
LT Vol	66	0	26	0	11	192	0	0
Through Vol	0	202	113	0	44	0	249	0
RT Vol	0	10	0	110	122	0	0	22
Lane Flow Rate	75	241	158	125	201	218	283	25
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.18	0.543	0.37	0.264	0.451	0.494	0.601	0.048
Departure Headway (Hd)	8.661	8.111	8.428	7.615	8.072	8.155	7.642	6.924
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	413	443	425	469	445	441	470	514
Service Time	6.457	5.906	6.223	5.409	5.871	5.943	5.429	4.71
HCM Lane V/C Ratio	0.182	0.544	0.372	0.267	0.452	0.494	0.602	0.049
HCM Control Delay	13.4	20.2	16.1	13.2	17.4	18.7	21.4	10.1
HCM Lane LOS	B	C	C	B	C	C	C	B
HCM 95th-tile Q	0.6	3.2	1.7	1.1	2.3	2.7	3.9	0.2

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	111	56	35	78	48	76	332	46	40	373	47
Future Volume (vph)	55	111	56	35	78	48	76	332	46	40	373	47
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	114
Intersection LOS	F


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	55	111	56	35	78	48	76	332	46	40	373	47
Future Vol, veh/h	55	111	56	35	78	48	76	332	46	40	373	47
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	73	148	75	47	104	64	101	443	61	53	497	63
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	29.6	22.7	169.1	132.4
HCM LOS	D	C	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	17%	25%	22%	10%	0%
Vol Thru, %	73%	50%	48%	90%	0%
Vol Right, %	10%	25%	30%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	454	222	161	413	47
LT Vol	76	55	35	40	0
Through Vol	332	111	78	373	0
RT Vol	46	56	48	0	47
Lane Flow Rate	605	296	215	551	63
Geometry Grp	5	2	2	7	7
Degree of Util (X)	1.285	0.672	0.509	1.222	0.126
Departure Headway (Hd)	8.11	9.366	9.883	8.557	7.781
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	454	388	367	430	464
Service Time	6.11	7.366	7.883	6.257	5.481
HCM Lane V/C Ratio	1.333	0.763	0.586	1.281	0.136
HCM Control Delay	169.1	29.6	22.7	146.1	11.6
HCM Lane LOS	F	D	C	F	B
HCM 95th-tile Q	24.5	4.7	2.8	20.9	0.4

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAC (2023) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	111	56	35	78	48	76	332	46	40	373	47
Future Volume (vph)	55	111	56	35	78	48	76	332	46	40	373	47
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	41.0	41.0		41.0	41.0		79.0	79.0		79.0	79.0	79.0
Total Split (%)	34.2%	34.2%		34.2%	34.2%		65.8%	65.8%		65.8%	65.8%	65.8%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)		4.5			4.5			4.5			4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

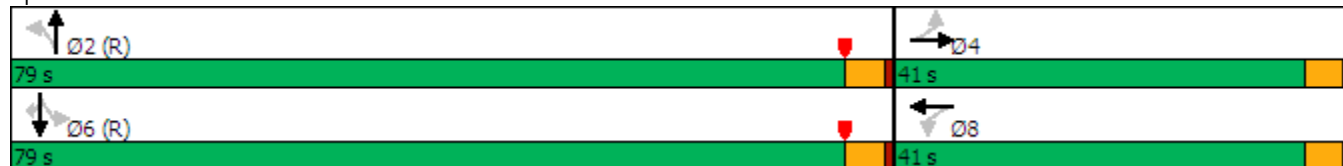
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated


















Splits and Phases: 12: Monroe St. & Avenue 58



HCM 6th Signalized Intersection Summary






















12: Monroe St. & Avenue 58

EAC (2023) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	111	56	35	78	48	76	332	46	40	373	47
Future Volume (veh/h)	55	111	56	35	78	48	76	332	46	40	373	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	73	148	75	47	104	64	101	443	61	53	497	63
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	104	179	83	85	173	94	179	765	102	119	1092	1083
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.70	0.70	0.70	0.70	0.70	0.70
Sat Flow, veh/h	300	799	373	216	776	421	205	1090	145	123	1557	1543
Grp Volume(v), veh/h	296	0	0	215	0	0	605	0	0	550	0	63
Grp Sat Flow(s),veh/h/ln	1472	0	0	1413	0	0	1441	0	0	1680	0	1543
Q Serve(g_s), s	7.5	0.0	0.0	0.0	0.0	0.0	14.7	0.0	0.0	0.0	0.0	1.5
Cycle Q Clear(g_c), s	23.7	0.0	0.0	16.2	0.0	0.0	30.2	0.0	0.0	15.5	0.0	1.5
Prop In Lane	0.25		0.25	0.22		0.30	0.17		0.10	0.10		1.00
Lane Grp Cap(c), veh/h	366	0	0	352	0	0	1046	0	0	1211	0	1083
V/C Ratio(X)	0.81	0.00	0.00	0.61	0.00	0.00	0.58	0.00	0.00	0.45	0.00	0.06
Avail Cap(c_a), veh/h	492	0	0	477	0	0	1046	0	0	1211	0	1083
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.3	0.0	0.0	41.9	0.0	0.0	9.7	0.0	0.0	7.7	0.0	5.6
Incr Delay (d2), s/veh	7.2	0.0	0.0	1.7	0.0	0.0	2.3	0.0	0.0	1.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	0.0	0.0	5.9	0.0	0.0	8.0	0.0	0.0	5.3	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.5	0.0	0.0	43.6	0.0	0.0	12.1	0.0	0.0	8.9	0.0	5.7
LnGrp LOS	D	A	A	D	A	A	B	A	A	A	A	A
Approach Vol, veh/h		296			215			605			613	
Approach Delay, s/veh		52.5			43.6			12.1			8.6	
Approach LOS		D			D			B			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		88.7		31.3		88.7		31.3				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		74.5		36.5		74.5		36.5				
Max Q Clear Time (g_c+I1), s		32.2		25.7		17.5		18.2				
Green Ext Time (p_c), s		4.5		1.1		3.9		1.2				
Intersection Summary												
HCM 6th Ctrl Delay				21.7								
HCM 6th LOS				C								

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.









EAC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	90	19	45	93	47	18	333	48	51	387	12
Future Volume (vph)	7	90	19	45	93	47	18	333	48	51	387	12
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 27.7

Intersection LOS D



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	90	19	45	93	47	18	333	48	51	387	12
Future Vol, veh/h	7	90	19	45	93	47	18	333	48	51	387	12
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	103	22	52	107	54	21	383	55	59	445	14
Number of Lanes	1	1	1	0	1	0	1	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	1	3
HCM Control Delay	13	18.9	46.5	18.5
HCM LOS	B	C	E	C







Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	100%	0%	0%	24%	100%	0%	0%
Vol Thru, %	0%	87%	0%	100%	0%	50%	0%	100%	91%
Vol Right, %	0%	13%	0%	0%	100%	25%	0%	0%	9%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	18	381	7	90	19	185	51	258	141
LT Vol	18	0	7	0	0	45	51	0	0
Through Vol	0	333	0	90	0	93	0	258	129
RT Vol	0	48	0	0	19	47	0	0	12
Lane Flow Rate	21	438	8	103	22	213	59	297	162
Geometry Grp	8	8	7	7	7	8	8	8	8
Degree of Util (X)	0.046	0.905	0.02	0.238	0.046	0.49	0.131	0.623	0.338
Departure Headway (Hd)	8.04	7.44	8.781	8.265	7.543	8.295	8.071	7.559	7.498
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	444	486	406	432	472	432	443	474	478
Service Time	5.818	5.217	6.57	6.053	5.33	6.084	5.853	5.341	5.28
HCM Lane V/C Ratio	0.047	0.901	0.02	0.238	0.047	0.493	0.133	0.627	0.339
HCM Control Delay	11.2	48.2	11.8	13.6	10.7	18.9	12.1	22.1	14.1
HCM Lane LOS	B	E	B	B	B	C	B	C	B
HCM 95th-tile Q	0.1	10.2	0.1	0.9	0.1	2.6	0.4	4.2	1.5

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	237	82	23	144	51	52	388	33	83	347	39
Future Volume (vph)	74	237	82	23	144	51	52	388	33	83	347	39
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	106
Intersection LOS	F



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	237	82	23	144	51	52	388	33	83	347	39
Future Vol, veh/h	74	237	82	23	144	51	52	388	33	83	347	39
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	81	260	90	25	158	56	57	426	36	91	381	43
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	43.5	32.9	180.3	117.4
HCM LOS	E	D	F	F

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	11%	100%	0%	11%	19%	0%
Vol Thru, %	82%	0%	74%	66%	81%	0%
Vol Right, %	7%	0%	26%	23%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	473	74	319	218	430	39
LT Vol	52	74	0	23	83	0
Through Vol	388	0	237	144	347	0
RT Vol	33	0	82	51	0	39
Lane Flow Rate	520	81	351	240	473	43
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	1.299	0.214	0.857	0.651	1.158	0.096
Departure Headway (Hd)	9.539	10.535	9.82	11.206	9.569	8.735
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	385	343	372	326	383	413
Service Time	7.539	8.235	7.52	9.206	7.269	6.435
HCM Lane V/C Ratio	1.351	0.236	0.944	0.736	1.235	0.104
HCM Control Delay	180.3	16.1	49.8	32.9	126.9	12.4
HCM Lane LOS	F	C	E	D	F	B
HCM 95th-tile Q	22.3	0.8	8.1	4.3	17	0.3

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAC (2023) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	237	82	23	144	51	52	388	33	83	347	39
Future Volume (vph)	74	237	82	23	144	51	52	388	33	83	347	39
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	47.0	47.0		47.0	47.0		73.0	73.0		73.0	73.0	73.0
Total Split (%)	39.2%	39.2%		39.2%	39.2%		60.8%	60.8%		60.8%	60.8%	60.8%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)	4.5	4.5			4.5			4.5			4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated



















Splits and Phases: 14: Monroe St. & Avenue 54



HCM 6th Signalized Intersection Summary























14: Monroe St. & Avenue 54

EAC (2023) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	237	82	23	144	51	52	388	33	83	347	39
Future Volume (veh/h)	74	237	82	23	144	51	52	388	33	83	347	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	81	260	90	25	158	56	57	426	36	91	381	43
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	176	329	114	45	208	67	130	946	78	214	872	1035
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.67	0.67	0.67	0.67	0.67	0.67
Sat Flow, veh/h	1167	1293	448	45	817	264	144	1412	116	265	1300	1543
Grp Volume(v), veh/h	81	0	350	239	0	0	519	0	0	472	0	43
Grp Sat Flow(s),veh/h/ln	1167	0	1741	1126	0	0	1672	0	0	1566	0	1543
Q Serve(g_s), s	0.3	0.0	22.5	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Cycle Q Clear(g_c), s	26.7	0.0	22.5	26.4	0.0	0.0	16.0	0.0	0.0	15.4	0.0	1.1
Prop In Lane	1.00		0.26	0.10		0.23	0.11		0.07	0.19		1.00
Lane Grp Cap(c), veh/h	176	0	443	320	0	0	1154	0	0	1085	0	1035
V/C Ratio(X)	0.46	0.00	0.79	0.75	0.00	0.00	0.45	0.00	0.00	0.43	0.00	0.04
Avail Cap(c_a), veh/h	292	0	616	481	0	0	1154	0	0	1085	0	1035
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.6	0.0	41.7	40.4	0.0	0.0	9.2	0.0	0.0	8.9	0.0	6.7
Incr Delay (d2), s/veh	1.9	0.0	4.7	3.5	0.0	0.0	1.3	0.0	0.0	1.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	9.7	6.1	0.0	0.0	5.7	0.0	0.0	5.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.5	0.0	46.4	43.9	0.0	0.0	10.4	0.0	0.0	10.2	0.0	6.8
LnGrp LOS	D	A	D	D	A	A	B	A	A	B	A	A
Approach Vol, veh/h	431			239			519			515		
Approach Delay, s/veh	46.3			43.9			10.4			9.9		
Approach LOS	D			D			B			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	85.0			35.0			85.0			35.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	68.5			42.5			68.5			42.5		
Max Q Clear Time (g_c+I1), s	18.0			28.7			17.4			28.4		
Green Ext Time (p_c), s	3.4			1.8			3.3			1.0		
Intersection Summary												
HCM 6th Ctrl Delay	24.0											
HCM 6th LOS	C											

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52









EAC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	403	66	55	361	104	44	406	64	116	362	90
Future Volume (vph)	106	403	66	55	361	104	44	406	64	116	362	90
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 75.8

Intersection LOS F























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	106	403	66	55	361	104	44	406	64	116	362	90
Future Vol, veh/h	106	403	66	55	361	104	44	406	64	116	362	90
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	123	469	77	64	420	121	51	472	74	135	421	105
Number of Lanes	1	1	1	0	2	1	0	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay	192.1	49.7	436.5	38.8
HCM LOS	F	E	F	E

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	9%	100%	0%	0%	31%	0%	0%	100%	0%	0%
Vol Thru, %	79%	0%	100%	0%	69%	100%	0%	0%	100%	57%
Vol Right, %	12%	0%	0%	100%	0%	0%	100%	0%	0%	43%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	514	106	403	66	175	241	104	116	241	211
LT Vol	44	106	0	0	55	0	0	116	0	0
Through Vol	406	0	403	0	120	241	0	0	241	121
RT Vol	64	0	0	66	0	0	104	0	0	90
Lane Flow Rate	598	123	469	77	204	280	121	135	281	245
Geometry Grp	8	8	8	8	8	8	8	7	7	7
Degree of Util (X)	1.884	0.403	1.47	0.226	0.642	0.869	0.352	0.391	0.775	0.657
Departure Headway (Hd)	11.962	14.148	13.596	12.823	14.526	14.35	13.567	13.222	12.674	12.346
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	311	256	272	282	251	255	267	274	289	296
Service Time	9.662	11.848	11.296	10.523	12.226	12.05	11.267	10.922	10.374	10.046
HCM Lane V/C Ratio	1.923	0.48	1.724	0.273	0.813	1.098	0.453	0.493	0.972	0.828
HCM Control Delay	436.5	26.1	264.1	19.2	40	68.1	23.5	24.2	48.3	35.9
HCM Lane LOS	F	D	F	C	E	F	C	C	E	E
HCM 95th-tile Q	38.7	1.8	22.1	0.8	4	7.2	1.5	1.8	5.9	4.3

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52

EAC (2023) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	403	66	55	361	104	44	406	64	116	362	90
Future Volume (vph)	106	403	66	55	361	104	44	406	64	116	362	90
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	26.0	26.0	26.0	26.0	26.0	26.0	34.0	34.0		34.0	34.0	
Total Split (%)	43.3%	43.3%	43.3%	43.3%	43.3%	43.3%	56.7%	56.7%		56.7%	56.7%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5		4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	C-Max	C-Max		C-Max	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

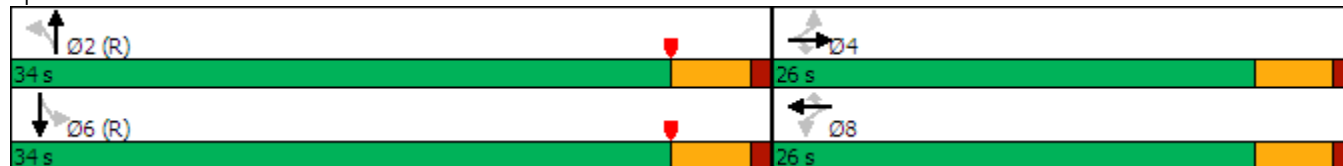
Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 50























Control Type: Actuated-Coordinated

Splits and Phases: 15: Monroe St. & Avenue 52



























HCM 6th Signalized Intersection Summary 15: Monroe St. & Avenue 52

EAC (2023) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	403	66	55	361	104	44	406	64	116	362	90
Future Volume (veh/h)	106	403	66	55	361	104	44	406	64	116	362	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	125	474	78	65	425	122	52	478	75	136	426	106
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	337	627	531	217	1191	531	108	705	106	454	1391	343
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.51	0.51	0.51	0.51	0.51	0.51
Sat Flow, veh/h	860	1821	1543	856	3460	1543	86	1395	210	855	2751	678
Grp Volume(v), veh/h	125	474	78	65	425	122	605	0	0	136	267	265
Grp Sat Flow(s),veh/h/ln	860	1821	1543	856	1730	1543	1690	0	0	855	1730	1699
Q Serve(g_s), s	7.6	13.8	2.1	4.4	5.5	3.4	3.9	0.0	0.0	0.0	5.4	5.5
Cycle Q Clear(g_c), s	13.1	13.8	2.1	18.2	5.5	3.4	15.8	0.0	0.0	11.7	5.4	5.5
Prop In Lane	1.00		1.00	1.00		1.00	0.09		0.12	1.00		0.40
Lane Grp Cap(c), veh/h	337	627	531	217	1191	531	920	0	0	454	875	859
V/C Ratio(X)	0.37	0.76	0.15	0.30	0.36	0.23	0.66	0.00	0.00	0.30	0.30	0.31
Avail Cap(c_a), veh/h	349	653	553	229	1240	553	920	0	0	454	875	859
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.6	17.4	13.6	25.5	14.7	14.0	11.1	0.0	0.0	10.2	8.7	8.7
Incr Delay (d2), s/veh	0.7	4.9	0.1	0.8	0.2	0.2	3.7	0.0	0.0	1.7	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	5.3	0.6	0.8	1.7	0.9	5.0	0.0	0.0	1.1	1.6	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.3	22.3	13.7	26.3	14.9	14.2	14.8	0.0	0.0	11.9	9.6	9.6
LnGrp LOS	C	C	B	C	B	B	B	A	A	B	A	A
Approach Vol, veh/h	677			612			605			668		
Approach Delay, s/veh	20.9			16.0			14.8			10.1		
Approach LOS	C			B			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	34.8			25.2			34.8			25.2		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	29.5			21.5			29.5			21.5		
Max Q Clear Time (g_c+I1), s	17.8			15.8			13.7			20.2		
Green Ext Time (p_c), s	2.9			1.8			3.3			0.4		
Intersection Summary												
HCM 6th Ctrl Delay	15.5											
HCM 6th LOS	B											

Lanes, Volumes, Timings
16: Monroe St. & 50th Avenue

EAC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	453	44	24	348	125	37	587	64	132	453	42
Future Volume (vph)	60	453	44	24	348	125	37	587	64	132	453	42
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	20.5	20.5	20.5	20.5	20.5	11.5	11.5	20.5		11.5	20.5	
Total Split (s)	26.0	26.0	26.0	26.0	26.0	12.0	11.5	22.0		12.0	22.5	
Total Split (%)	43.3%	43.3%	43.3%	43.3%	43.3%	20.0%	19.2%	36.7%		20.0%	37.5%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag						Lead	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

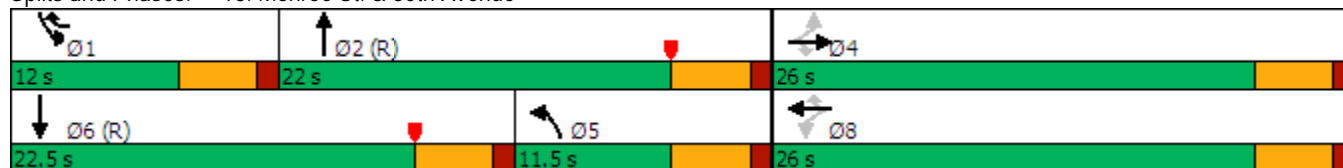
Actuated Cycle Length: 60

Offset: 14.6 (24%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

























Control Type: Actuated-Coordinated

Splits and Phases: 16: Monroe St. & 50th Avenue



















HCM 6th Signalized Intersection Summary
16: Monroe St. & 50th Avenue

EAC (2023) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	453	44	24	348	125	37	587	64	132	453	42
Future Volume (veh/h)	60	453	44	24	348	125	37	587	64	132	453	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	67	503	49	27	387	139	41	652	71	147	503	47
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	258	613	519	191	613	697	269	1097	119	199	987	92
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.16	0.35	0.34	0.11	0.31	0.30
Sat Flow, veh/h	877	1821	1543	856	1821	1543	1734	3147	342	1734	3200	298
Grp Volume(v), veh/h	67	503	49	27	387	139	41	358	365	147	271	279
Grp Sat Flow(s),veh/h/ln	877	1821	1543	856	1821	1543	1734	1730	1760	1734	1730	1767
Q Serve(g_s), s	4.2	15.2	1.3	1.8	10.7	3.3	1.2	10.2	10.2	4.9	7.7	7.8
Cycle Q Clear(g_c), s	14.9	15.2	1.3	17.0	10.7	3.3	1.2	10.2	10.2	4.9	7.7	7.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		0.17
Lane Grp Cap(c), veh/h	258	613	519	191	613	697	269	603	613	199	533	545
V/C Ratio(X)	0.26	0.82	0.09	0.14	0.63	0.20	0.15	0.59	0.60	0.74	0.51	0.51
Avail Cap(c_a), veh/h	284	668	566	217	668	743	269	603	613	231	533	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.1	18.2	13.6	26.0	16.8	9.9	21.9	16.1	16.1	25.7	17.0	17.1
Incr Delay (d2), s/veh	0.5	7.5	0.1	0.3	1.7	0.1	0.3	4.3	4.2	10.0	3.4	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	6.4	0.4	0.3	3.9	0.8	0.4	3.9	4.0	2.3	3.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.6	25.8	13.7	26.4	18.5	10.1	22.2	20.3	20.3	35.7	20.5	20.5
LnGrp LOS	C	C	B	C	B	B	C	C	C	D	C	C
Approach Vol, veh/h	619			553			764			697		
Approach Delay, s/veh	24.6			16.7			20.4			23.7		
Approach LOS	C			B			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.9	24.9		24.2	13.3	22.5		24.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	17.5		21.5	7.0	18.0		21.5				
Max Q Clear Time (g_c+I1), s	6.9	12.2		17.2	3.2	9.8		19.0				
Green Ext Time (p_c), s	0.0	1.8		1.3	0.0	1.8		0.7				
Intersection Summary												
HCM 6th Ctrl Delay	21.5											
HCM 6th LOS	C											

Lanes, Volumes, Timings
17: Jackson St. & 58th Avenue

EAC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	135	8	0	89	10	12	182	15	6	166	24
Future Volume (vph)	36	135	8	0	89	10	12	182	15	6	166	24
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		5266			1079			1013			510	
Travel Time (s)		71.8			14.7			12.6			6.3	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	36	135	8	0	89	10	12	182	15	6	166	24
Future Vol, veh/h	36	135	8	0	89	10	12	182	15	6	166	24
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	46	171	10	0	113	13	15	230	19	8	210	30
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.5	10.1	11.7	11.4
HCM LOS	B	B	B	B

























Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	20%	0%	3%
Vol Thru, %	87%	75%	90%	85%
Vol Right, %	7%	4%	10%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	209	179	99	196
LT Vol	12	36	0	6
Through Vol	182	135	89	166
RT Vol	15	8	10	24
Lane Flow Rate	265	227	125	248
Geometry Grp	1	1	1	1
Degree of Util (X)	0.389	0.349	0.197	0.365
Departure Headway (Hd)	5.298	5.541	5.657	5.29
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	677	648	633	680
Service Time	3.34	3.584	3.706	3.331
HCM Lane V/C Ratio	0.391	0.35	0.197	0.365
HCM Control Delay	11.7	11.5	10.1	11.4
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.8	1.6	0.7	1.7

WITH PROJECT CONDITIONS

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Lanes, Volumes, Timings
1: Madison St. & Avenue 58

EAPC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	67	7	14	72	65	18	277	20	84	242	74
Future Volume (vph)	115	67	7	14	72	65	18	277	20	84	242	74
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Intersection Delay, s/veh	12											
Intersection LOS	B											















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↑		↰	↑↑		↰	↑↑	
Traffic Vol, veh/h	115	67	7	14	72	65	18	277	20	84	242	74
Future Vol, veh/h	115	67	7	14	72	65	18	277	20	84	242	74
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	122	71	7	15	77	69	19	295	21	89	257	79
Number of Lanes	1	1	1	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	12.3	10.9	12.5	11.9
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	82%	0%	100%	0%	0%	100%	27%	0%	100%
Vol Right, %	0%	0%	18%	0%	0%	100%	0%	0%	73%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	18	185	112	115	67	7	14	48	89	84	161
LT Vol	18	0	0	115	0	0	14	0	0	84	0
Through Vol	0	185	92	0	67	0	0	48	24	0	161
RT Vol	0	0	20	0	0	7	0	0	65	0	0
Lane Flow Rate	19	196	120	122	71	7	15	51	95	89	172
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.039	0.369	0.22	0.26	0.142	0.013	0.032	0.103	0.178	0.176	0.315
Departure Headway (Hd)	7.258	6.758	6.633	7.651	7.151	6.451	7.786	7.286	6.774	7.102	6.602
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	491	530	538	467	498	551	457	489	525	503	542
Service Time	5.037	4.537	4.413	5.438	4.938	4.238	5.577	5.077	4.566	4.878	4.378
HCM Lane V/C Ratio	0.039	0.37	0.223	0.261	0.143	0.013	0.033	0.104	0.181	0.177	0.317
HCM Control Delay	10.3	13.5	11.3	13.1	11.1	9.3	10.8	10.9	11	11.4	12.4
HCM Lane LOS	B	B	B	B	B	A	B	B	B	B	B
HCM 95th-tile Q	0.1	1.7	0.8	1	0.5	0	0.1	0.3	0.6	0.6	1.3

Lanes, Volumes, Timings
2: Madison St. & Airport Bl.

EAPC (2023) AM Peak hour

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	40	73	1	414	37	102	376
Future Volume (vph)	40	73	1	414	37	102	376
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		3			2		
Detector Phase	3	3	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	11.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	15.0	15.0	13.0	27.0	27.0	18.0	32.0
Total Split (%)	25.0%	25.0%	21.7%	45.0%	45.0%	30.0%	53.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary















Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 60
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 45
 Control Type: Actuated-Coordinated

Splits and Phases: 2: Madison St. & Airport Bl.


























HCM 6th Signalized Intersection Summary 2: Madison St. & Airport Bl.

EAPC (2023) AM Peak hour

							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	40	73	1	414	37	102	376
Future Volume (veh/h)	40	73	1	414	37	102	376
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	46	84		476	43	117	432
Peak Hour Factor	0.87	0.87		0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	194	172		2007	895	188	2613
Arrive On Green	0.11	0.11		0.58	0.58	0.11	0.76
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	46	84		476	43	117	432
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	1.5	3.1		4.0	0.7	3.9	2.1
Cycle Q Clear(g_c), s	1.5	3.1		4.0	0.7	3.9	2.1
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	194	172		2007	895	188	2613
V/C Ratio(X)	0.24	0.49		0.24	0.05	0.62	0.17
Avail Cap(c_a), veh/h	318	283		2007	895	405	2613
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	25.0		6.1	5.4	25.6	2.1
Incr Delay (d2), s/veh	0.6	2.1		0.3	0.1	3.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.1		1.0	0.2	1.6	0.1
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	24.9	27.2		6.4	5.5	28.9	2.2
LnGrp LOS	C	C		A	A	C	A
Approach Vol, veh/h	130			519			549
Approach Delay, s/veh	26.4			6.3			7.9
Approach LOS	C			A			A
Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	10.5	38.8				49.3	10.7
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	13.5	22.5				27.5	10.5
Max Q Clear Time (g_c+I1), s	5.9	6.0				4.1	5.1
Green Ext Time (p_c), s	0.1	2.6				2.5	0.1
Intersection Summary							
HCM 6th Ctrl Delay			9.2				
HCM 6th LOS			A				
Notes							
User approved pedestrian interval to be less than phase max green.							
User approved ignoring U-Turning movement.							

Lanes, Volumes, Timings
3: Madison St. & Avenue 54









EAPC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	197	315	38	185	60	258	287	29	63	217	16
Future Volume (vph)	14	197	315	38	185	60	258	287	29	63	217	16
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh36.9

Intersection LOS E























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	197	315	38	185	60	258	287	29	63	217	16
Future Vol, veh/h	14	197	315	38	185	60	258	287	29	63	217	16
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	221	354	43	208	67	290	322	33	71	244	18
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach RightNB		SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	66.1	18.2	28.8	18.5
HCM LOS	F	C	D	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	77%	0%	100%	17%	0%	100%	51%	0%	100%	82%
Vol Right, %	0%	0%	23%	0%	0%	83%	0%	0%	49%	0%	0%	18%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	258	191	125	14	131	381	38	123	122	63	145	88
LT Vol	258	0	0	14	0	0	38	0	0	63	0	0
Through Vol	0	191	96	0	131	66	0	123	62	0	145	72
RT Vol	0	0	29	0	0	315	0	0	60	0	0	16
Lane Flow Rate	290	215	140	16	148	428	43	139	137	71	163	99
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.776	0.547	0.35	0.043	0.382	1.038	0.125	0.389	0.371	0.206	0.451	0.272
Departure Headway (Hd)	9.757	9.257	8.994	9.815	9.315	8.735	10.581	10.094	9.758	10.603	10.103	9.976
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	374	391	398	365	387	415	339	358	369	340	359	362
Service Time	7.457	6.957	6.794	7.581	7.081	6.502	8.342	7.842	7.497	8.303	7.803	7.676
HCM Lane V/C Ratio	0.775	0.55	0.352	0.044	0.382	1.031	0.127	0.388	0.371	0.209	0.454	0.273
HCM Control Delay	39.2	22.6	16.6	13	17.8	84.7	14.9	19.2	18.2	16	20.8	16.4
HCM Lane LOS	E	C	C	B	C	F	B	C	C	C	C	C
HCM 95th-tile Q	6.4	3.2	1.5	0.1	1.8	13.6	0.4	1.8	1.7	0.8	2.3	1.1

Lanes, Volumes, Timings
3: Madison St. & Avenue 54

EAPC (2023) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	197	315	38	185	60	258	287	29	63	217	16
Future Volume (vph)	14	197	315	38	185	60	258	287	29	63	217	16
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						6			8			
Detector Phase	5	2		1	6	6	3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	30.5		11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	
Total Split (s)	14.0	43.0		15.0	44.0	44.0	28.0	42.0	42.0	20.0	34.0	
Total Split (%)	11.7%	35.8%		12.5%	36.7%	36.7%	23.3%	35.0%	35.0%	16.7%	28.3%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	Max	Max	None	Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

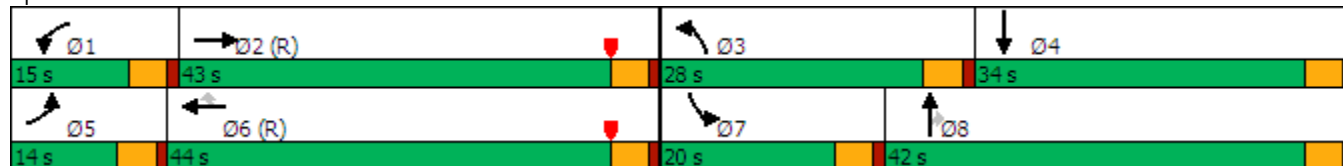
Actuated Cycle Length: 120

Offset: 54 (45%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated























Splits and Phases: 3: Madison St. & Avenue 54



HCM 6th Signalized Intersection Summary

























3: Madison St. & Avenue 54

EAPC (2023) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	197	315	38	185	60	258	287	29	63	217	16
Future Volume (veh/h)	14	197	315	38	185	60	258	287	29	63	217	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	16	221	354	43	208	67	290	322	33	71	244	18
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	42	762	679	77	1593	711	360	1081	482	92	845	62
Arrive On Green	0.02	0.44	0.44	0.04	0.46	0.46	0.11	0.31	0.31	0.05	0.26	0.26
Sat Flow, veh/h	1734	1730	1543	1734	3460	1543	3365	3460	1543	1734	3269	240
Grp Volume(v), veh/h	16	221	354	43	208	67	290	322	33	71	128	134
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1734	1730	1778
Q Serve(g_s), s	1.1	9.8	20.0	2.9	4.1	2.9	10.1	8.5	1.8	4.9	7.1	7.2
Cycle Q Clear(g_c), s	1.1	9.8	20.0	2.9	4.1	2.9	10.1	8.5	1.8	4.9	7.1	7.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	42	762	679	77	1593	711	360	1081	482	92	447	460
V/C Ratio(X)	0.38	0.29	0.52	0.56	0.13	0.09	0.81	0.30	0.07	0.77	0.29	0.29
Avail Cap(c_a), veh/h	137	762	679	152	1593	711	659	1081	482	224	447	460
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.7	21.6	24.4	56.2	18.6	18.3	52.4	31.3	29.0	56.1	35.6	35.7
Incr Delay (d2), s/veh	4.7	0.8	2.4	6.2	0.2	0.3	4.3	0.7	0.3	12.9	1.6	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.9	7.2	1.4	1.6	1.0	4.3	3.5	0.7	2.4	3.1	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.4	22.4	26.8	62.4	18.7	18.5	56.7	32.0	29.3	69.0	37.2	37.3
LnGrp LOS	E	C	C	E	B	B	E	C	C	E	D	D
Approach Vol, veh/h	591			318			645			333		
Approach Delay, s/veh	26.1			24.6			42.9			44.0		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.8	57.3	17.3	35.5	7.4	59.8	10.8	42.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	38.5	23.5	29.5	9.5	39.5	15.5	37.5				
Max Q Clear Time (g_c+I1), s	4.9	22.0	12.1	9.2	3.1	6.1	6.9	10.5				
Green Ext Time (p_c), s	0.0	2.9	0.7	1.2	0.0	1.3	0.1	1.9				
Intersection Summary												
HCM 6th Ctrl Delay	34.8											
HCM 6th LOS	C											

Lanes, Volumes, Timings
4: Madison St. & Avenue 52

EAPC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	420	54	26	380	63	124	240	17	51	206	56
Future Volume (vph)	69	420	54	26	380	63	124	240	17	51	206	56
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	23.0	49.0	49.0	15.0	41.0	41.0	20.0	41.0	41.0	15.0	36.0	36.0
Total Split (%)	19.2%	40.8%	40.8%	12.5%	34.2%	34.2%	16.7%	34.2%	34.2%	12.5%	30.0%	30.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

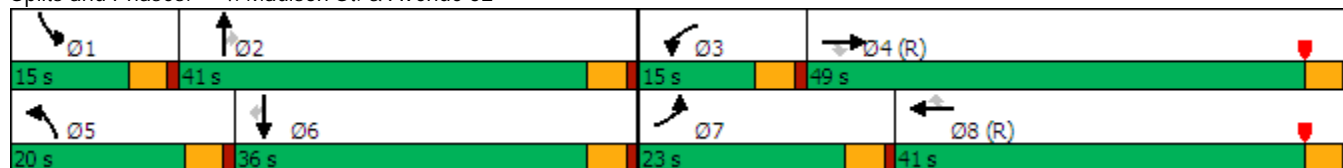
Actuated Cycle Length: 120

Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 85
























Control Type: Actuated-Coordinated

Splits and Phases: 4: Madison St. & Avenue 52




HCM 6th Signalized Intersection Summary 4: Madison St. & Avenue 52

EAPC (2023) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	420	54	26	380	63	124	240	17	51	206	56
Future Volume (veh/h)	69	420	54	26	380	63	124	240	17	51	206	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	79	483	62	30	437	72	143	276	20	59	237	64
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	101	1587	708	64	1514	675	201	1052	469	169	1019	454
Arrive On Green	0.06	0.46	0.46	0.04	0.44	0.44	0.06	0.30	0.30	0.05	0.29	0.29
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	79	483	62	30	437	72	143	276	20	59	237	64
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	5.4	10.5	2.7	2.0	9.8	3.3	5.0	7.2	1.1	2.0	6.2	3.7
Cycle Q Clear(g_c), s	5.4	10.5	2.7	2.0	9.8	3.3	5.0	7.2	1.1	2.0	6.2	3.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	101	1587	708	64	1514	675	201	1052	469	169	1019	454
V/C Ratio(X)	0.79	0.30	0.09	0.47	0.29	0.11	0.71	0.26	0.04	0.35	0.23	0.14
Avail Cap(c_a), veh/h	267	1587	708	152	1514	675	435	1052	469	294	1019	454
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.8	20.4	18.3	56.6	21.7	19.9	55.4	31.6	29.4	55.1	32.1	31.2
Incr Delay (d2), s/veh	12.5	0.5	0.2	5.3	0.5	0.3	4.6	0.6	0.2	1.2	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	4.2	1.0	1.0	3.8	1.2	2.2	3.0	0.4	0.9	2.6	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.3	20.9	18.6	61.9	22.2	20.2	60.0	32.2	29.6	56.3	32.6	31.8
LnGrp LOS	E	C	B	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h	624			539			439			360		
Approach Delay, s/veh	26.7			24.1			41.1			36.3		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.5	41.0	8.9	59.6	11.7	39.8	11.5	57.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	36.5	10.5	44.5	15.5	31.5	18.5	36.5				
Max Q Clear Time (g_c+I1), s	4.0	9.2	4.0	12.5	7.0	8.2	7.4	11.8				
Green Ext Time (p_c), s	0.1	1.6	0.0	3.3	0.2	1.4	0.1	2.7				
Intersection Summary												
HCM 6th Ctrl Delay	31.0											
HCM 6th LOS	C											

Lanes, Volumes, Timings
5: Madison St. & Avenue 50/50th Avenue

EAPC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	335	62	32	333	25	100	246	48	39	238	99
Future Volume (vph)	69	335	62	32	333	25	100	246	48	39	238	99
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	22.0	47.0	47.0	17.0	42.0	42.0	18.0	41.0	41.0	15.0	38.0	38.0
Total Split (%)	18.3%	39.2%	39.2%	14.2%	35.0%	35.0%	15.0%	34.2%	34.2%	12.5%	31.7%	31.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

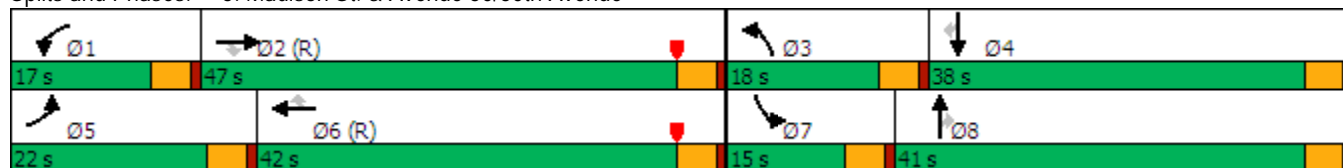
Actuated Cycle Length: 120

Offset: 64.5 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue




























HCM 6th Signalized Intersection Summary 5: Madison St. & Avenue 50/50th Avenue

EAPC (2023) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	335	62	32	333	25	100	246	48	39	238	99
Future Volume (veh/h)	69	335	62	32	333	25	100	246	48	39	238	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	70	342	63	33	340	26	102	251	49	40	243	101
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	91	1605	716	67	1558	695	190	1052	469	145	1006	449
Arrive On Green	0.05	0.46	0.46	0.04	0.45	0.45	0.06	0.30	0.30	0.04	0.29	0.29
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	70	342	63	33	340	26	102	251	49	40	243	101
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	4.8	7.1	2.7	2.2	7.2	1.1	3.5	6.5	2.7	1.4	6.4	6.0
Cycle Q Clear(g_c), s	4.8	7.1	2.7	2.2	7.2	1.1	3.5	6.5	2.7	1.4	6.4	6.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	91	1605	716	67	1558	695	190	1052	469	145	1006	449
V/C Ratio(X)	0.77	0.21	0.09	0.49	0.22	0.04	0.54	0.24	0.10	0.28	0.24	0.23
Avail Cap(c_a), veh/h	253	1605	716	181	1558	695	379	1052	469	294	1006	449
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.1	19.1	18.0	56.5	20.1	18.4	55.1	31.3	30.0	55.6	32.5	32.3
Incr Delay (d2), s/veh	12.5	0.3	0.2	5.4	0.3	0.1	2.4	0.5	0.4	1.0	0.6	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	2.8	1.0	1.1	2.8	0.4	1.5	2.7	1.0	0.6	2.7	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.6	19.4	18.2	61.9	20.4	18.5	57.5	31.9	30.5	56.6	33.0	33.5
LnGrp LOS	E	B	B	E	C	B	E	C	C	E	C	C
Approach Vol, veh/h	475			399			402			384		
Approach Delay, s/veh	26.5			23.7			38.2			35.6		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	60.2	11.3	39.4	10.8	58.5	9.7	41.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	12.5	42.5	13.5	33.5	17.5	37.5	10.5	36.5				
Max Q Clear Time (g_c+I1), s	4.2	9.1	5.5	8.4	6.8	9.2	3.4	8.5				
Green Ext Time (p_c), s	0.0	2.3	0.1	1.6	0.1	2.0	0.0	1.5				
Intersection Summary												
HCM 6th Ctrl Delay	30.8											
HCM 6th LOS	C											

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54









EAPC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 		 	 	
Traffic Volume (vph)	8	10	13	43	7	386	5	250	30	472	192	27
Future Volume (vph)	8	10	13	43	7	386	5	250	30	472	192	27
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh25.2

Intersection LOS D























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	10	13	43	7	386	5	250	30	472	192	27
Future Vol, veh/h	8	10	13	43	7	386	5	250	30	472	192	27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	11	14	48	8	429	6	278	33	524	213	30
Number of Lanes	1	2	0	1	1	1	0	2	0	2	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	12.6	40.4	15.7	20.1
HCM LOS	B	E	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	4%	0%	100%	0%	0%	100%	0%	0%	100%	100%	0%
Vol Thru, %	96%	81%	0%	100%	20%	0%	100%	0%	0%	0%	88%
Vol Right, %	0%	19%	0%	0%	80%	0%	0%	100%	0%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	130	155	8	7	16	43	7	386	236	236	219
LT Vol	5	0	8	0	0	43	0	0	236	236	0
Through Vol	125	125	0	7	3	0	7	0	0	0	192
RT Vol	0	30	0	0	13	0	0	386	0	0	27
Lane Flow Rate	144	172	9	7	18	48	8	429	262	262	243
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.334	0.391	0.025	0.02	0.046	0.114	0.018	0.881	0.582	0.582	0.5
Departure Headway (Hd)	8.326	8.171	10.267	9.751	9.176	8.612	8.104	7.393	7.993	7.993	7.404
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	430	439	351	369	393	416	441	489	451	451	484
Service Time	6.102	5.947	7.967	7.451	6.876	6.375	5.866	5.155	5.762	5.762	5.172
HCM Lane V/C Ratio	0.335	0.392	0.026	0.019	0.046	0.115	0.018	0.877	0.581	0.581	0.502
HCM Control Delay	15.3	16.1	13.2	12.6	12.3	12.5	11	44	21.4	21.4	17.4
HCM Lane LOS	C	C	B	B	B	B	B	E	C	C	C
HCM 95th-tile Q	1.4	1.8	0.1	0.1	0.1	0.4	0.1	9.5	3.6	3.6	2.7

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54

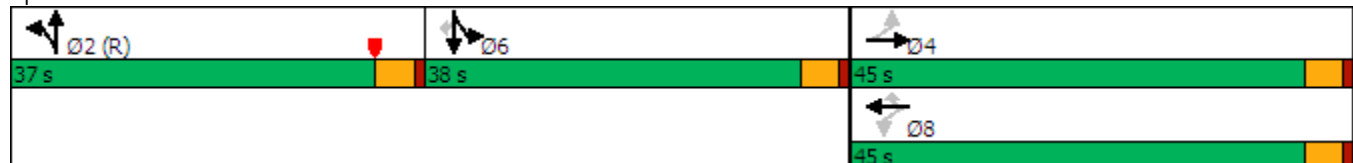
EAPC (2023) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	10	13	43	7	386	5	250	30	472	192	27
Future Volume (vph)	8	10	13	43	7	386	5	250	30	472	192	27
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases		4			8		2	2		6	6	
Permitted Phases	4			8		8						6
Detector Phase	4	4		8	8	8	2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	30.5	30.5		30.5	30.5	30.5	30.5	30.5		30.5	30.5	30.5
Total Split (s)	45.0	45.0		45.0	45.0	45.0	37.0	37.0		38.0	38.0	38.0
Total Split (%)	37.5%	37.5%		37.5%	37.5%	37.5%	30.8%	30.8%		31.7%	31.7%	31.7%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None	None	C-Max	C-Max		Max	Max	Max

Intersection Summary






















Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Yellow
 Natural Cycle: 95
 Control Type: Actuated-Coordinated

Splits and Phases: 6: Jefferson St. & Avenue 54























HCM 6th Signalized Intersection Summary 6: Jefferson St. & Avenue 54

EAPC (2023) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	10	13	43	7	386	5	250	30	472	192	27
Future Volume (veh/h)	8	10	13	43	7	386	5	250	30	472	192	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	9	11	14	48	8	429	6	278	33	524	213	30
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	338	511	456	461	538	456	20	975	121	939	966	431
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.31	0.31	0.31	0.28	0.28	0.28
Sat Flow, veh/h	952	1730	1543	1386	1821	1543	65	3117	387	3365	3460	1543
Grp Volume(v), veh/h	9	11	14	48	8	429	168	0	149	524	213	30
Grp Sat Flow(s),veh/h/ln	952	1730	1543	1386	1821	1543	1818	0	1752	1682	1730	1543
Q Serve(g_s), s	0.8	0.5	0.8	3.1	0.4	32.5	8.4	0.0	7.7	16.0	5.7	1.7
Cycle Q Clear(g_c), s	1.2	0.5	0.8	3.8	0.4	32.5	8.4	0.0	7.7	16.0	5.7	1.7
Prop In Lane	1.00		1.00	1.00		1.00	0.04		0.22	1.00		1.00
Lane Grp Cap(c), veh/h	338	511	456	461	538	456	569	0	548	939	966	431
V/C Ratio(X)	0.03	0.02	0.03	0.10	0.01	0.94	0.29	0.00	0.27	0.56	0.22	0.07
Avail Cap(c_a), veh/h	378	584	521	519	615	521	569	0	548	939	966	431
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.89	0.89	0.89	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	30.0	30.1	31.4	29.9	41.2	31.2	0.0	31.0	36.9	33.2	31.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	22.1	1.3	0.0	1.2	2.4	0.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.3	1.0	0.2	14.4	3.7	0.0	3.3	6.5	2.3	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.4	30.0	30.1	31.5	29.9	63.3	32.5	0.0	32.2	39.3	33.7	32.1
LnGrp LOS	C	C	C	C	C	E	C	A	C	D	C	C
Approach Vol, veh/h	34			485			317			767		
Approach Delay, s/veh	30.1			59.6			32.4			37.5		
Approach LOS	C			E			C			D		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	42.0			40.0			38.0			40.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	32.5			40.5			33.5			40.5		
Max Q Clear Time (g_c+I1), s	10.4			3.2			18.0			34.5		
Green Ext Time (p_c), s	1.5			0.1			2.8			0.9		
Intersection Summary												
HCM 6th Ctrl Delay	43.0											
HCM 6th LOS	D											

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EAPC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	373	277	12	368	303	239	496	32	183	476	83
Future Volume (vph)	123	373	277	12	368	303	239	496	32	183	476	83
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											





















HCM 6th Roundabout
7: Jefferson St. & Avenue 52

EAPC (2023) AM Peak hour

Intersection									
Intersection Delay, s/veh	61.7								
Intersection LOS	F								
Approach	EB		WB		NB		SB		
Entry Lanes	1		1		1		1		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	831		735		824		798		
Demand Flow Rate, veh/h	848		750		841		814		
Vehicles Circulating, veh/h	736		941		745		679		
Vehicles Exiting, veh/h	666		610		535		679		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	20.4		17.9		140.2		64.1		
Approach LOS	C		C		F		F		
Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Bypass	
Designated Moves	LT	R	LT	R	LT	R	LT	R	
Assumed Moves	LT	R	LT	R	LT	R	LT	R	
RT Channelized		Free		Free		Free		Free	
Lane Util	1.000		1.000		1.000		1.000		
Follow-Up Headway, s	2.609		2.609		2.609		2.609		
Critical Headway, s	4.976	304	4.976	333	4.976	35	4.976	91	
Entry Flow, veh/h	544	1887	417	1887	806	1887	723	1887	
Cap Entry Lane, veh/h	651	0.980	528	0.980	645	0.980	690	0.980	
Entry HV Adj Factor	0.980	298	0.981	326	0.981	34	0.980	89	
Flow Entry, veh/h	533	1850	409	1850	790	1850	709	1850	
Cap Entry, veh/h	638	0.161	518	0.176	633	0.018	677	0.048	
V/C Ratio	0.835	0.0	0.789	0.0	1.249	0.0	1.047	0.0	
Control Delay, s/veh	31.8	A	32.1	A	146.2	A	72.1	A	
LOS	D	1	D	1	F	0	F	0	
95th %tile Queue, veh	9		7		30		18		

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EAPC (2023) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	373	277	12	368	303	239	496	32	183	476	83
Future Volume (vph)	123	373	277	12	368	303	239	496	32	183	476	83
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		100	0		100	0		0	0		0
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	60			60			60			60		
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											























HCM 6th Roundabout
7: Jefferson St. & Avenue 52

EAPC (2023) AM Peak hour
With Improvements

Intersection										
Intersection Delay, s/veh	11.8									
Intersection LOS	B									
Approach	EB		WB		NB		SB			
Entry Lanes	1		1		2		2			
Conflicting Circle Lanes	2		2		2		2			
Adj Approach Flow, veh/h	831		735		824		798			
Demand Flow Rate, veh/h	848		750		841		814			
Vehicles Circulating, veh/h	736		941		745		679			
Vehicles Exiting, veh/h	666		610		535		679			
Ped Vol Crossing Leg, #/h	0		0		0		0			
Ped Cap Adj	1.000		1.000		1.000		1.000			
Approach Delay, s/veh	12.6		10.7		13.7		10.2			
Approach LOS	B		B		B		B			
Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
Assumed Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
RT Channelized		Free		Free			Free			Free
Lane Util	1.000		1.000		0.470	0.530		0.470	0.530	
Follow-Up Headway, s	2.535		2.535		2.667	2.535		2.667	2.535	
Critical Headway, s	4.328	304	4.328	333	4.645	4.328	35	4.645	4.328	91
Entry Flow, veh/h	544	1887	417	1887	379	427	1887	340	383	1887
Cap Entry Lane, veh/h	760	0.980	638	0.980	680	754	0.980	723	797	0.980
Entry HV Adj Factor	0.980	298	0.981	326	0.980	0.981	34	0.980	0.981	89
Flow Entry, veh/h	533	1850	409	1850	371	419	1850	333	376	1850
Cap Entry, veh/h	744	0.161	626	0.176	667	739	0.018	708	782	0.048
V/C Ratio	0.716	0.0	0.653	0.0	0.557	0.566	0.0	0.470	0.480	0.0
Control Delay, s/veh	19.6	A	19.2	A	14.8	13.9	A	11.9	11.2	A
LOS	C	1	C	1	B	B	0	B	B	0
95th %tile Queue, veh	6		5		3	4		3	3	

Lanes, Volumes, Timings
8: Jefferson St. & Pomelo

EAPC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	1	2	4	1	16	13	881	13	40	759	51
Future Volume (vph)	37	1	2	4	1	16	13	881	13	40	759	51
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	52.0		20.0	54.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	15.0%	43.3%		16.7%	45.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary

Area Type: Other

Cycle Length: 120

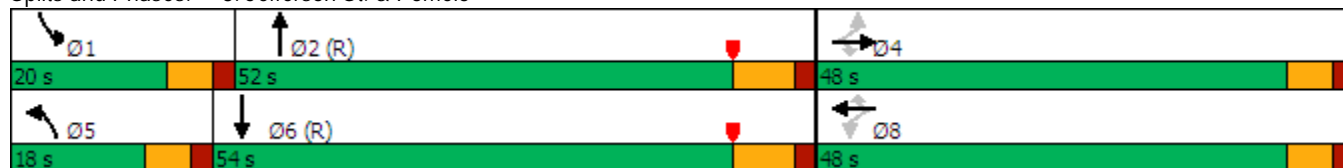
Actuated Cycle Length: 120

Offset: 110 (92%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110

























Control Type: Actuated-Coordinated

Splits and Phases: 8: Jefferson St. & Pomelo



























HCM 6th Signalized Intersection Summary 8: Jefferson St. & Pomelo

EAPC (2023) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (veh/h)	37	1	2	4	1	16	13	881	13	40	759	51
Future Volume (veh/h)	37	1	2	4	1	16	13	881	13	40	759	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	40	1	2	4	1	17	14	947	14	43	816	55
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	62	1	199	55	8	199	65	3193	47	132	3195	215
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.04	0.63	0.63	0.05	0.45	0.45
Sat Flow, veh/h	24	6	1543	11	62	1543	1734	5048	75	1734	4759	320
Grp Volume(v), veh/h	41	0	2	5	0	17	14	622	339	43	567	304
Grp Sat Flow(s),veh/h/ln	30	0	1543	73	0	1543	1734	1657	1808	1734	1657	1764
Q Serve(g_s), s	0.3	0.0	0.1	0.1	0.0	1.2	0.9	10.2	10.2	2.9	12.8	12.8
Cycle Q Clear(g_c), s	15.4	0.0	0.1	15.3	0.0	1.2	0.9	10.2	10.2	2.9	12.8	12.8
Prop In Lane	0.98		1.00	0.80		1.00	1.00		0.04	1.00		0.18
Lane Grp Cap(c), veh/h	63	0	199	63	0	199	65	2097	1144	132	2226	1184
V/C Ratio(X)	0.65	0.00	0.01	0.08	0.00	0.09	0.22	0.30	0.30	0.33	0.25	0.26
Avail Cap(c_a), veh/h	374	0	540	391	0	540	173	2097	1144	202	2226	1184
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.76	0.76	0.76
Uniform Delay (d), s/veh	59.7	0.0	45.6	46.6	0.0	46.1	56.1	10.0	10.0	54.0	14.4	14.4
Incr Delay (d2), s/veh	21.5	0.0	0.0	1.1	0.0	0.4	3.5	0.4	0.7	2.3	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.1	0.2	0.0	0.5	0.5	3.3	3.6	1.3	4.7	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.2	0.0	45.7	47.7	0.0	46.5	59.6	10.3	10.6	56.3	14.6	14.8
LnGrp LOS	F	A	D	D	A	D	E	B	B	E	B	B
Approach Vol, veh/h	43		22			975			914			
Approach Delay, s/veh	79.5		46.7			11.1			16.6			
Approach LOS	E		D			B			B			
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	15.1	83.3	21.6		10.5	88.0	21.6					
Change Period (Y+Rc), s	6.0	7.5	6.0		6.0	7.5	6.0					
Max Green Setting (Gmax), s	14.0	44.5	42.0		12.0	46.5	42.0					
Max Q Clear Time (g_c+I1), s	4.9	12.2	17.4		2.9	14.8	17.3					
Green Ext Time (p_c), s	0.1	12.3	0.3		0.0	10.9	0.1					
Intersection Summary												
HCM 6th Ctrl Delay	15.6											
HCM 6th LOS	B											
Notes												

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

EAPC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	256	291	75	68	321	209	123	748	63	131	697	362
Future Volume (vph)	256	291	75	68	321	209	123	748	63	131	697	362
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	43.5	43.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	36.3%	36.3%	15.0%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

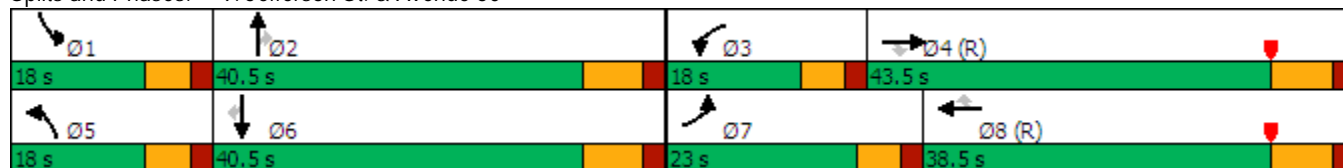
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 115






























Control Type: Actuated-Coordinated

Splits and Phases: 9: Jefferson St. & Avenue 50



HCM 6th Signalized Intersection Summary 9: Jefferson St. & Avenue 50

EAPC (2023) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  		 	  	
Traffic Volume (veh/h)	256	291	75	68	321	209	123	748	63	131	697	362
Future Volume (veh/h)	256	291	75	68	321	209	123	748	63	131	697	362
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	261	297	77	69	328	213	126	763	64	134	711	369
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	1112	496	156	491	416	171	1316	409	333	1318	409
Arrive On Green	0.14	0.32	0.32	0.09	0.27	0.27	0.03	0.09	0.09	0.10	0.27	0.27
Sat Flow, veh/h	1734	3460	1543	1734	1821	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	261	297	77	69	328	213	126	763	64	134	711	369
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	17.0	7.6	4.3	4.5	19.3	14.0	8.6	17.7	4.6	4.5	14.7	27.7
Cycle Q Clear(g_c), s	17.0	7.6	4.3	4.5	19.3	14.0	8.6	17.7	4.6	4.5	14.7	27.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	1112	496	156	491	416	171	1316	409	333	1318	409
V/C Ratio(X)	1.06	0.27	0.16	0.44	0.67	0.51	0.74	0.58	0.16	0.40	0.54	0.90
Avail Cap(c_a), veh/h	246	1112	496	173	491	416	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	30.2	29.1	51.7	39.0	37.1	56.5	48.3	42.4	50.7	37.8	42.6
Incr Delay (d2), s/veh	74.8	0.6	0.7	0.7	7.0	4.4	12.9	0.7	0.2	0.3	0.5	22.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	3.2	1.6	2.0	9.3	5.6	4.4	7.9	1.8	1.8	5.7	12.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	126.3	30.8	29.7	52.5	46.1	41.6	69.4	49.0	42.6	51.0	38.3	64.7
LnGrp LOS	F	C	C	D	D	D	E	D	D	D	D	E
Approach Vol, veh/h	635				610				953			
Approach Delay, s/veh	69.9				45.2				51.3			
Approach LOS	E				D				D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.9	39.3	16.8	46.1	17.8	39.3	23.0	39.9				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	12.0	33.0	12.0	36.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	6.5	19.7	6.5	9.6	10.6	29.7	19.0	21.3				
Green Ext Time (p_c), s	0.1	5.3	0.0	3.8	0.0	2.1	0.0	3.2				
Intersection Summary												
HCM 6th Ctrl Delay	52.4											
HCM 6th LOS	D											
Notes												

Lanes, Volumes, Timings
10: Avenue 60 & Madison St.






EAPC (2023) AM Peak hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	37	12	8	166	138	62
Future Volume (vph)	37	12	8	166	138	62
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		40	
Link Distance (ft)		1772	661		437	
Travel Time (s)		30.2	11.3		7.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)						
Sign Control		Stop	Stop		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Intersection Delay, s/veh	9.2
Intersection LOS	A





















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	37	12	8	166	138	62
Future Vol, veh/h	37	12	8	166	138	62
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	14	10	200	166	75
Number of Lanes	0	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	8.9	8.8	9.6
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	76%	0%	0%	100%	0%
Vol Thru, %	24%	100%	0%	0%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	49	8	166	138	62
LT Vol	37	0	0	138	0
Through Vol	12	8	0	0	0
RT Vol	0	0	166	0	62
Lane Flow Rate	59	10	200	166	75
Geometry Grp	4	7	7	7	7
Degree of Util (X)	0.088	0.014	0.252	0.262	0.093
Departure Headway (Hd)	5.357	5.242	4.538	5.664	4.459
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	668	683	792	633	802
Service Time	3.394	2.968	2.264	3.402	2.197
HCM Lane V/C Ratio	0.088	0.015	0.253	0.262	0.094
HCM Control Delay	8.9	8	8.8	10.4	7.7
HCM Lane LOS	A	A	A	B	A
HCM 95th-tile Q	0.3	0	1	1	0.3

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

EAPC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	52	100	7	61	159	106	197	10	75	116	36
Future Volume (vph)	22	52	100	7	61	159	106	197	10	75	116	36
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	13.3
Intersection LOS	B


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰↱		↰	↱		↰	↱	↰
Traffic Vol, veh/h	22	52	100	7	61	159	106	197	10	75	116	36
Future Vol, veh/h	22	52	100	7	61	159	106	197	10	75	116	36
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	57	110	8	67	175	116	216	11	82	127	40
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	11.4	15.1	14.1	11.9
HCM LOS	B	C	B	B






Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	30%	0%	3%	100%	0%	0%
Vol Thru, %	0%	95%	70%	0%	27%	0%	100%	0%
Vol Right, %	0%	5%	0%	100%	70%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	106	207	74	100	227	75	116	36
LT Vol	106	0	22	0	7	75	0	0
Through Vol	0	197	52	0	61	0	116	0
RT Vol	0	10	0	100	159	0	0	36
Lane Flow Rate	116	227	81	110	249	82	127	40
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.241	0.436	0.17	0.203	0.463	0.176	0.254	0.071
Departure Headway (Hd)	7.444	6.899	7.518	6.655	6.685	7.683	7.172	6.458
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	482	523	477	538	539	467	501	554
Service Time	5.185	4.639	5.263	4.4	4.425	5.428	4.917	4.202
HCM Lane V/C Ratio	0.241	0.434	0.17	0.204	0.462	0.176	0.253	0.072
HCM Control Delay	12.5	14.9	11.8	11.1	15.1	12.1	12.4	9.7
HCM Lane LOS	B	B	B	B	C	B	B	A
HCM 95th-tile Q	0.9	2.2	0.6	0.8	2.4	0.6	1	0.2

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAPC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	69	54	16	54	34	42	320	27	23	198	40
Future Volume (vph)	42	69	54	16	54	34	42	320	27	23	198	40
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	16.4
Intersection LOS	C


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	69	54	16	54	34	42	320	27	23	198	40
Future Vol, veh/h	42	69	54	16	54	34	42	320	27	23	198	40
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	50	82	64	19	64	40	50	381	32	27	236	48
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	12.4	11.3	21.5	13.4
HCM LOS	B	B	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	11%	25%	15%	10%	0%
Vol Thru, %	82%	42%	52%	90%	0%
Vol Right, %	7%	33%	33%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	389	165	104	221	40
LT Vol	42	42	16	23	0
Through Vol	320	69	54	198	0
RT Vol	27	54	34	0	40
Lane Flow Rate	463	196	124	263	48
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.715	0.337	0.222	0.456	0.072
Departure Headway (Hd)	5.558	6.182	6.458	6.24	5.475
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	648	576	560	574	648
Service Time	3.633	4.281	4.458	4.026	3.26
HCM Lane V/C Ratio	0.715	0.34	0.221	0.458	0.074
HCM Control Delay	21.5	12.4	11.3	14.2	8.7
HCM Lane LOS	C	B	B	B	A
HCM 95th-tile Q	6	1.5	0.8	2.4	0.2

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAPC (2023) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	69	54	16	54	34	42	320	27	23	198	40
Future Volume (vph)	42	69	54	16	54	34	42	320	27	23	198	40
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	30.5	30.5		30.5	30.5		37.0	37.0		30.5	30.5	30.5
Total Split (s)	43.0	43.0		43.0	43.0		77.0	77.0		77.0	77.0	77.0
Total Split (%)	35.8%	35.8%		35.8%	35.8%		64.2%	64.2%		64.2%	64.2%	64.2%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)		4.5			4.5			4.5			4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

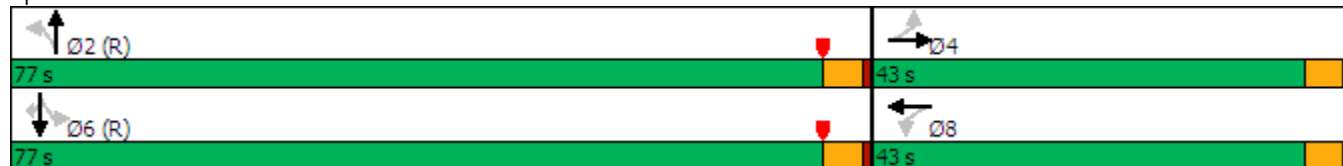
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated


















Splits and Phases: 12: Monroe St. & Avenue 58



HCM 6th Signalized Intersection Summary






















12: Monroe St. & Avenue 58

EAPC (2023) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	69	54	16	54	34	42	320	27	23	198	40
Future Volume (veh/h)	42	69	54	16	54	34	42	320	27	23	198	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	50	82	64	19	64	40	50	381	32	27	236	48
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	85	108	75	56	137	76	151	1124	92	143	1223	1210
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.78	0.78	0.78	0.78	0.78	0.78
Sat Flow, veh/h	334	764	532	149	975	542	150	1433	118	140	1559	1543
Grp Volume(v), veh/h	196	0	0	123	0	0	463	0	0	263	0	48
Grp Sat Flow(s),veh/h/ln	1630	0	0	1667	0	0	1701	0	0	1699	0	1543
Q Serve(g_s), s	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
Cycle Q Clear(g_c), s	14.0	0.0	0.0	8.0	0.0	0.0	9.0	0.0	0.0	4.4	0.0	0.8
Prop In Lane	0.26		0.33	0.15		0.33	0.11		0.07	0.10		1.00
Lane Grp Cap(c), veh/h	267	0	0	269	0	0	1367	0	0	1365	0	1210
V/C Ratio(X)	0.73	0.00	0.00	0.46	0.00	0.00	0.34	0.00	0.00	0.19	0.00	0.04
Avail Cap(c_a), veh/h	549	0	0	559	0	0	1367	0	0	1365	0	1210
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.1	0.0	0.0	47.7	0.0	0.0	3.8	0.0	0.0	3.3	0.0	2.9
Incr Delay (d2), s/veh	3.9	0.0	0.0	1.2	0.0	0.0	0.7	0.0	0.0	0.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	0.0	0.0	3.5	0.0	0.0	2.4	0.0	0.0	1.2	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.0	0.0	0.0	48.9	0.0	0.0	4.4	0.0	0.0	3.6	0.0	2.9
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	196			123			463			311		
Approach Delay, s/veh	54.0			48.9			4.4			3.5		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	98.6			21.4			98.6			21.4		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	72.5			38.5			72.5			38.5		
Max Q Clear Time (g_c+I1), s	11.0			16.0			6.4			10.0		
Green Ext Time (p_c), s	2.9			0.9			1.6			0.7		
Intersection Summary												
HCM 6th Ctrl Delay	18.1											
HCM 6th LOS	B											

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.









EAPC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	108	12	22	66	25	19	302	37	56	198	9
Future Volume (vph)	0	108	12	22	66	25	19	302	37	56	198	9
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh16.2

Intersection LOS C



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	108	12	22	66	25	19	302	37	56	198	9
Future Vol, veh/h	0	108	12	22	66	25	19	302	37	56	198	9
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	127	14	26	78	29	22	355	44	66	233	11
Number of Lanes	1	1	1	0	1	0	1	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	1
Conflicting Approach RightNB		SB	WB	EB
Conflicting Lanes Right	2	3	1	3
HCM Control Delay	11.7	12.7	22.1	11.6
HCM LOS	B	B	C	B







Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	0%	0%	19%	100%	0%	0%
Vol Thru, %	0%	89%	100%	100%	0%	58%	0%	100%	88%
Vol Right, %	0%	11%	0%	0%	100%	22%	0%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	19	339	0	108	12	113	56	132	75
LT Vol	19	0	0	0	0	22	56	0	0
Through Vol	0	302	0	108	0	66	0	132	66
RT Vol	0	37	0	0	12	25	0	0	9
Lane Flow Rate	22	399	0	127	14	133	66	155	88
Geometry Grp	8	8	7	7	7	8	8	8	8
Degree of Util (X)	0.043	0.702	0	0.245	0.024	0.271	0.132	0.289	0.162
Departure Headway (Hd)	6.92	6.335	6.942	6.942	6.231	7.339	7.217	6.709	6.623
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	514	566	0	513	569	492	493	531	536
Service Time	4.704	4.119	4.741	4.741	4.03	5.039	5.016	4.507	4.422
HCM Lane V/C Ratio	0.043	0.705	0	0.248	0.025	0.27	0.134	0.292	0.164
HCM Control Delay	10	22.8	9.7	12	9.2	12.7	11.1	12.3	10.7
HCM Lane LOS	A	C	N	B	A	B	B	B	B
HCM 95th-tile Q	0.1	5.6	0	1	0.1	1.1	0.5	1.2	0.6

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAPC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	153	38	28	239	52	69	316	17	51	256	96
Future Volume (vph)	34	153	38	28	239	52	69	316	17	51	256	96
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	95.5
Intersection LOS	F



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	153	38	28	239	52	69	316	17	51	256	96
Future Vol, veh/h	34	153	38	28	239	52	69	316	17	51	256	96
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	189	47	35	295	64	85	390	21	63	316	119
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	26.8	82.5	183.6	56.4
HCM LOS	D	F	F	F

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	17%	100%	0%	9%	17%	0%
Vol Thru, %	79%	0%	80%	75%	83%	0%
Vol Right, %	4%	0%	20%	16%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	402	34	191	319	307	96
LT Vol	69	34	0	28	51	0
Through Vol	316	0	153	239	256	0
RT Vol	17	0	38	52	0	96
Lane Flow Rate	496	42	236	394	379	119
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	1.307	0.118	0.622	1.007	0.958	0.274
Departure Headway (Hd)	9.484	11.108	10.434	10.132	9.923	9.101
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	382	325	349	362	368	397
Service Time	7.556	8.808	8.134	8.132	7.623	6.801
HCM Lane V/C Ratio	1.298	0.129	0.676	1.088	1.03	0.3
HCM Control Delay	183.6	15.3	28.9	82.5	69.3	15.2
HCM Lane LOS	F	C	D	F	F	C
HCM 95th-tile Q	22.6	0.4	4	11.7	10.5	1.1

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAPC (2023) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	153	38	28	239	52	69	316	17	51	256	96
Future Volume (vph)	34	153	38	28	239	52	69	316	17	51	256	96
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	50.0	50.0		50.0	50.0		70.0	70.0		70.0	70.0	70.0
Total Split (%)	41.7%	41.7%		41.7%	41.7%		58.3%	58.3%		58.3%	58.3%	58.3%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)	4.5	4.5			4.5			4.5			4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

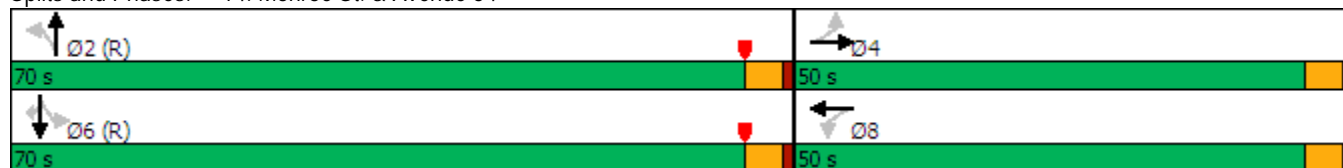
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 50

Control Type: Actuated-Coordinated



















Splits and Phases: 14: Monroe St. & Avenue 54



HCM 6th Signalized Intersection Summary























14: Monroe St. & Avenue 54

EAPC (2023) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	153	38	28	239	52	69	316	17	51	256	96
Future Volume (veh/h)	34	153	38	28	239	52	69	316	17	51	256	96
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	42	189	47	35	295	64	85	390	21	63	316	119
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	166	388	96	57	339	71	184	822	43	183	896	1002
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.65	0.65	0.65	0.65	0.65	0.65
Sat Flow, veh/h	1022	1408	350	89	1232	256	229	1266	66	228	1380	1543
Grp Volume(v), veh/h	42	0	236	394	0	0	496	0	0	379	0	119
Grp Sat Flow(s),veh/h/ln	1022	0	1758	1576	0	0	1561	0	0	1608	0	1543
Q Serve(g_s), s	0.0	0.0	13.5	15.8	0.0	0.0	8.4	0.0	0.0	0.0	0.0	3.5
Cycle Q Clear(g_c), s	13.9	0.0	13.5	29.3	0.0	0.0	19.8	0.0	0.0	11.4	0.0	3.5
Prop In Lane	1.00		0.20	0.09		0.16	0.17		0.04	0.17		1.00
Lane Grp Cap(c), veh/h	166	0	484	467	0	0	1049	0	0	1079	0	1002
V/C Ratio(X)	0.25	0.00	0.49	0.84	0.00	0.00	0.47	0.00	0.00	0.35	0.00	0.12
Avail Cap(c_a), veh/h	272	0	667	641	0	0	1049	0	0	1079	0	1002
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.5	0.0	36.4	42.2	0.0	0.0	10.6	0.0	0.0	9.3	0.0	8.0
Incr Delay (d2), s/veh	0.8	0.0	0.8	7.4	0.0	0.0	1.5	0.0	0.0	0.9	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	5.6	11.6	0.0	0.0	6.2	0.0	0.0	4.0	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.3	0.0	37.1	49.6	0.0	0.0	12.1	0.0	0.0	10.2	0.0	8.2
LnGrp LOS	D	A	D	D	A	A	B	A	A	B	A	A
Approach Vol, veh/h	278			394			496			498		
Approach Delay, s/veh	37.2			49.6			12.1			9.7		
Approach LOS	D			D			B			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	82.4			37.6			82.4			37.6		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	65.5			45.5			65.5			45.5		
Max Q Clear Time (g_c+I1), s	21.8			15.9			13.4			31.3		
Green Ext Time (p_c), s	3.3			1.4			2.7			1.8		
Intersection Summary												
HCM 6th Ctrl Delay	24.5											
HCM 6th LOS	C											

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52










EAPC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	101	316	38	27	330	131	43	292	41	103	288	59
Future Volume (vph)	101	316	38	27	330	131	43	292	41	103	288	59
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh84.9

Intersection LOS F























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	101	316	38	27	330	131	43	292	41	103	288	59
Future Vol, veh/h	101	316	38	27	330	131	43	292	41	103	288	59
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	122	381	46	33	398	158	52	352	49	124	347	71
Number of Lanes	1	1	1	0	2	1	0	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach RightNB		SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay	95.8	35.1	207.2	25.7
HCM LOS	F	E	F	D

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	11%	100%	0%	0%	20%	0%	0%	100%	0%	0%
Vol Thru, %	78%	0%	100%	0%	80%	100%	0%	0%	100%	62%
Vol Right, %	11%	0%	0%	100%	0%	0%	100%	0%	0%	38%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	376	101	316	38	137	220	131	103	192	155
LT Vol	43	101	0	0	27	0	0	103	0	0
Through Vol	292	0	316	0	110	220	0	0	192	96
RT Vol	41	0	0	38	0	0	131	0	0	59
Lane Flow Rate	453	122	381	46	165	265	158	124	231	187
Geometry Grp	8	8	8	8	8	8	8	7	7	7
Degree of Util (X)	1.353	0.379	1.135	0.128	0.494	0.786	0.438	0.354	0.628	0.493
Departure Headway (Hd)	11.011	12.491	11.952	11.198	12.236	12.129	11.371	11.5	10.966	10.682
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	335	290	308	322	297	300	319	315	331	340
Service Time	8.711	10.191	9.652	8.898	9.936	9.829	9.071	9.2	8.666	8.382
HCM Lane V/C Ratio	1.352	0.421	1.237	0.143	0.556	0.883	0.495	0.394	0.698	0.55
HCM Control Delay	207.2	22.6	128.9	15.5	26.3	48	22.6	20.4	30.5	23.3
HCM Lane LOS	F	C	F	C	D	E	C	C	D	C
HCM 95th-tile Q	22	1.7	14.1	0.4	2.6	6.2	2.1	1.5	4	2.6

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52

EAPC (2023) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	101	316	38	27	330	131	43	292	41	103	288	59
Future Volume (vph)	101	316	38	27	330	131	43	292	41	103	288	59
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	2	2	2	6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	28.0	28.0	28.0	28.0	28.0	28.0	32.0	32.0		32.0	32.0	
Total Split (%)	46.7%	46.7%	46.7%	46.7%	46.7%	46.7%	53.3%	53.3%		53.3%	53.3%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5		4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max		Max	Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

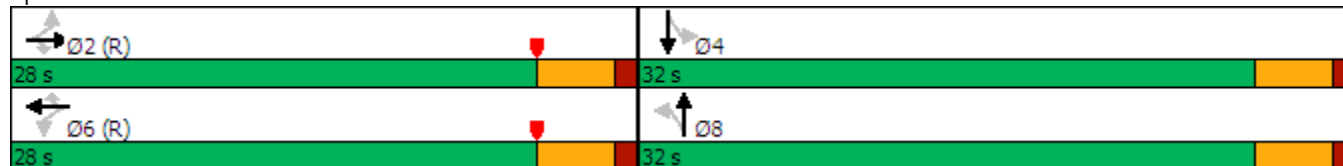
Actuated Cycle Length: 60

Offset: 27 (45%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 45























Control Type: Actuated-Coordinated

Splits and Phases: 15: Monroe St. & Avenue 52



























HCM 6th Signalized Intersection Summary 15: Monroe St. & Avenue 52

EAPC (2023) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	316	38	27	330	131	43	292	41	103	288	59
Future Volume (veh/h)	101	316	38	27	330	131	43	292	41	103	288	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	122	381	46	33	398	158	52	352	49	124	347	71
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	387	713	604	342	1355	604	120	637	84	512	1314	266
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	853	1821	1543	961	3460	1543	115	1389	182	984	2867	580
Grp Volume(v), veh/h	122	381	46	33	398	158	453	0	0	124	208	210
Grp Sat Flow(s),veh/h/ln	853	1821	1543	961	1730	1543	1687	0	0	984	1730	1717
Q Serve(g_s), s	6.9	9.7	1.1	1.6	4.7	4.2	0.6	0.0	0.0	0.0	4.4	4.5
Cycle Q Clear(g_c), s	11.6	9.7	1.1	11.3	4.7	4.2	11.1	0.0	0.0	7.4	4.4	4.5
Prop In Lane	1.00		1.00	1.00		1.00	0.11		0.11	1.00		0.34
Lane Grp Cap(c), veh/h	387	713	604	342	1355	604	840	0	0	512	793	787
V/C Ratio(X)	0.32	0.53	0.08	0.10	0.29	0.26	0.54	0.00	0.00	0.24	0.26	0.27
Avail Cap(c_a), veh/h	387	713	604	342	1355	604	840	0	0	512	793	787
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.5	14.0	11.4	18.4	12.5	12.4	11.8	0.0	0.0	10.8	10.0	10.0
Incr Delay (d2), s/veh	2.1	2.9	0.2	0.6	0.6	1.1	2.5	0.0	0.0	1.1	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	3.5	0.3	0.4	1.5	1.3	3.7	0.0	0.0	1.0	1.4	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.7	16.9	11.7	18.9	13.1	13.4	14.3	0.0	0.0	11.9	10.8	10.9
LnGrp LOS	B	B	B	B	B	B	B	A	A	B	B	B
Approach Vol, veh/h	549			589			453			542		
Approach Delay, s/veh	16.9			13.5			14.3			11.1		
Approach LOS	B			B			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	28.0			32.0			28.0			32.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	23.5			27.5			23.5			27.5		
Max Q Clear Time (g_c+I1), s	13.6			9.4			13.3			13.1		
Green Ext Time (p_c), s	2.0			2.6			2.1			2.2		
Intersection Summary												
HCM 6th Ctrl Delay	13.9											
HCM 6th LOS	B											

Lanes, Volumes, Timings
16: Monroe St. & 50th Avenue

EAPC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	229	37	31	342	123	25	417	27	73	358	42
Future Volume (vph)	30	229	37	31	342	123	25	417	27	73	358	42
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	20.5	20.5	20.5	20.5	20.5	11.5	11.5	20.5		11.5	20.5	
Total Split (s)	27.0	27.0	27.0	27.0	27.0	11.5	11.5	21.5		11.5	21.5	
Total Split (%)	45.0%	45.0%	45.0%	45.0%	45.0%	19.2%	19.2%	35.8%		19.2%	35.8%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 60







Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

























Control Type: Actuated-Coordinated

Splits and Phases: 16: Monroe St. & 50th Avenue

 Ø1	 Ø2 (R)	 Ø4
11.5 s	21.5 s	27 s
 Ø5	 Ø6 (R)	 Ø8
11.5 s	21.5 s	27 s

















HCM 6th Signalized Intersection Summary
16: Monroe St. & 50th Avenue

EAPC (2023) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	229	37	31	342	123	25	417	27	73	358	42
Future Volume (veh/h)	30	229	37	31	342	123	25	417	27	73	358	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	35	269	44	36	402	145	29	491	32	86	421	49
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	201	536	454	303	536	604	92	1347	88	169	1414	164
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.05	0.41	0.40	0.10	0.45	0.44
Sat Flow, veh/h	860	1821	1543	1067	1821	1543	1734	3298	214	1734	3124	362
Grp Volume(v), veh/h	35	269	44	36	402	145	29	257	266	86	232	238
Grp Sat Flow(s),veh/h/ln	860	1821	1543	1067	1821	1543	1734	1730	1783	1734	1730	1756
Q Serve(g_s), s	2.3	7.3	1.2	1.7	12.0	3.8	1.0	6.2	6.2	2.8	5.1	5.2
Cycle Q Clear(g_c), s	14.3	7.3	1.2	9.1	12.0	3.8	1.0	6.2	6.2	2.8	5.1	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		0.21
Lane Grp Cap(c), veh/h	201	536	454	303	536	604	92	707	728	169	783	795
V/C Ratio(X)	0.17	0.50	0.10	0.12	0.75	0.24	0.32	0.36	0.37	0.51	0.30	0.30
Avail Cap(c_a), veh/h	278	698	592	398	698	742	217	707	728	217	783	795
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.6	17.5	15.4	21.3	19.2	12.3	27.4	12.3	12.4	25.7	10.4	10.4
Incr Delay (d2), s/veh	0.4	0.7	0.1	0.2	3.3	0.2	1.9	1.4	1.4	2.4	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.6	0.4	0.4	4.6	1.0	0.4	2.1	2.2	1.1	1.6	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.1	18.3	15.5	21.5	22.5	12.5	29.3	13.8	13.8	28.1	11.3	11.4
LnGrp LOS	C	B	B	C	C	B	C	B	B	C	B	B
Approach Vol, veh/h	348			583			552			556		
Approach Delay, s/veh	18.7			19.9			14.6			14.0		
Approach LOS	B			B			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.8	28.5		21.7	7.2	31.2		21.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.0	17.0		22.5	7.0	17.0		22.5				
Max Q Clear Time (g_c+I1), s	4.8	8.2		16.3	3.0	7.2		14.0				
Green Ext Time (p_c), s	0.0	1.8		0.9	0.0	1.7		1.8				
Intersection Summary												
HCM 6th Ctrl Delay	16.6											
HCM 6th LOS	B											

Lanes, Volumes, Timings
17: Jackson St. & 58th Avenue

EAPC (2023) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	82	10	2	67	3	4	129	2	12	123	15
Future Volume (vph)	15	82	10	2	67	3	4	129	2	12	123	15
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		5266			1079			1013			510	
Travel Time (s)		71.8			14.7			12.6			6.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	15	82	10	2	67	3	4	129	2	12	123	15
Future Vol, veh/h	15	82	10	2	67	3	4	129	2	12	123	15
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	87	11	2	71	3	4	137	2	13	131	16
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.6	8.3	8.6	8.7
HCM LOS	A	A	A	A




Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	14%	3%	8%
Vol Thru, %	96%	77%	93%	82%
Vol Right, %	1%	9%	4%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	135	107	72	150
LT Vol	4	15	2	12
Through Vol	129	82	67	123
RT Vol	2	10	3	15
Lane Flow Rate	144	114	77	160
Geometry Grp	1	1	1	1
Degree of Util (X)	0.182	0.149	0.101	0.2
Departure Headway (Hd)	4.571	4.701	4.756	4.513
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	784	763	752	795
Service Time	2.602	2.734	2.792	2.544
HCM Lane V/C Ratio	0.184	0.149	0.102	0.201
HCM Control Delay	8.6	8.6	8.3	8.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.5	0.3	0.7

Lanes, Volumes, Timings
18: Avenue 60 & S. Access

EAPC (2023) AM Peak hour














Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	4	11	0
Future Volume (vph)	0	0	0	4	11	0
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		25	
Link Distance (ft)		207	1772		380	
Travel Time (s)		3.5	30.2		10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	6.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	4	11	0
Future Vol, veh/h	0	0	0	4	11	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	4	12	0
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	4	0	-	0	2	2
Stage 1	-	-	-	-	2	-
Stage 2	-	-	-	-	0	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1618	-	-	-	1021	1082
Stage 1	-	-	-	-	1021	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1618	-	-	-	1021	1082
Mov Cap-2 Maneuver	-	-	-	-	1021	-
Stage 1	-	-	-	-	1021	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		8.6		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1618	-	-	-	1021	
HCM Lane V/C Ratio	-	-	-	-	0.012	
HCM Control Delay (s)	0	-	-	-	8.6	
HCM Lane LOS	A	-	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0	







Lanes, Volumes, Timings
19: Madison St. & Main Access

EAPC (2023) AM Peak hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	36	3	14	279	246	10
Future Volume (vph)	36	3	14	279	246	10
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100	0	150			0
Storage Lanes	1	1	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	25			50	50	
Link Distance (ft)	499			880	145	
Travel Time (s)	13.6			12.0	2.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
19: Madison St. & Main Access

EAPC (2023) AM Peak hour

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	36	3	14	279	246	10
Future Vol, veh/h	36	3	14	279	246	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	3	15	303	267	11











Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	455	139	278	0	-	0
Stage 1	273	-	-	-	-	-
Stage 2	182	-	-	-	-	-
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	534	884	1282	-	-	-
Stage 1	748	-	-	-	-	-
Stage 2	831	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	528	884	1282	-	-	-
Mov Cap-2 Maneuver	593	-	-	-	-	-
Stage 1	739	-	-	-	-	-
Stage 2	831	-	-	-	-	-






Approach	EB	NB	SB
HCM Control Delay, s	11.3	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1282	-	593	884	-	-
HCM Lane V/C Ratio	0.012	-	0.066	0.004	-	-
HCM Control Delay (s)	7.8	-	11.5	9.1	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	0	-	-

Lanes, Volumes, Timings
20: Project Access 1 & Avenue 58

EAPC (2023) AM Peak hour




						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	194	5	16	148	5	2
Future Volume (vph)	194	5	16	148	5	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)		0	50		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			60		60	
Link Speed (mph)	50			50	25	
Link Distance (ft)	403			335	383	
Travel Time (s)	5.5			4.6	10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	194	5	16	148	5	2
Future Vol, veh/h	194	5	16	148	5	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	211	5	17	161	5	2
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	216	0	329	214
Stage 1	-	-	-	-	214	-
Stage 2	-	-	-	-	115	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1352	-	653	825
Stage 1	-	-	-	-	821	-
Stage 2	-	-	-	-	898	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1352	-	645	825
Mov Cap-2 Maneuver	-	-	-	-	678	-
Stage 1	-	-	-	-	810	-
Stage 2	-	-	-	-	898	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.8		10.1	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	714	-	-	1352	-	
HCM Lane V/C Ratio	0.011	-	-	0.013	-	
HCM Control Delay (s)	10.1	-	-	7.7	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Lanes, Volumes, Timings
21: Project Access 2 & Avenue 58












EAPC (2023) AM Peak hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱↱		↱
Traffic Volume (vph)	189	7	0	164	0	2
Future Volume (vph)	189	7	0	164	0	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	50			50	25	
Link Distance (ft)	335			276	233	
Travel Time (s)	4.6			3.8	6.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	189	7	0	164	0	2
Future Vol, veh/h	189	7	0	164	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	205	8	0	178	0	2
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	209
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	-	-	0	-	0	831
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	831
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		9.3	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	831	-	-	-		
HCM Lane V/C Ratio	0.003	-	-	-		
HCM Control Delay (s)	9.3	-	-	-		
HCM Lane LOS	A	-	-	-		
HCM 95th %tile Q(veh)	0	-	-	-		

Lanes, Volumes, Timings
22: Madison St. & Project Access 3

























EAPC (2023) AM Peak hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				 	 	
Traffic Volume (vph)	0	5	0	315	251	12
Future Volume (vph)	0	5	0	315	251	12
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	25			50	50	
Link Distance (ft)	210			248	288	
Travel Time (s)	5.7			3.4	3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					










Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	5	0	315	251	12
Future Vol, veh/h	0	5	0	315	251	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	5	0	342	273	13
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	143	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	879	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	879	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.1	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT EBLn1		SBT	SBR		
Capacity (veh/h)	- 879		-	-		
HCM Lane V/C Ratio	- 0.006		-	-		
HCM Control Delay (s)	- 9.1		-	-		
HCM Lane LOS	- A		-	-		
HCM 95th %tile Q(veh)	- 0		-	-		

Lanes, Volumes, Timings
1: Madison St. & Avenue 58

EAPC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	126	126	21	23	104	129	13	280	18	106	414	128
Future Volume (vph)	126	126	21	23	104	129	13	280	18	106	414	128
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Intersection Delay, s/veh	18.2											
Intersection LOS	C											















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	126	126	21	23	104	129	13	280	18	106	414	128
Future Vol, veh/h	126	126	21	23	104	129	13	280	18	106	414	128
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	137	137	23	25	113	140	14	304	20	115	450	139
Number of Lanes	1	1	1	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	15.9	15.4	17	20.9
HCM LOS	C	C	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	84%	0%	100%	0%	0%	100%	21%	0%	100%
Vol Right, %	0%	0%	16%	0%	0%	100%	0%	0%	79%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	13	187	111	126	126	21	23	69	164	106	276
LT Vol	13	0	0	126	0	0	23	0	0	106	0
Through Vol	0	187	93	0	126	0	0	69	35	0	276
RT Vol	0	0	18	0	0	21	0	0	129	0	0
Lane Flow Rate	14	203	121	137	137	23	25	75	178	115	300
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.035	0.479	0.282	0.349	0.33	0.051	0.064	0.183	0.406	0.265	0.647
Departure Headway (Hd)	9.002	8.502	8.389	9.168	8.668	7.968	9.26	8.76	8.208	8.269	7.769
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	396	422	426	390	414	447	385	408	436	433	462
Service Time	6.795	6.295	6.182	6.961	6.461	5.761	7.056	6.556	6.004	6.047	5.547
HCM Lane V/C Ratio	0.035	0.481	0.284	0.351	0.331	0.051	0.065	0.184	0.408	0.266	0.649
HCM Control Delay	12.1	18.9	14.5	16.8	15.7	11.2	12.7	13.5	16.6	14	23.8
HCM Lane LOS	B	C	B	C	C	B	B	B	C	B	C
HCM 95th-tile Q	0.1	2.5	1.1	1.5	1.4	0.2	0.2	0.7	1.9	1.1	4.5

Lanes, Volumes, Timings
2: Madison St. & Airport Bl.

EAPC (2023) PM Peak hour

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	57	85	1	433	51	66	536
Future Volume (vph)	57	85	1	433	51	66	536
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		8			2		
Detector Phase	3	8	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	20.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	21.0	21.0	12.0	26.0	26.0	13.0	27.0
Total Split (%)	35.0%	35.0%	20.0%	43.3%	43.3%	21.7%	45.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 60

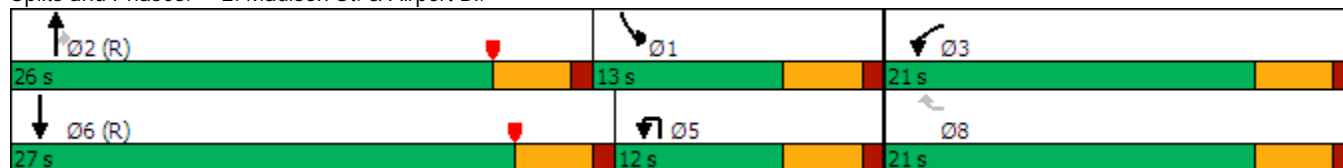
Actuated Cycle Length: 60

Offset: 28 (47%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55















Control Type: Actuated-Coordinated

Splits and Phases: 2: Madison St. & Airport Bl.


























HCM 6th Signalized Intersection Summary 2: Madison St. & Airport Bl.

EAPC (2023) PM Peak hour

							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	57	85	1	433	51	66	536
Future Volume (veh/h)	57	85	1	433	51	66	536
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	64	96		487	57	74	602
Peak Hour Factor	0.89	0.89		0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	203	180		1269	566	549	2594
Arrive On Green	0.12	0.12		0.37	0.37	0.32	0.75
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	64	96		487	57	74	602
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	2.0	3.5		6.2	0.8	1.8	3.2
Cycle Q Clear(g_c), s	2.0	3.5		6.2	0.8	1.8	3.2
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	203	180		1269	566	549	2594
V/C Ratio(X)	0.32	0.53		0.38	0.10	0.13	0.23
Avail Cap(c_a), veh/h	491	437		1269	566	549	2594
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	24.9		14.0	4.4	14.6	2.3
Incr Delay (d2), s/veh	0.9	2.4		0.9	0.4	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.2		2.1	0.4	0.6	0.2
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	25.2	27.4		14.9	4.7	14.8	2.5
LnGrp LOS	C	C		B	A	B	A
Approach Vol, veh/h	160			544			676
Approach Delay, s/veh	26.5			13.8			3.8
Approach LOS	C			B			A
Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	23.0	26.0				49.0	11.0
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	8.5	21.5				22.5	16.5
Max Q Clear Time (g_c+I1), s	3.8	8.2				5.2	5.5
Green Ext Time (p_c), s	0.0	2.5				3.3	0.3
Intersection Summary							
HCM 6th Ctrl Delay			10.4				
HCM 6th LOS			B				
Notes							
User approved ignoring U-Turning movement.							

Lanes, Volumes, Timings
3: Madison St. & Avenue 54









EAPC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	278	379	31	164	95	313	394	77	74	291	15
Future Volume (vph)	19	278	379	31	164	95	313	394	77	74	291	15
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh96.2

Intersection LOS F
























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	278	379	31	164	95	313	394	77	74	291	15
Future Vol, veh/h	19	278	379	31	164	95	313	394	77	74	291	15
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	312	426	35	184	107	352	443	87	83	327	17
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	203.6	24.7	61.9	30.3
HCM LOS	F	C	F	D

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	63%	0%	100%	20%	0%	100%	37%	0%	100%	87%
Vol Right, %	0%	0%	37%	0%	0%	80%	0%	0%	63%	0%	0%	13%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	313	263	208	19	185	472	31	109	150	74	194	112
LT Vol	313	0	0	19	0	0	31	0	0	74	0	0
Through Vol	0	263	131	0	185	93	0	109	55	0	194	97
RT Vol	0	0	77	0	0	379	0	0	95	0	0	15
Lane Flow Rate	352	295	234	21	208	530	35	123	168	83	218	126
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	1.032	0.826	0.639	0.067	0.633	1.531	0.119	0.403	0.532	0.277	0.697	0.399
Departure Headway (Hd)	11.307	10.807	10.548	11.492	10.942	10.401	12.847	12.347	11.903	12.645	12.145	12.051
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	324	336	344	314	331	355	281	294	304	286	299	301
Service Time	9.007	8.507	8.248	9.192	8.692	8.13	10.547	10.047	9.603	10.345	9.845	9.751
HCM Lane V/C Ratio	1.086	0.878	0.68	0.067	0.628	1.493	0.125	0.418	0.553	0.29	0.729	0.419
HCM Control Delay	94	48.9	30.2	15	30.9	279.1	17.3	23.1	27.4	20.1	38.6	22.5
HCM Lane LOS	F	E	D	B	D	F	C	C	D	C	E	C
HCM 95th-tile Q	11.8	7.2	4.2	0.2	4.1	29.6	0.4	1.9	2.9	1.1	4.8	1.8

Lanes, Volumes, Timings
3: Madison St. & Avenue 54

EAPC (2023) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	278	379	31	164	95	313	394	77	74	291	15
Future Volume (vph)	19	278	379	31	164	95	313	394	77	74	291	15
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	
Total Split (s)	14.0	45.0		14.0	45.0	45.0	30.0	40.0	40.0	21.0	31.0	
Total Split (%)	11.7%	37.5%		11.7%	37.5%	37.5%	25.0%	33.3%	33.3%	17.5%	25.8%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

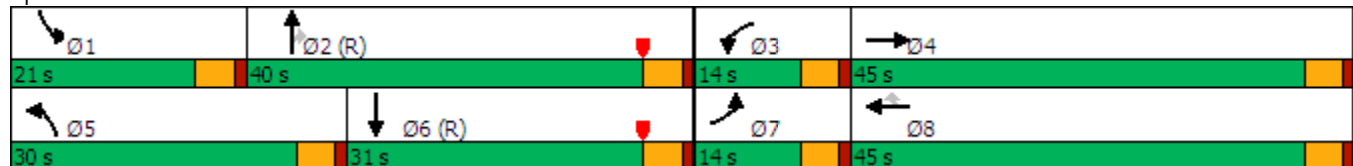
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated























Splits and Phases: 3: Madison St. & Avenue 54



HCM 6th Signalized Intersection Summary

























3: Madison St. & Avenue 54

EAPC (2023) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	278	379	31	164	95	313	394	77	74	291	15
Future Volume (veh/h)	19	278	379	31	164	95	313	394	77	74	291	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	21	312	426	35	184	107	352	443	87	83	327	17
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	51	522	466	70	1082	482	425	1548	691	105	1278	66
Arrive On Green	0.03	0.30	0.30	0.04	0.31	0.31	0.13	0.45	0.45	0.06	0.38	0.38
Sat Flow, veh/h	1734	1730	1543	1734	3460	1543	3365	3460	1543	1734	3347	173
Grp Volume(v), veh/h	21	312	426	35	184	107	352	443	87	83	168	176
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1734	1730	1790
Q Serve(g_s), s	1.4	18.4	31.9	2.4	4.6	6.1	12.2	9.7	4.0	5.7	8.0	8.1
Cycle Q Clear(g_c), s	1.4	18.4	31.9	2.4	4.6	6.1	12.2	9.7	4.0	5.7	8.0	8.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	51	522	466	70	1082	482	425	1548	691	105	661	683
V/C Ratio(X)	0.41	0.60	0.91	0.50	0.17	0.22	0.83	0.29	0.13	0.79	0.26	0.26
Avail Cap(c_a), veh/h	137	584	521	137	1168	521	715	1548	691	238	661	683
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.72	0.72	0.72	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.2	35.7	40.4	56.4	29.9	30.5	51.2	21.0	19.4	55.6	25.4	25.4
Incr Delay (d2), s/veh	3.8	1.0	15.2	5.5	0.1	0.2	4.2	0.5	0.4	12.3	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	7.5	13.3	1.1	1.8	2.2	5.2	3.8	1.4	2.8	3.3	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.0	36.7	55.7	61.9	30.0	30.7	55.3	21.5	19.8	67.9	26.3	26.3
LnGrp LOS	E	D	E	E	C	C	E	C	B	E	C	C
Approach Vol, veh/h	759			326			882			427		
Approach Delay, s/veh	48.0			33.7			34.8			34.4		
Approach LOS	D			C			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.8	58.2	9.3	40.7	19.7	50.3	8.0	42.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	16.5	35.5	9.5	40.5	25.5	26.5	9.5	40.5				
Max Q Clear Time (g_c+I1), s	7.7	11.7	4.4	33.9	14.2	10.1	3.4	8.1				
Green Ext Time (p_c), s	0.1	2.8	0.0	2.3	0.9	1.5	0.0	1.3				
Intersection Summary												
HCM 6th Ctrl Delay	38.8											
HCM 6th LOS	D											

Lanes, Volumes, Timings
4: Madison St. & Avenue 52

EAPC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	509	87	26	433	54	105	326	40	63	268	68
Future Volume (vph)	78	509	87	26	433	54	105	326	40	63	268	68
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	23.0	51.0	51.0	15.0	43.0	43.0	17.0	40.0	40.0	14.0	37.0	37.0
Total Split (%)	19.2%	42.5%	42.5%	12.5%	35.8%	35.8%	14.2%	33.3%	33.3%	11.7%	30.8%	30.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

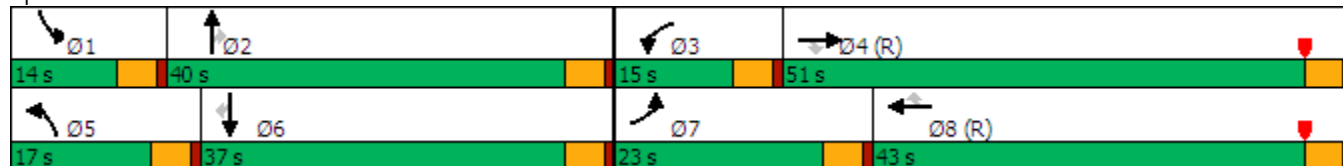
Actuated Cycle Length: 120

Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 85































Control Type: Actuated-Coordinated

Splits and Phases: 4: Madison St. & Avenue 52



























HCM 6th Signalized Intersection Summary 4: Madison St. & Avenue 52

EAPC (2023) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 		 	 	
Traffic Volume (veh/h)	78	509	87	26	433	54	105	326	40	63	268	68
Future Volume (veh/h)	78	509	87	26	433	54	105	326	40	63	268	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	91	592	101	30	503	63	122	379	47	73	312	79
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	1606	716	64	1505	671	193	1024	457	179	1009	450
Arrive On Green	0.07	0.46	0.46	0.04	0.43	0.43	0.06	0.30	0.30	0.05	0.29	0.29
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	91	592	101	30	503	63	122	379	47	73	312	79
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	6.2	13.3	4.5	2.0	11.5	2.9	4.3	10.4	2.7	2.5	8.4	4.6
Cycle Q Clear(g_c), s	6.2	13.3	4.5	2.0	11.5	2.9	4.3	10.4	2.7	2.5	8.4	4.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	115	1606	716	64	1505	671	193	1024	457	179	1009	450
V/C Ratio(X)	0.79	0.37	0.14	0.47	0.33	0.09	0.63	0.37	0.10	0.41	0.31	0.18
Avail Cap(c_a), veh/h	267	1606	716	152	1505	671	350	1024	457	266	1009	450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.2	20.8	18.4	56.6	22.4	20.0	55.3	33.4	30.7	55.0	33.1	31.7
Incr Delay (d2), s/veh	11.6	0.7	0.4	5.3	0.6	0.3	3.4	1.0	0.5	1.5	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	5.3	1.6	1.0	4.5	1.0	1.8	4.3	1.0	1.1	3.5	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.9	21.4	18.9	61.9	23.0	20.3	58.7	34.4	31.1	56.5	33.9	32.6
LnGrp LOS	E	C	B	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h	784			596			548			464		
Approach Delay, s/veh	26.4			24.7			39.6			37.2		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.9	40.0	8.9	60.2	11.4	39.5	12.4	56.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	9.5	35.5	10.5	46.5	12.5	32.5	18.5	38.5				
Max Q Clear Time (g_c+I1), s	4.5	12.4	4.0	15.3	6.3	10.4	8.2	13.5				
Green Ext Time (p_c), s	0.1	2.3	0.0	4.2	0.2	1.9	0.1	3.1				
Intersection Summary												
HCM 6th Ctrl Delay	31.1											
HCM 6th LOS	C											

Lanes, Volumes, Timings
5: Madison St. & Avenue 50/50th Avenue

EAPC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	449	151	51	368	53	120	395	40	52	258	97
Future Volume (vph)	94	449	151	51	368	53	120	395	40	52	258	97
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	24.0	48.0	48.0	18.0	42.0	42.0	18.0	40.0	40.0	14.0	36.0	36.0
Total Split (%)	20.0%	40.0%	40.0%	15.0%	35.0%	35.0%	15.0%	33.3%	33.3%	11.7%	30.0%	30.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

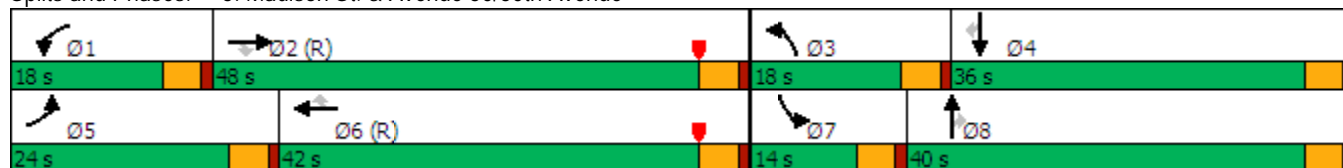
Actuated Cycle Length: 120

Offset: 64.5 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue




























HCM 6th Signalized Intersection Summary 5: Madison St. & Avenue 50/50th Avenue

EAPC (2023) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	449	151	51	368	53	120	395	40	52	258	97
Future Volume (veh/h)	94	449	151	51	368	53	120	395	40	52	258	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	99	473	159	54	387	56	126	416	42	55	272	102
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	124	1579	704	84	1501	670	193	1024	457	165	994	444
Arrive On Green	0.07	0.46	0.46	0.05	0.43	0.43	0.06	0.30	0.30	0.05	0.29	0.29
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	99	473	159	54	387	56	126	416	42	55	272	102
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	6.7	10.3	7.5	3.7	8.6	2.6	4.4	11.5	2.4	1.9	7.3	6.1
Cycle Q Clear(g_c), s	6.7	10.3	7.5	3.7	8.6	2.6	4.4	11.5	2.4	1.9	7.3	6.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	124	1579	704	84	1501	670	193	1024	457	165	994	444
V/C Ratio(X)	0.80	0.30	0.23	0.64	0.26	0.08	0.65	0.41	0.09	0.33	0.27	0.23
Avail Cap(c_a), veh/h	282	1579	704	195	1501	670	379	1024	457	266	994	444
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	20.5	19.8	56.0	21.7	20.0	55.4	33.8	30.6	55.2	33.1	32.6
Incr Delay (d2), s/veh	11.2	0.5	0.7	7.8	0.4	0.2	3.7	1.2	0.4	1.2	0.7	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	4.1	2.7	1.7	3.4	0.9	1.9	4.8	0.9	0.8	3.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.1	21.0	20.5	63.8	22.1	20.2	59.1	35.0	31.0	56.3	33.7	33.8
LnGrp LOS	E	C	C	E	C	C	E	D	C	E	C	C
Approach Vol, veh/h	731			497			584			429		
Approach Delay, s/veh	27.0			26.4			39.9			36.7		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.3	59.3	11.4	39.0	13.1	56.6	10.4	40.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	13.5	43.5	13.5	31.5	19.5	37.5	9.5	35.5				
Max Q Clear Time (g_c+I1), s	5.7	12.3	6.4	9.3	8.7	10.6	3.9	13.5				
Green Ext Time (p_c), s	0.0	3.5	0.2	1.8	0.1	2.4	0.0	2.5				
Intersection Summary												
HCM 6th Ctrl Delay	32.1											
HCM 6th LOS	C											

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54









EAPC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 		 	 	
Traffic Volume (vph)	31	24	2	34	10	455	6	252	53	577	303	2
Future Volume (vph)	31	24	2	34	10	455	6	252	53	577	303	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh83.5

Intersection LOS F























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	24	2	34	10	455	6	252	53	577	303	2
Future Vol, veh/h	31	24	2	34	10	455	6	252	53	577	303	2
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	29	2	41	12	555	7	307	65	704	370	2
Number of Lanes	1	2	0	1	1	1	0	2	0	2	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	16.1	191.9	23.5	47.7
HCM LOS	C	F	C	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	5%	0%	100%	0%	0%	100%	0%	0%	100%	100%	0%
Vol Thru, %	95%	70%	0%	100%	80%	0%	100%	0%	0%	0%	99%
Vol Right, %	0%	30%	0%	0%	20%	0%	0%	100%	0%	0%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	132	179	31	16	10	34	10	455	289	289	305
LT Vol	6	0	31	0	0	34	0	0	289	289	0
Through Vol	126	126	0	16	8	0	10	0	0	0	303
RT Vol	0	53	0	0	2	0	0	455	0	0	2
Lane Flow Rate	161	218	38	20	12	41	12	555	352	352	372
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.432	0.572	0.122	0.06	0.037	0.117	0.033	1.376	0.856	0.856	0.854
Departure Headway (Hd)	10.376	10.146	12.489	11.965	11.818	10.155	9.644	8.928	9.531	9.531	9.019
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	349	358	289	301	305	352	371	411	383	383	405
Service Time	8.076	7.846	10.189	9.665	9.518	7.931	7.42	6.705	7.231	7.231	6.719
HCM Lane V/C Ratio	0.461	0.609	0.131	0.066	0.039	0.116	0.032	1.35	0.919	0.919	0.919
HCM Control Delay	20.7	25.6	16.9	15.4	15	14.3	12.8	209.1	48.5	48.5	46.3
HCM Lane LOS	C	D	C	C	B	B	B	F	E	E	E
HCM 95th-tile Q	2.1	3.4	0.4	0.2	0.1	0.4	0.1	26.6	8.1	8.1	8.2

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54

EAPC (2023) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	24	2	34	10	455	6	252	53	577	303	2
Future Volume (vph)	31	24	2	34	10	455	6	252	53	577	303	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases		2			6		8	8		4	4	
Permitted Phases	2			6		6						4
Detector Phase	2	2		6	6	6	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5		22.5	22.5	22.5
Total Split (s)	52.0	52.0		52.0	52.0	52.0	26.0	26.0		42.0	42.0	42.0
Total Split (%)	43.3%	43.3%		43.3%	43.3%	43.3%	21.7%	21.7%		35.0%	35.0%	35.0%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		None	None	None	Max	Max		Max	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

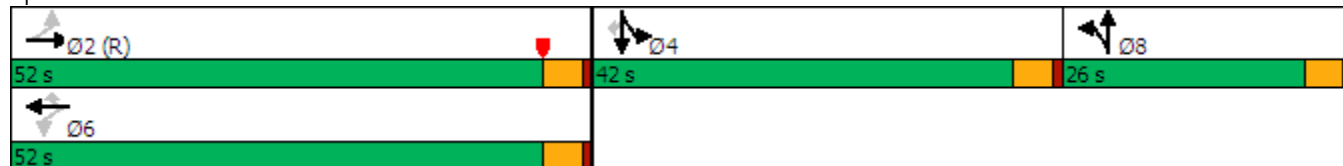
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated























Splits and Phases: 6: Jefferson St. & Avenue 54



HCM 6th Signalized Intersection Summary





















6: Jefferson St. & Avenue 54

EAPC (2023) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	24	2	34	10	455	6	252	53	577	303	2
Future Volume (veh/h)	31	24	2	34	10	455	6	252	53	577	303	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	38	29	2	41	12	555	7	307	65	704	370	2
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	391	1301	89	598	721	611	11	508	112	1051	1081	482
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.18	0.18	0.18	0.31	0.31	0.31
Sat Flow, veh/h	844	3287	224	1378	1821	1543	63	2835	628	3365	3460	1543
Grp Volume(v), veh/h	38	15	16	41	12	555	202	0	177	704	370	2
Grp Sat Flow(s),veh/h/ln	844	1730	1781	1378	1821	1543	1818	0	1708	1682	1730	1543
Q Serve(g_s), s	3.4	0.6	0.7	2.2	0.5	40.7	12.3	0.0	11.4	21.8	9.9	0.1
Cycle Q Clear(g_c), s	3.9	0.6	0.7	2.9	0.5	40.7	12.3	0.0	11.4	21.8	9.9	0.1
Prop In Lane	1.00		0.13	1.00		1.00	0.03		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	391	685	705	598	721	611	326	0	306	1051	1081	482
V/C Ratio(X)	0.10	0.02	0.02	0.07	0.02	0.91	0.62	0.00	0.58	0.67	0.34	0.00
Avail Cap(c_a), veh/h	391	685	705	598	721	611	326	0	306	1051	1081	482
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.82	0.82	0.82	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.2	22.1	22.1	23.0	22.0	34.2	45.5	0.0	45.1	35.9	31.8	28.4
Incr Delay (d2), s/veh	0.5	0.1	0.1	0.0	0.0	15.0	8.6	0.0	7.7	3.4	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.3	0.3	0.7	0.2	16.5	6.1	0.0	5.3	8.9	4.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.7	22.2	22.2	23.0	22.1	49.2	54.1	0.0	52.8	39.3	32.6	28.4
LnGrp LOS	C	C	C	C	C	D	D	A	D	D	C	C
Approach Vol, veh/h	69			608				379			1076	
Approach Delay, s/veh	23.0			46.9				53.5			37.0	
Approach LOS	C			D				D			D	
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	52.0			42.0			52.0			26.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	47.5			37.5			47.5			21.5		
Max Q Clear Time (g_c+I1), s	5.9			23.8			42.7			14.3		
Green Ext Time (p_c), s	0.3			4.0			1.1			1.1		
Intersection Summary												
HCM 6th Ctrl Delay	42.3											
HCM 6th LOS	D											

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EAPC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	383	335	31	401	300	213	636	73	190	651	144
Future Volume (vph)	105	383	335	31	401	300	213	636	73	190	651	144
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											





















HCM 6th Roundabout
7: Jefferson St. & Avenue 52

EAPC (2023) PM Peak hour

Intersection									
Intersection Delay, s/veh	123.1								
Intersection LOS	F								
Approach	EB		WB		NB		SB		
Entry Lanes	1		1		1		1		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	885		787		991		1059		
Demand Flow Rate, veh/h	902		803		1012		1080		
Vehicles Circulating, veh/h	956		1047		743		708		
Vehicles Exiting, veh/h	674		628		748		813		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	45.0		42.2		208.4		168.7		
Approach LOS	E		E		F		F		
Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Bypass	
Designated Moves	LT	R	LT	R	LT	R	LT	R	
Assumed Moves	LT	R	LT	R	LT	R	LT	R	
RT Channelized		Free		Free		Free		Free	
Lane Util	1.000		1.000		1.000		1.000		
Follow-Up Headway, s	2.609		2.609		2.609		2.609		
Critical Headway, s	4.976	367	4.976	329	4.976	80	4.976	158	
Entry Flow, veh/h	535	1887	474	1887	932	1887	922	1887	
Cap Entry Lane, veh/h	520	0.980	474	0.980	647	0.980	670	0.980	
Entry HV Adj Factor	0.981	360	0.980	323	0.980	78	0.980	155	
Flow Entry, veh/h	525	1850	464	1850	913	1850	904	1850	
Cap Entry, veh/h	511	0.195	465	0.175	634	0.042	657	0.084	
V/C Ratio	1.028	0.0	0.999	0.0	1.441	0.0	1.376	0.0	
Control Delay, s/veh	75.8	A	71.6	A	226.2	A	197.6	A	
LOS	F	1	F	1	F	0	F	0	
95th %tile Queue, veh	15		13		43		39		

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EAPC (2023) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	383	335	31	401	300	213	636	73	190	651	144
Future Volume (vph)	105	383	335	31	401	300	213	636	73	190	651	144
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		100	0		100	0		0	0		0
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	60			60			60			60		
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											






















HCM 6th Roundabout
7: Jefferson St. & Avenue 52

EAPC (2023) PM Peak hour
With Improvements

Intersection										
Intersection Delay, s/veh	16.9									
Intersection LOS	C									
Approach	EB		WB		NB		SB			
Entry Lanes	1		1		2		2			
Conflicting Circle Lanes	2		2		2		2			
Adj Approach Flow, veh/h	885		787		991		1059			
Demand Flow Rate, veh/h	902		803		1012		1080			
Vehicles Circulating, veh/h	956		1047		743		708			
Vehicles Exiting, veh/h	674		628		748		813			
Ped Vol Crossing Leg, #/h	0		0		0		0			
Ped Cap Adj	1.000		1.000		1.000		1.000			
Approach Delay, s/veh	20.3		18.9		15.9		13.5			
Approach LOS	C		C		C		B			
Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
Assumed Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
RT Channelized		Free		Free			Free			Free
Lane Util	1.000		1.000		0.470	0.530		0.470	0.530	
Follow-Up Headway, s	2.535		2.535		2.667	2.535		2.667	2.535	
Critical Headway, s	4.328	367	4.328	329	4.645	4.328	80	4.645	4.328	158
Entry Flow, veh/h	535	1887	474	1887	438	494	1887	433	489	1887
Cap Entry Lane, veh/h	630	0.980	583	0.980	681	755	0.980	704	778	0.980
Entry HV Adj Factor	0.981	360	0.980	323	0.980	0.980	78	0.981	0.980	155
Flow Entry, veh/h	525	1850	464	1850	429	484	1850	425	479	1850
Cap Entry, veh/h	618	0.195	571	0.175	668	740	0.042	691	762	0.084
V/C Ratio	0.849	0.0	0.813	0.0	0.643	0.654	0.0	0.615	0.629	0.0
Control Delay, s/veh	34.3	A	32.1	A	17.8	16.9	A	16.3	15.5	A
LOS	D	1	D	1	C	C	0	C	C	0
95th %tile Queue, veh	9		8		5	5		4	5	

Lanes, Volumes, Timings 8: Jefferson St. & Pomelo

EAPC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	2	21	9	1	42	3	1044	7	23	1049	68
Future Volume (vph)	66	2	21	9	1	42	3	1044	7	23	1049	68
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	54.0		18.0	54.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	15.0%	45.0%		15.0%	45.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary

Area Type: Other

Cycle Length: 120

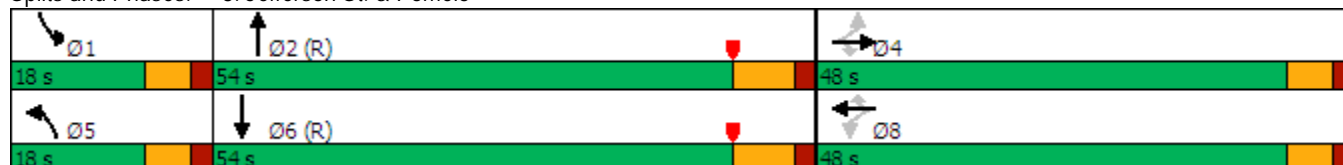
Actuated Cycle Length: 120

Offset: 30 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110


Control Type: Actuated-Coordinated

Splits and Phases: 8: Jefferson St. & Pomelo



























HCM 6th Signalized Intersection Summary 8: Jefferson St. & Pomelo

EAPC (2023) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↱	↰↰↰		↱	↰↰↰	
Traffic Volume (veh/h)	66	2	21	9	1	42	3	1044	7	23	1049	68
Future Volume (veh/h)	66	2	21	9	1	42	3	1044	7	23	1049	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	69	2	22	9	1	44	3	1099	7	24	1104	72
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	73	1	524	66	4	524	17	2258	14	96	2330	152
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.01	0.44	0.44	0.02	0.16	0.16
Sat Flow, veh/h	41	4	1543	27	13	1543	1734	5097	32	1734	4769	311
Grp Volume(v), veh/h	71	0	22	10	0	44	3	715	391	24	767	409
Grp Sat Flow(s),veh/h/ln	44	0	1543	40	0	1543	1734	1657	1815	1734	1657	1765
Q Serve(g_s), s	1.2	0.0	1.1	0.6	0.0	2.3	0.2	18.4	18.4	1.6	25.2	25.3
Cycle Q Clear(g_c), s	40.7	0.0	1.1	40.4	0.0	2.3	0.2	18.4	18.4	1.6	25.2	25.3
Prop In Lane	0.97		1.00	0.90		1.00	1.00		0.02	1.00		0.18
Lane Grp Cap(c), veh/h	74	0	524	71	0	524	17	1468	804	96	1619	862
V/C Ratio(X)	0.96	0.00	0.04	0.14	0.00	0.08	0.18	0.49	0.49	0.25	0.47	0.47
Avail Cap(c_a), veh/h	89	0	540	86	0	540	173	1468	804	173	1619	862
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.72	0.72	0.72
Uniform Delay (d), s/veh	59.4	0.0	26.6	45.9	0.0	27.0	59.0	23.7	23.7	56.5	36.3	36.3
Incr Delay (d2), s/veh	81.4	0.0	0.1	1.9	0.0	0.1	10.9	1.2	2.1	2.1	0.7	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	0.4	0.3	0.0	0.9	0.1	6.9	7.7	0.8	11.2	12.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	140.7	0.0	26.6	47.8	0.0	27.1	69.8	24.9	25.8	58.6	37.0	37.7
LnGrp LOS	F	A	C	D	A	C	E	C	C	E	D	D
Approach Vol, veh/h	93			54			1109			1200		
Approach Delay, s/veh	113.7			30.9			25.3			37.7		
Approach LOS	F			C			C			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.6	60.0		47.4	7.1	65.5		47.4				
Change Period (Y+Rc), s	6.0	7.5		6.0	6.0	7.5		6.0				
Max Green Setting (Gmax), s	12.0	46.5		42.0	12.0	46.5		42.0				
Max Q Clear Time (g_c+I1), s	3.6	20.4		42.7	2.2	27.3		42.4				
Green Ext Time (p_c), s	0.0	13.0		0.0	0.0	11.5		0.0				
Intersection Summary												
HCM 6th Ctrl Delay	34.8											
HCM 6th LOS	C											

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

EAPC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	362	365	133	127	323	199	128	940	83	285	878	231
Future Volume (vph)	362	365	133	127	323	199	128	940	83	285	878	231
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	39.5	39.5	22.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	32.9%	32.9%	18.3%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

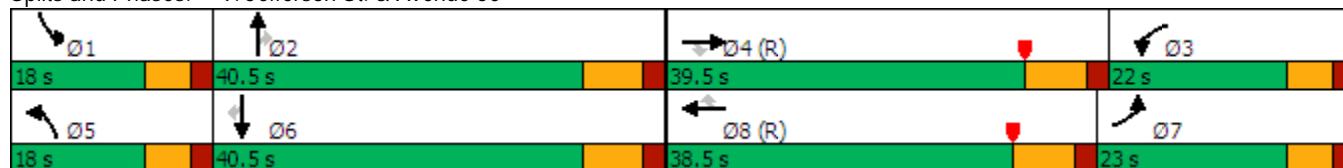
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 125

Control Type: Actuated-Coordinated

























Splits and Phases: 9: Jefferson St. & Avenue 50



HCM 6th Signalized Intersection Summary

9: Jefferson St. & Avenue 50

EAPC (2023) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	362	365	133	127	323	199	128	940	83	285	878	231
Future Volume (veh/h)	362	365	133	127	323	199	128	940	83	285	878	231
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	373	376	137	131	333	205	132	969	86	294	905	238
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	369	544	243	470	392	333	171	1226	381	336	1233	383
Arrive On Green	0.21	0.16	0.16	0.27	0.22	0.22	0.03	0.08	0.08	0.10	0.25	0.25
Sat Flow, veh/h	1734	3460	1543	1734	1821	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	373	376	137	131	333	205	132	969	86	294	905	238
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	25.5	12.3	7.4	7.1	21.1	10.5	9.1	23.0	3.1	10.3	20.1	9.3
Cycle Q Clear(g_c), s	25.5	12.3	7.4	7.1	21.1	10.5	9.1	23.0	3.1	10.3	20.1	9.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	369	544	243	470	392	333	171	1226	381	336	1233	383
V/C Ratio(X)	1.01	0.69	0.56	0.28	0.85	0.62	0.77	0.79	0.23	0.87	0.73	0.62
Avail Cap(c_a), veh/h	369	923	412	470	470	399	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	47.8	26.3	34.5	45.2	22.6	56.7	52.1	10.7	53.3	41.5	12.9
Incr Delay (d2), s/veh	49.5	7.1	9.2	0.1	19.9	8.3	16.4	3.1	0.4	20.8	2.1	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.6	5.7	4.2	3.0	11.4	4.4	4.8	10.5	2.4	5.2	8.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	96.8	54.9	35.5	34.6	65.1	30.9	73.1	55.1	11.1	74.1	43.6	15.9
LnGrp LOS	F	D	D	C	E	C	E	E	B	E	D	B
Approach Vol, veh/h		886			669			1187			1437	
Approach Delay, s/veh		69.5			48.6			53.9			45.2	
Approach LOS		E			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	37.1	38.5	26.4	17.9	37.3	31.5	33.4				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	12.0	33.0	16.0	32.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	12.3	25.0	9.1	14.3	11.1	22.1	27.5	23.1				
Green Ext Time (p_c), s	0.0	4.6	0.0	4.5	0.0	6.0	0.0	2.8				
Intersection Summary												
HCM 6th Ctrl Delay			53.4									
HCM 6th LOS			D									
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
10: Avenue 60 & Madison St.

EAPC (2023) PM Peak hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↰	↰	↰	↰
Traffic Volume (vph)	26	14	16	142	268	41
Future Volume (vph)	26	14	16	142	268	41
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		40	
Link Distance (ft)		1772	661		437	
Travel Time (s)		30.2	11.3		7.4	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)						
Sign Control		Stop	Stop		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Intersection Delay, s/veh	11.7
Intersection LOS	B





















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↱	↱	↱	↱	↱
Traffic Vol, veh/h	26	14	16	142	268	41
Future Vol, veh/h	26	14	16	142	268	41
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	17	20	173	327	50
Number of Lanes	0	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	9.3	9.1	13.3
HCM LOS	A	A	B









Lane	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	65%	0%	0%	100%	0%
Vol Thru, %	35%	100%	0%	0%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	40	16	142	268	41
LT Vol	26	0	0	268	0
Through Vol	14	16	0	0	0
RT Vol	0	0	142	0	41
Lane Flow Rate	49	20	173	327	50
Geometry Grp	4	7	7	7	7
Degree of Util (X)	0.078	0.031	0.238	0.511	0.061
Departure Headway (Hd)	5.752	5.647	4.94	5.629	4.425
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	620	633	726	637	804
Service Time	3.812	3.389	2.682	3.386	2.181
HCM Lane V/C Ratio	0.079	0.032	0.238	0.513	0.062
HCM Control Delay	9.3	8.6	9.2	14.2	7.5
HCM Lane LOS	A	A	A	B	A
HCM 95th-tile Q	0.3	0.1	0.9	2.9	0.2

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

EAPC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	123	111	11	55	122	68	202	10	192	249	24
Future Volume (vph)	27	123	111	11	55	122	68	202	10	192	249	24
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	19.1
Intersection LOS	C


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	123	111	11	55	122	68	202	10	192	249	24
Future Vol, veh/h	27	123	111	11	55	122	68	202	10	192	249	24
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	31	140	126	13	63	139	77	230	11	218	283	27
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	15.7	19	19.6	20.8
HCM LOS	C	C	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	18%	0%	6%	100%	0%	0%
Vol Thru, %	0%	95%	82%	0%	29%	0%	100%	0%
Vol Right, %	0%	5%	0%	100%	65%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	68	212	150	111	188	192	249	24
LT Vol	68	0	27	0	11	192	0	0
Through Vol	0	202	123	0	55	0	249	0
RT Vol	0	10	0	111	122	0	0	24
Lane Flow Rate	77	241	170	126	214	218	283	27
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.192	0.562	0.41	0.275	0.494	0.51	0.621	0.055
Departure Headway (Hd)	8.945	8.393	8.657	7.846	8.33	8.419	7.905	7.226
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	402	431	416	458	434	430	458	499
Service Time	6.691	6.138	6.404	5.592	6.079	6.161	5.646	4.926
HCM Lane V/C Ratio	0.192	0.559	0.409	0.275	0.493	0.507	0.618	0.054
HCM Control Delay	13.8	21.4	17.3	13.6	19	19.6	22.8	10.3
HCM Lane LOS	B	C	C	B	C	C	C	B
HCM 95th-tile Q	0.7	3.4	2	1.1	2.7	2.8	4.1	0.2

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAPC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	118	56	35	88	48	76	333	46	40	375	57
Future Volume (vph)	62	118	56	35	88	48	76	333	46	40	375	57
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	124.4
Intersection LOS	F


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	62	118	56	35	88	48	76	333	46	40	375	57
Future Vol, veh/h	62	118	56	35	88	48	76	333	46	40	375	57
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	83	157	75	47	117	64	101	444	61	53	500	76
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	35.1	25.4	187.3	144.4
HCM LOS	E	D	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	17%	26%	20%	10%	0%
Vol Thru, %	73%	50%	51%	90%	0%
Vol Right, %	10%	24%	28%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	455	236	171	415	57
LT Vol	76	62	35	40	0
Through Vol	333	118	88	375	0
RT Vol	46	56	48	0	57
Lane Flow Rate	607	315	228	553	76
Geometry Grp	5	2	2	7	7
Degree of Util (X)	1.327	0.733	0.556	1.261	0.157
Departure Headway (Hd)	8.457	9.676	10.256	8.906	8.127
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	437	378	353	415	444
Service Time	6.457	7.676	8.256	6.606	5.827
HCM Lane V/C Ratio	1.389	0.833	0.646	1.333	0.171
HCM Control Delay	187.3	35.1	25.4	162.5	12.3
HCM Lane LOS	F	E	D	F	B
HCM 95th-tile Q	25.7	5.7	3.2	21.9	0.6

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAPC (2023) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	118	56	35	88	48	76	333	46	40	375	57
Future Volume (vph)	62	118	56	35	88	48	76	333	46	40	375	57
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	41.0	41.0		41.0	41.0		79.0	79.0		79.0	79.0	79.0
Total Split (%)	34.2%	34.2%		34.2%	34.2%		65.8%	65.8%		65.8%	65.8%	65.8%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)		4.5			4.5			4.5			4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

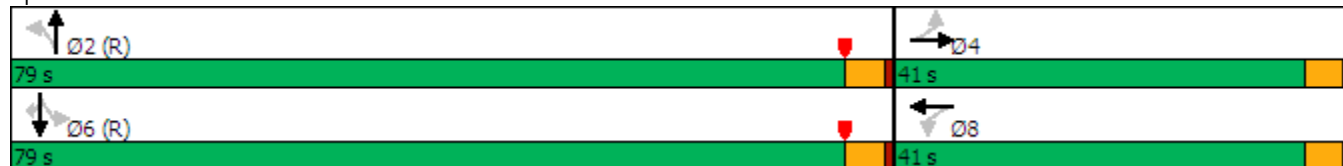
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated


















Splits and Phases: 12: Monroe St. & Avenue 58



HCM 6th Signalized Intersection Summary






















12: Monroe St. & Avenue 58

EAPC (2023) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	118	56	35	88	48	76	333	46	40	375	57
Future Volume (veh/h)	62	118	56	35	88	48	76	333	46	40	375	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	83	157	75	47	117	64	101	444	61	53	500	76
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	187	83	85	198	96	172	735	98	115	1058	1056
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.68	0.68	0.68	0.68	0.68	0.68
Sat Flow, veh/h	321	776	343	205	822	401	200	1074	143	120	1546	1543
Grp Volume(v), veh/h	315	0	0	228	0	0	606	0	0	553	0	76
Grp Sat Flow(s),veh/h/ln	1439	0	0	1427	0	0	1416	0	0	1667	0	1543
Q Serve(g_s), s	9.3	0.0	0.0	0.0	0.0	0.0	16.9	0.0	0.0	0.0	0.0	2.0
Cycle Q Clear(g_c), s	25.8	0.0	0.0	16.6	0.0	0.0	33.4	0.0	0.0	16.5	0.0	2.0
Prop In Lane	0.26		0.24	0.21		0.28	0.17		0.10	0.10		1.00
Lane Grp Cap(c), veh/h	384	0	0	380	0	0	1004	0	0	1173	0	1056
V/C Ratio(X)	0.82	0.00	0.00	0.60	0.00	0.00	0.60	0.00	0.00	0.47	0.00	0.07
Avail Cap(c_a), veh/h	482	0	0	478	0	0	1004	0	0	1173	0	1056
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.5	0.0	0.0	40.3	0.0	0.0	11.3	0.0	0.0	8.6	0.0	6.3
Incr Delay (d2), s/veh	8.7	0.0	0.0	1.5	0.0	0.0	2.7	0.0	0.0	1.4	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	0.0	0.0	6.2	0.0	0.0	8.9	0.0	0.0	5.8	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.2	0.0	0.0	41.8	0.0	0.0	14.0	0.0	0.0	10.0	0.0	6.4
LnGrp LOS	D	A	A	D	A	A	B	A	A	A	A	A
Approach Vol, veh/h		315			228			606			629	
Approach Delay, s/veh		53.2			41.8			14.0			9.5	
Approach LOS		D			D			B			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		86.6		33.4		86.6		33.4				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		74.5		36.5		74.5		36.5				
Max Q Clear Time (g_c+I1), s		35.4		27.8		18.5		18.6				
Green Ext Time (p_c), s		4.5		1.1		3.9		1.2				
Intersection Summary												
HCM 6th Ctrl Delay				22.9								
HCM 6th LOS				C								

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.









EAPC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	90	19	47	93	47	18	337	49	51	393	12
Future Volume (vph)	7	90	19	47	93	47	18	337	49	51	393	12
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh29.1

Intersection LOS D



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	90	19	47	93	47	18	337	49	51	393	12
Future Vol, veh/h	7	90	19	47	93	47	18	337	49	51	393	12
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	103	22	54	107	54	21	387	56	59	452	14
Number of Lanes	1	1	1	0	1	0	1	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	1
Conflicting Approach RightNB		SB	WB	EB
Conflicting Lanes Right	2	3	1	3
HCM Control Delay	13.1	19.3	49.6	19
HCM LOS	B	C	E	C







Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	100%	0%	0%	25%	100%	0%	0%
Vol Thru, %	0%	87%	0%	100%	0%	50%	0%	100%	92%
Vol Right, %	0%	13%	0%	0%	100%	25%	0%	0%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	18	386	7	90	19	187	51	262	143
LT Vol	18	0	7	0	0	47	51	0	0
Through Vol	0	337	0	90	0	93	0	262	131
RT Vol	0	49	0	0	19	47	0	0	12
Lane Flow Rate	21	444	8	103	22	215	59	301	164
Geometry Grp	8	8	7	7	7	8	8	8	8
Degree of Util (X)	0.046	0.922	0.02	0.239	0.046	0.499	0.132	0.636	0.345
Departure Headway (Hd)	8.087	7.485	8.844	8.328	7.605	8.358	8.12	7.608	7.548
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	441	484	403	429	468	430	440	473	475
Service Time	5.864	5.262	6.637	6.12	5.397	6.145	5.902	5.39	5.329
HCM Lane V/C Ratio	0.048	0.917	0.02	0.24	0.047	0.5	0.134	0.636	0.345
HCM Control Delay	11.3	51.4	11.8	13.7	10.8	19.3	12.1	22.9	14.3
HCM Lane LOS	B	F	B	B	B	C	B	C	B
HCM 95th-tile Q	0.1	10.7	0.1	0.9	0.1	2.7	0.5	4.4	1.5

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAPC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	238	82	23	146	51	52	392	33	83	353	39
Future Volume (vph)	74	238	82	23	146	51	52	392	33	83	353	39
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	110.4
Intersection LOS	F



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	238	82	23	146	51	52	392	33	83	353	39
Future Vol, veh/h	74	238	82	23	146	51	52	392	33	83	353	39
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	81	262	90	25	160	56	57	431	36	91	388	43
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	44.2	33.6	187	123.9
HCM LOS	E	D	F	F

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	11%	100%	0%	10%	19%	0%
Vol Thru, %	82%	0%	74%	66%	81%	0%
Vol Right, %	7%	0%	26%	23%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	477	74	320	220	436	39
LT Vol	52	74	0	23	83	0
Through Vol	392	0	238	146	353	0
RT Vol	33	0	82	51	0	39
Lane Flow Rate	524	81	352	242	479	43
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	1.315	0.215	0.861	0.658	1.177	0.096
Departure Headway (Hd)	9.605	10.611	9.897	11.304	9.621	8.789
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	383	341	369	322	383	410
Service Time	7.605	8.311	7.597	9.304	7.321	6.489
HCM Lane V/C Ratio	1.368	0.238	0.954	0.752	1.251	0.105
HCM Control Delay	187	16.2	50.7	33.6	133.9	12.4
HCM Lane LOS	F	C	F	D	F	B
HCM 95th-tile Q	22.8	0.8	8.1	4.4	17.6	0.3

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAPC (2023) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	238	82	23	146	51	52	392	33	83	353	39
Future Volume (vph)	74	238	82	23	146	51	52	392	33	83	353	39
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	47.0	47.0		47.0	47.0		73.0	73.0		73.0	73.0	73.0
Total Split (%)	39.2%	39.2%		39.2%	39.2%		60.8%	60.8%		60.8%	60.8%	60.8%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)	4.5	4.5			4.5			4.5			4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated



















Splits and Phases: 14: Monroe St. & Avenue 54



HCM 6th Signalized Intersection Summary























14: Monroe St. & Avenue 54

EAPC (2023) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	238	82	23	146	51	52	392	33	83	353	39
Future Volume (veh/h)	74	238	82	23	146	51	52	392	33	83	353	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	81	262	90	25	160	56	57	431	36	91	388	43
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	176	332	114	45	210	67	128	947	77	210	874	1033
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.67	0.67	0.67	0.67	0.67	0.67
Sat Flow, veh/h	1165	1296	445	45	821	262	142	1415	115	261	1306	1543
Grp Volume(v), veh/h	81	0	352	241	0	0	524	0	0	479	0	43
Grp Sat Flow(s),veh/h/ln	1165	0	1741	1128	0	0	1672	0	0	1567	0	1543
Q Serve(g_s), s	0.3	0.0	22.6	4.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	1.1
Cycle Q Clear(g_c), s	26.9	0.0	22.6	26.6	0.0	0.0	16.3	0.0	0.0	15.8	0.0	1.1
Prop In Lane	1.00		0.26	0.10		0.23	0.11		0.07	0.19		1.00
Lane Grp Cap(c), veh/h	176	0	446	322	0	0	1152	0	0	1084	0	1033
V/C Ratio(X)	0.46	0.00	0.79	0.75	0.00	0.00	0.45	0.00	0.00	0.44	0.00	0.04
Avail Cap(c_a), veh/h	290	0	617	481	0	0	1152	0	0	1084	0	1033
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.6	0.0	41.6	40.3	0.0	0.0	9.3	0.0	0.0	9.0	0.0	6.8
Incr Delay (d2), s/veh	1.9	0.0	4.7	3.5	0.0	0.0	1.3	0.0	0.0	1.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	9.8	6.1	0.0	0.0	5.8	0.0	0.0	5.1	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.4	0.0	46.4	43.9	0.0	0.0	10.6	0.0	0.0	10.3	0.0	6.8
LnGrp LOS	D	A	D	D	A	A	B	A	A	B	A	A
Approach Vol, veh/h	433			241			524			522		
Approach Delay, s/veh	46.2			43.9			10.6			10.0		
Approach LOS	D			D			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	84.8			35.2			84.8			35.2		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	68.5			42.5			68.5			42.5		
Max Q Clear Time (g_c+I1), s	18.3			28.9			17.8			28.6		
Green Ext Time (p_c), s	3.5			1.8			3.3			1.0		
Intersection Summary												
HCM 6th Ctrl Delay	24.0											
HCM 6th LOS	C											

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52










EAPC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	404	66	55	363	104	44	410	64	116	368	90
Future Volume (vph)	106	404	66	55	363	104	44	410	64	116	368	90
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 79.1

Intersection LOS F























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	106	404	66	55	363	104	44	410	64	116	368	90
Future Vol, veh/h	106	404	66	55	363	104	44	410	64	116	368	90
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	123	470	77	64	422	121	51	477	74	135	428	105
Number of Lanes	1	1	1	0	2	1	0	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay	194.7	50.6	445.4	40
HCM LOS	F	F	F	E

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	8%	100%	0%	0%	31%	0%	0%	100%	0%	0%
Vol Thru, %	79%	0%	100%	0%	69%	100%	0%	0%	100%	58%
Vol Right, %	12%	0%	0%	100%	0%	0%	100%	0%	0%	42%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	518	106	404	66	176	242	104	116	245	213
LT Vol	44	106	0	0	55	0	0	116	0	0
Through Vol	410	0	404	0	121	242	0	0	245	123
RT Vol	64	0	0	66	0	0	104	0	0	90
Lane Flow Rate	602	123	470	77	205	281	121	135	285	247
Geometry Grp	8	8	8	8	8	8	8	7	7	7
Degree of Util (X)	1.904	0.405	1.478	0.227	0.646	0.875	0.353	0.392	0.789	0.664
Departure Headway (Hd)	12.002	14.22	13.667	12.894	14.605	14.43	13.646	13.284	12.736	12.411
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	307	255	272	280	250	253	266	272	288	294
Service Time	9.702	11.92	11.367	10.594	12.305	12.13	11.346	10.984	10.436	10.111
HCM Lane V/C Ratio	1.961	0.482	1.728	0.275	0.82	1.111	0.455	0.496	0.99	0.84
HCM Control Delay	445.4	26.3	267.6	19.3	40.6	69.5	23.6	24.3	50.3	36.6
HCM Lane LOS	F	D	F	C	E	F	C	C	F	E
HCM 95th-tile Q	39.3	1.9	22.3	0.9	4	7.3	1.5	1.8	6.1	4.4

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52

EAPC (2023) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	404	66	55	363	104	44	410	64	116	368	90
Future Volume (vph)	106	404	66	55	363	104	44	410	64	116	368	90
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	26.0	26.0	26.0	26.0	26.0	26.0	34.0	34.0		34.0	34.0	
Total Split (%)	43.3%	43.3%	43.3%	43.3%	43.3%	43.3%	56.7%	56.7%		56.7%	56.7%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5		4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	C-Max	C-Max		C-Max	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

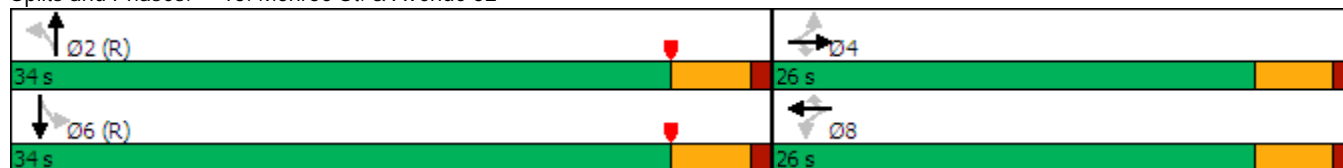
Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 50

Control Type: Actuated-Coordinated























Splits and Phases: 15: Monroe St. & Avenue 52



HCM 6th Signalized Intersection Summary

























15: Monroe St. & Avenue 52

EAPC (2023) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	404	66	55	363	104	44	410	64	116	368	90
Future Volume (veh/h)	106	404	66	55	363	104	44	410	64	116	368	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	125	475	78	65	427	122	52	482	75	136	433	106
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	337	628	532	217	1193	532	108	706	105	451	1395	339
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.51	0.51	0.51	0.51	0.51	0.51
Sat Flow, veh/h	858	1821	1543	855	3460	1543	85	1397	208	852	2760	670
Grp Volume(v), veh/h	125	475	78	65	427	122	609	0	0	136	270	269
Grp Sat Flow(s),veh/h/ln	858	1821	1543	855	1730	1543	1690	0	0	852	1730	1701
Q Serve(g_s), s	7.6	13.9	2.1	4.4	5.5	3.4	4.1	0.0	0.0	0.0	5.5	5.6
Cycle Q Clear(g_c), s	13.2	13.9	2.1	18.2	5.5	3.4	15.9	0.0	0.0	11.9	5.5	5.6
Prop In Lane	1.00		1.00	1.00		1.00	0.09		0.12	1.00		0.39
Lane Grp Cap(c), veh/h	337	628	532	217	1193	532	919	0	0	451	874	859
V/C Ratio(X)	0.37	0.76	0.15	0.30	0.36	0.23	0.66	0.00	0.00	0.30	0.31	0.31
Avail Cap(c_a), veh/h	348	653	553	229	1240	553	919	0	0	451	874	859
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.6	17.4	13.6	25.5	14.7	14.0	11.2	0.0	0.0	10.3	8.7	8.7
Incr Delay (d2), s/veh	0.7	4.9	0.1	0.8	0.2	0.2	3.8	0.0	0.0	1.7	0.9	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	5.3	0.6	0.8	1.7	0.9	5.1	0.0	0.0	1.1	1.6	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.3	22.3	13.7	26.3	14.9	14.2	14.9	0.0	0.0	12.0	9.6	9.7
LnGrp LOS	C	C	B	C	B	B	B	A	A	B	A	A
Approach Vol, veh/h	678			614			609			675		
Approach Delay, s/veh	21.0			15.9			14.9			10.1		
Approach LOS	C			B			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	34.8			25.2			34.8			25.2		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	29.5			21.5			29.5			21.5		
Max Q Clear Time (g_c+I1), s	17.9			15.9			13.9			20.2		
Green Ext Time (p_c), s	2.9			1.8			3.3			0.4		
Intersection Summary												
HCM 6th Ctrl Delay	15.5											
HCM 6th LOS	B											

Lanes, Volumes, Timings
16: Monroe St. & 50th Avenue

EAPC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	453	44	26	348	125	37	589	65	132	457	42
Future Volume (vph)	60	453	44	26	348	125	37	589	65	132	457	42
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	20.5	20.5	20.5	20.5	20.5	11.5	11.5	20.5		11.5	20.5	
Total Split (s)	26.0	26.0	26.0	26.0	26.0	12.0	11.5	22.0		12.0	22.5	
Total Split (%)	43.3%	43.3%	43.3%	43.3%	43.3%	20.0%	19.2%	36.7%		20.0%	37.5%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag						Lead	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

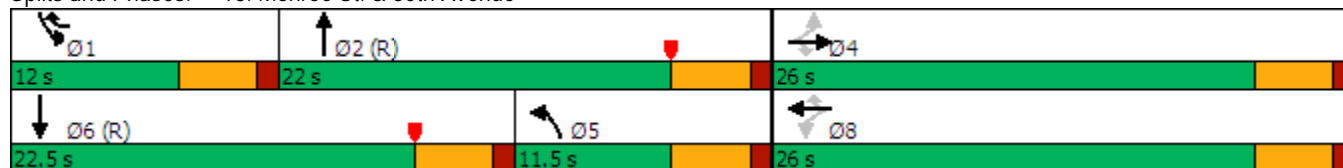
Actuated Cycle Length: 60

Offset: 14.6 (24%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

























Control Type: Actuated-Coordinated

Splits and Phases: 16: Monroe St. & 50th Avenue



















HCM 6th Signalized Intersection Summary
16: Monroe St. & 50th Avenue

EAPC (2023) PM Peak hour





												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	453	44	26	348	125	37	589	65	132	457	42
Future Volume (veh/h)	60	453	44	26	348	125	37	589	65	132	457	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	67	503	49	29	387	139	41	654	72	147	508	47
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	260	615	521	193	615	699	267	1092	120	199	987	91
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.15	0.35	0.34	0.11	0.31	0.30
Sat Flow, veh/h	877	1821	1543	856	1821	1543	1734	3143	346	1734	3203	295
Grp Volume(v), veh/h	67	503	49	29	387	139	41	360	366	147	274	281
Grp Sat Flow(s),veh/h/ln	877	1821	1543	856	1821	1543	1734	1730	1759	1734	1730	1768
Q Serve(g_s), s	4.2	15.2	1.3	1.9	10.7	3.2	1.2	10.3	10.3	4.9	7.8	7.9
Cycle Q Clear(g_c), s	14.9	15.2	1.3	17.1	10.7	3.2	1.2	10.3	10.3	4.9	7.8	7.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.20	1.00		0.17
Lane Grp Cap(c), veh/h	260	615	521	193	615	699	267	601	611	199	533	545
V/C Ratio(X)	0.26	0.82	0.09	0.15	0.63	0.20	0.15	0.60	0.60	0.74	0.51	0.52
Avail Cap(c_a), veh/h	285	668	566	218	668	743	267	601	611	231	533	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.0	18.2	13.6	26.0	16.7	9.9	22.0	16.1	16.2	25.7	17.0	17.1
Incr Delay (d2), s/veh	0.5	7.4	0.1	0.4	1.7	0.1	0.3	4.4	4.3	10.0	3.5	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	6.3	0.4	0.4	3.8	0.8	0.5	3.9	4.0	2.3	3.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.5	25.6	13.7	26.3	18.4	10.0	22.3	20.5	20.5	35.7	20.6	20.6
LnGrp LOS	C	C	B	C	B	B	C	C	C	D	C	C
Approach Vol, veh/h		619			555			767			702	
Approach Delay, s/veh		24.4			16.7			20.6			23.7	
Approach LOS		C			B			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.9	24.8		24.3	13.2	22.5		24.3				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	17.5		21.5	7.0	18.0		21.5				
Max Q Clear Time (g_c+I1), s	6.9	12.3		17.2	3.2	9.9		19.1				
Green Ext Time (p_c), s	0.0	1.8		1.4	0.0	1.8		0.7				
Intersection Summary												
HCM 6th Ctrl Delay			21.5									
HCM 6th LOS			C									

Lanes, Volumes, Timings
17: Jackson St. & 58th Avenue

EAPC (2023) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	141	8	0	97	10	12	182	15	6	166	26
Future Volume (vph)	37	141	8	0	97	10	12	182	15	6	166	26
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		5266			1079			1013			510	
Travel Time (s)		71.8			14.7			12.6			6.3	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	11.5
Intersection LOS	B










Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	37	141	8	0	97	10	12	182	15	6	166	26
Future Vol, veh/h	37	141	8	0	97	10	12	182	15	6	166	26
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	47	178	10	0	123	13	15	230	19	8	210	33
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.8	10.3	11.9	11.6
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	20%	0%	3%
Vol Thru, %	87%	76%	91%	84%
Vol Right, %	7%	4%	9%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	209	186	107	198
LT Vol	12	37	0	6
Through Vol	182	141	97	166
RT Vol	15	8	10	26
Lane Flow Rate	265	235	135	251
Geometry Grp	1	1	1	1
Degree of Util (X)	0.395	0.365	0.215	0.373
Departure Headway (Hd)	5.372	5.585	5.704	5.355
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	669	643	627	669
Service Time	3.418	3.634	3.759	3.402
HCM Lane V/C Ratio	0.396	0.365	0.215	0.375
HCM Control Delay	11.9	11.8	10.3	11.6
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.9	1.7	0.8	1.7




Lanes, Volumes, Timings
18: Avenue 60 & S. Access

EAPC (2023) PM Peak hour

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	11	6	0
Future Volume (vph)	0	0	0	11	6	0
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		25	
Link Distance (ft)		207	1772		380	
Travel Time (s)		3.5	30.2		10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Int Delay, s/veh 3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	11	6	0
Future Vol, veh/h	0	0	0	11	6	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	12	7	0












Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	12	0	0 6 6
Stage 1	-	-	- - 6 -
Stage 2	-	-	- - 0 -
Critical Hdwy	4.12	-	- - 6.42 6.22
Critical Hdwy Stg 1	-	-	- - 5.42 -
Critical Hdwy Stg 2	-	-	- - 5.42 -
Follow-up Hdwy	2.218	-	- - 3.518 3.318
Pot Cap-1 Maneuver	1607	-	- - 1015 1077
Stage 1	-	-	- - 1017 -
Stage 2	-	-	- - - -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1607	-	- - 1015 1077
Mov Cap-2 Maneuver	-	-	- - 1015 -
Stage 1	-	-	- - 1017 -
Stage 2	-	-	- - - -

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1607	-	-	-	1015
HCM Lane V/C Ratio	-	-	-	-	0.006
HCM Control Delay (s)	0	-	-	-	8.6
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lanes, Volumes, Timings
19: Madison St. & Main Access

EAPC (2023) PM Peak hour







						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	37	5	25	274	429	29
Future Volume (vph)	37	5	25	274	429	29
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100	0	150			0
Storage Lanes	1	1	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	25			50	50	
Link Distance (ft)	499			880	169	
Travel Time (s)	13.6			12.0	2.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
19: Madison St. & Main Access

EAPC (2023) PM Peak hour

Intersection

Int Delay, s/veh 1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	37	5	25	274	429	29
Future Vol, veh/h	37	5	25	274	429	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	5	27	298	466	32

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	685	249	498
Stage 1	482	-	-
Stage 2	203	-	-
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	382	751	1062
Stage 1	587	-	-
Stage 2	811	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	372	751	1062
Mov Cap-2 Maneuver	462	-	-
Stage 1	572	-	-
Stage 2	811	-	-






Approach	EB	NB	SB
HCM Control Delay, s	13.1	0.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1062	-	462	751	-	-
HCM Lane V/C Ratio	0.026	-	0.087	0.007	-	-
HCM Control Delay (s)	8.5	-	13.5	9.8	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	0	-	-

Lanes, Volumes, Timings
20: Project Access 1 & Avenue 58










EAPC (2023) PM Peak hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰		↱	↰↰	↱↱	
Traffic Volume (vph)	261	7	23	221	20	11
Future Volume (vph)	261	7	23	221	20	11
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)		0	50		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			60		60	
Link Speed (mph)	50			50	25	
Link Distance (ft)	403			335	383	
Travel Time (s)	5.5			4.6	10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	261	7	23	221	20	11
Future Vol, veh/h	261	7	23	221	20	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	284	8	25	240	22	12
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	292	0	458	288
Stage 1	-	-	-	-	288	-
Stage 2	-	-	-	-	170	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1268	-	546	750
Stage 1	-	-	-	-	760	-
Stage 2	-	-	-	-	843	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1268	-	535	750
Mov Cap-2 Maneuver	-	-	-	-	599	-
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	843	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.7		10.9	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	645	-	-	1268	-	
HCM Lane V/C Ratio	0.052	-	-	0.02	-	
HCM Control Delay (s)	10.9	-	-	7.9	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-	

Lanes, Volumes, Timings
21: Project Access 2 & Avenue 58













EAPC (2023) PM Peak hour

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	260	12	0	244	0	13
Future Volume (vph)	260	12	0	244	0	13
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	50			50	25	
Link Distance (ft)	335			276	233	
Travel Time (s)	4.6			3.8	6.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱↱		↱
Traffic Vol, veh/h	260	12	0	244	0	13
Future Vol, veh/h	260	12	0	244	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	283	13	0	265	0	14
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	290
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	-	-	0	-	0	748
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	748
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		9.9	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	748	-	-	-		
HCM Lane V/C Ratio	0.019	-	-	-		
HCM Control Delay (s)	9.9	-	-	-		
HCM Lane LOS	A	-	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	-		

Lanes, Volumes, Timings
22: Madison St. & Project Access 3

EAPC (2023) PM Peak hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				 	  	
Traffic Volume (vph)	0	21	0	311	437	20
Future Volume (vph)	0	21	0	311	437	20
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	25			50	50	
Link Distance (ft)	210			224	288	
Travel Time (s)	5.7			3.1	3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↕↕	↕↗	
Traffic Vol, veh/h	0	21	0	311	437	20
Future Vol, veh/h	0	21	0	311	437	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	23	0	338	475	22
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	249	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	751	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	751	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	9.9		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT EBLn1		SBT	SBR		
Capacity (veh/h)	-		751	-	-	
HCM Lane V/C Ratio	-		0.03	-	-	
HCM Control Delay (s)	-		9.9	-	-	
HCM Lane LOS	-		A	-	-	
HCM 95th %tile Q(veh)	-		0.1	-	-	

APPENDIX 6.8:

**EAC (2023) WITHOUT AND WITH PROJECT PHASE 2 CONDITIONS
TRAFFIC SIGNAL WARRANTS ANALYSIS WORKSHEETS**

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WITHOUT PROJECT CONDITIONS

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAC PHASE 2 (2023) AM PEAK HOUR WARRANTS**

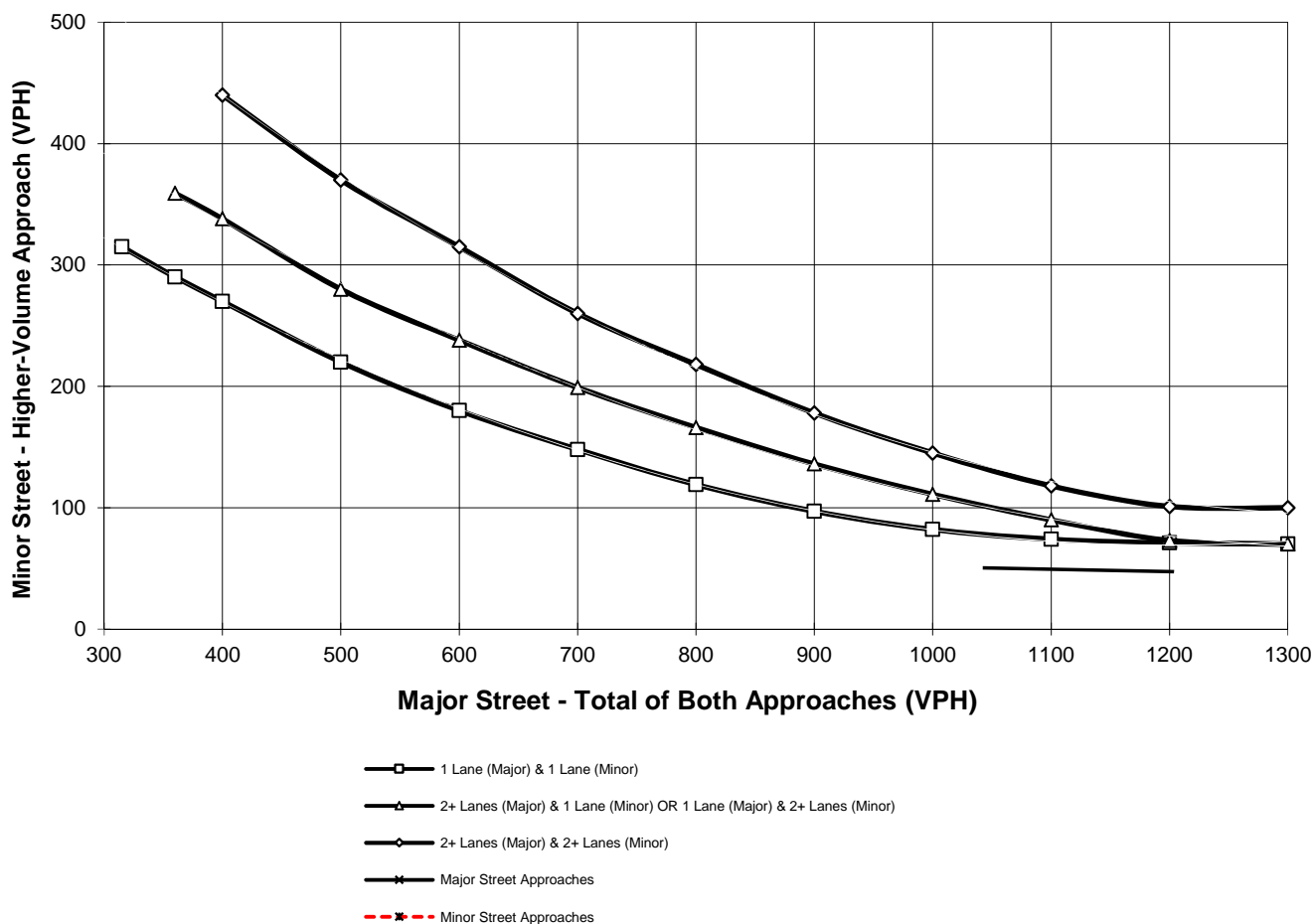
Major Street Name = **Avenue 60**

Total of Both Approaches (VPH) = **201**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Madison St.**

High Volume Approach (VPH) = **193**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #10

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAC PHASE 2 (2023) PM PEAK HOUR WARRANTS**

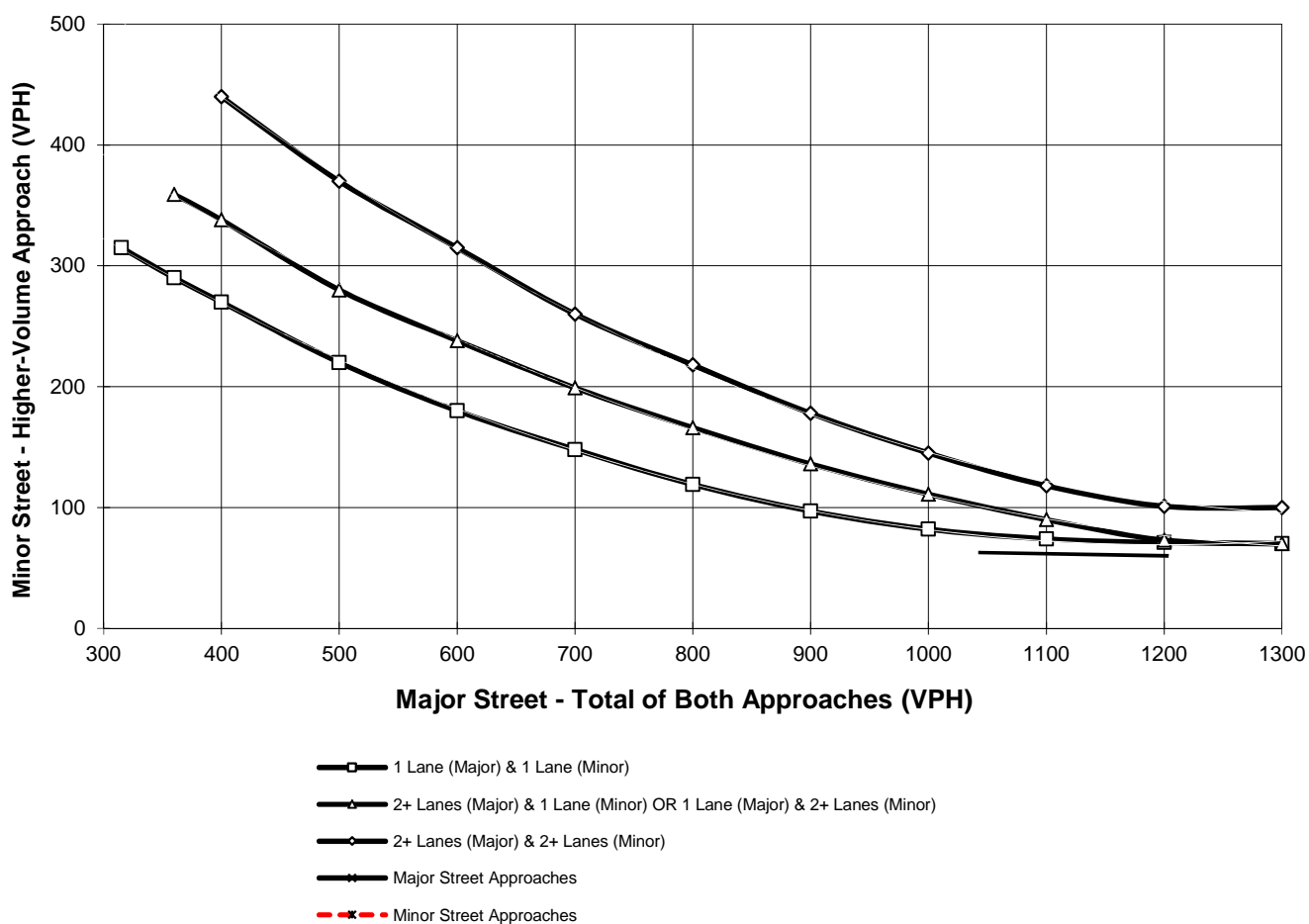
Major Street Name = **Madison St.**

Total of Both Approaches (VPH) = **292**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Avenue 60**

High Volume Approach (VPH) = **140**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #10

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

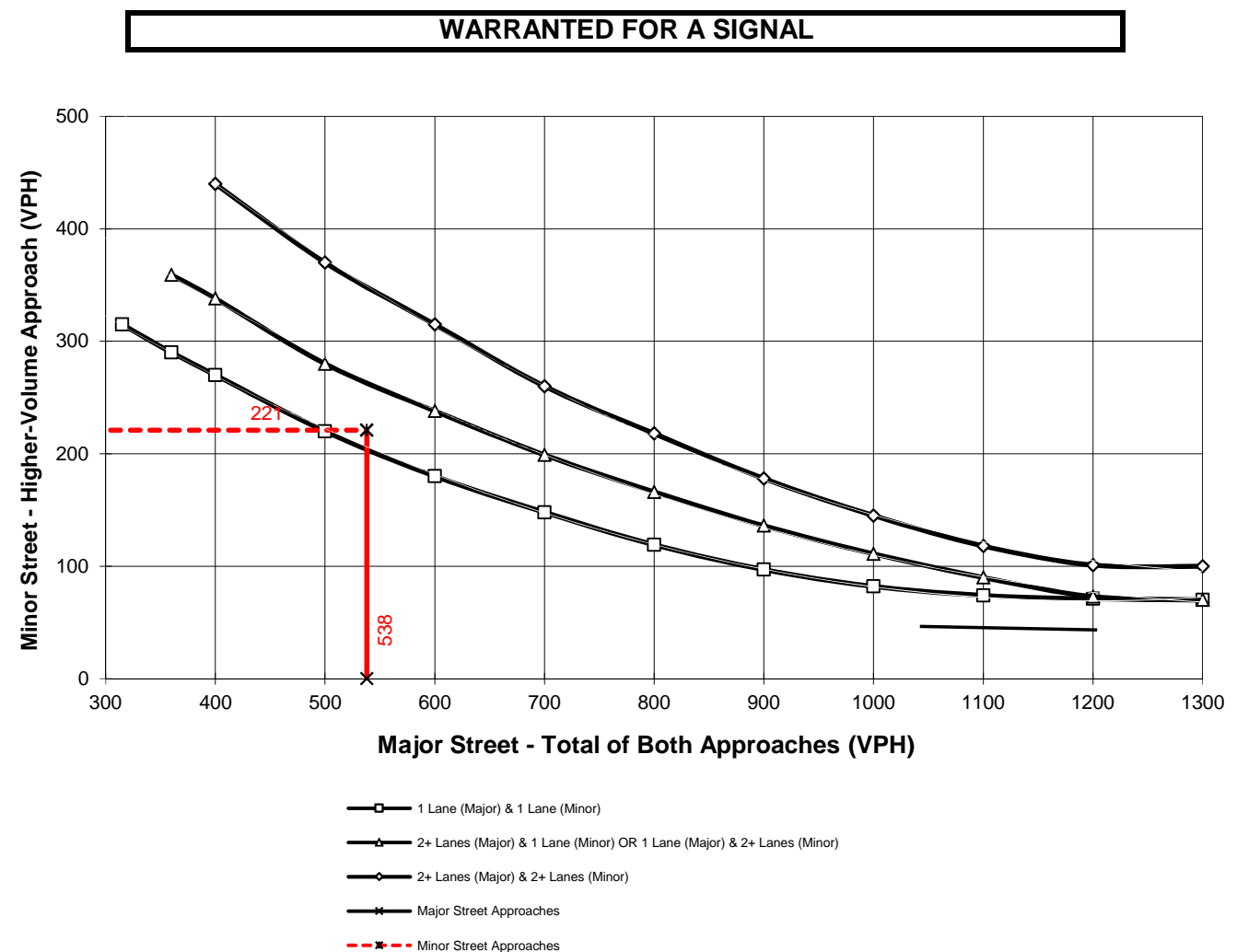
Traffic Conditions = **EAC PHASE 2 (2023) AM PEAK HOUR WARRANTS**

Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **538**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Avenue 60**

High Volume Approach (VPH) = **221**
Number of Approach Lanes Minor Street = **1**



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #11

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

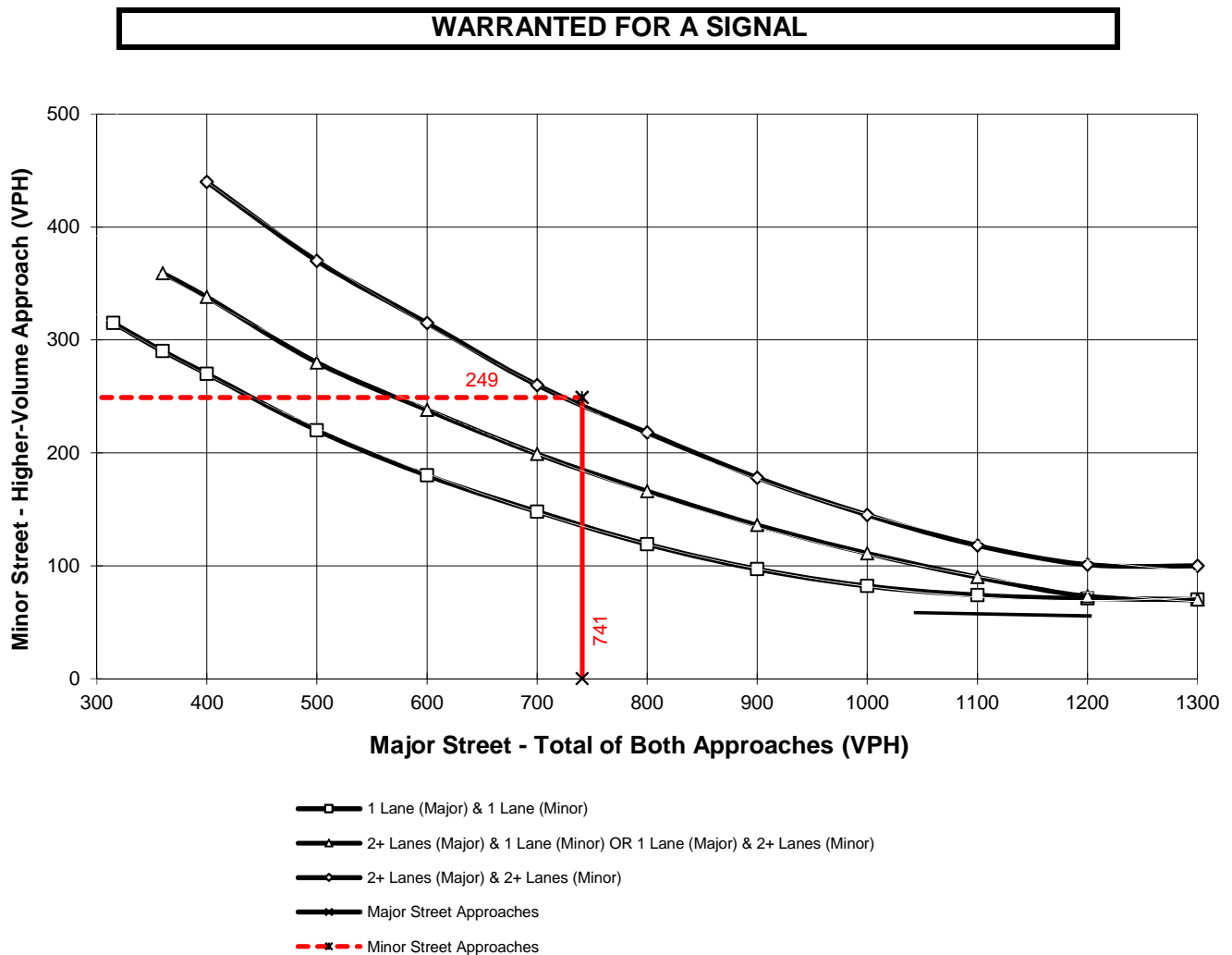
Traffic Conditions = **EAC PHASE 2 (2023) PM PEAK HOUR WARRANTS**

Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **741**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Avenue 60**

High Volume Approach (VPH) = **249**
Number of Approach Lanes Minor Street = **1**



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #11

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

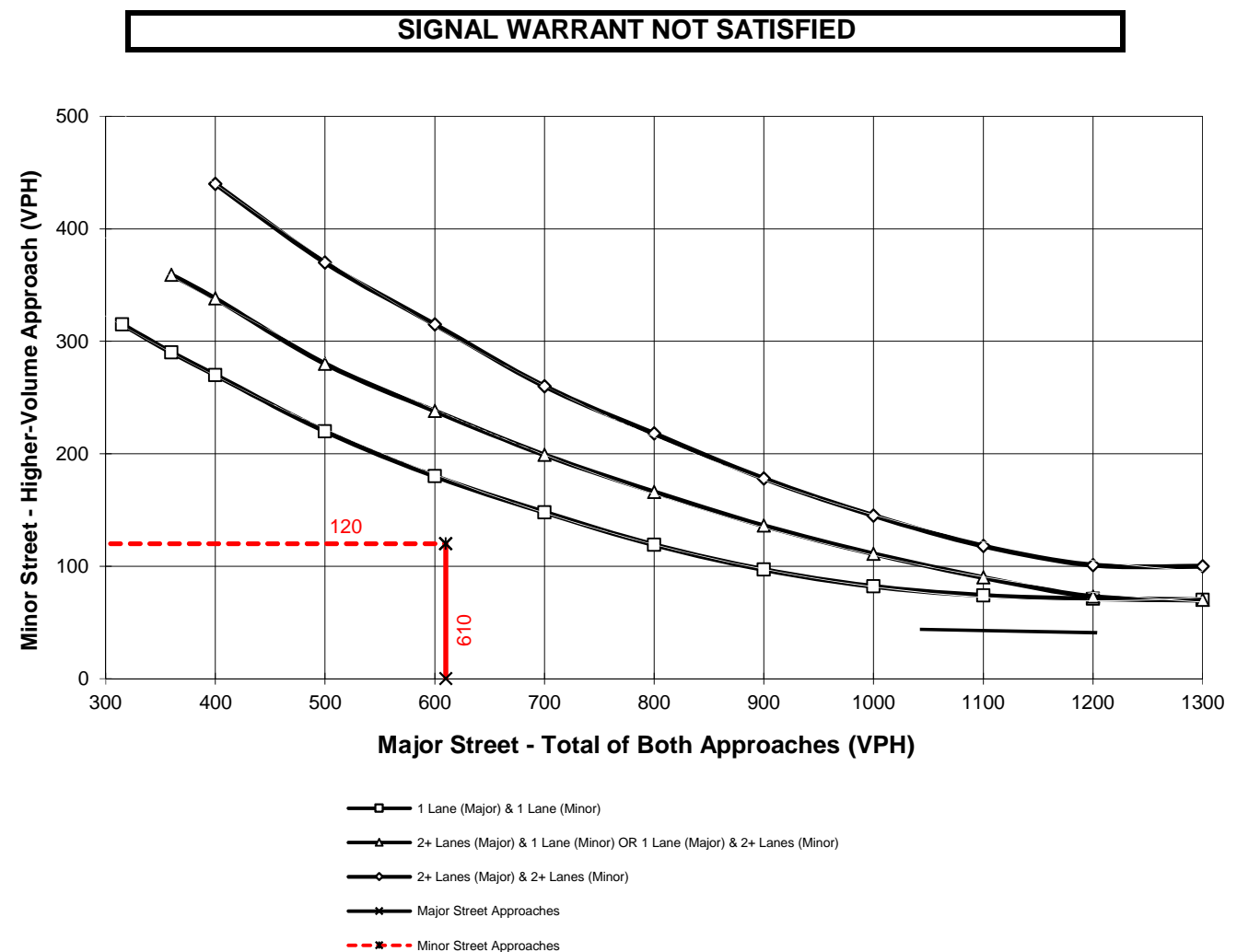
Traffic Conditions = **EAC PHASE 2 (2023) AM PEAK HOUR WARRANTS**

Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **610**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Airport Blvd.**

High Volume Approach (VPH) = **120**
Number of Approach Lanes Minor Street = **1**



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #13

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

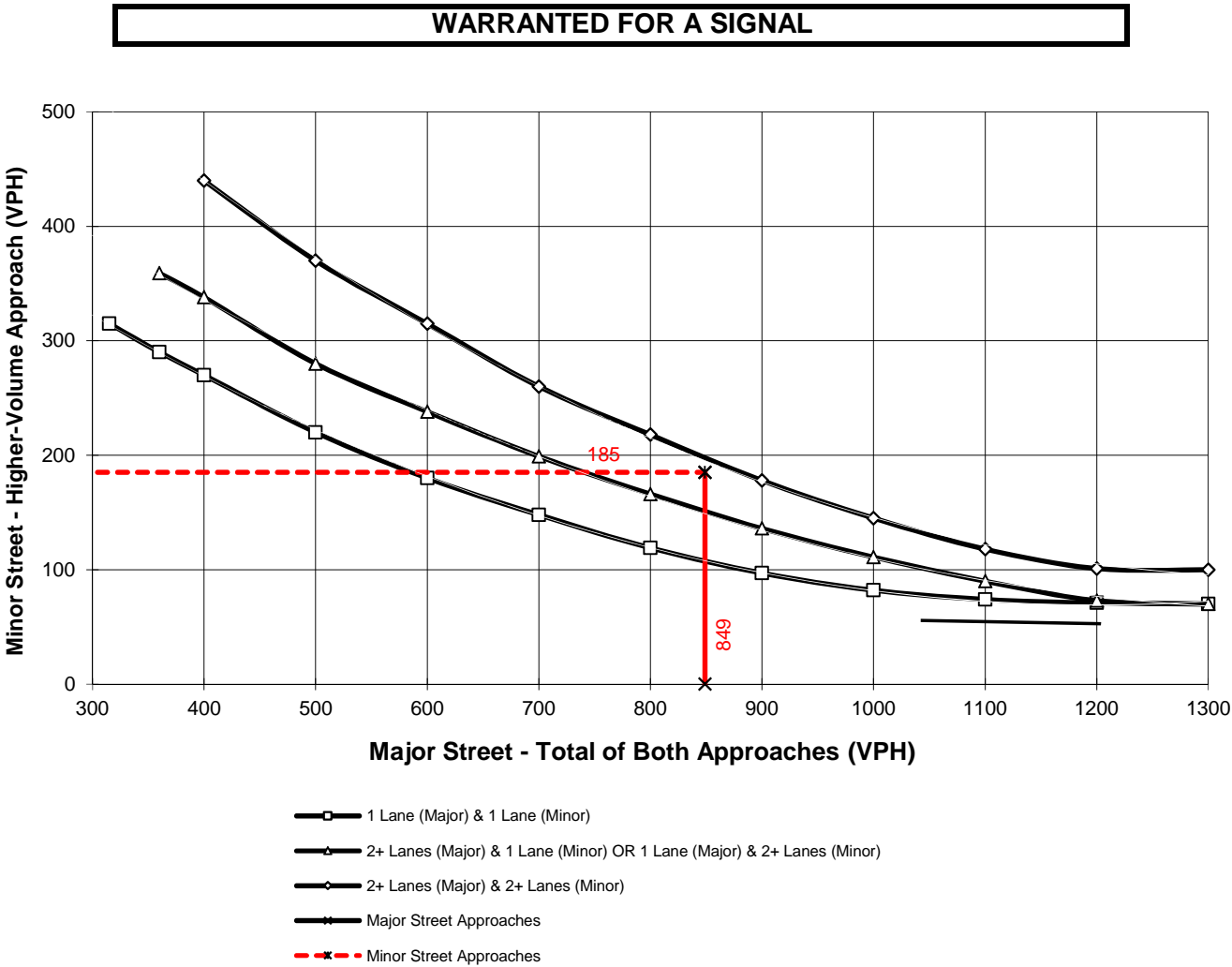
Traffic Conditions = **EAC PHASE 2 (2023) PM PEAK HOUR WARRANTS**

Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **849**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Airport Blvd.**

High Volume Approach (VPH) = **185**
Number of Approach Lanes Minor Street = **1**



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold 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 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAC PHASE 2 (2023) AM PEAK HOUR WARRANTS**

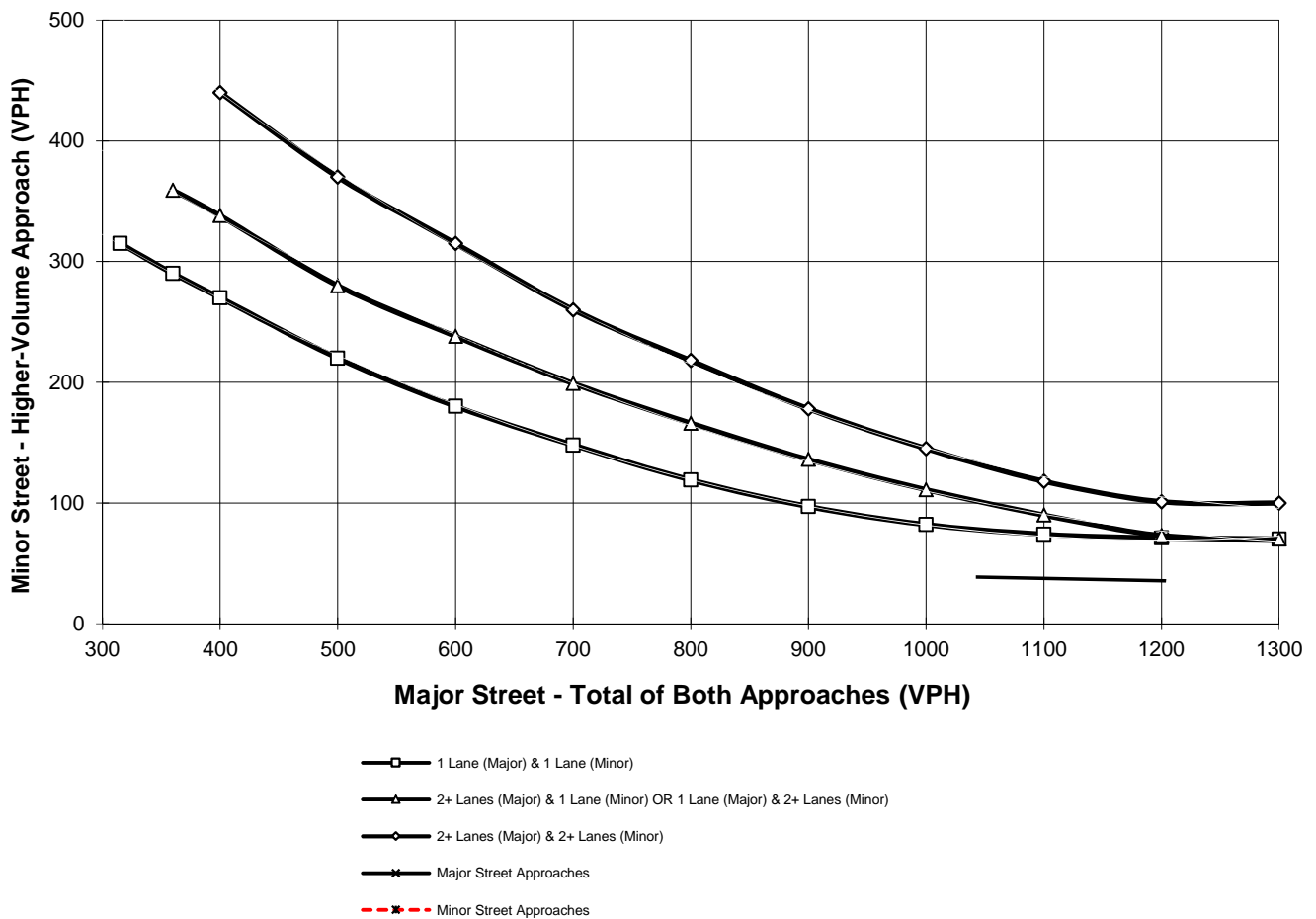
Major Street Name = **Jackson St.**

Total of Both Approaches (VPH) = **284**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **58th Avenue**

High Volume Approach (VPH) = **99**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #17

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAC PHASE 2 (2023) PM PEAK HOUR WARRANTS**

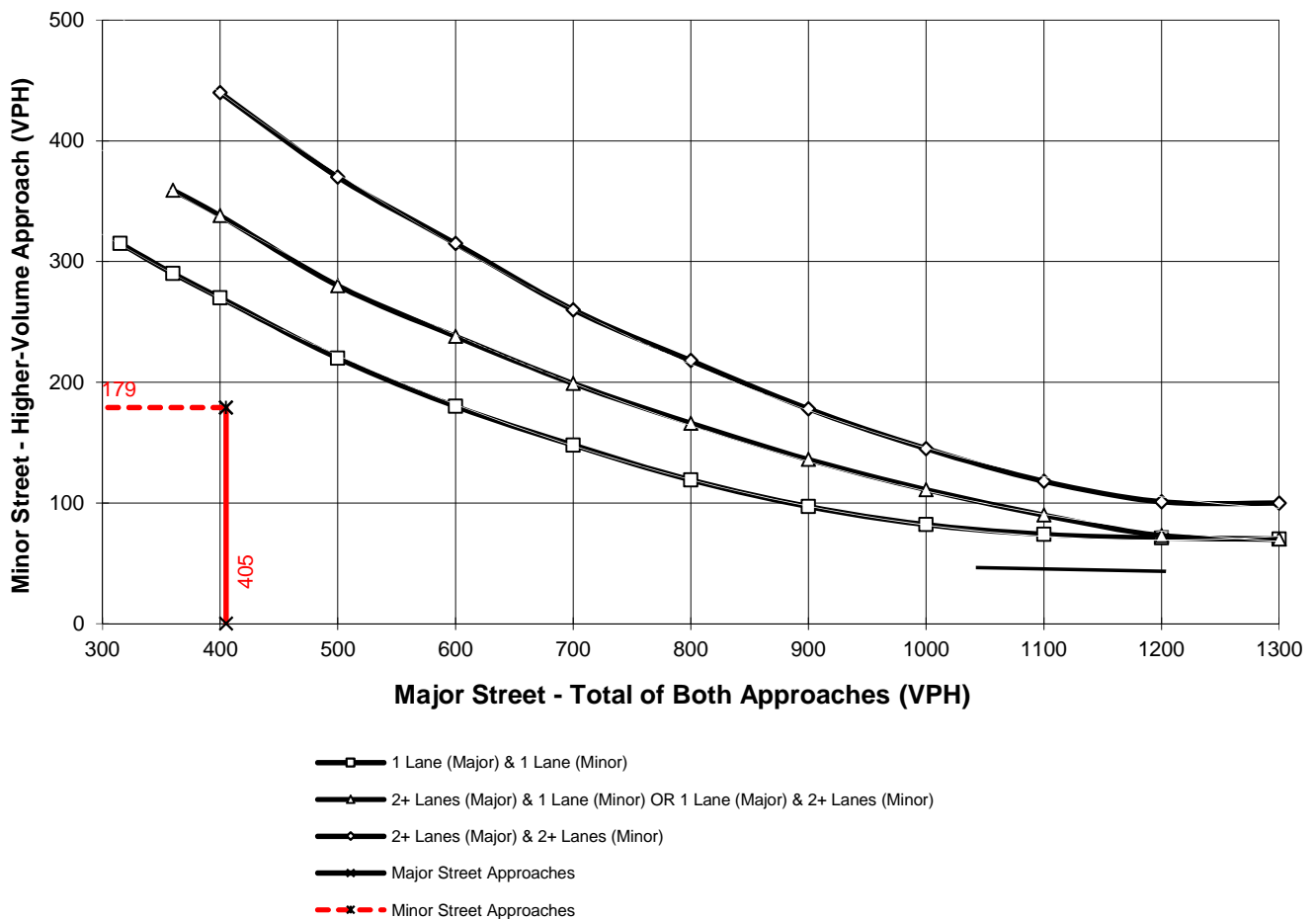
Major Street Name = **Jackson St.**

Total of Both Approaches (VPH) = **405**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **58th Avenue**

High Volume Approach (VPH) = **179**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #17

WITH PROJECT CONDITIONS

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAPC PHASE 2 (2023) AM PEAK HOUR WARRANTS**

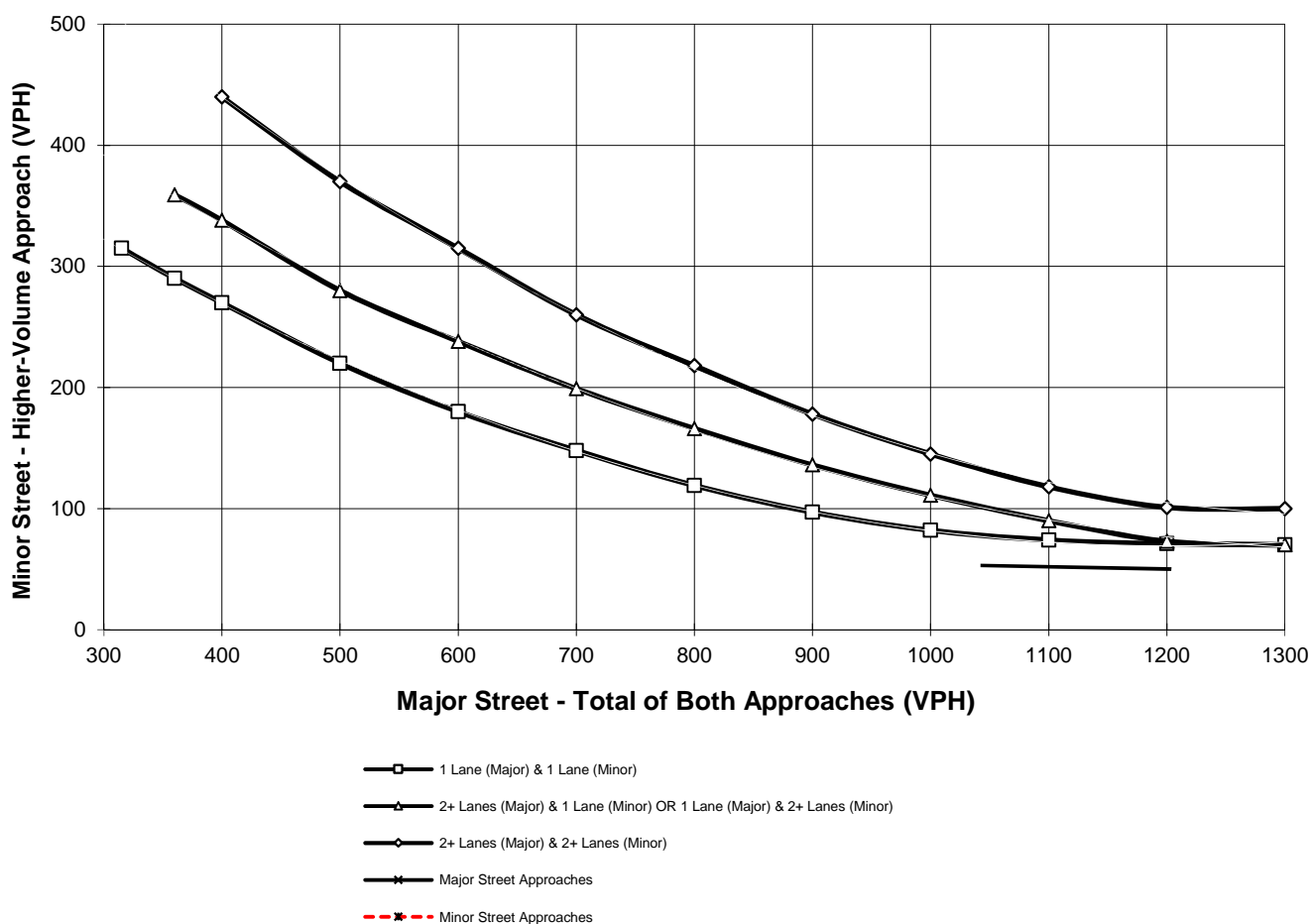
Major Street Name = **Avenue 60**

Total of Both Approaches (VPH) = **223**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Madison St.**

High Volume Approach (VPH) = **200**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #10

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions =
EAPC PHASE 2 (2023) PM PEAK HOUR WARRANTS

Major Street Name =
Madison St.

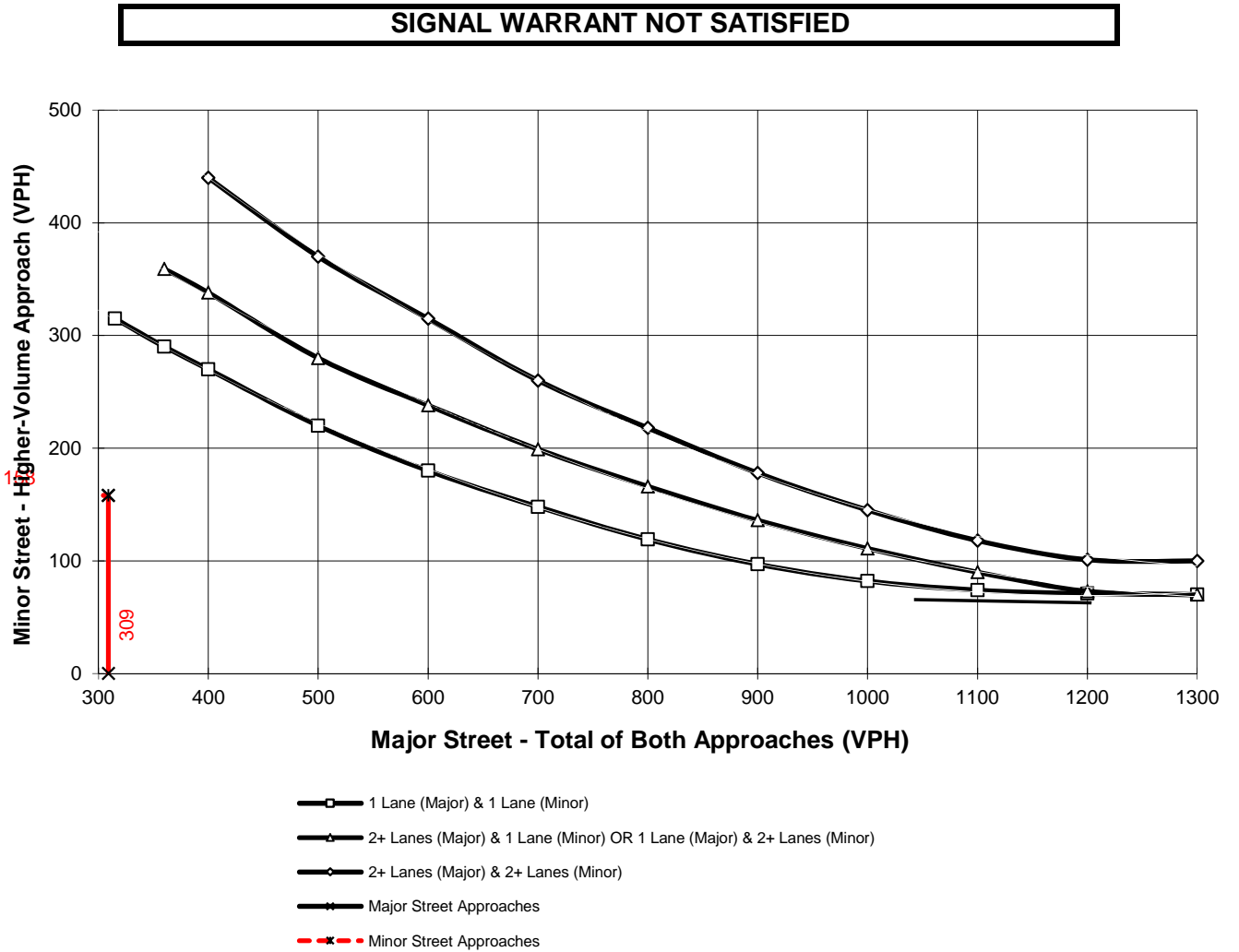
Minor Street Name =
Avenue 60

Total of Both Approaches (VPH) =
309

Number of Approach Lanes Major Street =
2

High Volume Approach (VPH) =
158

Number of Approach Lanes Minor Street =
1



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold 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 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAPC PHASE 2 (2023) AM PEAK HOUR WARRANTS**

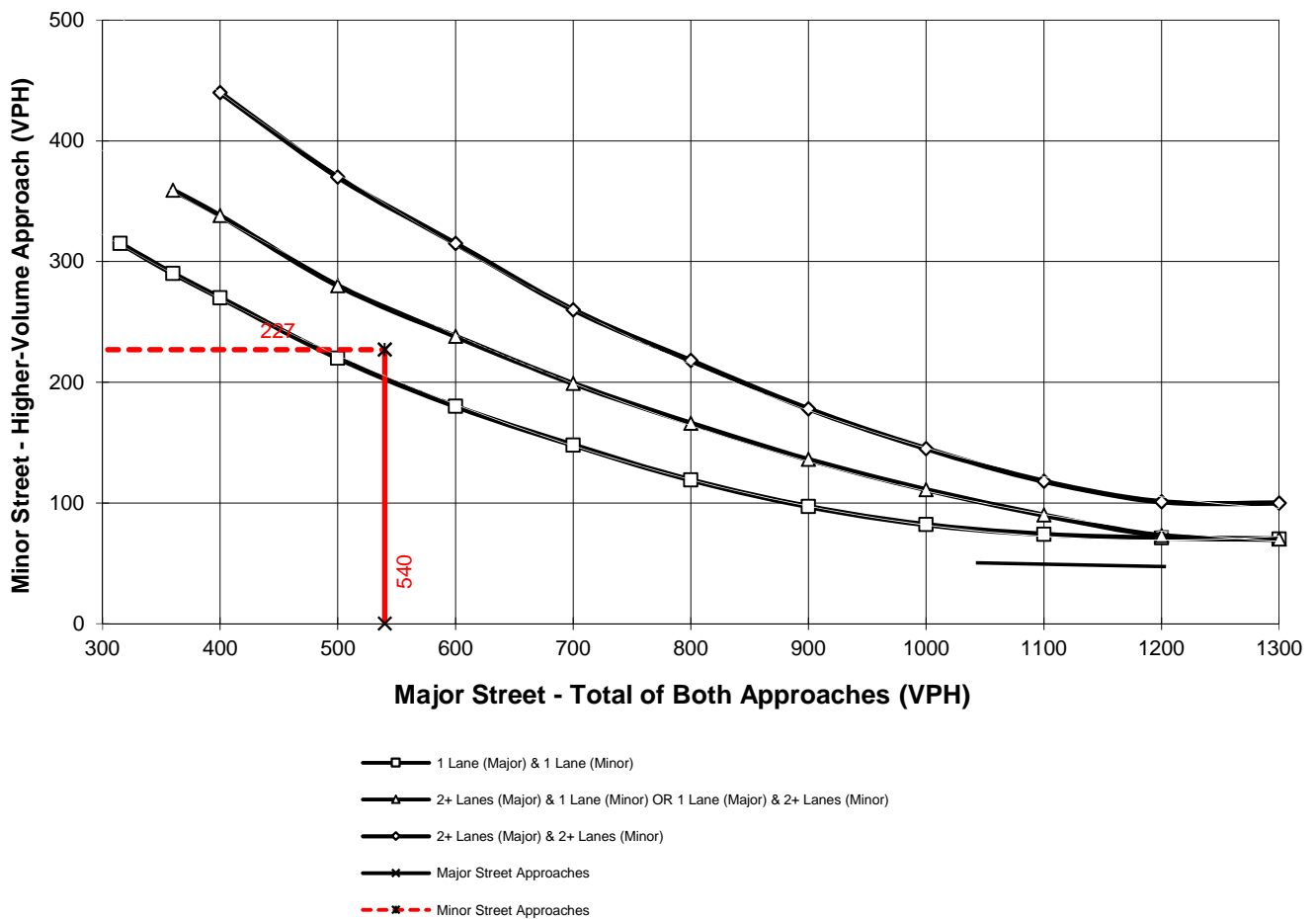
Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **540**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Avenue 60**

High Volume Approach (VPH) = **227**
Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #11

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

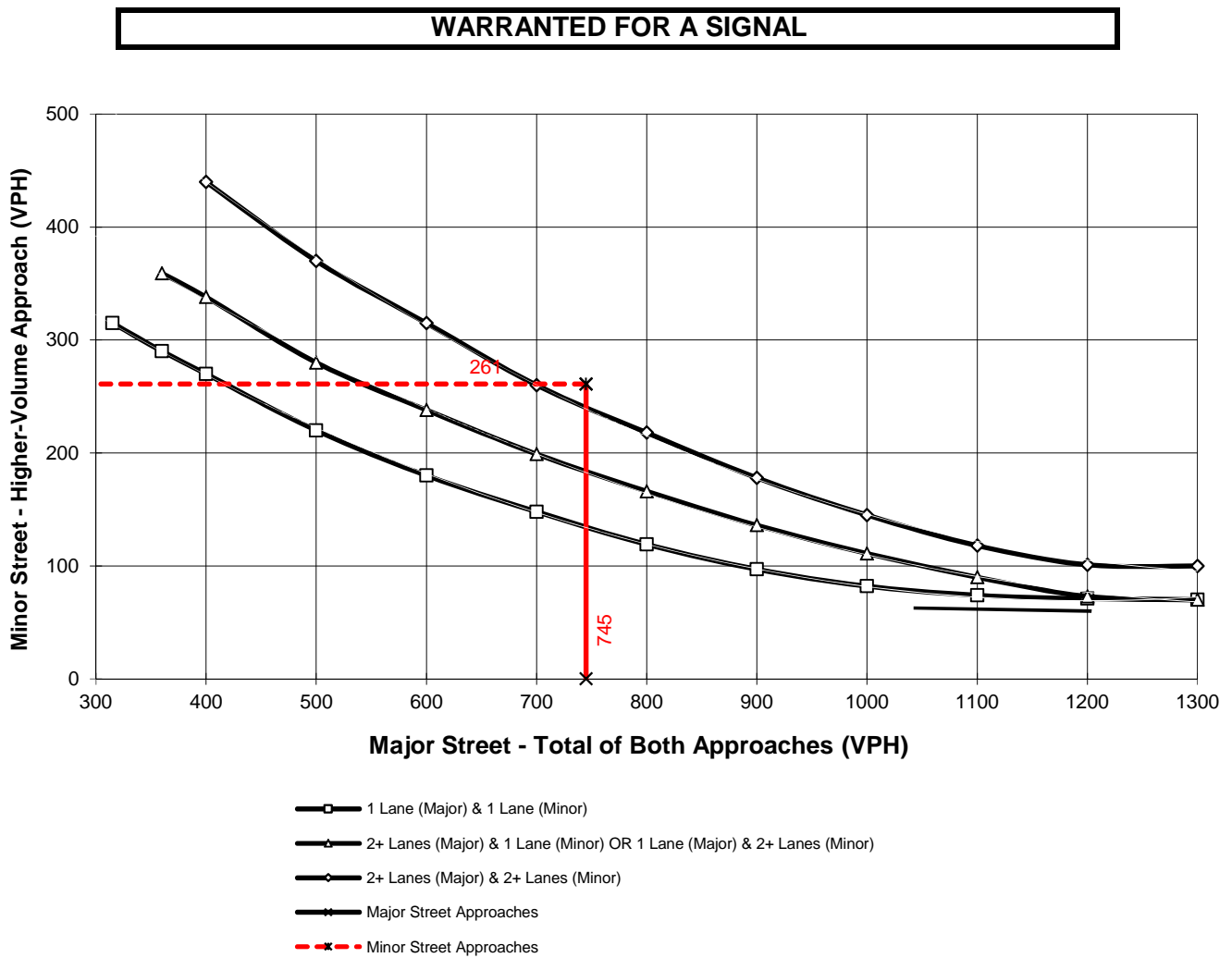
Traffic Conditions = **EAPC PHASE 2 (2023) PM PEAK HOUR WARRANTS**

Major Street Name = **Monroe St.**

Total of Both Approaches (VPH) = **745**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Avenue 60**

High Volume Approach (VPH) = **261**
Number of Approach Lanes Minor Street = **1**



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #11

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAPC PHASE 2 (2023) AM PEAK HOUR WARRANTS**

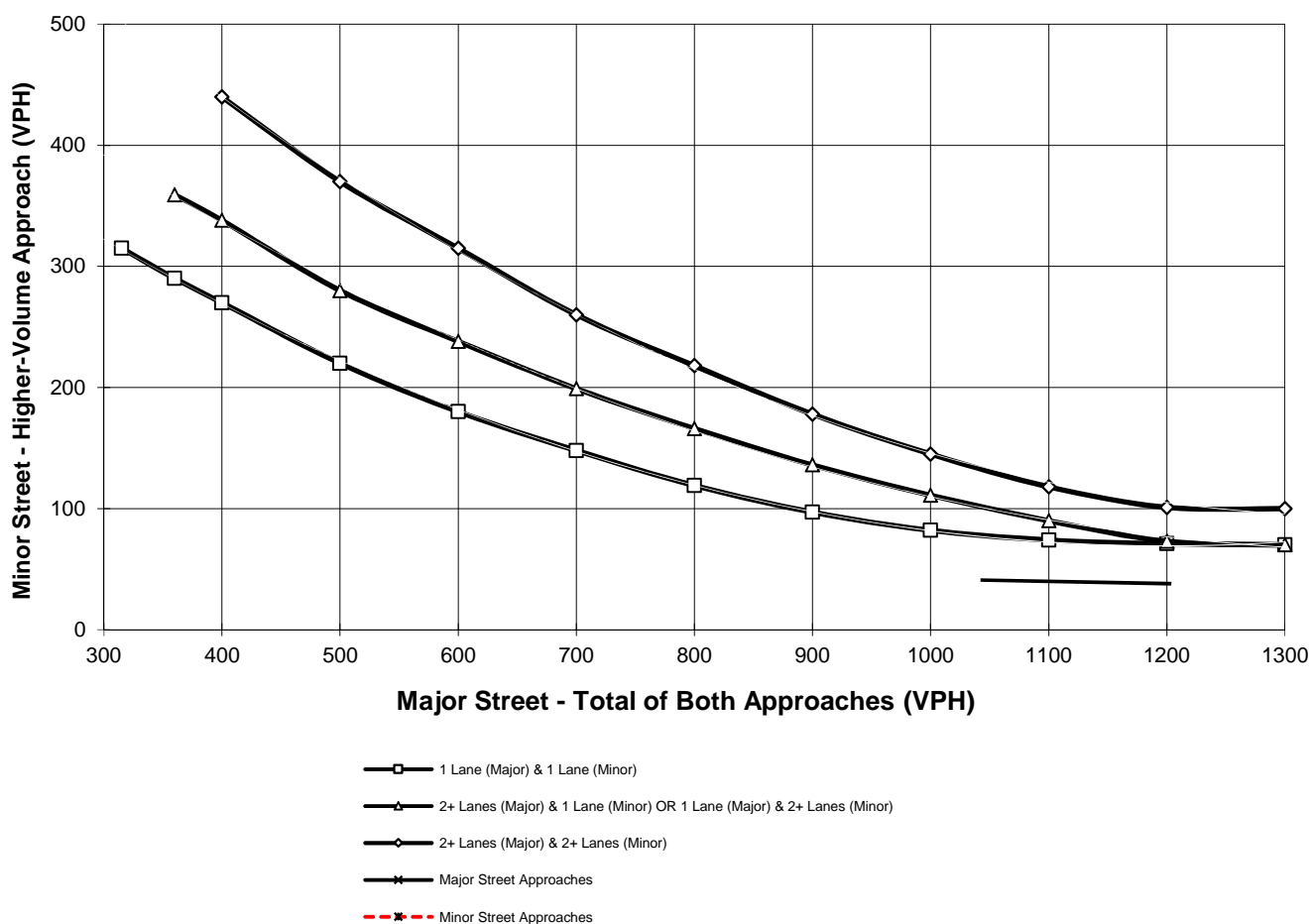
Major Street Name = **Jackson St.**

Total of Both Approaches (VPH) = **285**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **58th Avenue**

High Volume Approach (VPH) = **107**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #17

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions =
EAPC PHASE 2 (2023) PM PEAK HOUR WARRANTS

Major Street Name =
Jackson St.

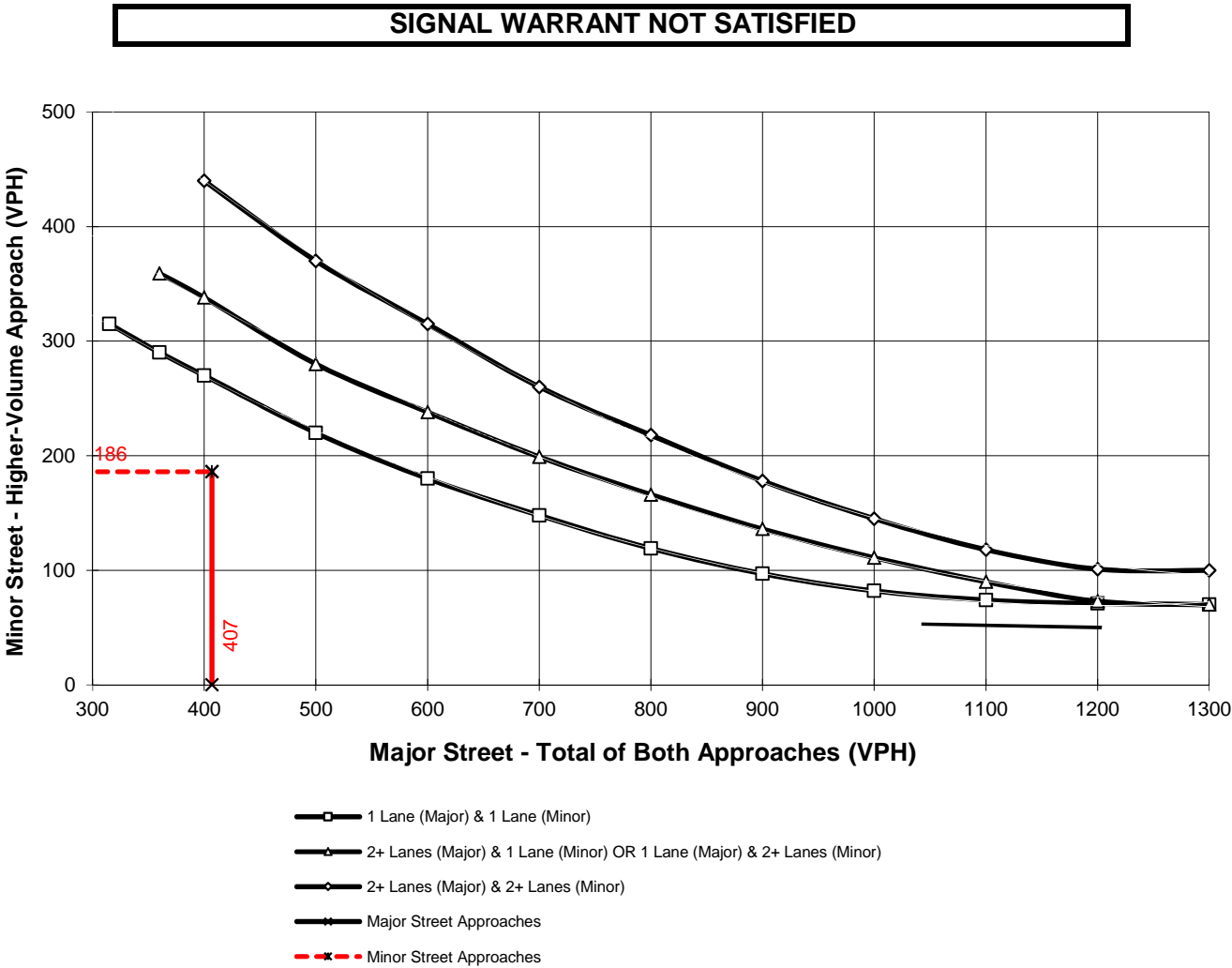
Minor Street Name =
58th Avenue

Total of Both Approaches (VPH) =
407

Number of Approach Lanes Major Street =
1

High Volume Approach (VPH) =
186

Number of Approach Lanes Minor Street =
1



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	CALC	TRAFFIC CONDITIONS	EAPC (2023)
Jurisdiction: <u>City of La Quinta</u>				CHK	<u>JC</u>	DATE <u>10/08/19</u>
Major Street: <u>Madison St.</u>						DATE
Minor Street: <u>Main Access</u>					Critical Approach Speed (Major)	<u>50</u> mph
					Critical Approach Speed (Minor)	<u>30</u> mph
Major Street Approach Lanes = <u>2</u> lane				Minor Street Approach Lanes: <u>1</u> lane		
Major Street Future ADT = <u>7,802</u> vpd				Minor Street Future ADT = <u>617</u> vpd		
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						<input checked="" type="checkbox"/>
						or
In built up area of isolated community of < 10,000 population						<input type="checkbox"/>

RURAL (R)**(Based on Estimated Average Daily Traffic - See Note)**

URBAN		RURAL		Minimum Requirements			
				ADT			
CONDITION A - Minimum Vehicular Volume				Vehicles Per Day on Major Street		Vehicles Per Day on Higher-Volume Minor Street Approach	
<u>Satisfied</u>		<u>Not Satisfied</u>		(Total of Both Approaches)		(One Direction Only)	
				Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach							
<u>Major Street</u>		<u>Minor Street</u>					
<u>1</u>		<u>1</u>		8,000	5,600	2,400	1,680
<u>2 + 7,802</u>		<u>1 617</u>		9,600	6,720 *	2,400	1,680
<u>2 +</u>		<u>2 +</u>		9,600	6,720	3,200	2,240
<u>1</u>		<u>2 +</u>		8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				Vehicles Per Day on Major Street		Vehicles Per Day on Higher-Volume Minor Street Approach	
<u>Satisfied</u>		<u>Not Satisfied</u>		(Total of Both Approaches)		(One Direction Only)	
				Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach							
<u>Major Street</u>		<u>Minor Street</u>					
<u>1</u>		<u>1</u>		12,000	8,400	1,200	850
<u>2 + 7,802</u>		<u>1 617</u>		14,400	10,080	1,200	850
<u>2 +</u>		<u>2 +</u>		14,400	10,080	1,600	1,120
<u>1</u>		<u>2 +</u>		12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				2 CONDITIONS		2 CONDITIONS	
<u>Satisfied</u>		<u>Not Satisfied</u>		80%		80%	
No one condition satisfied, but following conditions fulfilled 80% of more							

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APPENDIX 6.9:

**EAC (2026) WITHOUT AND WITH PROJECT BUILDOUT PHASE 3 CONDITIONS
INTERSECTION OPERATIONS ANALYSIS WORKSHEETS AND
PROJECT ACCESS QUEUEING ANALYSIS WORKSHEETS**

























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WITHOUT PROJECT CONDITIONS










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Lanes, Volumes, Timings
1: Madison St. & Avenue 58

EAC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	72	7	10	73	74	19	281	6	105	284	69
Future Volume (vph)	116	72	7	10	73	74	19	281	6	105	284	69
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	12.7
Intersection LOS	B

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	116	72	7	10	73	74	19	281	6	105	284	69
Future Vol, veh/h	116	72	7	10	73	74	19	281	6	105	284	69
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	123	77	7	11	78	79	20	299	6	112	302	73
Number of Lanes	1	1	1	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	12.7	11.4	13.2	12.7
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	94%	0%	100%	0%	0%	100%	25%	0%	100%
Vol Right, %	0%	0%	6%	0%	0%	100%	0%	0%	75%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	19	187	100	116	72	7	10	49	98	105	189
LT Vol	19	0	0	116	0	0	10	0	0	105	0
Through Vol	0	187	94	0	72	0	0	49	24	0	189
RT Vol	0	0	6	0	0	7	0	0	74	0	0
Lane Flow Rate	20	199	106	123	77	7	11	52	105	112	201
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.042	0.391	0.207	0.272	0.158	0.014	0.024	0.109	0.205	0.226	0.379
Departure Headway (Hd)	7.564	7.064	7.022	7.927	7.427	6.727	8.07	7.57	7.043	7.27	6.77
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	475	512	513	454	483	532	444	474	509	496	534
Service Time	5.28	4.78	4.738	5.665	5.165	4.465	5.808	5.308	4.782	4.981	4.481
HCM Lane V/C Ratio	0.042	0.389	0.207	0.271	0.159	0.013	0.025	0.11	0.206	0.226	0.376
HCM Control Delay	10.6	14.3	11.6	13.6	11.6	9.6	11	11.2	11.6	12.1	13.6
HCM Lane LOS	B	B	B	B	B	A	B	B	B	B	B
HCM 95th-tile Q	0.1	1.8	0.8	1.1	0.6	0	0.1	0.4	0.8	0.9	1.8

Lanes, Volumes, Timings
1: Madison St. & Avenue 58

EAC (2026) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	72	7	10	73	74	19	281	6	105	284	69
Future Volume (vph)	116	72	7	10	73	74	19	281	6	105	284	69
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	30.0	43.0	43.0	14.0	27.0	27.0	16.0	34.0	34.0	29.0	47.0	47.0
Total Split (%)	25.0%	35.8%	35.8%	11.7%	22.5%	22.5%	13.3%	28.3%	28.3%	24.2%	39.2%	39.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

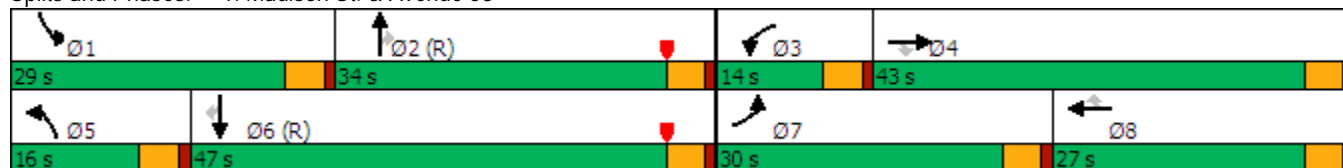
Actuated Cycle Length: 120

Offset: 87 (73%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated

























Splits and Phases: 1: Madison St. & Avenue 58



HCM 6th Signalized Intersection Summary















1: Madison St. & Avenue 58

EAC (2026) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	72	7	10	73	74	19	281	6	105	284	69
Future Volume (veh/h)	116	72	7	10	73	74	19	281	6	105	284	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	123	77	7	11	78	79	20	299	6	112	302	73
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	150	254	215	31	244	109	49	2122	946	138	2299	1025
Arrive On Green	0.10	0.16	0.16	0.02	0.08	0.08	0.04	0.80	0.80	0.10	0.86	0.86
Sat Flow, veh/h	1734	1821	1543	1734	3460	1543	1734	3460	1543	1734	3460	1543
Grp Volume(v), veh/h	123	77	7	11	78	79	20	299	6	112	302	73
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1730	1543	1734	1730	1543	1734	1730	1543
Q Serve(g_s), s	8.3	4.5	0.5	0.8	2.6	6.0	1.4	2.4	0.1	7.6	1.6	0.8
Cycle Q Clear(g_c), s	8.3	4.5	0.5	0.8	2.6	6.0	1.4	2.4	0.1	7.6	1.6	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	150	254	215	31	244	109	49	2122	946	138	2299	1025
V/C Ratio(X)	0.82	0.30	0.03	0.35	0.32	0.73	0.41	0.14	0.01	0.81	0.13	0.07
Avail Cap(c_a), veh/h	369	584	495	137	649	289	166	2122	946	354	2299	1025
HCM Platoon Ratio	1.15	1.15	1.15	1.15	1.15	1.15	1.30	1.30	1.30	1.30	1.30	1.30
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.1	45.2	43.6	58.1	52.4	54.0	56.8	4.9	4.7	52.9	2.9	2.8
Incr Delay (d2), s/veh	10.3	0.7	0.1	6.7	0.7	8.8	5.3	0.1	0.0	10.7	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	2.0	0.2	0.4	1.1	2.5	0.6	0.8	0.0	3.5	0.5	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.4	45.9	43.6	64.8	53.2	62.8	62.1	5.1	4.7	63.7	3.0	2.9
LnGrp LOS	E	D	D	E	D	E	E	A	A	E	A	A
Approach Vol, veh/h	207			168			325			487		
Approach Delay, s/veh	56.3			58.5			8.6			16.9		
Approach LOS	E			E			A			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.1	78.1	6.6	21.2	7.9	84.2	14.9	13.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	24.5	29.5	9.5	38.5	11.5	42.5	25.5	22.5				
Max Q Clear Time (g_c+I1), s	9.6	4.4	2.8	6.5	3.4	3.6	10.3	8.0				
Green Ext Time (p_c), s	0.2	1.7	0.0	0.3	0.0	2.0	0.2	0.5				
Intersection Summary												
HCM 6th Ctrl Delay	27.4											
HCM 6th LOS	C											

Lanes, Volumes, Timings
2: Madison St. & Airport Bl.

EAC (2026) AM Peak hour

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	44	84	1	435	39	128	442
Future Volume (vph)	44	84	1	435	39	128	442
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		3			2		
Detector Phase	3	3	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	11.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	14.0	14.0	12.0	27.0	27.0	19.0	34.0
Total Split (%)	23.3%	23.3%	20.0%	45.0%	45.0%	31.7%	56.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 19 (32%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 45















Control Type: Actuated-Coordinated

Splits and Phases: 2: Madison St. & Airport Bl.






























HCM 6th Signalized Intersection Summary 2: Madison St. & Airport Bl.

EAC (2026) AM Peak hour

							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	44	84	1	435	39	128	442
Future Volume (veh/h)	44	84	1	435	39	128	442
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	51	97		500	45	147	508
Peak Hour Factor	0.87	0.87		0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	200	178		1967	877	202	2601
Arrive On Green	0.12	0.12		0.60	0.60	0.12	0.77
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	51	97		500	45	147	508
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	1.6	3.6		4.1	0.7	4.9	2.4
Cycle Q Clear(g_c), s	1.6	3.6		4.1	0.7	4.9	2.4
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	200	178		1967	877	202	2601
V/C Ratio(X)	0.26	0.55		0.25	0.05	0.73	0.20
Avail Cap(c_a), veh/h	289	257		1967	877	434	2601
HCM Platoon Ratio	1.00	1.00		1.05	1.05	1.05	1.02
Upstream Filter(l)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.2	25.1		6.0	5.4	25.4	2.0
Incr Delay (d2), s/veh	0.7	2.6		0.3	0.1	5.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.3		1.0	0.2	2.0	0.2
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	24.9	27.7		6.4	5.5	30.4	2.2
LnGrp LOS	C	C		A	A	C	A
Approach Vol, veh/h	148			545			655
Approach Delay, s/veh	26.7			6.3			8.5
Approach LOS	C			A			A
Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	11.0	38.1				49.1	10.9
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	14.5	22.5				29.5	9.5
Max Q Clear Time (g_c+I1), s	6.9	6.1				4.4	5.6
Green Ext Time (p_c), s	0.2	2.7				3.0	0.1
Intersection Summary							
HCM 6th Ctrl Delay			9.6				
HCM 6th LOS			A				
Notes							
User approved pedestrian interval to be less than phase max green.							
User approved ignoring U-Turning movement.							

Lanes, Volumes, Timings
3: Madison St. & Avenue 54









EAC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 			 	
Traffic Volume (vph)	19	244	388	44	221	86	260	320	30	85	266	20
Future Volume (vph)	19	244	388	44	221	86	260	320	30	85	266	20
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 79.2

Intersection LOS F
























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	244	388	44	221	86	260	320	30	85	266	20
Future Vol, veh/h	19	244	388	44	221	86	260	320	30	85	266	20
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	274	436	49	248	97	292	360	34	96	299	22
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	177.4	24.3	39.1	24.7
HCM LOS	F	C	E	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	78%	0%	100%	17%	0%	100%	46%	0%	100%	82%
Vol Right, %	0%	0%	22%	0%	0%	83%	0%	0%	54%	0%	0%	18%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	260	213	137	19	163	469	44	147	160	85	177	109
LT Vol	260	0	0	19	0	0	44	0	0	85	0	0
Through Vol	0	213	107	0	163	81	0	147	74	0	177	89
RT Vol	0	0	30	0	0	388	0	0	86	0	0	20
Lane Flow Rate	292	240	154	21	183	527	49	166	179	96	199	122
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.855	0.669	0.422	0.065	0.527	1.436	0.157	0.503	0.527	0.299	0.598	0.362
Departure Headway (Hd)	11.147	10.647	10.494	10.879	10.379	9.8	11.97	11.47	11.093	11.923	11.423	11.294
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	327	343	346	329	347	374	302	316	327	304	319	321
Service Time	8.847	8.347	8.194	8.639	8.139	7.561	9.67	9.17	8.793	9.623	9.123	8.994
HCM Lane V/C Ratio	0.893	0.7	0.445	0.064	0.527	1.409	0.162	0.525	0.547	0.316	0.624	0.38
HCM Control Delay	54.4	32.4	20.6	14.4	24.2	237.1	16.9	25.2	25.5	19.6	29.8	20.3
HCM Lane LOS	F	D	C	B	C	F	C	D	D	C	D	C
HCM 95th-tile Q	7.7	4.6	2	0.2	2.9	27.1	0.5	2.7	2.9	1.2	3.6	1.6

Lanes, Volumes, Timings
3: Madison St. & Avenue 54

EAC (2026) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	244	388	44	221	86	260	320	30	85	266	20
Future Volume (vph)	19	244	388	44	221	86	260	320	30	85	266	20
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	
Total Split (s)	13.0	43.0		17.0	47.0	47.0	28.0	38.0	38.0	22.0	32.0	
Total Split (%)	10.8%	35.8%		14.2%	39.2%	39.2%	23.3%	31.7%	31.7%	18.3%	26.7%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

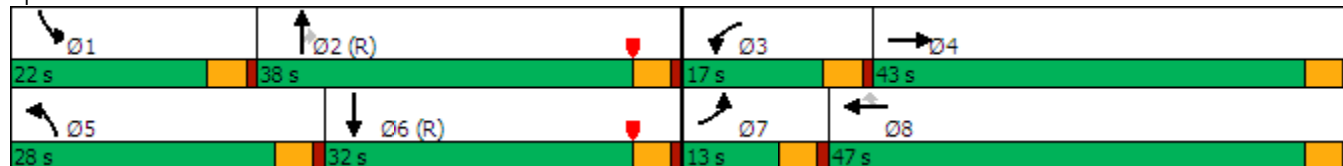
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated
























Splits and Phases: 3: Madison St. & Avenue 54



HCM 6th Signalized Intersection Summary

























3: Madison St. & Avenue 54

EAC (2026) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	244	388	44	221	86	260	320	30	85	266	20
Future Volume (veh/h)	19	244	388	44	221	86	260	320	30	85	266	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	21	274	436	49	248	97	292	360	34	96	299	22
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	51	524	467	81	1108	494	362	1492	665	120	1285	94
Arrive On Green	0.03	0.30	0.30	0.05	0.32	0.32	0.11	0.43	0.43	0.07	0.39	0.39
Sat Flow, veh/h	1734	1730	1543	1734	3460	1543	3365	3460	1543	1734	3269	239
Grp Volume(v), veh/h	21	274	436	49	248	97	292	360	34	96	157	164
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1734	1730	1778
Q Serve(g_s), s	1.4	15.7	33.0	3.3	6.3	5.5	10.2	7.9	1.5	6.5	7.3	7.4
Cycle Q Clear(g_c), s	1.4	15.7	33.0	3.3	6.3	5.5	10.2	7.9	1.5	6.5	7.3	7.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	51	524	467	81	1108	494	362	1492	665	120	680	699
V/C Ratio(X)	0.41	0.52	0.93	0.60	0.22	0.20	0.81	0.24	0.05	0.80	0.23	0.23
Avail Cap(c_a), veh/h	123	555	495	181	1225	547	659	1492	665	253	680	699
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.2	34.7	40.7	56.1	29.9	29.6	52.3	21.7	19.8	55.0	24.3	24.3
Incr Delay (d2), s/veh	4.8	0.7	22.9	7.0	0.1	0.2	4.3	0.4	0.1	11.5	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	6.4	14.6	1.6	2.5	2.0	4.4	3.1	0.5	3.2	3.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.1	35.4	63.6	63.0	30.0	29.8	56.6	22.0	20.0	66.5	25.1	25.1
LnGrp LOS	E	D	E	E	C	C	E	C	B	E	C	C
Approach Vol, veh/h	731			394			686			417		
Approach Delay, s/veh	53.0			34.0			36.7			34.6		
Approach LOS	D			C			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.8	56.2	10.1	40.8	17.4	51.7	8.0	42.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	17.5	33.5	12.5	38.5	23.5	27.5	8.5	42.5				
Max Q Clear Time (g_c+I1), s	8.5	9.9	5.3	35.0	12.2	9.4	3.4	8.3				
Green Ext Time (p_c), s	0.1	2.1	0.0	1.4	0.7	1.4	0.0	1.7				
Intersection Summary												
HCM 6th Ctrl Delay	41.2											
HCM 6th LOS	D											

Lanes, Volumes, Timings
4: Madison St. & Avenue 52

EAC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	466	59	28	422	72	131	299	14	63	270	63
Future Volume (vph)	73	466	59	28	422	72	131	299	14	63	270	63
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	22.0	50.0	50.0	15.0	43.0	43.0	19.0	41.0	41.0	14.0	36.0	36.0
Total Split (%)	18.3%	41.7%	41.7%	12.5%	35.8%	35.8%	15.8%	34.2%	34.2%	11.7%	30.0%	30.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

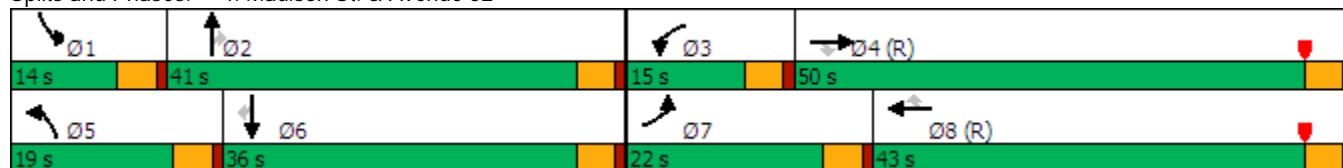
Actuated Cycle Length: 120

Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 4: Madison St. & Avenue 52




HCM 6th Signalized Intersection Summary 4: Madison St. & Avenue 52

EAC (2026) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	466	59	28	422	72	131	299	14	63	270	63
Future Volume (veh/h)	73	466	59	28	422	72	131	299	14	63	270	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	84	536	68	32	485	83	151	344	16	72	310	72
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	106	1573	702	66	1493	666	209	1052	469	178	1021	455
Arrive On Green	0.06	0.45	0.45	0.04	0.43	0.43	0.06	0.30	0.30	0.05	0.29	0.29
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	84	536	68	32	485	83	151	344	16	72	310	72
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	5.7	12.0	3.0	2.2	11.1	3.9	5.3	9.2	0.9	2.5	8.3	4.1
Cycle Q Clear(g_c), s	5.7	12.0	3.0	2.2	11.1	3.9	5.3	9.2	0.9	2.5	8.3	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	106	1573	702	66	1493	666	209	1052	469	178	1021	455
V/C Ratio(X)	0.79	0.34	0.10	0.48	0.32	0.12	0.72	0.33	0.03	0.40	0.30	0.16
Avail Cap(c_a), veh/h	253	1573	702	152	1493	666	407	1052	469	266	1021	455
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.6	21.1	18.7	56.5	22.6	20.5	55.2	32.3	29.4	55.0	32.8	31.3
Incr Delay (d2), s/veh	12.2	0.6	0.3	5.3	0.6	0.4	4.6	0.8	0.1	1.5	0.8	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	4.8	1.1	1.0	4.3	1.4	2.3	3.8	0.3	1.1	3.5	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.7	21.7	19.0	61.9	23.1	20.9	59.9	33.1	29.5	56.4	33.5	32.0
LnGrp LOS	E	C	B	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h	688			600			511			454		
Approach Delay, s/veh	27.1			24.9			40.9			36.9		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.9	41.0	9.1	59.0	12.0	39.9	11.9	56.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	9.5	36.5	10.5	45.5	14.5	31.5	17.5	38.5				
Max Q Clear Time (g_c+I1), s	4.5	11.2	4.2	14.0	7.3	10.3	7.7	13.1				
Green Ext Time (p_c), s	0.1	2.0	0.0	3.7	0.2	1.9	0.1	3.0				
Intersection Summary												
HCM 6th Ctrl Delay	31.6											
HCM 6th LOS	C											

Lanes, Volumes, Timings
5: Madison St. & Avenue 50/50th Avenue

EAC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	365	66	33	372	33	118	303	52	55	315	117
Future Volume (vph)	80	365	66	33	372	33	118	303	52	55	315	117
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	22.0	47.0	47.0	17.0	42.0	42.0	18.0	41.0	41.0	15.0	38.0	38.0
Total Split (%)	18.3%	39.2%	39.2%	14.2%	35.0%	35.0%	15.0%	34.2%	34.2%	12.5%	31.7%	31.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

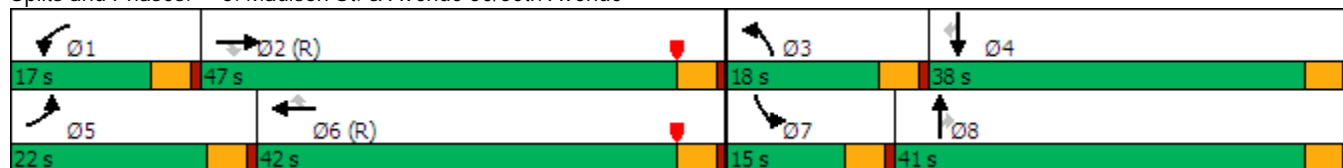
Actuated Cycle Length: 120

Offset: 64.5 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 85































Control Type: Actuated-Coordinated

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue




























HCM 6th Signalized Intersection Summary
5: Madison St. & Avenue 50/50th Avenue

EAC (2026) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 		 	 	
Traffic Volume (veh/h)	80	365	66	33	372	33	118	303	52	55	315	117
Future Volume (veh/h)	80	365	66	33	372	33	118	303	52	55	315	117
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	82	372	67	34	380	34	120	309	53	56	321	119
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	104	1581	705	69	1510	674	193	1052	469	166	1025	457
Arrive On Green	0.06	0.46	0.46	0.04	0.44	0.44	0.06	0.30	0.30	0.05	0.30	0.30
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	82	372	67	34	380	34	120	309	53	56	321	119
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	5.6	7.8	3.0	2.3	8.3	1.5	4.2	8.2	3.0	1.9	8.6	7.1
Cycle Q Clear(g_c), s	5.6	7.8	3.0	2.3	8.3	1.5	4.2	8.2	3.0	1.9	8.6	7.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	104	1581	705	69	1510	674	193	1052	469	166	1025	457
V/C Ratio(X)	0.79	0.24	0.10	0.50	0.25	0.05	0.62	0.29	0.11	0.34	0.31	0.26
Avail Cap(c_a), veh/h	253	1581	705	181	1510	674	379	1052	469	294	1025	457
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.6	19.8	18.5	56.5	21.4	19.5	55.3	31.9	30.1	55.1	32.8	32.2
Incr Delay (d2), s/veh	12.3	0.3	0.3	5.4	0.4	0.1	3.3	0.7	0.5	1.2	0.8	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	3.1	1.1	1.1	3.3	0.5	1.8	3.4	1.1	0.8	3.6	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.0	20.2	18.8	61.9	21.8	19.6	58.6	32.6	30.6	56.3	33.6	33.6
LnGrp LOS	E	C	B	E	C	B	E	C	C	E	C	C
Approach Vol, veh/h	521			448			482			496		
Approach Delay, s/veh	27.5			24.7			38.8			36.1		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	59.3	11.4	40.0	11.7	56.9	10.4	41.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	12.5	42.5	13.5	33.5	17.5	37.5	10.5	36.5				
Max Q Clear Time (g_c+I1), s	4.3	9.8	6.2	10.6	7.6	10.3	3.9	10.2				
Green Ext Time (p_c), s	0.0	2.5	0.2	2.1	0.1	2.3	0.0	1.9				
Intersection Summary												
HCM 6th Ctrl Delay	31.9											
HCM 6th LOS	C											

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54









EAC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 		 	 	
Traffic Volume (vph)	8	10	13	43	7	433	5	250	30	590	192	27
Future Volume (vph)	8	10	13	43	7	433	5	250	30	590	192	27
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh40.6

Intersection LOS E






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	10	13	43	7	433	5	250	30	590	192	27
Future Vol, veh/h	8	10	13	43	7	433	5	250	30	590	192	27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	11	14	48	8	481	6	278	33	656	213	30
Number of Lanes	1	2	0	1	1	1	0	2	0	2	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach RightNB		SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	13.4	75.3	17.4	29
HCM LOS	B	F	C	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	4%	0%	100%	0%	0%	100%	0%	0%	100%	100%	0%
Vol Thru, %	96%	81%	0%	100%	20%	0%	100%	0%	0%	0%	88%
Vol Right, %	0%	19%	0%	0%	80%	0%	0%	100%	0%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	130	155	8	7	16	43	7	433	295	295	219
LT Vol	5	0	8	0	0	43	0	0	295	295	0
Through Vol	125	125	0	7	3	0	7	0	0	0	192
RT Vol	0	30	0	0	13	0	0	433	0	0	27
Lane Flow Rate	144	172	9	7	18	48	8	481	328	328	243
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.359	0.42	0.026	0.021	0.049	0.12	0.018	1.045	0.754	0.754	0.521
Departure Headway (Hd)	9.039	8.786	11.029	10.51	9.932	9.041	8.533	7.821	8.437	8.437	7.846
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	400	408	327	343	363	396	419	462	433	433	462
Service Time	6.739	6.585	8.729	8.21	7.632	6.812	6.303	5.591	6.137	6.137	5.546
HCM Lane V/C Ratio	0.36	0.422	0.028	0.02	0.05	0.121	0.019	1.041	0.758	0.758	0.526
HCM Control Delay	16.7	17.9	14	13.4	13.1	13.1	11.5	82.5	32.8	32.8	18.8
HCM Lane LOS	C	C	B	B	B	B	B	F	D	D	C
HCM 95th-tile Q	1.6	2	0.1	0.1	0.2	0.4	0.1	14.7	6.2	6.2	2.9

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54

EAC (2026) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	10	13	43	7	433	5	250	30	590	192	27
Future Volume (vph)	8	10	13	43	7	433	5	250	30	590	192	27
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases		2			6	4	8	8		4	4	
Permitted Phases	2			6		6						4
Detector Phase	2	2		6	6	4	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5		22.5	22.5	22.5
Total Split (s)	28.0	28.0		28.0	28.0	61.0	31.0	31.0		61.0	61.0	61.0
Total Split (%)	23.3%	23.3%		23.3%	23.3%	50.8%	25.8%	25.8%		50.8%	50.8%	50.8%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		None	None	Max	Max	Max		Max	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

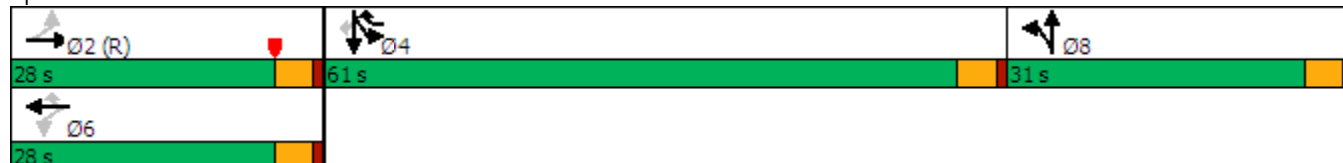
Actuated Cycle Length: 120

Offset: 87 (73%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 70






















Control Type: Actuated-Coordinated

Splits and Phases: 6: Jefferson St. & Avenue 54























HCM 6th Signalized Intersection Summary 6: Jefferson St. & Avenue 54

EAC (2026) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	10	13	43	7	433	5	250	30	590	192	27
Future Volume (veh/h)	8	10	13	43	7	433	5	250	30	590	192	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No				No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	9	11	14	48	8	481	6	278	33	656	213	30
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	234	339	302	321	357	1029	14	688	85	1584	1629	727
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.22	0.22	0.22	0.47	0.47	0.47
Sat Flow, veh/h	907	1730	1543	1386	1821	1543	65	3117	387	3365	3460	1543
Grp Volume(v), veh/h	9	11	14	48	8	481	168	0	149	656	213	30
Grp Sat Flow(s),veh/h/ln	907	1730	1543	1386	1821	1543	1818	0	1752	1682	1730	1543
Q Serve(g_s), s	1.0	0.6	0.9	3.5	0.4	18.1	9.5	0.0	8.7	15.4	4.2	1.3
Cycle Q Clear(g_c), s	1.4	0.6	0.9	4.4	0.4	18.1	9.5	0.0	8.7	15.4	4.2	1.3
Prop In Lane	1.00		1.00	1.00		1.00	0.04		0.22	1.00		1.00
Lane Grp Cap(c), veh/h	234	339	302	321	357	1029	401	0	387	1584	1629	727
V/C Ratio(X)	0.04	0.03	0.05	0.15	0.02	0.47	0.42	0.00	0.39	0.41	0.13	0.04
Avail Cap(c_a), veh/h	234	339	302	321	357	1029	401	0	387	1584	1629	727
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.86	0.86	0.86	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.5	39.0	39.2	40.9	39.0	9.7	40.1	0.0	39.8	20.9	17.9	17.1
Incr Delay (d2), s/veh	0.3	0.2	0.3	0.2	0.0	0.3	3.2	0.0	2.9	0.8	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.3	0.3	1.2	0.2	14.2	4.4	0.0	3.9	5.7	1.6	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.8	39.2	39.4	41.1	39.0	10.0	43.3	0.0	42.7	21.7	18.1	17.2
LnGrp LOS	D	D	D	D	D	A	D	A	D	C	B	B
Approach Vol, veh/h	34			537				317			899	
Approach Delay, s/veh	39.5			13.2				43.0			20.7	
Approach LOS	D			B				D			C	
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	28.0			61.0			28.0			31.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	23.5			56.5			23.5			26.5		
Max Q Clear Time (g_c+I1), s	3.4			17.4			20.1			11.5		
Green Ext Time (p_c), s	0.1			3.8			0.7			1.3		
Intersection Summary												
HCM 6th Ctrl Delay	22.7											
HCM 6th LOS	C											

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EAC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	126	401	322	15	391	322	253	506	35	209	550	95
Future Volume (vph)	126	401	322	15	391	322	253	506	35	209	550	95
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											





















HCM 6th Roundabout
7: Jefferson St. & Avenue 52

EAC (2026) AM Peak hour

Intersection									
Intersection Delay, s/veh	97.8								
Intersection LOS	F								
Approach	EB		WB		NB		SB		
Entry Lanes	1		1		1		1		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	912		782		854		918		
Demand Flow Rate, veh/h	931		797		871		937		
Vehicles Circulating, veh/h	848		970		807		721		
Vehicles Exiting, veh/h	705		669		619		693		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	39.3		23.4		190.1		133.2		
Approach LOS	E		C		F		F		
Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Bypass	
Designated Moves	LT	R	LT	R	LT	R	LT	R	
Assumed Moves	LT	R	LT	R	LT	R	LT	R	
RT Channelized		Free		Free		Free		Free	
Lane Util	1.000		1.000		1.000		1.000		
Follow-Up Headway, s	2.609		2.609		2.609		2.609		
Critical Headway, s	4.976	353	4.976	353	4.976	39	4.976	104	
Entry Flow, veh/h	578	1887	444	1887	832	1887	833	1887	
Cap Entry Lane, veh/h	581	0.980	513	0.980	606	0.980	661	0.980	
Entry HV Adj Factor	0.980	346	0.981	346	0.981	38	0.980	102	
Flow Entry, veh/h	566	1850	436	1850	816	1850	816	1850	
Cap Entry, veh/h	569	0.187	503	0.187	594	0.021	648	0.055	
V/C Ratio	0.995	0.0	0.865	0.0	1.373	0.0	1.259	0.0	
Control Delay, s/veh	63.3	A	42.0	A	198.9	A	149.9	A	
LOS	F	1	E	1	F	0	F	0	
95th %tile Queue, veh	14		9		36		31		

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EAC (2026) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	126	401	322	15	391	322	253	506	35	209	550	95
Future Volume (vph)	126	401	322	15	391	322	253	506	35	209	550	95
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											























HCM 6th Roundabout
7: Jefferson St. & Avenue 52

EAC (2026) AM Peak hour
With Improvements

Intersection										
Intersection Delay, s/veh	15.1									
Intersection LOS	C									
Approach	EB		WB		NB		SB			
Entry Lanes	1		1		2		2			
Conflicting Circle Lanes	2		2		2		2			
Adj Approach Flow, veh/h	912		782		854		918			
Demand Flow Rate, veh/h	931		797		871		937			
Vehicles Circulating, veh/h	848		970		807		721			
Vehicles Exiting, veh/h	705		669		619		693			
Ped Vol Crossing Leg, #/h	0		0		0		0			
Ped Cap Adj	1.000		1.000		1.000		1.000			
Approach Delay, s/veh	19.1		12.7		15.9		12.7			
Approach LOS	C		B		C		B			
Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
Assumed Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
RT Channelized		Free		Free			Free			Free
Lane Util	1.000		1.000		0.470	0.530		0.471	0.529	
Follow-Up Headway, s	2.535		2.535		2.667	2.535		2.667	2.535	
Critical Headway, s	4.328	353	4.328	353	4.645	4.328	39	4.645	4.328	104
Entry Flow, veh/h	578	1887	444	1887	391	441	1887	392	441	1887
Cap Entry Lane, veh/h	691	0.980	623	0.980	643	715	0.980	695	769	0.980
Entry HV Adj Factor	0.980	346	0.981	346	0.981	0.981	38	0.979	0.981	102
Flow Entry, veh/h	566	1850	436	1850	384	433	1850	384	433	1850
Cap Entry, veh/h	677	0.187	611	0.187	630	701	0.021	681	755	0.055
V/C Ratio	0.837	0.0	0.713	0.0	0.609	0.617	0.0	0.564	0.573	0.0
Control Delay, s/veh	30.7	A	22.7	A	17.2	16.1	A	14.7	13.8	A
LOS	D	1	C	1	C	C	0	B	B	0
95th %tile Queue, veh	9		6		4	4		4	4	

Lanes, Volumes, Timings 8: Jefferson St. & Pomelo

EAC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	1	2	4	1	16	13	905	13	40	865	51
Future Volume (vph)	37	1	2	4	1	16	13	905	13	40	865	51
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	52.0		20.0	54.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	15.0%	43.3%		16.7%	45.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary

Area Type: Other

Cycle Length: 120

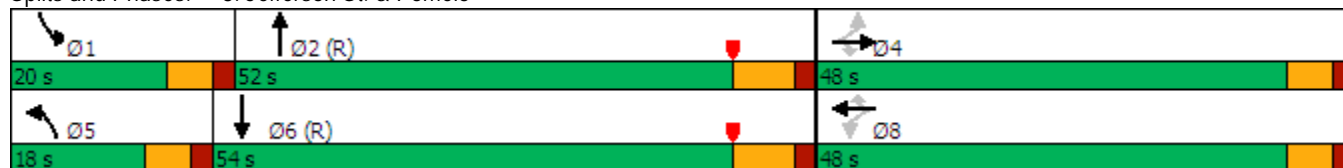
Actuated Cycle Length: 120

Offset: 10 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110

























Control Type: Actuated-Coordinated

Splits and Phases: 8: Jefferson St. & Pomelo



























HCM 6th Signalized Intersection Summary 8: Jefferson St. & Pomelo

EAC (2026) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (veh/h)	37	1	2	4	1	16	13	905	13	40	865	51
Future Volume (veh/h)	37	1	2	4	1	16	13	905	13	40	865	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	40	1	2	4	1	17	14	973	14	43	930	55
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	62	1	199	55	8	199	65	3195	46	132	3224	190
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.04	0.63	0.63	0.03	0.23	0.23
Sat Flow, veh/h	24	6	1543	11	62	1543	1734	5050	73	1734	4801	283
Grp Volume(v), veh/h	41	0	2	5	0	17	14	638	349	43	641	344
Grp Sat Flow(s),veh/h/ln	30	0	1543	73	0	1543	1734	1657	1808	1734	1657	1770
Q Serve(g_s), s	0.3	0.0	0.1	0.1	0.0	1.2	0.9	10.5	10.5	2.9	19.2	19.2
Cycle Q Clear(g_c), s	15.4	0.0	0.1	15.3	0.0	1.2	0.9	10.5	10.5	2.9	19.2	19.2
Prop In Lane	0.98		1.00	0.80		1.00	1.00		0.04	1.00		0.16
Lane Grp Cap(c), veh/h	63	0	199	63	0	199	65	2097	1144	132	2226	1189
V/C Ratio(X)	0.65	0.00	0.01	0.08	0.00	0.09	0.22	0.30	0.30	0.33	0.29	0.29
Avail Cap(c_a), veh/h	374	0	540	391	0	540	173	2097	1144	202	2226	1189
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.34	0.34	0.34
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.71	0.71	0.71
Uniform Delay (d), s/veh	59.7	0.0	45.6	46.6	0.0	46.1	56.1	10.0	10.0	55.4	22.6	22.6
Incr Delay (d2), s/veh	21.5	0.0	0.0	1.1	0.0	0.4	3.5	0.4	0.7	2.1	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.1	0.2	0.0	0.5	0.5	3.4	3.8	1.3	8.5	9.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.2	0.0	45.7	47.7	0.0	46.5	59.6	10.4	10.7	57.6	22.8	23.1
LnGrp LOS	F	A	D	D	A	D	E	B	B	E	C	C
Approach Vol, veh/h	43					22		1001		1028		
Approach Delay, s/veh	79.5					46.7		11.2		24.4		
Approach LOS	E					D		B		C		
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	15.1	83.3	21.6		10.5	88.0	21.6					
Change Period (Y+Rc), s	6.0	7.5	6.0		6.0	7.5	6.0					
Max Green Setting (Gmax), s	14.0	44.5	42.0		12.0	46.5	42.0					
Max Q Clear Time (g_c+I1), s	4.9	12.5	17.4		2.9	21.2	17.3					
Green Ext Time (p_c), s	0.1	12.6	0.3		0.0	11.3	0.1					
Intersection Summary												
HCM 6th Ctrl Delay	19.4											
HCM 6th LOS	B											
Notes												

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

EAC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	256	300	74	84	333	232	121	770	68	154	791	362
Future Volume (vph)	256	300	74	84	333	232	121	770	68	154	791	362
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	43.5	43.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	36.3%	36.3%	15.0%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

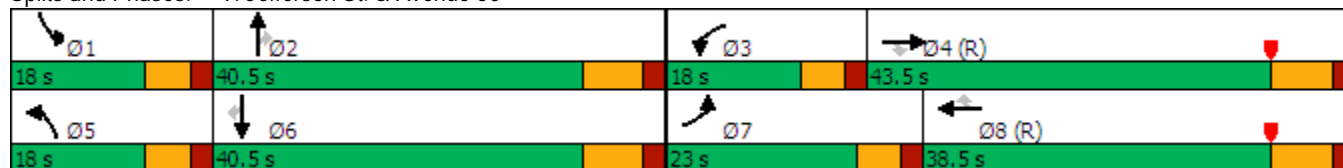
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 115

























Control Type: Actuated-Coordinated

Splits and Phases: 9: Jefferson St. & Avenue 50



























HCM 6th Signalized Intersection Summary 9: Jefferson St. & Avenue 50

EAC (2026) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	256	300	74	84	333	232	121	770	68	154	791	362
Future Volume (veh/h)	256	300	74	84	333	232	121	770	68	154	791	362
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	261	306	76	86	340	237	123	786	69	157	807	369
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	1094	488	164	490	415	171	1318	409	335	1323	411
Arrive On Green	0.14	0.32	0.32	0.09	0.27	0.27	0.03	0.09	0.09	0.10	0.27	0.27
Sat Flow, veh/h	1734	3460	1543	1734	1821	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	261	306	76	86	340	237	123	786	69	157	807	369
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	17.0	8.0	4.3	5.7	20.1	15.9	8.4	18.3	5.0	5.3	17.1	27.7
Cycle Q Clear(g_c), s	17.0	8.0	4.3	5.7	20.1	15.9	8.4	18.3	5.0	5.3	17.1	27.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	1094	488	164	490	415	171	1318	409	335	1323	411
V/C Ratio(X)	1.06	0.28	0.16	0.53	0.69	0.57	0.72	0.60	0.17	0.47	0.61	0.90
Avail Cap(c_a), veh/h	246	1094	488	173	490	415	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	30.8	29.5	51.8	39.4	37.9	56.4	48.6	42.5	51.0	38.6	42.5
Incr Delay (d2), s/veh	74.8	0.6	0.7	1.0	7.9	5.6	11.2	0.8	0.3	0.4	0.9	21.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	3.3	1.6	2.5	9.8	6.5	4.3	8.1	1.9	2.2	6.7	12.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	126.3	31.4	30.2	52.8	47.3	43.5	67.6	49.4	42.8	51.4	39.5	64.0
LnGrp LOS	F	C	C	D	D	D	E	D	D	D	D	E
Approach Vol, veh/h		643			663			978			1333	
Approach Delay, s/veh		69.8			46.7			51.2			47.7	
Approach LOS		E			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.9	39.3	17.3	45.4	17.8	39.4	23.0	39.8				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	12.0	33.0	12.0	36.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	7.3	20.3	7.7	10.0	10.4	29.7	19.0	22.1				
Green Ext Time (p_c), s	0.1	5.3	0.0	3.9	0.0	2.3	0.0	3.2				
Intersection Summary												
HCM 6th Ctrl Delay			52.4									
HCM 6th LOS			D									
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

EAC (2026) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	256	300	74	84	333	232	121	770	68	154	791	362
Future Volume (vph)	256	300	74	84	333	232	121	770	68	154	791	362
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	43.5	43.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	36.3%	36.3%	15.0%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120









Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 115

Control Type: Actuated-Coordinated

























Splits and Phases: 9: Jefferson St. & Avenue 50

 Ø1	 Ø2	 Ø3	 Ø4 (R)
18 s	40.5 s	18 s	43.5 s
 Ø5	 Ø6	 Ø7	 Ø8 (R)
18 s	40.5 s	23 s	38.5 s

HCM 6th Signalized Intersection Summary

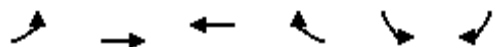
9: Jefferson St. & Avenue 50

EAC (2026) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	256	300	74	84	333	232	121	770	68	154	791	362
Future Volume (veh/h)	256	300	74	84	333	232	121	770	68	154	791	362
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	261	306	76	86	340	237	123	786	69	157	807	369
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	1094	488	164	930	415	171	1318	409	335	1323	411
Arrive On Green	0.14	0.32	0.32	0.09	0.27	0.27	0.03	0.09	0.09	0.10	0.27	0.27
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	261	306	76	86	340	237	123	786	69	157	807	369
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	17.0	8.0	4.3	5.7	9.6	15.9	8.4	18.3	5.0	5.3	17.1	27.7
Cycle Q Clear(g_c), s	17.0	8.0	4.3	5.7	9.6	15.9	8.4	18.3	5.0	5.3	17.1	27.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	1094	488	164	930	415	171	1318	409	335	1323	411
V/C Ratio(X)	1.06	0.28	0.16	0.53	0.37	0.57	0.72	0.60	0.17	0.47	0.61	0.90
Avail Cap(c_a), veh/h	246	1094	488	173	930	415	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	30.8	29.5	51.8	35.6	37.9	56.4	48.6	42.5	51.0	38.6	42.5
Incr Delay (d2), s/veh	74.8	0.6	0.7	1.0	1.1	5.6	11.2	0.8	0.3	0.4	0.9	21.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	3.3	1.6	2.5	4.1	6.5	4.3	8.1	1.9	2.2	6.7	12.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	126.3	31.4	30.2	52.8	36.7	43.5	67.6	49.4	42.8	51.4	39.5	64.0
LnGrp LOS	F	C	C	D	D	D	E	D	D	D	D	E
Approach Vol, veh/h	643				663				978			
Approach Delay, s/veh	69.8				41.2				51.2			
Approach LOS	E				D				D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.9	39.3	17.3	45.4	17.8	39.4	23.0	39.8				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	12.0	33.0	12.0	36.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	7.3	20.3	7.7	10.0	10.4	29.7	19.0	17.9				
Green Ext Time (p_c), s	0.1	5.3	0.0	3.9	0.0	2.3	0.0	4.2				
Intersection Summary												
HCM 6th Ctrl Delay	51.4											
HCM 6th LOS	D											
Notes												

Lanes, Volumes, Timings
10: Avenue 60 & Madison St.






EAC (2026) AM Peak hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↱	↱	↱	↱	↱
Traffic Volume (vph)	36	9	12	171	156	65
Future Volume (vph)	36	9	12	171	156	65
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		40	
Link Distance (ft)		1772	661		437	
Travel Time (s)		30.2	11.3		7.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)						
Sign Control		Stop	Stop		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Intersection Delay, s/veh	9.4
Intersection LOS	A





















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	36	9	12	171	156	65
Future Vol, veh/h	36	9	12	171	156	65
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	11	14	206	188	78
Number of Lanes	0	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	9	8.9	9.9
HCM LOS	A	A	A









Lane	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	80%	0%	0%	100%	0%
Vol Thru, %	20%	100%	0%	0%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	45	12	171	156	65
LT Vol	36	0	0	156	0
Through Vol	9	12	0	0	0
RT Vol	0	0	171	0	65
Lane Flow Rate	54	14	206	188	78
Geometry Grp	4	7	7	7	7
Degree of Util (X)	0.082	0.021	0.263	0.297	0.097
Departure Headway (Hd)	5.45	5.307	4.603	5.683	4.478
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	657	675	781	632	798
Service Time	3.491	3.036	2.332	3.423	2.218
HCM Lane V/C Ratio	0.082	0.021	0.264	0.297	0.098
HCM Control Delay	9	8.2	9	10.8	7.7
HCM Lane LOS	A	A	A	B	A
HCM 95th-tile Q	0.3	0.1	1.1	1.2	0.3

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

EAC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	59	122	10	69	167	123	343	19	82	180	50
Future Volume (vph)	28	59	122	10	69	167	123	343	19	82	180	50
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	25.9
Intersection LOS	D





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	59	122	10	69	167	123	343	19	82	180	50
Future Vol, veh/h	28	59	122	10	69	167	123	343	19	82	180	50
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	31	65	134	11	76	184	135	377	21	90	198	55
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	14.7	23.5	38	16.4
HCM LOS	B	C	E	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	32%	0%	4%	100%	0%	0%
Vol Thru, %	0%	95%	68%	0%	28%	0%	100%	0%
Vol Right, %	0%	5%	0%	100%	68%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	123	362	87	122	246	82	180	50
LT Vol	123	0	28	0	10	82	0	0
Through Vol	0	343	59	0	69	0	180	0
RT Vol	0	19	0	122	167	0	0	50
Lane Flow Rate	135	398	96	134	270	90	198	55
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.319	0.878	0.242	0.307	0.618	0.226	0.468	0.119
Departure Headway (Hd)	8.505	7.95	9.122	8.233	8.235	9.035	8.518	7.795
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	423	457	394	436	438	397	423	459
Service Time	6.254	5.699	6.881	5.992	5.987	6.79	6.273	5.549
HCM Lane V/C Ratio	0.319	0.871	0.244	0.307	0.616	0.227	0.468	0.12
HCM Control Delay	15.2	45.8	14.8	14.6	23.5	14.4	18.6	11.6
HCM Lane LOS	C	E	B	B	C	B	C	B
HCM 95th-tile Q	1.4	9.2	0.9	1.3	4.1	0.9	2.4	0.4

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

EAC (2026) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	59	122	10	69	167	123	343	19	82	180	50
Future Volume (vph)	28	59	122	10	69	167	123	343	19	82	180	50
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red		Yes				Yes			Yes			Yes
Link Speed (mph)		45				45			50			50
Link Distance (ft)		598				1045			1022			1291
Travel Time (s)		9.1				15.8			13.9			17.6
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4				8		5	2		1	6
Permitted Phases	4		4	8								6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		11.5	22.5		11.5	22.5	22.5
Total Split (s)	42.0	42.0	42.0	42.0	42.0		28.0	57.0		21.0	50.0	50.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	35.0%		23.3%	47.5%		17.5%	41.7%	41.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

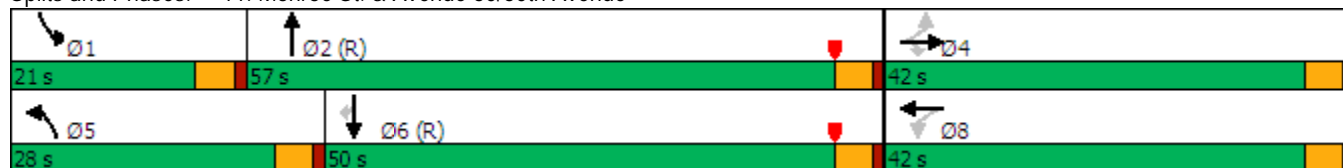
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Splits and Phases: 11: Monroe St. & Avenue 60/60th Avenue



HCM 6th Signalized Intersection Summary


















11: Monroe St. & Avenue 60/60th Avenue

EAC (2026) AM Peak hour
With Improvements






Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↰	↱		↰	↱	↱
Traffic Volume (veh/h)	28	59	122	10	69	167	123	343	19	82	180	50
Future Volume (veh/h)	28	59	122	10	69	167	123	343	19	82	180	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	31	65	134	11	76	184	135	377	21	90	198	55
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	92	172	295	37	93	209	163	1078	60	113	1097	930
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.09	0.63	0.63	0.07	0.60	0.60
Sat Flow, veh/h	272	899	1543	29	487	1092	1734	1709	95	1734	1821	1543
Grp Volume(v), veh/h	96	0	134	271	0	0	135	0	398	90	198	55
Grp Sat Flow(s),veh/h/ln	1170	0	1543	1609	0	0	1734	0	1804	1734	1821	1543
Q Serve(g_s), s	0.0	0.0	9.2	7.1	0.0	0.0	9.2	0.0	12.5	6.1	5.8	1.8
Cycle Q Clear(g_c), s	6.8	0.0	9.2	19.6	0.0	0.0	9.2	0.0	12.5	6.1	5.8	1.8
Prop In Lane	0.32		1.00	0.04		0.68	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	263	0	295	339	0	0	163	0	1139	113	1097	930
V/C Ratio(X)	0.36	0.00	0.45	0.80	0.00	0.00	0.83	0.00	0.35	0.80	0.18	0.06
Avail Cap(c_a), veh/h	447	0	482	532	0	0	340	0	1139	238	1097	930
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.6	0.0	43.0	47.2	0.0	0.0	53.4	0.0	10.5	55.3	10.6	9.8
Incr Delay (d2), s/veh	0.8	0.0	1.1	4.7	0.0	0.0	10.1	0.0	0.8	11.8	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	3.5	8.1	0.0	0.0	4.3	0.0	4.6	3.0	2.2	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.4	0.0	44.1	51.8	0.0	0.0	63.5	0.0	11.3	67.1	11.0	10.0
LnGrp LOS	D	A	D	D	A	A	E	A	B	E	B	A
Approach Vol, veh/h	230			271			533			343		
Approach Delay, s/veh	43.4			51.8			24.5			25.6		
Approach LOS	D			D			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.3	80.2		27.4	15.8	76.8		27.4				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	16.5	52.5		37.5	23.5	45.5		37.5				
Max Q Clear Time (g_c+I1), s	8.1	14.5		11.2	11.2	7.8		21.6				
Green Ext Time (p_c), s	0.1	2.3		0.9	0.2	1.2		1.3				
Intersection Summary												
HCM 6th Ctrl Delay	33.3											
HCM 6th LOS	C											

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	76	62	30	51	41	50	438	49	31	278	37
Future Volume (vph)	36	76	62	30	51	41	50	438	49	31	278	37
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	52.2
Intersection LOS	F





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	76	62	30	51	41	50	438	49	31	278	37
Future Vol, veh/h	36	76	62	30	51	41	50	438	49	31	278	37
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	43	90	74	36	61	49	60	521	58	37	331	44
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	15.5	14	91.8	22.6
HCM LOS	C	B	F	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	9%	21%	25%	10%	0%
Vol Thru, %	82%	44%	42%	90%	0%
Vol Right, %	9%	36%	34%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	537	174	122	309	37
LT Vol	50	36	30	31	0
Through Vol	438	76	51	278	0
RT Vol	49	62	41	0	37
Lane Flow Rate	639	207	145	368	44
Geometry Grp	5	2	2	7	7
Degree of Util (X)	1.101	0.407	0.296	0.692	0.074
Departure Headway (Hd)	6.198	7.473	7.76	7.074	6.304
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	588	485	466	515	572
Service Time	4.198	5.473	5.76	4.774	4.004
HCM Lane V/C Ratio	1.087	0.427	0.311	0.715	0.077
HCM Control Delay	91.8	15.5	14	24.2	9.5
HCM Lane LOS	F	C	B	C	A
HCM 95th-tile Q	19.6	2	1.2	5.3	0.2

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAC (2026) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	76	62	30	51	41	50	438	49	31	278	37
Future Volume (vph)	36	76	62	30	51	41	50	438	49	31	278	37
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		0	150		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		11.5	22.5		11.5	22.5	
Total Split (s)	34.0	34.0		34.0	34.0		17.0	73.0		13.0	69.0	
Total Split (%)	28.3%	28.3%		28.3%	28.3%		14.2%	60.8%		10.8%	57.5%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated





















Splits and Phases: 12: Monroe St. & Avenue 58



HCM 6th Signalized Intersection Summary






















12: Monroe St. & Avenue 58

EAC (2026) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	76	62	30	51	41	50	438	49	31	278	37
Future Volume (veh/h)	36	76	62	30	51	41	50	438	49	31	278	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	43	90	74	36	61	49	60	521	58	37	331	44
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	166	132	108	121	133	107	87	1133	126	72	1094	145
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.05	0.70	0.70	0.04	0.69	0.69
Sat Flow, veh/h	1283	924	760	1222	935	751	1734	1610	179	1734	1574	209
Grp Volume(v), veh/h	43	0	164	36	0	110	60	0	579	37	0	375
Grp Sat Flow(s),veh/h/ln	1283	0	1684	1222	0	1686	1734	0	1789	1734	0	1783
Q Serve(g_s), s	3.8	0.0	11.1	3.5	0.0	7.2	4.1	0.0	17.0	2.5	0.0	9.8
Cycle Q Clear(g_c), s	11.0	0.0	11.1	14.6	0.0	7.2	4.1	0.0	17.0	2.5	0.0	9.8
Prop In Lane	1.00		0.45	1.00		0.45	1.00		0.10	1.00		0.12
Lane Grp Cap(c), veh/h	166	0	240	121	0	240	87	0	1259	72	0	1239
V/C Ratio(X)	0.26	0.00	0.68	0.30	0.00	0.46	0.69	0.00	0.46	0.52	0.00	0.30
Avail Cap(c_a), veh/h	299	0	414	247	0	414	181	0	1259	123	0	1239
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.3	0.0	48.9	55.8	0.0	47.2	56.0	0.0	7.8	56.3	0.0	7.1
Incr Delay (d2), s/veh	0.8	0.0	3.4	1.4	0.0	1.4	9.1	0.0	1.2	5.6	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	4.7	1.1	0.0	3.1	2.0	0.0	5.7	1.2	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.1	0.0	52.3	57.2	0.0	48.6	65.2	0.0	9.0	62.0	0.0	7.7
LnGrp LOS	D	A	D	E	A	D	E	A	A	E	A	A
Approach Vol, veh/h	207			146			639			412		
Approach Delay, s/veh	52.5			50.7			14.3			12.6		
Approach LOS	D			D			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	89.0		21.6	10.6	87.9		21.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	8.5	68.5		29.5	12.5	64.5		29.5				
Max Q Clear Time (g_c+I1), s	4.5	19.0		13.1	6.1	11.8		16.6				
Green Ext Time (p_c), s	0.0	3.7		0.8	0.0	2.2		0.5				
Intersection Summary												
HCM 6th Ctrl Delay	23.2											
HCM 6th LOS	C											

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.









EAC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	133	19	27	81	36	29	412	46	71	275	13
Future Volume (vph)	0	133	19	27	81	36	29	412	46	71	275	13
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh47.3

Intersection LOS E






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	133	19	27	81	36	29	412	46	71	275	13
Future Vol, veh/h	0	133	19	27	81	36	29	412	46	71	275	13
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	156	22	32	95	42	34	485	54	84	324	15
Number of Lanes	1	1	1	0	1	0	1	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	1
Conflicting Approach RightNB		SB	WB	EB
Conflicting Lanes Right	2	3	1	3
HCM Control Delay	14.7	16.9	90.1	15.2
HCM LOS	B	C	F	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	0%	0%	19%	100%	0%	0%
Vol Thru, %	0%	90%	100%	100%	0%	56%	0%	100%	88%
Vol Right, %	0%	10%	0%	0%	100%	25%	0%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	29	458	0	133	19	144	71	183	105
LT Vol	29	0	0	0	0	27	71	0	0
Through Vol	0	412	0	133	0	81	0	183	92
RT Vol	0	46	0	0	19	36	0	0	13
Lane Flow Rate	34	539	0	156	22	169	84	216	123
Geometry Grp	8	8	7	7	7	8	8	8	8
Degree of Util (X)	0.075	1.095	0	0.343	0.045	0.391	0.188	0.455	0.257
Departure Headway (Hd)	7.901	7.316	8.288	8.288	7.567	8.705	8.462	7.948	7.858
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	456	501	0	437	476	417	427	457	461
Service Time	5.601	5.016	5.988	5.988	5.267	6.405	6.162	5.648	5.558
HCM Lane V/C Ratio	0.075	1.076	0	0.357	0.046	0.405	0.197	0.473	0.267
HCM Control Delay	11.2	95.1	11	15.3	10.6	16.9	13.1	17.1	13.3
HCM Lane LOS	B	F	N	C	B	C	B	C	B
HCM 95th-tile Q	0.2	17.4	0	1.5	0.1	1.8	0.7	2.3	1

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.

EAC (2026) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	133	19	27	81	36	29	412	46	71	275	13
Future Volume (vph)	0	133	19	27	81	36	29	412	46	71	275	13
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		11.5	22.5		11.5	22.5	22.5
Total Split (s)	31.0	31.0	31.0	31.0	31.0		14.0	69.0		20.0	75.0	75.0
Total Split (%)	25.8%	25.8%	25.8%	25.8%	25.8%		11.7%	57.5%		16.7%	62.5%	62.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60






















Control Type: Actuated-Coordinated

Splits and Phases: 13: Monroe St. & Airport Bl.





















HCM 6th Signalized Intersection Summary 13: Monroe St. & Airport Bl.

EAC (2026) AM Peak hour
With Improvements







												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	133	19	27	81	36	29	412	46	71	275	13
Future Volume (veh/h)	0	133	19	27	81	36	29	412	46	71	275	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	0	156	22	32	95	42	34	485	54	84	324	15
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	60	279	237	58	127	49	69	1083	121	106	2403	1072
Arrive On Green	0.00	0.15	0.15	0.15	0.15	0.15	0.04	0.71	0.71	0.06	0.73	0.73
Sat Flow, veh/h	1252	1821	1543	146	826	321	1734	1610	179	1734	3460	1543
Grp Volume(v), veh/h	0	156	22	169	0	0	34	0	539	84	324	15
Grp Sat Flow(s),veh/h/ln	1252	1821	1543	1293	0	0	1734	0	1789	1734	1730	1543
Q Serve(g_s), s	0.0	9.5	1.5	6.4	0.0	0.0	2.3	0.0	15.5	5.7	3.4	0.3
Cycle Q Clear(g_c), s	0.0	9.5	1.5	15.9	0.0	0.0	2.3	0.0	15.5	5.7	3.4	0.3
Prop In Lane	1.00		1.00	0.19		0.25	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	60	279	237	234	0	0	69	0	1204	106	2403	1072
V/C Ratio(X)	0.00	0.56	0.09	0.72	0.00	0.00	0.50	0.00	0.45	0.79	0.13	0.01
Avail Cap(c_a), veh/h	144	402	341	342	0	0	137	0	1204	224	2403	1072
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.05	1.05	1.05	1.05
Upstream Filter(I)	0.00	0.94	0.94	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	47.0	43.6	49.7	0.0	0.0	56.3	0.0	8.0	55.4	5.4	5.0
Incr Delay (d2), s/veh	0.0	1.6	0.2	4.2	0.0	0.0	5.4	0.0	1.2	12.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.3	0.6	5.1	0.0	0.0	1.1	0.0	5.1	2.8	1.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	48.7	43.8	53.9	0.0	0.0	61.8	0.0	9.2	67.7	5.5	5.0
LnGrp LOS	A	D	D	D	A	A	E	A	A	E	A	A
Approach Vol, veh/h	178			169			573			423		
Approach Delay, s/veh	48.1			53.9			12.4			17.9		
Approach LOS	D			D			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.8	85.3		22.9	9.2	87.8		22.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	15.5	64.5		26.5	9.5	70.5		26.5				
Max Q Clear Time (g_c+I1), s	7.7	17.5		11.5	4.3	5.4		17.9				
Green Ext Time (p_c), s	0.1	3.4		0.6	0.0	2.0		0.5				
Intersection Summary												
HCM 6th Ctrl Delay	24.0											
HCM 6th LOS	C											

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	184	60	37	260	52	107	393	30	51	334	110
Future Volume (vph)	44	184	60	37	260	52	107	393	30	51	334	110
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	199.8
Intersection LOS	F





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	184	60	37	260	52	107	393	30	51	334	110
Future Vol, veh/h	44	184	60	37	260	52	107	393	30	51	334	110
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	54	227	74	46	321	64	132	485	37	63	412	136
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	45.1	139.8	387.4	131.2
HCM LOS	E	F	F	F

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	20%	100%	0%	11%	13%	0%
Vol Thru, %	74%	0%	75%	74%	87%	0%
Vol Right, %	6%	0%	25%	15%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	530	44	244	349	385	110
LT Vol	107	44	0	37	51	0
Through Vol	393	0	184	260	334	0
RT Vol	30	0	60	52	0	110
Lane Flow Rate	654	54	301	431	475	136
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	1.778	0.154	0.8	1.162	1.234	0.324
Departure Headway (Hd)	10.905	12.924	12.207	12.301	11.717	10.903
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	340	279	298	297	314	333
Service Time	8.905	10.624	9.907	10.301	9.417	8.603
HCM Lane V/C Ratio	1.924	0.194	1.01	1.451	1.513	0.408
HCM Control Delay	387.4	18	50	139.8	163.4	18.7
HCM Lane LOS	F	C	E	F	F	C
HCM 95th-tile Q	37.9	0.5	6.4	14.6	17.2	1.4

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAC (2026) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	184	60	37	260	52	107	393	30	51	334	110
Future Volume (vph)	44	184	60	37	260	52	107	393	30	51	334	110
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		11.5	22.5		11.5	22.5	
Total Split (s)	41.0	41.0		41.0	41.0		20.0	64.0		15.0	59.0	
Total Split (%)	34.2%	34.2%		34.2%	34.2%		16.7%	53.3%		12.5%	49.2%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated





















Splits and Phases: 14: Monroe St. & Avenue 54



HCM 6th Signalized Intersection Summary























14: Monroe St. & Avenue 54

EAC (2026) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	184	60	37	260	52	107	393	30	51	334	110
Future Volume (veh/h)	44	184	60	37	260	52	107	393	30	51	334	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	54	227	74	46	321	64	132	485	37	63	412	136
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	135	363	118	195	407	81	158	936	71	89	681	225
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.09	0.56	0.56	0.05	0.52	0.52
Sat Flow, veh/h	998	1315	429	1078	1474	294	1734	1671	127	1734	1311	433
Grp Volume(v), veh/h	54	0	301	46	0	385	132	0	522	63	0	548
Grp Sat Flow(s),veh/h/ln	998	0	1744	1078	0	1768	1734	0	1798	1734	0	1743
Q Serve(g_s), s	6.3	0.0	18.1	4.7	0.0	24.2	9.0	0.0	21.6	4.3	0.0	26.4
Cycle Q Clear(g_c), s	30.5	0.0	18.1	22.8	0.0	24.2	9.0	0.0	21.6	4.3	0.0	26.4
Prop In Lane	1.00		0.25	1.00		0.17	1.00		0.07	1.00		0.25
Lane Grp Cap(c), veh/h	135	0	482	195	0	489	158	0	1007	89	0	906
V/C Ratio(X)	0.40	0.00	0.62	0.24	0.00	0.79	0.83	0.00	0.52	0.71	0.00	0.60
Avail Cap(c_a), veh/h	163	0	530	225	0	538	224	0	1007	152	0	906
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.3	0.0	38.0	47.9	0.0	40.2	53.6	0.0	16.4	56.1	0.0	20.2
Incr Delay (d2), s/veh	1.9	0.0	2.0	0.6	0.0	7.1	16.6	0.0	1.9	9.9	0.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	7.6	1.2	0.0	10.9	4.5	0.0	8.5	2.1	0.0	10.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.2	0.0	40.0	48.6	0.0	47.2	70.2	0.0	18.3	66.0	0.0	23.2
LnGrp LOS	E	A	D	D	A	D	E	A	B	E	A	C
Approach Vol, veh/h	355			431			654			611		
Approach Delay, s/veh	42.4			47.4			28.8			27.6		
Approach LOS	D			D			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	71.7		37.7	15.5	66.9		37.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	10.5	59.5		36.5	15.5	54.5		36.5				
Max Q Clear Time (g_c+I1), s	6.3	23.6		32.5	11.0	28.4		26.2				
Green Ext Time (p_c), s	0.0	3.2		0.6	0.1	3.3		1.6				
Intersection Summary												
HCM 6th Ctrl Delay				34.7								
HCM 6th LOS				C								

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52









EAC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	345	54	34	359	138	66	349	51	112	364	59
Future Volume (vph)	106	345	54	34	359	138	66	349	51	112	364	59
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 47.7

Intersection LOS F























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	106	345	54	34	359	138	66	349	51	112	364	59
Future Vol, veh/h	106	345	54	34	359	138	66	349	51	112	364	59
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	128	416	65	41	433	166	80	420	61	135	439	71
Number of Lanes	1	1	1	0	2	1	0	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay	143.4	48.7	390.4	38.8
HCM LOS	F	E	F	E

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	14%	100%	0%	0%	22%	0%	0%	100%	0%	0%
Vol Thru, %	75%	0%	100%	0%	78%	100%	0%	0%	100%	67%
Vol Right, %	11%	0%	0%	100%	0%	0%	100%	0%	0%	33%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	466	106	345	54	154	239	138	112	243	180
LT Vol	66	106	0	0	34	0	0	112	0	0
Through Vol	349	0	345	0	120	239	0	0	243	121
RT Vol	51	0	0	54	0	0	138	0	0	59
Lane Flow Rate	561	128	416	65	185	288	166	135	292	217
Geometry Grp	8	8	8	8	8	8	8	7	7	7
Degree of Util (X)	1.779	0.42	1.31	0.193	0.578	0.891	0.482	0.393	0.811	0.589
Departure Headway (Hd)	11.856	13.983	13.433	12.663	13.939	13.817	13.04	12.822	12.278	12.029
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	314	259	274	285	261	265	279	283	298	302
Service Time	9.556	11.683	11.133	10.363	11.639	11.517	10.74	10.522	9.978	9.729
HCM Lane V/C Ratio	1.787	0.494	1.518	0.228	0.709	1.087	0.595	0.477	0.98	0.719
HCM Control Delay	390.4	26.4	198.9	18.4	34.1	70.4	27.3	23.6	51.8	30.6
HCM Lane LOS	F	D	F	C	D	F	D	C	F	D
HCM 95th-tile Q	35.3	2	17.8	0.7	3.3	7.7	2.5	1.8	6.6	3.5

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52

EAC (2026) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	345	54	34	359	138	66	349	51	112	364	59
Future Volume (vph)	106	345	54	34	359	138	66	349	51	112	364	59
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2			6		
Detector Phase	7	4	4	3	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	21.1	42.0	42.0	11.5	32.4	32.4	66.5	66.5		66.5	66.5	
Total Split (%)	17.6%	35.0%	35.0%	9.6%	27.0%	27.0%	55.4%	55.4%		55.4%	55.4%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5		4.5		4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	None	None	None	None	None	C-Max	C-Max		C-Max	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

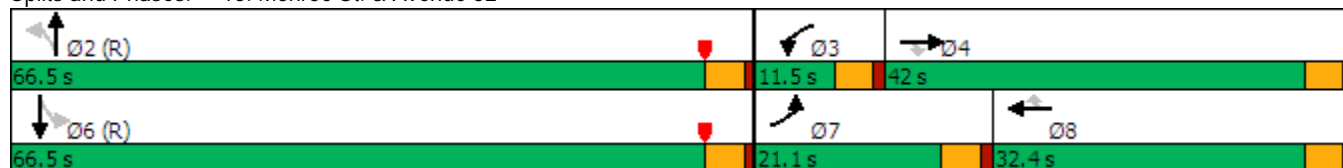
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 70























Control Type: Actuated-Coordinated

Splits and Phases: 15: Monroe St. & Avenue 52



























HCM 6th Signalized Intersection Summary 15: Monroe St. & Avenue 52

EAC (2026) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	345	54	34	359	138	66	349	51	112	364	59
Future Volume (veh/h)	106	345	54	34	359	138	66	349	51	112	364	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	128	416	65	41	433	166	80	420	61	135	439	71
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	154	458	388	75	712	318	144	734	103	495	1769	284
Arrive On Green	0.09	0.25	0.25	0.04	0.21	0.21	0.59	0.59	0.59	0.59	0.59	0.59
Sat Flow, veh/h	1734	1821	1543	1734	3460	1543	185	1238	174	914	2985	480
Grp Volume(v), veh/h	128	416	65	41	433	166	561	0	0	135	253	257
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1730	1543	1597	0	0	914	1730	1735
Q Serve(g_s), s	8.7	26.6	3.9	2.8	13.6	11.5	12.8	0.0	0.0	0.1	8.4	8.5
Cycle Q Clear(g_c), s	8.7	26.6	3.9	2.8	13.6	11.5	24.8	0.0	0.0	24.9	8.4	8.5
Prop In Lane	1.00		1.00	1.00		1.00	0.14		0.11	1.00		0.28
Lane Grp Cap(c), veh/h	154	458	388	75	712	318	980	0	0	495	1025	1028
V/C Ratio(X)	0.83	0.91	0.17	0.54	0.61	0.52	0.57	0.00	0.00	0.27	0.25	0.25
Avail Cap(c_a), veh/h	240	569	482	101	804	359	980	0	0	495	1025	1028
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.8	43.6	35.1	56.2	43.3	42.4	14.7	0.0	0.0	15.1	11.7	11.7
Incr Delay (d2), s/veh	13.0	16.2	0.2	6.0	1.1	1.3	2.4	0.0	0.0	1.4	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	13.4	1.4	1.3	5.7	4.3	8.8	0.0	0.0	2.2	3.1	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.7	59.8	35.3	62.2	44.3	43.7	17.2	0.0	0.0	16.4	12.2	12.3
LnGrp LOS	E	E	D	E	D	D	B	A	A	B	B	B
Approach Vol, veh/h	609				640				561		645	
Approach Delay, s/veh	58.6				45.3				17.2		13.1	
Approach LOS	E				D				B		B	
Timer - Assigned Phs	2		3	4		6	7	8				
Phs Duration (G+Y+Rc), s	75.6		9.7	34.7		75.6	15.2	29.2				
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s	62.0		7.0	37.5		62.0	16.6	27.9				
Max Q Clear Time (g_c+I1), s	26.8		4.8	28.6		26.9	10.7	15.6				
Green Ext Time (p_c), s	3.9		0.0	1.6		3.6	0.1	2.4				
Intersection Summary												
HCM 6th Ctrl Delay	33.7											
HCM 6th LOS	C											

Lanes, Volumes, Timings
16: Monroe St. & 50th Avenue

EAC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	281	44	33	383	124	30	480	34	77	449	44
Future Volume (vph)	30	281	44	33	383	124	30	480	34	77	449	44
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	20.5	20.5	20.5	20.5	20.5	11.5	11.5	20.5		11.5	20.5	
Total Split (s)	26.0	26.0	26.0	26.0	26.0	12.0	11.5	22.0		12.0	22.5	
Total Split (%)	43.3%	43.3%	43.3%	43.3%	43.3%	20.0%	19.2%	36.7%		20.0%	37.5%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

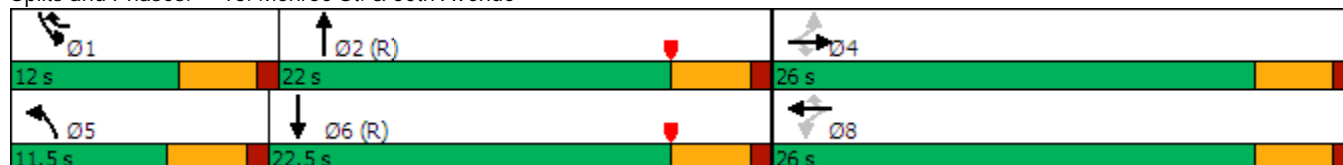
Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55














Control Type: Actuated-Coordinated

Splits and Phases: 16: Monroe St. & 50th Avenue



















HCM 6th Signalized Intersection Summary
16: Monroe St. & 50th Avenue

EAC (2026) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	281	44	33	383	124	30	480	34	77	449	44
Future Volume (veh/h)	30	281	44	33	383	124	30	480	34	77	449	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	35	331	52	39	451	146	35	565	40	91	528	52
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	197	580	491	287	580	645	104	1253	89	172	1342	132
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.06	0.38	0.37	0.10	0.42	0.41
Sat Flow, veh/h	821	1821	1543	1000	1821	1543	1734	3278	232	1734	3182	313
Grp Volume(v), veh/h	35	331	52	39	451	146	35	298	307	91	286	294
Grp Sat Flow(s),veh/h/ln	821	1821	1543	1000	1821	1543	1734	1730	1779	1734	1730	1765
Q Serve(g_s), s	2.4	9.1	1.4	2.0	13.5	3.7	1.2	7.7	7.7	3.0	6.9	6.9
Cycle Q Clear(g_c), s	15.9	9.1	1.4	11.1	13.5	3.7	1.2	7.7	7.7	3.0	6.9	6.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		0.18
Lane Grp Cap(c), veh/h	197	580	491	287	580	645	104	661	680	172	730	744
V/C Ratio(X)	0.18	0.57	0.11	0.14	0.78	0.23	0.34	0.45	0.45	0.53	0.39	0.39
Avail Cap(c_a), veh/h	237	668	566	335	668	719	217	661	680	231	730	744
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.7	17.0	14.4	21.7	18.5	11.2	27.1	13.8	13.9	25.7	12.0	12.1
Incr Delay (d2), s/veh	0.4	0.9	0.1	0.2	5.1	0.2	1.9	2.2	2.2	2.5	1.6	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.2	0.4	0.4	5.4	1.0	0.5	2.7	2.8	1.2	2.3	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.1	17.9	14.5	21.9	23.6	11.4	29.0	16.0	16.0	28.2	13.6	13.6
LnGrp LOS	C	B	B	C	C	B	C	B	B	C	B	B
Approach Vol, veh/h	418			636			640			671		
Approach Delay, s/veh	18.2			20.7			16.7			15.6		
Approach LOS	B			C			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	26.9		23.1	7.6	29.3		23.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	17.5		21.5	7.0	18.0		21.5				
Max Q Clear Time (g_c+I1), s	5.0	9.7		17.9	3.2	8.9		15.5				
Green Ext Time (p_c), s	0.0	2.0		0.7	0.0	2.1		1.7				
Intersection Summary												
HCM 6th Ctrl Delay	17.7											
HCM 6th LOS	B											

Lanes, Volumes, Timings
17: Jackson St. & 58th Avenue

EAC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	109	12	2	85	4	6	168	3	13	168	17
Future Volume (vph)	22	109	12	2	85	4	6	168	3	13	168	17
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		5266			1079			1013			510	
Travel Time (s)		71.8			14.7			12.6			6.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	22	109	12	2	85	4	6	168	3	13	168	17
Future Vol, veh/h	22	109	12	2	85	4	6	168	3	13	168	17
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	116	13	2	90	4	6	179	3	14	179	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.4	8.9	9.5	9.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	15%	2%	7%
Vol Thru, %	95%	76%	93%	85%
Vol Right, %	2%	8%	4%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	177	143	91	198
LT Vol	6	22	2	13
Through Vol	168	109	85	168
RT Vol	3	12	4	17
Lane Flow Rate	188	152	97	211
Geometry Grp	1	1	1	1
Degree of Util (X)	0.252	0.211	0.136	0.278
Departure Headway (Hd)	4.812	4.991	5.067	4.752
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	742	713	702	752
Service Time	2.872	3.059	3.141	2.811
HCM Lane V/C Ratio	0.253	0.213	0.138	0.281
HCM Control Delay	9.5	9.4	8.9	9.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1	0.8	0.5	1.1

Lanes, Volumes, Timings
1: Madison St. & Avenue 58

EAC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	123	22	10	99	166	15	320	7	130	434	123
Future Volume (vph)	121	123	22	10	99	166	15	320	7	130	434	123
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Intersection Delay, s/veh	20.8											
Intersection LOS	C											

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↑		↰	↑↑		↰	↑↑	
Traffic Vol, veh/h	121	123	22	10	99	166	15	320	7	130	434	123
Future Vol, veh/h	121	123	22	10	99	166	15	320	7	130	434	123
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	132	134	24	11	108	180	16	348	8	141	472	134
Number of Lanes	1	1	1	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	16.6	18.4	19.9	23.9
HCM LOS	C	C	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	94%	0%	100%	0%	0%	100%	17%	0%	100%
Vol Right, %	0%	0%	6%	0%	0%	100%	0%	0%	83%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	15	213	114	121	123	22	10	66	199	130	289
LT Vol	15	0	0	121	0	0	10	0	0	130	0
Through Vol	0	213	107	0	123	0	0	66	33	0	289
RT Vol	0	0	7	0	0	22	0	0	166	0	0
Lane Flow Rate	16	232	124	132	134	24	11	72	216	141	314
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.042	0.571	0.303	0.353	0.34	0.056	0.029	0.183	0.515	0.339	0.711
Departure Headway (Hd)	9.358	8.858	8.815	9.65	9.15	8.45	9.66	9.16	8.576	8.639	8.139
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	383	408	408	372	393	424	371	392	420	418	447
Service Time	7.114	6.614	6.571	7.408	6.908	6.208	7.418	6.918	6.334	6.339	5.839
HCM Lane V/C Ratio	0.042	0.569	0.304	0.355	0.341	0.057	0.03	0.184	0.514	0.337	0.702
HCM Control Delay	12.5	22.8	15.4	17.6	16.6	11.7	12.7	14	20.1	15.7	28.5
HCM Lane LOS	B	C	C	C	C	B	B	B	C	C	D
HCM 95th-tile Q	0.1	3.4	1.3	1.6	1.5	0.2	0.1	0.7	2.9	1.5	5.5

Lanes, Volumes, Timings
1: Madison St. & Avenue 58

EAC (2026) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	123	22	10	99	166	15	320	7	130	434	123
Future Volume (vph)	121	123	22	10	99	166	15	320	7	130	434	123
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	28.0	43.0	43.0	13.0	28.0	28.0	14.0	34.0	34.0	30.0	50.0	50.0
Total Split (%)	23.3%	35.8%	35.8%	10.8%	23.3%	23.3%	11.7%	28.3%	28.3%	25.0%	41.7%	41.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

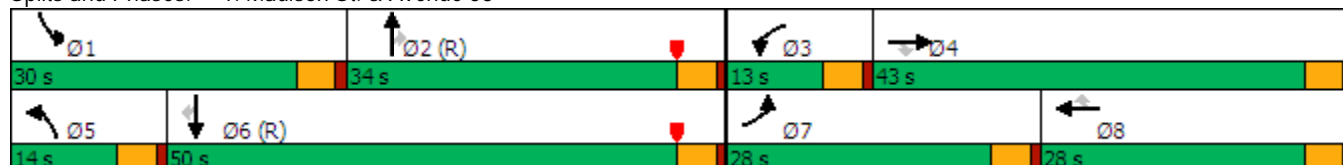
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated

























Splits and Phases: 1: Madison St. & Avenue 58



HCM 6th Signalized Intersection Summary















1: Madison St. & Avenue 58

EAC (2026) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	123	22	10	99	166	15	320	7	130	434	123
Future Volume (veh/h)	121	123	22	10	99	166	15	320	7	130	434	123
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	132	134	24	11	108	180	16	348	8	141	472	134
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	160	384	325	31	472	210	42	1812	808	170	2067	922
Arrive On Green	0.09	0.21	0.21	0.02	0.14	0.14	0.02	0.52	0.52	0.10	0.60	0.60
Sat Flow, veh/h	1734	1821	1543	1734	3460	1543	1734	3460	1543	1734	3460	1543
Grp Volume(v), veh/h	132	134	24	11	108	180	16	348	8	141	472	134
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1730	1543	1734	1730	1543	1734	1730	1543
Q Serve(g_s), s	9.0	7.5	1.5	0.8	3.3	13.7	1.1	6.4	0.3	9.6	7.6	4.6
Cycle Q Clear(g_c), s	9.0	7.5	1.5	0.8	3.3	13.7	1.1	6.4	0.3	9.6	7.6	4.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	160	384	325	31	472	210	42	1812	808	170	2067	922
V/C Ratio(X)	0.83	0.35	0.07	0.35	0.23	0.86	0.38	0.19	0.01	0.83	0.23	0.15
Avail Cap(c_a), veh/h	340	584	495	123	678	302	137	1812	808	369	2067	922
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.5	40.4	38.0	58.2	46.2	50.7	57.7	15.1	13.7	53.2	11.3	10.7
Incr Delay (d2), s/veh	10.2	0.5	0.1	6.7	0.2	15.1	5.6	0.2	0.0	10.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	3.3	0.6	0.4	1.4	6.0	0.5	2.4	0.1	4.5	2.7	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.7	40.9	38.1	65.0	46.4	65.7	63.3	15.4	13.7	63.1	11.5	11.0
LnGrp LOS	E	D	D	E	D	E	E	B	B	E	B	B
Approach Vol, veh/h		290			299			372			747	
Approach Delay, s/veh		51.0			58.7			17.4			21.2	
Approach LOS		D			E			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.2	67.3	6.6	29.8	7.4	76.2	15.6	20.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	25.5	29.5	8.5	38.5	9.5	45.5	23.5	23.5				
Max Q Clear Time (g_c+I1), s	11.6	8.4	2.8	9.5	3.1	9.6	11.0	15.7				
Green Ext Time (p_c), s	0.3	1.9	0.0	0.7	0.0	3.4	0.2	0.7				
Intersection Summary												
HCM 6th Ctrl Delay			32.0									
HCM 6th LOS			C									

Lanes, Volumes, Timings
2: Madison St. & Airport Bl.

EAC (2026) PM Peak hour

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	64	108	1	503	59	76	569
Future Volume (vph)	64	108	1	503	59	76	569
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		8			2		
Detector Phase	3	8	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	20.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	21.0	21.0	11.5	27.0	27.0	12.0	27.5
Total Split (%)	35.0%	35.0%	19.2%	45.0%	45.0%	20.0%	45.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 60

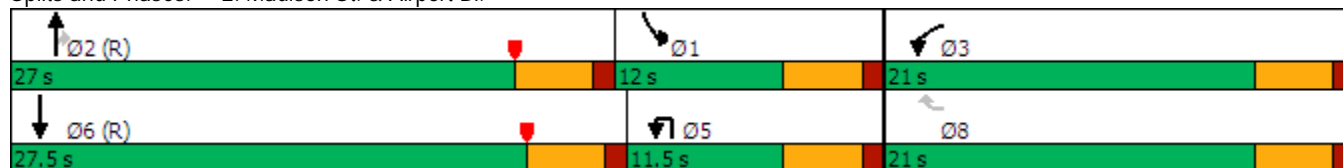
Actuated Cycle Length: 60

Offset: 28 (47%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55















Control Type: Actuated-Coordinated

Splits and Phases: 2: Madison St. & Airport Bl.






























HCM 6th Signalized Intersection Summary 2: Madison St. & Airport Bl.

EAC (2026) PM Peak hour

							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	64	108	1	503	59	76	569
Future Volume (veh/h)	64	108	1	503	59	76	569
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	72	121		565	66	85	639
Peak Hour Factor	0.89	0.89		0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	209	186		1326	592	514	2582
Arrive On Green	0.12	0.12		0.38	0.38	0.30	0.75
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	72	121		565	66	85	639
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	2.3	4.5		7.2	0.9	2.2	3.4
Cycle Q Clear(g_c), s	2.3	4.5		7.2	0.9	2.2	3.4
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	209	186		1326	592	514	2582
V/C Ratio(X)	0.35	0.65		0.43	0.11	0.17	0.25
Avail Cap(c_a), veh/h	491	437		1326	592	514	2582
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.2	25.2		13.6	3.9	15.6	2.4
Incr Delay (d2), s/veh	1.0	3.8		1.0	0.4	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	1.6		2.4	0.5	0.7	0.3
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	25.2	29.0		14.6	4.3	15.8	2.6
LnGrp LOS	C	C		B	A	B	A
Approach Vol, veh/h	193			631			724
Approach Delay, s/veh	27.6			13.6			4.1
Approach LOS	C			B			A
Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	21.8	27.0				48.8	11.2
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	7.5	22.5				23.0	16.5
Max Q Clear Time (g_c+I1), s	4.2	9.2				5.4	6.5
Green Ext Time (p_c), s	0.0	2.9				3.5	0.4
Intersection Summary							
HCM 6th Ctrl Delay			10.9				
HCM 6th LOS			B				
Notes							
User approved ignoring U-Turning movement.							

Lanes, Volumes, Timings
3: Madison St. & Avenue 54









EAC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 			 	
Traffic Volume (vph)	24	329	444	32	206	134	356	471	87	108	320	18
Future Volume (vph)	24	329	444	32	206	134	356	471	87	108	320	18
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 77.6

Intersection LOS F
























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	329	444	32	206	134	356	471	87	108	320	18
Future Vol, veh/h	24	329	444	32	206	134	356	471	87	108	320	18
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	370	499	36	231	151	400	529	98	121	360	20
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	367.2	40.7	132.8	44.7
HCM LOS	F	E	F	E

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	64%	0%	100%	20%	0%	100%	34%	0%	100%	86%
Vol Right, %	0%	0%	36%	0%	0%	80%	0%	0%	66%	0%	0%	14%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	356	314	244	24	219	554	32	137	203	108	213	125
LT Vol	356	0	0	24	0	0	32	0	0	108	0	0
Through Vol	0	314	157	0	219	110	0	137	69	0	213	107
RT Vol	0	0	87	0	0	444	0	0	134	0	0	18
Lane Flow Rate	400	353	274	27	246	622	36	154	228	121	240	140
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	1.307	1.106	0.841	0.096	0.846	2.04	0.133	0.551	0.784	0.446	0.848	0.492
Departure Headway (Hd)	12.926	12.426	12.176	13.005	12.505	11.944	13.948	13.448	12.985	14.258	13.758	13.657
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	284	296	299	277	291	311	259	270	280	255	266	266
Service Time	10.626	10.126	9.876	10.705	10.205	9.644	11.648	11.148	10.685	11.958	11.458	11.357
HCM Lane V/C Ratio	1.408	1.193	0.916	0.097	0.845	2	0.139	0.57	0.814	0.475	0.902	0.526
HCM Control Delay	195.9	121.2	55.8	17.1	57.8	505	18.8	31.5	50.4	28	62.4	28.9
HCM Lane LOS	F	F	F	C	F	F	C	D	F	D	F	D
HCM 95th-tile Q	18.2	13	7.2	0.3	7.2	44.4	0.5	3.1	6	2.2	7	2.5

Lanes, Volumes, Timings
3: Madison St. & Avenue 54

EAC (2026) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	329	444	32	206	134	356	471	87	108	320	18
Future Volume (vph)	24	329	444	32	206	134	356	471	87	108	320	18
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	
Total Split (s)	12.0	44.0		14.4	46.4	46.4	28.2	40.6	40.6	21.0	33.4	
Total Split (%)	10.0%	36.7%		12.0%	38.7%	38.7%	23.5%	33.8%	33.8%	17.5%	27.8%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

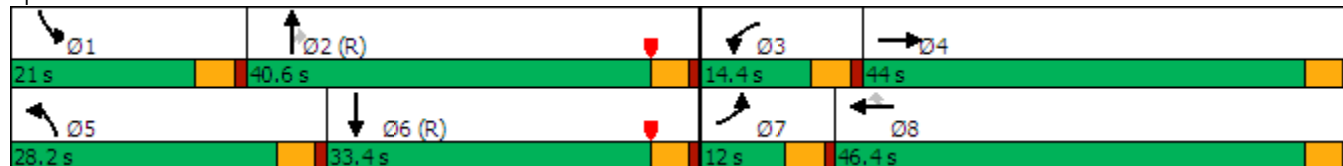
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated
























Splits and Phases: 3: Madison St. & Avenue 54



HCM 6th Signalized Intersection Summary

























3: Madison St. & Avenue 54

EAC (2026) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	329	444	32	206	134	356	471	87	108	320	18
Future Volume (veh/h)	24	329	444	32	206	134	356	471	87	108	320	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	27	370	499	36	231	151	400	529	98	121	360	20
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	60	569	508	71	1160	518	471	1368	610	147	1134	63
Arrive On Green	0.03	0.33	0.33	0.04	0.34	0.34	0.14	0.40	0.40	0.08	0.34	0.34
Sat Flow, veh/h	1734	1730	1543	1734	3460	1543	3365	3460	1543	1734	3333	185
Grp Volume(v), veh/h	27	370	499	36	231	151	400	529	98	121	186	194
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1734	1730	1788
Q Serve(g_s), s	1.8	21.9	38.5	2.4	5.7	8.7	13.9	13.1	4.9	8.2	9.6	9.6
Cycle Q Clear(g_c), s	1.8	21.9	38.5	2.4	5.7	8.7	13.9	13.1	4.9	8.2	9.6	9.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	60	569	508	71	1160	518	471	1368	610	147	588	608
V/C Ratio(X)	0.45	0.65	0.98	0.51	0.20	0.29	0.85	0.39	0.16	0.82	0.32	0.32
Avail Cap(c_a), veh/h	108	569	508	143	1208	539	665	1368	610	238	588	608
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.8	34.3	39.9	56.4	28.4	29.4	50.4	25.9	23.4	54.0	29.3	29.3
Incr Delay (d2), s/veh	4.5	2.3	32.6	5.6	0.1	0.3	7.3	0.8	0.6	11.3	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	9.0	18.1	1.1	2.3	3.1	6.1	5.3	1.8	3.9	4.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.3	36.6	72.5	61.9	28.5	29.7	57.7	26.7	24.0	65.3	30.7	30.7
LnGrp LOS	E	D	E	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h	896			418			1027			501		
Approach Delay, s/veh	57.4			31.8			38.5			39.0		
Approach LOS	E			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.7	51.9	9.4	44.0	21.3	45.3	8.7	44.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	16.5	36.1	9.9	39.5	23.7	28.9	7.5	41.9				
Max Q Clear Time (g_c+I1), s	10.2	15.1	4.4	40.5	15.9	11.6	3.8	10.7				
Green Ext Time (p_c), s	0.1	3.3	0.0	0.0	0.9	1.7	0.0	1.7				
Intersection Summary												
HCM 6th Ctrl Delay	43.6											
HCM 6th LOS	D											

Lanes, Volumes, Timings
4: Madison St. & Avenue 52

EAC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	547	85	24	497	70	119	417	44	79	333	77
Future Volume (vph)	86	547	85	24	497	70	119	417	44	79	333	77
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	22.0	48.0	48.0	17.0	43.0	43.0	18.0	41.0	41.0	14.0	37.0	37.0
Total Split (%)	18.3%	40.0%	40.0%	14.2%	35.8%	35.8%	15.0%	34.2%	34.2%	11.7%	30.8%	30.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

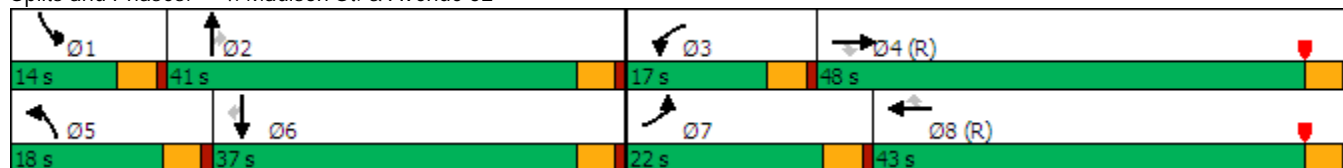
Actuated Cycle Length: 120

Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 4: Madison St. & Avenue 52



























HCM 6th Signalized Intersection Summary 4: Madison St. & Avenue 52

EAC (2026) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	547	85	24	497	70	119	417	44	79	333	77
Future Volume (veh/h)	86	547	85	24	497	70	119	417	44	79	333	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	100	636	99	28	578	81	138	485	51	92	387	90
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	125	1574	702	61	1448	646	195	1052	469	187	1044	466
Arrive On Green	0.07	0.45	0.45	0.04	0.42	0.42	0.06	0.30	0.30	0.06	0.30	0.30
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	100	636	99	28	578	81	138	485	51	92	387	90
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	6.8	14.7	4.5	1.9	14.0	3.9	4.8	13.6	2.9	3.2	10.6	5.2
Cycle Q Clear(g_c), s	6.8	14.7	4.5	1.9	14.0	3.9	4.8	13.6	2.9	3.2	10.6	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	125	1574	702	61	1448	646	195	1052	469	187	1044	466
V/C Ratio(X)	0.80	0.40	0.14	0.46	0.40	0.13	0.71	0.46	0.11	0.49	0.37	0.19
Avail Cap(c_a), veh/h	253	1574	702	181	1448	646	379	1052	469	266	1044	466
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	21.8	19.1	56.7	24.4	21.4	55.5	33.8	30.0	55.0	32.9	31.1
Incr Delay (d2), s/veh	11.3	0.8	0.4	5.2	0.8	0.4	4.7	1.5	0.5	2.0	1.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	5.9	1.6	0.9	5.5	1.4	2.1	5.7	1.1	1.4	4.4	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.1	22.6	19.5	61.9	25.2	21.8	60.2	35.2	30.5	57.0	33.9	32.0
LnGrp LOS	E	C	B	E	C	C	E	D	C	E	C	C
Approach Vol, veh/h		835			687			674			569	
Approach Delay, s/veh		27.5			26.3			40.0			37.4	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.2	41.0	8.7	59.1	11.5	40.7	13.1	54.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	9.5	36.5	12.5	43.5	13.5	32.5	17.5	38.5				
Max Q Clear Time (g_c+I1), s	5.2	15.6	3.9	16.7	6.8	12.6	8.8	16.0				
Green Ext Time (p_c), s	0.1	2.9	0.0	4.5	0.2	2.4	0.1	3.6				
Intersection Summary												
HCM 6th Ctrl Delay			32.3									
HCM 6th LOS			C									

Lanes, Volumes, Timings
5: Madison St. & Avenue 50/50th Avenue

EAC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	498	158	55	427	77	133	498	44	73	333	115
Future Volume (vph)	111	498	158	55	427	77	133	498	44	73	333	115
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	26.0	45.0	45.0	19.0	38.0	38.0	19.0	41.0	41.0	15.0	37.0	37.0
Total Split (%)	21.7%	37.5%	37.5%	15.8%	31.7%	31.7%	15.8%	34.2%	34.2%	12.5%	30.8%	30.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

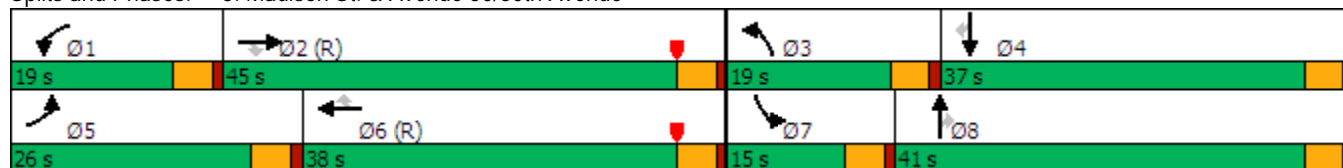
Actuated Cycle Length: 120

Offset: 64.5 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 85































Control Type: Actuated-Coordinated

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue




























HCM 6th Signalized Intersection Summary
5: Madison St. & Avenue 50/50th Avenue

EAC (2026) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 		 	 	
Traffic Volume (veh/h)	111	498	158	55	427	77	133	498	44	73	333	115
Future Volume (veh/h)	111	498	158	55	427	77	133	498	44	73	333	115
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	117	524	166	58	449	81	140	524	46	77	351	121
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	144	1530	682	87	1416	631	198	1052	469	181	1036	462
Arrive On Green	0.08	0.44	0.44	0.05	0.41	0.41	0.06	0.30	0.30	0.05	0.30	0.30
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	117	524	166	58	449	81	140	524	46	77	351	121
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	8.0	11.9	8.1	3.9	10.6	3.9	4.9	14.9	2.6	2.7	9.5	7.2
Cycle Q Clear(g_c), s	8.0	11.9	8.1	3.9	10.6	3.9	4.9	14.9	2.6	2.7	9.5	7.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	144	1530	682	87	1416	631	198	1052	469	181	1036	462
V/C Ratio(X)	0.81	0.34	0.24	0.67	0.32	0.13	0.71	0.50	0.10	0.42	0.34	0.26
Avail Cap(c_a), veh/h	311	1530	682	210	1416	631	407	1052	469	294	1036	462
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.1	22.0	20.9	56.0	24.1	22.1	55.5	34.2	29.9	55.0	32.8	32.0
Incr Delay (d2), s/veh	10.5	0.6	0.8	8.6	0.6	0.4	4.6	1.7	0.4	1.6	0.9	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	4.8	2.9	1.9	4.2	1.4	2.1	6.2	1.0	1.1	3.9	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.6	22.6	21.8	64.7	24.7	22.5	60.1	35.9	30.4	56.5	33.7	33.3
LnGrp LOS	E	C	C	E	C	C	E	D	C	E	C	C
Approach Vol, veh/h		807			588			710			549	
Approach Delay, s/veh		28.5			28.3			40.3			36.8	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.5	57.6	11.5	40.4	14.4	53.6	11.0	41.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	14.5	40.5	14.5	32.5	21.5	33.5	10.5	36.5				
Max Q Clear Time (g_c+I1), s	5.9	13.9	6.9	11.5	10.0	12.6	4.7	16.9				
Green Ext Time (p_c), s	0.1	3.9	0.2	2.3	0.2	2.8	0.1	3.1				
Intersection Summary												
HCM 6th Ctrl Delay			33.4									
HCM 6th LOS			C									

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54










EAC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 		 	 	
Traffic Volume (vph)	31	24	2	34	10	550	6	252	53	695	305	2
Future Volume (vph)	31	24	2	34	10	550	6	252	53	695	305	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 47.8

Intersection LOS F






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	24	2	34	10	550	6	252	53	695	305	2
Future Vol, veh/h	31	24	2	34	10	550	6	252	53	695	305	2
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	29	2	41	12	671	7	307	65	848	372	2
Number of Lanes	1	2	0	1	1	1	0	2	0	2	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	17.3	339.5	27.1	79.1
HCM LOS	C	F	D	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	5%	0%	100%	0%	0%	100%	0%	0%	100%	100%	0%
Vol Thru, %	95%	70%	0%	100%	80%	0%	100%	0%	0%	0%	99%
Vol Right, %	0%	30%	0%	0%	20%	0%	0%	100%	0%	0%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	132	179	31	16	10	34	10	550	348	348	307
LT Vol	6	0	31	0	0	34	0	0	348	348	0
Through Vol	126	126	0	16	8	0	10	0	0	0	305
RT Vol	0	53	0	0	2	0	0	550	0	0	2
Lane Flow Rate	161	218	38	20	12	41	12	671	424	424	374
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.456	0.605	0.126	0.063	0.039	0.121	0.034	1.738	1.039	1.039	0.866
Departure Headway (Hd)	11.506	11.276	13.499	12.971	12.823	10.78	10.269	9.553	10.259	10.259	9.746
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	316	323	267	278	281	335	351	389	356	356	374
Service Time	9.206	8.976	11.199	10.671	10.523	8.48	7.969	7.253	7.959	7.959	7.446
HCM Lane V/C Ratio	0.509	0.675	0.142	0.072	0.043	0.122	0.034	1.725	1.191	1.191	1
HCM Control Delay	23.5	29.8	18.1	16.5	16	15	13.3	365.5	91.5	91.5	50.9
HCM Lane LOS	C	D	C	C	C	B	B	F	F	F	F
HCM 95th-tile Q	2.3	3.7	0.4	0.2	0.1	0.4	0.1	40.8	12.6	12.6	8.3

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54





EAC (2026) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	24	2	34	10	550	6	252	53	695	305	2
Future Volume (vph)	31	24	2	34	10	550	6	252	53	695	305	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases		2			6	4	8	8		4	4	
Permitted Phases	2			6		6						4
Detector Phase	2	2		6	6	4	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5		22.5	22.5	22.5
Total Split (s)	26.0	26.0		26.0	26.0	66.0	28.0	28.0		66.0	66.0	66.0
Total Split (%)	21.7%	21.7%		21.7%	21.7%	55.0%	23.3%	23.3%		55.0%	55.0%	55.0%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		None	None	Max	Max	Max		Max	Max	Max

Intersection Summary






















Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated

Splits and Phases: 6: Jefferson St. & Avenue 54

 Ø2 (R)	 Ø4	 Ø8
26 s	66 s	28 s
 Ø6		
26 s		





















HCM 6th Signalized Intersection Summary 6: Jefferson St. & Avenue 54

EAC (2026) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	24	2	34	10	550	6	252	53	695	305	2
Future Volume (veh/h)	31	24	2	34	10	550	6	252	53	695	305	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	38	29	2	41	12	671	7	307	65	848	372	2
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	192	589	40	297	326	1067	12	555	123	1724	1773	791
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.20	0.20	0.20	0.51	0.51	0.51
Sat Flow, veh/h	758	3287	224	1378	1821	1543	63	2835	628	3365	3460	1543
Grp Volume(v), veh/h	38	15	16	41	12	671	202	0	177	848	372	2
Grp Sat Flow(s),veh/h/ln	758	1730	1781	1378	1821	1543	1818	0	1708	1682	1730	1543
Q Serve(g_s), s	5.2	0.9	0.9	3.0	0.7	21.5	12.1	0.0	11.1	19.7	7.0	0.1
Cycle Q Clear(g_c), s	5.9	0.9	0.9	3.9	0.7	21.5	12.1	0.0	11.1	19.7	7.0	0.1
Prop In Lane	1.00		0.13	1.00		1.00	0.03		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	192	310	319	297	326	1067	356	0	335	1724	1773	791
V/C Ratio(X)	0.20	0.05	0.05	0.14	0.04	0.63	0.57	0.00	0.53	0.49	0.21	0.00
Avail Cap(c_a), veh/h	192	310	319	297	326	1067	356	0	335	1724	1773	791
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.80	0.80	0.80	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.1	40.8	40.8	42.4	40.7	9.0	43.7	0.0	43.3	19.1	16.0	14.3
Incr Delay (d2), s/veh	2.3	0.3	0.3	0.2	0.0	0.9	6.4	0.0	5.9	1.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.4	0.4	1.0	0.3	19.9	5.8	0.0	5.0	7.2	2.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.4	41.1	41.1	42.6	40.7	10.0	50.1	0.0	49.2	20.1	16.2	14.3
LnGrp LOS	D	D	D	D	D	A	D	A	D	C	B	B
Approach Vol, veh/h	69			724			379			1222		
Approach Delay, s/veh	43.5			12.3			49.7			18.9		
Approach LOS	D			B			D			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	26.0			66.0			26.0			28.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	21.5			61.5			21.5			23.5		
Max Q Clear Time (g_c+I1), s	7.9			21.7			23.5			14.1		
Green Ext Time (p_c), s	0.2			5.9			0.0			1.3		
Intersection Summary												
HCM 6th Ctrl Delay	22.5											
HCM 6th LOS	C											

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EAC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	410	364	31	459	334	253	692	77	200	720	155
Future Volume (vph)	108	410	364	31	459	334	253	692	77	200	720	155
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											





















HCM 6th Roundabout
7: Jefferson St. & Avenue 52

EAC (2026) PM Peak hour

Intersection									
Intersection Delay, s/veh	201.0								
Intersection LOS	F								
Approach	EB		WB		NB		SB		
Entry Lanes	1		1		1		1		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	948		886		1099		1156		
Demand Flow Rate, veh/h	967		904		1121		1178		
Vehicles Circulating, veh/h	1042		1154		787		815		
Vehicles Exiting, veh/h	781		669		823		877		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	78.2		98.3		304.1		282.6		
Approach LOS	F		F		F		F		
Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Bypass	
Designated Moves	LT	R	LT	R	LT	R	LT	R	
Assumed Moves	LT	R	LT	R	LT	R	LT	R	
RT Channelized		Free		Free		Free		Free	
Lane Util	1.000		1.000		1.000		1.000		
Follow-Up Headway, s	2.609		2.609		2.609		2.609		
Critical Headway, s	4.976	399	4.976	366	4.976	85	4.976	170	
Entry Flow, veh/h	568	1887	538	1887	1036	1887	1008	1887	
Cap Entry Lane, veh/h	477	0.980	425	0.980	618	0.980	601	0.980	
Entry HV Adj Factor	0.981	391	0.980	359	0.981	83	0.981	167	
Flow Entry, veh/h	557	1850	527	1850	1016	1850	989	1850	
Cap Entry, veh/h	468	0.211	417	0.194	607	0.045	589	0.090	
V/C Ratio	1.191	0.0	1.265	0.0	1.675	0.0	1.677	0.0	
Control Delay, s/veh	133.1	A	165.3	A	328.9	A	330.3	A	
LOS	F	1	F	1	F	0	F	0	
95th %tile Queue, veh	21		23		58		56		

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EAC (2026) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	410	364	31	459	334	253	692	77	200	720	155
Future Volume (vph)	108	410	364	31	459	334	253	692	77	200	720	155
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		100	0		100	0		0	0		0
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	60			60			60			60		
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											























HCM 6th Roundabout
7: Jefferson St. & Avenue 52

EAC (2026) PM Peak hour
With Improvements

Intersection										
Intersection Delay, s/veh	28.3									
Intersection LOS	D									
Approach	EB		WB		NB		SB			
Entry Lanes	1		1		2		2			
Conflicting Circle Lanes	2		2		2		2			
Adj Approach Flow, veh/h	948		886		1099		1156			
Demand Flow Rate, veh/h	967		904		1121		1178			
Vehicles Circulating, veh/h	1042		1154		787		815			
Vehicles Exiting, veh/h	781		669		823		877			
Ped Vol Crossing Leg, #/h	0		0		0		0			
Ped Cap Adj	1.000		1.000		1.000		1.000			
Approach Delay, s/veh	33.5		41.8		21.4		20.1			
Approach LOS	D		E		C		C			
Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
Assumed Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
RT Channelized		Free		Free			Free			Free
Lane Util	1.000		1.000		0.470	0.530		0.470	0.530	
Follow-Up Headway, s	2.535		2.535		2.667	2.535		2.667	2.535	
Critical Headway, s	4.328	399	4.328	366	4.645	4.328	85	4.645	4.328	170
Entry Flow, veh/h	568	1887	538	1887	487	549	1887	474	534	1887
Cap Entry Lane, veh/h	586	0.980	532	0.980	654	727	0.980	638	710	0.980
Entry HV Adj Factor	0.981	391	0.980	359	0.981	0.981	83	0.980	0.981	167
Flow Entry, veh/h	557	1850	527	1850	478	539	1850	465	524	1850
Cap Entry, veh/h	574	0.211	522	0.194	642	714	0.045	625	697	0.090
V/C Ratio	0.970	0.0	1.010	0.0	0.744	0.755	0.0	0.743	0.752	0.0
Control Delay, s/veh	57.1	A	70.3	A	23.8	22.6	A	24.2	22.8	A
LOS	F	1	F	1	C	C	0	C	C	0
95th %tile Queue, veh	13		14		7	7		7	7	

Lanes, Volumes, Timings
8: Jefferson St. & Pomelo

EAC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	2	21	9	1	42	3	1149	7	23	1135	68
Future Volume (vph)	66	2	21	9	1	42	3	1149	7	23	1135	68
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	54.0		18.0	54.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	15.0%	45.0%		15.0%	45.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary

Area Type: Other

Cycle Length: 120

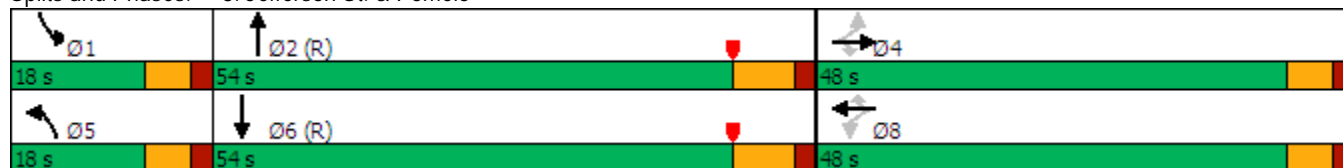
Actuated Cycle Length: 120

Offset: 30 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110























Control Type: Actuated-Coordinated

Splits and Phases: 8: Jefferson St. & Pomelo



























HCM 6th Signalized Intersection Summary 8: Jefferson St. & Pomelo

EAC (2026) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	2	21	9	1	42	3	1149	7	23	1135	68
Future Volume (veh/h)	66	2	21	9	1	42	3	1149	7	23	1135	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	69	2	22	9	1	44	3	1209	7	24	1195	72
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	73	1	524	66	4	524	17	2260	13	96	2343	141
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.01	0.44	0.44	0.02	0.16	0.16
Sat Flow, veh/h	41	4	1543	27	13	1543	1734	5101	30	1734	4795	289
Grp Volume(v), veh/h	71	0	22	10	0	44	3	786	430	24	826	441
Grp Sat Flow(s),veh/h/ln	44	0	1543	40	0	1543	1734	1657	1816	1734	1657	1769
Q Serve(g_s), s	1.2	0.0	1.1	0.6	0.0	2.3	0.2	20.8	20.8	1.6	27.3	27.3
Cycle Q Clear(g_c), s	40.7	0.0	1.1	40.4	0.0	2.3	0.2	20.8	20.8	1.6	27.3	27.3
Prop In Lane	0.97		1.00	0.90		1.00	1.00		0.02	1.00		0.16
Lane Grp Cap(c), veh/h	74	0	524	71	0	524	17	1468	804	96	1619	864
V/C Ratio(X)	0.96	0.00	0.04	0.14	0.00	0.08	0.18	0.53	0.54	0.25	0.51	0.51
Avail Cap(c_a), veh/h	89	0	540	86	0	540	173	1468	804	173	1619	864
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.70	0.70	0.70
Uniform Delay (d), s/veh	59.4	0.0	26.6	45.9	0.0	27.0	59.0	24.4	24.4	56.5	37.2	37.2
Incr Delay (d2), s/veh	81.4	0.0	0.1	1.9	0.0	0.1	10.9	1.4	2.5	2.0	0.8	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	0.4	0.3	0.0	0.9	0.1	7.8	8.8	0.7	12.2	13.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	140.7	0.0	26.6	47.8	0.0	27.1	69.8	25.8	26.9	58.5	38.0	38.7
LnGrp LOS	F	A	C	D	A	C	E	C	C	E	D	D
Approach Vol, veh/h	93			54			1219			1291		
Approach Delay, s/veh	113.7			30.9			26.3			38.6		
Approach LOS	F			C			C			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.6	60.0		47.4	7.1	65.5		47.4				
Change Period (Y+Rc), s	6.0	7.5		6.0	6.0	7.5		6.0				
Max Green Setting (Gmax), s	12.0	46.5		42.0	12.0	46.5		42.0				
Max Q Clear Time (g_c+I1), s	3.6	22.8		42.7	2.2	29.3		42.4				
Green Ext Time (p_c), s	0.0	13.6		0.0	0.0	11.3		0.0				
Intersection Summary												
HCM 6th Ctrl Delay	35.4											
HCM 6th LOS	D											

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

EAC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	362	389	131	153	360	214	131	1024	102	303	936	239
Future Volume (vph)	362	389	131	153	360	214	131	1024	102	303	936	239
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	36.5	36.5	25.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	30.4%	30.4%	20.8%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

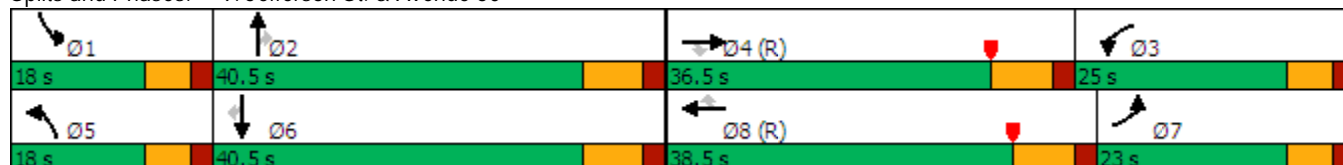
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 125































Control Type: Actuated-Coordinated

Splits and Phases: 9: Jefferson St. & Avenue 50



























HCM 6th Signalized Intersection Summary 9: Jefferson St. & Avenue 50

EAC (2026) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  		 	  	
Traffic Volume (veh/h)	362	389	131	153	360	214	131	1024	102	303	936	239
Future Volume (veh/h)	362	389	131	153	360	214	131	1024	102	303	936	239
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	373	401	135	158	371	221	135	1056	105	312	965	246
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	320	558	249	443	423	358	172	1283	398	336	1289	400
Arrive On Green	0.18	0.16	0.16	0.26	0.23	0.23	0.03	0.09	0.09	0.10	0.26	0.26
Sat Flow, veh/h	1734	3460	1543	1734	1821	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	373	401	135	158	371	221	135	1056	105	312	965	246
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	22.2	13.2	7.2	9.0	23.6	11.1	9.3	25.1	3.9	11.0	21.4	10.1
Cycle Q Clear(g_c), s	22.2	13.2	7.2	9.0	23.6	11.1	9.3	25.1	3.9	11.0	21.4	10.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	320	558	249	443	423	358	172	1283	398	336	1289	400
V/C Ratio(X)	1.16	0.72	0.54	0.36	0.88	0.62	0.79	0.82	0.26	0.93	0.75	0.61
Avail Cap(c_a), veh/h	320	836	373	443	470	399	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.9	47.7	25.9	36.6	44.4	21.6	56.8	52.2	11.2	53.6	40.9	14.0
Incr Delay (d2), s/veh	102.7	7.7	8.2	0.2	21.8	7.7	18.2	4.0	0.5	30.6	2.4	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.3	6.1	4.1	3.7	12.8	4.6	5.0	11.5	2.9	5.9	8.5	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	151.7	55.5	34.1	36.8	66.2	29.3	74.9	56.2	11.7	84.1	43.3	17.0
LnGrp LOS	F	E	C	D	E	C	E	E	B	F	D	B
Approach Vol, veh/h		909			750			1296			1523	
Approach Delay, s/veh		91.8			49.1			54.5			47.4	
Approach LOS		F			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	38.5	36.7	26.9	17.9	38.6	28.2	35.4				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	12.0	33.0	19.0	29.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	13.0	27.1	11.0	15.2	11.3	23.4	24.2	25.6				
Green Ext Time (p_c), s	0.0	3.9	0.1	4.2	0.0	5.7	0.0	2.3				
Intersection Summary												
HCM 6th Ctrl Delay			58.8									
HCM 6th LOS			E									
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

EAC (2026) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	362	389	131	153	360	214	131	1024	102	303	936	239
Future Volume (vph)	362	389	131	153	360	214	131	1024	102	303	936	239
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	36.5	36.5	25.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	30.4%	30.4%	20.8%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

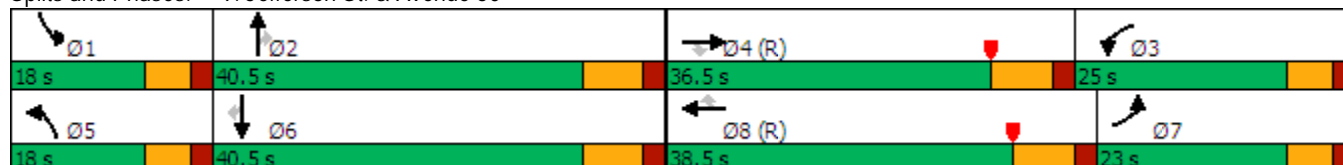
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 125

Control Type: Actuated-Coordinated

























Splits and Phases: 9: Jefferson St. & Avenue 50



HCM 6th Signalized Intersection Summary












9: Jefferson St. & Avenue 50

EAC (2026) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	362	389	131	153	360	214	131	1024	102	303	936	239
Future Volume (veh/h)	362	389	131	153	360	214	131	1024	102	303	936	239
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	373	401	135	158	371	221	135	1056	105	312	965	246
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	441	558	249	443	563	251	172	1283	398	336	1289	400
Arrive On Green	0.25	0.16	0.16	0.26	0.16	0.16	0.03	0.09	0.09	0.10	0.26	0.26
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	373	401	135	158	371	221	135	1056	105	312	965	246
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	24.5	13.2	7.2	9.0	12.1	12.5	9.3	25.1	3.9	11.0	21.4	8.5
Cycle Q Clear(g_c), s	24.5	13.2	7.2	9.0	12.1	12.5	9.3	25.1	3.9	11.0	21.4	8.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	441	558	249	443	563	251	172	1283	398	336	1289	400
V/C Ratio(X)	0.85	0.72	0.54	0.36	0.66	0.88	0.79	0.82	0.26	0.93	0.75	0.61
Avail Cap(c_a), veh/h	441	836	373	443	894	399	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	47.7	25.9	36.6	47.1	27.3	56.8	52.2	11.2	53.6	40.9	10.0
Incr Delay (d2), s/veh	13.9	7.7	8.2	0.2	5.9	32.6	18.2	4.0	0.5	30.6	2.4	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.7	6.1	4.1	3.7	5.5	6.7	5.0	11.5	2.9	5.9	8.5	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.4	55.5	34.1	36.8	53.0	59.9	74.9	56.2	11.7	84.1	43.3	13.0
LnGrp LOS	E	E	C	D	D	E	E	E	B	F	D	B
Approach Vol, veh/h	909				750				1296			
Approach Delay, s/veh	52.7				51.6				54.5			
Approach LOS	D				D				D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	38.5	36.7	26.9	17.9	38.6	36.5	27.0				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	12.0	33.0	19.0	29.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	13.0	27.1	11.0	15.2	11.3	23.4	26.5	14.5				
Green Ext Time (p_c), s	0.0	3.9	0.1	4.2	0.0	5.7	0.0	5.0				
Intersection Summary												
HCM 6th Ctrl Delay			51.0									
HCM 6th LOS			D									
Notes												

Lanes, Volumes, Timings
10: Avenue 60 & Madison St.

EAC (2026) PM Peak hour

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	30	20	20	146	299	40
Future Volume (vph)	30	20	20	146	299	40
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		40	
Link Distance (ft)		1772	661		437	
Travel Time (s)		30.2	11.3		7.4	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)						
Sign Control		Stop	Stop		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Intersection Delay, s/veh	12.8
Intersection LOS	B





















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↱	↱	↱	↱	↱
Traffic Vol, veh/h	30	20	20	146	299	40
Future Vol, veh/h	30	20	20	146	299	40
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	24	24	178	365	49
Number of Lanes	0	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	9.6	9.4	15
HCM LOS	A	A	B









Lane	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	60%	0%	0%	100%	0%
Vol Thru, %	40%	100%	0%	0%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	50	20	146	299	40
LT Vol	30	0	0	299	0
Through Vol	20	20	0	0	0
RT Vol	0	0	146	0	40
Lane Flow Rate	61	24	178	365	49
Geometry Grp	4	7	7	7	7
Degree of Util (X)	0.1	0.039	0.251	0.577	0.061
Departure Headway (Hd)	5.877	5.782	5.075	5.693	4.488
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	605	617	705	631	791
Service Time	3.952	3.538	2.831	3.461	2.256
HCM Lane V/C Ratio	0.101	0.039	0.252	0.578	0.062
HCM Control Delay	9.6	8.8	9.5	16	7.6
HCM Lane LOS	A	A	A	C	A
HCM 95th-tile Q	0.3	0.1	1	3.7	0.2

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

EAC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	146	142	21	61	131	84	330	15	204	416	33
Future Volume (vph)	39	146	142	21	61	131	84	330	15	204	416	33
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	76.4
Intersection LOS	F





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	146	142	21	61	131	84	330	15	204	416	33
Future Vol, veh/h	39	146	142	21	61	131	84	330	15	204	416	33
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	166	161	24	69	149	95	375	17	232	473	38
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	25.2	34.1	84.1	110.9
HCM LOS	D	D	F	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	21%	0%	10%	100%	0%	0%
Vol Thru, %	0%	96%	79%	0%	29%	0%	100%	0%
Vol Right, %	0%	4%	0%	100%	62%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	84	345	185	142	213	204	416	33
LT Vol	84	0	39	0	21	204	0	0
Through Vol	0	330	146	0	61	0	416	0
RT Vol	0	15	0	142	131	0	0	33
Lane Flow Rate	95	392	210	161	242	232	473	38
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.274	1.068	0.601	0.426	0.684	0.641	1.242	0.091
Departure Headway (Hd)	10.867	10.307	11.029	10.184	10.868	10.278	9.755	9.023
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	333	357	330	357	334	355	378	399
Service Time	8.567	8.007	8.729	7.884	8.568	7.978	7.455	6.723
HCM Lane V/C Ratio	0.285	1.098	0.636	0.451	0.725	0.654	1.251	0.095
HCM Control Delay	17.6	100.3	29	20.2	34.1	29.6	158.6	12.6
HCM Lane LOS	C	F	D	C	D	D	F	B
HCM 95th-tile Q	1.1	13.4	3.7	2.1	4.8	4.2	19.8	0.3

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

EAC (2026) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	146	142	21	61	131	84	330	15	204	416	33
Future Volume (vph)	39	146	142	21	61	131	84	330	15	204	416	33
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red		Yes				Yes			Yes			Yes
Link Speed (mph)		45				45			50			50
Link Distance (ft)		598				1045			1022			1291
Travel Time (s)		9.1				15.8			13.9			17.6
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4				8		5	2		1	6
Permitted Phases	4		4	8								6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		11.5	22.5		11.5	22.5	22.5
Total Split (s)	39.0	39.0	39.0	39.0	39.0		21.0	48.0		33.0	60.0	60.0
Total Split (%)	32.5%	32.5%	32.5%	32.5%	32.5%		17.5%	40.0%		27.5%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

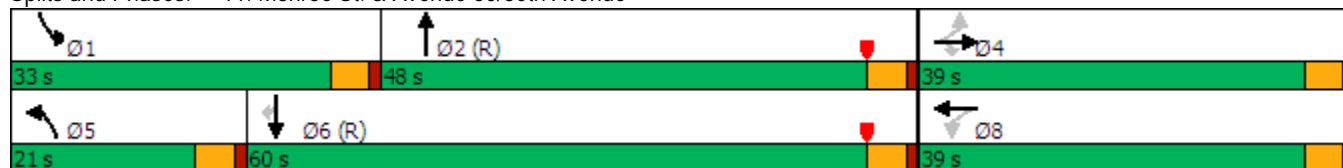
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated


Splits and Phases: 11: Monroe St. & Avenue 60/60th Avenue



HCM 6th Signalized Intersection Summary


















11: Monroe St. & Avenue 60/60th Avenue

EAC (2026) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↔		↖	↗		↖	↗	↗
Traffic Volume (veh/h)	39	146	142	21	61	131	84	330	15	204	416	33
Future Volume (veh/h)	39	146	142	21	61	131	84	330	15	204	416	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	44	166	161	24	69	149	95	375	17	232	473	38
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	78	255	343	46	92	168	119	889	40	263	1087	921
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.07	0.51	0.51	0.15	0.60	0.60
Sat Flow, veh/h	190	1149	1543	57	415	756	1734	1729	78	1734	1821	1543
Grp Volume(v), veh/h	210	0	161	242	0	0	95	0	392	232	473	38
Grp Sat Flow(s),veh/h/ln	1339	0	1543	1228	0	0	1734	0	1807	1734	1821	1543
Q Serve(g_s), s	0.0	0.0	10.9	7.1	0.0	0.0	6.5	0.0	16.2	15.7	17.0	1.2
Cycle Q Clear(g_c), s	16.7	0.0	10.9	23.8	0.0	0.0	6.5	0.0	16.2	15.7	17.0	1.2
Prop In Lane	0.21		1.00	0.10		0.62	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	333	0	343	305	0	0	119	0	929	263	1087	921
V/C Ratio(X)	0.63	0.00	0.47	0.79	0.00	0.00	0.80	0.00	0.42	0.88	0.44	0.04
Avail Cap(c_a), veh/h	440	0	444	406	0	0	238	0	929	412	1087	921
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.9	0.0	40.6	44.8	0.0	0.0	55.1	0.0	18.1	49.9	13.2	10.0
Incr Delay (d2), s/veh	2.0	0.0	1.0	7.6	0.0	0.0	11.6	0.0	1.4	13.1	1.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.0	4.1	7.5	0.0	0.0	3.1	0.0	6.6	7.5	6.5	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.9	0.0	41.6	52.4	0.0	0.0	66.6	0.0	19.5	63.0	14.4	10.1
LnGrp LOS	D	A	D	D	A	A	E	A	B	E	B	B
Approach Vol, veh/h	371			242			487			743		
Approach Delay, s/veh	42.9			52.4			28.7			29.4		
Approach LOS	D			D			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.7	66.2		31.1	12.7	76.1		31.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	28.5	43.5		34.5	16.5	55.5		34.5				
Max Q Clear Time (g_c+I1), s	17.7	18.2		18.7	8.5	19.0		25.8				
Green Ext Time (p_c), s	0.4	2.1		1.4	0.1	2.9		0.8				
Intersection Summary												
HCM 6th Ctrl Delay	34.9											
HCM 6th LOS	C											

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	140	62	66	100	62	88	456	72	53	522	48
Future Volume (vph)	60	140	62	66	100	62	88	456	72	53	522	48
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Intersection Delay, s/veh	336.7											
Intersection LOS	F											





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	60	140	62	66	100	62	88	456	72	53	522	48
Future Vol, veh/h	60	140	62	66	100	62	88	456	72	53	522	48
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	80	187	83	88	133	83	117	608	96	71	696	64
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	62.7	50.9	481.7	413.1
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	14%	23%	29%	9%	0%
Vol Thru, %	74%	53%	44%	91%	0%
Vol Right, %	12%	24%	27%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	616	262	228	575	48
LT Vol	88	60	66	53	0
Through Vol	456	140	100	522	0
RT Vol	72	62	62	0	48
Lane Flow Rate	821	349	304	767	64
Geometry Grp	5	2	2	7	7
Degree of Util (X)	1.995	0.857	0.764	1.913	0.146
Departure Headway (Hd)	10.618	13.326	13.861	10.99	10.203
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	353	276	264	337	354
Service Time	8.618	11.326	11.861	8.69	7.903
HCM Lane V/C Ratio	2.326	1.264	1.152	2.276	0.181
HCM Control Delay	481.7	62.7	50.9	446.4	14.6
HCM Lane LOS	F	F	F	F	B
HCM 95th-tile Q	47.5	7.2	5.6	42.9	0.5

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAC (2026) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	140	62	66	100	62	88	456	72	53	522	48
Future Volume (vph)	60	140	62	66	100	62	88	456	72	53	522	48
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		0	150		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		11.5	22.5		11.5	22.5	
Total Split (s)	34.0	34.0		34.0	34.0		16.0	73.4		12.6	70.0	
Total Split (%)	28.3%	28.3%		28.3%	28.3%		13.3%	61.2%		10.5%	58.3%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

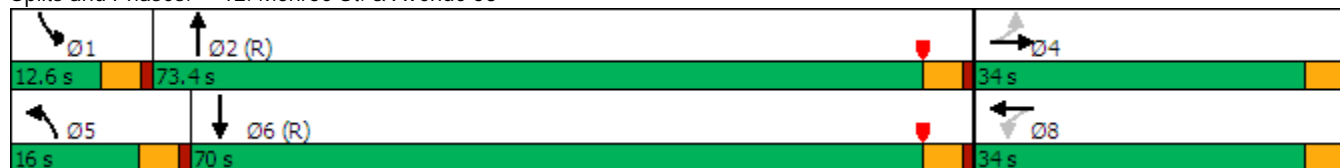
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 75

Control Type: Actuated-Coordinated






















Splits and Phases: 12: Monroe St. & Avenue 58



HCM 6th Signalized Intersection Summary






















12: Monroe St. & Avenue 58

EAC (2026) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	140	62	66	100	62	88	456	72	53	522	48
Future Volume (veh/h)	60	140	62	66	100	62	88	456	72	53	522	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	80	187	83	88	133	83	117	608	96	71	696	64
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	208	284	126	167	249	156	142	917	145	92	934	86
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.08	0.60	0.60	0.05	0.57	0.57
Sat Flow, veh/h	1165	1195	530	1109	1049	655	1734	1535	242	1734	1643	151
Grp Volume(v), veh/h	80	0	270	88	0	216	117	0	704	71	0	760
Grp Sat Flow(s),veh/h/ln	1165	0	1726	1109	0	1703	1734	0	1778	1734	0	1794
Q Serve(g_s), s	7.7	0.0	17.0	9.3	0.0	13.3	8.0	0.0	31.7	4.9	0.0	38.1
Cycle Q Clear(g_c), s	21.0	0.0	17.0	26.3	0.0	13.3	8.0	0.0	31.7	4.9	0.0	38.1
Prop In Lane	1.00		0.31	1.00		0.38	1.00		0.14	1.00		0.08
Lane Grp Cap(c), veh/h	208	0	410	167	0	405	142	0	1061	92	0	1019
V/C Ratio(X)	0.38	0.00	0.66	0.53	0.00	0.53	0.83	0.00	0.66	0.77	0.00	0.75
Avail Cap(c_a), veh/h	217	0	424	176	0	419	166	0	1061	117	0	1019
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	49.1	0.0	41.3	53.2	0.0	39.9	54.3	0.0	16.1	56.1	0.0	19.4
Incr Delay (d2), s/veh	1.2	0.0	3.6	2.6	0.0	1.2	24.6	0.0	3.3	21.3	0.0	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	7.3	2.7	0.0	5.7	4.3	0.0	12.2	2.6	0.0	15.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.3	0.0	44.9	55.8	0.0	41.2	78.8	0.0	19.4	77.4	0.0	24.4
LnGrp LOS	D	A	D	E	A	D	E	A	B	E	A	C
Approach Vol, veh/h	350			304			821			831		
Approach Delay, s/veh	46.1			45.4			27.9			28.9		
Approach LOS	D			D			C			C		
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	10.8	76.1	33.0		14.3	72.7	33.0					
Change Period (Y+Rc), s	4.5	4.5	4.5		4.5	4.5	4.5					
Max Green Setting (Gmax), s	8.1	68.9	29.5		11.5	65.5	29.5					
Max Q Clear Time (g_c+I1), s	6.9	33.7	23.0		10.0	40.1	28.3					
Green Ext Time (p_c), s	0.0	4.9	0.9		0.0	5.1	0.2					
Intersection Summary												
HCM 6th Ctrl Delay	33.3											
HCM 6th LOS	C											

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.









EAC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	111	30	57	121	66	28	460	56	67	532	19
Future Volume (vph)	10	111	30	57	121	66	28	460	56	67	532	19
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 105.3

Intersection LOS F






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	111	30	57	121	66	28	460	56	67	532	19
Future Vol, veh/h	10	111	30	57	121	66	28	460	56	67	532	19
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	128	34	66	139	76	32	529	64	77	611	22
Number of Lanes	1	1	1	0	1	0	1	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	1	3
HCM Control Delay	16.5	35	229.5	45.5
HCM LOS	C	D	F	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	100%	0%	0%	23%	100%	0%	0%
Vol Thru, %	0%	89%	0%	100%	0%	50%	0%	100%	90%
Vol Right, %	0%	11%	0%	0%	100%	27%	0%	0%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	28	516	10	111	30	244	67	355	196
LT Vol	28	0	10	0	0	57	67	0	0
Through Vol	0	460	0	111	0	121	0	355	177
RT Vol	0	56	0	0	30	66	0	0	19
Lane Flow Rate	32	593	11	128	34	280	77	408	226
Geometry Grp	8	8	7	7	7	8	8	8	8
Degree of Util (X)	0.084	1.454	0.031	0.325	0.081	0.718	0.19	0.948	0.521
Departure Headway (Hd)	9.424	8.827	10.724	10.196	9.455	10.179	9.852	9.329	9.259
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	380	415	336	355	381	359	367	391	393
Service Time	7.187	6.59	8.424	7.896	7.155	7.879	7.552	7.029	6.959
HCM Lane V/C Ratio	0.084	1.429	0.033	0.361	0.089	0.78	0.21	1.043	0.575
HCM Control Delay	13.1	241.2	13.8	17.7	13	35	14.8	64.5	21.6
HCM Lane LOS	B	F	B	C	B	D	B	F	C
HCM 95th-tile Q	0.3	30.3	0.1	1.4	0.3	5.3	0.7	10.5	2.9

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.

EAC (2026) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	111	30	57	121	66	28	460	56	67	532	19
Future Volume (vph)	10	111	30	57	121	66	28	460	56	67	532	19
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		11.5	22.5		11.5	22.5	22.5
Total Split (s)	40.4	40.4	40.4	40.4	40.4		11.8	62.6		17.0	67.8	67.8
Total Split (%)	33.7%	33.7%	33.7%	33.7%	33.7%		9.8%	52.2%		14.2%	56.5%	56.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120



Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60






















Control Type: Actuated-Coordinated

Splits and Phases: 13: Monroe St. & Airport Bl.

 Ø1	 Ø2 (R)	 Ø4
17 s	62.6 s	40.4 s
 Ø5	 Ø6 (R)	 Ø8
11.8 s	67.8 s	40.4 s



















HCM 6th Signalized Intersection Summary 13: Monroe St. & Airport Bl.

EAC (2026) PM Peak hour
With Improvements







												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	111	30	57	121	66	28	460	56	67	532	19
Future Volume (veh/h)	10	111	30	57	121	66	28	460	56	67	532	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	11	128	34	66	139	76	32	529	64	77	611	22
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	190	398	338	96	170	85	66	976	118	98	2181	973
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.04	0.61	0.61	0.06	0.63	0.63
Sat Flow, veh/h	1166	1821	1543	268	778	388	1734	1594	193	1734	3460	1543
Grp Volume(v), veh/h	11	128	34	281	0	0	32	0	593	77	611	22
Grp Sat Flow(s),veh/h/ln	1166	1821	1543	1434	0	0	1734	0	1786	1734	1730	1543
Q Serve(g_s), s	0.0	7.1	2.1	16.1	0.0	0.0	2.2	0.0	23.1	5.3	9.5	0.6
Cycle Q Clear(g_c), s	2.0	7.1	2.1	23.2	0.0	0.0	2.2	0.0	23.1	5.3	9.5	0.6
Prop In Lane	1.00		1.00	0.23		0.27	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	190	398	338	351	0	0	66	0	1094	98	2181	973
V/C Ratio(X)	0.06	0.32	0.10	0.80	0.00	0.00	0.48	0.00	0.54	0.79	0.28	0.02
Avail Cap(c_a), veh/h	284	545	462	477	0	0	106	0	1094	181	2181	973
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.4	39.4	37.4	46.2	0.0	0.0	56.5	0.0	13.5	55.9	10.0	8.3
Incr Delay (d2), s/veh	0.1	0.5	0.1	6.9	0.0	0.0	5.3	0.0	1.9	13.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	3.1	0.8	8.5	0.0	0.0	1.0	0.0	8.7	2.6	3.3	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.5	39.8	37.6	53.1	0.0	0.0	61.9	0.0	15.4	69.0	10.3	8.4
LnGrp LOS	D	D	D	D	A	A	E	A	B	E	B	A
Approach Vol, veh/h	173			281			625			710		
Approach Delay, s/veh	39.2			53.1			17.8			16.6		
Approach LOS	D			D			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.3	78.0		30.8	9.1	80.2		30.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	12.5	58.1		35.9	7.3	63.3		35.9				
Max Q Clear Time (g_c+I1), s	7.3	25.1		9.1	4.2	11.5		25.2				
Green Ext Time (p_c), s	0.1	3.7		0.7	0.0	4.1		1.1				
Intersection Summary												
HCM 6th Ctrl Delay	24.9											
HCM 6th LOS	C											

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	279	133	38	194	66	81	507	39	94	446	45
Future Volume (vph)	89	279	133	38	194	66	81	507	39	94	446	45
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	262.9
Intersection LOS	F





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	89	279	133	38	194	66	81	507	39	94	446	45
Future Vol, veh/h	89	279	133	38	194	66	81	507	39	94	446	45
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	98	307	146	42	213	73	89	557	43	103	490	49
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	119.8	80.7	444.4	283.9
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	13%	100%	0%	13%	17%	0%
Vol Thru, %	81%	0%	68%	65%	83%	0%
Vol Right, %	6%	0%	32%	22%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	627	89	412	298	540	45
LT Vol	81	89	0	38	94	0
Through Vol	507	0	279	194	446	0
RT Vol	39	0	133	66	0	45
Lane Flow Rate	689	98	453	327	593	49
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	1.901	0.272	1.167	0.92	1.582	0.121
Departure Headway (Hd)	12.013	13.04	12.264	14.976	12.101	11.263
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	310	278	299	246	309	320
Service Time	10.013	10.74	9.964	12.976	9.801	8.963
HCM Lane V/C Ratio	2.223	0.353	1.515	1.329	1.919	0.153
HCM Control Delay	444.4	20.5	141.2	80.7	306.3	15.5
HCM Lane LOS	F	C	F	F	F	C
HCM 95th-tile Q	39.2	1.1	14.8	8	28	0.4

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAC (2026) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	279	133	38	194	66	81	507	39	94	446	45
Future Volume (vph)	89	279	133	38	194	66	81	507	39	94	446	45
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		11.5	22.5		11.5	22.5	
Total Split (s)	44.0	44.0		44.0	44.0		15.0	60.0		16.0	61.0	
Total Split (%)	36.7%	36.7%		36.7%	36.7%		12.5%	50.0%		13.3%	50.8%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated





















Splits and Phases: 14: Monroe St. & Avenue 54



HCM 6th Signalized Intersection Summary























14: Monroe St. & Avenue 54

EAC (2026) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	279	133	38	194	66	81	507	39	94	446	45
Future Volume (veh/h)	89	279	133	38	194	66	81	507	39	94	446	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	98	307	146	42	213	73	89	557	43	103	490	49
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	251	362	172	120	402	138	111	841	65	127	836	84
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.06	0.50	0.50	0.07	0.51	0.51
Sat Flow, veh/h	1093	1167	555	938	1297	444	1734	1669	129	1734	1629	163
Grp Volume(v), veh/h	98	0	453	42	0	286	89	0	600	103	0	539
Grp Sat Flow(s),veh/h/ln	1093	0	1721	938	0	1741	1734	0	1798	1734	0	1792
Q Serve(g_s), s	9.8	0.0	29.6	5.3	0.0	16.3	6.1	0.0	29.8	7.0	0.0	25.1
Cycle Q Clear(g_c), s	26.0	0.0	29.6	34.8	0.0	16.3	6.1	0.0	29.8	7.0	0.0	25.1
Prop In Lane	1.00		0.32	1.00		0.26	1.00		0.07	1.00		0.09
Lane Grp Cap(c), veh/h	251	0	534	120	0	540	111	0	906	127	0	919
V/C Ratio(X)	0.39	0.00	0.85	0.35	0.00	0.53	0.80	0.00	0.66	0.81	0.00	0.59
Avail Cap(c_a), veh/h	272	0	567	138	0	573	152	0	906	166	0	919
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.9	0.0	38.7	55.0	0.0	34.1	55.4	0.0	22.2	54.8	0.0	20.4
Incr Delay (d2), s/veh	1.0	0.0	11.1	1.7	0.0	0.8	18.9	0.0	3.8	20.0	0.0	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	13.3	1.3	0.0	6.6	3.2	0.0	12.4	3.7	0.0	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.9	0.0	49.8	56.8	0.0	34.9	74.3	0.0	26.0	74.8	0.0	23.1
LnGrp LOS	D	A	D	E	A	C	E	A	C	E	A	C
Approach Vol, veh/h	551			328			689			642		
Approach Delay, s/veh	49.1			37.7			32.2			31.4		
Approach LOS	D			D			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.3	65.0		41.7	12.2	66.1		41.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	11.5	55.5		39.5	10.5	56.5		39.5				
Max Q Clear Time (g_c+I1), s	9.0	31.8		31.6	8.1	27.1		36.8				
Green Ext Time (p_c), s	0.0	3.6		1.8	0.0	3.2		0.4				
Intersection Summary												
HCM 6th Ctrl Delay				37.0								
HCM 6th LOS				D								

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52









EAC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	433	92	68	425	124	64	504	78	128	447	97
Future Volume (vph)	116	433	92	68	425	124	64	504	78	128	447	97
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 292

Intersection LOS F























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	116	433	92	68	425	124	64	504	78	128	447	97
Future Vol, veh/h	116	433	92	68	425	124	64	504	78	128	447	97
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	135	503	107	79	494	144	74	586	91	149	520	113
Number of Lanes	1	1	1	0	2	1	0	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay	259.7	86.5	750.1	71.1
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	10%	100%	0%	0%	32%	0%	0%	100%	0%	0%
Vol Thru, %	78%	0%	100%	0%	68%	100%	0%	0%	100%	61%
Vol Right, %	12%	0%	0%	100%	0%	0%	100%	0%	0%	39%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	646	116	433	92	210	283	124	128	298	246
LT Vol	64	116	0	0	68	0	0	128	0	0
Through Vol	504	0	433	0	142	283	0	0	298	149
RT Vol	78	0	0	92	0	0	124	0	0	97
Lane Flow Rate	751	135	503	107	244	329	144	149	347	286
Geometry Grp	8	8	8	8	8	8	8	7	7	7
Degree of Util (X)	2.587	0.476	1.708	0.342	0.809	1.078	0.444	0.449	0.997	0.801
Departure Headway (Hd)	12.845	16.043	15.474	14.677	16.506	16.318	15.508	15.607	15.044	14.733
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	293	227	242	247	222	224	234	232	246	249
Service Time	10.545	13.743	13.174	12.377	14.206	14.018	13.208	13.307	12.744	12.433
HCM Lane V/C Ratio	2.563	0.595	2.079	0.433	1.099	1.469	0.615	0.642	1.411	1.149
HCM Control Delay	750.1	32.5	370.5	24.8	64.9	127.3	30	30.4	99.2	58.2
HCM Lane LOS	F	D	F	C	F	F	D	D	F	F
HCM 95th-tile Q	60.1	2.3	26.3	1.5	5.9	10.6	2.1	2.2	9.4	6.1

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52

EAC (2026) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	433	92	68	425	124	64	504	78	128	447	97
Future Volume (vph)	116	433	92	68	425	124	64	504	78	128	447	97
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2			6		
Detector Phase	7	4	4	3	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	17.8	40.0	40.0	11.5	33.7	33.7	68.5	68.5		68.5	68.5	
Total Split (%)	14.8%	33.3%	33.3%	9.6%	28.1%	28.1%	57.1%	57.1%		57.1%	57.1%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5		4.5		4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	None	None	None	None	None	C-Max	C-Max		C-Max	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

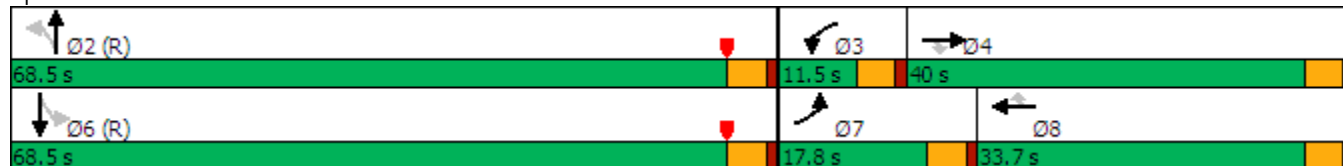
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 90























Control Type: Actuated-Coordinated

Splits and Phases: 15: Monroe St. & Avenue 52



























HCM 6th Signalized Intersection Summary 15: Monroe St. & Avenue 52

EAC (2026) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	433	92	68	425	124	64	504	78	128	447	97
Future Volume (veh/h)	116	433	92	68	425	124	64	504	78	128	447	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	136	509	108	80	500	146	75	593	92	151	526	114
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	162	533	452	100	891	397	100	688	104	249	1520	328
Arrive On Green	0.09	0.29	0.29	0.06	0.26	0.26	0.54	0.54	0.54	0.54	0.54	0.54
Sat Flow, veh/h	1734	1821	1543	1734	3460	1543	125	1281	194	757	2830	611
Grp Volume(v), veh/h	136	509	108	80	500	146	760	0	0	151	321	319
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1730	1543	1600	0	0	757	1730	1711
Q Serve(g_s), s	9.3	32.9	6.4	5.5	15.1	9.3	37.3	0.0	0.0	6.9	12.6	12.8
Cycle Q Clear(g_c), s	9.3	32.9	6.4	5.5	15.1	9.3	50.0	0.0	0.0	56.9	12.6	12.8
Prop In Lane	1.00		1.00	1.00		1.00	0.10		0.12	1.00		0.36
Lane Grp Cap(c), veh/h	162	533	452	100	891	397	892	0	0	249	929	919
V/C Ratio(X)	0.84	0.95	0.24	0.80	0.56	0.37	0.85	0.00	0.00	0.61	0.35	0.35
Avail Cap(c_a), veh/h	192	539	457	101	891	397	892	0	0	249	929	919
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.5	41.7	32.3	55.8	38.7	36.5	24.1	0.0	0.0	31.0	15.8	15.8
Incr Delay (d2), s/veh	23.8	27.6	0.3	34.3	0.8	0.6	10.1	0.0	0.0	10.5	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	17.9	2.3	3.3	6.2	3.4	19.2	0.0	0.0	4.7	4.8	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.4	69.3	32.5	90.1	39.5	37.1	34.2	0.0	0.0	41.5	16.8	16.9
LnGrp LOS	E	E	C	F	D	D	C	A	A	D	B	B
Approach Vol, veh/h	753			726			760			791		
Approach Delay, s/veh	65.5			44.6			34.2			21.6		
Approach LOS	E			D			C			C		
Timer - Assigned Phs	2		3	4		6		7	8			
Phs Duration (G+Y+Rc), s	68.9		11.4	39.6		68.9		15.7	35.4			
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5		4.5	4.5			
Max Green Setting (Gmax), s	64.0		7.0	35.5		64.0		13.3	29.2			
Max Q Clear Time (g_c+I1), s	52.0		7.5	34.9		58.9		11.3	17.1			
Green Ext Time (p_c), s	4.0		0.0	0.2		2.0		0.1	2.6			
Intersection Summary												
HCM 6th Ctrl Delay	41.2											
HCM 6th LOS	D											

Lanes, Volumes, Timings
16: Monroe St. & 50th Avenue

EAC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	516	58	33	424	126	50	700	73	137	547	43
Future Volume (vph)	60	516	58	33	424	126	50	700	73	137	547	43
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	20.5	20.5	20.5	20.5	20.5	11.5	11.5	20.5		11.5	20.5	
Total Split (s)	26.0	26.0	26.0	26.0	26.0	12.0	11.5	22.0		12.0	22.5	
Total Split (%)	43.3%	43.3%	43.3%	43.3%	43.3%	20.0%	19.2%	36.7%		20.0%	37.5%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag						Lead	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

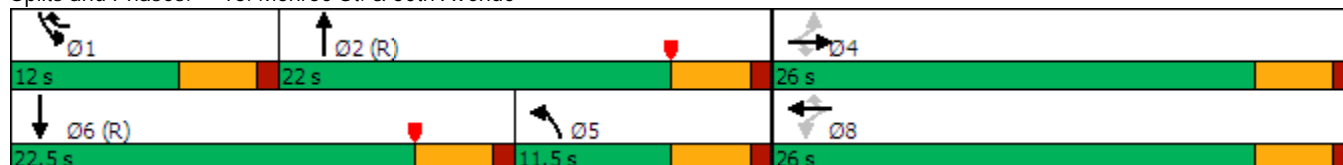
Actuated Cycle Length: 60

Offset: 14.6 (24%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 65























Control Type: Actuated-Coordinated

Splits and Phases: 16: Monroe St. & 50th Avenue



















HCM 6th Signalized Intersection Summary
16: Monroe St. & 50th Avenue

EAC (2026) PM Peak hour





												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	516	58	33	424	126	50	700	73	137	547	43
Future Volume (veh/h)	60	516	58	33	424	126	50	700	73	137	547	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	67	573	64	37	471	140	56	778	81	152	608	48
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	668	566	180	668	747	217	1000	104	203	1002	79
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.13	0.32	0.31	0.12	0.31	0.30
Sat Flow, veh/h	810	1821	1543	791	1821	1543	1734	3163	329	1734	3249	256
Grp Volume(v), veh/h	67	573	64	37	471	140	56	425	434	152	323	333
Grp Sat Flow(s),veh/h/ln	810	1821	1543	791	1821	1543	1734	1730	1762	1734	1730	1775
Q Serve(g_s), s	4.6	17.4	1.6	2.7	13.3	3.1	1.8	13.4	13.4	5.1	9.5	9.6
Cycle Q Clear(g_c), s	17.9	17.4	1.6	20.2	13.3	3.1	1.8	13.4	13.4	5.1	9.5	9.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		0.14
Lane Grp Cap(c), veh/h	238	668	566	180	668	747	217	547	557	203	533	547
V/C Ratio(X)	0.28	0.86	0.11	0.21	0.71	0.19	0.26	0.78	0.78	0.75	0.61	0.61
Avail Cap(c_a), veh/h	238	668	566	180	668	747	217	547	557	231	533	547
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	17.6	12.6	26.9	16.2	8.8	23.7	18.6	18.7	25.6	17.7	17.7
Incr Delay (d2), s/veh	0.6	10.8	0.1	0.6	3.4	0.1	0.6	10.5	10.3	11.0	5.0	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	7.7	0.5	0.5	4.9	0.8	0.7	5.9	6.0	2.4	3.8	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.5	28.4	12.6	27.4	19.6	8.9	24.4	29.1	29.0	36.6	22.7	22.7
LnGrp LOS	C	C	B	C	B	A	C	C	C	D	C	C
Approach Vol, veh/h	704				648				915			
Approach Delay, s/veh	26.6				17.7				28.7			
Approach LOS	C				B				C			
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	11.0	23.0	26.0		11.5	22.5	26.0					
Change Period (Y+Rc), s	4.5	4.5	4.5		4.5	4.5	4.5					
Max Green Setting (Gmax), s	7.5	17.5	21.5		7.0	18.0	21.5					
Max Q Clear Time (g_c+I1), s	7.1	15.4	19.9		3.8	11.6	22.2					
Green Ext Time (p_c), s	0.0	1.0	0.7		0.0	1.9	0.0					
Intersection Summary												
HCM 6th Ctrl Delay	25.0											
HCM 6th LOS	C											

Lanes, Volumes, Timings
17: Jackson St. & 58th Avenue

EAC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	178	10	0	130	12	16	245	18	7	217	37
Future Volume (vph)	44	178	10	0	130	12	16	245	18	7	217	37
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		5266			1079			1013			510	
Travel Time (s)		71.8			14.7			12.6			6.3	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	16.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	178	10	0	130	12	16	245	18	7	217	37
Future Vol, veh/h	44	178	10	0	130	12	16	245	18	7	217	37
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	56	225	13	0	165	15	20	310	23	9	275	47
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	16.8	13.3	18.6	17.3
HCM LOS	C	B	C	C

























Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	19%	0%	3%
Vol Thru, %	88%	77%	92%	83%
Vol Right, %	6%	4%	8%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	279	232	142	261
LT Vol	16	44	0	7
Through Vol	245	178	130	217
RT Vol	18	10	12	37
Lane Flow Rate	353	294	180	330
Geometry Grp	1	1	1	1
Degree of Util (X)	0.61	0.532	0.338	0.57
Departure Headway (Hd)	6.216	6.524	6.774	6.216
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	579	552	528	578
Service Time	4.277	4.588	4.85	4.279
HCM Lane V/C Ratio	0.61	0.533	0.341	0.571
HCM Control Delay	18.6	16.8	13.3	17.3
HCM Lane LOS	C	C	B	C
HCM 95th-tile Q	4.1	3.1	1.5	3.6

WITH PROJECT CONDITIONS










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Lanes, Volumes, Timings
1: Madison St. & Avenue 58

EAPC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	118	74	7	39	83	74	19	428	93	105	341	74
Future Volume (vph)	118	74	7	39	83	74	19	428	93	105	341	74
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Intersection Delay, s/veh	17.3											
Intersection LOS	C											

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	118	74	7	39	83	74	19	428	93	105	341	74
Future Vol, veh/h	118	74	7	39	83	74	19	428	93	105	341	74
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	126	79	7	41	88	79	20	455	99	112	363	79
Number of Lanes	1	1	1	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	14.9	13.2	20.5	16.4
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	61%	0%	100%	0%	0%	100%	27%	0%	100%
Vol Right, %	0%	0%	39%	0%	0%	100%	0%	0%	73%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	19	285	236	118	74	7	39	55	102	105	227
LT Vol	19	0	0	118	0	0	39	0	0	105	0
Through Vol	0	285	143	0	74	0	0	55	28	0	227
RT Vol	0	0	93	0	0	7	0	0	74	0	0
Lane Flow Rate	20	304	251	126	79	7	41	59	108	112	242
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.046	0.645	0.514	0.317	0.188	0.016	0.105	0.141	0.244	0.254	0.517
Departure Headway (Hd)	8.15	7.65	7.374	9.095	8.595	7.895	9.146	8.646	8.136	8.193	7.693
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	439	470	489	394	416	452	391	414	440	438	467
Service Time	5.909	5.409	5.133	6.869	6.369	5.669	6.921	6.421	5.911	5.954	5.454
HCM Lane V/C Ratio	0.046	0.647	0.513	0.32	0.19	0.015	0.105	0.143	0.245	0.256	0.518
HCM Control Delay	11.3	23.4	17.7	16.1	13.4	10.8	13	12.8	13.5	13.7	18.5
HCM Lane LOS	B	C	C	C	B	B	B	B	B	B	C
HCM 95th-tile Q	0.1	4.5	2.9	1.3	0.7	0	0.3	0.5	0.9	1	2.9

Lanes, Volumes, Timings
1: Madison St. & Avenue 58

EAPC (2026) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	118	74	7	39	83	74	19	428	93	105	341	74
Future Volume (vph)	118	74	7	39	83	74	19	428	93	105	341	74
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	28.0	38.0	38.0	15.0	25.0	25.0	14.0	40.0	40.0	27.0	53.0	53.0
Total Split (%)	23.3%	31.7%	31.7%	12.5%	20.8%	20.8%	11.7%	33.3%	33.3%	22.5%	44.2%	44.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

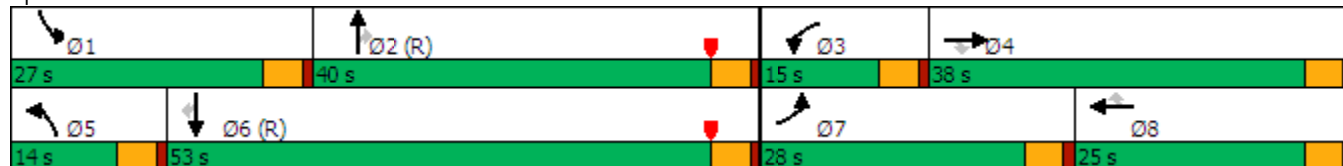
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated

























Splits and Phases: 1: Madison St. & Avenue 58



HCM 6th Signalized Intersection Summary















1: Madison St. & Avenue 58

EAPC (2026) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	74	7	39	83	74	19	428	93	105	341	74
Future Volume (veh/h)	118	74	7	39	83	74	19	428	93	105	341	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	126	79	7	41	88	79	20	455	99	112	363	79
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	154	211	179	75	245	109	49	2114	943	138	2292	1022
Arrive On Green	0.09	0.12	0.12	0.04	0.07	0.07	0.03	0.61	0.61	0.08	0.66	0.66
Sat Flow, veh/h	1734	1821	1543	1734	3460	1543	1734	3460	1543	1734	3460	1543
Grp Volume(v), veh/h	126	79	7	41	88	79	20	455	99	112	363	79
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1730	1543	1734	1730	1543	1734	1730	1543
Q Serve(g_s), s	8.6	4.8	0.5	2.8	2.9	6.0	1.4	7.1	3.2	7.6	4.7	2.2
Cycle Q Clear(g_c), s	8.6	4.8	0.5	2.8	2.9	6.0	1.4	7.1	3.2	7.6	4.7	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	154	211	179	75	245	109	49	2114	943	138	2292	1022
V/C Ratio(X)	0.82	0.37	0.04	0.54	0.36	0.72	0.41	0.22	0.11	0.81	0.16	0.08
Avail Cap(c_a), veh/h	340	508	431	152	591	264	137	2114	943	325	2292	1022
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.7	49.0	47.1	56.2	53.2	54.6	57.3	10.5	9.7	54.3	7.6	7.2
Incr Delay (d2), s/veh	10.3	1.1	0.1	6.0	0.9	8.7	5.3	0.2	0.2	10.6	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	2.2	0.2	1.3	1.3	2.5	0.7	2.5	1.0	3.6	1.6	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.0	50.1	47.2	62.2	54.0	63.3	62.6	10.7	9.9	64.9	7.8	7.4
LnGrp LOS	E	D	D	E	D	E	E	B	A	E	A	A
Approach Vol, veh/h		212			208			574			554	
Approach Delay, s/veh		58.3			59.2			12.4			19.3	
Approach LOS		E			E			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.1	77.8	9.7	18.4	7.9	84.0	15.1	13.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	22.5	35.5	10.5	33.5	9.5	48.5	23.5	20.5				
Max Q Clear Time (g_c+I1), s	9.6	9.1	4.8	6.8	3.4	6.7	10.6	8.0				
Green Ext Time (p_c), s	0.2	3.0	0.0	0.3	0.0	2.5	0.2	0.5				
Intersection Summary												
HCM 6th Ctrl Delay			27.4									
HCM 6th LOS			C									

Lanes, Volumes, Timings
2: Madison St. & Airport Bl.

EAPC (2026) AM Peak hour

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	51	84	1	567	54	128	492
Future Volume (vph)	51	84	1	567	54	128	492
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		3			2		
Detector Phase	3	3	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	11.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	15.0	15.0	13.0	27.0	27.0	18.0	32.0
Total Split (%)	25.0%	25.0%	21.7%	45.0%	45.0%	30.0%	53.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 45

Control Type: Actuated-Coordinated















Splits and Phases: 2: Madison St. & Airport Bl.



HCM 6th Signalized Intersection Summary




























2: Madison St. & Airport Bl.

EAPC (2026) AM Peak hour

							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	51	84	1	567	54	128	492
Future Volume (veh/h)	51	84	1	567	54	128	492
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	59	97		652	62	147	566
Peak Hour Factor	0.87	0.87		0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	202	180		1963	876	202	2596
Arrive On Green	0.12	0.12		0.57	0.57	0.12	0.75
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	59	97		652	62	147	566
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	1.9	3.6		6.0	1.1	4.9	2.9
Cycle Q Clear(g_c), s	1.9	3.6		6.0	1.1	4.9	2.9
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	202	180		1963	876	202	2596
V/C Ratio(X)	0.29	0.54		0.33	0.07	0.73	0.22
Avail Cap(c_a), veh/h	318	283		1963	876	405	2596
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	25.0		6.9	5.8	25.6	2.2
Incr Delay (d2), s/veh	0.8	2.5		0.5	0.2	5.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.3		1.5	0.3	2.0	0.2
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	25.0	27.5		7.4	6.0	30.6	2.4
LnGrp LOS	C	C		A	A	C	A
Approach Vol, veh/h	156			714			713
Approach Delay, s/veh	26.6			7.3			8.2
Approach LOS	C			A			A
Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	11.0	38.0				49.0	11.0
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	13.5	22.5				27.5	10.5
Max Q Clear Time (g_c+I1), s	6.9	8.0				4.9	5.6
Green Ext Time (p_c), s	0.2	3.5				3.3	0.2
Intersection Summary							
HCM 6th Ctrl Delay			9.6				
HCM 6th LOS			A				
Notes							
User approved pedestrian interval to be less than phase max green.							
User approved ignoring U-Turning movement.							

Lanes, Volumes, Timings
3: Madison St. & Avenue 54









EAPC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 			 	
Traffic Volume (vph)	19	244	405	51	221	86	304	393	45	85	292	20
Future Volume (vph)	19	244	405	51	221	86	304	393	45	85	292	20
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 106.3

Intersection LOS F
























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	244	405	51	221	86	304	393	45	85	292	20
Future Vol, veh/h	19	244	405	51	221	86	304	393	45	85	292	20
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	274	455	57	248	97	342	442	51	96	328	22
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	239.1	27.6	64.8	31.2
HCM LOS	F	D	F	D

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	74%	0%	100%	17%	0%	100%	46%	0%	100%	83%
Vol Right, %	0%	0%	26%	0%	0%	83%	0%	0%	54%	0%	0%	17%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	304	262	176	19	163	486	51	147	160	85	195	117
LT Vol	304	0	0	19	0	0	51	0	0	85	0	0
Through Vol	0	262	131	0	163	81	0	147	74	0	195	97
RT Vol	0	0	45	0	0	405	0	0	86	0	0	20
Lane Flow Rate	342	294	198	21	183	546	57	166	179	96	219	132
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	1.032	0.85	0.562	0.069	0.565	1.621	0.195	0.541	0.568	0.322	0.707	0.422
Departure Headway (Hd)	11.758	11.258	11.079	11.791	11.291	10.678	12.892	12.392	12.014	12.809	12.309	12.19
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	311	324	328	306	322	344	280	293	303	283	295	298
Service Time	9.458	8.958	8.779	9.491	8.991	8.408	10.592	10.092	9.714	10.509	10.009	9.89
HCM Lane V/C Ratio	1.1	0.907	0.604	0.069	0.568	1.587	0.204	0.567	0.591	0.339	0.742	0.443
HCM Control Delay	95.9	54	27.1	15.4	27.7	318.5	18.7	28.8	29.4	21.5	40	23.5
HCM Lane LOS	F	F	D	C	D	F	C	D	D	C	E	C
HCM 95th-tile Q	11.5	7.5	3.3	0.2	3.3	32.4	0.7	3	3.3	1.3	5	2

Lanes, Volumes, Timings
3: Madison St. & Avenue 54

EAPC (2026) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	244	405	51	221	86	304	393	45	85	292	20
Future Volume (vph)	19	244	405	51	221	86	304	393	45	85	292	20
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	
Total Split (s)	13.0	43.0		17.0	47.0	47.0	28.0	38.0	38.0	22.0	32.0	
Total Split (%)	10.8%	35.8%		14.2%	39.2%	39.2%	23.3%	31.7%	31.7%	18.3%	26.7%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

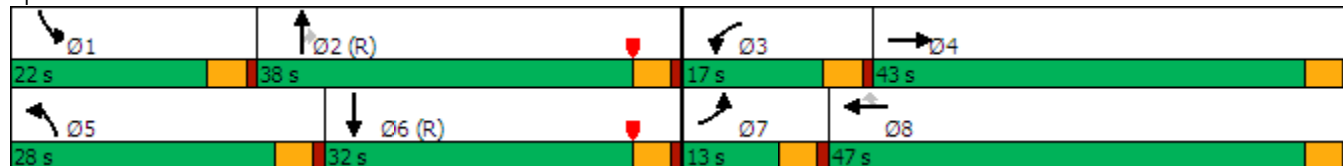
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated























Splits and Phases: 3: Madison St. & Avenue 54



HCM 6th Signalized Intersection Summary

























3: Madison St. & Avenue 54

EAPC (2026) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	244	405	51	221	86	304	393	45	85	292	20
Future Volume (veh/h)	19	244	405	51	221	86	304	393	45	85	292	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	21	274	455	57	248	97	342	442	51	96	328	22
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	51	539	481	86	1148	512	413	1452	648	120	1206	80
Arrive On Green	0.03	0.31	0.31	0.05	0.33	0.33	0.12	0.42	0.42	0.07	0.37	0.37
Sat Flow, veh/h	1734	1730	1543	1734	3460	1543	3365	3460	1543	1734	3292	220
Grp Volume(v), veh/h	21	274	455	57	248	97	342	442	51	96	172	178
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1734	1730	1782
Q Serve(g_s), s	1.4	15.5	34.5	3.9	6.2	5.4	11.9	10.2	2.4	6.5	8.4	8.5
Cycle Q Clear(g_c), s	1.4	15.5	34.5	3.9	6.2	5.4	11.9	10.2	2.4	6.5	8.4	8.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	51	539	481	86	1148	512	413	1452	648	120	634	653
V/C Ratio(X)	0.41	0.51	0.95	0.66	0.22	0.19	0.83	0.30	0.08	0.80	0.27	0.27
Avail Cap(c_a), veh/h	123	555	495	181	1225	547	659	1452	648	253	634	653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.2	33.8	40.3	56.0	28.9	28.6	51.4	23.2	20.9	55.0	26.8	26.8
Incr Delay (d2), s/veh	4.8	0.7	25.5	8.4	0.1	0.2	4.9	0.5	0.2	11.5	1.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	6.3	15.6	1.8	2.5	1.9	5.1	4.1	0.9	3.2	3.5	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.0	34.5	65.9	64.4	29.0	28.8	56.3	23.7	21.1	66.5	27.8	27.8
LnGrp LOS	E	C	E	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h	750			402			835			446		
Approach Delay, s/veh	54.3			33.9			36.9			36.1		
Approach LOS	D			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.8	54.9	10.5	41.9	19.2	48.5	8.0	44.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	17.5	33.5	12.5	38.5	23.5	27.5	8.5	42.5				
Max Q Clear Time (g_c+I1), s	8.5	12.2	5.9	36.5	13.9	10.5	3.4	8.2				
Green Ext Time (p_c), s	0.1	2.6	0.0	0.8	0.8	1.5	0.0	1.7				
Intersection Summary												
HCM 6th Ctrl Delay	41.6											
HCM 6th LOS	D											

Lanes, Volumes, Timings
4: Madison St. & Avenue 52

EAPC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	466	64	35	422	72	145	342	29	63	284	63
Future Volume (vph)	73	466	64	35	422	72	145	342	29	63	284	63
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	23.0	49.0	49.0	15.0	41.0	41.0	20.0	41.0	41.0	15.0	36.0	36.0
Total Split (%)	19.2%	40.8%	40.8%	12.5%	34.2%	34.2%	16.7%	34.2%	34.2%	12.5%	30.0%	30.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

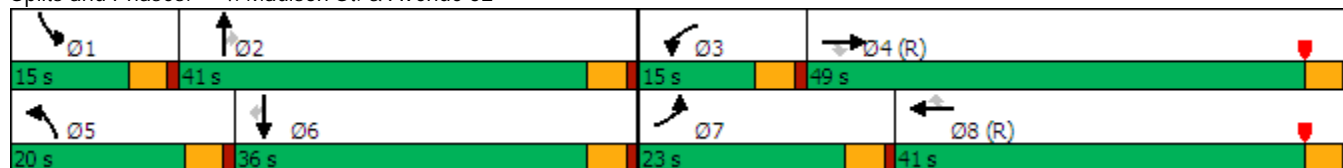
Actuated Cycle Length: 120

Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated

























Splits and Phases: 4: Madison St. & Avenue 52



HCM 6th Signalized Intersection Summary


4: Madison St. & Avenue 52

EAPC (2026) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	466	64	35	422	72	145	342	29	63	284	63
Future Volume (veh/h)	73	466	64	35	422	72	145	342	29	63	284	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	84	536	74	40	485	83	167	393	33	72	326	72
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	106	1557	694	75	1493	666	227	1052	469	178	1003	447
Arrive On Green	0.06	0.45	0.45	0.04	0.43	0.43	0.07	0.30	0.30	0.05	0.29	0.29
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	84	536	74	40	485	83	167	393	33	72	326	72
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	5.7	12.1	3.3	2.7	11.1	3.9	5.8	10.7	1.8	2.5	8.9	4.2
Cycle Q Clear(g_c), s	5.7	12.1	3.3	2.7	11.1	3.9	5.8	10.7	1.8	2.5	8.9	4.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	106	1557	694	75	1493	666	227	1052	469	178	1003	447
V/C Ratio(X)	0.79	0.34	0.11	0.54	0.32	0.12	0.74	0.37	0.07	0.40	0.33	0.16
Avail Cap(c_a), veh/h	267	1557	694	152	1493	666	435	1052	469	294	1003	447
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.5	21.5	19.1	56.3	22.6	20.5	54.9	32.8	29.7	55.0	33.4	31.7
Incr Delay (d2), s/veh	12.1	0.6	0.3	5.9	0.6	0.4	4.6	1.0	0.3	1.5	0.9	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	4.8	1.2	1.3	4.3	1.4	2.5	4.4	0.7	1.1	3.7	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.7	22.1	19.4	62.1	23.1	20.9	59.5	33.8	30.0	56.4	34.3	32.5
LnGrp LOS	E	C	B	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h	694			608			593			470		
Approach Delay, s/veh	27.3			25.4			40.8			37.4		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.9	41.0	9.7	58.5	12.6	39.3	11.9	56.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	36.5	10.5	44.5	15.5	31.5	18.5	36.5				
Max Q Clear Time (g_c+I1), s	4.5	12.7	4.7	14.1	7.8	10.9	7.7	13.1				
Green Ext Time (p_c), s	0.1	2.3	0.0	3.7	0.3	2.0	0.1	3.0				
Intersection Summary												
HCM 6th Ctrl Delay	32.2											
HCM 6th LOS	C											

Lanes, Volumes, Timings
5: Madison St. & Avenue 50/50th Avenue

EAPC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	365	71	33	372	33	132	332	52	55	325	117
Future Volume (vph)	80	365	71	33	372	33	132	332	52	55	325	117
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	22.0	47.0	47.0	17.0	42.0	42.0	18.0	41.0	41.0	15.0	38.0	38.0
Total Split (%)	18.3%	39.2%	39.2%	14.2%	35.0%	35.0%	15.0%	34.2%	34.2%	12.5%	31.7%	31.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

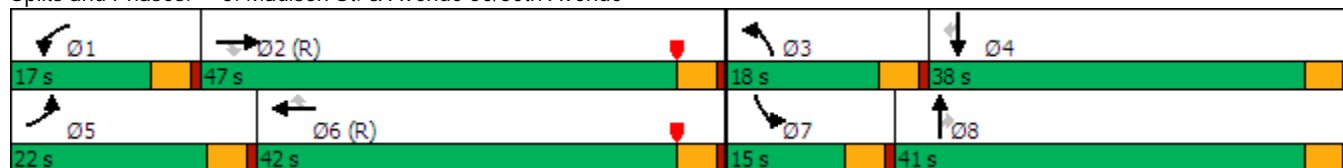
Actuated Cycle Length: 120

Offset: 64.5 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue




























HCM 6th Signalized Intersection Summary 5: Madison St. & Avenue 50/50th Avenue

EAPC (2026) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	365	71	33	372	33	132	332	52	55	325	117
Future Volume (veh/h)	80	365	71	33	372	33	132	332	52	55	325	117
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	82	372	72	34	380	34	135	339	53	56	332	119
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	104	1581	705	69	1510	674	194	1052	469	166	1023	457
Arrive On Green	0.06	0.46	0.46	0.04	0.44	0.44	0.06	0.30	0.30	0.05	0.30	0.30
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	82	372	72	34	380	34	135	339	53	56	332	119
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	5.6	7.8	3.2	2.3	8.3	1.5	4.7	9.1	3.0	1.9	9.0	7.1
Cycle Q Clear(g_c), s	5.6	7.8	3.2	2.3	8.3	1.5	4.7	9.1	3.0	1.9	9.0	7.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	104	1581	705	69	1510	674	194	1052	469	166	1023	457
V/C Ratio(X)	0.79	0.24	0.10	0.50	0.25	0.05	0.70	0.32	0.11	0.34	0.32	0.26
Avail Cap(c_a), veh/h	253	1581	705	181	1510	674	379	1052	469	294	1023	457
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.6	19.8	18.6	56.5	21.4	19.5	55.5	32.2	30.1	55.1	32.9	32.2
Incr Delay (d2), s/veh	12.3	0.3	0.3	5.4	0.4	0.1	4.4	0.8	0.5	1.2	0.8	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	3.1	1.1	1.1	3.3	0.5	2.1	3.8	1.1	0.8	3.7	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.0	20.2	18.8	61.9	21.8	19.6	59.9	33.0	30.6	56.3	33.8	33.6
LnGrp LOS	E	C	B	E	C	B	E	C	C	E	C	C
Approach Vol, veh/h	526			448			527			507		
Approach Delay, s/veh	27.4			24.7			39.7			36.2		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	59.3	11.4	40.0	11.7	56.9	10.4	41.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	12.5	42.5	13.5	33.5	17.5	37.5	10.5	36.5				
Max Q Clear Time (g_c+I1), s	4.3	9.8	6.7	11.0	7.6	10.3	3.9	11.1				
Green Ext Time (p_c), s	0.0	2.5	0.2	2.2	0.1	2.3	0.0	2.1				
Intersection Summary												
HCM 6th Ctrl Delay	32.2											
HCM 6th LOS	C											

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54









EAPC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 		 	 	
Traffic Volume (vph)	8	10	13	43	7	477	5	250	30	607	192	27
Future Volume (vph)	8	10	13	43	7	477	5	250	30	607	192	27
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh54.2

Intersection LOS F






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	10	13	43	7	477	5	250	30	607	192	27
Future Vol, veh/h	8	10	13	43	7	477	5	250	30	607	192	27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	11	14	48	8	530	6	278	33	674	213	30
Number of Lanes	1	2	0	1	1	1	0	2	0	2	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach RightNB		SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	13.7	111.6	17.9	31.6
HCM LOS	B	F	C	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	4%	0%	100%	0%	0%	100%	0%	0%	100%	100%	0%
Vol Thru, %	96%	81%	0%	100%	20%	0%	100%	0%	0%	0%	88%
Vol Right, %	0%	19%	0%	0%	80%	0%	0%	100%	0%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	130	155	8	7	16	43	7	477	304	304	219
LT Vol	5	0	8	0	0	43	0	0	304	304	0
Through Vol	125	125	0	7	3	0	7	0	0	0	192
RT Vol	0	30	0	0	13	0	0	477	0	0	27
Lane Flow Rate	144	172	9	7	18	48	8	530	337	337	243
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.361	0.423	0.027	0.021	0.049	0.121	0.019	1.164	0.78	0.78	0.523
Departure Headway (Hd)	9.303	9.149	11.303	10.783	10.203	9.126	8.618	7.906	8.659	8.659	8.068
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	389	396	319	334	353	393	416	461	422	422	450
Service Time	7.003	6.849	9.003	8.483	7.903	6.872	6.363	5.651	6.359	6.359	5.768
HCM Lane V/C Ratio	0.37	0.434	0.028	0.021	0.051	0.122	0.019	1.15	0.799	0.799	0.54
HCM Control Delay	17.2	18.4	14.3	13.7	13.4	13.1	11.5	121.9	36	36	19.3
HCM Lane LOS	C	C	B	B	B	B	B	F	E	E	C
HCM 95th-tile Q	1.6	2.1	0.1	0.1	0.2	0.4	0.1	19.4	6.7	6.7	3

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54

EAPC (2026) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	10	13	43	7	477	5	250	30	607	192	27
Future Volume (vph)	8	10	13	43	7	477	5	250	30	607	192	27
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases		2			6	4	8	8		4	4	
Permitted Phases	2			6		6						4
Detector Phase	2	2		6	6	4	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5		22.5	22.5	22.5
Total Split (s)	30.0	30.0		30.0	30.0	60.0	30.0	30.0		60.0	60.0	60.0
Total Split (%)	25.0%	25.0%		25.0%	25.0%	50.0%	25.0%	25.0%		50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		None	None	Max	Max	Max		Max	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

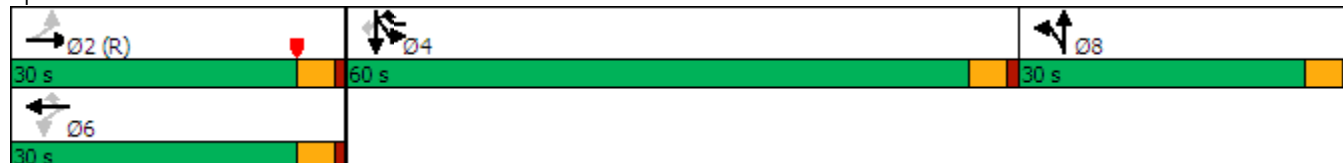
Actuated Cycle Length: 120

Offset: 87 (73%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 70






















Control Type: Actuated-Coordinated

Splits and Phases: 6: Jefferson St. & Avenue 54























HCM 6th Signalized Intersection Summary 6: Jefferson St. & Avenue 54

EAPC (2026) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	10	13	43	7	477	5	250	30	607	192	27
Future Volume (veh/h)	8	10	13	43	7	477	5	250	30	607	192	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	9	11	14	48	8	530	6	278	33	674	213	30
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	241	368	328	345	387	1042	14	662	82	1556	1600	714
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.46	0.46	0.46
Sat Flow, veh/h	867	1730	1543	1386	1821	1543	65	3117	387	3365	3460	1543
Grp Volume(v), veh/h	9	11	14	48	8	530	168	0	149	674	213	30
Grp Sat Flow(s),veh/h/ln	867	1730	1543	1386	1821	1543	1818	0	1752	1682	1730	1543
Q Serve(g_s), s	1.0	0.6	0.9	3.4	0.4	20.4	9.6	0.0	8.8	16.2	4.2	1.3
Cycle Q Clear(g_c), s	1.4	0.6	0.9	4.3	0.4	20.4	9.6	0.0	8.8	16.2	4.2	1.3
Prop In Lane	1.00		1.00	1.00		1.00	0.04		0.22	1.00		1.00
Lane Grp Cap(c), veh/h	241	368	328	345	387	1042	386	0	372	1556	1600	714
V/C Ratio(X)	0.04	0.03	0.04	0.14	0.02	0.51	0.43	0.00	0.40	0.43	0.13	0.04
Avail Cap(c_a), veh/h	241	368	328	345	387	1042	386	0	372	1556	1600	714
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.83	0.83	0.83	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	37.4	37.6	39.3	37.4	9.7	41.0	0.0	40.7	21.7	18.5	17.7
Incr Delay (d2), s/veh	0.3	0.2	0.2	0.2	0.0	0.3	3.5	0.0	3.2	0.9	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.3	0.3	1.1	0.2	15.6	4.5	0.0	4.0	6.1	1.6	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.2	37.6	37.8	39.4	37.4	10.0	44.5	0.0	43.9	22.6	18.6	17.8
LnGrp LOS	D	D	D	D	D	A	D	A	D	C	B	B
Approach Vol, veh/h	34			586			317			917		
Approach Delay, s/veh	37.8			12.8			44.2			21.5		
Approach LOS	D			B			D			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	30.0			60.0			30.0			30.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	25.5			55.5			25.5			25.5		
Max Q Clear Time (g_c+I1), s	3.4			18.2			22.4			11.6		
Green Ext Time (p_c), s	0.1			3.9			0.7			1.2		
Intersection Summary												
HCM 6th Ctrl Delay	22.9											
HCM 6th LOS	C											

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EAPC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	126	406	322	15	405	322	253	549	35	209	564	95
Future Volume (vph)	126	406	322	15	405	322	253	549	35	209	564	95
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											





















HCM 6th Roundabout
7: Jefferson St. & Avenue 52

EAPC (2026) AM Peak hour

Intersection									
Intersection Delay, s/veh	115.2								
Intersection LOS	F								
Approach	EB		WB		NB		SB		
Entry Lanes	1		1		1		1		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	918		797		900		933		
Demand Flow Rate, veh/h	937		813		918		952		
Vehicles Circulating, veh/h	863		1017		813		737		
Vehicles Exiting, veh/h	721		675		634		740		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	44.0		32.1		225.8		149.7		
Approach LOS	E		D		F		F		
Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Bypass	
Designated Moves	LT	R	LT	R	LT	R	LT	R	
Assumed Moves	LT	R	LT	R	LT	R	LT	R	
RT Channelized		Free		Free		Free		Free	
Lane Util	1.000		1.000		1.000		1.000		
Follow-Up Headway, s	2.609		2.609		2.609		2.609		
Critical Headway, s	4.976	353	4.976	353	4.976	39	4.976	104	
Entry Flow, veh/h	584	1887	460	1887	879	1887	848	1887	
Cap Entry Lane, veh/h	572	0.980	489	0.980	602	0.980	651	0.980	
Entry HV Adj Factor	0.980	346	0.981	346	0.981	38	0.980	102	
Flow Entry, veh/h	572	1850	451	1850	862	1850	831	1850	
Cap Entry, veh/h	561	0.187	480	0.187	591	0.021	638	0.055	
V/C Ratio	1.021	0.0	0.941	0.0	1.460	0.0	1.303	0.0	
Control Delay, s/veh	70.5	A	56.7	A	235.8	A	168.1	A	
LOS	F	1	F	1	F	0	F	0	
95th %tile Queue, veh	15		11		42		33		

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EAPC (2026) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	126	406	322	15	405	322	253	549	35	209	564	95
Future Volume (vph)	126	406	322	15	405	322	253	549	35	209	564	95
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		100	0		100	0		0	0		0
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	60			60			60			60		
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											























HCM 6th Roundabout
7: Jefferson St. & Avenue 52

EAPC (2026) AM Peak hour
With Improvements

Intersection										
Intersection Delay, s/veh	16.8									
Intersection LOS	C									
Approach	EB		WB		NB		SB			
Entry Lanes	1		1		2		2			
Conflicting Circle Lanes	2		2		2		2			
Adj Approach Flow, veh/h	918		797		900		933			
Demand Flow Rate, veh/h	937		813		918		952			
Vehicles Circulating, veh/h	863		1017		813		737			
Vehicles Exiting, veh/h	721		675		634		740			
Ped Vol Crossing Leg, #/h	0		0		0		0			
Ped Cap Adj	1.000		1.000		1.000		1.000			
Approach Delay, s/veh	20.7		15.5		17.5		13.4			
Approach LOS	C		C		C		B			
Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
Assumed Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
RT Channelized		Free		Free			Free			Free
Lane Util	1.000		1.000		0.470	0.530		0.471	0.529	
Follow-Up Headway, s	2.535		2.535		2.667	2.535		2.667	2.535	
Critical Headway, s	4.328	353	4.328	353	4.645	4.328	39	4.645	4.328	104
Entry Flow, veh/h	584	1887	460	1887	413	466	1887	399	449	1887
Cap Entry Lane, veh/h	682	0.980	598	0.980	639	711	0.980	685	759	0.980
Entry HV Adj Factor	0.980	346	0.981	346	0.981	0.981	38	0.979	0.981	102
Flow Entry, veh/h	572	1850	451	1850	405	457	1850	391	440	1850
Cap Entry, veh/h	668	0.187	587	0.187	627	698	0.021	671	744	0.055
V/C Ratio	0.856	0.0	0.769	0.0	0.646	0.655	0.0	0.582	0.592	0.0
Control Delay, s/veh	33.2	A	27.5	A	18.9	17.7	A	15.5	14.6	A
LOS	D	1	D	1	C	C	0	C	B	0
95th %tile Queue, veh	10		7		5	5		4	4	

Lanes, Volumes, Timings 8: Jefferson St. & Pomelo

EAPC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	1	2	4	1	16	13	948	13	40	879	51
Future Volume (vph)	37	1	2	4	1	16	13	948	13	40	879	51
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	52.0		20.0	54.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	15.0%	43.3%		16.7%	45.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary

Area Type: Other

Cycle Length: 120

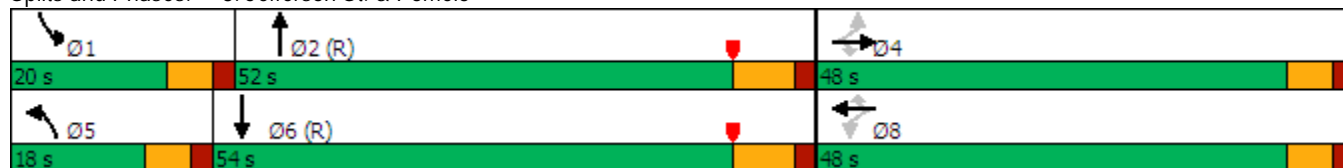
Actuated Cycle Length: 120

Offset: 10 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110





















Control Type: Actuated-Coordinated

Splits and Phases: 8: Jefferson St. & Pomelo



























HCM 6th Signalized Intersection Summary 8: Jefferson St. & Pomelo

EAPC (2026) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	1	2	4	1	16	13	948	13	40	879	51
Future Volume (veh/h)	37	1	2	4	1	16	13	948	13	40	879	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	40	1	2	4	1	17	14	1019	14	43	945	55
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	62	1	199	55	8	199	65	3197	44	132	3227	187
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.04	0.63	0.63	0.03	0.22	0.22
Sat Flow, veh/h	24	6	1543	11	62	1543	1734	5054	69	1734	4806	279
Grp Volume(v), veh/h	41	0	2	5	0	17	14	668	365	43	651	349
Grp Sat Flow(s),veh/h/ln	30	0	1543	73	0	1543	1734	1657	1809	1734	1657	1771
Q Serve(g_s), s	0.3	0.0	0.1	0.1	0.0	1.2	0.9	11.1	11.1	2.9	19.6	19.7
Cycle Q Clear(g_c), s	15.4	0.0	0.1	15.3	0.0	1.2	0.9	11.1	11.1	2.9	19.6	19.7
Prop In Lane	0.98		1.00	0.80		1.00	1.00		0.04	1.00		0.16
Lane Grp Cap(c), veh/h	63	0	199	63	0	199	65	2097	1144	132	2226	1189
V/C Ratio(X)	0.65	0.00	0.01	0.08	0.00	0.09	0.22	0.32	0.32	0.33	0.29	0.29
Avail Cap(c_a), veh/h	374	0	540	391	0	540	173	2097	1144	202	2226	1189
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.71	0.71	0.71
Uniform Delay (d), s/veh	59.7	0.0	45.6	46.6	0.0	46.1	56.1	10.1	10.1	55.5	23.0	23.0
Incr Delay (d2), s/veh	21.5	0.0	0.0	1.1	0.0	0.4	3.5	0.4	0.7	2.1	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.1	0.2	0.0	0.5	0.5	3.6	4.0	1.3	8.7	9.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.2	0.0	45.7	47.7	0.0	46.5	59.6	10.5	10.9	57.6	23.2	23.4
LnGrp LOS	F	A	D	D	A	D	E	B	B	E	C	C
Approach Vol, veh/h	43		22			1047			1043			
Approach Delay, s/veh	79.5		46.7			11.3			24.7			
Approach LOS	E		D			B			C			
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	15.1	83.3	21.6		10.5	88.0	21.6					
Change Period (Y+Rc), s	6.0	7.5	6.0		6.0	7.5	6.0					
Max Green Setting (Gmax), s	14.0	44.5	42.0		12.0	46.5	42.0					
Max Q Clear Time (g_c+I1), s	4.9	13.1	17.4		2.9	21.7	17.3					
Green Ext Time (p_c), s	0.1	13.2	0.3		0.0	11.4	0.1					
Intersection Summary												
HCM 6th Ctrl Delay	19.5											
HCM 6th LOS	B											
Notes												

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

EAPC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	256	305	79	84	347	232	135	799	68	154	801	362
Future Volume (vph)	256	305	79	84	347	232	135	799	68	154	801	362
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	43.5	43.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	36.3%	36.3%	15.0%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

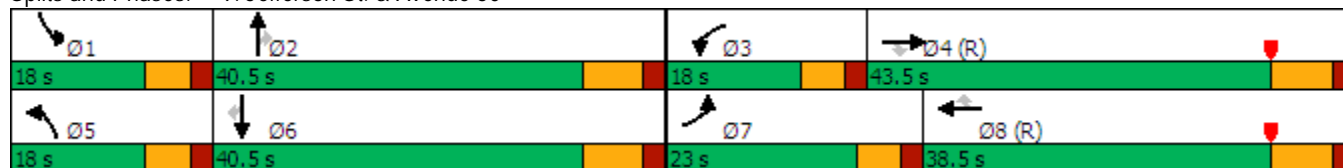
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 115































Control Type: Actuated-Coordinated

Splits and Phases: 9: Jefferson St. & Avenue 50



























HCM 6th Signalized Intersection Summary 9: Jefferson St. & Avenue 50

EAPC (2026) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  		 	  	
Traffic Volume (veh/h)	256	305	79	84	347	232	135	799	68	154	801	362
Future Volume (veh/h)	256	305	79	84	347	232	135	799	68	154	801	362
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	261	311	81	86	354	237	138	815	69	157	817	369
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	1091	487	164	488	414	172	1321	410	335	1324	411
Arrive On Green	0.14	0.32	0.32	0.09	0.27	0.27	0.03	0.09	0.09	0.10	0.27	0.27
Sat Flow, veh/h	1734	3460	1543	1734	1821	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	261	311	81	86	354	237	138	815	69	157	817	369
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	17.0	8.1	4.6	5.7	21.2	15.9	9.5	19.0	5.0	5.3	17.3	27.7
Cycle Q Clear(g_c), s	17.0	8.1	4.6	5.7	21.2	15.9	9.5	19.0	5.0	5.3	17.3	27.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	1091	487	164	488	414	172	1321	410	335	1324	411
V/C Ratio(X)	1.06	0.28	0.17	0.53	0.73	0.57	0.80	0.62	0.17	0.47	0.62	0.90
Avail Cap(c_a), veh/h	246	1091	487	173	488	414	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	30.9	29.7	51.8	39.9	38.0	56.9	48.8	42.5	51.0	38.7	42.5
Incr Delay (d2), s/veh	74.8	0.7	0.7	1.0	9.1	5.7	20.8	0.9	0.3	0.4	1.0	21.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	3.4	1.7	2.5	10.4	6.5	5.2	8.5	1.9	2.2	6.8	12.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	126.3	31.6	30.4	52.8	49.0	43.6	77.7	49.8	42.7	51.4	39.6	64.0
LnGrp LOS	F	C	C	D	D	D	E	D	D	D	D	E
Approach Vol, veh/h	653				677				1022			
Approach Delay, s/veh	69.3				47.6				53.1			
Approach LOS	E				D				D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.9	39.4	17.3	45.4	17.9	39.5	23.0	39.7				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	12.0	33.0	12.0	36.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	7.3	21.0	7.7	10.1	11.5	29.7	19.0	23.2				
Green Ext Time (p_c), s	0.1	5.3	0.0	4.0	0.0	2.3	0.0	3.0				
Intersection Summary												
HCM 6th Ctrl Delay	53.0											
HCM 6th LOS	D											
Notes												

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

EAPC (2026) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	256	305	79	84	347	232	135	799	68	154	801	362
Future Volume (vph)	256	305	79	84	347	232	135	799	68	154	801	362
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	43.5	43.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	36.3%	36.3%	15.0%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

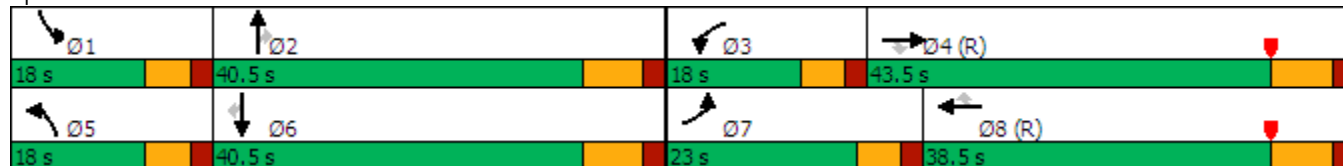
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 115

























Control Type: Actuated-Coordinated

Splits and Phases: 9: Jefferson St. & Avenue 50



HCM 6th Signalized Intersection Summary 9: Jefferson St. & Avenue 50

EAPC (2026) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	256	305	79	84	347	232	135	799	68	154	801	362
Future Volume (veh/h)	256	305	79	84	347	232	135	799	68	154	801	362
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	261	311	81	86	354	237	138	815	69	157	817	369
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	1091	487	164	928	414	172	1321	410	335	1324	411
Arrive On Green	0.14	0.32	0.32	0.09	0.27	0.27	0.03	0.09	0.09	0.10	0.27	0.27
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	261	311	81	86	354	237	138	815	69	157	817	369
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	17.0	8.1	4.6	5.7	10.0	15.9	9.5	19.0	5.0	5.3	17.3	27.7
Cycle Q Clear(g_c), s	17.0	8.1	4.6	5.7	10.0	15.9	9.5	19.0	5.0	5.3	17.3	27.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	1091	487	164	928	414	172	1321	410	335	1324	411
V/C Ratio(X)	1.06	0.28	0.17	0.53	0.38	0.57	0.80	0.62	0.17	0.47	0.62	0.90
Avail Cap(c_a), veh/h	246	1091	487	173	928	414	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	30.9	29.7	51.8	35.8	38.0	56.9	48.8	42.5	51.0	38.7	42.5
Incr Delay (d2), s/veh	74.8	0.7	0.7	1.0	1.2	5.7	20.8	0.9	0.3	0.4	1.0	21.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	3.4	1.7	2.5	4.3	6.5	5.2	8.5	1.9	2.2	6.8	12.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	126.3	31.6	30.4	52.8	37.0	43.6	77.7	49.8	42.7	51.4	39.6	64.0
LnGrp LOS	F	C	C	D	D	D	E	D	D	D	D	E
Approach Vol, veh/h	653		677				1022		1343			
Approach Delay, s/veh	69.3		41.3				53.1		47.7			
Approach LOS	E		D				D		D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.9	39.4	17.3	45.4	17.9	39.5	23.0	39.7				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	12.0	33.0	12.0	36.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	7.3	21.0	7.7	10.1	11.5	29.7	19.0	17.9				
Green Ext Time (p_c), s	0.1	5.3	0.0	4.0	0.0	2.3	0.0	4.4				
Intersection Summary												
HCM 6th Ctrl Delay			51.8									
HCM 6th LOS			D									
Notes												

Lanes, Volumes, Timings
10: Avenue 60 & Madison St.

EAPC (2026) AM Peak hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	65	52	26	183	173	75
Future Volume (vph)	65	52	26	183	173	75
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		40	
Link Distance (ft)		1772	661		437	
Travel Time (s)		30.2	11.3		7.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)						
Sign Control		Stop	Stop		Stop	






Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Intersection Delay, s/veh	10.2
Intersection LOS	B





















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	65	52	26	183	173	75
Future Vol, veh/h	65	52	26	183	173	75
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	78	63	31	220	208	90
Number of Lanes	0	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	10.2	9.5	10.8
HCM LOS	B	A	B

Lane	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	56%	0%	0%	100%	0%
Vol Thru, %	44%	100%	0%	0%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	117	26	183	173	75
LT Vol	65	0	0	173	0
Through Vol	52	26	0	0	0
RT Vol	0	0	183	0	75
Lane Flow Rate	141	31	220	208	90
Geometry Grp	4	7	7	7	7
Degree of Util (X)	0.217	0.048	0.295	0.346	0.12
Departure Headway (Hd)	5.551	5.521	4.815	5.984	4.776
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	643	646	743	598	744
Service Time	3.618	3.279	2.572	3.758	2.55
HCM Lane V/C Ratio	0.219	0.048	0.296	0.348	0.121
HCM Control Delay	10.2	8.6	9.6	11.9	8.2
HCM Lane LOS	B	A	A	B	A
HCM 95th-tile Q	0.8	0.2	1.2	1.5	0.4

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue









EAPC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	89	136	10	83	167	128	343	19	82	180	55
Future Volume (vph)	42	89	136	10	83	167	128	343	19	82	180	55
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

HCM 6th AWSC
11: Monroe St. & Avenue 60/60th Avenue

EAPC (2026) AM Peak hour

Intersection	
Intersection Delay, s/veh	30.9
Intersection LOS	D





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	89	136	10	83	167	128	343	19	82	180	55
Future Vol, veh/h	42	89	136	10	83	167	128	343	19	82	180	55
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	46	98	149	11	91	184	141	377	21	90	198	60
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	17	29.2	47.8	17.9
HCM LOS	C	D	E	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	32%	0%	4%	100%	0%	0%
Vol Thru, %	0%	95%	68%	0%	32%	0%	100%	0%
Vol Right, %	0%	5%	0%	100%	64%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	128	362	131	136	260	82	180	55
LT Vol	128	0	42	0	10	82	0	0
Through Vol	0	343	89	0	83	0	180	0
RT Vol	0	19	0	136	167	0	0	55
Lane Flow Rate	141	398	144	149	286	90	198	60
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.353	0.937	0.379	0.356	0.694	0.24	0.499	0.14
Departure Headway (Hd)	9.041	8.483	9.474	8.583	8.744	9.608	9.088	8.361
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	397	426	379	418	411	373	396	427
Service Time	6.812	6.253	7.255	6.364	6.519	7.389	6.869	6.141
HCM Lane V/C Ratio	0.355	0.934	0.38	0.356	0.696	0.241	0.5	0.141
HCM Control Delay	16.7	58.8	18	16.1	29.2	15.4	20.7	12.5
HCM Lane LOS	C	F	C	C	D	C	C	B
HCM 95th-tile Q	1.6	10.6	1.7	1.6	5.1	0.9	2.7	0.5

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

EAPC (2026) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	89	136	10	83	167	128	343	19	82	180	55
Future Volume (vph)	42	89	136	10	83	167	128	343	19	82	180	55
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red		Yes				Yes			Yes			Yes
Link Speed (mph)		45				45			50			50
Link Distance (ft)		598				1045			1022			1291
Travel Time (s)		9.1				15.8			13.9			17.6
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4				8		5	2		1	6
Permitted Phases	4		4	8								6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		11.5	22.5		11.5	22.5	22.5
Total Split (s)	42.0	42.0	42.0	42.0	42.0		28.0	57.0		21.0	50.0	50.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	35.0%		23.3%	47.5%		17.5%	41.7%	41.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

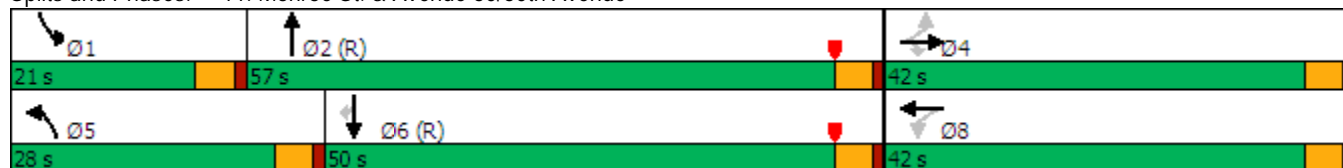
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated


Splits and Phases: 11: Monroe St. & Avenue 60/60th Avenue



HCM 6th Signalized Intersection Summary


















11: Monroe St. & Avenue 60/60th Avenue

EAPC (2026) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↰	↱		↰	↱	↱
Traffic Volume (veh/h)	42	89	136	10	83	167	128	343	19	82	180	55
Future Volume (veh/h)	42	89	136	10	83	167	128	343	19	82	180	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	46	98	149	11	91	184	141	377	21	90	198	60
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	92	176	309	37	110	208	169	1063	59	113	1074	910
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.10	0.62	0.62	0.07	0.59	0.59
Sat Flow, veh/h	262	879	1543	28	548	1038	1734	1709	95	1734	1821	1543
Grp Volume(v), veh/h	144	0	149	286	0	0	141	0	398	90	198	60
Grp Sat Flow(s),veh/h/ln	1142	0	1543	1614	0	0	1734	0	1804	1734	1821	1543
Q Serve(g_s), s	0.0	0.0	10.3	7.4	0.0	0.0	9.6	0.0	12.8	6.1	6.0	2.0
Cycle Q Clear(g_c), s	13.2	0.0	10.3	20.6	0.0	0.0	9.6	0.0	12.8	6.1	6.0	2.0
Prop In Lane	0.32		1.00	0.04		0.64	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	268	0	309	354	0	0	169	0	1123	113	1074	910
V/C Ratio(X)	0.54	0.00	0.48	0.81	0.00	0.00	0.83	0.00	0.35	0.80	0.18	0.07
Avail Cap(c_a), veh/h	438	0	482	534	0	0	340	0	1123	238	1074	910
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.7	0.0	42.5	46.6	0.0	0.0	53.2	0.0	11.0	55.3	11.3	10.5
Incr Delay (d2), s/veh	1.7	0.0	1.2	5.5	0.0	0.0	10.1	0.0	0.9	11.8	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	3.9	8.6	0.0	0.0	4.5	0.0	4.8	3.0	2.3	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.3	0.0	43.7	52.1	0.0	0.0	63.2	0.0	11.9	67.1	11.7	10.6
LnGrp LOS	D	A	D	D	A	A	E	A	B	E	B	B
Approach Vol, veh/h	293			286			539			348		
Approach Delay, s/veh	44.0			52.1			25.3			25.9		
Approach LOS	D			D			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.3	79.2		28.5	16.2	75.3		28.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	16.5	52.5		37.5	23.5	45.5		37.5				
Max Q Clear Time (g_c+I1), s	8.1	14.8		15.2	11.6	8.0		22.6				
Green Ext Time (p_c), s	0.1	2.3		1.2	0.2	1.2		1.4				
Intersection Summary												
HCM 6th Ctrl Delay	34.4											
HCM 6th LOS	C											

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAPC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	120	62	30	68	41	50	452	49	31	283	54
Future Volume (vph)	80	120	62	30	68	41	50	452	49	31	283	54
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	84.4
Intersection LOS	F





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	80	120	62	30	68	41	50	452	49	31	283	54
Future Vol, veh/h	80	120	62	30	68	41	50	452	49	31	283	54
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	95	143	74	36	81	49	60	538	58	37	337	64
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	25.7	17.3	164.5	31.7
HCM LOS	D	C	F	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	9%	31%	22%	10%	0%
Vol Thru, %	82%	46%	49%	90%	0%
Vol Right, %	9%	24%	29%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	551	262	139	314	54
LT Vol	50	80	30	31	0
Through Vol	452	120	68	283	0
RT Vol	49	62	41	0	54
Lane Flow Rate	656	312	165	374	64
Geometry Grp	5	2	2	7	7
Degree of Util (X)	1.284	0.656	0.375	0.79	0.122
Departure Headway (Hd)	7.048	8.278	9	8.166	7.391
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	518	440	402	445	488
Service Time	5.105	6.278	7	5.866	5.091
HCM Lane V/C Ratio	1.266	0.709	0.41	0.84	0.131
HCM Control Delay	164.5	25.7	17.3	35.3	11.1
HCM Lane LOS	F	D	C	E	B
HCM 95th-tile Q	27	4.6	1.7	7	0.4

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAPC (2026) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	120	62	30	68	41	50	452	49	31	283	54
Future Volume (vph)	80	120	62	30	68	41	50	452	49	31	283	54
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		0	150		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		11.5	22.5		11.5	22.5	
Total Split (s)	34.0	34.0		34.0	34.0		17.0	73.0		13.0	69.0	
Total Split (%)	28.3%	28.3%		28.3%	28.3%		14.2%	60.8%		10.8%	57.5%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated





















Splits and Phases: 12: Monroe St. & Avenue 58



HCM 6th Signalized Intersection Summary






















12: Monroe St. & Avenue 58

EAPC (2026) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	120	62	30	68	41	50	452	49	31	283	54
Future Volume (veh/h)	80	120	62	30	68	41	50	452	49	31	283	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	95	143	74	36	81	49	60	538	58	37	337	64
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	190	194	100	120	182	110	87	1091	118	72	991	188
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.05	0.67	0.67	0.04	0.67	0.67
Sat Flow, veh/h	1260	1131	585	1164	1063	643	1734	1616	174	1734	1488	283
Grp Volume(v), veh/h	95	0	217	36	0	130	60	0	596	37	0	401
Grp Sat Flow(s),veh/h/ln	1260	0	1716	1164	0	1705	1734	0	1790	1734	0	1770
Q Serve(g_s), s	8.8	0.0	14.4	3.6	0.0	8.2	4.1	0.0	19.5	2.5	0.0	11.7
Cycle Q Clear(g_c), s	17.0	0.0	14.4	18.0	0.0	8.2	4.1	0.0	19.5	2.5	0.0	11.7
Prop In Lane	1.00		0.34	1.00		0.38	1.00		0.10	1.00		0.16
Lane Grp Cap(c), veh/h	190	0	294	120	0	292	87	0	1208	72	0	1179
V/C Ratio(X)	0.50	0.00	0.74	0.30	0.00	0.45	0.69	0.00	0.49	0.52	0.00	0.34
Avail Cap(c_a), veh/h	284	0	422	207	0	419	181	0	1208	123	0	1179
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.2	0.0	47.2	55.7	0.0	44.6	56.0	0.0	9.5	56.3	0.0	8.7
Incr Delay (d2), s/veh	2.0	0.0	4.0	1.4	0.0	1.1	9.1	0.0	1.4	5.6	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	6.2	1.1	0.0	3.6	2.0	0.0	6.8	1.2	0.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.3	0.0	51.2	57.1	0.0	45.7	65.2	0.0	10.9	62.0	0.0	9.4
LnGrp LOS	D	A	D	E	A	D	E	A	B	E	A	A
Approach Vol, veh/h	312			166			656			438		
Approach Delay, s/veh	52.1			48.2			15.9			13.9		
Approach LOS	D			D			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	85.5		25.0	10.6	84.4		25.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	8.5	68.5		29.5	12.5	64.5		29.5				
Max Q Clear Time (g_c+I1), s	4.5	21.5		19.0	6.1	13.7		20.0				
Green Ext Time (p_c), s	0.0	3.9		1.0	0.0	2.4		0.5				
Intersection Summary												
HCM 6th Ctrl Delay	25.9											
HCM 6th LOS	C											

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.









EAPC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	133	19	32	81	36	29	455	60	71	289	13
Future Volume (vph)	0	133	19	32	81	36	29	455	60	71	289	13
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh70.4

Intersection LOS F






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	133	19	32	81	36	29	455	60	71	289	13
Future Vol, veh/h	0	133	19	32	81	36	29	455	60	71	289	13
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	156	22	38	95	42	34	535	71	84	340	15
Number of Lanes	1	1	1	0	1	0	1	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	1
Conflicting Approach RightNB		SB	WB	EB
Conflicting Lanes Right	2	3	1	3
HCM Control Delay	15.2	17.9	137.5	16.1
HCM LOS	C	C	F	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	0%	0%	21%	100%	0%	0%
Vol Thru, %	0%	88%	100%	100%	0%	54%	0%	100%	88%
Vol Right, %	0%	12%	0%	0%	100%	24%	0%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	29	515	0	133	19	149	71	193	109
LT Vol	29	0	0	0	0	32	71	0	0
Through Vol	0	455	0	133	0	81	0	193	96
RT Vol	0	60	0	0	19	36	0	0	13
Lane Flow Rate	34	606	0	156	22	175	84	227	129
Geometry Grp	8	8	7	7	7	8	8	8	8
Degree of Util (X)	0.075	1.231	0	0.348	0.045	0.41	0.19	0.483	0.271
Departure Headway (Hd)	7.909	7.313	8.596	8.596	7.872	9.037	8.729	8.214	8.128
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	450	497	0	421	458	401	413	442	445
Service Time	5.706	5.109	6.296	6.296	5.572	6.737	6.429	5.914	5.828
HCM Lane V/C Ratio	0.076	1.219	0	0.371	0.048	0.436	0.203	0.514	0.29
HCM Control Delay	11.4	144.6	11.3	15.8	10.9	17.9	13.5	18.4	13.8
HCM Lane LOS	B	F	N	C	B	C	B	C	B
HCM 95th-tile Q	0.2	23.6	0	1.5	0.1	2	0.7	2.6	1.1

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.

EAPC (2026) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	133	19	32	81	36	29	455	60	71	289	13
Future Volume (vph)	0	133	19	32	81	36	29	455	60	71	289	13
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		11.5	22.5		11.5	22.5	22.5
Total Split (s)	30.0	30.0	30.0	30.0	30.0		13.0	71.0		19.0	77.0	77.0
Total Split (%)	25.0%	25.0%	25.0%	25.0%	25.0%		10.8%	59.2%		15.8%	64.2%	64.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated






















Splits and Phases: 13: Monroe St. & Airport Bl.



HCM 6th Signalized Intersection Summary



















13: Monroe St. & Airport Bl.

EAPC (2026) AM Peak hour
With Improvements







												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	133	19	32	81	36	29	455	60	71	289	13
Future Volume (veh/h)	0	133	19	32	81	36	29	455	60	71	289	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	0	156	22	38	95	42	34	535	71	84	340	15
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	60	292	248	65	126	49	69	1049	139	106	2379	1061
Arrive On Green	0.00	0.16	0.16	0.16	0.16	0.16	0.04	0.67	0.67	0.06	0.69	0.69
Sat Flow, veh/h	1252	1821	1543	175	788	304	1734	1575	209	1734	3460	1543
Grp Volume(v), veh/h	0	156	22	175	0	0	34	0	606	84	340	15
Grp Sat Flow(s),veh/h/ln	1252	1821	1543	1266	0	0	1734	0	1784	1734	1730	1543
Q Serve(g_s), s	0.0	9.4	1.5	7.4	0.0	0.0	2.3	0.0	20.6	5.7	4.1	0.4
Cycle Q Clear(g_c), s	0.0	9.4	1.5	16.8	0.0	0.0	2.3	0.0	20.6	5.7	4.1	0.4
Prop In Lane	1.00		1.00	0.22		0.24	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	60	292	248	240	0	0	69	0	1188	106	2379	1061
V/C Ratio(X)	0.00	0.53	0.09	0.73	0.00	0.00	0.50	0.00	0.51	0.79	0.14	0.01
Avail Cap(c_a), veh/h	125	387	328	322	0	0	123	0	1188	210	2379	1061
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.00	0.95	0.95	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	46.3	42.9	49.5	0.0	0.0	56.5	0.0	10.1	55.6	6.5	5.9
Incr Delay (d2), s/veh	0.0	1.4	0.1	5.5	0.0	0.0	5.4	0.0	1.6	12.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.2	0.5	5.3	0.0	0.0	1.1	0.0	7.3	2.8	1.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	47.7	43.1	55.0	0.0	0.0	61.9	0.0	11.7	67.9	6.6	5.9
LnGrp LOS	A	D	D	E	A	A	E	A	B	E	A	A
Approach Vol, veh/h	178			175			640			439		
Approach Delay, s/veh	47.1			55.0			14.4			18.3		
Approach LOS	D			E			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.8	84.4		23.7	9.2	87.0		23.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	14.5	66.5		25.5	8.5	72.5		25.5				
Max Q Clear Time (g_c+I1), s	7.7	22.6		11.4	4.3	6.1		18.8				
Green Ext Time (p_c), s	0.1	4.0		0.6	0.0	2.1		0.4				
Intersection Summary												
HCM 6th Ctrl Delay	24.6											
HCM 6th LOS	C											

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAPC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	198	60	37	265	52	107	436	30	51	348	110
Future Volume (vph)	44	198	60	37	265	52	107	436	30	51	348	110
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	232.8
Intersection LOS	F





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	198	60	37	265	52	107	436	30	51	348	110
Future Vol, veh/h	44	198	60	37	265	52	107	436	30	51	348	110
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	54	244	74	46	327	64	132	538	37	63	430	136
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	52.5	148.7	452.5	151.1
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	19%	100%	0%	10%	13%	0%
Vol Thru, %	76%	0%	77%	75%	87%	0%
Vol Right, %	5%	0%	23%	15%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	573	44	258	354	399	110
LT Vol	107	44	0	37	51	0
Through Vol	436	0	198	265	348	0
RT Vol	30	0	60	52	0	110
Lane Flow Rate	707	54	319	437	493	136
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	1.925	0.154	0.846	1.18	1.292	0.327
Departure Headway (Hd)	11.179	13.375	12.666	12.941	12.202	11.387
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	332	270	290	284	300	318
Service Time	9.179	11.075	10.366	10.941	9.902	9.087
HCM Lane V/C Ratio	2.13	0.2	1.1	1.539	1.643	0.428
HCM Control Delay	452.5	18.5	58.3	148.7	187.4	19.5
HCM Lane LOS	F	C	F	F	F	C
HCM 95th-tile Q	42.7	0.5	7.1	14.7	18.5	1.4

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAPC (2026) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	198	60	37	265	52	107	436	30	51	348	110
Future Volume (vph)	44	198	60	37	265	52	107	436	30	51	348	110
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		11.5	22.5		11.5	22.5	
Total Split (s)	41.0	41.0		41.0	41.0		20.0	64.0		15.0	59.0	
Total Split (%)	34.2%	34.2%		34.2%	34.2%		16.7%	53.3%		12.5%	49.2%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

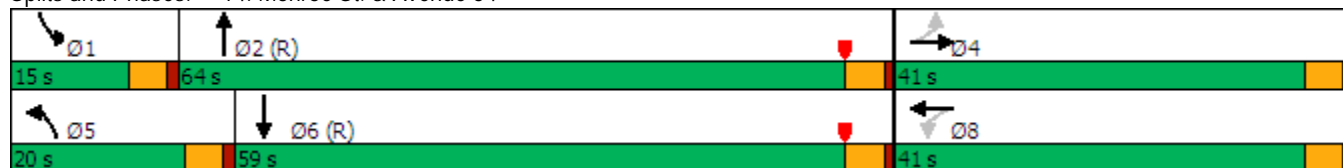
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated





















Splits and Phases: 14: Monroe St. & Avenue 54



HCM 6th Signalized Intersection Summary























14: Monroe St. & Avenue 54

EAPC (2026) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	198	60	37	265	52	107	436	30	51	348	110
Future Volume (veh/h)	44	198	60	37	265	52	107	436	30	51	348	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	54	244	74	46	327	64	132	538	37	63	430	136
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	135	375	114	187	414	81	158	938	64	89	685	217
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.09	0.56	0.56	0.05	0.52	0.52
Sat Flow, veh/h	993	1341	407	1062	1479	290	1734	1684	116	1734	1326	419
Grp Volume(v), veh/h	54	0	318	46	0	391	132	0	575	63	0	566
Grp Sat Flow(s),veh/h/ln	993	0	1748	1062	0	1769	1734	0	1800	1734	0	1746
Q Serve(g_s), s	6.4	0.0	19.2	4.8	0.0	24.5	9.0	0.0	25.0	4.3	0.0	27.8
Cycle Q Clear(g_c), s	30.9	0.0	19.2	24.0	0.0	24.5	9.0	0.0	25.0	4.3	0.0	27.8
Prop In Lane	1.00		0.23	1.00		0.16	1.00		0.06	1.00		0.24
Lane Grp Cap(c), veh/h	135	0	489	187	0	494	158	0	1002	89	0	902
V/C Ratio(X)	0.40	0.00	0.65	0.25	0.00	0.79	0.83	0.00	0.57	0.71	0.00	0.63
Avail Cap(c_a), veh/h	159	0	532	213	0	538	224	0	1002	152	0	902
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.3	0.0	38.1	48.6	0.0	40.0	53.6	0.0	17.3	56.1	0.0	20.7
Incr Delay (d2), s/veh	1.9	0.0	2.5	0.7	0.0	7.3	16.6	0.0	2.4	9.9	0.0	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	8.1	1.3	0.0	11.0	4.5	0.0	9.9	2.1	0.0	11.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.2	0.0	40.6	49.3	0.0	47.3	70.2	0.0	19.7	66.0	0.0	24.0
LnGrp LOS	E	A	D	D	A	D	E	A	B	E	A	C
Approach Vol, veh/h	372			437			707			629		
Approach Delay, s/veh	42.8			47.5			29.1			28.2		
Approach LOS	D			D			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	71.3		38.0	15.5	66.5		38.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	10.5	59.5		36.5	15.5	54.5		36.5				
Max Q Clear Time (g_c+I1), s	6.3	27.0		32.9	11.0	29.8		26.5				
Green Ext Time (p_c), s	0.0	3.6		0.6	0.1	3.4		1.6				
Intersection Summary												
HCM 6th Ctrl Delay	35.0											
HCM 6th LOS	C											

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52










EAPC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	359	54	34	364	138	66	392	51	112	378	59
Future Volume (vph)	106	359	54	34	364	138	66	392	51	112	378	59
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 77.6

Intersection LOS F























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	106	359	54	34	364	138	66	392	51	112	378	59
Future Vol, veh/h	106	359	54	34	364	138	66	392	51	112	378	59
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	128	433	65	41	439	166	80	472	61	135	455	71
Number of Lanes	1	1	1	0	2	1	0	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay	163.8	52.1	469.1	42.8
HCM LOS	F	F	F	E

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	13%	100%	0%	0%	22%	0%	0%	100%	0%	0%
Vol Thru, %	77%	0%	100%	0%	78%	100%	0%	0%	100%	68%
Vol Right, %	10%	0%	0%	100%	0%	0%	100%	0%	0%	32%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	509	106	359	54	155	243	138	112	252	185
LT Vol	66	106	0	0	34	0	0	112	0	0
Through Vol	392	0	359	0	121	243	0	0	252	126
RT Vol	51	0	0	54	0	0	138	0	0	59
Lane Flow Rate	613	128	433	65	187	292	166	135	304	223
Geometry Grp	8	8	8	8	8	8	8	7	7	7
Degree of Util (X)	1.958	0.423	1.374	0.194	0.587	0.909	0.485	0.394	0.845	0.606
Departure Headway (Hd)	12.003	14.425	13.871	13.095	14.506	14.383	13.599	13.312	12.764	12.519
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	307	252	268	276	251	254	268	273	285	292
Service Time	9.703	12.125	11.571	10.795	12.206	12.083	11.299	11.012	10.464	10.219
HCM Lane V/C Ratio	1.997	0.508	1.616	0.236	0.745	1.15	0.619	0.495	1.067	0.764
HCM Control Delay	469.1	27.3	225.9	18.9	35.9	76	28.5	24.4	58.5	32.7
HCM Lane LOS	F	D	F	C	E	F	D	C	F	D
HCM 95th-tile Q	41.3	2	19.1	0.7	3.4	7.9	2.5	1.8	7.1	3.7

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52

EAPC (2026) AM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	359	54	34	364	138	66	392	51	112	378	59
Future Volume (vph)	106	359	54	34	364	138	66	392	51	112	378	59
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2			6		
Detector Phase	7	4	4	3	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	21.1	42.0	42.0	11.5	32.4	32.4	66.5	66.5		66.5	66.5	
Total Split (%)	17.6%	35.0%	35.0%	9.6%	27.0%	27.0%	55.4%	55.4%		55.4%	55.4%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5		4.5		4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	None	None	None	None	None	C-Max	C-Max		C-Max	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

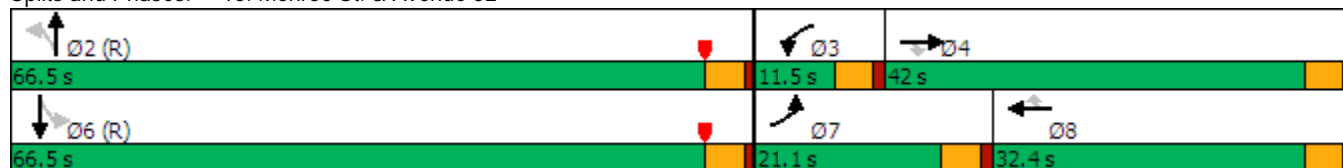
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 80























Control Type: Actuated-Coordinated

Splits and Phases: 15: Monroe St. & Avenue 52



























HCM 6th Signalized Intersection Summary 15: Monroe St. & Avenue 52

EAPC (2026) AM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	359	54	34	364	138	66	392	51	112	378	59
Future Volume (veh/h)	106	359	54	34	364	138	66	392	51	112	378	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	128	433	65	41	439	166	80	472	61	135	455	71
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	154	474	401	75	742	331	133	748	94	442	1753	272
Arrive On Green	0.09	0.26	0.26	0.04	0.21	0.21	0.58	0.58	0.58	0.58	0.58	0.58
Sat Flow, veh/h	1734	1821	1543	1734	3460	1543	169	1280	160	871	3002	466
Grp Volume(v), veh/h	128	433	65	41	439	166	613	0	0	135	261	265
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1730	1543	1610	0	0	871	1730	1737
Q Serve(g_s), s	8.7	27.7	3.9	2.8	13.7	11.4	16.9	0.0	0.0	0.6	8.9	9.0
Cycle Q Clear(g_c), s	8.7	27.7	3.9	2.8	13.7	11.4	29.1	0.0	0.0	29.8	8.9	9.0
Prop In Lane	1.00		1.00	1.00		1.00	0.13		0.10	1.00		0.27
Lane Grp Cap(c), veh/h	154	474	401	75	742	331	974	0	0	442	1010	1014
V/C Ratio(X)	0.83	0.91	0.16	0.54	0.59	0.50	0.63	0.00	0.00	0.31	0.26	0.26
Avail Cap(c_a), veh/h	240	569	482	101	804	359	974	0	0	442	1010	1014
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.8	43.1	34.3	56.2	42.4	41.5	16.1	0.0	0.0	16.9	12.2	12.3
Incr Delay (d2), s/veh	13.0	17.4	0.2	6.0	1.0	1.2	3.1	0.0	0.0	1.8	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	14.0	1.4	1.3	5.7	4.2	10.5	0.0	0.0	2.4	3.3	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.7	60.5	34.5	62.2	43.4	42.7	19.2	0.0	0.0	18.6	12.9	12.9
LnGrp LOS	E	E	C	E	D	D	B	A	A	B	B	B
Approach Vol, veh/h	626		646				613		661			
Approach Delay, s/veh	59.1		44.4				19.2		14.0			
Approach LOS	E		D				B		B			
Timer - Assigned Phs	2		3	4		6	7	8				
Phs Duration (G+Y+Rc), s	74.6		9.7	35.7		74.6	15.2	30.2				
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s	62.0		7.0	37.5		62.0	16.6	27.9				
Max Q Clear Time (g_c+I1), s	31.1		4.8	29.7		31.8	10.7	15.7				
Green Ext Time (p_c), s	4.3		0.0	1.5		3.8	0.1	2.4				
Intersection Summary												
HCM 6th Ctrl Delay 34.1												
HCM 6th LOS C												

Lanes, Volumes, Timings
16: Monroe St. & 50th Avenue

EAPC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	281	44	38	383	124	30	509	48	77	459	44
Future Volume (vph)	30	281	44	38	383	124	30	509	48	77	459	44
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	20.5	20.5	20.5	20.5	20.5	11.5	11.5	20.5		11.5	20.5	
Total Split (s)	26.0	26.0	26.0	26.0	26.0	12.0	11.5	22.0		12.0	22.5	
Total Split (%)	43.3%	43.3%	43.3%	43.3%	43.3%	20.0%	19.2%	36.7%		20.0%	37.5%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

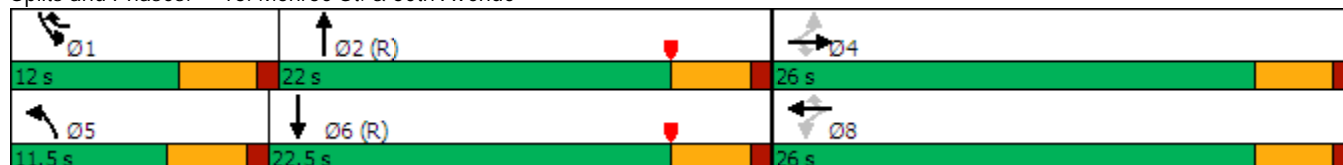
Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

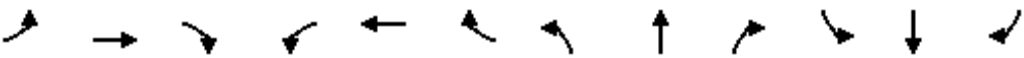












Control Type: Actuated-Coordinated

Splits and Phases: 16: Monroe St. & 50th Avenue



















HCM 6th Signalized Intersection Summary
16: Monroe St. & 50th Avenue

EAPC (2026) AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	281	44	38	383	124	30	509	48	77	459	44
Future Volume (veh/h)	30	281	44	38	383	124	30	509	48	77	459	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	35	331	52	45	451	146	35	599	56	91	540	52
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	197	580	491	287	580	645	104	1223	114	172	1345	129
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.06	0.38	0.37	0.10	0.42	0.41
Sat Flow, veh/h	821	1821	1543	1000	1821	1543	1734	3199	299	1734	3190	306
Grp Volume(v), veh/h	35	331	52	45	451	146	35	323	332	91	292	300
Grp Sat Flow(s),veh/h/ln	821	1821	1543	1000	1821	1543	1734	1730	1767	1734	1730	1766
Q Serve(g_s), s	2.4	9.1	1.4	2.4	13.5	3.7	1.2	8.5	8.6	3.0	7.1	7.1
Cycle Q Clear(g_c), s	15.9	9.1	1.4	11.4	13.5	3.7	1.2	8.5	8.6	3.0	7.1	7.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.17	1.00		0.17
Lane Grp Cap(c), veh/h	197	580	491	287	580	645	104	661	676	172	730	745
V/C Ratio(X)	0.18	0.57	0.11	0.16	0.78	0.23	0.34	0.49	0.49	0.53	0.40	0.40
Avail Cap(c_a), veh/h	237	668	566	335	668	719	217	661	676	231	730	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.7	17.0	14.4	21.8	18.5	11.2	27.1	14.1	14.1	25.7	12.1	12.1
Incr Delay (d2), s/veh	0.4	0.9	0.1	0.3	5.1	0.2	1.9	2.6	2.5	2.5	1.6	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.2	0.4	0.5	5.4	1.0	0.5	3.1	3.1	1.2	2.4	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.1	17.9	14.5	22.1	23.6	11.4	29.0	16.7	16.7	28.2	13.7	13.7
LnGrp LOS	C	B	B	C	C	B	C	B	B	C	B	B
Approach Vol, veh/h	418			642			690			683		
Approach Delay, s/veh	18.2			20.7			17.3			15.6		
Approach LOS	B			C			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	26.9		23.1	7.6	29.3		23.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	17.5		21.5	7.0	18.0		21.5				
Max Q Clear Time (g_c+I1), s	5.0	10.6		17.9	3.2	9.1		15.5				
Green Ext Time (p_c), s	0.0	2.0		0.7	0.0	2.1		1.7				
Intersection Summary												
HCM 6th Ctrl Delay	17.9											
HCM 6th LOS	B											

Lanes, Volumes, Timings
17: Jackson St. & 58th Avenue

EAPC (2026) AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	139	12	2	97	4	6	168	3	13	168	22
Future Volume (vph)	36	139	12	2	97	4	6	168	3	13	168	22
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		5266			1079			1013			510	
Travel Time (s)		71.8			14.7			12.6			6.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	36	139	12	2	97	4	6	168	3	13	168	22
Future Vol, veh/h	36	139	12	2	97	4	6	168	3	13	168	22
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	148	13	2	103	4	6	179	3	14	179	23
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.1	9.3	9.9	10.1
HCM LOS	B	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	19%	2%	6%
Vol Thru, %	95%	74%	94%	83%
Vol Right, %	2%	6%	4%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	177	187	103	203
LT Vol	6	36	2	13
Through Vol	168	139	97	168
RT Vol	3	12	4	22
Lane Flow Rate	188	199	110	216
Geometry Grp	1	1	1	1
Degree of Util (X)	0.261	0.28	0.158	0.294
Departure Headway (Hd)	4.987	5.064	5.175	4.905
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	712	702	685	726
Service Time	3.072	3.151	3.271	2.988
HCM Lane V/C Ratio	0.264	0.283	0.161	0.298
HCM Control Delay	9.9	10.1	9.3	10.1
HCM Lane LOS	A	B	A	B
HCM 95th-tile Q	1	1.1	0.6	1.2

Lanes, Volumes, Timings
18: Avenue 60 & S. Access

EAPC (2026) AM Peak hour






Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	24	72	0
Future Volume (vph)	0	0	0	24	72	0
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		25	
Link Distance (ft)		207	1772		380	
Travel Time (s)		3.5	30.2		10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
18: Avenue 60 & S. Access

EAPC (2026) AM Peak hour

Intersection

Int Delay, s/veh 6.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	24	72	0
Future Vol, veh/h	0	0	0	24	72	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	26	78	0














Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	26	0	0 13 13
Stage 1	-	-	- 13 -
Stage 2	-	-	- 0 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1588	-	- 1006 1067
Stage 1	-	-	- 1010 -
Stage 2	-	-	- - -
Platoon blocked, %		-	- -
Mov Cap-1 Maneuver	1588	-	- 1006 1067
Mov Cap-2 Maneuver	-	-	- 1006 -
Stage 1	-	-	- 1010 -
Stage 2	-	-	- - -

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1588	-	-	-	1006
HCM Lane V/C Ratio	-	-	-	-	0.078
HCM Control Delay (s)	0	-	-	-	8.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.3







Lanes, Volumes, Timings
19: Madison St. & Main Access

EAPC (2026) AM Peak hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				 	 	
Traffic Volume (vph)	207	15	19	333	313	67
Future Volume (vph)	207	15	19	333	313	67
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100	0	150			0
Storage Lanes	1	1	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	25			50	50	
Link Distance (ft)	499			880	130	
Travel Time (s)	13.6			12.0	1.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
19: Madison St. & Main Access

EAPC (2026) AM Peak hour

Intersection						
Int Delay, s/veh	4.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	207	15	19	333	313	67
Future Vol, veh/h	207	15	19	333	313	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	225	16	21	362	340	73











Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	600	207	413
Stage 1	377	-	-
Stage 2	223	-	-
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	432	799	1142
Stage 1	663	-	-
Stage 2	793	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	424	799	1142
Mov Cap-2 Maneuver	513	-	-
Stage 1	651	-	-
Stage 2	793	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.9	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1142	-	513	799	-	-
HCM Lane V/C Ratio	0.018	-	0.439	0.02	-	-
HCM Control Delay (s)	8.2	-	17.4	9.6	-	-
HCM Lane LOS	A	-	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	2.2	0.1	-	-






Lanes, Volumes, Timings
20: Project Access 1 & Avenue 58

EAPC (2026) AM Peak hour

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	202	5	16	160	5	2
Future Volume (vph)	202	5	16	160	5	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)		0	50		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			60		60	
Link Speed (mph)	50			50	25	
Link Distance (ft)	403			335	383	
Travel Time (s)	5.5			4.6	10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
20: Project Access 1 & Avenue 58

EAPC (2026) AM Peak hour

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	202	5	16	160	5	2
Future Vol, veh/h	202	5	16	160	5	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	220	5	17	174	5	2
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	225	0	344	223
Stage 1	-	-	-	-	223	-
Stage 2	-	-	-	-	121	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1342	-	639	816
Stage 1	-	-	-	-	813	-
Stage 2	-	-	-	-	892	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1342	-	631	816
Mov Cap-2 Maneuver	-	-	-	-	668	-
Stage 1	-	-	-	-	802	-
Stage 2	-	-	-	-	892	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.7		10.2	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	705	-	-	1342	-	
HCM Lane V/C Ratio	0.011	-	-	0.013	-	
HCM Control Delay (s)	10.2	-	-	7.7	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Lanes, Volumes, Timings
21: Project Access 2 & Avenue 58










EAPC (2026) AM Peak hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱↱		↱
Traffic Volume (vph)	196	8	0	176	0	3
Future Volume (vph)	196	8	0	176	0	3
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	50			50	25	
Link Distance (ft)	335			276	233	
Travel Time (s)	4.6			3.8	6.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↱↱		↱
Traffic Vol, veh/h	196	8	0	176	0	3
Future Vol, veh/h	196	8	0	176	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	213	9	0	191	0	3
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	-	-	-	218
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	-	-	0	-	0	821
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	821
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	0		9.4		
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	821	-	-	-		
HCM Lane V/C Ratio	0.004	-	-	-		
HCM Control Delay (s)	9.4	-	-	-		
HCM Lane LOS	A	-	-	-		
HCM 95th %tile Q(veh)	0	-	-	-		

Lanes, Volumes, Timings
22: Madison St. & Project Access 3

EAPC (2026) AM Peak hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	6	0	540	374	13
Future Volume (vph)	0	6	0	540	374	13
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	25			50	50	
Link Distance (ft)	210			263	288	
Travel Time (s)	5.7			3.6	3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

























HCM 6th TWSC
22: Madison St. & Project Access 3

EAPC (2026) AM Peak hour










Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	6	0	540	374	13
Future Vol, veh/h	0	6	0	540	374	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	7	0	587	407	14
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	211	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	794	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	794	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.6	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT EBLn1		SBT	SBR		
Capacity (veh/h)	- 794		-	-		
HCM Lane V/C Ratio	- 0.008		-	-		
HCM Control Delay (s)	- 9.6		-	-		
HCM Lane LOS	- A		-	-		
HCM 95th %tile Q(veh)	- 0		-	-		

Lanes, Volumes, Timings
1: Madison St. & Avenue 58

EAPC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	133	135	22	101	115	166	15	420	64	130	602	131
Future Volume (vph)	133	135	22	101	115	166	15	420	64	130	602	131
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	57.9
Intersection LOS	F

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	133	135	22	101	115	166	15	420	64	130	602	131
Future Vol, veh/h	133	135	22	101	115	166	15	420	64	130	602	131
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	145	147	24	110	125	180	16	457	70	141	654	142
Number of Lanes	1	1	1	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	23.4	25.3	45.8	90.9
HCM LOS	C	D	E	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	69%	0%	100%	0%	0%	100%	19%	0%	100%
Vol Right, %	0%	0%	31%	0%	0%	100%	0%	0%	81%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	15	280	204	133	135	22	101	77	204	130	401
LT Vol	15	0	0	133	0	0	101	0	0	130	0
Through Vol	0	280	140	0	135	0	0	77	38	0	401
RT Vol	0	0	64	0	0	22	0	0	166	0	0
Lane Flow Rate	16	304	222	145	147	24	110	83	222	141	436
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.05	0.891	0.636	0.469	0.456	0.07	0.348	0.253	0.641	0.401	1.179
Departure Headway (Hd)	11.248	10.748	10.529	11.98	11.48	10.78	11.718	11.218	10.649	10.227	9.727
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	320	341	346	302	315	334	308	322	342	352	375
Service Time	8.948	8.448	8.229	9.68	9.18	8.48	9.418	8.918	8.349	8.009	7.509
HCM Lane V/C Ratio	0.05	0.891	0.642	0.48	0.467	0.072	0.357	0.258	0.649	0.401	1.163
HCM Control Delay	14.5	59	29.9	24.8	23.5	14.3	20.5	17.7	30.5	19.7	135.4
HCM Lane LOS	B	F	D	C	C	B	C	C	D	C	F
HCM 95th-tile Q	0.2	8.5	4.1	2.4	2.3	0.2	1.5	1	4.2	1.9	17.5

Lanes, Volumes, Timings
1: Madison St. & Avenue 58

EAPC (2026) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	133	135	22	101	115	166	15	420	64	130	602	131
Future Volume (vph)	133	135	22	101	115	166	15	420	64	130	602	131
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	28.0	31.0	31.0	24.0	27.0	27.0	13.0	37.0	37.0	28.0	52.0	52.0
Total Split (%)	23.3%	25.8%	25.8%	20.0%	22.5%	22.5%	10.8%	30.8%	30.8%	23.3%	43.3%	43.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

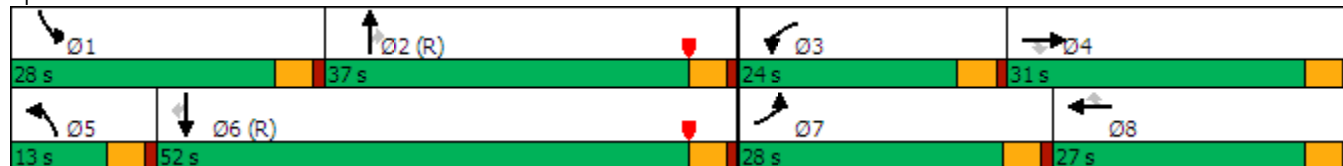
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated

























Splits and Phases: 1: Madison St. & Avenue 58



HCM 6th Signalized Intersection Summary















1: Madison St. & Avenue 58

EAPC (2026) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	133	135	22	101	115	166	15	420	64	130	602	131
Future Volume (veh/h)	133	135	22	101	115	166	15	420	64	130	602	131
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	145	147	24	110	125	180	16	457	70	141	654	142
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	174	288	244	136	472	210	42	1785	796	169	2040	910
Arrive On Green	0.10	0.16	0.16	0.08	0.14	0.14	0.02	0.52	0.52	0.10	0.59	0.59
Sat Flow, veh/h	1734	1821	1543	1734	3460	1543	1734	3460	1543	1734	3460	1543
Grp Volume(v), veh/h	145	147	24	110	125	180	16	457	70	141	654	142
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1730	1543	1734	1730	1543	1734	1730	1543
Q Serve(g_s), s	9.9	8.9	1.6	7.5	3.9	13.7	1.1	8.8	2.8	9.6	11.5	5.0
Cycle Q Clear(g_c), s	9.9	8.9	1.6	7.5	3.9	13.7	1.1	8.8	2.8	9.6	11.5	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	174	288	244	136	472	210	42	1785	796	169	2040	910
V/C Ratio(X)	0.84	0.51	0.10	0.81	0.27	0.86	0.38	0.26	0.09	0.83	0.32	0.16
Avail Cap(c_a), veh/h	340	402	341	282	649	289	123	1785	796	340	2040	910
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.0	46.3	43.2	54.4	46.4	50.7	57.7	16.2	14.7	53.2	12.5	11.1
Incr Delay (d2), s/veh	10.0	1.4	0.2	10.8	0.3	16.5	5.6	0.3	0.2	10.1	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	4.0	0.6	3.6	1.6	6.1	0.5	3.3	1.0	4.5	4.1	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.1	47.7	43.4	65.2	46.7	67.1	63.3	16.5	14.9	63.2	12.9	11.5
LnGrp LOS	E	D	D	E	D	E	E	B	B	E	B	B
Approach Vol, veh/h		316			415			543			937	
Approach Delay, s/veh		54.4			60.5			17.7			20.3	
Approach LOS		D			E			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.2	66.4	13.9	23.5	7.4	75.2	16.5	20.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	23.5	32.5	19.5	26.5	8.5	47.5	23.5	22.5				
Max Q Clear Time (g_c+I1), s	11.6	10.8	9.5	10.9	3.1	13.5	11.9	15.7				
Green Ext Time (p_c), s	0.2	2.8	0.2	0.6	0.0	4.8	0.3	0.7				
Intersection Summary												
HCM 6th Ctrl Delay			32.1									
HCM 6th LOS			C									

Lanes, Volumes, Timings
2: Madison St. & Airport Bl.

EAPC (2026) PM Peak hour

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	83	108	1	594	72	76	718
Future Volume (vph)	83	108	1	594	72	76	718
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		8			2		
Detector Phase	3	8	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	20.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	21.0	21.0	11.5	27.0	27.0	12.0	27.5
Total Split (%)	35.0%	35.0%	19.2%	45.0%	45.0%	20.0%	45.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 60

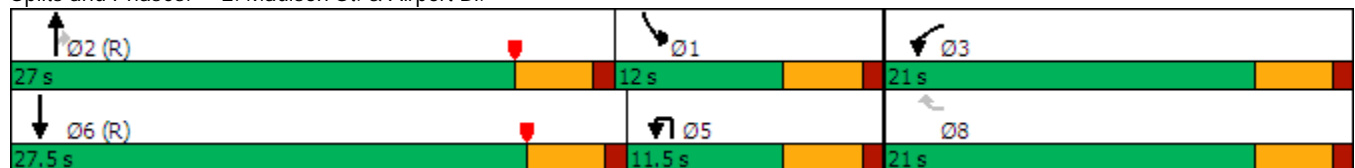
Actuated Cycle Length: 60

Offset: 28 (47%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 2: Madison St. & Airport Bl.






























HCM 6th Signalized Intersection Summary 2: Madison St. & Airport Bl.

EAPC (2026) PM Peak hour

Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	83	108	1	594	72	76	718
Future Volume (veh/h)	83	108	1	594	72	76	718
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	93	121		667	81	85	807
Peak Hour Factor	0.89	0.89		0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	211	188		1326	592	512	2578
Arrive On Green	0.12	0.12		0.38	0.38	0.29	0.74
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	93	121		667	81	85	807
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	3.0	4.5		8.8	1.1	2.2	4.7
Cycle Q Clear(g_c), s	3.0	4.5		8.8	1.1	2.2	4.7
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	211	188		1326	592	512	2578
V/C Ratio(X)	0.44	0.64		0.50	0.14	0.17	0.31
Avail Cap(c_a), veh/h	491	437		1326	592	512	2578
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.5	25.1		14.1	3.9	15.7	2.5
Incr Delay (d2), s/veh	1.4	3.7		1.4	0.5	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.6		2.9	0.6	0.7	0.4
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	25.9	28.8		15.5	4.4	15.8	2.9
LnGrp LOS	C	C		B	A	B	A
Approach Vol, veh/h	214			748			892
Approach Delay, s/veh	27.5			14.3			4.1
Approach LOS	C			B			A
Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	21.7	27.0				48.7	11.3
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	7.5	22.5				23.0	16.5
Max Q Clear Time (g_c+I1), s	4.2	10.8				6.7	6.5
Green Ext Time (p_c), s	0.0	3.3				4.5	0.4
Intersection Summary							
HCM 6th Ctrl Delay			10.9				
HCM 6th LOS			B				
Notes							
User approved ignoring U-Turning movement.							

Lanes, Volumes, Timings
3: Madison St. & Avenue 54









EAPC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 			 	
Traffic Volume (vph)	24	329	494	51	206	134	386	519	100	108	400	18
Future Volume (vph)	24	329	494	51	206	134	386	519	100	108	400	18
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 231

Intersection LOS F
























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	329	494	51	206	134	386	519	100	108	400	18
Future Vol, veh/h	24	329	494	51	206	134	386	519	100	108	400	18
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	370	555	57	231	151	434	583	112	121	449	20
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	461.4	39.2	192.9	75.2
HCM LOS	F	E	F	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	63%	0%	100%	18%	0%	100%	34%	0%	100%	88%
Vol Right, %	0%	0%	37%	0%	0%	82%	0%	0%	66%	0%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	386	346	273	24	219	604	51	137	203	108	267	151
LT Vol	386	0	0	24	0	0	51	0	0	108	0	0
Through Vol	0	346	173	0	219	110	0	137	69	0	267	133
RT Vol	0	0	100	0	0	494	0	0	134	0	0	18
Lane Flow Rate	434	389	307	27	246	678	57	154	228	121	300	170
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	1.488	1.282	0.99	0.1	0.876	2.304	0.217	0.562	0.801	0.45	1.071	0.604
Departure Headway (Hd)	13.637	13.137	12.88	13.522	13.022	12.449	13.138	12.638	12.175	14.516	14.016	13.932
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	269	280	285	267	281	298	275	287	298	250	261	260
Service Time	11.337	10.837	10.58	11.222	10.722	10.149	10.838	10.338	9.875	12.216	11.716	11.632
HCM Lane V/C Ratio	1.613	1.389	1.077	0.101	0.875	2.275	0.207	0.537	0.765	0.484	1.149	0.654
HCM Control Delay	271.7	187	89.1	17.7	64.7	623.2	19.4	30.4	50.1	28.6	116.4	35.8
HCM Lane LOS	F	F	F	C	F	F	C	D	F	D	F	E
HCM 95th-tile Q	22.6	17.3	10	0.3	7.6	51.9	0.8	3.2	6.4	2.2	11.4	3.6

Lanes, Volumes, Timings
3: Madison St. & Avenue 54

EAPC (2026) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	329	494	51	206	134	386	519	100	108	400	18
Future Volume (vph)	24	329	494	51	206	134	386	519	100	108	400	18
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	
Total Split (s)	12.0	44.0		14.4	46.4	46.4	28.2	40.6	40.6	21.0	33.4	
Total Split (%)	10.0%	36.7%		12.0%	38.7%	38.7%	23.5%	33.8%	33.8%	17.5%	27.8%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

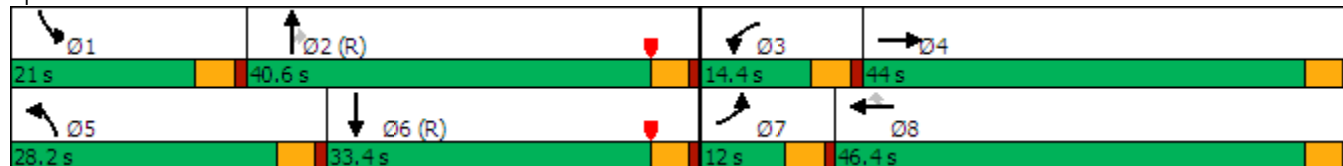
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated























Splits and Phases: 3: Madison St. & Avenue 54



HCM 6th Signalized Intersection Summary

























3: Madison St. & Avenue 54

EAPC (2026) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	329	494	51	206	134	386	519	100	108	400	18
Future Volume (veh/h)	24	329	494	51	206	134	386	519	100	108	400	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	27	370	555	57	231	151	434	583	112	121	449	20
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	60	569	508	86	1191	531	504	1337	596	147	1085	48
Arrive On Green	0.03	0.33	0.33	0.05	0.34	0.34	0.15	0.39	0.39	0.08	0.32	0.32
Sat Flow, veh/h	1734	1730	1543	1734	3460	1543	3365	3460	1543	1734	3374	150
Grp Volume(v), veh/h	27	370	555	57	231	151	434	583	112	121	230	239
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1734	1730	1794
Q Serve(g_s), s	1.8	21.9	39.5	3.9	5.6	8.5	15.1	14.9	5.8	8.2	12.5	12.5
Cycle Q Clear(g_c), s	1.8	21.9	39.5	3.9	5.6	8.5	15.1	14.9	5.8	8.2	12.5	12.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	60	569	508	86	1191	531	504	1337	596	147	556	577
V/C Ratio(X)	0.45	0.65	1.09	0.66	0.19	0.28	0.86	0.44	0.19	0.82	0.41	0.41
Avail Cap(c_a), veh/h	108	569	508	143	1208	539	665	1337	596	238	556	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.8	34.3	40.3	56.0	27.7	28.6	49.8	27.2	24.4	54.0	31.9	31.9
Incr Delay (d2), s/veh	4.4	2.2	64.6	8.4	0.1	0.3	8.8	1.0	0.7	11.3	2.3	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	9.0	23.0	1.8	2.2	3.0	6.7	6.0	2.1	3.9	5.3	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.2	36.6	104.8	64.4	27.7	28.9	58.6	28.2	25.1	65.3	34.1	34.1
LnGrp LOS	E	D	F	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h	952			439			1129			590		
Approach Delay, s/veh	77.0			32.9			39.6			40.5		
Approach LOS	E			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.7	50.9	10.5	44.0	22.5	43.1	8.7	45.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	16.5	36.1	9.9	39.5	23.7	28.9	7.5	41.9				
Max Q Clear Time (g_c+I1), s	10.2	16.9	5.9	41.5	17.1	14.5	3.8	10.5				
Green Ext Time (p_c), s	0.1	3.7	0.0	0.0	0.9	2.0	0.0	1.7				
Intersection Summary												
HCM 6th Ctrl Delay	50.3											
HCM 6th LOS	D											

Lanes, Volumes, Timings
4: Madison St. & Avenue 52

EAPC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	547	100	43	497	70	128	444	57	79	379	77
Future Volume (vph)	86	547	100	43	497	70	128	444	57	79	379	77
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	22.0	48.0	48.0	17.0	43.0	43.0	18.0	41.0	41.0	14.0	37.0	37.0
Total Split (%)	18.3%	40.0%	40.0%	14.2%	35.8%	35.8%	15.0%	34.2%	34.2%	11.7%	30.8%	30.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

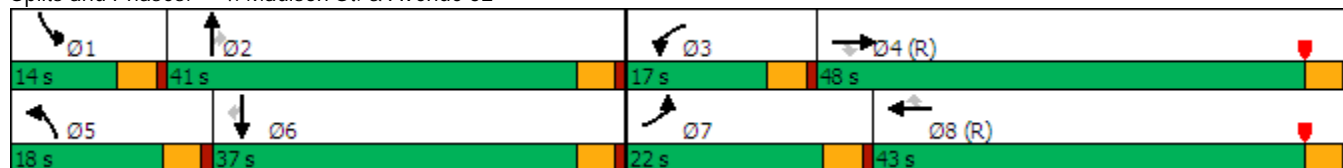
Actuated Cycle Length: 120

Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated

























Splits and Phases: 4: Madison St. & Avenue 52



HCM 6th Signalized Intersection Summary

























4: Madison St. & Avenue 52

EAPC (2026) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	547	100	43	497	70	128	444	57	79	379	77
Future Volume (veh/h)	86	547	100	43	497	70	128	444	57	79	379	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	100	636	116	50	578	81	149	516	66	92	441	90
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	125	1533	684	82	1448	646	207	1052	469	187	1032	460
Arrive On Green	0.07	0.44	0.44	0.05	0.42	0.42	0.06	0.30	0.30	0.06	0.30	0.30
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	100	636	116	50	578	81	149	516	66	92	441	90
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	6.8	15.1	5.4	3.4	14.0	3.9	5.2	14.6	3.7	3.2	12.3	5.2
Cycle Q Clear(g_c), s	6.8	15.1	5.4	3.4	14.0	3.9	5.2	14.6	3.7	3.2	12.3	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	125	1533	684	82	1448	646	207	1052	469	187	1032	460
V/C Ratio(X)	0.80	0.42	0.17	0.61	0.40	0.13	0.72	0.49	0.14	0.49	0.43	0.20
Avail Cap(c_a), veh/h	253	1533	684	181	1448	646	379	1052	469	266	1032	460
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	22.8	20.1	56.1	24.4	21.4	55.3	34.1	30.3	55.0	33.9	31.4
Incr Delay (d2), s/veh	11.3	0.8	0.5	7.1	0.8	0.4	4.7	1.6	0.6	2.0	1.3	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	6.0	1.9	1.6	5.5	1.4	2.3	6.1	1.4	1.4	5.1	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.1	23.6	20.7	63.2	25.2	21.8	60.0	35.8	31.0	57.0	35.1	32.3
LnGrp LOS	E	C	C	E	C	C	E	D	C	E	D	C
Approach Vol, veh/h	852			709			731			623		
Approach Delay, s/veh	28.2			27.5			40.3			38.0		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.2	41.0	10.2	57.6	11.9	40.3	13.1	54.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	9.5	36.5	12.5	43.5	13.5	32.5	17.5	38.5				
Max Q Clear Time (g_c+I1), s	5.2	16.6	5.4	17.1	7.2	14.3	8.8	16.0				
Green Ext Time (p_c), s	0.1	3.1	0.0	4.5	0.2	2.6	0.1	3.6				
Intersection Summary												
HCM 6th Ctrl Delay	33.1											
HCM 6th LOS	C											

Lanes, Volumes, Timings
5: Madison St. & Avenue 50/50th Avenue

EAPC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	498	173	55	427	77	142	516	44	73	363	115
Future Volume (vph)	111	498	173	55	427	77	142	516	44	73	363	115
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	26.0	45.0	45.0	19.0	38.0	38.0	19.0	41.0	41.0	15.0	37.0	37.0
Total Split (%)	21.7%	37.5%	37.5%	15.8%	31.7%	31.7%	15.8%	34.2%	34.2%	12.5%	30.8%	30.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

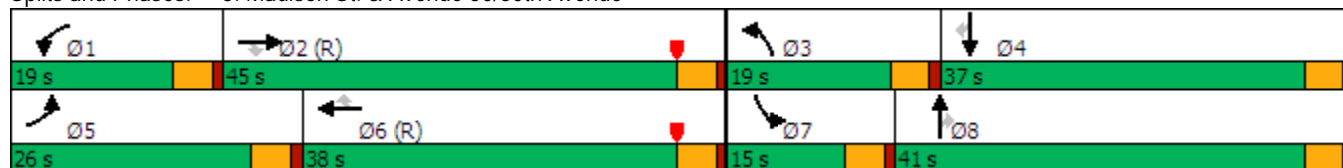
Actuated Cycle Length: 120

Offset: 64.5 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue



























HCM 6th Signalized Intersection Summary 5: Madison St. & Avenue 50/50th Avenue

EAPC (2026) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	498	173	55	427	77	142	516	44	73	363	115
Future Volume (veh/h)	111	498	173	55	427	77	142	516	44	73	363	115
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	117	524	182	58	449	81	149	543	46	77	382	121
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	144	1530	682	87	1416	631	207	1052	469	181	1026	457
Arrive On Green	0.08	0.44	0.44	0.05	0.41	0.41	0.06	0.30	0.30	0.05	0.30	0.30
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	117	524	182	58	449	81	149	543	46	77	382	121
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	8.0	11.9	9.0	3.9	10.6	3.9	5.2	15.5	2.6	2.7	10.5	7.2
Cycle Q Clear(g_c), s	8.0	11.9	9.0	3.9	10.6	3.9	5.2	15.5	2.6	2.7	10.5	7.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	144	1530	682	87	1416	631	207	1052	469	181	1026	457
V/C Ratio(X)	0.81	0.34	0.27	0.67	0.32	0.13	0.72	0.52	0.10	0.42	0.37	0.26
Avail Cap(c_a), veh/h	311	1530	682	210	1416	631	407	1052	469	294	1026	457
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.1	22.0	21.2	56.0	24.1	22.1	55.3	34.5	29.9	55.0	33.4	32.2
Incr Delay (d2), s/veh	10.5	0.6	1.0	8.6	0.6	0.4	4.6	1.8	0.4	1.6	1.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	4.8	3.2	1.9	4.2	1.4	2.3	6.5	1.0	1.1	4.4	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.6	22.6	22.1	64.7	24.7	22.5	59.9	36.3	30.4	56.5	34.4	33.6
LnGrp LOS	E	C	C	E	C	C	E	D	C	E	C	C
Approach Vol, veh/h	823			588			738			580		
Approach Delay, s/veh	28.5			28.3			40.7			37.2		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.5	57.6	11.9	40.1	14.4	53.6	11.0	41.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	14.5	40.5	14.5	32.5	21.5	33.5	10.5	36.5				
Max Q Clear Time (g_c+I1), s	5.9	13.9	7.2	12.5	10.0	12.6	4.7	17.5				
Green Ext Time (p_c), s	0.1	3.9	0.2	2.4	0.2	2.8	0.1	3.2				
Intersection Summary												
HCM 6th Ctrl Delay	33.6											
HCM 6th LOS	C											

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54










EAPC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 		 		
Traffic Volume (vph)	31	24	2	34	10	580	6	252	53	745	305	2
Future Volume (vph)	31	24	2	34	10	580	6	252	53	745	305	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 72.6

Intersection LOS F























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	24	2	34	10	580	6	252	53	745	305	2
Future Vol, veh/h	31	24	2	34	10	580	6	252	53	745	305	2
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	29	2	41	12	707	7	307	65	909	372	2
Number of Lanes	1	2	0	1	1	1	0	2	0	2	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	17.7	384.5	28.1	98
HCM LOS	C	F	D	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	5%	0%	100%	0%	0%	100%	0%	0%	100%	100%	0%
Vol Thru, %	95%	70%	0%	100%	80%	0%	100%	0%	0%	0%	99%
Vol Right, %	0%	30%	0%	0%	20%	0%	0%	100%	0%	0%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	132	179	31	16	10	34	10	580	373	373	307
LT Vol	6	0	31	0	0	34	0	0	373	373	0
Through Vol	126	126	0	16	8	0	10	0	0	0	305
RT Vol	0	53	0	0	2	0	0	580	0	0	2
Lane Flow Rate	161	218	38	20	12	41	12	707	454	454	374
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.458	0.607	0.127	0.063	0.039	0.122	0.034	1.844	1.118	1.118	0.869
Departure Headway (Hd)	11.92	11.69	13.794	13.265	13.116	10.982	10.471	9.755	10.453	10.453	9.94
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	304	312	262	272	275	328	344	382	350	350	367
Service Time	9.62	9.39	11.494	10.965	10.816	8.682	8.171	7.455	8.153	8.153	7.64
HCM Lane V/C Ratio	0.53	0.699	0.145	0.074	0.044	0.125	0.035	1.851	1.297	1.297	1.019
HCM Control Delay	24.3	30.9	18.5	16.9	16.3	15.2	13.5	412.5	116.9	116.9	52.1
HCM Lane LOS	C	D	C	C	C	C	B	F	F	F	F
HCM 95th-tile Q	2.3	3.7	0.4	0.2	0.1	0.4	0.1	44.6	14.8	14.8	8.3

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54

EAPC (2026) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	24	2	34	10	580	6	252	53	745	305	2
Future Volume (vph)	31	24	2	34	10	580	6	252	53	745	305	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases		2			6	4	8	8		4	4	
Permitted Phases	2			6		6						4
Detector Phase	2	2		6	6	4	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5		22.5	22.5	22.5
Total Split (s)	26.0	26.0		26.0	26.0	66.0	28.0	28.0		66.0	66.0	66.0
Total Split (%)	21.7%	21.7%		21.7%	21.7%	55.0%	23.3%	23.3%		55.0%	55.0%	55.0%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		None	None	Max	Max	Max		Max	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120





Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 70






















Control Type: Actuated-Coordinated

Splits and Phases: 6: Jefferson St. & Avenue 54

 Ø2 (R)	 Ø4	 Ø8
26 s	66 s	28 s
 Ø6		
26 s		





















HCM 6th Signalized Intersection Summary 6: Jefferson St. & Avenue 54

EAPC (2026) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	24	2	34	10	580	6	252	53	745	305	2
Future Volume (veh/h)	31	24	2	34	10	580	6	252	53	745	305	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	38	29	2	41	12	707	7	307	65	909	372	2
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	187	589	40	297	326	1067	12	555	123	1724	1773	791
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.20	0.20	0.20	0.51	0.51	0.51
Sat Flow, veh/h	733	3287	224	1378	1821	1543	63	2835	628	3365	3460	1543
Grp Volume(v), veh/h	38	15	16	41	12	707	202	0	177	909	372	2
Grp Sat Flow(s),veh/h/ln	733	1730	1781	1378	1821	1543	1818	0	1708	1682	1730	1543
Q Serve(g_s), s	5.4	0.9	0.9	3.0	0.7	21.5	12.1	0.0	11.1	21.7	7.0	0.1
Cycle Q Clear(g_c), s	6.1	0.9	0.9	3.9	0.7	21.5	12.1	0.0	11.1	21.7	7.0	0.1
Prop In Lane	1.00		0.13	1.00		1.00	0.03		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	187	310	319	297	326	1067	356	0	335	1724	1773	791
V/C Ratio(X)	0.20	0.05	0.05	0.14	0.04	0.66	0.57	0.00	0.53	0.53	0.21	0.00
Avail Cap(c_a), veh/h	187	310	319	297	326	1067	356	0	335	1724	1773	791
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.79	0.79	0.79	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.2	40.8	40.8	42.4	40.7	9.0	43.7	0.0	43.3	19.5	16.0	14.3
Incr Delay (d2), s/veh	2.4	0.3	0.3	0.2	0.0	1.2	6.4	0.0	5.9	1.2	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.4	0.4	1.0	0.3	21.1	5.8	0.0	5.0	7.9	2.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.6	41.1	41.1	42.6	40.7	10.2	50.1	0.0	49.2	20.7	16.2	14.3
LnGrp LOS	D	D	D	D	D	B	D	A	D	C	B	B
Approach Vol, veh/h	69			760			379			1283		
Approach Delay, s/veh	43.6			12.5			49.7			19.4		
Approach LOS	D			B			D			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	26.0			66.0			26.0			28.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	21.5			61.5			21.5			23.5		
Max Q Clear Time (g_c+I1), s	8.1			23.7			23.5			14.1		
Green Ext Time (p_c), s	0.2			6.3			0.0			1.3		
Intersection Summary												
HCM 6th Ctrl Delay	22.6											
HCM 6th LOS	C											

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EAPC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	425	364	31	468	334	253	719	77	200	766	155
Future Volume (vph)	108	425	364	31	468	334	253	719	77	200	766	155
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											





















HCM 6th Roundabout
7: Jefferson St. & Avenue 52

EAPC (2026) PM Peak hour

Intersection									
Intersection Delay, s/veh	231.2								
Intersection LOS	F								
Approach	EB		WB		NB		SB		
Entry Lanes	1		1		1		1		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	964		895		1128		1206		
Demand Flow Rate, veh/h	983		913		1150		1229		
Vehicles Circulating, veh/h	1093		1183		803		824		
Vehicles Exiting, veh/h	790		685		874		906		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	102.9		113.9		335.7		323.1		
Approach LOS	F		F		F		F		
Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Bypass	
Designated Moves	LT	R	LT	R	LT	R	LT	R	
Assumed Moves	LT	R	LT	R	LT	R	LT	R	
RT Channelized		Free		Free		Free		Free	
Lane Util	1.000		1.000		1.000		1.000		
Follow-Up Headway, s	2.609		2.609		2.609		2.609		
Critical Headway, s	4.976	399	4.976	366	4.976	85	4.976	170	
Entry Flow, veh/h	584	1887	547	1887	1065	1887	1059	1887	
Cap Entry Lane, veh/h	453	0.980	413	0.980	608	0.980	595	0.980	
Entry HV Adj Factor	0.981	391	0.980	359	0.981	83	0.981	167	
Flow Entry, veh/h	573	1850	536	1850	1045	1850	1039	1850	
Cap Entry, veh/h	444	0.211	405	0.194	597	0.045	584	0.090	
V/C Ratio	1.290	0.0	1.325	0.0	1.751	0.0	1.778	0.0	
Control Delay, s/veh	173.2	A	190.1	A	362.3	A	375.0	A	
LOS	F	1	F	1	F	0	F	0	
95th %tile Queue, veh	25		25		62		63		

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

EAPC (2026) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	425	364	31	468	334	253	719	77	200	766	155
Future Volume (vph)	108	425	364	31	468	334	253	719	77	200	766	155
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		100	0		100	0		0	0		0
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	60			60			60			60		
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											






















HCM 6th Roundabout
7: Jefferson St. & Avenue 52

EAPC (2026) PM Peak hour
With Improvements

Intersection										
Intersection Delay, s/veh	34.3									
Intersection LOS	D									
Approach	EB		WB		NB		SB			
Entry Lanes	1		1		2		2			
Conflicting Circle Lanes	2		2		2		2			
Adj Approach Flow, veh/h	964		895		1128		1206			
Demand Flow Rate, veh/h	983		913		1150		1229			
Vehicles Circulating, veh/h	1093		1183		803		824			
Vehicles Exiting, veh/h	790		685		874		906			
Ped Vol Crossing Leg, #/h	0		0		0		0			
Ped Cap Adj	1.000		1.000		1.000		1.000			
Approach Delay, s/veh	45.8		49.8		23.9		23.3			
Approach LOS	E		E		C		C			
Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
Assumed Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
RT Channelized		Free		Free			Free			Free
Lane Util	1.000		1.000		0.470	0.530		0.470	0.530	
Follow-Up Headway, s	2.535		2.535		2.667	2.535		2.667	2.535	
Critical Headway, s	4.328	399	4.328	366	4.645	4.328	85	4.645	4.328	170
Entry Flow, veh/h	584	1887	547	1887	501	564	1887	498	561	1887
Cap Entry Lane, veh/h	561	0.980	519	0.980	645	718	0.980	633	705	0.980
Entry HV Adj Factor	0.981	391	0.980	359	0.980	0.982	83	0.980	0.981	167
Flow Entry, veh/h	573	1850	536	1850	491	554	1850	488	550	1850
Cap Entry, veh/h	550	0.211	509	0.194	632	704	0.045	620	692	0.090
V/C Ratio	1.041	0.0	1.053	0.0	0.777	0.786	0.0	0.787	0.796	0.0
Control Delay, s/veh	77.0	A	83.1	A	26.5	25.1	A	27.8	26.3	A
LOS	F	1	F	1	D	D	0	D	D	0
95th %tile Queue, veh	16		16		7	8		8	8	

Lanes, Volumes, Timings
8: Jefferson St. & Pomelo

EAPC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	2	21	9	1	42	3	1176	7	23	1181	68
Future Volume (vph)	66	2	21	9	1	42	3	1176	7	23	1181	68
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	54.0		18.0	54.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	15.0%	45.0%		15.0%	45.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary

Area Type: Other

Cycle Length: 120

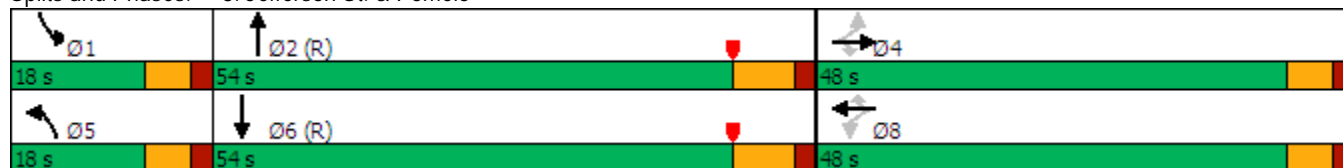
Actuated Cycle Length: 120

Offset: 30 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110


Control Type: Actuated-Coordinated

Splits and Phases: 8: Jefferson St. & Pomelo



























HCM 6th Signalized Intersection Summary 8: Jefferson St. & Pomelo

EAPC (2026) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗	↖	↑↑↑		↖	↑↑↑	
Traffic Volume (veh/h)	66	2	21	9	1	42	3	1176	7	23	1181	68
Future Volume (veh/h)	66	2	21	9	1	42	3	1176	7	23	1181	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	69	2	22	9	1	44	3	1238	7	24	1243	72
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	73	1	524	66	4	524	17	2260	13	96	2349	136
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.01	0.44	0.44	0.02	0.16	0.16
Sat Flow, veh/h	41	4	1543	27	13	1543	1734	5102	29	1734	4807	278
Grp Volume(v), veh/h	71	0	22	10	0	44	3	804	441	24	857	458
Grp Sat Flow(s),veh/h/ln	44	0	1543	40	0	1543	1734	1657	1816	1734	1657	1771
Q Serve(g_s), s	1.2	0.0	1.1	0.6	0.0	2.3	0.2	21.4	21.4	1.6	28.5	28.5
Cycle Q Clear(g_c), s	40.7	0.0	1.1	40.4	0.0	2.3	0.2	21.4	21.4	1.6	28.5	28.5
Prop In Lane	0.97		1.00	0.90		1.00	1.00		0.02	1.00		0.16
Lane Grp Cap(c), veh/h	74	0	524	71	0	524	17	1468	805	96	1619	865
V/C Ratio(X)	0.96	0.00	0.04	0.14	0.00	0.08	0.18	0.55	0.55	0.25	0.53	0.53
Avail Cap(c_a), veh/h	89	0	540	86	0	540	173	1468	805	173	1619	865
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.68	0.68	0.68
Uniform Delay (d), s/veh	59.4	0.0	26.6	45.9	0.0	27.0	59.0	24.6	24.6	56.5	37.7	37.7
Incr Delay (d2), s/veh	81.4	0.0	0.1	1.9	0.0	0.1	10.9	1.5	2.7	2.0	0.8	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	0.4	0.3	0.0	0.9	0.1	8.0	9.1	0.7	12.7	13.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	140.7	0.0	26.6	47.8	0.0	27.1	69.8	26.1	27.3	58.4	38.5	39.3
LnGrp LOS	F	A	C	D	A	C	E	C	C	E	D	D
Approach Vol, veh/h	93			54			1248			1339		
Approach Delay, s/veh	113.7			30.9			26.6			39.1		
Approach LOS	F			C			C			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.6	60.0		47.4	7.1	65.5		47.4				
Change Period (Y+Rc), s	6.0	7.5		6.0	6.0	7.5		6.0				
Max Green Setting (Gmax), s	12.0	46.5		42.0	12.0	46.5		42.0				
Max Q Clear Time (g_c+I1), s	3.6	23.4		42.7	2.2	30.5		42.4				
Green Ext Time (p_c), s	0.0	13.7		0.0	0.0	11.1		0.0				
Intersection Summary												
HCM 6th Ctrl Delay	35.8											
HCM 6th LOS	D											

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

EAPC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	362	404	146	153	369	214	140	1042	102	303	966	239
Future Volume (vph)	362	404	146	153	369	214	140	1042	102	303	966	239
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	36.5	36.5	25.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	30.4%	30.4%	20.8%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

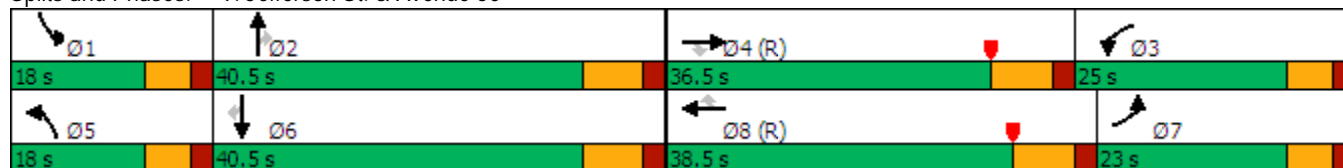
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 125































Control Type: Actuated-Coordinated

Splits and Phases: 9: Jefferson St. & Avenue 50



























HCM 6th Signalized Intersection Summary 9: Jefferson St. & Avenue 50

EAPC (2026) PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  		 	  	
Traffic Volume (veh/h)	362	404	146	153	369	214	140	1042	102	303	966	239
Future Volume (veh/h)	362	404	146	153	369	214	140	1042	102	303	966	239
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	373	416	151	158	380	221	144	1074	105	312	996	246
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	311	576	257	431	430	364	172	1293	401	336	1297	403
Arrive On Green	0.18	0.17	0.17	0.25	0.24	0.24	0.03	0.09	0.09	0.10	0.26	0.26
Sat Flow, veh/h	1734	3460	1543	1734	1821	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	373	416	151	158	380	221	144	1074	105	312	996	246
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	21.5	13.7	8.1	9.0	24.2	11.1	9.9	25.5	3.9	11.0	22.2	10.2
Cycle Q Clear(g_c), s	21.5	13.7	8.1	9.0	24.2	11.1	9.9	25.5	3.9	11.0	22.2	10.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	311	576	257	431	430	364	172	1293	401	336	1297	403
V/C Ratio(X)	1.20	0.72	0.59	0.37	0.88	0.61	0.84	0.83	0.26	0.93	0.77	0.61
Avail Cap(c_a), veh/h	311	836	373	431	470	399	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.3	47.4	25.7	37.3	44.3	21.3	57.1	52.3	11.6	53.6	41.0	14.3
Incr Delay (d2), s/veh	117.0	7.6	9.5	0.2	22.5	7.3	25.7	4.3	0.5	30.6	2.8	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.0	6.3	3.6	3.8	13.2	4.6	5.6	11.7	2.9	5.9	8.9	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	166.3	55.0	35.2	37.5	66.7	28.6	82.8	56.5	12.0	84.1	43.8	17.2
LnGrp LOS	F	E	D	D	E	C	F	E	B	F	D	B
Approach Vol, veh/h		940			759			1323			1554	
Approach Delay, s/veh		96.0			49.6			55.9			47.7	
Approach LOS		F			D			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	38.7	35.8	27.5	17.9	38.8	27.5	35.8				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	12.0	33.0	19.0	29.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	13.0	27.5	11.0	15.7	11.9	24.2	23.5	26.2				
Green Ext Time (p_c), s	0.0	3.7	0.1	4.3	0.0	5.5	0.0	2.1				
Intersection Summary												
HCM 6th Ctrl Delay			60.3									
HCM 6th LOS			E									
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

EAPC (2026) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	362	404	146	153	369	214	140	1042	102	303	966	239
Future Volume (vph)	362	404	146	153	369	214	140	1042	102	303	966	239
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	36.5	36.5	25.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	30.4%	30.4%	20.8%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

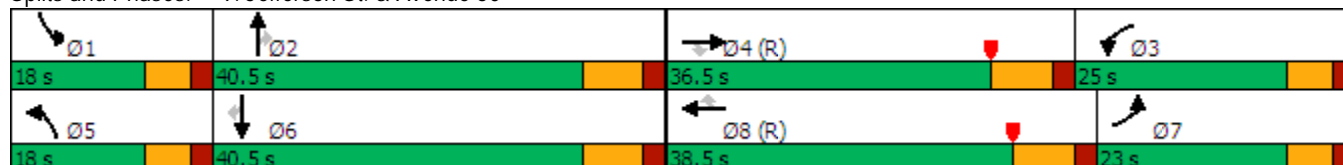
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 125

Control Type: Actuated-Coordinated
































Splits and Phases: 9: Jefferson St. & Avenue 50



HCM 6th Signalized Intersection Summary

9: Jefferson St. & Avenue 50

EAPC (2026) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			  		 	  	
Traffic Volume (veh/h)	362	404	146	153	369	214	140	1042	102	303	966	239
Future Volume (veh/h)	362	404	146	153	369	214	140	1042	102	303	966	239
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	373	416	151	158	380	221	144	1074	105	312	996	246
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	436	576	257	431	566	252	172	1293	401	336	1297	403
Arrive On Green	0.25	0.17	0.17	0.25	0.16	0.16	0.03	0.09	0.09	0.10	0.26	0.26
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	373	416	151	158	380	221	144	1074	105	312	996	246
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	24.6	13.7	8.1	9.0	12.4	12.5	9.9	25.5	3.9	11.0	22.2	8.5
Cycle Q Clear(g_c), s	24.6	13.7	8.1	9.0	12.4	12.5	9.9	25.5	3.9	11.0	22.2	8.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	436	576	257	431	566	252	172	1293	401	336	1297	403
V/C Ratio(X)	0.86	0.72	0.59	0.37	0.67	0.88	0.84	0.83	0.26	0.93	0.77	0.61
Avail Cap(c_a), veh/h	436	836	373	431	894	399	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.8	47.4	25.7	37.3	47.2	27.3	57.1	52.3	11.6	53.6	41.0	10.0
Incr Delay (d2), s/veh	15.0	7.6	9.5	0.2	6.2	32.0	25.7	4.3	0.5	30.6	2.8	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.9	6.3	3.6	3.8	5.7	6.7	5.6	11.7	2.9	5.9	8.9	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.8	55.0	35.2	37.5	53.4	59.3	82.8	56.5	12.0	84.1	43.8	12.9
LnGrp LOS	E	E	D	D	D	E	F	E	B	F	D	B
Approach Vol, veh/h		940			759			1323			1554	
Approach Delay, s/veh		52.9			51.8			55.9			47.0	
Approach LOS		D			D			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	38.7	35.8	27.5	17.9	38.8	36.2	27.1				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	12.0	33.0	19.0	29.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	13.0	27.5	11.0	15.7	11.9	24.2	26.6	14.5				
Green Ext Time (p_c), s	0.0	3.7	0.1	4.3	0.0	5.5	0.0	5.1				
Intersection Summary												
HCM 6th Ctrl Delay			51.6									
HCM 6th LOS			D									
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
10: Avenue 60 & Madison St.






EAPC (2026) PM Peak hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	48	47	66	173	320	70
Future Volume (vph)	48	47	66	173	320	70
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		40	
Link Distance (ft)		1772	661		437	
Travel Time (s)		30.2	11.3		7.4	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)						
Sign Control		Stop	Stop		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Intersection Delay, s/veh	14.8
Intersection LOS	B





















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	48	47	66	173	320	70
Future Vol, veh/h	48	47	66	173	320	70
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	59	57	80	211	390	85
Number of Lanes	0	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	10.9	10.5	18.4
HCM LOS	B	B	C









Lane	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	51%	0%	0%	100%	0%
Vol Thru, %	49%	100%	0%	0%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	95	66	173	320	70
LT Vol	48	0	0	320	0
Through Vol	47	66	0	0	0
RT Vol	0	0	173	0	70
Lane Flow Rate	116	80	211	390	85
Geometry Grp	4	7	7	7	7
Degree of Util (X)	0.202	0.138	0.319	0.67	0.118
Departure Headway (Hd)	6.274	6.159	5.449	6.184	4.975
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	572	583	660	585	722
Service Time	4.309	3.891	3.182	3.905	2.696
HCM Lane V/C Ratio	0.203	0.137	0.32	0.667	0.118
HCM Control Delay	10.9	9.9	10.7	20.6	8.4
HCM Lane LOS	B	A	B	C	A
HCM 95th-tile Q	0.7	0.5	1.4	5	0.4

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

EAPC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	171	151	21	99	131	99	330	15	204	416	48
Future Volume (vph)	48	171	151	21	99	131	99	330	15	204	416	48
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	93.7
Intersection LOS	F





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	48	171	151	21	99	131	99	330	15	204	416	48
Future Vol, veh/h	48	171	151	21	99	131	99	330	15	204	416	48
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	55	194	172	24	113	149	113	375	17	232	473	55
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	34.3	54.3	104.8	133.9
HCM LOS	D	F	F	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	22%	0%	8%	100%	0%	0%
Vol Thru, %	0%	96%	78%	0%	39%	0%	100%	0%
Vol Right, %	0%	4%	0%	100%	52%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	99	345	219	151	251	204	416	48
LT Vol	99	0	48	0	21	204	0	0
Through Vol	0	330	171	0	99	0	416	0
RT Vol	0	15	0	151	131	0	0	48
Lane Flow Rate	112	392	249	172	285	232	473	55
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.345	1.145	0.744	0.475	0.844	0.684	1.33	0.143
Departure Headway (Hd)	11.707	11.142	11.763	10.909	11.604	11.101	10.575	9.838
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	309	329	309	333	314	327	350	367
Service Time	9.407	8.842	9.463	8.609	9.304	8.801	8.275	7.538
HCM Lane V/C Ratio	0.362	1.191	0.806	0.517	0.908	0.709	1.351	0.15
HCM Control Delay	20.4	129	42	23.1	54.3	34.7	196.3	14.2
HCM Lane LOS	C	F	E	C	F	D	F	B
HCM 95th-tile Q	1.5	15.1	5.6	2.4	7.3	4.7	21.8	0.5

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

EAPC (2026) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	171	151	21	99	131	99	330	15	204	416	48
Future Volume (vph)	48	171	151	21	99	131	99	330	15	204	416	48
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		11.5	22.5		11.5	22.5	22.5
Total Split (s)	39.0	39.0	39.0	39.0	39.0		21.0	48.0		33.0	60.0	60.0
Total Split (%)	32.5%	32.5%	32.5%	32.5%	32.5%		17.5%	40.0%		27.5%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Splits and Phases: 11: Monroe St. & Avenue 60/60th Avenue



HCM 6th Signalized Intersection Summary


















11: Monroe St. & Avenue 60/60th Avenue

EAPC (2026) PM Peak hour
With Improvements






Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↰	↱		↰	↱	↱
Traffic Volume (veh/h)	48	171	151	21	99	131	99	330	15	204	416	48
Future Volume (veh/h)	48	171	151	21	99	131	99	330	15	204	416	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	55	194	172	24	112	149	112	375	17	232	473	55
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	85	267	421	43	138	162	138	801	36	263	975	826
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.08	0.46	0.46	0.15	0.54	0.54
Sat Flow, veh/h	177	979	1543	38	504	593	1734	1729	78	1734	1821	1543
Grp Volume(v), veh/h	249	0	172	285	0	0	112	0	392	232	473	55
Grp Sat Flow(s),veh/h/ln	1156	0	1543	1135	0	0	1734	0	1807	1734	1821	1543
Q Serve(g_s), s	0.0	0.0	10.9	7.0	0.0	0.0	7.6	0.0	17.8	15.7	19.6	2.1
Cycle Q Clear(g_c), s	23.4	0.0	10.9	30.4	0.0	0.0	7.6	0.0	17.8	15.7	19.6	2.1
Prop In Lane	0.22		1.00	0.08		0.52	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	352	0	421	342	0	0	138	0	837	263	975	826
V/C Ratio(X)	0.71	0.00	0.41	0.83	0.00	0.00	0.81	0.00	0.47	0.88	0.49	0.07
Avail Cap(c_a), veh/h	375	0	444	365	0	0	238	0	837	412	975	826
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.6	0.0	35.7	41.0	0.0	0.0	54.4	0.0	22.1	49.9	17.5	13.4
Incr Delay (d2), s/veh	5.6	0.0	0.6	14.4	0.0	0.0	11.0	0.0	1.9	13.1	1.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	0.0	4.1	9.4	0.0	0.0	3.6	0.0	7.5	7.5	7.9	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.2	0.0	36.3	55.4	0.0	0.0	65.3	0.0	24.0	63.0	19.2	13.6
LnGrp LOS	D	A	D	E	A	A	E	A	C	E	B	B
Approach Vol, veh/h	421			285			504			760		
Approach Delay, s/veh	41.0			55.4			33.2			32.2		
Approach LOS	D			E			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.7	60.1		37.2	14.0	68.7		37.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	28.5	43.5		34.5	16.5	55.5		34.5				
Max Q Clear Time (g_c+I1), s	17.7	19.8		25.4	9.6	21.6		32.4				
Green Ext Time (p_c), s	0.4	2.1		1.3	0.1	2.9		0.3				
Intersection Summary												
HCM 6th Ctrl Delay	37.7											
HCM 6th LOS	D											

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAPC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	171	62	66	150	62	88	465	72	53	537	98
Future Volume (vph)	90	171	62	66	150	62	88	465	72	53	537	98
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	398.9
Intersection LOS	F





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	90	171	62	66	150	62	88	465	72	53	537	98
Future Vol, veh/h	90	171	62	66	150	62	88	465	72	53	537	98
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	120	228	83	88	200	83	117	620	96	71	716	131
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	143.2	99.8	591.4	464.8
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	14%	28%	24%	9%	0%
Vol Thru, %	74%	53%	54%	91%	0%
Vol Right, %	12%	19%	22%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	625	323	278	590	98
LT Vol	88	90	66	53	0
Through Vol	465	171	150	537	0
RT Vol	72	62	62	0	98
Lane Flow Rate	833	431	371	787	131
Geometry Grp	5	2	2	7	7
Degree of Util (X)	2.232	1.139	0.982	2.109	0.323
Departure Headway (Hd)	12.392	15.234	16.191	13.071	12.277
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	300	241	226	291	295
Service Time	10.392	13.234	14.191	10.771	9.977
HCM Lane V/C Ratio	2.777	1.788	1.642	2.704	0.444
HCM Control Delay	591.4	143.2	99.8	538.6	20.7
HCM Lane LOS	F	F	F	F	C
HCM 95th-tile Q	49.6	12.3	8.8	43.2	1.4

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAPC (2026) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	171	62	66	150	62	88	465	72	53	537	98
Future Volume (vph)	90	171	62	66	150	62	88	465	72	53	537	98
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		0	150		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		11.5	22.5		11.5	22.5	
Total Split (s)	34.0	34.0		34.0	34.0		16.0	73.4		12.6	70.0	
Total Split (%)	28.3%	28.3%		28.3%	28.3%		13.3%	61.2%		10.5%	58.3%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

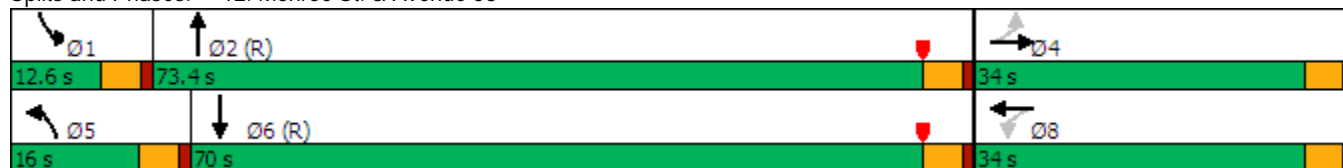
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 80





















Control Type: Actuated-Coordinated

Splits and Phases: 12: Monroe St. & Avenue 58
























HCM 6th Signalized Intersection Summary 12: Monroe St. & Avenue 58

EAPC (2026) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	171	62	66	150	62	88	465	72	53	537	98
Future Volume (veh/h)	90	171	62	66	150	62	88	465	72	53	537	98
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	120	228	83	88	200	83	117	620	96	71	716	131
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	168	313	114	147	301	125	142	907	140	92	839	153
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.08	0.59	0.59	0.05	0.56	0.56
Sat Flow, veh/h	1096	1274	464	1068	1222	507	1734	1540	238	1734	1498	274
Grp Volume(v), veh/h	120	0	311	88	0	283	117	0	716	71	0	847
Grp Sat Flow(s),veh/h/ln	1096	0	1738	1068	0	1730	1734	0	1778	1734	0	1772
Q Serve(g_s), s	11.8	0.0	19.7	9.8	0.0	17.7	8.0	0.0	33.3	4.9	0.0	48.4
Cycle Q Clear(g_c), s	29.5	0.0	19.7	29.5	0.0	17.7	8.0	0.0	33.3	4.9	0.0	48.4
Prop In Lane	1.00		0.27	1.00		0.29	1.00		0.13	1.00		0.15
Lane Grp Cap(c), veh/h	168	0	427	147	0	425	142	0	1047	92	0	992
V/C Ratio(X)	0.72	0.00	0.73	0.60	0.00	0.67	0.83	0.00	0.68	0.77	0.00	0.85
Avail Cap(c_a), veh/h	168	0	427	147	0	425	166	0	1047	117	0	992
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.7	0.0	41.6	55.2	0.0	40.8	54.3	0.0	17.0	56.1	0.0	22.3
Incr Delay (d2), s/veh	13.5	0.0	6.2	6.5	0.0	3.9	24.6	0.0	3.6	21.3	0.0	9.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	8.8	2.9	0.0	8.0	4.3	0.0	12.9	2.6	0.0	20.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.2	0.0	47.7	61.7	0.0	44.7	78.8	0.0	20.6	77.4	0.0	31.5
LnGrp LOS	E	A	D	E	A	D	E	A	C	E	A	C
Approach Vol, veh/h	431				371				833			
Approach Delay, s/veh	53.4				48.7				28.8			
Approach LOS	D				D				C			
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.8	75.2		34.0	14.3	71.7		34.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	8.1	68.9		29.5	11.5	65.5		29.5				
Max Q Clear Time (g_c+I1), s	6.9	35.3		31.5	10.0	50.4		31.5				
Green Ext Time (p_c), s	0.0	5.0		0.0	0.0	5.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay	38.1											
HCM 6th LOS	D											

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.









EAPC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	111	30	72	121	66	28	487	65	67	578	19
Future Volume (vph)	10	111	30	72	121	66	28	487	65	67	578	19
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 32.7

Intersection LOS F






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	111	30	72	121	66	28	487	65	67	578	19
Future Vol, veh/h	10	111	30	72	121	66	28	487	65	67	578	19
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	128	34	83	139	76	32	560	75	77	664	22
Number of Lanes	1	1	1	0	1	0	1	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	1	3
HCM Control Delay	17.2	42.6	283.5	62.5
HCM LOS	C	E	F	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	100%	0%	0%	28%	100%	0%	0%
Vol Thru, %	0%	88%	0%	100%	0%	47%	0%	100%	91%
Vol Right, %	0%	12%	0%	0%	100%	25%	0%	0%	9%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	28	552	10	111	30	259	67	385	212
LT Vol	28	0	10	0	0	72	67	0	0
Through Vol	0	487	0	111	0	121	0	385	193
RT Vol	0	65	0	0	30	66	0	0	19
Lane Flow Rate	32	634	11	128	34	298	77	443	243
Geometry Grp	8	8	7	7	7	8	8	8	8
Degree of Util (X)	0.085	1.583	0.031	0.331	0.083	0.782	0.193	1.048	0.571
Departure Headway (Hd)	9.799	9.194	11.172	10.641	9.896	10.610	10.234	9.709	9.643
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	368	400	322	341	364	345	353	376	377
Service Time	7.499	6.894	8.872	8.341	7.596	8.3	7.934	7.409	7.343
HCM Lane V/C Ratio	0.087	1.585	0.034	0.375	0.093	0.864	0.218	1.178	0.645
HCM Control Delay	13.4	297.2	14.2	18.5	13.5	42.6	15.4	91.7	24.4
HCM Lane LOS	B	F	B	C	B	E	C	F	C
HCM 95th-tile Q	0.3	35.1	0.1	1.4	0.3	6.4	0.7	13.2	3.4

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.

EAPC (2026) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	111	30	72	121	66	28	487	65	67	578	19
Future Volume (vph)	10	111	30	72	121	66	28	487	65	67	578	19
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		11.5	22.5		11.5	22.5	22.5
Total Split (s)	40.4	40.4	40.4	40.4	40.4		11.8	62.6		17.0	67.8	67.8
Total Split (%)	33.7%	33.7%	33.7%	33.7%	33.7%		9.8%	52.2%		14.2%	56.5%	56.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated






















Splits and Phases: 13: Monroe St. & Airport Bl.



HCM 6th Signalized Intersection Summary



















13: Monroe St. & Airport Bl.

EAPC (2026) PM Peak hour
With Improvements







												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	111	30	72	121	66	28	487	65	67	578	19
Future Volume (veh/h)	10	111	30	72	121	66	28	487	65	67	578	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	11	128	34	83	139	76	32	560	75	77	664	22
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	209	432	366	116	168	84	66	934	125	98	2117	944
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.04	0.59	0.59	0.06	0.61	0.61
Sat Flow, veh/h	1166	1821	1543	325	707	353	1734	1573	211	1734	3460	1543
Grp Volume(v), veh/h	11	128	34	298	0	0	32	0	635	77	664	22
Grp Sat Flow(s),veh/h/ln	1166	1821	1543	1385	0	0	1734	0	1783	1734	1730	1543
Q Serve(g_s), s	0.0	6.9	2.1	18.6	0.0	0.0	2.2	0.0	27.0	5.3	11.1	0.7
Cycle Q Clear(g_c), s	1.8	6.9	2.1	25.5	0.0	0.0	2.2	0.0	27.0	5.3	11.1	0.7
Prop In Lane	1.00		1.00	0.28		0.26	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	209	432	366	367	0	0	66	0	1059	98	2117	944
V/C Ratio(X)	0.05	0.30	0.09	0.81	0.00	0.00	0.48	0.00	0.60	0.79	0.31	0.02
Avail Cap(c_a), veh/h	281	545	462	462	0	0	106	0	1059	181	2117	944
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	37.5	35.7	45.5	0.0	0.0	56.5	0.0	15.4	55.9	11.2	9.2
Incr Delay (d2), s/veh	0.1	0.4	0.1	8.5	0.0	0.0	5.3	0.0	2.5	13.1	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.0	0.8	9.2	0.0	0.0	1.0	0.0	10.4	2.6	3.9	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.7	37.9	35.8	54.0	0.0	0.0	61.9	0.0	17.9	69.0	11.6	9.2
LnGrp LOS	D	D	D	D	A	A	E	A	B	E	B	A
Approach Vol, veh/h	173			298			667			763		
Approach Delay, s/veh	37.3			54.0			20.0			17.3		
Approach LOS	D			D			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.3	75.8		33.0	9.1	77.9		33.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	12.5	58.1		35.9	7.3	63.3		35.9				
Max Q Clear Time (g_c+I1), s	7.3	29.0		8.9	4.2	13.1		27.5				
Green Ext Time (p_c), s	0.1	4.1		0.7	0.0	4.5		1.0				
Intersection Summary												
HCM 6th Ctrl Delay	25.8											
HCM 6th LOS	C											

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAPC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	288	133	38	209	66	81	534	39	94	492	45
Future Volume (vph)	89	288	133	38	209	66	81	534	39	94	492	45
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	304
Intersection LOS	F





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	89	288	133	38	209	66	81	534	39	94	492	45
Future Vol, veh/h	89	288	133	38	209	66	81	534	39	94	492	45
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	98	316	146	42	230	73	89	587	43	103	541	49
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	134	95.1	494.1	347.9
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	12%	100%	0%	12%	16%	0%
Vol Thru, %	82%	0%	68%	67%	84%	0%
Vol Right, %	6%	0%	32%	21%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	654	89	421	313	586	45
LT Vol	81	89	0	38	94	0
Through Vol	534	0	288	209	492	0
RT Vol	39	0	133	66	0	45
Lane Flow Rate	719	98	463	344	644	49
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	2.01	0.275	1.207	0.967	1.735	0.122
Departure Headway (Hd)	12.662	13.623	12.849	15.92	12.559	11.726
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	295	266	287	230	296	308
Service Time	10.662	11.323	10.549	13.92	10.259	9.426
HCM Lane V/C Ratio	2.437	0.368	1.613	1.496	2.176	0.159
HCM Control Delay	494.1	21.4	157.8	95.1	373.4	16
HCM Lane LOS	F	C	F	F	F	C
HCM 95th-tile Q	41.1	1.1	15.5	8.6	32.1	0.4

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAPC (2026) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	288	133	38	209	66	81	534	39	94	492	45
Future Volume (vph)	89	288	133	38	209	66	81	534	39	94	492	45
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		11.5	22.5		11.5	22.5	
Total Split (s)	44.0	44.0		44.0	44.0		15.0	60.0		16.0	61.0	
Total Split (%)	36.7%	36.7%		36.7%	36.7%		12.5%	50.0%		13.3%	50.8%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

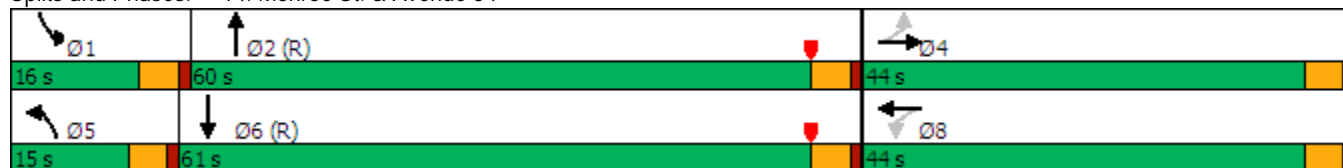
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 75

Control Type: Actuated-Coordinated





















Splits and Phases: 14: Monroe St. & Avenue 54



HCM 6th Signalized Intersection Summary























14: Monroe St. & Avenue 54

EAPC (2026) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	288	133	38	209	66	81	534	39	94	492	45
Future Volume (veh/h)	89	288	133	38	209	66	81	534	39	94	492	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	98	316	146	42	230	73	89	587	43	103	541	49
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	244	371	171	119	417	132	111	837	61	127	837	76
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.06	0.50	0.50	0.07	0.51	0.51
Sat Flow, veh/h	1076	1179	545	930	1325	421	1734	1676	123	1734	1645	149
Grp Volume(v), veh/h	98	0	462	42	0	303	89	0	630	103	0	590
Grp Sat Flow(s),veh/h/ln	1076	0	1723	930	0	1745	1734	0	1799	1734	0	1794
Q Serve(g_s), s	10.0	0.0	30.1	5.3	0.0	17.3	6.1	0.0	32.4	7.0	0.0	28.9
Cycle Q Clear(g_c), s	27.2	0.0	30.1	35.4	0.0	17.3	6.1	0.0	32.4	7.0	0.0	28.9
Prop In Lane	1.00		0.32	1.00		0.24	1.00		0.07	1.00		0.08
Lane Grp Cap(c), veh/h	244	0	543	119	0	550	111	0	899	127	0	912
V/C Ratio(X)	0.40	0.00	0.85	0.35	0.00	0.55	0.80	0.00	0.70	0.81	0.00	0.65
Avail Cap(c_a), veh/h	259	0	567	133	0	575	152	0	899	166	0	912
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.4	0.0	38.5	55.1	0.0	34.1	55.4	0.0	23.1	54.8	0.0	21.6
Incr Delay (d2), s/veh	1.1	0.0	11.5	1.8	0.0	1.0	18.9	0.0	4.5	20.0	0.0	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	13.6	1.3	0.0	7.1	3.2	0.0	13.6	3.7	0.0	12.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.4	0.0	50.0	56.8	0.0	35.1	74.3	0.0	27.7	74.8	0.0	25.1
LnGrp LOS	D	A	D	E	A	D	E	A	C	E	A	C
Approach Vol, veh/h	560			345			719			693		
Approach Delay, s/veh	49.4			37.8			33.4			32.5		
Approach LOS	D			D			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.3	64.4		42.3	12.2	65.5		42.3				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	11.5	55.5		39.5	10.5	56.5		39.5				
Max Q Clear Time (g_c+I1), s	9.0	34.4		32.1	8.1	30.9		37.4				
Green Ext Time (p_c), s	0.0	3.7		1.8	0.0	3.6		0.4				
Intersection Summary												
HCM 6th Ctrl Delay	37.7											
HCM 6th LOS	D											

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52










EAPC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	442	92	68	440	124	64	531	78	128	493	97
Future Volume (vph)	116	442	92	68	440	124	64	531	78	128	493	97
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 822.5

Intersection LOS F























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	116	442	92	68	440	124	64	531	78	128	493	97
Future Vol, veh/h	116	442	92	68	440	124	64	531	78	128	493	97
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	135	514	107	79	512	144	74	617	91	149	573	113
Number of Lanes	1	1	1	0	2	1	0	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay	278.8	97.2	822.6	91.5
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	10%	100%	0%	0%	32%	0%	0%	100%	0%	0%
Vol Thru, %	79%	0%	100%	0%	68%	100%	0%	0%	100%	63%
Vol Right, %	12%	0%	0%	100%	0%	0%	100%	0%	0%	37%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	673	116	442	92	215	293	124	128	329	261
LT Vol	64	116	0	0	68	0	0	128	0	0
Through Vol	531	0	442	0	147	293	0	0	329	164
RT Vol	78	0	0	92	0	0	124	0	0	97
Lane Flow Rate	783	135	514	107	250	341	144	149	382	304
Geometry Grp	8	8	8	8	8	8	8	7	7	7
Degree of Util (X)	2.749	0.482	1.765	0.347	0.836	1.128	0.449	0.45	1.104	0.856
Departure Headway (Hd)	12.973	16.369	15.796	14.994	16.88	16.696	15.879	16.179	15.612	15.317
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	290	223	236	242	217	222	229	225	237	240
Service Time	10.673	14.069	13.496	12.694	14.58	14.396	13.579	13.879	13.312	13.017
HCM Lane V/C Ratio	2.7	0.605	2.178	0.442	1.152	1.536	0.629	0.662	1.612	1.267
HCM Control Delay	822.6	33.4	396	25.5	70.5	144.7	30.9	31.5	132.8	69
HCM Lane LOS	F	D	F	D	F	F	D	D	F	F
HCM 95th-tile Q	65.1	2.4	27.3	1.5	6.3	11.4	2.1	2.2	11.4	6.8

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52

EAPC (2026) PM Peak hour
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	442	92	68	440	124	64	531	78	128	493	97
Future Volume (vph)	116	442	92	68	440	124	64	531	78	128	493	97
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2			6		
Detector Phase	7	4	4	3	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	17.8	40.0	40.0	11.5	33.7	33.7	68.5	68.5		68.5	68.5	
Total Split (%)	14.8%	33.3%	33.3%	9.6%	28.1%	28.1%	57.1%	57.1%		57.1%	57.1%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5		4.5		4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	None	None	None	None	None	C-Max	C-Max		C-Max	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

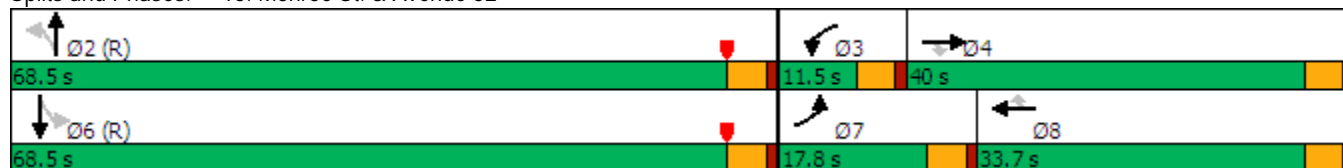
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 100

Control Type: Actuated-Coordinated























Splits and Phases: 15: Monroe St. & Avenue 52



HCM 6th Signalized Intersection Summary

























15: Monroe St. & Avenue 52

EAPC (2026) PM Peak hour
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	442	92	68	440	124	64	531	78	128	493	97
Future Volume (veh/h)	116	442	92	68	440	124	64	531	78	128	493	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	136	520	108	80	518	146	75	625	92	151	580	114
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	162	539	457	100	901	402	95	673	97	202	1539	302
Arrive On Green	0.09	0.30	0.30	0.06	0.26	0.26	0.53	0.53	0.53	0.53	0.53	0.53
Sat Flow, veh/h	1734	1821	1543	1734	3460	1543	116	1261	181	734	2884	565
Grp Volume(v), veh/h	136	520	108	80	518	146	792	0	0	151	347	347
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1730	1543	1558	0	0	734	1730	1719
Q Serve(g_s), s	9.3	33.8	6.4	5.5	15.6	9.3	43.8	0.0	0.0	6.1	14.1	14.1
Cycle Q Clear(g_c), s	9.3	33.8	6.4	5.5	15.6	9.3	58.0	0.0	0.0	64.1	14.1	14.1
Prop In Lane	1.00		1.00	1.00		1.00	0.09		0.12	1.00		0.33
Lane Grp Cap(c), veh/h	162	539	457	100	901	402	865	0	0	202	923	918
V/C Ratio(X)	0.84	0.97	0.24	0.80	0.57	0.36	0.92	0.00	0.00	0.75	0.38	0.38
Avail Cap(c_a), veh/h	192	539	457	101	901	402	865	0	0	202	923	918
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.5	41.6	32.0	55.8	38.6	36.2	26.6	0.0	0.0	35.0	16.3	16.3
Incr Delay (d2), s/veh	23.8	30.0	0.3	34.3	0.9	0.6	16.0	0.0	0.0	22.3	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	18.6	2.3	3.3	6.4	3.4	22.8	0.0	0.0	5.6	5.4	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.4	71.7	32.3	90.1	39.5	36.8	42.5	0.0	0.0	57.3	17.5	17.5
LnGrp LOS	E	E	C	F	D	D	D	A	A	E	B	B
Approach Vol, veh/h	764			744			792			845		
Approach Delay, s/veh	67.1			44.4			42.5			24.6		
Approach LOS	E			D			D			C		
Timer - Assigned Phs	2		3	4		6	7	8				
Phs Duration (G+Y+Rc), s	68.6		11.4	40.0		68.6	15.7	35.8				
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s	64.0		7.0	35.5		64.0	13.3	29.2				
Max Q Clear Time (g_c+I1), s	60.0		7.5	35.8		66.1	11.3	17.6				
Green Ext Time (p_c), s	1.9		0.0	0.0		0.0	0.1	2.7				
Intersection Summary												
HCM 6th Ctrl Delay	44.1											
HCM 6th LOS	D											

Lanes, Volumes, Timings
16: Monroe St. & 50th Avenue

EAPC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	516	58	48	424	126	50	718	82	137	577	43
Future Volume (vph)	60	516	58	48	424	126	50	718	82	137	577	43
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	20.5	20.5	20.5	20.5	20.5	11.5	11.5	20.5		11.5	20.5	
Total Split (s)	26.0	26.0	26.0	26.0	26.0	12.0	11.5	22.0		12.0	22.5	
Total Split (%)	43.3%	43.3%	43.3%	43.3%	43.3%	20.0%	19.2%	36.7%		20.0%	37.5%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag						Lead	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

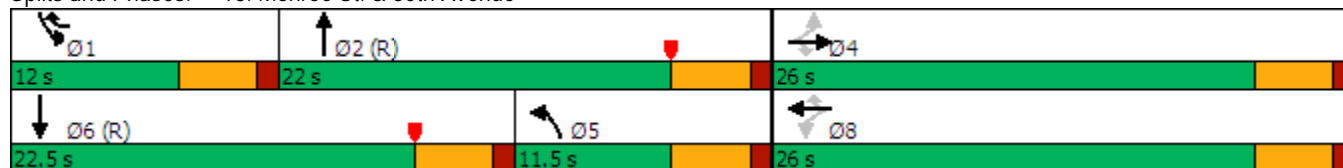
Actuated Cycle Length: 60

Offset: 14.6 (24%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 65

























Control Type: Actuated-Coordinated

Splits and Phases: 16: Monroe St. & 50th Avenue



















HCM 6th Signalized Intersection Summary
16: Monroe St. & 50th Avenue

EAPC (2026) PM Peak hour





												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	516	58	48	424	126	50	718	82	137	577	43
Future Volume (veh/h)	60	516	58	48	424	126	50	718	82	137	577	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	67	573	64	53	471	140	56	798	91	152	641	48
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	668	566	180	668	747	217	989	113	203	1006	75
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.13	0.32	0.31	0.12	0.31	0.30
Sat Flow, veh/h	810	1821	1543	791	1821	1543	1734	3130	357	1734	3263	244
Grp Volume(v), veh/h	67	573	64	53	471	140	56	441	448	152	340	349
Grp Sat Flow(s),veh/h/ln	810	1821	1543	791	1821	1543	1734	1730	1757	1734	1730	1777
Q Serve(g_s), s	4.6	17.4	1.6	4.0	13.3	3.1	1.8	14.0	14.1	5.1	10.1	10.2
Cycle Q Clear(g_c), s	17.9	17.4	1.6	21.4	13.3	3.1	1.8	14.0	14.1	5.1	10.1	10.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.20	1.00		0.14
Lane Grp Cap(c), veh/h	238	668	566	180	668	747	217	547	555	203	533	548
V/C Ratio(X)	0.28	0.86	0.11	0.29	0.71	0.19	0.26	0.81	0.81	0.75	0.64	0.64
Avail Cap(c_a), veh/h	238	668	566	180	668	747	217	547	555	231	533	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	17.6	12.6	27.5	16.2	8.8	23.7	18.8	18.9	25.6	17.9	17.9
Incr Delay (d2), s/veh	0.6	10.8	0.1	0.9	3.4	0.1	0.6	12.1	11.9	11.0	5.7	5.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	7.7	0.5	0.7	4.9	0.8	0.7	6.3	6.4	2.4	4.1	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.5	28.4	12.6	28.4	19.6	8.9	24.4	30.9	30.8	36.6	23.6	23.5
LnGrp LOS	C	C	B	C	B	A	C	C	C	D	C	C
Approach Vol, veh/h		704			664			945			841	
Approach Delay, s/veh		26.6			18.1			30.5			25.9	
Approach LOS		C			B			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	23.0		26.0	11.5	22.5		26.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	17.5		21.5	7.0	18.0		21.5				
Max Q Clear Time (g_c+I1), s	7.1	16.1		19.9	3.8	12.2		23.4				
Green Ext Time (p_c), s	0.0	0.7		0.7	0.0	1.9		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			25.8									
HCM 6th LOS			C									

Lanes, Volumes, Timings
17: Jackson St. & 58th Avenue

EAPC (2026) PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	200	10	0	165	12	16	245	18	7	217	52
Future Volume (vph)	53	200	10	0	165	12	16	245	18	7	217	52
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		5266			1079			1013			510	
Travel Time (s)		71.8			14.7			12.6			6.3	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	21.5
Intersection LOS	C

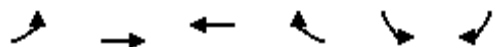
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	53	200	10	0	165	12	16	245	18	7	217	52
Future Vol, veh/h	53	200	10	0	165	12	16	245	18	7	217	52
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	67	253	13	0	209	15	20	310	23	9	275	66
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	22.4	16.5	23.1	22.3
HCM LOS	C	C	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	20%	0%	3%
Vol Thru, %	88%	76%	93%	79%
Vol Right, %	6%	4%	7%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	279	263	177	276
LT Vol	16	53	0	7
Through Vol	245	200	165	217
RT Vol	18	10	12	52
Lane Flow Rate	353	333	224	349
Geometry Grp	1	1	1	1
Degree of Util (X)	0.674	0.651	0.457	0.661
Departure Headway (Hd)	6.872	7.044	7.335	6.81
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	526	513	491	531
Service Time	4.932	5.104	5.401	4.869
HCM Lane V/C Ratio	0.671	0.649	0.456	0.657
HCM Control Delay	23.1	22.4	16.5	22.3
HCM Lane LOS	C	C	C	C
HCM 95th-tile Q	5	4.6	2.4	4.8

Lanes, Volumes, Timings
18: Avenue 60 & S. Access




EAPC (2026) PM Peak hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	76	45	0
Future Volume (vph)	0	0	0	76	45	0
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		25	
Link Distance (ft)		207	1772		380	
Travel Time (s)		3.5	30.2		10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Int Delay, s/veh 3.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	76	45	0
Future Vol, veh/h	0	0	0	76	45	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	83	49	0












Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	83	0	0 42 42
Stage 1	-	-	- 42 -
Stage 2	-	-	- 0 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1514	-	- 969 1029
Stage 1	-	-	- 980 -
Stage 2	-	-	- - -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1514	-	- 969 1029
Mov Cap-2 Maneuver	-	-	- 969 -
Stage 1	-	-	- 980 -
Stage 2	-	-	- - -

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1514	-	-	-	969
HCM Lane V/C Ratio	-	-	-	-	0.05
HCM Control Delay (s)	0	-	-	-	8.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2







Lanes, Volumes, Timings
19: Madison St. & Main Access

EAPC (2026) PM Peak hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	150	13	45	349	511	213
Future Volume (vph)	150	13	45	349	511	213
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100	0	150			0
Storage Lanes	1	1	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	25			50	50	
Link Distance (ft)	499			880	178	
Travel Time (s)	13.6			12.0	2.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
19: Madison St. & Main Access

EAPC (2026) PM Peak hour

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	150	13	45	349	511	213
Future Vol, veh/h	150	13	45	349	511	213
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	163	14	49	379	555	232

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	959	394	787	0	-	0
Stage 1	671	-	-	-	-	-
Stage 2	288	-	-	-	-	-
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	255	605	828	-	-	-
Stage 1	470	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	240	605	828	-	-	-
Mov Cap-2 Maneuver	346	-	-	-	-	-
Stage 1	442	-	-	-	-	-
Stage 2	735	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23.2	1.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	828	-	346	605	-	-
HCM Lane V/C Ratio	0.059	-	0.471	0.023	-	-
HCM Control Delay (s)	9.6	-	24.3	11.1	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.2	-	2.4	0.1	-	-

Lanes, Volumes, Timings
20: Project Access 1 & Avenue 58

EAPC (2026) PM Peak hour






	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰		↱	↕	↕	
Traffic Volume (vph)	277	8	27	233	23	12
Future Volume (vph)	277	8	27	233	23	12
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)		0	50		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			60		60	
Link Speed (mph)	50			50	25	
Link Distance (ft)	403			335	383	
Travel Time (s)	5.5			4.6	10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
20: Project Access 1 & Avenue 58

EAPC (2026) PM Peak hour

Intersection

Int Delay, s/veh 1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	277	8	27	233	23	12
Future Vol, veh/h	277	8	27	233	23	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	301	9	29	253	25	13











Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	310
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.13
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.219
Pot Cap-1 Maneuver	-	-	1249
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1249
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	11.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	624	-	-	1249	-
HCM Lane V/C Ratio	0.061	-	-	0.023	-
HCM Control Delay (s)	11.1	-	-	8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Lanes, Volumes, Timings
21: Project Access 2 & Avenue 58












EAPC (2026) PM Peak hour




						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations				 		
Traffic Volume (vph)	274	15	0	260	0	15
Future Volume (vph)	274	15	0	260	0	15
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	50			50	25	
Link Distance (ft)	335			276	233	
Travel Time (s)	4.6			3.8	6.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑↑		↑
Traffic Vol, veh/h	274	15	0	260	0	15
Future Vol, veh/h	274	15	0	260	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	298	16	0	283	0	16
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	306
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	-	-	0	-	0	733
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	733
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		10	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	733	-	-	-		
HCM Lane V/C Ratio	0.022	-	-	-		
HCM Control Delay (s)	10	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	-		

Lanes, Volumes, Timings
22: Madison St. & Project Access 3

EAPC (2026) PM Peak hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				 	 	
Traffic Volume (vph)	0	29	0	499	695	29
Future Volume (vph)	0	29	0	499	695	29
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	25			50	50	
Link Distance (ft)	210			215	288	
Travel Time (s)	5.7			2.9	3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	29	0	499	695	29
Future Vol, veh/h	0	29	0	499	695	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	32	0	542	755	32
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	394	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	605	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	605	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	11.3		0		0	
HCM LOS	B					
Minor Lane/Major Mvmt	NBT EBLn1		SBT	SBR		
Capacity (veh/h)	-		605	-	-	
HCM Lane V/C Ratio	-		0.052	-	-	
HCM Control Delay (s)	-		11.3	-	-	
HCM Lane LOS	-		B	-	-	
HCM 95th %tile Q(veh)	-		0.2	-	-	

Intersection: 18: Avenue 60 & S. Access

Movement	SB
Directions Served	LR
Maximum Queue (ft)	54
Average Queue (ft)	34
95th Queue (ft)	56
Link Distance (ft)	352
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 19: Madison St. & Main Access

Movement	EB	EB	NB
Directions Served	L	R	L
Maximum Queue (ft)	97	29	18
Average Queue (ft)	60	13	5
95th Queue (ft)	101	37	22
Link Distance (ft)		452	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100		150
Storage Blk Time (%)	2		
Queuing Penalty (veh)	0		

Intersection: 20: Project Access 1 & Avenue 58

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	15	25
Average Queue (ft)	2	6
95th Queue (ft)	15	25
Link Distance (ft)		348
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	50	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 21: Project Access 2 & Avenue 58

Movement	NB
Directions Served	R
Maximum Queue (ft)	21
Average Queue (ft)	4
95th Queue (ft)	20
Link Distance (ft)	199
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 22: Madison St. & Project Access 3

Movement	EB
Directions Served	R
Maximum Queue (ft)	29
Average Queue (ft)	7
95th Queue (ft)	28
Link Distance (ft)	164
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Zone Summary

Zone wide Queuing Penalty: 0

Intersection: 18: Avenue 60 & S. Access

Movement	SB
Directions Served	LR
Maximum Queue (ft)	56
Average Queue (ft)	35
95th Queue (ft)	49
Link Distance (ft)	352
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 19: Madison St. & Main Access

Movement	EB	EB	NB	SB
Directions Served	L	R	L	TR
Maximum Queue (ft)	122	30	51	22
Average Queue (ft)	80	13	14	3
95th Queue (ft)	115	36	45	16
Link Distance (ft)		452		105
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	100		150	
Storage Blk Time (%)	7			
Queuing Penalty (veh)	1			

Intersection: 20: Project Access 1 & Avenue 58

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	30	31
Average Queue (ft)	4	21
95th Queue (ft)	21	43
Link Distance (ft)		348
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	50	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 21: Project Access 2 & Avenue 58

Movement	NB
Directions Served	R
Maximum Queue (ft)	31
Average Queue (ft)	27
95th Queue (ft)	44
Link Distance (ft)	199
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 22: Madison St. & Project Access 3

Movement	EB
Directions Served	R
Maximum Queue (ft)	30
Average Queue (ft)	17
95th Queue (ft)	40
Link Distance (ft)	164
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Zone Summary

Zone wide Queuing Penalty: 1

APPENDIX 6.10:

**EAC (2026) WITHOUT AND WITH PROJECT BUILDOUT PHASE 3 CONDITIONS
TRAFFIC SIGNAL WARRANTS ANALYSIS WORKSHEETS**

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WITHOUT PROJECT CONDITIONS

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAC PHASE 3 (2026) AM PEAK HOUR WARRANTS**

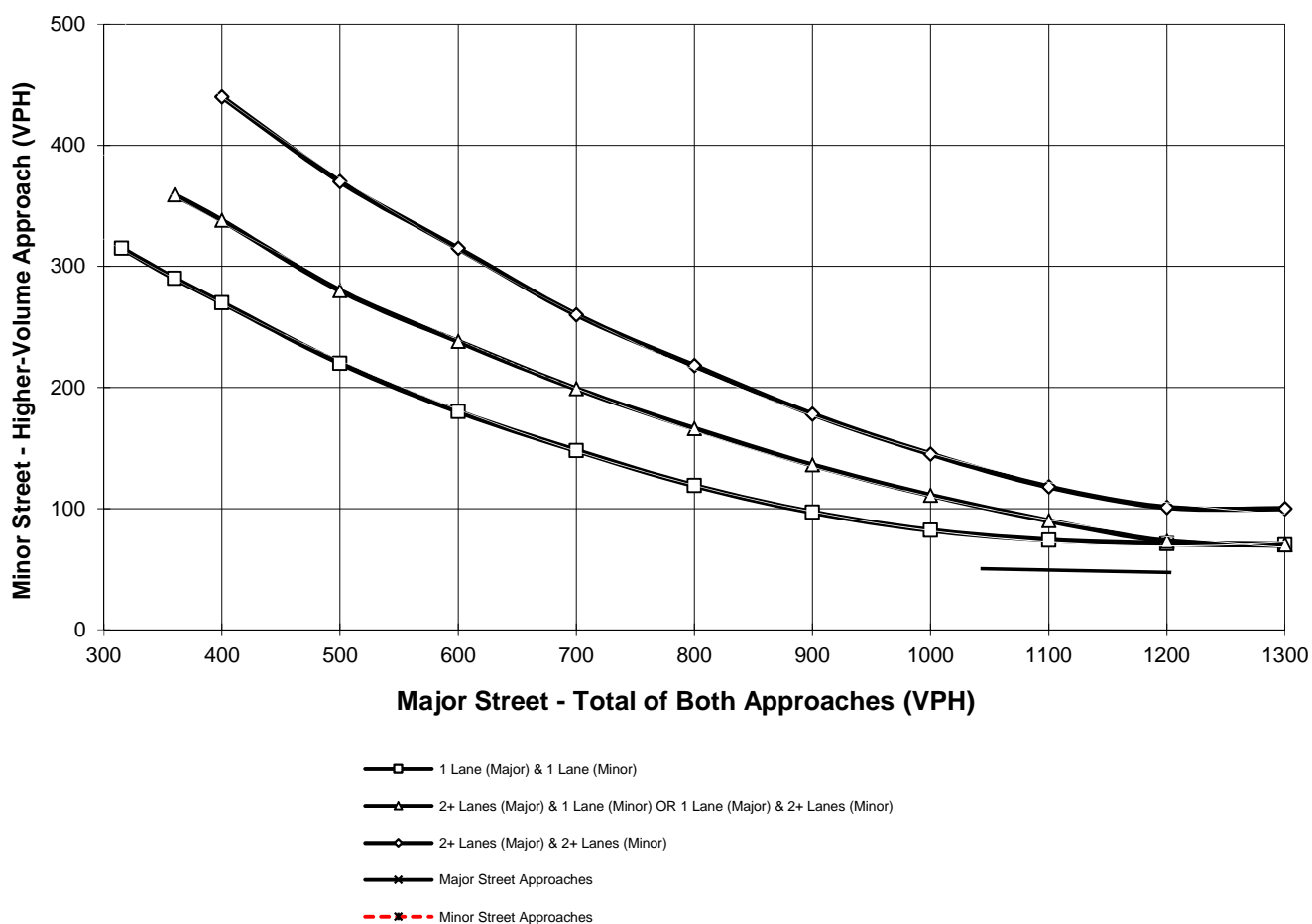
Major Street Name = **Avenue 60**

Total of Both Approaches (VPH) = **228**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Madison St.**

High Volume Approach (VPH) = **221**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #10

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAC PHASE 3 (2026) PM PEAK HOUR WARRANTS**

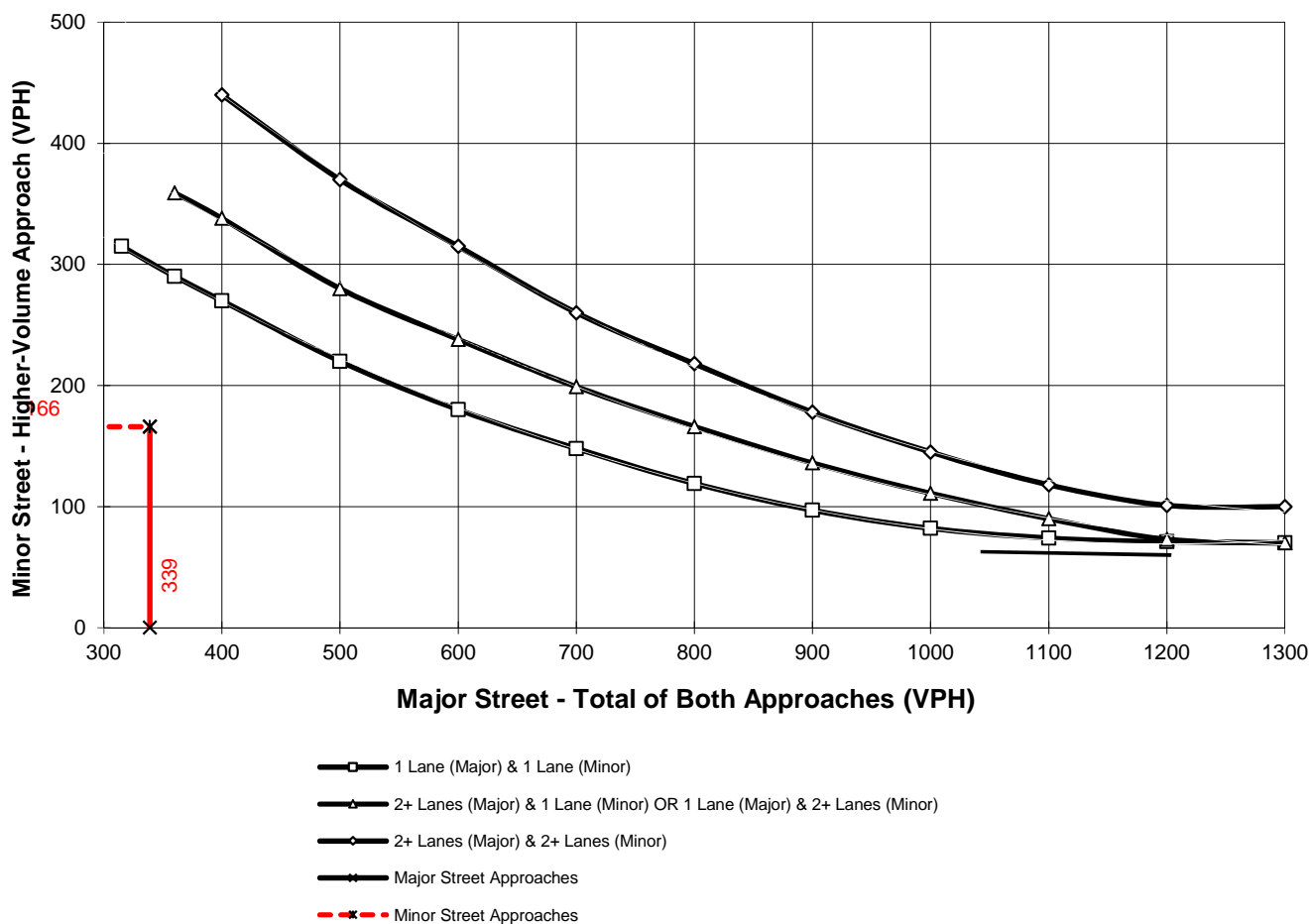
Major Street Name = **Madison St.**

Total of Both Approaches (VPH) = **339**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Avenue 60**

High Volume Approach (VPH) = **166**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #10

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAC PHASE 3 (2026) AM PEAK HOUR WARRANTS**

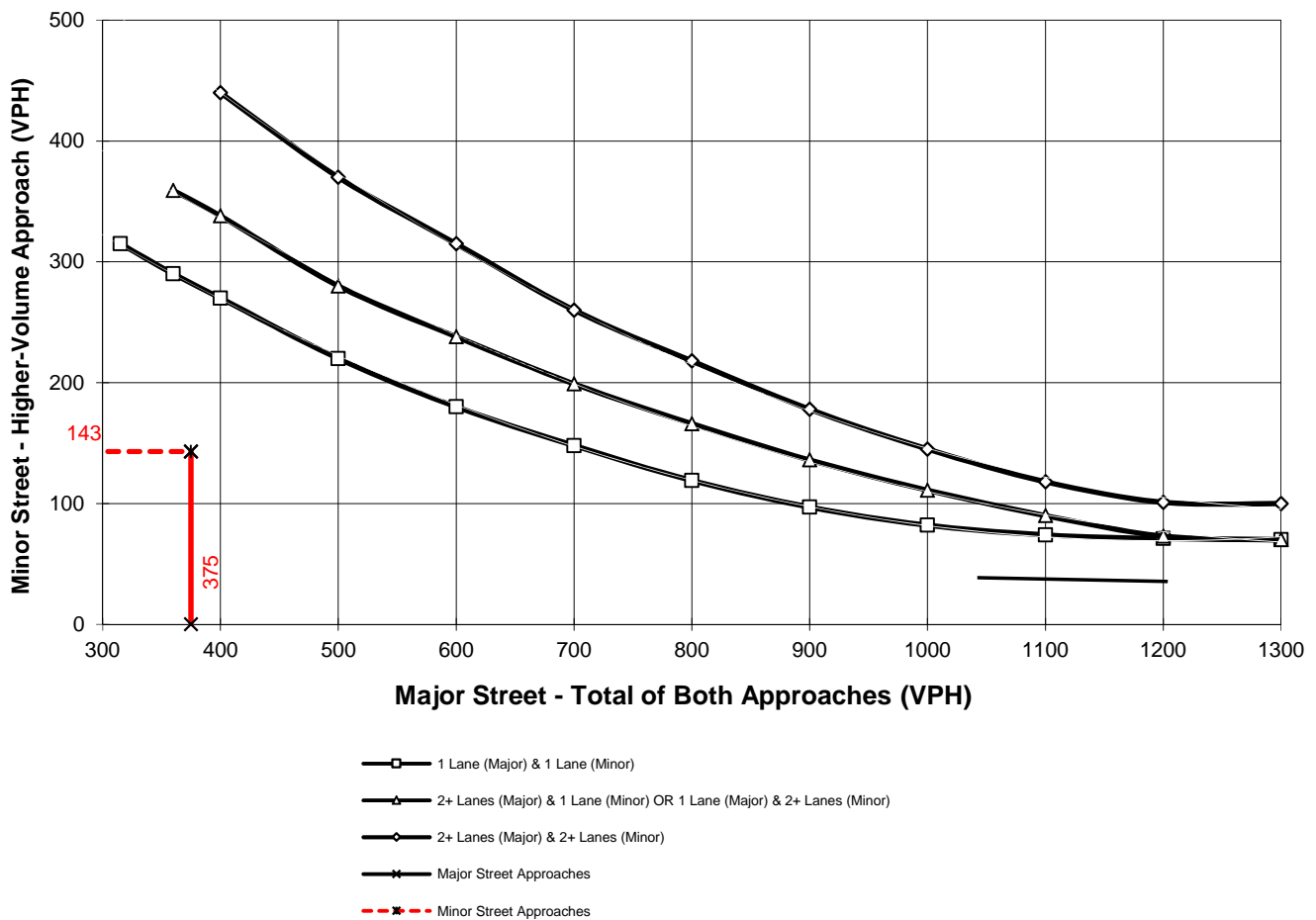
Major Street Name = **Jackson St.**

Total of Both Approaches (VPH) = **375**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **58th Avenue**

High Volume Approach (VPH) = **143**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #17

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAC PHASE 3 (2026) PM PEAK HOUR WARRANTS**

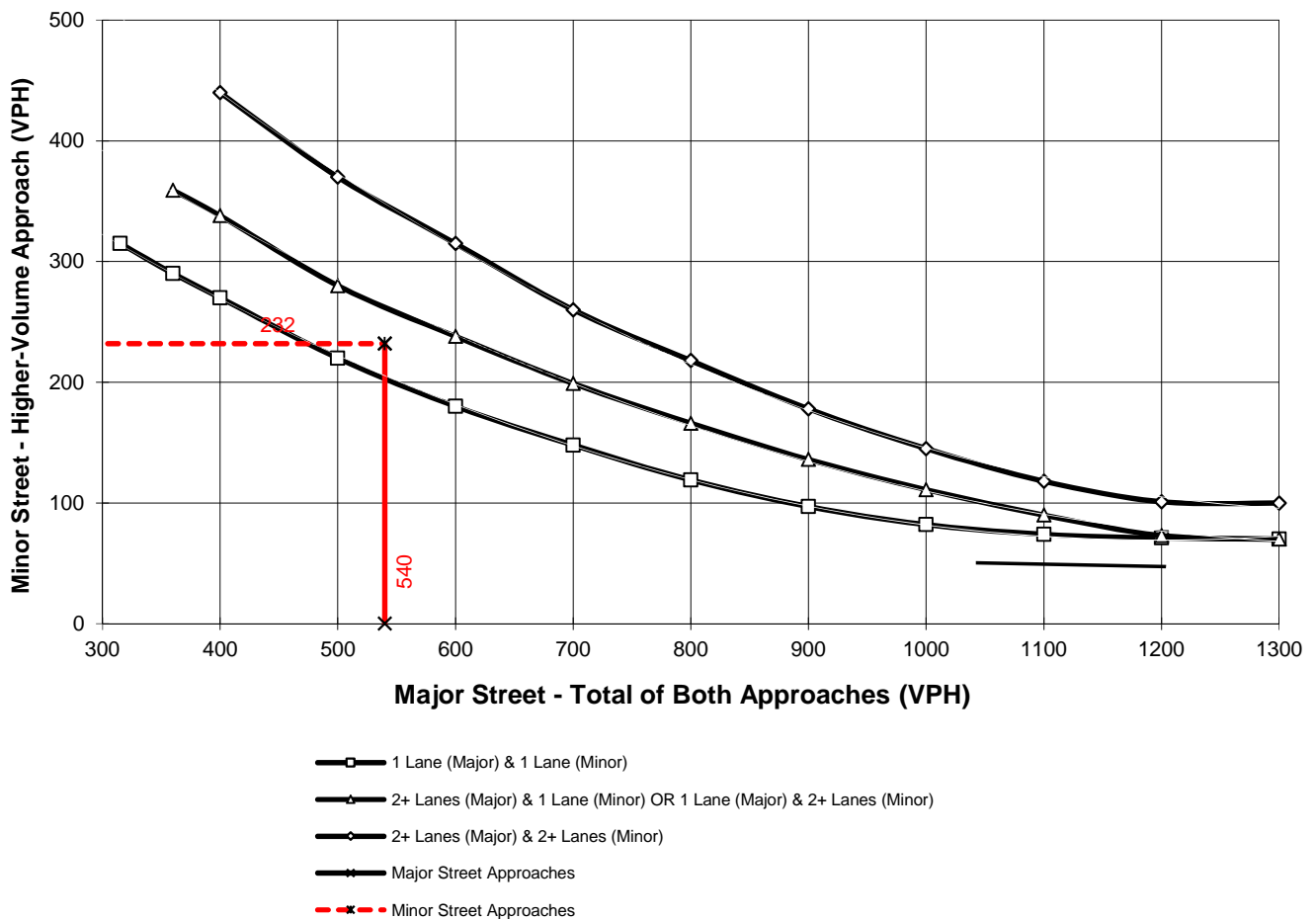
Major Street Name = **Jackson St.**

Total of Both Approaches (VPH) = **540**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **58th Avenue**

High Volume Approach (VPH) = **232**
Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #17

WITH PROJECT CONDITIONS

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAPC PHASE 3 (2026) AM PEAK HOUR WARRANTS**

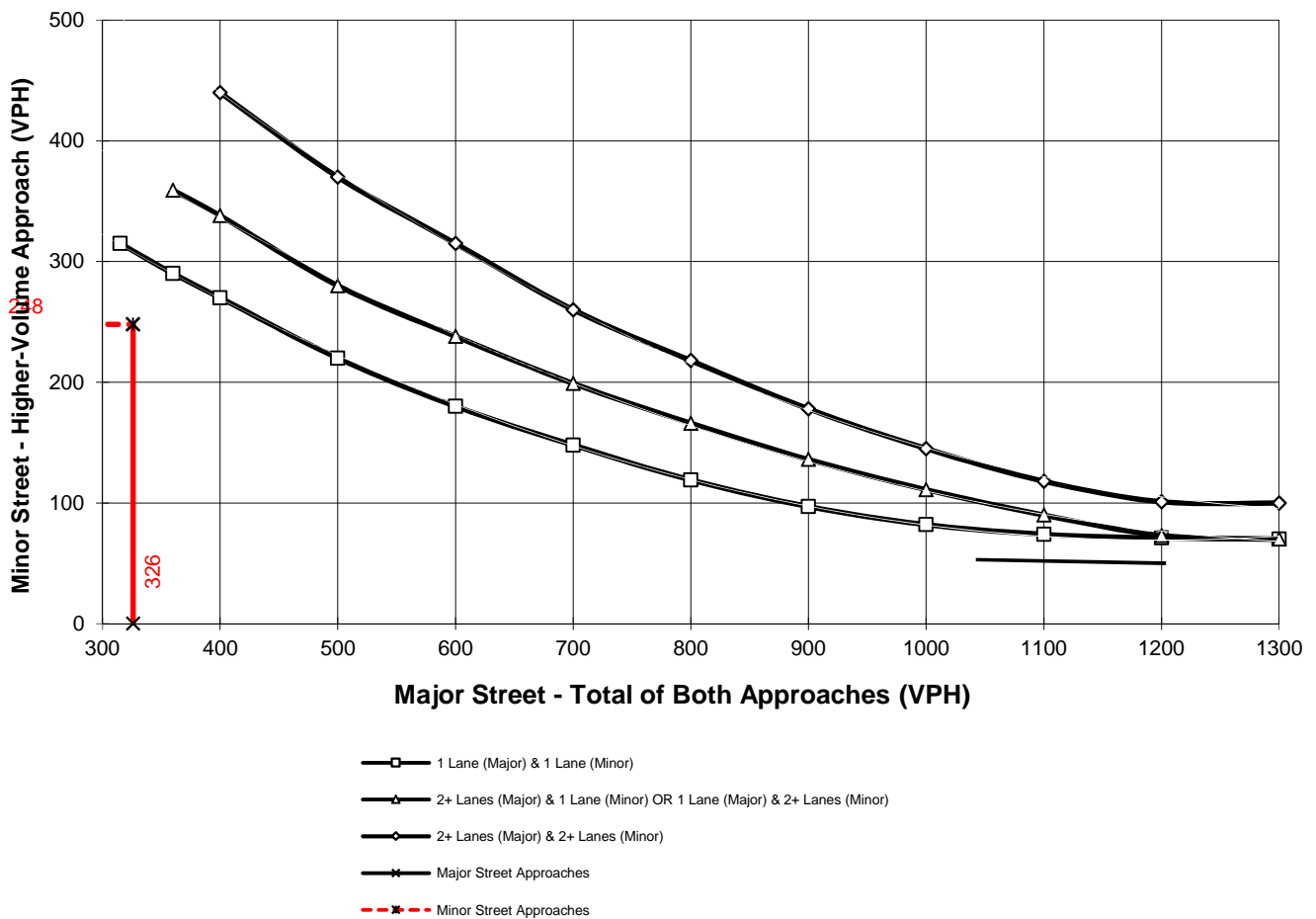
Major Street Name = **Avenue 60**

Total of Both Approaches (VPH) = **326**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Madison St.**

High Volume Approach (VPH) = **248**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #10

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAPC PHASE 3 (2026) PM PEAK HOUR WARRANTS**

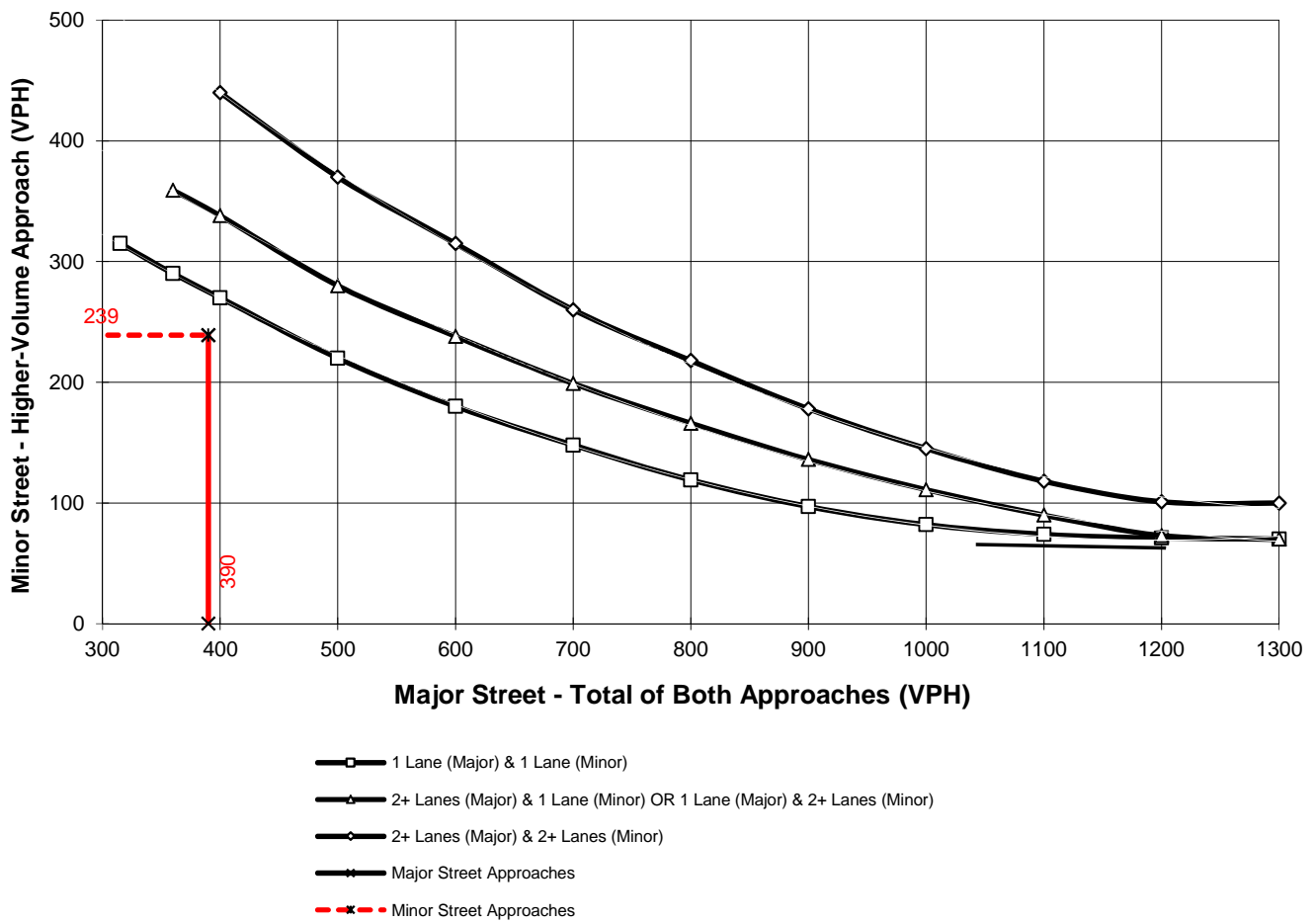
Major Street Name = **Madison St.**

Total of Both Approaches (VPH) = **390**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Avenue 60**

High Volume Approach (VPH) = **239**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #10

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAPC PHASE 3 (2026) AM PEAK HOUR WARRANTS**

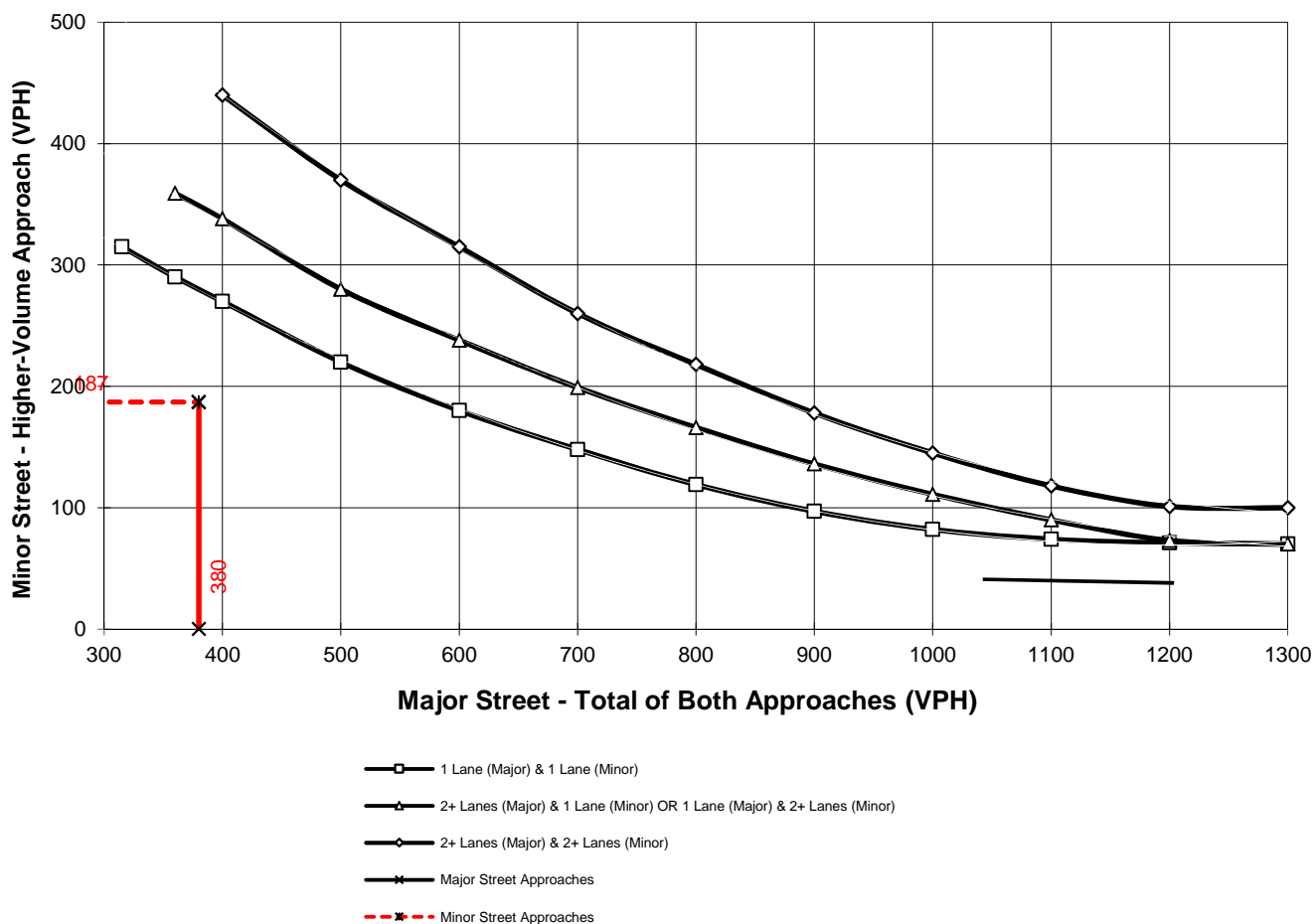
Major Street Name = **Jackson St.**

Total of Both Approaches (VPH) = **380**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **58th Avenue**

High Volume Approach (VPH) = **187**
Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #17

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

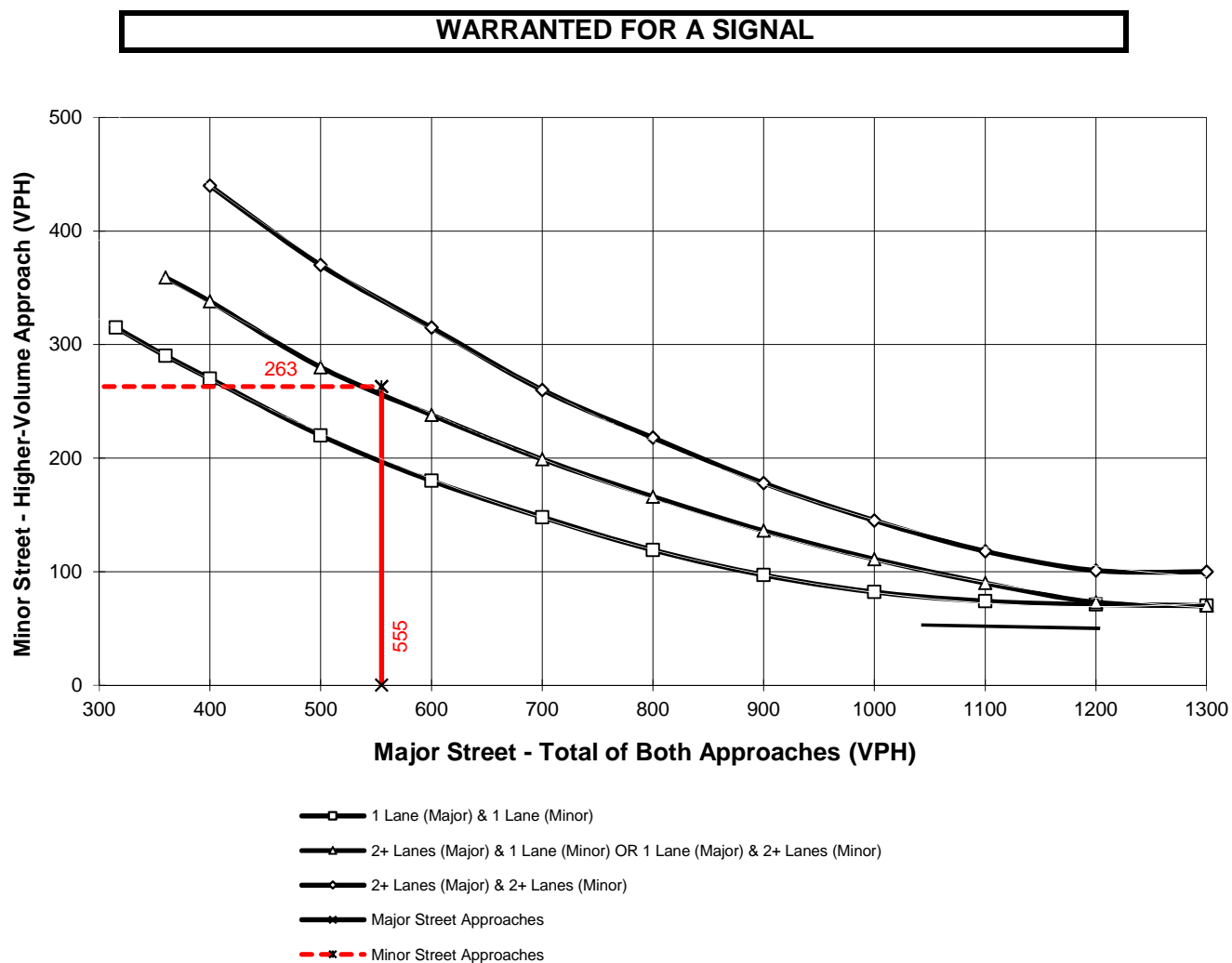
Traffic Conditions = **EAPC PHASE 3 (2026) PM PEAK HOUR WARRANTS**

Major Street Name = **Jackson St.**

Total of Both Approaches (VPH) = **555**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **58th Avenue**

High Volume Approach (VPH) = **263**
Number of Approach Lanes Minor Street = **1**



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #17

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	CALC	TRAFFIC CONDITIONS	EAPC (2026)
Jurisdiction: <u>City of La Quinta</u>				CHK	<u>JC</u>	DATE <u>10/08/19</u>
Major Street: <u>Avenue 60</u>						DATE
Minor Street: <u>S. Access</u>						Critical Approach Speed (Major) <u>30</u> mph
						Critical Approach Speed (Minor) <u>30</u> mph
Major Street Approach Lanes = <u>1</u> lane				Minor Street Approach Lanes: <u>1</u> lane		
Major Street Future ADT = <u>1,161</u> vpd				Minor Street Future ADT = <u>606</u> vpd		
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						
						or
In built up area of isolated community of < 10,000 population						

URBAN (U)

(Based on Estimated Average Daily Traffic - See Note)

URBAN XX		RURAL		Minimum Requirements ADT			
CONDITION A - Minimum Vehicular Volume				Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>		<u>Not Satisfied</u>					
		XX					
Number of lanes for moving traffic on each approach				<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>Major Street</u>		<u>Minor Street</u>					
1	1,161	1	606	8,000	5,600	2,400	1,680
2 +		1		9,600	6,720	2,400	1,680
2 +		2 +		9,600	6,720	3,200	2,240
1		2 +		8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>		<u>Not Satisfied</u>					
		XX					
Number of lanes for moving traffic on each approach				<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>Major Street</u>		<u>Minor Street</u>					
1	1,161	1	606	12,000	8,400	1,200	850
2 +		1		14,400	10,080	1,200	850
2 +		2 +		14,400	10,080	1,600	1,120
1		2 +		12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				2 CONDITIONS 80%		2 CONDITIONS 80%	
<u>Satisfied</u>		<u>Not Satisfied</u>					
		XX					
No one condition satisfied, but following conditions fulfilled 80% of more							
		<u>A</u>	<u>B</u>				
		15%	10%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	<u>CALC</u>	<u>TRAFFIC CONDITIONS</u>	<u>EAPC (2026)</u>
Jurisdiction: <u>City of La Quinta</u>				<u>JC</u>		<u>DATE</u> <u>10/08/19</u>
Major Street: <u>Madison St.</u>				<u>CHK</u>		<u>DATE</u>
Minor Street: <u>Main Access</u>					Critical Approach Speed (Major)	<u>50</u> mph
					Critical Approach Speed (Minor)	<u>30</u> mph
Major Street Approach Lanes = <u>2</u> lane				Minor Street Approach Lanes: <u>1</u> lane		
Major Street Future ADT = <u>10,835</u> vpd				Minor Street Future ADT = <u>2,186</u> vpd		
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						<input checked="" type="checkbox"/> or <input type="checkbox"/>
In built up area of isolated community of < 10,000 population						RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

<u>URBAN</u>		<u>RURAL</u>		Minimum Requirements			
		XX		ADT			
CONDITION A - Minimum Vehicular Volume							
<u>Satisfied</u>		<u>Not Satisfied</u>		Vehicles Per Day on		Vehicles Per Day	
XX				(Total of Both Approaches)		on Higher-Volume	
Number of lanes for moving traffic on each approach						Minor Street Approach	
<u>Major Street</u>		<u>Minor Street</u>		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>1</u>		<u>1</u>		8,000	5,600	2,400	1,680
<u>2 + 10,835</u>		<u>1 2,186</u>		9,600	6,720 *	2,400	1,680 *
<u>2 +</u>		<u>2 +</u>		9,600	6,720	3,200	2,240
<u>1</u>		<u>2 +</u>		8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic							
<u>Satisfied</u>		<u>Not Satisfied</u>		Vehicles Per Day		Vehicles Per Day	
XX				(Total of Both Approaches)		on Higher-Volume	
Number of lanes for moving traffic on each approach						Minor Street Approach	
<u>Major Street</u>		<u>Minor Street</u>		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>1</u>		<u>1</u>		12,000	8,400	1,200	850
<u>2 + 10,835</u>		<u>1 2,186</u>		14,400	10,080 *	1,200	850 *
<u>2 +</u>		<u>2 +</u>		14,400	10,080	1,600	1,120
<u>1</u>		<u>2 +</u>		12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B							
<u>Satisfied</u>		<u>Not Satisfied</u>					
XX							
No one condition satisfied, but following conditions				2 CONDITIONS		2 CONDITIONS	
fulfilled 80% of more				80%		80%	
		<u>A</u>	<u>B</u>				
		100%	100%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	CALC	TRAFFIC CONDITIONS	EAPC (2026)
Jurisdiction: <u>City of La Quinta</u>				CHK	<u>JC</u>	DATE <u>10/08/19</u>
Major Street: <u>Avenue 58</u>						DATE
Minor Street: <u>Project Access 1</u>					Critical Approach Speed (Major)	<u>50</u> mph
					Critical Approach Speed (Minor)	<u>30</u> mph
Major Street Approach Lanes = <u>2</u> lane				Minor Street Approach Lanes: <u>1</u> lane		
Major Street Future ADT = <u>6,275</u> vpd				Minor Street Future ADT = <u>458</u> vpd		
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						<input checked="" type="checkbox"/>
						or
In built up area of isolated community of < 10,000 population						<input type="checkbox"/>

RURAL (R)**(Based on Estimated Average Daily Traffic - See Note)**

URBAN		RURAL		Minimum Requirements			
				ADT			
CONDITION A - Minimum Vehicular Volume		XX		Vehicles Per Day on		Vehicles Per Day	
Satisfied		Not Satisfied		Major Street		on Higher-Volume	
		XX		(Total of Both Approaches)		Minor Street Approach	
Number of lanes for moving traffic on each approach						(One Direction Only)	
Major Street	Minor Street			Urban	Rural	Urban	Rural
1	1			8,000	5,600	2,400	1,680
2 + 6,275	1 458			9,600	6,720	2,400	1,680
2 +	2 +			9,600	6,720	3,200	2,240
1	2 +			8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				Vehicles Per Day		Vehicles Per Day	
Satisfied		Not Satisfied		on Major Street		on Higher-Volume	
		XX		(Total of Both Approaches)		Minor Street Approach	
Number of lanes for moving traffic on each approach						(One Direction Only)	
Major Street	Minor Street			Urban	Rural	Urban	Rural
1	1			12,000	8,400	1,200	850
2 + 6,275	1 458			14,400	10,080	1,200	850
2 +	2 +			14,400	10,080	1,600	1,120
1	2 +			12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				2 CONDITIONS		2 CONDITIONS	
Satisfied		Not Satisfied		80%		80%	
		XX					
No one condition satisfied, but following conditions fulfilled 80% of more							
		A	B				
		27%	54%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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


















APPENDIX 7.1:

GENERAL PLAN BUILDOUT (YEAR 2040) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Lanes, Volumes, Timings
1: Madison St. & Avenue 58

2040 NP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	320	181	38	10	178	138	40	503	6	320	1023	139
Future Volume (vph)	320	181	38	10	178	138	40	503	6	320	1023	139
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	34.0	45.0		11.5	22.5	34.0	11.5	29.5	29.5	34.0	52.0	52.0
Total Split (%)	28.3%	37.5%		9.6%	18.8%	28.3%	9.6%	24.6%	24.6%	28.3%	43.3%	43.3%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

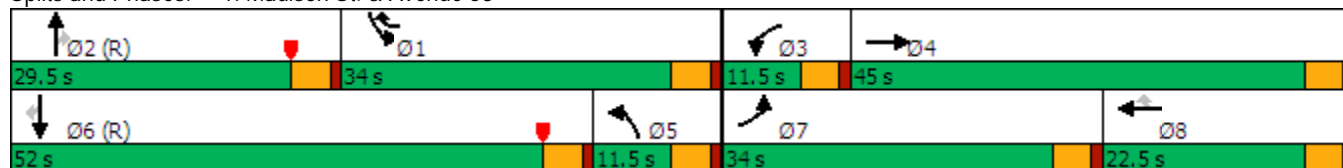
Actuated Cycle Length: 120

Offset: 87.9 (73%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated




























Splits and Phases: 1: Madison St. & Avenue 58



HCM 6th Signalized Intersection Summary
























1: Madison St. & Avenue 58

2040 NP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	320	181	38	10	178	138	40	503	6	320	1023	139
Future Volume (veh/h)	320	181	38	10	178	138	40	503	6	320	1023	139
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	327	185	39	10	182	141	41	513	6	327	1044	142
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	356	756	156	29	263	674	300	721	322	625	1370	611
Arrive On Green	0.21	0.26	0.26	0.02	0.08	0.08	0.17	0.21	0.21	0.36	0.40	0.40
Sat Flow, veh/h	1734	2856	589	1734	3460	1543	1734	3460	1543	1734	3460	1543
Grp Volume(v), veh/h	327	111	113	10	182	141	41	513	6	327	1044	142
Grp Sat Flow(s),veh/h/ln	1734	1730	1715	1734	1730	1543	1734	1730	1543	1734	1730	1543
Q Serve(g_s), s	22.2	6.0	6.3	0.7	6.2	2.9	2.4	16.5	0.3	17.8	31.3	3.9
Cycle Q Clear(g_c), s	22.2	6.0	6.3	0.7	6.2	2.9	2.4	16.5	0.3	17.8	31.3	3.9
Prop In Lane	1.00		0.34	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	356	458	454	29	263	674	300	721	322	625	1370	611
V/C Ratio(X)	0.92	0.24	0.25	0.35	0.69	0.21	0.14	0.71	0.02	0.52	0.76	0.23
Avail Cap(c_a), veh/h	426	584	579	101	519	788	300	721	322	625	1370	611
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.7	34.6	34.7	58.4	54.1	7.9	42.0	44.1	29.5	30.3	31.4	6.9
Incr Delay (d2), s/veh	22.5	0.3	0.3	7.1	3.2	0.2	0.2	5.9	0.1	0.8	4.1	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.4	2.5	2.6	0.3	2.7	1.0	1.0	7.4	0.1	7.2	13.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.2	34.9	35.0	65.5	57.3	8.0	42.2	50.0	29.6	31.0	35.4	7.8
LnGrp LOS	E	C	D	E	E	A	D	D	C	C	D	A
Approach Vol, veh/h	551			333			560			1513		
Approach Delay, s/veh	55.3			36.7			49.3			31.9		
Approach LOS	E			D			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	47.7	29.5	6.5	36.3	25.2	52.0	29.1	13.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	29.5	25.0	7.0	40.5	7.0	47.5	29.5	18.0				
Max Q Clear Time (g_c+I1), s	19.8	18.5	2.7	8.3	4.4	33.3	24.2	8.2				
Green Ext Time (p_c), s	0.7	1.6	0.0	1.1	0.0	6.1	0.5	1.0				
Intersection Summary												
HCM 6th Ctrl Delay	40.1											
HCM 6th LOS	D											

Lanes, Volumes, Timings
1: Madison St. & Avenue 58

2040 NP AM Peak hour
With Additional Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	320	181	38	10	178	138	40	503	6	320	1023	139
Future Volume (vph)	320	181	38	10	178	138	40	503	6	320	1023	139
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	23.0	34.5		11.5	23.0	41.0	12.0	33.0	33.0	41.0	62.0	62.0
Total Split (%)	19.2%	28.8%		9.6%	19.2%	34.2%	10.0%	27.5%	27.5%	34.2%	51.7%	51.7%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

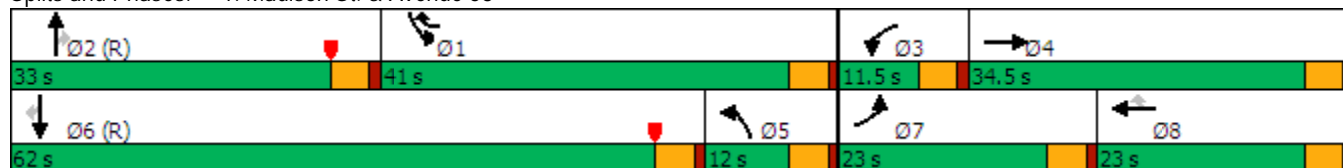
Actuated Cycle Length: 120

Offset: 87.9 (73%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated
























Splits and Phases: 1: Madison St. & Avenue 58



HCM 6th Signalized Intersection Summary















1: Madison St. & Avenue 58

2040 NP AM Peak hour
With Additional Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	181	38	10	178	138	40	503	6	320	1023	139
Future Volume (veh/h)	320	181	38	10	178	138	40	503	6	320	1023	139
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	327	185	39	10	182	141	41	513	6	327	1044	142
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	390	502	104	29	264	766	310	822	367	729	1658	740
Arrive On Green	0.12	0.18	0.18	0.02	0.08	0.08	0.18	0.24	0.24	0.42	0.48	0.48
Sat Flow, veh/h	3365	2856	589	1734	3460	1543	1734	3460	1543	1734	3460	1543
Grp Volume(v), veh/h	327	111	113	10	182	141	41	513	6	327	1044	142
Grp Sat Flow(s),veh/h/ln	1682	1730	1715	1734	1730	1543	1734	1730	1543	1734	1730	1543
Q Serve(g_s), s	11.4	6.7	7.0	0.7	6.2	1.9	2.4	15.9	0.3	16.2	27.0	4.0
Cycle Q Clear(g_c), s	11.4	6.7	7.0	0.7	6.2	1.9	2.4	15.9	0.3	16.2	27.0	4.0
Prop In Lane	1.00		0.34	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	390	304	302	29	264	766	310	822	367	729	1658	740
V/C Ratio(X)	0.84	0.36	0.38	0.35	0.69	0.18	0.13	0.62	0.02	0.45	0.63	0.19
Avail Cap(c_a), veh/h	519	433	429	101	533	886	310	822	367	729	1658	740
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.9	43.5	43.6	58.4	54.0	6.6	41.5	41.0	27.1	24.9	23.3	7.2
Incr Delay (d2), s/veh	8.9	0.7	0.8	7.1	3.2	0.1	0.2	3.6	0.1	0.4	1.8	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	2.9	2.9	0.3	2.7	0.9	1.0	6.9	0.1	6.4	10.6	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.8	44.3	44.4	65.5	57.2	6.7	41.7	44.5	27.2	25.3	25.1	7.8
LnGrp LOS	E	D	D	E	E	A	D	D	C	C	C	A
Approach Vol, veh/h	551			333			560			1513		
Approach Delay, s/veh	54.1			36.1			44.1			23.5		
Approach LOS	D			D			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	54.9	33.0	6.5	25.6	25.9	62.0	18.4	13.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	36.5	28.5	7.0	30.0	7.5	57.5	18.5	18.5				
Max Q Clear Time (g_c+I1), s	18.2	17.9	2.7	9.0	4.4	29.0	13.4	8.2				
Green Ext Time (p_c), s	0.9	2.2	0.0	1.0	0.0	8.1	0.5	1.0				
Intersection Summary												
HCM 6th Ctrl Delay	34.5											
HCM 6th LOS	C											

Lanes, Volumes, Timings
2: Madison St. & Airport Bl.

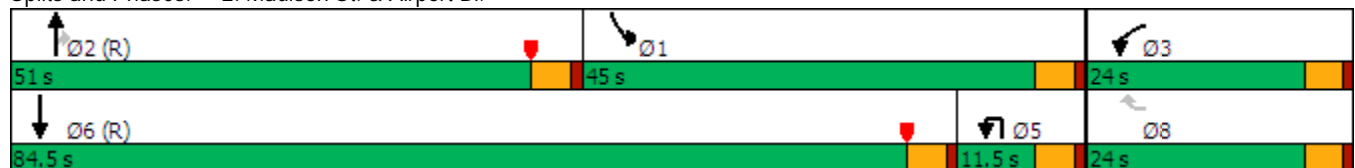
2040 NP AM Peak hour

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	160	167	1	958	139	372	1317
Future Volume (vph)	160	167	1	958	139	372	1317
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		8			2		
Detector Phase	3	8	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	20.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	24.0	24.0	11.5	51.0	51.0	45.0	84.5
Total Split (%)	20.0%	20.0%	9.6%	42.5%	42.5%	37.5%	70.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated















Splits and Phases: 2: Madison St. & Airport Bl.



HCM 6th Signalized Intersection Summary

























2: Madison St. & Airport Bl.

2040 NP AM Peak hour

							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	160	167	1	958	139	372	1317
Future Volume (veh/h)	160	167	1	958	139	372	1317
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	163	170		978	142	380	1344
Peak Hour Factor	0.98	0.98		0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	229	204		1355	604	653	2773
Arrive On Green	0.13	0.13		0.39	0.39	0.38	0.80
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	163	170		978	142	380	1344
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	10.8	12.9		28.8	4.9	21.0	15.1
Cycle Q Clear(g_c), s	10.8	12.9		28.8	4.9	21.0	15.1
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	229	204		1355	604	653	2773
V/C Ratio(X)	0.71	0.84		0.72	0.23	0.58	0.48
Avail Cap(c_a), veh/h	289	257		1355	604	653	2773
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(l)	0.97	0.97		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.9	50.8		31.0	10.8	29.9	3.9
Incr Delay (d2), s/veh	5.7	16.6		3.4	0.9	1.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	5.7		11.9	2.6	8.5	3.4
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	55.6	67.4		34.3	11.8	31.2	4.5
LnGrp LOS	E	E		C	B	C	A
Approach Vol, veh/h	333			1120			1724
Approach Delay, s/veh	61.7			31.4			10.4
Approach LOS	E			C			B
Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	49.2	51.0				100.2	19.8
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	40.5	46.5				80.0	19.5
Max Q Clear Time (g_c+I1), s	23.0	30.8				17.1	14.9
Green Ext Time (p_c), s	1.0	6.0				12.6	0.4
Intersection Summary							
HCM 6th Ctrl Delay			23.2				
HCM 6th LOS			C				
Notes							
User approved ignoring U-Turning movement.							

Lanes, Volumes, Timings
3: Madison St. & Avenue 54

2040 NP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	583	1166	132	319	160	377	891	59	228	986	57
Future Volume (vph)	84	583	1166	132	319	160	377	891	59	228	986	57
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		1	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Free	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			Free			8			2			
Detector Phase	7	4		3	8	1	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5	22.5	11.5	22.5	
Total Split (s)	17.2	30.0		18.0	30.8	26.0	22.0	46.0	46.0	26.0	50.0	
Total Split (%)	14.3%	25.0%		15.0%	25.7%	21.7%	18.3%	38.3%	38.3%	21.7%	41.7%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

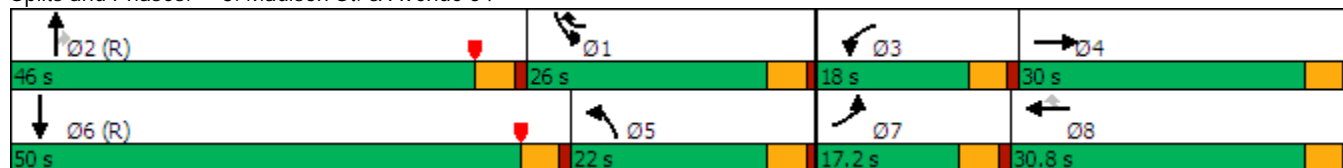
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

























Splits and Phases: 3: Madison St. & Avenue 54



HCM 6th Signalized Intersection Summary

3: Madison St. & Avenue 54

2040 NP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	583	1166	132	319	160	377	891	59	228	986	57
Future Volume (veh/h)	84	583	1166	132	319	160	377	891	59	228	986	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	86	595	0	135	326	163	385	909	60	233	1006	58
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	108	669		161	775	682	621	1197	534	378	1261	73
Arrive On Green	0.06	0.19	0.00	0.09	0.22	0.22	0.18	0.35	0.35	0.22	0.38	0.38
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	1734	3325	192
Grp Volume(v), veh/h	86	595	0	135	326	163	385	909	60	233	523	541
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1734	1730	1787
Q Serve(g_s), s	5.9	20.1	0.0	9.2	9.7	1.4	12.6	28.0	2.4	14.6	32.3	32.3
Cycle Q Clear(g_c), s	5.9	20.1	0.0	9.2	9.7	1.4	12.6	28.0	2.4	14.6	32.3	32.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	108	669		161	775	682	621	1197	534	378	656	677
V/C Ratio(X)	0.80	0.89		0.84	0.42	0.24	0.62	0.76	0.11	0.62	0.80	0.80
Avail Cap(c_a), veh/h	184	735		195	775	682	621	1197	534	378	656	677
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.5	47.1	0.0	53.6	39.9	10.5	45.0	34.8	14.8	42.4	33.2	33.2
Incr Delay (d2), s/veh	1.2	1.3	0.0	22.9	0.4	0.2	1.9	4.6	0.4	3.0	9.8	9.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	8.3	0.0	4.9	4.0	1.6	5.2	11.9	1.2	6.3	14.5	14.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.7	48.5	0.0	76.5	40.3	10.7	46.9	39.4	15.2	45.4	42.9	42.7
LnGrp LOS	E	D		E	D	B	D	D	B	D	D	D
Approach Vol, veh/h	681		A	624			1354			1297		
Approach Delay, s/veh	49.5			40.4			40.5			43.3		
Approach LOS	D			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.7	46.0	15.6	27.7	26.7	50.0	12.0	31.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	21.5	41.5	13.5	25.5	17.5	45.5	12.7	26.3				
Max Q Clear Time (g_c+I1), s	16.6	30.0	11.2	22.1	14.6	34.3	7.9	11.7				
Green Ext Time (p_c), s	0.3	4.5	0.1	1.1	0.4	4.6	0.1	2.0				

Intersection Summary

























HCM 6th Ctrl Delay	42.9
HCM 6th LOS	D

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
4: Madison St. & Avenue 52

2040 NP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	748	117	80	622	137	222	878	45	173	995	115
Future Volume (vph)	100	748	117	80	622	137	222	878	45	173	995	115
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	16.0	40.0	40.0	15.0	39.0	39.0	17.0	49.0	49.0	16.0	48.0	48.0
Total Split (%)	13.3%	33.3%	33.3%	12.5%	32.5%	32.5%	14.2%	40.8%	40.8%	13.3%	40.0%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

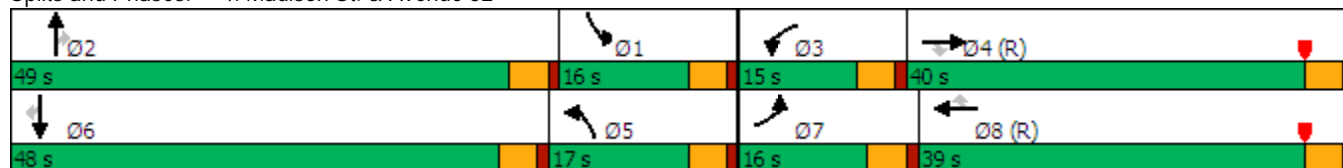
Actuated Cycle Length: 120

Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated

























Splits and Phases: 4: Madison St. & Avenue 52



HCM 6th Signalized Intersection Summary

























4: Madison St. & Avenue 52

2040 NP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	748	117	80	622	137	222	878	45	173	995	115
Future Volume (veh/h)	100	748	117	80	622	137	222	878	45	173	995	115
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	102	763	119	82	635	140	227	896	46	177	1015	117
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	126	1189	530	103	1144	510	284	1283	572	256	1254	559
Arrive On Green	0.07	0.34	0.34	0.06	0.33	0.33	0.08	0.37	0.37	0.08	0.36	0.36
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	102	763	119	82	635	140	227	896	46	177	1015	117
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	7.0	22.3	5.0	5.6	18.1	6.2	7.9	26.4	1.8	6.2	31.8	4.8
Cycle Q Clear(g_c), s	7.0	22.3	5.0	5.6	18.1	6.2	7.9	26.4	1.8	6.2	31.8	4.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	126	1189	530	103	1144	510	284	1283	572	256	1254	559
V/C Ratio(X)	0.81	0.64	0.22	0.79	0.55	0.27	0.80	0.70	0.08	0.69	0.81	0.21
Avail Cap(c_a), veh/h	166	1189	530	152	1144	510	350	1283	572	322	1254	559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.8	33.2	16.1	55.7	32.9	17.7	53.9	32.1	15.1	54.1	34.5	15.6
Incr Delay (d2), s/veh	19.7	2.7	1.0	16.1	1.9	1.3	10.2	3.2	0.3	4.5	5.7	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	9.4	2.4	2.8	7.4	2.9	3.7	11.0	0.8	2.7	13.5	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.5	35.8	17.0	71.8	34.9	19.1	64.1	35.2	15.4	58.6	40.2	16.4
LnGrp LOS	E	D	B	E	C	B	E	D	B	E	D	B
Approach Vol, veh/h	984			857			1169			1309		
Approach Delay, s/veh	37.6			35.8			40.1			40.6		
Approach LOS	D			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.6	49.0	11.6	45.7	14.6	48.0	13.2	44.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.5	44.5	10.5	35.5	12.5	43.5	11.5	34.5				
Max Q Clear Time (g_c+I1), s	8.2	28.4	7.6	24.3	9.9	33.8	9.0	20.1				
Green Ext Time (p_c), s	0.2	5.2	0.0	3.9	0.2	4.6	0.0	3.6				
Intersection Summary												
HCM 6th Ctrl Delay	38.8											
HCM 6th LOS	D											

Lanes, Volumes, Timings
5: Madison St. & Avenue 50/50th Avenue

2040 NP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	546	81	39	626	124	211	866	82	296	1240	253
Future Volume (vph)	165	546	81	39	626	124	211	866	82	296	1240	253
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	11.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	20.2	39.8	39.8	11.6	31.2	21.9	15.0	46.7	46.7	21.9	53.6	53.6
Total Split (%)	16.8%	33.2%	33.2%	9.7%	26.0%	18.3%	12.5%	38.9%	38.9%	18.3%	44.7%	44.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

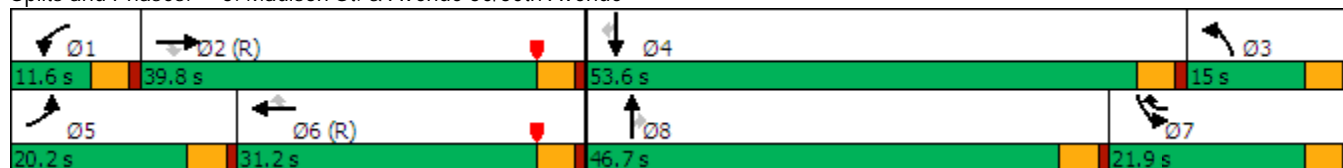
Actuated Cycle Length: 120

Offset: 77.7 (65%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 95

























Control Type: Actuated-Coordinated

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue



























HCM 6th Signalized Intersection Summary 5: Madison St. & Avenue 50/50th Avenue

2040 NP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	546	81	39	626	124	211	866	82	296	1240	253
Future Volume (veh/h)	165	546	81	39	626	124	211	866	82	296	1240	253
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	168	557	83	40	639	127	215	884	84	302	1265	258
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	194	1101	491	75	862	596	268	1748	543	462	1416	631
Arrive On Green	0.13	0.38	0.38	0.05	0.30	0.30	0.10	0.42	0.42	0.16	0.49	0.49
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	4972	1543	3365	3460	1543
Grp Volume(v), veh/h	168	557	83	40	639	127	215	884	84	302	1265	258
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1657	1543	1682	1730	1543
Q Serve(g_s), s	11.4	14.8	3.3	2.7	20.0	1.5	7.5	15.7	3.3	10.1	39.8	8.7
Cycle Q Clear(g_c), s	11.4	14.8	3.3	2.7	20.0	1.5	7.5	15.7	3.3	10.1	39.8	8.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	194	1101	491	75	862	596	268	1748	543	462	1416	631
V/C Ratio(X)	0.87	0.51	0.17	0.54	0.74	0.21	0.80	0.51	0.15	0.65	0.89	0.41
Avail Cap(c_a), veh/h	227	1101	491	103	862	596	294	1748	543	488	1416	631
HCM Platoon Ratio	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.1	29.9	15.9	55.7	38.6	10.5	53.3	27.0	15.8	47.4	28.2	10.0
Incr Delay (d2), s/veh	25.1	1.7	0.7	5.9	5.7	0.8	13.5	1.0	0.6	2.9	9.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	5.9	1.6	1.3	8.4	1.3	3.5	5.7	1.5	4.2	15.8	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.1	31.5	16.6	61.6	44.3	11.4	66.9	28.1	16.4	50.4	37.2	11.9
LnGrp LOS	E	C	B	E	D	B	E	C	B	D	D	B
Approach Vol, veh/h	808					806		1183		1825		
Approach Delay, s/veh	39.3					39.9		34.3		35.8		
Approach LOS	D					D		C		D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.7	42.7	14.1	53.6	17.9	34.4	21.0	46.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.1	35.3	10.5	49.1	15.7	26.7	17.4	42.2				
Max Q Clear Time (g_c+I1), s	4.7	16.8	9.5	41.8	13.4	22.0	12.1	17.7				
Green Ext Time (p_c), s	0.0	3.5	0.1	4.8	0.1	1.8	0.5	6.1				
Intersection Summary												
HCM 6th Ctrl Delay	36.7											
HCM 6th LOS	D											

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54

2040 NP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	10	13	43	8	727	5	249	29	1761	194	27
Future Volume (vph)	8	10	13	43	8	727	5	249	29	1761	194	27
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		1	1		0	1		1	2		1
Taper Length (ft)	0			110			90			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	11.5	22.5	22.5	11.5	22.5	63.0	22.5	23.0	23.0	63.0	63.5	63.5
Total Split (%)	9.6%	18.8%	18.8%	9.6%	18.8%	52.5%	18.8%	19.2%	19.2%	52.5%	52.9%	52.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	C-Max	C-Max	Max	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120









Actuated Cycle Length: 120

Offset: 22.5 (19%), Referenced to phase 2:NBT, Start of Yellow

Natural Cycle: 130

























Control Type: Actuated-Coordinated

Splits and Phases: 6: Jefferson St. & Avenue 54

 Ø2 (R)	 Ø1	 Ø3	 Ø4
23 s	63 s	11.5 s	22.5 s
 Ø6	 Ø5	 Ø7	 Ø8
63.5 s	22.5 s	11.5 s	22.5 s





















HCM 6th Signalized Intersection Summary 6: Jefferson St. & Avenue 54

2040 NP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	10	13	43	8	727	5	249	29	1761	194	27
Future Volume (veh/h)	8	10	13	43	8	727	5	249	29	1761	194	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	8	10	13	44	8	742	5	254	30	1797	198	28
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	24	106	90	78	163	1853	442	533	238	1994	1701	759
Arrive On Green	0.01	0.06	0.06	0.04	0.09	0.09	0.26	0.15	0.15	0.59	0.49	0.49
Sat Flow, veh/h	1734	1821	1543	1734	1821	2716	1734	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	8	10	13	44	8	742	5	254	30	1797	198	28
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1821	1358	1734	1730	1543	1682	1730	1543
Q Serve(g_s), s	0.5	0.6	0.6	3.0	0.5	2.3	0.3	8.0	1.7	56.0	3.7	0.9
Cycle Q Clear(g_c), s	0.5	0.6	0.6	3.0	0.5	2.3	0.3	8.0	1.7	56.0	3.7	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	24	106	90	78	163	1853	442	533	238	1994	1701	759
V/C Ratio(X)	0.34	0.09	0.14	0.57	0.05	0.40	0.01	0.48	0.13	0.90	0.12	0.04
Avail Cap(c_a), veh/h	101	273	232	101	273	2017	442	533	238	1994	1701	759
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.74	0.74	0.74	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.6	53.5	22.6	56.2	50.0	3.2	33.4	46.3	32.2	21.4	16.4	10.8
Incr Delay (d2), s/veh	8.2	0.4	0.7	4.7	0.1	0.1	0.0	3.0	1.1	7.1	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.3	0.4	1.4	0.2	1.2	0.1	3.5	0.8	20.4	1.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.8	53.9	23.4	60.9	50.0	3.4	33.4	49.4	33.3	28.5	16.6	10.9
LnGrp LOS	E	D	C	E	D	A	C	D	C	C	B	B
Approach Vol, veh/h	31			794			289			2023		
Approach Delay, s/veh	44.4			7.0			47.4			27.1		
Approach LOS	D			A			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	75.6	23.0	9.9	11.5	35.1	63.5	6.1	15.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	58.5	18.5	7.0	18.0	18.0	59.0	7.0	18.0				
Max Q Clear Time (g_c+I1), s	58.0	10.0	5.0	2.6	2.3	5.7	2.5	4.3				
Green Ext Time (p_c), s	0.4	0.9	0.0	0.0	0.0	1.2	0.0	2.7				
Intersection Summary												
HCM 6th Ctrl Delay	24.0											
HCM 6th LOS	C											

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

2040 NP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	567	664	59	501	428	336	535	60	390	1092	187
Future Volume (vph)	140	567	664	59	501	428	336	535	60	390	1092	187
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											

The Wave - Coral Mountain TIA (JN:12615)
2040 Without Project
AM Peak Hour

























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                        Level Of Service Computation Report
                        FHWA Roundabout Method (Base Volume Alternative)
*****
Intersection #7 Jefferson St. / Avenue 52
*****
Average Delay (sec/veh):      5.8      Level Of Service: A
*****
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Control:      Yield Sign      Yield Sign      Yield Sign      Yield Sign
Lanes:      2      2      3      3
-----|-----|-----|-----|
Volume Module:
Base Vol:      336  535      60      390 1092      187      140  567      664      59  501      428
Growth Adj:      1.00 1.00      1.00      1.00 1.00      1.00      1.00 1.00      1.00      1.00 1.00      1.00
Initial Bse:      336  535      60      390 1092      187      140  567      664      59  501      428
User Adj:      1.00 1.00      1.00      1.00 1.00      1.00      1.00 1.00      0.00      1.00 1.00      0.00
PHF Adj:      0.98 0.98      0.98      0.98 0.98      0.98      0.98 0.98      0.00      0.98 0.98      0.00
PHF Volume:      343  546      61      398 1114      191      143  579      0      60  511      0
Reduct Vol:      0      0      0      0      0      0      0      0      0      0      0      0
Reduced Vol:      343  546      61      398 1114      191      143  579      0      60  511      0
PCE Adj:      1.00 1.00      1.00      1.00 1.00      1.00      1.00 1.00      0.00      1.00 1.00      0.00
MLF Adj:      1.00 1.00      1.00      1.00 1.00      1.00      1.00 1.00      0.00      1.00 1.00      0.00
FinalVolume:      343  546      61      398 1114      191      143  579      0      60  511      0
-----|-----|-----|-----|
PCE Module:
AutoPCE:      343  546      61      398 1114      191      143  579      0      60  511      0
TruckPCE:      0      0      0      0      0      0      0      0      0      0      0      0
ComboPCE:      0      0      0      0      0      0      0      0      0      0      0      0
BicyclePCE:      0      0      0      0      0      0      0      0      0      0      0      0
AdjVolume:      343  546      61      398 1114      191      143  579      0      60  511      0
-----|-----|-----|-----|
Delay Module: >> Time Period: 0.25 hours <<
CircVolume:      398      343      1512      889
MaxVolume:      2137      2177      xxxxxx      xxxxxx
PedVolume:      0      0      0      0
AdjMaxVol:      2137      2177      xxxxxx      xxxxxx
ApproachVol:      950      1703      xxxxxx      xxxxxx
ApproachV/C:      0.44      0.78      1.00      1.00
ApproachDel:      3.0      7.3      xxxxxx      xxxxxx
ApproachLOS:      A      A      *      *
Queue:      2.4      9.3      xxxx      xxxx

```

Lanes, Volumes, Timings
8: Jefferson St. & Pomelo

2040 NP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (vph)	37	1	2	4	1	16	13	1004	13	40	1643	51
Future Volume (vph)	37	1	2	4	1	16	13	1004	13	40	1643	51
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	54.0		18.0	54.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	15.0%	45.0%		15.0%	45.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary

Area Type: Other

Cycle Length: 120

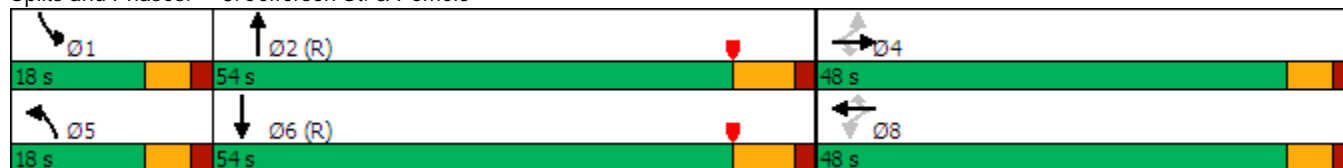
Actuated Cycle Length: 120

Offset: 30 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110

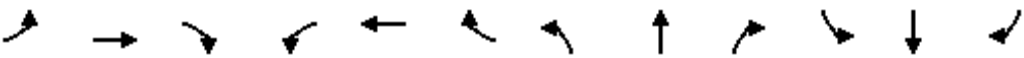
Control Type: Actuated-Coordinated

Splits and Phases: 8: Jefferson St. & Pomelo




































HCM 6th Signalized Intersection Summary 8: Jefferson St. & Pomelo

2040 NP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↩	↪		↩	↪	↩	↩↪↪		↩	↩↪↪	
Traffic Volume (veh/h)	37	1	2	4	1	16	13	1004	13	40	1643	51
Future Volume (veh/h)	37	1	2	4	1	16	13	1004	13	40	1643	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	38	1	2	4	1	16	13	1024	13	41	1677	52
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	62	1	182	55	8	182	61	3263	41	129	3390	105
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.04	0.64	0.64	0.15	1.00	1.00
Sat Flow, veh/h	19	7	1543	10	67	1543	1734	5060	64	1734	4954	154
Grp Volume(v), veh/h	39	0	2	5	0	16	13	671	366	41	1122	607
Grp Sat Flow(s),veh/h/ln	27	0	1543	76	0	1543	1734	1657	1810	1734	1657	1793
Q Serve(g_s), s	0.2	0.0	0.1	0.0	0.0	1.1	0.9	10.8	10.8	2.5	0.0	0.0
Cycle Q Clear(g_c), s	14.2	0.0	0.1	14.1	0.0	1.1	0.9	10.8	10.8	2.5	0.0	0.0
Prop In Lane	0.97		1.00	0.80		1.00	1.00		0.04	1.00		0.09
Lane Grp Cap(c), veh/h	62	0	182	63	0	182	61	2137	1167	129	2268	1227
V/C Ratio(X)	0.63	0.00	0.01	0.08	0.00	0.09	0.21	0.31	0.31	0.32	0.49	0.49
Avail Cap(c_a), veh/h	388	0	540	406	0	540	173	2137	1167	173	2268	1227
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.49	0.49	0.49
Uniform Delay (d), s/veh	59.7	0.0	46.7	47.6	0.0	47.2	56.3	9.5	9.5	48.3	0.0	0.0
Incr Delay (d2), s/veh	19.9	0.0	0.1	1.1	0.0	0.4	3.7	0.4	0.7	1.5	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.1	0.2	0.0	0.5	0.4	3.4	3.8	1.1	0.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.6	0.0	46.8	48.7	0.0	47.6	59.9	9.9	10.2	49.8	0.4	0.7
LnGrp LOS	E	A	D	D	A	D	E	A	B	D	A	A
Approach Vol, veh/h	41			21			1050			1770		
Approach Delay, s/veh	78.0			47.9			10.6			1.6		
Approach LOS	E			D			B			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.9	84.8		20.3	10.2	89.5		20.3				
Change Period (Y+Rc), s	6.0	7.5		6.0	6.0	7.5		6.0				
Max Green Setting (Gmax), s	12.0	46.5		42.0	12.0	46.5		42.0				
Max Q Clear Time (g_c+I1), s	4.5	12.8		16.2	2.9	2.0		16.1				
Green Ext Time (p_c), s	0.1	13.7		0.3	0.0	29.8		0.1				
Intersection Summary												
HCM 6th Ctrl Delay	6.3											
HCM 6th LOS	A											

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

2040 NP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 			  		 	  	
Traffic Volume (vph)	256	342	74	236	376	385	121	828	108	359	1430	362
Future Volume (vph)	256	342	74	236	376	385	121	828	108	359	1430	362
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	2		1	2		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	18.0	37.0	37.0	20.0	39.0	39.0	18.0	41.0	41.0	22.0	45.0	45.0
Total Split (%)	15.0%	30.8%	30.8%	16.7%	32.5%	32.5%	15.0%	34.2%	34.2%	18.3%	37.5%	37.5%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

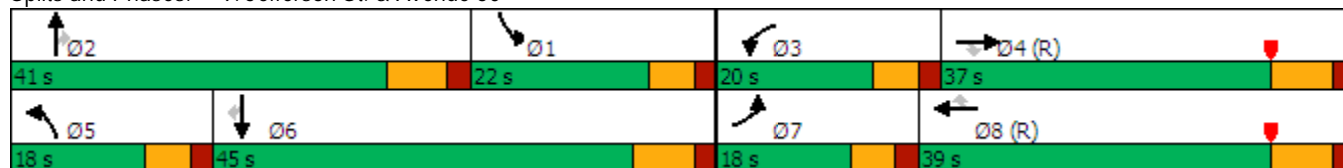
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 115

Control Type: Actuated-Coordinated

























Splits and Phases: 9: Jefferson St. & Avenue 50



HCM 6th Signalized Intersection Summary

9: Jefferson St. & Avenue 50

2040 NP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	256	342	74	236	376	385	121	828	108	359	1430	362
Future Volume (veh/h)	256	342	74	236	376	385	121	828	108	359	1430	362
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	261	349	76	241	384	393	123	845	110	366	1459	369
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	336	920	410	336	920	410	171	1090	338	597	1545	480
Arrive On Green	0.15	0.40	0.40	0.15	0.40	0.40	0.15	0.33	0.33	0.27	0.47	0.47
Sat Flow, veh/h	3365	3460	1543	3365	3460	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	261	349	76	241	384	393	123	845	110	366	1459	369
Grp Sat Flow(s),veh/h/ln	1682	1730	1543	1682	1730	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	9.0	8.6	3.8	8.2	9.6	17.5	8.1	18.4	4.7	11.4	33.6	23.9
Cycle Q Clear(g_c), s	9.0	8.6	3.8	8.2	9.6	17.5	8.1	18.4	4.7	11.4	33.6	23.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	336	920	410	336	920	410	171	1090	338	597	1545	480
V/C Ratio(X)	0.78	0.38	0.19	0.72	0.42	0.96	0.72	0.78	0.33	0.61	0.94	0.77
Avail Cap(c_a), veh/h	336	920	410	393	920	410	173	1388	431	597	1554	482
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.7	29.1	27.6	49.4	29.4	12.2	49.6	37.6	17.8	40.4	31.0	28.4
Incr Delay (d2), s/veh	10.4	1.2	1.0	3.8	1.4	35.0	11.2	2.5	0.8	1.4	12.2	7.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	3.4	1.5	3.4	3.8	8.4	3.8	6.5	2.3	4.3	12.0	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.2	30.2	28.6	53.2	30.8	47.2	60.8	40.1	18.6	41.8	43.2	36.3
LnGrp LOS	E	C	C	D	C	D	E	D	B	D	D	D
Approach Vol, veh/h	686			1018			1078			2194		
Approach Delay, s/veh	41.4			42.4			40.2			41.8		
Approach LOS	D			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	28.8	33.8	18.0	39.4	17.8	44.8	18.0	39.4				
Change Period (Y+Rc), s	7.5	* 7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	16.0	* 34	14.0	29.5	12.0	37.5	12.0	31.5				
Max Q Clear Time (g_c+I1), s	13.4	20.4	10.2	10.6	10.1	35.6	11.0	19.5				
Green Ext Time (p_c), s	0.1	5.9	0.1	3.9	0.0	1.7	0.1	5.3				

Intersection Summary

HCM 6th Ctrl Delay	41.5
HCM 6th LOS	D






















Notes

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

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings
10: Avenue 60 & Madison St.

2040 NP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	346	368	1	1	658	258	1	2	1	334	1	779
Future Volume (vph)	346	368	1	1	658	258	1	2	1	334	1	779
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	150		0	150		150
Storage Lanes	2		0	1		1	0		0	2		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			40	
Link Distance (ft)		1772			661			281			437	
Travel Time (s)		30.2			11.3			7.7			7.4	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6			8		7	4	5
Permitted Phases						6	8					4
Detector Phase	5	2		1	6	6	8	8		7	4	5
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	11.5	22.5		11.5	22.5	22.5	22.5	22.5		22.5	22.5	11.5
Total Split (s)	42.0	63.5		11.5	33.0	33.0	22.5	22.5		22.5	45.0	42.0
Total Split (%)	35.0%	52.9%		9.6%	27.5%	27.5%	18.8%	18.8%		18.8%	37.5%	35.0%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lead		Lag		Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		Yes
Recall Mode	None	C-Max		None	None	None	Max	Max		Max	Max	None

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT, Start of Yellow

Natural Cycle: 90






















Control Type: Actuated-Coordinated

Splits and Phases: 10: Avenue 60 & Madison St.
























HCM 6th Signalized Intersection Summary
10: Avenue 60 & Madison St.

2040 NP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	346	368	1	1	658	258	1	2	1	334	1	779
Future Volume (veh/h)	346	368	1	1	658	258	1	2	1	334	1	779
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	353	376	1	1	671	263	1	2	1	341	1	795
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	436	1940	5	3	1546	655	70	125	52	520	615	715
Arrive On Green	0.13	0.55	0.55	0.00	0.42	0.42	0.15	0.15	0.15	0.15	0.34	0.34
Sat Flow, veh/h	3469	3540	9	1734	3642	1543	215	834	350	3469	1821	1543
Grp Volume(v), veh/h	353	184	193	1	671	263	4	0	0	341	1	795
Grp Sat Flow(s),veh/h/ln	1734	1730	1819	1734	1821	1543	1399	0	0	1734	1821	1543
Q Serve(g_s), s	11.9	6.4	6.4	0.1	15.6	8.6	0.0	0.0	0.0	11.1	0.0	40.5
Cycle Q Clear(g_c), s	11.9	6.4	6.4	0.1	15.6	8.6	0.2	0.0	0.0	11.1	0.0	40.5
Prop In Lane	1.00		0.01	1.00		1.00	0.25		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	436	948	997	3	1546	655	247	0	0	520	615	715
V/C Ratio(X)	0.81	0.19	0.19	0.30	0.43	0.40	0.02	0.00	0.00	0.66	0.00	1.11
Avail Cap(c_a), veh/h	1084	948	997	101	1546	655	247	0	0	520	615	715
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.1	13.7	13.7	59.8	24.4	8.9	43.5	0.0	0.0	48.1	26.3	32.2
Incr Delay (d2), s/veh	3.7	0.5	0.4	44.3	0.2	0.4	0.1	0.0	0.0	6.3	0.0	68.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	2.5	2.7	0.1	6.5	2.9	0.1	0.0	0.0	5.2	0.0	33.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.7	14.2	14.1	104.2	24.6	9.3	43.6	0.0	0.0	54.4	26.4	101.0
LnGrp LOS	D	B	B	F	C	A	D	A	A	D	C	F
Approach Vol, veh/h	730				935				4			
Approach Delay, s/veh	33.8				20.4				43.6			
Approach LOS	C				C				D			
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.7	70.3		45.0	19.6	55.4	22.5	22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.0	59.0		40.5	37.5	28.5	18.0	18.0				
Max Q Clear Time (g_c+I1), s	2.1	8.4		42.5	13.9	17.6	13.1	2.2				
Green Ext Time (p_c), s	0.0	2.2		0.0	1.2	3.9	0.5	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	50.9											
HCM 6th LOS	D											

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

2040 NP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	195	359	18	254	284	274	545	39	183	434	291
Future Volume (vph)	136	195	359	18	254	284	274	545	39	183	434	291
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Detector Phase	7	4		3	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5		11.5	22.5	
Total Split (s)	20.0	37.5		11.5	29.0	26.6	32.0	44.4		26.6	39.0	
Total Split (%)	16.7%	31.3%		9.6%	24.2%	22.2%	26.7%	37.0%		22.2%	32.5%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

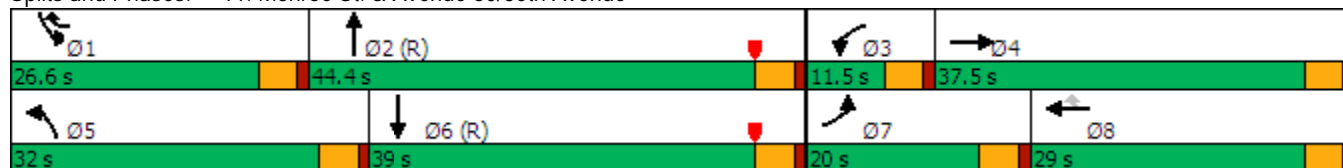
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 80






















Control Type: Actuated-Coordinated

Splits and Phases: 11: Monroe St. & Avenue 60/60th Avenue



























HCM 6th Signalized Intersection Summary
11: Monroe St. & Avenue 60/60th Avenue

2040 NP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	195	359	18	254	284	274	545	39	183	434	291
Future Volume (veh/h)	136	195	359	18	254	284	274	545	39	183	434	291
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	139	199	366	18	259	290	280	556	40	187	443	297
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	166	444	396	46	341	481	309	1449	104	216	773	515
Arrive On Green	0.10	0.26	0.26	0.03	0.19	0.19	0.18	0.44	0.44	0.12	0.39	0.39
Sat Flow, veh/h	1734	1730	1543	1734	1821	1543	1734	3274	235	1734	1988	1324
Grp Volume(v), veh/h	139	199	366	18	259	290	280	293	303	187	385	355
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1730	1779	1734	1730	1583
Q Serve(g_s), s	9.5	11.6	27.7	1.2	16.2	19.1	19.0	13.7	13.7	12.7	21.0	21.2
Cycle Q Clear(g_c), s	9.5	11.6	27.7	1.2	16.2	19.1	19.0	13.7	13.7	12.7	21.0	21.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		0.84
Lane Grp Cap(c), veh/h	166	444	396	46	341	481	309	766	788	216	673	615
V/C Ratio(X)	0.84	0.45	0.92	0.39	0.76	0.60	0.90	0.38	0.38	0.87	0.57	0.58
Avail Cap(c_a), veh/h	224	476	424	101	372	507	397	766	788	319	673	615
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.4	37.5	43.5	57.5	46.2	35.0	48.3	22.4	22.5	51.6	28.8	28.9
Incr Delay (d2), s/veh	18.4	0.7	25.1	5.4	8.1	1.8	20.2	1.5	1.4	15.1	3.5	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	4.9	12.9	0.6	7.9	7.2	9.6	5.5	5.7	6.2	8.9	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.7	38.2	68.6	62.9	54.3	36.8	68.5	23.9	23.9	66.7	32.4	32.8
LnGrp LOS	E	D	E	E	D	D	E	C	C	E	C	C
Approach Vol, veh/h		704			567			876			927	
Approach Delay, s/veh		60.6			45.6			38.1			39.4	
Approach LOS		E			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.4	57.6	7.7	35.3	25.9	51.2	16.0	27.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	22.1	39.9	7.0	33.0	27.5	34.5	15.5	24.5				
Max Q Clear Time (g_c+I1), s	14.7	15.7	3.2	29.7	21.0	23.2	11.5	21.1				
Green Ext Time (p_c), s	0.3	3.2	0.0	1.0	0.4	3.2	0.1	0.8				
Intersection Summary												
HCM 6th Ctrl Delay			45.1									
HCM 6th LOS			D									

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

2040 NP AM Peak hour
With Additional Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	195	359	18	254	284	274	545	39	183	434	291
Future Volume (vph)	136	195	359	18	254	284	274	545	39	183	434	291
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	100		150	320		150
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						6
Detector Phase	7	4	5	3	8	1	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	11.5	11.5	22.5	11.5	11.5	22.5		11.5	22.5	22.5
Total Split (s)	25.0	37.0	38.0	12.0	24.0	29.0	38.0	42.0		29.0	33.0	33.0
Total Split (%)	20.8%	30.8%	31.7%	10.0%	20.0%	24.2%	31.7%	35.0%		24.2%	27.5%	27.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

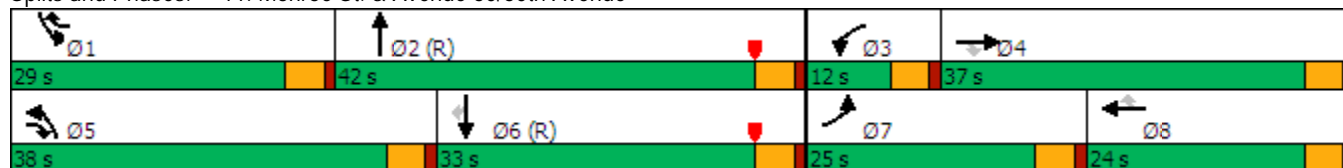
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated
























Splits and Phases: 11: Monroe St. & Avenue 60/60th Avenue



HCM 6th Signalized Intersection Summary























11: Monroe St. & Avenue 60/60th Avenue

2040 NP AM Peak hour
With Additional Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	195	359	18	254	284	274	545	39	183	434	291
Future Volume (veh/h)	136	195	359	18	254	284	274	545	39	183	434	291
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	139	199	366	18	259	290	280	556	40	187	443	297
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	167	804	636	46	562	443	312	1527	110	217	1424	635
Arrive On Green	0.10	0.23	0.23	0.03	0.16	0.16	0.18	0.47	0.47	0.12	0.41	0.41
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	1734	3274	235	1734	3460	1543
Grp Volume(v), veh/h	139	199	366	18	259	290	280	293	303	187	443	297
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1734	1730	1779	1734	1730	1543
Q Serve(g_s), s	9.4	5.6	21.9	1.2	8.1	19.5	19.0	13.1	13.1	12.7	10.4	16.8
Cycle Q Clear(g_c), s	9.4	5.6	21.9	1.2	8.1	19.5	19.0	13.1	13.1	12.7	10.4	16.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	167	804	636	46	562	443	312	807	830	217	1424	635
V/C Ratio(X)	0.83	0.25	0.58	0.39	0.46	0.65	0.90	0.36	0.36	0.86	0.31	0.47
Avail Cap(c_a), veh/h	296	937	695	108	562	443	484	807	830	354	1424	635
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.3	37.5	27.2	57.5	45.5	37.5	48.1	20.6	20.6	51.5	23.8	25.7
Incr Delay (d2), s/veh	10.3	0.2	1.0	5.4	0.6	3.4	13.4	1.3	1.2	11.5	0.6	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	2.3	7.9	0.6	3.5	7.6	9.0	5.2	5.4	6.0	4.1	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.5	37.7	28.2	62.9	46.1	41.0	61.5	21.8	21.8	63.0	24.4	28.2
LnGrp LOS	E	D	C	E	D	D	E	C	C	E	C	C
Approach Vol, veh/h	704			567			876			927		
Approach Delay, s/veh	37.8			44.0			34.5			33.4		
Approach LOS	D			D			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.5	60.5	7.7	32.4	26.1	53.9	16.0	24.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	24.5	37.5	7.5	32.5	33.5	28.5	20.5	19.5				
Max Q Clear Time (g_c+I1), s	14.7	15.1	3.2	23.9	21.0	18.8	11.4	21.5				
Green Ext Time (p_c), s	0.3	3.1	0.0	1.6	0.6	2.6	0.2	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	36.7											
HCM 6th LOS	D											

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

2040 NP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	301	129	344	85	104	139	589	276	134	934	58
Future Volume (vph)	77	301	129	344	85	104	139	589	276	134	934	58
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		0	150		150	150		150
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			732			913			1519	
Travel Time (s)		9.1			16.6			12.5			20.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5		11.5	22.5	22.5	11.5	22.5	
Total Split (s)	16.7	22.6		34.8	40.7		18.5	40.2	40.2	22.4	44.1	
Total Split (%)	13.9%	18.8%		29.0%	33.9%		15.4%	33.5%	33.5%	18.7%	36.8%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

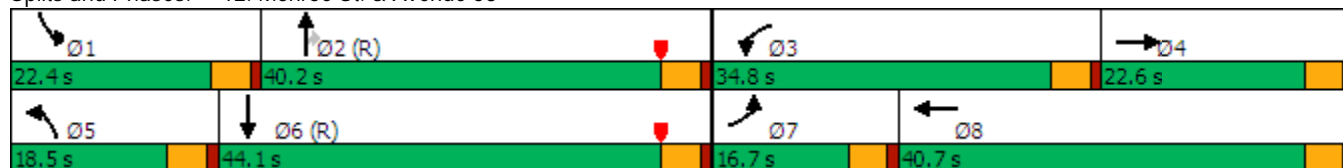
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated























Splits and Phases: 12: Monroe St. & Avenue 58



HCM 6th Signalized Intersection Summary
























12: Monroe St. & Avenue 58

2040 NP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	301	129	344	85	104	139	589	276	134	934	58
Future Volume (veh/h)	77	301	129	344	85	104	139	589	276	134	934	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	79	307	132	351	87	106	142	601	282	137	953	59
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	100	350	147	380	534	477	168	1346	600	164	1279	79
Arrive On Green	0.06	0.15	0.15	0.22	0.31	0.31	0.10	0.39	0.39	0.09	0.39	0.39
Sat Flow, veh/h	1734	2373	998	1734	1730	1543	1734	3460	1543	1734	3309	205
Grp Volume(v), veh/h	79	222	217	351	87	106	142	601	282	137	498	514
Grp Sat Flow(s),veh/h/ln	1734	1730	1641	1734	1730	1543	1734	1730	1543	1734	1730	1784
Q Serve(g_s), s	5.4	15.1	15.6	23.8	4.4	6.1	9.7	15.4	16.4	9.3	29.8	29.8
Cycle Q Clear(g_c), s	5.4	15.1	15.6	23.8	4.4	6.1	9.7	15.4	16.4	9.3	29.8	29.8
Prop In Lane	1.00		0.61	1.00		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	100	255	242	380	534	477	168	1346	600	164	669	690
V/C Ratio(X)	0.79	0.87	0.90	0.92	0.16	0.22	0.84	0.45	0.47	0.83	0.74	0.74
Avail Cap(c_a), veh/h	176	261	248	438	534	477	202	1346	600	259	669	690
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.8	50.0	50.2	45.9	30.2	30.8	53.3	27.1	27.4	53.4	31.7	31.7
Incr Delay (d2), s/veh	12.9	25.1	31.0	23.6	0.1	0.2	23.3	1.1	2.6	12.4	7.4	7.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	8.0	8.2	12.7	1.9	2.3	5.2	6.2	6.5	4.5	13.1	13.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.7	75.1	81.2	69.5	30.3	31.0	76.6	28.2	30.0	65.8	39.1	38.9
LnGrp LOS	E	E	F	E	C	C	E	C	C	E	D	D
Approach Vol, veh/h	518			544			1025			1149		
Approach Delay, s/veh	76.7			55.7			35.4			42.2		
Approach LOS	E			E			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.9	51.2	30.8	22.2	16.1	50.9	11.4	41.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	17.9	35.7	30.3	18.1	14.0	39.6	12.2	36.2				
Max Q Clear Time (g_c+I1), s	11.3	18.4	25.8	17.6	11.7	31.8	7.4	8.1				
Green Ext Time (p_c), s	0.2	4.2	0.5	0.1	0.1	3.5	0.1	1.2				
Intersection Summary												
HCM 6th Ctrl Delay	47.8											
HCM 6th LOS	D											

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

2040 NP AM Peak hour
With Additional Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	301	129	344	85	104	139	589	276	134	934	58
Future Volume (vph)	77	301	129	344	85	104	139	589	276	134	934	58
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		0	150		150	150		150
Storage Lanes	1		1	1		0	2		1	2		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			732			913			1519	
Travel Time (s)		9.1			16.6			12.5			20.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3	8		5	2	3	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5		11.5	22.5	11.5	11.5	22.5	
Total Split (s)	16.8	22.6	22.6	37.0	42.8		12.2	46.2	37.0	14.2	48.2	
Total Split (%)	14.0%	18.8%	18.8%	30.8%	35.7%		10.2%	38.5%	30.8%	11.8%	40.2%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	None	None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

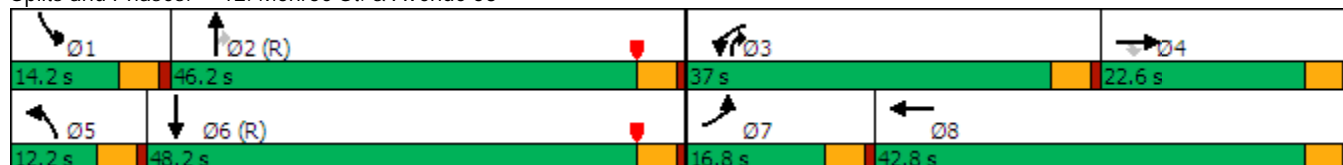
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated
























Splits and Phases: 12: Monroe St. & Avenue 58



HCM 6th Signalized Intersection Summary























12: Monroe St. & Avenue 58

2040 NP AM Peak hour
With Additional Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	301	129	344	85	104	139	589	276	134	934	58
Future Volume (veh/h)	77	301	129	344	85	104	139	589	276	134	934	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	79	307	132	351	87	106	142	601	282	137	953	59
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	100	388	173	381	475	423	195	1593	1050	194	1523	94
Arrive On Green	0.06	0.11	0.11	0.22	0.27	0.27	0.06	0.46	0.46	0.06	0.46	0.46
Sat Flow, veh/h	1734	3460	1543	1734	1730	1543	3365	3460	1543	3365	3309	205
Grp Volume(v), veh/h	79	307	132	351	87	106	142	601	282	137	498	514
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1784
Q Serve(g_s), s	5.4	10.4	10.0	23.8	4.6	6.4	5.0	13.6	8.6	4.8	26.2	26.2
Cycle Q Clear(g_c), s	5.4	10.4	10.0	23.8	4.6	6.4	5.0	13.6	8.6	4.8	26.2	26.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	100	388	173	381	475	423	195	1593	1050	194	796	821
V/C Ratio(X)	0.79	0.79	0.76	0.92	0.18	0.25	0.73	0.38	0.27	0.71	0.63	0.63
Avail Cap(c_a), veh/h	178	522	233	470	552	493	216	1593	1050	272	796	821
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.8	51.9	51.7	45.8	33.3	33.9	55.6	21.1	7.5	55.5	24.6	24.6
Incr Delay (d2), s/veh	12.9	5.9	9.9	20.8	0.2	0.3	10.6	0.7	0.6	4.8	3.7	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	4.7	4.3	12.4	2.0	2.5	2.3	5.3	2.9	2.1	10.8	11.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.7	57.8	61.6	66.6	33.5	34.2	66.2	21.8	8.1	60.3	28.2	28.1
LnGrp LOS	E	E	E	E	C	C	E	C	A	E	C	C
Approach Vol, veh/h	518			544			1025			1149		
Approach Delay, s/veh	60.5			55.0			24.2			32.0		
Approach LOS	E			D			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.4	59.7	30.9	17.9	11.4	59.7	11.4	37.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	9.7	41.7	32.5	18.1	7.7	43.7	12.3	38.3				
Max Q Clear Time (g_c+I1), s	6.8	15.6	25.8	12.4	7.0	28.2	7.4	8.4				
Green Ext Time (p_c), s	0.1	4.7	0.6	1.1	0.0	5.2	0.1	1.2				
Intersection Summary												
HCM 6th Ctrl Delay	38.0											
HCM 6th LOS	D											

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.

2040 NP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	391	97	49	224	235	49	746	80	234	922	65
Future Volume (vph)	32	391	97	49	224	235	49	746	80	234	922	65
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	60			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						6
Detector Phase	7	4		3	8	1	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5		11.5	22.5	22.5
Total Split (s)	11.6	29.6		13.8	31.8	32.0	13.8	44.6		32.0	62.8	62.8
Total Split (%)	9.7%	24.7%		11.5%	26.5%	26.7%	11.5%	37.2%		26.7%	52.3%	52.3%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

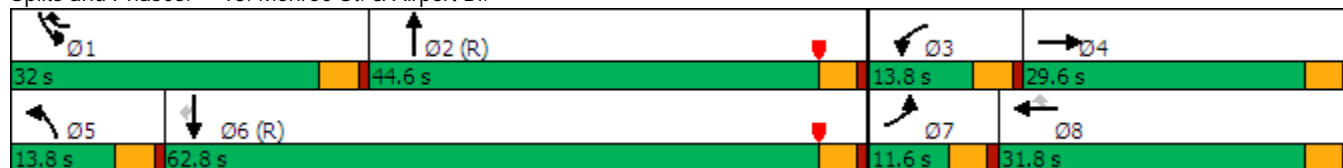
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 80























Control Type: Actuated-Coordinated

Splits and Phases: 13: Monroe St. & Airport Bl.



























HCM 6th Signalized Intersection Summary
13: Monroe St. & Airport Bl.

2040 NP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	391	97	49	224	235	49	746	80	234	922	65
Future Volume (veh/h)	32	391	97	49	224	235	49	746	80	234	922	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	33	399	99	50	229	240	50	761	82	239	941	66
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	67	469	115	82	618	515	82	1504	162	269	2025	903
Arrive On Green	0.04	0.17	0.17	0.05	0.18	0.18	0.05	0.48	0.48	0.16	0.59	0.59
Sat Flow, veh/h	1734	2753	676	1734	3460	1543	1734	3151	339	1734	3460	1543
Grp Volume(v), veh/h	33	249	249	50	229	240	50	418	425	239	941	66
Grp Sat Flow(s),veh/h/ln	1734	1730	1699	1734	1730	1543	1734	1730	1760	1734	1730	1543
Q Serve(g_s), s	2.2	16.8	17.1	3.4	7.0	14.7	3.4	20.0	20.0	16.2	18.6	2.2
Cycle Q Clear(g_c), s	2.2	16.8	17.1	3.4	7.0	14.7	3.4	20.0	20.0	16.2	18.6	2.2
Prop In Lane	1.00		0.40	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	67	294	289	82	618	515	82	826	840	269	2025	903
V/C Ratio(X)	0.49	0.85	0.86	0.61	0.37	0.47	0.61	0.51	0.51	0.89	0.46	0.07
Avail Cap(c_a), veh/h	103	362	355	134	787	591	134	826	840	397	2025	903
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.74	0.74	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.5	48.3	48.4	56.1	43.4	31.5	56.1	21.6	21.6	49.7	14.2	10.8
Incr Delay (d2), s/veh	4.0	11.0	12.5	7.1	0.4	0.7	7.1	2.2	2.2	15.2	0.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	7.9	8.0	1.6	2.9	5.3	1.6	8.0	8.2	7.9	6.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.5	59.3	60.9	63.2	43.7	32.2	63.2	23.8	23.8	64.9	15.0	10.9
LnGrp LOS	E	E	E	E	D	C	E	C	C	E	B	B
Approach Vol, veh/h	531			519			893			1246		
Approach Delay, s/veh	60.1			40.3			26.0			24.3		
Approach LOS	E			D			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.1	61.8	10.2	24.9	10.2	74.7	9.2	25.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	27.5	40.1	9.3	25.1	9.3	58.3	7.1	27.3				
Max Q Clear Time (g_c+I1), s	18.2	22.0	5.4	19.1	5.4	20.6	4.2	16.7				
Green Ext Time (p_c), s	0.4	4.4	0.0	1.3	0.0	7.2	0.0	1.5				
Intersection Summary												
HCM 6th Ctrl Delay	33.3											
HCM 6th LOS	C											

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

2040 NP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	169	466	217	108	392	52	79	896	152	51	1120	209
Future Volume (vph)	169	466	217	108	392	52	79	896	152	51	1120	209
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	100			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	15.0	28.0	28.0	19.1	32.1	32.1	16.3	59.5	59.5	13.4	56.6	56.6
Total Split (%)	12.5%	23.3%	23.3%	15.9%	26.8%	26.8%	13.6%	49.6%	49.6%	11.2%	47.2%	47.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 75

























Control Type: Actuated-Coordinated

Splits and Phases: 14: Monroe St. & Avenue 54



























HCM 6th Signalized Intersection Summary
14: Monroe St. & Avenue 54

2040 NP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	466	217	108	392	52	79	896	152	51	1120	209
Future Volume (veh/h)	169	466	217	108	392	52	79	896	152	51	1120	209
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	172	476	221	110	400	53	81	914	155	52	1143	213
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	339	578	245	135	506	214	102	2059	873	83	2020	856
Arrive On Green	0.10	0.16	0.16	0.08	0.14	0.14	0.06	0.57	0.57	0.05	0.55	0.55
Sat Flow, veh/h	3469	3642	1543	1734	3642	1543	1734	3642	1543	1734	3642	1543
Grp Volume(v), veh/h	172	476	221	110	400	53	81	914	155	52	1143	213
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1821	1543	1734	1821	1543	1734	1821	1543
Q Serve(g_s), s	5.6	15.2	14.2	7.5	12.7	3.2	5.5	17.5	3.8	3.5	24.4	5.2
Cycle Q Clear(g_c), s	5.6	15.2	14.2	7.5	12.7	3.2	5.5	17.5	3.8	3.5	24.4	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	339	578	245	135	506	214	102	2059	873	83	2020	856
V/C Ratio(X)	0.51	0.82	0.90	0.81	0.79	0.25	0.79	0.44	0.18	0.62	0.57	0.25
Avail Cap(c_a), veh/h	339	713	302	211	838	355	171	2059	873	129	2020	856
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.4	48.8	35.0	54.5	50.0	33.9	55.7	15.1	5.3	56.1	17.4	5.2
Incr Delay (d2), s/veh	1.2	6.4	25.0	12.7	2.8	0.6	12.8	0.7	0.4	7.4	1.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	7.1	6.7	3.6	5.7	1.4	2.7	6.7	1.8	1.7	9.5	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.6	55.3	60.0	67.2	52.8	34.4	68.5	15.8	5.7	63.5	18.5	5.9
LnGrp LOS	D	E	E	E	D	C	E	B	A	E	B	A
Approach Vol, veh/h	869			563			1150			1408		
Approach Delay, s/veh	56.0			53.9			18.2			18.3		
Approach LOS	E			D			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.3	72.3	13.8	23.5	11.6	71.0	16.2	21.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	8.9	55.0	14.6	23.5	11.8	52.1	10.5	27.6				
Max Q Clear Time (g_c+I1), s	5.5	19.5	9.5	17.2	7.5	26.4	7.6	14.7				
Green Ext Time (p_c), s	0.0	7.2	0.1	1.9	0.0	9.1	0.1	1.9				
Intersection Summary												
HCM 6th Ctrl Delay	31.5											
HCM 6th LOS	C											

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52

2040 NP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	587	213	71	554	178	237	747	51	188	1075	62
Future Volume (vph)	135	587	213	71	554	178	237	747	51	188	1075	62
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	21.0	35.8	35.8	15.2	30.0	30.0	18.0	52.5	52.5	16.5	51.0	51.0
Total Split (%)	17.5%	29.8%	29.8%	12.7%	25.0%	25.0%	15.0%	43.8%	43.8%	13.8%	42.5%	42.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120













Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

























Splits and Phases: 15: Monroe St. & Avenue 52

					
Ø1	Ø2 (R)		Ø3	Ø4	
16.5 s	52.5 s		15.2 s	35.8 s	
					
Ø5	Ø6 (R)		Ø7	Ø8	
18 s	51 s		21 s	30 s	

HCM 6th Signalized Intersection Summary

























15: Monroe St. & Avenue 52

2040 NP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	587	213	71	554	178	237	747	51	188	1075	62
Future Volume (veh/h)	135	587	213	71	554	178	237	747	51	188	1075	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	138	599	217	72	565	182	242	762	52	192	1097	63
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	165	817	346	92	664	282	300	1816	769	249	1761	746
Arrive On Green	0.10	0.22	0.22	0.05	0.18	0.18	0.09	0.50	0.50	0.07	0.48	0.48
Sat Flow, veh/h	1734	3642	1543	1734	3642	1543	3365	3642	1543	3365	3642	1543
Grp Volume(v), veh/h	138	599	217	72	565	182	242	762	52	192	1097	63
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1821	1543	1682	1821	1543	1682	1821	1543
Q Serve(g_s), s	9.4	18.3	15.2	4.9	18.0	13.1	8.5	15.9	2.1	6.7	26.7	2.6
Cycle Q Clear(g_c), s	9.4	18.3	15.2	4.9	18.0	13.1	8.5	15.9	2.1	6.7	26.7	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	165	817	346	92	664	282	300	1816	769	249	1761	746
V/C Ratio(X)	0.84	0.73	0.63	0.78	0.85	0.65	0.81	0.42	0.07	0.77	0.62	0.08
Avail Cap(c_a), veh/h	238	950	403	155	774	328	379	1816	769	336	1761	746
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.4	43.2	42.0	56.1	47.5	45.5	53.6	19.1	15.6	54.6	22.9	16.7
Incr Delay (d2), s/veh	15.7	2.5	2.4	13.4	7.9	3.5	9.8	0.7	0.2	7.4	1.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	8.1	5.7	2.4	8.5	5.1	3.9	6.4	0.7	3.0	10.9	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.1	45.7	44.4	69.5	55.4	48.9	63.5	19.8	15.8	62.0	24.6	16.9
LnGrp LOS	E	D	D	E	E	D	E	B	B	E	C	B
Approach Vol, veh/h	954			819			1056			1352		
Approach Delay, s/veh	48.8			55.2			29.6			29.5		
Approach LOS	D			E			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.4	64.3	10.9	31.4	15.2	62.5	15.9	26.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	12.0	48.0	10.7	31.3	13.5	46.5	16.5	25.5				
Max Q Clear Time (g_c+I1), s	8.7	17.9	6.9	20.3	10.5	28.7	11.4	20.0				
Green Ext Time (p_c), s	0.2	5.2	0.0	3.2	0.2	6.9	0.1	1.9				
Intersection Summary												
HCM 6th Ctrl Delay	39.0											
HCM 6th LOS	D											

Lanes, Volumes, Timings
16: Monroe St. & 50th Avenue

2040 NP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	760	101	38	654	130	79	929	48	102	1337	53
Future Volume (vph)	30	760	101	38	654	130	79	929	48	102	1337	53
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	2		1	1		1	2		1	2		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8			2			
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	20.5	20.5	11.5	20.5	11.5	11.5	20.5	20.5	11.5	20.5	
Total Split (s)	11.6	36.0	36.0	11.6	36.0	11.8	11.6	60.6	60.6	11.8	60.8	
Total Split (%)	9.7%	30.0%	30.0%	9.7%	30.0%	9.8%	9.7%	50.5%	50.5%	9.8%	50.7%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	0.0	-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.0	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120



Actuated Cycle Length: 120

Offset: 11.5 (10%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 90

























Control Type: Actuated-Coordinated

Splits and Phases: 16: Monroe St. & 50th Avenue

						
Ø1	Ø2 (R)			Ø4		Ø3
11.8 s	60.6 s			36 s		11.6 s
						
Ø5	Ø6 (R)			Ø8		Ø7
11.6 s	60.8 s			36 s		11.6 s





















HCM 6th Signalized Intersection Summary
16: Monroe St. & 50th Avenue

2040 NP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	760	101	38	654	130	79	929	48	102	1337	53
Future Volume (veh/h)	30	760	101	38	654	130	79	929	48	102	1337	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	31	776	103	39	667	133	81	948	49	104	1364	54
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	245	888	376	81	800	433	203	1878	789	210	1801	71
Arrive On Green	0.07	0.24	0.24	0.05	0.22	0.22	0.06	0.54	0.54	0.06	0.54	0.54
Sat Flow, veh/h	3469	3642	1543	1734	3642	1543	3469	3642	1543	3469	3480	138
Grp Volume(v), veh/h	31	776	103	39	667	133	81	948	49	104	713	705
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1821	1543	1734	1821	1543	1734	1821	1796
Q Serve(g_s), s	1.0	24.6	5.3	2.6	21.0	6.2	2.7	19.7	1.4	3.5	36.4	36.6
Cycle Q Clear(g_c), s	1.0	24.6	5.3	2.6	21.0	6.2	2.7	19.7	1.4	3.5	36.4	36.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	245	888	376	81	800	433	203	1878	789	210	943	930
V/C Ratio(X)	0.13	0.87	0.27	0.48	0.83	0.31	0.40	0.50	0.06	0.49	0.76	0.76
Avail Cap(c_a), veh/h	245	971	412	110	971	505	220	1878	789	225	943	930
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.05	1.05	1.05	1.05
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.3	43.6	24.9	55.8	44.7	20.1	54.3	17.9	8.1	54.4	21.5	21.6
Incr Delay (d2), s/veh	0.2	8.4	0.4	4.4	5.3	0.4	1.3	1.0	0.2	1.8	5.6	5.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	11.6	2.4	1.2	9.7	2.5	1.2	7.6	0.6	1.5	15.1	15.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.5	52.0	25.3	60.2	50.1	20.5	55.5	18.8	8.2	56.2	27.2	27.3
LnGrp LOS	D	D	C	E	D	C	E	B	A	E	C	C
Approach Vol, veh/h	910			839			1078			1522		
Approach Delay, s/veh	49.0			45.8			21.1			29.2		
Approach LOS	D			D			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.3	65.9	9.6	33.3	11.0	66.1	12.5	30.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.3	56.1	7.1	31.5	7.1	56.3	7.1	31.5				
Max Q Clear Time (g_c+I1), s	5.5	21.7	4.6	26.6	4.7	38.6	3.0	23.0				
Green Ext Time (p_c), s	0.0	7.0	0.0	2.2	0.0	8.4	0.0	2.9				
Intersection Summary												
HCM 6th Ctrl Delay	34.5											
HCM 6th LOS	C											

Lanes, Volumes, Timings
17: Jackson St. & 58th Avenue

2040 NP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	501	39	15	349	20	45	708	5	23	769	23
Future Volume (vph)	36	501	39	15	349	20	45	708	5	23	769	23
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		4534			1079			1013			510	
Travel Time (s)		61.8			14.7			12.6			6.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5		11.5	22.5		11.5	22.5	
Total Split (s)	14.0	37.0		13.0	36.0		16.0	57.0		13.0	54.0	
Total Split (%)	11.7%	30.8%		10.8%	30.0%		13.3%	47.5%		10.8%	45.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

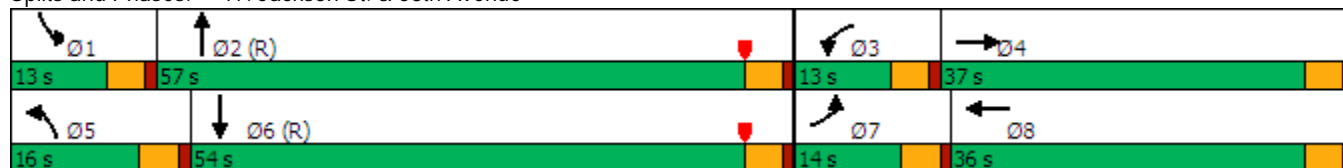
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 70





















Control Type: Actuated-Coordinated

Splits and Phases: 17: Jackson St. & 58th Avenue


























HCM 6th Signalized Intersection Summary
17: Jackson St. & 58th Avenue

2040 NP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	501	39	15	349	20	45	708	5	23	769	23
Future Volume (veh/h)	36	501	39	15	349	20	45	708	5	23	769	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	37	511	40	15	356	20	46	722	5	23	785	23
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	72	610	48	40	564	32	79	2142	15	54	2038	60
Arrive On Green	0.04	0.19	0.19	0.02	0.17	0.17	0.05	0.61	0.61	0.03	0.59	0.59
Sat Flow, veh/h	1734	3252	254	1734	3331	186	1734	3522	24	1734	3433	101
Grp Volume(v), veh/h	37	271	280	15	184	192	46	355	372	23	396	412
Grp Sat Flow(s),veh/h/ln	1734	1730	1775	1734	1730	1788	1734	1730	1817	1734	1730	1803
Q Serve(g_s), s	2.5	18.1	18.2	1.0	11.9	12.0	3.1	12.1	12.1	1.6	14.5	14.5
Cycle Q Clear(g_c), s	2.5	18.1	18.2	1.0	11.9	12.0	3.1	12.1	12.1	1.6	14.5	14.5
Prop In Lane	1.00		0.14	1.00		0.10	1.00		0.01	1.00		0.06
Lane Grp Cap(c), veh/h	72	325	333	40	293	303	79	1052	1105	54	1027	1070
V/C Ratio(X)	0.52	0.84	0.84	0.38	0.63	0.63	0.58	0.34	0.34	0.42	0.39	0.39
Avail Cap(c_a), veh/h	137	469	481	123	454	469	166	1052	1105	123	1027	1070
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.3	47.0	47.0	57.8	46.3	46.4	56.1	11.6	11.6	57.1	12.8	12.8
Incr Delay (d2), s/veh	5.6	8.6	8.7	5.8	2.2	2.2	6.5	0.9	0.8	5.2	1.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	8.3	8.5	0.5	5.1	5.3	1.5	4.3	4.5	0.7	5.2	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.0	55.5	55.7	63.6	48.6	48.6	62.7	12.5	12.4	62.3	13.9	13.9
LnGrp LOS	E	E	E	E	D	D	E	B	B	E	B	B
Approach Vol, veh/h	588			391			773			831		
Approach Delay, s/veh	56.0			49.1			15.4			15.3		
Approach LOS	E			D			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.2	77.5	7.3	27.0	10.0	75.7	9.5	24.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	8.5	52.5	8.5	32.5	11.5	49.5	9.5	31.5				
Max Q Clear Time (g_c+I1), s	3.6	14.1	3.0	20.2	5.1	16.5	4.5	14.0				
Green Ext Time (p_c), s	0.0	4.1	0.0	2.3	0.0	4.6	0.0	1.7				
Intersection Summary												
HCM 6th Ctrl Delay	29.7											
HCM 6th LOS	C											

Lanes, Volumes, Timings
1: Madison St. & Avenue 58

2040 NP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	280	215	45	10	253	684	80	1020	7	413	877	342
Future Volume (vph)	280	215	45	10	253	684	80	1020	7	413	877	342
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	24.0	35.0		11.5	22.5	33.0	16.9	40.5	40.5	33.0	56.6	56.6
Total Split (%)	20.0%	29.2%		9.6%	18.8%	27.5%	14.1%	33.8%	33.8%	27.5%	47.2%	47.2%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

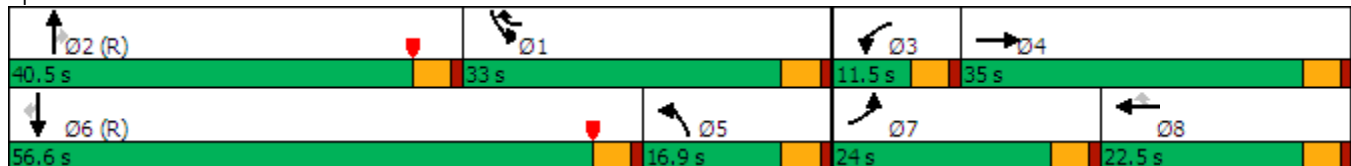
Actuated Cycle Length: 120

Offset: 87.9 (73%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 130

Control Type: Actuated-Coordinated
























Splits and Phases: 1: Madison St. & Avenue 58



HCM 6th Signalized Intersection Summary
























1: Madison St. & Avenue 58

2040 NP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	215	45	10	253	684	80	1020	7	413	877	342
Future Volume (veh/h)	280	215	45	10	253	684	80	1020	7	413	877	342
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	286	219	46	10	258	698	82	1041	7	421	895	349
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	282	836	172	29	507	598	185	1038	463	418	1502	670
Arrive On Green	0.16	0.29	0.29	0.02	0.15	0.15	0.11	0.30	0.30	0.24	0.43	0.43
Sat Flow, veh/h	1734	2856	589	1734	3460	1543	1734	3460	1543	1734	3460	1543
Grp Volume(v), veh/h	286	131	134	10	258	698	82	1041	7	421	895	349
Grp Sat Flow(s),veh/h/ln	1734	1730	1715	1734	1730	1543	1734	1730	1543	1734	1730	1543
Q Serve(g_s), s	19.5	7.0	7.2	0.7	8.3	15.2	5.3	36.0	0.3	28.9	23.7	11.5
Cycle Q Clear(g_c), s	19.5	7.0	7.2	0.7	8.3	15.2	5.3	36.0	0.3	28.9	23.7	11.5
Prop In Lane	1.00		0.34	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	282	506	502	29	507	598	185	1038	463	418	1502	670
V/C Ratio(X)	1.01	0.26	0.27	0.35	0.51	1.17	0.44	1.00	0.02	1.01	0.60	0.52
Avail Cap(c_a), veh/h	282	506	502	101	519	603	185	1038	463	418	1502	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.3	32.5	32.6	58.4	47.2	15.1	50.3	42.0	22.3	45.5	25.9	8.4
Incr Delay (d2), s/veh	57.4	0.3	0.3	7.1	0.8	92.3	1.7	28.6	0.1	46.0	1.7	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.6	2.8	2.9	0.3	3.5	22.6	2.3	18.6	0.1	17.2	9.5	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	107.7	32.8	32.9	65.5	48.0	107.4	51.9	70.6	22.4	91.5	27.7	11.2
LnGrp LOS	F	C	C	E	D	F	D	F	C	F	C	B
Approach Vol, veh/h	551			966			1130			1665		
Approach Delay, s/veh	71.7			91.1			69.0			40.4		
Approach LOS	E			F			E			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	33.4	40.5	6.5	39.6	17.3	56.6	24.0	22.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	28.5	36.0	7.0	30.5	12.4	52.1	19.5	18.0				
Max Q Clear Time (g_c+I1), s	30.9	38.0	2.7	9.2	7.3	25.7	21.5	17.2				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.2	0.1	7.5	0.0	0.4				
Intersection Summary												
HCM 6th Ctrl Delay	63.2											
HCM 6th LOS	E											

Lanes, Volumes, Timings
1: Madison St. & Avenue 58

2040 NP PM Peak hour
With Additional Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	280	215	45	10	253	684	80	1020	7	413	877	342
Future Volume (vph)	280	215	45	10	253	684	80	1020	7	413	877	342
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	15.8	26.8		11.5	22.5	39.3	16.9	42.4	42.4	39.3	64.8	64.8
Total Split (%)	13.2%	22.3%		9.6%	18.8%	32.8%	14.1%	35.3%	35.3%	32.8%	54.0%	54.0%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

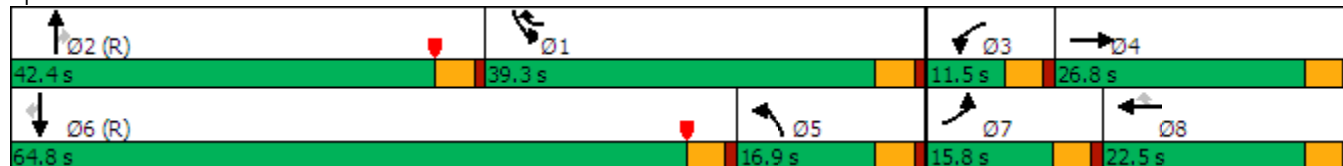
Actuated Cycle Length: 120

Offset: 103 (86%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110

Control Type: Actuated-Coordinated




























Splits and Phases: 1: Madison St. & Avenue 58



HCM 6th Signalized Intersection Summary















1: Madison St. & Avenue 58

2040 NP PM Peak hour
With Additional Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 				 			 			 	
Traffic Volume (veh/h)	280	215	45	10	253	684	80	1020	7	413	877	342
Future Volume (veh/h)	280	215	45	10	253	684	80	1020	7	413	877	342
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	286	219	46	10	258	698	82	1041	7	421	895	349
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	317	307	65	29	460	679	209	1093	487	532	1739	776
Arrive On Green	0.09	0.21	0.21	0.02	0.13	0.13	0.12	0.32	0.32	0.31	0.50	0.50
Sat Flow, veh/h	3365	1459	307	1734	3460	1543	1734	3460	1543	1734	3460	1543
Grp Volume(v), veh/h	286	0	265	10	258	698	82	1041	7	421	895	349
Grp Sat Flow(s),veh/h/ln	1682	0	1766	1734	1730	1543	1734	1730	1543	1734	1730	1543
Q Serve(g_s), s	10.1	0.0	16.7	0.7	8.4	12.4	5.2	35.3	0.3	26.7	20.8	11.5
Cycle Q Clear(g_c), s	10.1	0.0	16.7	0.7	8.4	12.4	5.2	35.3	0.3	26.7	20.8	11.5
Prop In Lane	1.00		0.17	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	317	0	372	29	460	679	209	1093	487	532	1739	776
V/C Ratio(X)	0.90	0.00	0.71	0.35	0.56	1.03	0.39	0.95	0.01	0.79	0.51	0.45
Avail Cap(c_a), veh/h	317	0	372	101	519	705	209	1093	487	532	1739	776
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.8	0.0	44.0	58.4	48.7	15.2	48.7	40.2	21.2	38.1	20.0	8.4
Incr Delay (d2), s/veh	27.4	0.0	6.3	7.1	1.1	41.6	1.2	18.0	0.1	7.9	1.1	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.0	7.7	0.3	3.6	17.5	2.3	16.9	0.1	11.9	8.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.2	0.0	50.2	65.5	49.8	56.8	49.9	58.1	21.2	46.0	21.1	10.2
LnGrp LOS	F	A	D	E	D	F	D	E	C	D	C	B
Approach Vol, veh/h	551		966				1130		1665			
Approach Delay, s/veh	66.3		55.0				57.3		25.1			
Approach LOS	E		E				E		C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	41.3	42.4	6.5	29.8	18.9	64.8	15.8	20.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	34.8	37.9	7.0	22.3	12.4	60.3	11.3	18.0				
Max Q Clear Time (g_c+I1), s	28.7	37.3	2.7	18.7	7.2	22.8	12.1	14.4				
Green Ext Time (p_c), s	0.7	0.4	0.0	0.4	0.1	8.1	0.0	1.6				
Intersection Summary												
HCM 6th Ctrl Delay	45.5											
HCM 6th LOS	D											

Lanes, Volumes, Timings
2: Madison St. & Airport Bl.

2040 NP PM Peak hour

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	346	332	1	1621	300	146	1265
Future Volume (vph)	346	332	1	1621	300	146	1265
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		8			2		
Detector Phase	3	8	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	20.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	34.0	34.0	11.5	67.8	67.8	18.2	74.5
Total Split (%)	28.3%	28.3%	9.6%	56.5%	56.5%	15.2%	62.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 80















Control Type: Actuated-Coordinated

Splits and Phases: 2: Madison St. & Airport Bl.



























HCM 6th Signalized Intersection Summary 2: Madison St. & Airport Bl.

2040 NP PM Peak hour

							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	346	332	1	1621	300	146	1265
Future Volume (veh/h)	346	332	1	1621	300	146	1265
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	353	339		1654	306	149	1291
Peak Hour Factor	0.98	0.98		0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	415	369		1840	821	224	2402
Arrive On Green	0.24	0.24		0.53	0.53	0.13	0.69
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	353	339		1654	306	149	1291
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	23.3	25.7		51.5	4.6	9.8	21.8
Cycle Q Clear(g_c), s	23.3	25.7		51.5	4.6	9.8	21.8
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	415	369		1840	821	224	2402
V/C Ratio(X)	0.85	0.92		0.90	0.37	0.67	0.54
Avail Cap(c_a), veh/h	434	386		1840	821	224	2402
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.69		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.6	44.5		25.2	1.9	49.8	9.0
Incr Delay (d2), s/veh	10.5	19.9		7.5	1.3	7.3	0.9
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.8	11.4		20.6	4.0	4.6	6.9
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	54.1	64.4		32.7	3.2	57.0	9.8
LnGrp LOS	D	E		C	A	E	A
Approach Vol, veh/h	692		1960		1440		
Approach Delay, s/veh	59.1		28.1		14.7		
Approach LOS	E		C		B		
Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	19.5	67.8				87.3	32.7
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	13.7	63.3				70.0	29.5
Max Q Clear Time (g_c+I1), s	11.8	53.5				23.8	27.7
Green Ext Time (p_c), s	0.1	7.4				11.3	0.5
Intersection Summary							
HCM 6th Ctrl Delay			28.6				
HCM 6th LOS			C				
Notes							

Lanes, Volumes, Timings
3: Madison St. & Avenue 54

2040 NP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	521	1181	95	450	470	774	1455	216	263	889	51
Future Volume (vph)	84	521	1181	95	450	470	774	1455	216	263	889	51
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		1	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Free	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			Free			8			2			
Detector Phase	7	4		3	8	1	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5	22.5	11.5	22.5	
Total Split (s)	11.5	24.0		12.3	24.8	24.2	37.6	59.5	59.5	24.2	46.1	
Total Split (%)	9.6%	20.0%		10.3%	20.7%	20.2%	31.3%	49.6%	49.6%	20.2%	38.4%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

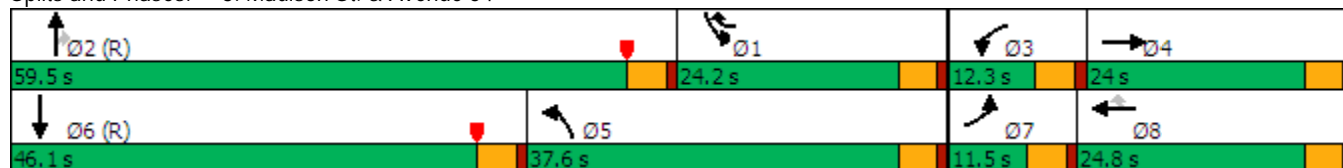
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 100

Control Type: Actuated-Coordinated






























Splits and Phases: 3: Madison St. & Avenue 54



HCM 6th Signalized Intersection Summary

3: Madison St. & Avenue 54

2040 NP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 			 	
Traffic Volume (veh/h)	84	521	1181	95	450	470	774	1455	216	263	889	51
Future Volume (veh/h)	84	521	1181	95	450	470	774	1455	216	263	889	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	86	532	0	97	459	480	790	1485	220	268	907	52
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	101	562		113	585	514	928	1586	707	285	1153	66
Arrive On Green	0.06	0.16	0.00	0.07	0.17	0.17	0.28	0.46	0.46	0.16	0.35	0.35
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	1734	3326	191
Grp Volume(v), veh/h	86	532	0	97	459	480	790	1485	220	268	472	487
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1734	1730	1787
Q Serve(g_s), s	5.9	18.3	0.0	6.6	15.2	12.3	26.7	48.9	8.0	18.3	29.4	29.4
Cycle Q Clear(g_c), s	5.9	18.3	0.0	6.6	15.2	12.3	26.7	48.9	8.0	18.3	29.4	29.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	101	562		113	585	514	928	1586	707	285	600	619
V/C Ratio(X)	0.85	0.95		0.86	0.78	0.93	0.85	0.94	0.31	0.94	0.79	0.79
Avail Cap(c_a), veh/h	101	562		113	585	514	928	1586	707	285	600	619
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.09	0.09	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	49.7	0.0	55.6	47.8	24.4	41.1	30.8	11.3	49.6	35.2	35.2
Incr Delay (d2), s/veh	6.3	4.0	0.0	44.9	6.9	24.2	7.6	11.8	1.1	37.8	10.0	9.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	7.8	0.0	4.2	6.8	15.6	11.5	21.1	3.7	10.6	13.3	13.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.3	53.7	0.0	100.4	54.7	48.6	48.8	42.7	12.4	87.4	45.2	44.9
LnGrp LOS	E	D		F	D	D	D	D	B	F	D	D
Approach Vol, veh/h			618	A			1036			2495		
Approach Delay, s/veh			54.9				56.1			41.9		
Approach LOS			D				E			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	24.2	59.5	12.3	24.0	37.6	46.1	11.5	24.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	19.7	55.0	7.8	19.5	33.1	41.6	7.0	20.3				
Max Q Clear Time (g_c+I1), s	20.3	50.9	8.6	20.3	28.7	31.4	7.9	17.2				
Green Ext Time (p_c), s	0.0	3.2	0.0	0.0	1.3	3.9	0.0	1.4				

Intersection Summary

























HCM 6th Ctrl Delay	49.0
HCM 6th LOS	D

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
4: Madison St. & Avenue 52

2040 NP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	696	118	104	940	224	276	1368	167	223	933	139
Future Volume (vph)	135	696	118	104	940	224	276	1368	167	223	933	139
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	14.6	38.3	38.3	15.4	39.1	39.1	17.6	53.0	53.0	13.3	48.7	48.7
Total Split (%)	12.2%	31.9%	31.9%	12.8%	32.6%	32.6%	14.7%	44.2%	44.2%	11.1%	40.6%	40.6%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120









Actuated Cycle Length: 120

Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 105

Control Type: Actuated-Coordinated

























Splits and Phases: 4: Madison St. & Avenue 52

 Ø2	 Ø1	 Ø3	 Ø4 (R)
53 s	13.3 s	15.4 s	38.3 s
 Ø6	 Ø5	 Ø7	 Ø8 (R)
48.7 s	17.6 s	14.6 s	39.1 s

HCM 6th Signalized Intersection Summary

























4: Madison St. & Avenue 52

2040 NP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	696	118	104	940	224	276	1368	167	223	933	139
Future Volume (veh/h)	135	696	118	104	940	224	276	1368	167	223	933	139
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	138	710	120	106	959	229	282	1396	170	228	952	142
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	146	1030	459	130	998	445	367	1398	624	247	1274	568
Arrive On Green	0.08	0.30	0.30	0.07	0.29	0.29	0.11	0.40	0.40	0.07	0.37	0.37
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	138	710	120	106	959	229	282	1396	170	228	952	142
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	9.5	21.8	5.2	7.2	32.7	11.8	9.8	48.4	6.6	8.1	28.8	5.7
Cycle Q Clear(g_c), s	9.5	21.8	5.2	7.2	32.7	11.8	9.8	48.4	6.6	8.1	28.8	5.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	146	1030	459	130	998	445	367	1398	624	247	1274	568
V/C Ratio(X)	0.95	0.69	0.26	0.82	0.96	0.51	0.77	1.00	0.27	0.92	0.75	0.25
Avail Cap(c_a), veh/h	146	1030	459	158	998	445	367	1398	624	247	1274	568
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.7	37.2	17.5	54.7	42.0	22.4	52.0	35.7	13.4	55.3	33.0	14.8
Incr Delay (d2), s/veh	58.0	3.8	1.4	23.3	20.5	4.2	9.4	23.6	1.1	37.3	4.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	9.4	2.6	3.9	15.9	4.5	4.5	23.4	3.1	4.6	12.1	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	112.7	41.0	18.9	78.0	62.6	26.6	61.4	59.4	14.5	92.6	37.1	15.8
LnGrp LOS	F	D	B	E	E	C	E	E	B	F	D	B
Approach Vol, veh/h	968		1294				1848		1322			
Approach Delay, s/veh	48.5		57.5				55.5		44.4			
Approach LOS	D		E				E		D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.3	53.0	13.5	40.2	17.6	48.7	14.6	39.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	8.8	48.5	10.9	33.8	13.1	44.2	10.1	34.6				
Max Q Clear Time (g_c+I1), s	10.1	50.4	9.2	23.8	11.8	30.8	11.5	34.7				
Green Ext Time (p_c), s	0.0	0.0	0.0	3.4	0.1	5.3	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	52.0											
HCM 6th LOS	D											

Lanes, Volumes, Timings
5: Madison St. & Avenue 50/50th Avenue

2040 NP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	264	822	174	78	909	439	195	1528	73	352	1227	277
Future Volume (vph)	264	822	174	78	909	439	195	1528	73	352	1227	277
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	11.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	22.0	44.8	44.8	13.2	36.0	17.8	12.5	44.2	44.2	17.8	49.5	49.5
Total Split (%)	18.3%	37.3%	37.3%	11.0%	30.0%	14.8%	10.4%	36.8%	36.8%	14.8%	41.3%	41.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

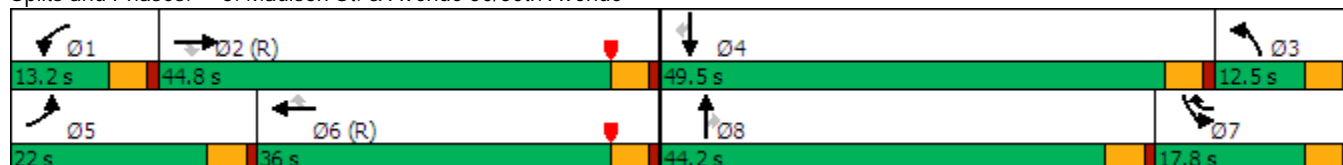
Actuated Cycle Length: 120

Offset: 77.7 (65%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 115
































Control Type: Actuated-Coordinated

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue



























HCM 6th Signalized Intersection Summary
5: Madison St. & Avenue 50/50th Avenue

2040 NP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	  		 	 	
Traffic Volume (veh/h)	264	822	174	78	909	439	195	1528	73	352	1227	277
Future Volume (veh/h)	264	822	174	78	909	439	195	1528	73	352	1227	277
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	269	839	178	80	928	448	199	1559	74	359	1252	283
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	253	1213	541	100	908	576	224	1645	511	373	1298	579
Arrive On Green	0.18	0.42	0.42	0.07	0.31	0.31	0.08	0.40	0.40	0.13	0.45	0.45
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	4972	1543	3365	3460	1543
Grp Volume(v), veh/h	269	839	178	80	928	448	199	1559	74	359	1252	283
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1657	1543	1682	1730	1543
Q Serve(g_s), s	17.5	23.8	7.3	5.5	31.5	12.5	7.0	36.4	3.0	12.7	42.2	10.0
Cycle Q Clear(g_c), s	17.5	23.8	7.3	5.5	31.5	12.5	7.0	36.4	3.0	12.7	42.2	10.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	253	1213	541	100	908	576	224	1645	511	373	1298	579
V/C Ratio(X)	1.06	0.69	0.33	0.80	1.02	0.78	0.89	0.95	0.14	0.96	0.96	0.49
Avail Cap(c_a), veh/h	253	1213	541	126	908	576	224	1645	511	373	1298	579
HCM Platoon Ratio	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.5	29.5	15.5	55.1	41.1	15.0	54.8	35.2	16.3	51.8	32.2	10.4
Incr Delay (d2), s/veh	74.4	3.3	1.6	23.9	35.5	9.9	31.9	12.8	0.6	36.8	17.9	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.3	9.4	3.3	3.0	16.6	6.4	3.8	14.9	1.4	7.0	18.5	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	123.9	32.7	17.1	79.0	76.6	24.9	86.6	48.0	16.9	88.5	50.1	13.3
LnGrp LOS	F	C	B	E	F	C	F	D	B	F	D	B
Approach Vol, veh/h		1286			1456			1832			1894	
Approach Delay, s/veh		49.6			60.8			51.0			51.9	
Approach LOS		D			E			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.4	46.6	12.5	49.5	22.0	36.0	17.8	44.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	8.7	40.3	8.0	45.0	17.5	31.5	13.3	39.7				
Max Q Clear Time (g_c+I1), s	7.5	25.8	9.0	44.2	19.5	33.5	14.7	38.4				
Green Ext Time (p_c), s	0.0	5.2	0.0	0.6	0.0	0.0	0.0	1.1				
Intersection Summary												
HCM 6th Ctrl Delay			53.2									
HCM 6th LOS			D									

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54

2040 NP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	24	2	34	11	1365	6	251	53	1697	315	2
Future Volume (vph)	31	24	2	34	11	1365	6	251	53	1697	315	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		1	1		0	1		1	2		1
Taper Length (ft)	0			110			90			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	11.5	23.0	23.0	11.5	23.0	63.0	22.5	22.5	22.5	63.0	63.0	63.0
Total Split (%)	9.6%	19.2%	19.2%	9.6%	19.2%	52.5%	18.8%	18.8%	18.8%	52.5%	52.5%	52.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	None	Max	Max	Max	Max	Max	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

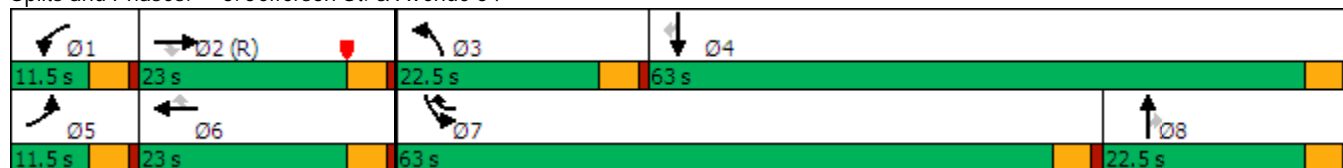
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT, Start of Yellow

Natural Cycle: 120

























Control Type: Actuated-Coordinated

Splits and Phases: 6: Jefferson St. & Avenue 54























HCM 6th Signalized Intersection Summary 6: Jefferson St. & Avenue 54

2040 NP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	24	2	34	11	1365	6	251	53	1697	315	2
Future Volume (veh/h)	31	24	2	34	11	1365	6	251	53	1697	315	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	32	24	2	35	11	1393	6	256	54	1732	321	2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	66	314	266	70	317	1797	260	519	232	1640	1687	752
Arrive On Green	0.04	0.17	0.17	0.04	0.17	0.17	0.15	0.15	0.15	0.49	0.49	0.49
Sat Flow, veh/h	1734	1821	1543	1734	1821	2716	1734	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	32	24	2	35	11	1393	6	256	54	1732	321	2
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1821	1358	1734	1730	1543	1682	1730	1543
Q Serve(g_s), s	2.2	1.3	0.1	2.4	0.6	20.9	0.4	8.1	3.7	58.5	6.3	0.1
Cycle Q Clear(g_c), s	2.2	1.3	0.1	2.4	0.6	20.9	0.4	8.1	3.7	58.5	6.3	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	66	314	266	70	317	1797	260	519	232	1640	1687	752
V/C Ratio(X)	0.48	0.08	0.01	0.50	0.03	0.77	0.02	0.49	0.23	1.06	0.19	0.00
Avail Cap(c_a), veh/h	101	314	266	101	317	1797	260	519	232	1640	1687	752
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.44	0.44	0.44	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.5	41.7	41.2	56.4	41.2	14.1	43.5	46.8	44.9	30.8	17.4	15.8
Incr Delay (d2), s/veh	5.3	0.5	0.1	2.5	0.0	1.0	0.2	3.3	2.3	38.6	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.6	0.1	1.0	0.3	10.6	0.2	3.6	1.5	29.7	2.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.9	42.1	41.2	58.9	41.2	15.1	43.7	50.1	47.3	69.4	17.6	15.8
LnGrp LOS	E	D	D	E	D	B	D	D	D	F	B	B
Approach Vol, veh/h	58			1439			316			2055		
Approach Delay, s/veh	53.0			16.3			49.5			61.3		
Approach LOS	D			B			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.3	25.2	22.5	63.0	9.1	25.4	63.0	22.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.0	18.5	18.0	58.5	7.0	18.5	58.5	18.0				
Max Q Clear Time (g_c+I1), s	4.4	3.3	2.4	8.3	4.2	22.9	60.5	10.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay	43.5											
HCM 6th LOS	D											

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

2040 NP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	122	538	547	34	876	565	593	1019	99	258	1133	216
Future Volume (vph)	122	538	547	34	876	565	593	1019	99	258	1133	216
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											

The Wave - Coral Mountain TIA (JN:12615)
2040 Without Project
PM Peak Hour























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                        Level Of Service Computation Report
                        FHWA Roundabout Method (Base Volume Alternative)
*****
Intersection #7 Jefferson St. / Avenue 52
*****
Average Delay (sec/veh):      8.3      Level Of Service: A
*****
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Control:      Yield Sign      Yield Sign      Yield Sign      Yield Sign
Lanes:      2      2      3      3
-----|-----|-----|-----|
Volume Module:
Base Vol:      593 1019      99      258 1133      216      122 538      547      34 876      565
Growth Adj:      1.00 1.00      1.00      1.00 1.00      1.00      1.00 1.00      1.00      1.00 1.00      1.00
Initial Bse:      593 1019      99      258 1133      216      122 538      547      34 876      565
User Adj:      1.00 1.00      1.00      1.00 1.00      1.00      1.00 1.00      0.00      1.00 1.00      0.00
PHF Adj:      0.98 0.98      0.98      0.98 0.98      0.98      0.98 0.98      0.00      0.98 0.98      0.00
PHF Volume:      605 1040      101      263 1156      220      124 549      0      35 894      0
Reduct Vol:      0      0      0      0      0      0      0      0      0      0      0      0
Reduced Vol:      605 1040      101      263 1156      220      124 549      0      35 894      0
PCE Adj:      1.00 1.00      1.00      1.00 1.00      1.00      1.00 1.00      0.00      1.00 1.00      0.00
MLF Adj:      1.00 1.00      1.00      1.00 1.00      1.00      1.00 1.00      0.00      1.00 1.00      0.00
FinalVolume:      605 1040      101      263 1156      220      124 549      0      35 894      0
-----|-----|-----|-----|
PCE Module:
AutoPCE:      605 1040      101      263 1156      220      124 549      0      35 894      0
TruckPCE:      0      0      0      0      0      0      0      0      0      0      0      0
ComboPCE:      0      0      0      0      0      0      0      0      0      0      0      0
BicyclePCE:      0      0      0      0      0      0      0      0      0      0      0      0
AdjVolume:      605 1040      101      263 1156      220      124 549      0      35 894      0
-----|-----|-----|-----|
Delay Module: >> Time Period: 0.25 hours <<
CircVolume:      263      605      1419      1645
MaxVolume:      2234      1988      xxxxxx      xxxxxx
PedVolume:      0      0      0      0
AdjMaxVol:      2234      1988      xxxxxx      xxxxxx
ApproachVol:      1746      1640      xxxxxx      xxxxxx
ApproachV/C:      0.78      0.82      1.00      1.00
ApproachDel:      7.1      9.6      xxxxxx      xxxxxx
ApproachLOS:      A      A      *      *
Queue:      9.3      11.2      xxxx      xxxx

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Lanes, Volumes, Timings
8: Jefferson St. & Pomelo

2040 NP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	2	21	9	1	42	3	1807	7	23	1627	68
Future Volume (vph)	66	2	21	9	1	42	3	1807	7	23	1627	68
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	54.0		18.0	54.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	15.0%	45.0%		15.0%	45.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary

Area Type: Other

Cycle Length: 120

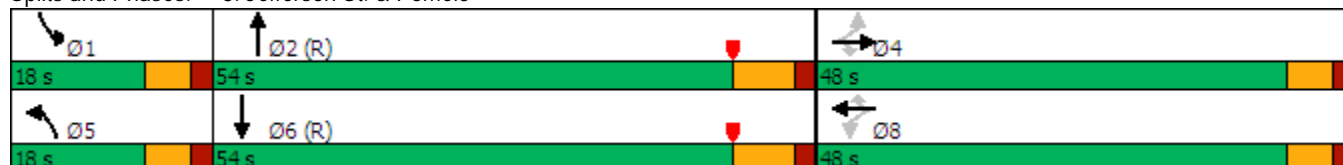
Actuated Cycle Length: 120

Offset: 30 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110























Control Type: Actuated-Coordinated

Splits and Phases: 8: Jefferson St. & Pomelo



































HCM 6th Signalized Intersection Summary 8: Jefferson St. & Pomelo

2040 NP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	2	21	9	1	42	3	1807	7	23	1627	68
Future Volume (veh/h)	66	2	21	9	1	42	3	1807	7	23	1627	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	67	2	21	9	1	43	3	1844	7	23	1660	69
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	73	1	514	66	4	514	17	2304	9	93	2422	101
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.01	0.45	0.45	0.11	0.99	0.99
Sat Flow, veh/h	41	4	1543	28	13	1543	1734	5113	19	1734	4896	203
Grp Volume(v), veh/h	69	0	21	10	0	43	3	1195	656	23	1124	605
Grp Sat Flow(s),veh/h/ln	45	0	1543	41	0	1543	1734	1657	1818	1734	1657	1785
Q Serve(g_s), s	1.2	0.0	1.1	0.6	0.0	2.3	0.2	37.2	37.2	1.5	1.3	1.3
Cycle Q Clear(g_c), s	40.0	0.0	1.1	39.7	0.0	2.3	0.2	37.2	37.2	1.5	1.3	1.3
Prop In Lane	0.97		1.00	0.90		1.00	1.00		0.01	1.00		0.11
Lane Grp Cap(c), veh/h	74	0	514	71	0	514	17	1494	819	93	1640	883
V/C Ratio(X)	0.93	0.00	0.04	0.14	0.00	0.08	0.18	0.80	0.80	0.25	0.69	0.69
Avail Cap(c_a), veh/h	97	0	540	94	0	540	173	1494	819	173	1640	883
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.57	0.57	0.57
Uniform Delay (d), s/veh	59.3	0.0	27.0	46.2	0.0	27.4	59.0	28.3	28.3	51.4	0.3	0.3
Incr Delay (d2), s/veh	69.5	0.0	0.1	1.9	0.0	0.1	10.9	4.6	8.1	1.7	1.3	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	0.4	0.3	0.0	0.9	0.1	14.3	16.5	0.6	0.5	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	128.9	0.0	27.1	48.1	0.0	27.6	69.8	32.9	36.4	53.0	1.7	2.8
LnGrp LOS	F	A	C	D	A	C	E	C	D	D	A	A
Approach Vol, veh/h	90				53				1854		1752	
Approach Delay, s/veh	105.1				31.5				34.2		2.7	
Approach LOS	F				C				C		A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.4	60.8		46.8	7.1	66.0		46.8				
Change Period (Y+Rc), s	6.0	7.5		6.0	6.0	7.5		6.0				
Max Green Setting (Gmax), s	12.0	46.5		42.0	12.0	46.5		42.0				
Max Q Clear Time (g_c+I1), s	3.5	39.2		42.0	2.2	3.3		41.7				
Green Ext Time (p_c), s	0.0	6.7		0.0	0.0	29.2		0.0				
Intersection Summary												
HCM 6th Ctrl Delay	21.2											
HCM 6th LOS	C											

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

2040 NP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 			  		 	  	
Traffic Volume (vph)	362	491	131	382	575	300	150	1480	285	408	1216	285
Future Volume (vph)	362	491	131	382	575	300	150	1480	285	408	1216	285
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	2		1	2		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	18.0	33.8	33.8	23.0	38.8	38.8	20.0	43.2	43.2	20.0	43.2	43.2
Total Split (%)	15.0%	28.2%	28.2%	19.2%	32.3%	32.3%	16.7%	36.0%	36.0%	16.7%	36.0%	36.0%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

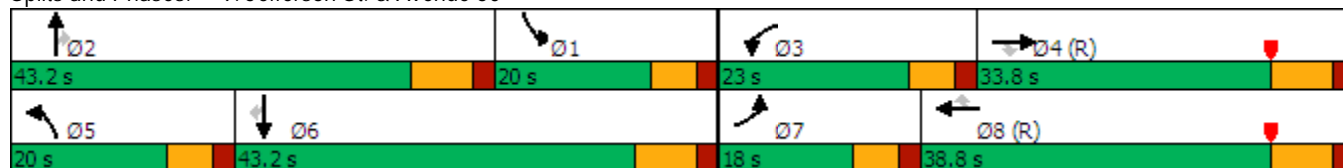
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 125

























Control Type: Actuated-Coordinated

Splits and Phases: 9: Jefferson St. & Avenue 50
























HCM 6th Signalized Intersection Summary 9: Jefferson St. & Avenue 50

2040 NP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	362	491	131	382	575	300	150	1480	285	408	1216	285
Future Volume (veh/h)	362	491	131	382	575	300	150	1480	285	408	1216	285
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	369	501	134	390	587	306	153	1510	291	416	1241	291
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	336	754	336	439	859	383	177	1479	459	393	1613	501
Arrive On Green	0.15	0.33	0.33	0.20	0.37	0.37	0.15	0.45	0.45	0.17	0.49	0.49
Sat Flow, veh/h	3365	3460	1543	3365	3460	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	369	501	134	390	587	306	153	1510	291	416	1241	291
Grp Sat Flow(s),veh/h/ln	1682	1730	1543	1682	1730	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	12.0	14.9	8.1	13.5	17.1	14.4	10.3	35.7	11.4	14.0	24.6	16.2
Cycle Q Clear(g_c), s	12.0	14.9	8.1	13.5	17.1	14.4	10.3	35.7	11.4	14.0	24.6	16.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	336	754	336	439	859	383	177	1479	459	393	1613	501
V/C Ratio(X)	1.10	0.66	0.40	0.89	0.68	0.80	0.86	1.02	0.63	1.06	0.77	0.58
Avail Cap(c_a), veh/h	336	758	338	477	903	403	202	1479	459	393	1613	501
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.83	0.83	0.83	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.0	36.6	34.3	47.4	33.7	16.1	50.0	33.2	12.1	49.5	27.1	25.0
Incr Delay (d2), s/veh	77.5	4.6	3.5	16.5	4.4	15.8	21.6	26.8	2.7	62.1	2.5	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	6.0	3.1	6.1	6.6	5.8	5.1	14.7	3.5	8.6	7.7	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	128.5	41.2	37.8	63.9	38.1	31.9	71.6	60.0	14.8	111.6	29.6	27.0
LnGrp LOS	F	D	D	E	D	C	E	F	B	F	C	C
Approach Vol, veh/h	1004			1283			1954			1948		
Approach Delay, s/veh	72.8			44.4			54.2			46.7		
Approach LOS	E			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.5	43.2	21.6	33.7	18.3	46.4	18.0	37.3				
Change Period (Y+Rc), s	7.5	* 7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	14.0	* 36	17.0	26.3	14.0	35.7	12.0	31.3				
Max Q Clear Time (g_c+I1), s	16.0	37.7	15.5	16.9	12.3	26.6	14.0	19.1				
Green Ext Time (p_c), s	0.0	0.0	0.1	3.9	0.0	6.6	0.0	6.3				
Intersection Summary												
HCM 6th Ctrl Delay	52.8											
HCM 6th LOS	D											
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
10: Avenue 60 & Madison St.

2040 NP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	949	763	2	2	653	273	2	2	2	663	2	371
Future Volume (vph)	949	763	2	2	653	273	2	2	2	663	2	371
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	150		0	150		150
Storage Lanes	2		0	1		1	0		0	2		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			40	
Link Distance (ft)		1772			661			281			437	
Travel Time (s)		30.2			11.3			7.7			7.4	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6			8		7	4	5
Permitted Phases						6	8					4
Detector Phase	5	2		1	6	6	8	8		7	4	5
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	11.5	22.5		11.5	22.5	22.5	22.5	22.5		22.5	22.5	11.5
Total Split (s)	39.2	56.9		11.5	29.2	29.2	22.5	22.5		29.1	51.6	39.2
Total Split (%)	32.7%	47.4%		9.6%	24.3%	24.3%	18.8%	18.8%		24.3%	43.0%	32.7%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lead		Lag		Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		Yes
Recall Mode	None	C-Max		None	None	None	Max	Max		Max	Max	None

Intersection Summary

Area Type: Other

Cycle Length: 120

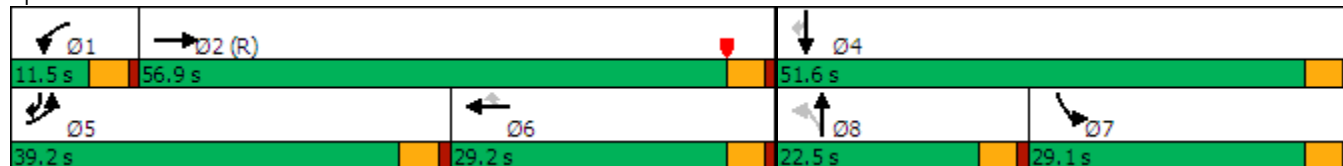
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT, Start of Yellow

Natural Cycle: 110






















Control Type: Actuated-Coordinated

Splits and Phases: 10: Avenue 60 & Madison St.
























HCM 6th Signalized Intersection Summary
10: Avenue 60 & Madison St.

2040 NP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	949	763	2	2	653	273	2	2	2	663	2	371
Future Volume (veh/h)	949	763	2	2	653	273	2	2	2	663	2	371
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	968	779	2	2	666	279	2	2	2	677	2	379
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1003	1739	4	7	750	318	94	91	72	711	715	1052
Arrive On Green	0.29	0.49	0.49	0.00	0.21	0.21	0.15	0.15	0.15	0.20	0.39	0.39
Sat Flow, veh/h	3469	3540	9	1734	3642	1543	357	605	481	3469	1821	1543
Grp Volume(v), veh/h	968	381	400	2	666	279	6	0	0	677	2	379
Grp Sat Flow(s),veh/h/ln	1734	1730	1820	1734	1821	1543	1443	0	0	1734	1821	1543
Q Serve(g_s), s	33.0	17.2	17.2	0.1	21.3	13.6	0.0	0.0	0.0	23.1	0.1	12.4
Cycle Q Clear(g_c), s	33.0	17.2	17.2	0.1	21.3	13.6	0.4	0.0	0.0	23.1	0.1	12.4
Prop In Lane	1.00		0.00	1.00		1.00	0.33		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	1003	850	894	7	750	318	256	0	0	711	715	1052
V/C Ratio(X)	0.97	0.45	0.45	0.31	0.89	0.88	0.02	0.00	0.00	0.95	0.00	0.36
Avail Cap(c_a), veh/h	1003	850	894	101	750	318	256	0	0	711	715	1052
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.1	19.9	19.9	59.6	46.3	19.4	43.5	0.0	0.0	47.1	22.2	8.1
Incr Delay (d2), s/veh	20.4	1.7	1.6	24.4	12.6	23.2	0.2	0.0	0.0	23.9	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.5	7.0	7.4	0.1	10.7	7.0	0.2	0.0	0.0	12.1	0.0	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.4	21.6	21.5	84.0	58.9	42.6	43.7	0.0	0.0	71.0	22.2	9.0
LnGrp LOS	E	C	C	F	E	D	D	A	A	E	C	A
Approach Vol, veh/h	1749				947				6			
Approach Delay, s/veh	44.2				54.2				43.7			
Approach LOS	D				D				D			
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	63.4		51.6	39.2	29.2	29.1	22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.0	52.4		47.1	34.7	24.7	24.6	18.0				
Max Q Clear Time (g_c+I1), s	2.1	19.2		14.4	35.0	23.3	25.1	2.4				
Green Ext Time (p_c), s	0.0	5.0		1.4	0.0	0.7	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	48.0											
HCM 6th LOS	D											

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

2040 NP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	263	551	574	43	380	324	307	1060	32	381	618	219
Future Volume (vph)	263	551	574	43	380	324	307	1060	32	381	618	219
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Detector Phase	7	4		3	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5		11.5	22.5	
Total Split (s)	22.0	38.5		11.5	28.0	29.0	27.6	41.0		29.0	42.4	
Total Split (%)	18.3%	32.1%		9.6%	23.3%	24.2%	23.0%	34.2%		24.2%	35.3%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

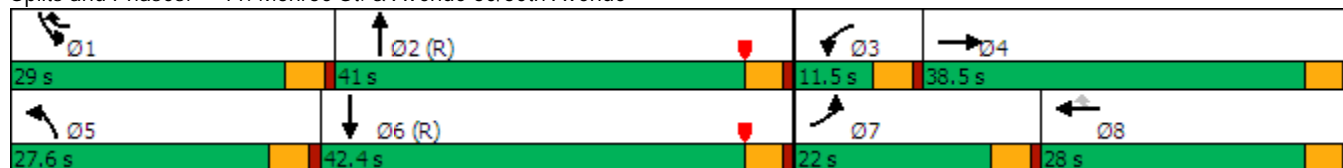
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 120






















Control Type: Actuated-Coordinated

Splits and Phases: 11: Monroe St. & Avenue 60/60th Avenue



























HCM 6th Signalized Intersection Summary
11: Monroe St. & Avenue 60/60th Avenue

2040 NP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	263	551	574	43	380	324	307	1060	32	381	618	219
Future Volume (veh/h)	263	551	574	43	380	324	307	1060	32	381	618	219
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	268	562	586	44	388	331	313	1082	33	389	631	223
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	253	513	458	78	357	617	334	1043	32	354	792	280
Arrive On Green	0.15	0.30	0.30	0.04	0.20	0.20	0.19	0.30	0.30	0.20	0.32	0.32
Sat Flow, veh/h	1734	1730	1543	1734	1821	1543	1734	3428	105	1734	2507	885
Grp Volume(v), veh/h	268	562	586	44	388	331	313	546	569	389	435	419
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1730	1802	1734	1730	1662
Q Serve(g_s), s	17.5	35.6	35.6	3.0	23.5	19.7	21.3	36.5	36.5	24.5	27.6	27.7
Cycle Q Clear(g_c), s	17.5	35.6	35.6	3.0	23.5	19.7	21.3	36.5	36.5	24.5	27.6	27.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.06	1.00		0.53
Lane Grp Cap(c), veh/h	253	513	458	78	357	617	334	526	548	354	546	525
V/C Ratio(X)	1.06	1.09	1.28	0.57	1.09	0.54	0.94	1.04	1.04	1.10	0.80	0.80
Avail Cap(c_a), veh/h	253	513	458	101	357	617	334	526	548	354	546	525
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.3	42.2	42.2	56.2	48.2	27.5	47.7	41.8	41.8	47.8	37.5	37.5
Incr Delay (d2), s/veh	73.2	67.9	141.7	6.3	73.3	0.9	33.4	49.3	48.6	77.0	11.5	12.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.5	24.2	31.0	1.4	17.6	7.1	11.9	21.9	22.7	17.7	12.8	12.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	124.4	110.1	183.9	62.5	121.5	28.4	81.1	91.1	90.3	124.7	49.0	49.5
LnGrp LOS	F	F	F	E	F	C	F	F	F	F	D	D
Approach Vol, veh/h		1416			763			1428			1243	
Approach Delay, s/veh		143.4			77.7			88.6			72.9	
Approach LOS		F			E			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	29.0	41.0	9.9	40.1	27.6	42.4	22.0	28.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	24.5	36.5	7.0	34.0	23.1	37.9	17.5	23.5				
Max Q Clear Time (g_c+I1), s	26.5	38.5	5.0	37.6	23.3	29.7	19.5	25.5				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			98.8									
HCM 6th LOS			F									

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

2040 NP PM Peak hour
With Additional Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	263	551	574	43	380	324	307	1060	32	381	618	219
Future Volume (vph)	263	551	574	43	380	324	307	1060	32	381	618	219
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	100		150	320		150
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						6
Detector Phase	7	4	5	3	8	1	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	11.5	11.5	22.5	11.5	11.5	22.5		11.5	22.5	22.5
Total Split (s)	23.6	34.3	36.2	11.9	22.6	32.0	36.2	41.8		32.0	37.6	37.6
Total Split (%)	19.7%	28.6%	30.2%	9.9%	18.8%	26.7%	30.2%	34.8%		26.7%	31.3%	31.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120









Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 120

























Control Type: Actuated-Coordinated

Splits and Phases: 11: Monroe St. & Avenue 60/60th Avenue

			
Ø1	Ø2 (R)	Ø4	Ø3
32 s	41.8 s	34.3 s	11.9 s
			
Ø5	Ø6 (R)	Ø8	Ø7
36.2 s	37.6 s	22.6 s	23.6 s


HCM 6th Signalized Intersection Summary
11: Monroe St. & Avenue 60/60th Avenue

2040 NP PM Peak hour
With Additional Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	263	551	574	43	380	324	307	1060	32	381	618	219
Future Volume (veh/h)	263	551	574	43	380	324	307	1060	32	381	618	219
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	268	562	586	44	388	331	313	1082	33	389	631	223
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	276	859	689	79	467	562	344	1149	35	397	1303	552
Arrive On Green	0.16	0.25	0.25	0.05	0.13	0.13	0.20	0.33	0.33	0.23	0.36	0.36
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	1734	3516	107	1734	3642	1543
Grp Volume(v), veh/h	268	562	586	44	388	331	313	560	555	389	631	223
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1734	1821	1802	1734	1821	1543
Q Serve(g_s), s	18.4	17.5	29.0	3.0	13.1	11.9	21.2	35.9	35.9	26.7	16.1	8.3
Cycle Q Clear(g_c), s	18.4	17.5	29.0	3.0	13.1	11.9	21.2	35.9	35.9	26.7	16.1	8.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	276	859	689	79	467	562	344	595	589	397	1303	552
V/C Ratio(X)	0.97	0.65	0.85	0.56	0.83	0.59	0.91	0.94	0.94	0.98	0.48	0.40
Avail Cap(c_a), veh/h	276	859	689	107	522	586	458	595	589	397	1303	552
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.2	40.5	15.8	56.1	50.6	13.1	47.1	39.3	39.3	46.0	29.9	11.7
Incr Delay (d2), s/veh	46.0	1.8	9.9	6.0	10.0	1.4	18.5	25.0	25.2	39.4	1.3	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.3	7.4	11.0	1.4	6.2	3.8	10.5	19.2	19.1	15.3	7.0	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	96.1	42.3	25.7	62.0	60.6	14.5	65.5	64.3	64.5	85.3	31.2	13.9
LnGrp LOS	F	D	C	E	E	B	E	E	E	F	C	B
Approach Vol, veh/h	1416			763			1428			1243		
Approach Delay, s/veh	45.6			40.7			64.6			45.0		
Approach LOS	D			D			E			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	32.0	43.7	10.0	34.3	28.3	47.4	23.6	20.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	27.5	37.3	7.4	29.8	31.7	33.1	19.1	18.1				
Max Q Clear Time (g_c+I1), s	28.7	37.9	5.0	31.0	23.2	18.1	20.4	15.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.6	4.0	0.0	1.1				
Intersection Summary												
HCM 6th Ctrl Delay	50.3											
HCM 6th LOS	D											

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

2040 NP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	481	99	412	461	190	211	1087	280	206	911	90
Future Volume (vph)	120	481	99	412	461	190	211	1087	280	206	911	90
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		0	150		150	150		150
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			732			913			1519	
Travel Time (s)		9.1			16.6			12.5			20.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5		11.5	22.5	22.5	11.5	22.5	
Total Split (s)	19.6	24.6		33.2	38.2		20.4	43.0	43.0	19.2	41.8	
Total Split (%)	16.3%	20.5%		27.7%	31.8%		17.0%	35.8%	35.8%	16.0%	34.8%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

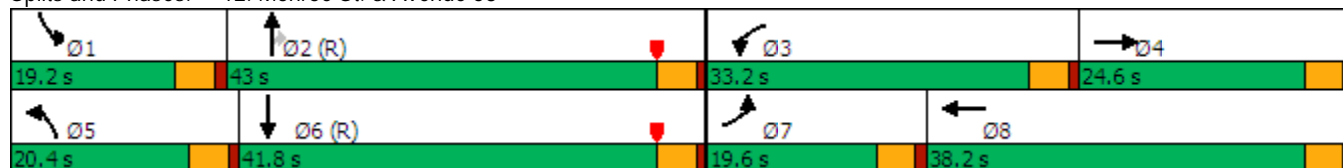
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110























Control Type: Actuated-Coordinated

Splits and Phases: 12: Monroe St. & Avenue 58


























HCM 6th Signalized Intersection Summary
12: Monroe St. & Avenue 58

2040 NP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	481	99	412	461	190	211	1087	280	206	911	90
Future Volume (veh/h)	120	481	99	412	461	190	211	1087	280	206	911	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	122	491	101	420	470	194	215	1109	286	210	930	92
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	479	98	415	769	315	230	1110	495	212	988	98
Arrive On Green	0.09	0.17	0.17	0.24	0.32	0.32	0.13	0.32	0.32	0.12	0.31	0.31
Sat Flow, veh/h	1734	2861	585	1734	2394	981	1734	3460	1543	1734	3180	315
Grp Volume(v), veh/h	122	296	296	420	339	325	215	1109	286	210	506	516
Grp Sat Flow(s),veh/h/ln	1734	1730	1716	1734	1730	1645	1734	1730	1543	1734	1730	1765
Q Serve(g_s), s	8.3	20.1	20.1	28.7	19.8	20.1	14.7	38.4	18.5	14.5	34.2	34.2
Cycle Q Clear(g_c), s	8.3	20.1	20.1	28.7	19.8	20.1	14.7	38.4	18.5	14.5	34.2	34.2
Prop In Lane	1.00		0.34	1.00		0.60	1.00		1.00	1.00		0.18
Lane Grp Cap(c), veh/h	148	290	287	415	556	529	230	1110	495	212	538	548
V/C Ratio(X)	0.83	1.02	1.03	1.01	0.61	0.62	0.94	1.00	0.58	0.99	0.94	0.94
Avail Cap(c_a), veh/h	218	290	287	415	556	529	230	1110	495	212	538	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.0	49.9	50.0	45.6	34.4	34.4	51.5	40.7	34.0	52.6	40.3	40.3
Incr Delay (d2), s/veh	14.9	58.4	61.1	47.4	1.9	2.1	41.8	26.8	4.8	58.3	26.6	26.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	13.0	13.2	17.7	8.6	8.3	8.8	19.5	7.6	9.5	17.7	18.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.9	108.3	111.1	93.0	36.3	36.6	93.4	67.5	38.8	110.8	66.9	66.6
LnGrp LOS	E	F	F	F	D	D	F	E	D	F	E	E
Approach Vol, veh/h	714			1084			1610			1232		
Approach Delay, s/veh	102.7			58.4			65.9			74.2		
Approach LOS	F			E			E			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.2	43.0	33.2	24.6	20.4	41.8	14.7	43.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	14.7	38.5	28.7	20.1	15.9	37.3	15.1	33.7				
Max Q Clear Time (g_c+I1), s	16.5	40.4	30.7	22.1	16.7	36.2	10.3	22.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.7	0.1	3.3				
Intersection Summary												
HCM 6th Ctrl Delay	72.0											
HCM 6th LOS	E											

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

2040 NP PM Peak hour
With Additional Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	481	99	412	461	190	211	1087	280	206	911	90
Future Volume (vph)	120	481	99	412	461	190	211	1087	280	206	911	90
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		0	150		150	150		150
Storage Lanes	1		1	1		0	2		1	2		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			732			913			1519	
Travel Time (s)		9.1			16.6			12.5			20.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3	8		5	2	3	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5		11.5	22.5	11.5	11.5	22.5	
Total Split (s)	20.7	24.0	24.0	37.0	40.3		14.0	45.0	37.0	14.0	45.0	
Total Split (%)	17.3%	20.0%	20.0%	30.8%	33.6%		11.7%	37.5%	30.8%	11.7%	37.5%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	None	None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120









Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 100
























Control Type: Actuated-Coordinated

Splits and Phases: 12: Monroe St. & Avenue 58

 Ø1	 Ø2 (R)	 Ø3	 Ø4
14 s	45 s	37 s	24 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
14 s	45 s	20.7 s	40.3 s























HCM 6th Signalized Intersection Summary 12: Monroe St. & Avenue 58

2040 NP PM Peak hour
With Additional Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	481	99	412	461	190	211	1087	280	206	911	90
Future Volume (veh/h)	120	481	99	412	461	190	211	1087	280	206	911	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	122	491	101	420	470	194	215	1109	286	210	930	92
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	547	244	445	789	323	266	1300	947	263	1161	115
Arrive On Green	0.09	0.16	0.16	0.26	0.33	0.33	0.08	0.36	0.36	0.08	0.36	0.36
Sat Flow, veh/h	1734	3460	1543	1734	2394	981	3365	3642	1543	3365	3262	323
Grp Volume(v), veh/h	122	491	101	420	339	325	215	1109	286	210	519	503
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1645	1682	1821	1543	1682	1821	1763
Q Serve(g_s), s	8.3	16.7	7.1	28.5	19.6	19.8	7.5	33.8	10.5	7.4	30.8	30.8
Cycle Q Clear(g_c), s	8.3	16.7	7.1	28.5	19.6	19.8	7.5	33.8	10.5	7.4	30.8	30.8
Prop In Lane	1.00		1.00	1.00		0.60	1.00		1.00	1.00		0.18
Lane Grp Cap(c), veh/h	148	547	244	445	570	542	266	1300	947	263	648	627
V/C Ratio(X)	0.82	0.90	0.41	0.94	0.59	0.60	0.81	0.85	0.30	0.80	0.80	0.80
Avail Cap(c_a), veh/h	234	562	251	470	570	542	266	1300	947	266	648	627
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.0	49.5	45.5	43.7	33.5	33.6	54.3	35.7	11.0	54.4	34.8	34.8
Incr Delay (d2), s/veh	12.3	16.8	1.1	27.1	1.7	1.8	16.6	7.2	0.8	15.6	10.1	10.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	8.2	2.8	15.5	8.5	8.2	3.7	15.4	3.7	3.6	14.7	14.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.2	66.4	46.6	70.8	35.2	35.4	70.9	42.9	11.8	70.0	44.9	45.2
LnGrp LOS	E	E	D	E	D	D	E	D	B	E	D	D
Approach Vol, veh/h	714		1084				1610		1232			
Approach Delay, s/veh	63.5		49.1				41.1		49.3			
Approach LOS	E		D				D		D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.9	47.3	35.3	23.5	14.0	47.2	14.7	44.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	9.5	40.5	32.5	19.5	9.5	40.5	16.2	35.8				
Max Q Clear Time (g_c+I1), s	9.4	35.8	30.5	18.7	9.5	32.8	10.3	21.8				
Green Ext Time (p_c), s	0.0	3.1	0.3	0.3	0.0	3.5	0.1	3.6				
Intersection Summary												
HCM 6th Ctrl Delay	48.6											
HCM 6th LOS	D											

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.

2040 NP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	325	54	104	491	367	102	1290	85	276	1050	130
Future Volume (vph)	71	325	54	104	491	367	102	1290	85	276	1050	130
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	60			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						6
Detector Phase	7	4		3	8	1	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5		11.5	22.5	22.5
Total Split (s)	11.8	22.8		13.4	24.4	26.0	18.5	57.8		26.0	65.3	65.3
Total Split (%)	9.8%	19.0%		11.2%	20.3%	21.7%	15.4%	48.2%		21.7%	54.4%	54.4%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120



Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 100























Control Type: Actuated-Coordinated

Splits and Phases: 13: Monroe St. & Airport Bl.

			
Ø1	Ø2 (R)	Ø3	Ø4
26 s	57.8 s	13.4 s	22.8 s
			
Ø5	Ø6 (R)	Ø7	Ø8
18.5 s	65.3 s	11.8 s	24.4 s

























HCM 6th Signalized Intersection Summary 13: Monroe St. & Airport Bl.

2040 NP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	325	54	104	491	367	102	1290	85	276	1050	130
Future Volume (veh/h)	71	325	54	104	491	367	102	1290	85	276	1050	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	72	332	55	106	501	374	104	1316	87	282	1071	133
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	92	431	71	129	574	529	128	1497	99	307	1928	860
Arrive On Green	0.05	0.14	0.14	0.07	0.17	0.17	0.07	0.45	0.45	0.18	0.56	0.56
Sat Flow, veh/h	1734	2975	488	1734	3460	1543	1734	3295	217	1734	3460	1543
Grp Volume(v), veh/h	72	192	195	106	501	374	104	690	713	282	1071	133
Grp Sat Flow(s),veh/h/ln	1734	1730	1733	1734	1730	1543	1734	1730	1782	1734	1730	1543
Q Serve(g_s), s	4.9	12.8	13.0	7.2	16.9	19.9	7.1	43.4	43.7	19.2	23.8	5.0
Cycle Q Clear(g_c), s	4.9	12.8	13.0	7.2	16.9	19.9	7.1	43.4	43.7	19.2	23.8	5.0
Prop In Lane	1.00		0.28	1.00		1.00	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	92	250	251	129	574	529	128	786	810	307	1928	860
V/C Ratio(X)	0.78	0.77	0.78	0.82	0.87	0.71	0.81	0.88	0.88	0.92	0.56	0.15
Avail Cap(c_a), veh/h	106	264	264	129	574	529	202	786	810	311	1928	860
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.1	49.4	49.5	54.8	48.8	34.2	54.7	29.7	29.8	48.6	17.0	12.9
Incr Delay (d2), s/veh	24.6	10.6	11.6	33.4	13.9	4.3	12.4	13.2	13.2	31.0	1.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	6.1	6.3	4.2	8.1	9.6	3.4	19.4	20.1	10.6	8.8	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.7	59.9	61.1	88.2	62.7	38.5	67.1	42.9	43.0	79.6	18.2	13.3
LnGrp LOS	F	E	E	F	E	D	E	D	D	E	B	B
Approach Vol, veh/h	459			981			1507			1486		
Approach Delay, s/veh	63.7			56.3			44.6			29.4		
Approach LOS	E			E			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.7	59.0	13.4	21.9	13.4	71.4	10.9	24.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	21.5	53.3	8.9	18.3	14.0	60.8	7.3	19.9				
Max Q Clear Time (g_c+I1), s	21.2	45.7	9.2	15.0	9.1	25.8	6.9	21.9				
Green Ext Time (p_c), s	0.0	4.7	0.0	0.6	0.1	8.7	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	44.1											
HCM 6th LOS	D											

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

2040 NP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	215	600	205	147	805	206	115	1567	48	177	1110	92
Future Volume (vph)	215	600	205	147	805	206	115	1567	48	177	1110	92
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	100			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	12.4	29.0	29.0	15.4	32.0	32.0	19.6	58.6	58.6	17.0	56.0	56.0
Total Split (%)	10.3%	24.2%	24.2%	12.8%	26.7%	26.7%	16.3%	48.8%	48.8%	14.2%	46.7%	46.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120


Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110

























Control Type: Actuated-Coordinated

Splits and Phases: 14: Monroe St. & Avenue 54

 Ø1	 Ø2 (R)	 Ø4	 Ø3
17 s	58.6 s	29 s	15.4 s
 Ø5	 Ø6 (R)	 Ø8	 Ø7
19.6 s	56 s	32 s	12.4 s

























HCM 6th Signalized Intersection Summary
14: Monroe St. & Avenue 54

2040 NP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	215	600	205	147	805	206	115	1567	48	177	1110	92
Future Volume (veh/h)	215	600	205	147	805	206	115	1567	48	177	1110	92
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	219	612	209	150	821	210	117	1599	49	181	1133	94
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	228	694	294	181	835	354	143	1642	696	181	1722	730
Arrive On Green	0.07	0.19	0.19	0.10	0.23	0.23	0.08	0.45	0.45	0.10	0.47	0.47
Sat Flow, veh/h	3469	3642	1543	1734	3642	1543	1734	3642	1543	1734	3642	1543
Grp Volume(v), veh/h	219	612	209	150	821	210	117	1599	49	181	1133	94
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1821	1543	1734	1821	1543	1734	1821	1543
Q Serve(g_s), s	7.6	19.6	12.3	10.2	26.9	11.2	8.0	51.6	1.5	12.5	28.6	3.0
Cycle Q Clear(g_c), s	7.6	19.6	12.3	10.2	26.9	11.2	8.0	51.6	1.5	12.5	28.6	3.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	228	694	294	181	835	354	143	1642	696	181	1722	730
V/C Ratio(X)	0.96	0.88	0.71	0.83	0.98	0.59	0.82	0.97	0.07	1.00	0.66	0.13
Avail Cap(c_a), veh/h	228	744	315	181	835	354	218	1642	696	181	1722	730
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.9	47.3	29.5	52.7	46.0	24.3	54.2	32.3	8.5	53.8	24.2	9.5
Incr Delay (d2), s/veh	47.9	11.6	6.8	25.9	27.0	2.7	13.5	16.8	0.2	67.4	2.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	9.6	4.8	5.5	14.6	4.1	3.9	24.5	0.8	8.6	11.8	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	103.8	58.8	36.3	78.6	73.1	27.0	67.7	49.1	8.7	121.2	26.2	9.9
LnGrp LOS	F	E	D	E	E	C	E	D	A	F	C	A
Approach Vol, veh/h	1040			1181			1765			1408		
Approach Delay, s/veh	63.8			65.6			49.2			37.3		
Approach LOS	E			E			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	58.6	17.1	27.3	14.4	61.2	12.4	32.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	12.5	54.1	10.9	24.5	15.1	51.5	7.9	27.5				
Max Q Clear Time (g_c+I1), s	14.5	53.6	12.2	21.6	10.0	30.6	9.6	28.9				
Green Ext Time (p_c), s	0.0	0.5	0.0	1.2	0.1	7.8	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	52.5											
HCM 6th LOS	D											

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52

2040 NP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	179	638	266	95	1019	287	229	1304	144	225	1043	138
Future Volume (vph)	179	638	266	95	1019	287	229	1304	144	225	1043	138
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	18.0	39.0	39.0	18.0	39.0	39.0	15.7	49.7	49.7	13.3	47.3	47.3
Total Split (%)	15.0%	32.5%	32.5%	15.0%	32.5%	32.5%	13.1%	41.4%	41.4%	11.1%	39.4%	39.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

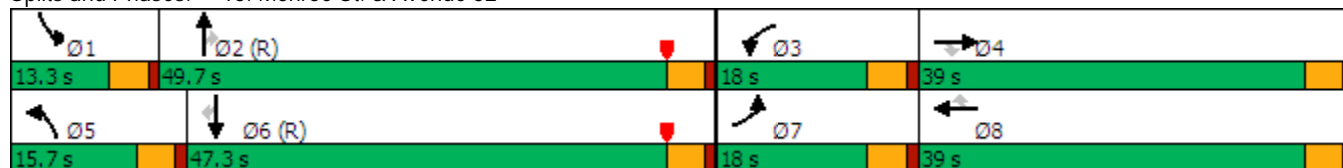
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110

























Control Type: Actuated-Coordinated

Splits and Phases: 15: Monroe St. & Avenue 52



























HCM 6th Signalized Intersection Summary
15: Monroe St. & Avenue 52

2040 NP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	638	266	95	1019	287	229	1304	144	225	1043	138
Future Volume (veh/h)	179	638	266	95	1019	287	229	1304	144	225	1043	138
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	183	651	271	97	1040	293	234	1331	147	230	1064	141
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	195	1204	510	121	1047	444	288	1372	581	247	1327	562
Arrive On Green	0.11	0.33	0.33	0.07	0.29	0.29	0.09	0.38	0.38	0.07	0.36	0.36
Sat Flow, veh/h	1734	3642	1543	1734	3642	1543	3365	3642	1543	3365	3642	1543
Grp Volume(v), veh/h	183	651	271	97	1040	293	234	1331	147	230	1064	141
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1821	1543	1682	1821	1543	1682	1821	1543
Q Serve(g_s), s	12.6	17.5	17.1	6.6	34.2	20.0	8.2	43.1	7.9	8.2	31.5	7.7
Cycle Q Clear(g_c), s	12.6	17.5	17.1	6.6	34.2	20.0	8.2	43.1	7.9	8.2	31.5	7.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	195	1204	510	121	1047	444	288	1372	581	247	1327	562
V/C Ratio(X)	0.94	0.54	0.53	0.80	0.99	0.66	0.81	0.97	0.25	0.93	0.80	0.25
Avail Cap(c_a), veh/h	195	1204	510	195	1047	444	314	1372	581	247	1327	562
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.8	32.8	32.6	55.0	42.6	37.6	53.9	36.7	25.8	55.3	34.2	26.7
Incr Delay (d2), s/veh	46.9	0.5	1.1	11.7	26.1	3.6	13.9	18.1	1.0	39.2	5.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	7.3	6.2	3.2	18.1	7.6	3.9	21.3	2.9	4.7	14.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	99.8	33.2	33.7	66.7	68.7	41.2	67.8	54.9	26.8	94.5	39.4	27.7
LnGrp LOS	F	C	C	E	E	D	E	D	C	F	D	C
Approach Vol, veh/h	1105			1430			1712			1435		
Approach Delay, s/veh	44.4			62.9			54.2			47.1		
Approach LOS	D			E			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.3	49.7	12.8	44.2	14.8	48.2	18.0	39.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	8.8	45.2	13.5	34.5	11.2	42.8	13.5	34.5				
Max Q Clear Time (g_c+I1), s	10.2	45.1	8.6	19.5	10.2	33.5	14.6	36.2				
Green Ext Time (p_c), s	0.0	0.1	0.1	4.2	0.1	4.7	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	52.7											
HCM 6th LOS	D											

Lanes, Volumes, Timings
16: Monroe St. & 50th Avenue

2040 NP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	972	209	49	1124	132	209	1559	107	158	1314	47
Future Volume (vph)	59	972	209	49	1124	132	209	1559	107	158	1314	47
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	2		1	1		1	2		1	2		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8			2			
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	20.5	20.5	11.5	20.5	11.5	11.5	20.5	20.5	11.5	20.5	
Total Split (s)	11.5	41.1	41.1	11.5	41.1	11.5	12.2	55.9	55.9	11.5	55.2	
Total Split (%)	9.6%	34.3%	34.3%	9.6%	34.3%	9.6%	10.2%	46.6%	46.6%	9.6%	46.0%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	0.0	-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.0	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120









Actuated Cycle Length: 120

Offset: 11.5 (10%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 130

























Control Type: Actuated-Coordinated

Splits and Phases: 16: Monroe St. & 50th Avenue

			
Ø1	Ø2 (R)	Ø4	Ø3
11.5 s	55.9 s	41.1 s	11.5 s
			
Ø5	Ø6 (R)	Ø8	Ø7
12.2 s	55.2 s	41.1 s	11.5 s





















HCM 6th Signalized Intersection Summary
16: Monroe St. & 50th Avenue

2040 NP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	972	209	49	1124	132	209	1559	107	158	1314	47
Future Volume (veh/h)	59	972	209	49	1124	132	209	1559	107	158	1314	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	60	992	213	50	1147	135	213	1591	109	161	1341	48
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	189	1090	462	112	1126	574	237	1604	673	217	1519	54
Arrive On Green	0.05	0.30	0.30	0.06	0.31	0.31	0.07	0.46	0.46	0.07	0.46	0.45
Sat Flow, veh/h	3469	3642	1543	1734	3642	1543	3469	3642	1543	3469	3495	125
Grp Volume(v), veh/h	60	992	213	50	1147	135	213	1591	109	161	698	691
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1821	1543	1734	1821	1543	1734	1821	1799
Q Serve(g_s), s	2.0	31.5	10.7	3.3	37.1	5.4	7.3	52.1	3.8	5.5	41.9	42.0
Cycle Q Clear(g_c), s	2.0	31.5	10.7	3.3	37.1	5.4	7.3	52.1	3.8	5.5	41.9	42.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	189	1090	462	112	1126	574	237	1604	673	217	791	782
V/C Ratio(X)	0.32	0.91	0.46	0.45	1.02	0.24	0.90	0.99	0.16	0.74	0.88	0.88
Avail Cap(c_a), veh/h	217	1126	477	112	1126	574	237	1604	673	217	791	782
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.05	1.05	1.05	1.05
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.6	40.5	21.6	54.1	41.5	15.0	55.3	32.0	11.4	55.1	29.8	29.9
Incr Delay (d2), s/veh	0.9	10.7	0.7	2.8	31.6	0.2	32.9	20.6	0.5	12.9	13.5	13.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	14.9	3.7	1.5	20.6	2.1	4.2	25.1	1.7	2.7	19.5	19.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.5	51.2	22.3	56.8	73.0	15.2	88.2	52.7	11.9	68.0	43.4	43.8
LnGrp LOS	E	D	C	E	F	B	F	D	B	E	D	D
Approach Vol, veh/h	1265			1332			1913			1550		
Approach Delay, s/veh	46.6			66.6			54.3			46.1		
Approach LOS	D			E			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.5	56.8	11.7	39.9	12.2	56.1	10.6	41.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.0	51.4	7.0	36.6	7.7	50.7	7.0	36.6				
Max Q Clear Time (g_c+I1), s	7.5	54.1	5.3	33.5	9.3	44.0	4.0	39.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.9	0.0	4.2	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	53.3											
HCM 6th LOS	D											

Lanes, Volumes, Timings
17: Jackson St. & 58th Avenue

2040 NP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	612	28	18	795	36	67	1028	32	11	883	75
Future Volume (vph)	69	612	28	18	795	36	67	1028	32	11	883	75
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		4534			1079			1013			510	
Travel Time (s)		61.8			14.7			12.6			6.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5		11.5	22.5		11.5	22.5	
Total Split (s)	15.0	44.4		11.6	41.0		13.0	52.4		11.6	51.0	
Total Split (%)	12.5%	37.0%		9.7%	34.2%		10.8%	43.7%		9.7%	42.5%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

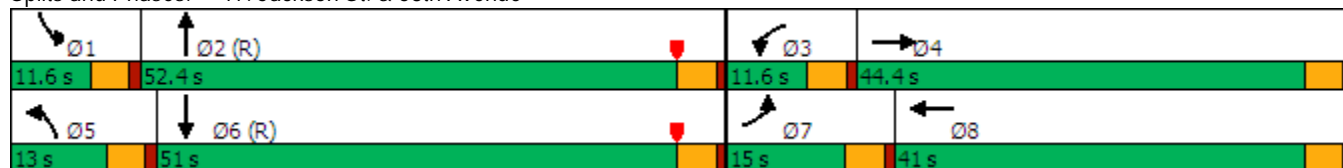
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 90





















Control Type: Actuated-Coordinated

Splits and Phases: 17: Jackson St. & 58th Avenue



HCM 6th Signalized Intersection Summary
17: Jackson St. & 58th Avenue

2040 NP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	612	28	18	795	36	67	1028	32	11	883	75
Future Volume (veh/h)	69	612	28	18	795	36	67	1028	32	11	883	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	70	624	29	18	811	37	68	1049	33	11	901	77
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	91	997	46	46	909	41	91	1745	55	31	1533	131
Arrive On Green	0.05	0.30	0.30	0.03	0.27	0.27	0.05	0.51	0.51	0.02	0.48	0.48
Sat Flow, veh/h	1734	3367	156	1734	3370	154	1734	3424	108	1734	3226	276
Grp Volume(v), veh/h	70	320	333	18	416	432	68	530	552	11	483	495
Grp Sat Flow(s),veh/h/ln	1734	1730	1793	1734	1730	1793	1734	1730	1802	1734	1730	1772
Q Serve(g_s), s	4.8	19.2	19.2	1.2	27.8	27.8	4.6	26.0	26.0	0.8	24.4	24.4
Cycle Q Clear(g_c), s	4.8	19.2	19.2	1.2	27.8	27.8	4.6	26.0	26.0	0.8	24.4	24.4
Prop In Lane	1.00		0.09	1.00		0.09	1.00		0.06	1.00		0.16
Lane Grp Cap(c), veh/h	91	512	531	46	467	484	91	882	918	31	822	842
V/C Ratio(X)	0.77	0.63	0.63	0.39	0.89	0.89	0.75	0.60	0.60	0.35	0.59	0.59
Avail Cap(c_a), veh/h	152	575	596	103	526	546	123	882	918	103	822	842
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.1	36.5	36.5	57.5	42.1	42.1	56.1	20.8	20.8	58.2	22.9	22.9
Incr Delay (d2), s/veh	12.5	1.8	1.7	5.4	16.1	15.7	15.7	3.0	2.9	6.7	3.1	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	8.0	8.3	0.6	13.4	13.8	2.3	10.2	10.6	0.4	9.7	10.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.6	38.3	38.2	62.9	58.2	57.8	71.8	23.8	23.7	65.0	26.0	25.9
LnGrp LOS	E	D	D	E	E	E	E	C	C	E	C	C
Approach Vol, veh/h	723			866			1150			989		
Approach Delay, s/veh	41.2			58.1			26.6			26.4		
Approach LOS	D			E			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.6	65.7	7.7	40.0	10.8	61.5	10.8	36.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.1	47.9	7.1	39.9	8.5	46.5	10.5	36.5				
Max Q Clear Time (g_c+I1), s	2.8	28.0	3.2	21.2	6.6	26.4	6.8	29.8				
Green Ext Time (p_c), s	0.0	6.0	0.0	3.3	0.0	5.3	0.0	2.6				
Intersection Summary												
HCM 6th Ctrl Delay	36.7											
HCM 6th LOS	D											

APPENDIX 7.2:

**GENERAL PLAN BUILDOUT (YEAR 2040) CONDITIONS
TRAFFIC SIGNAL WARRANTS ANALYSIS WORKSHEETS**

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

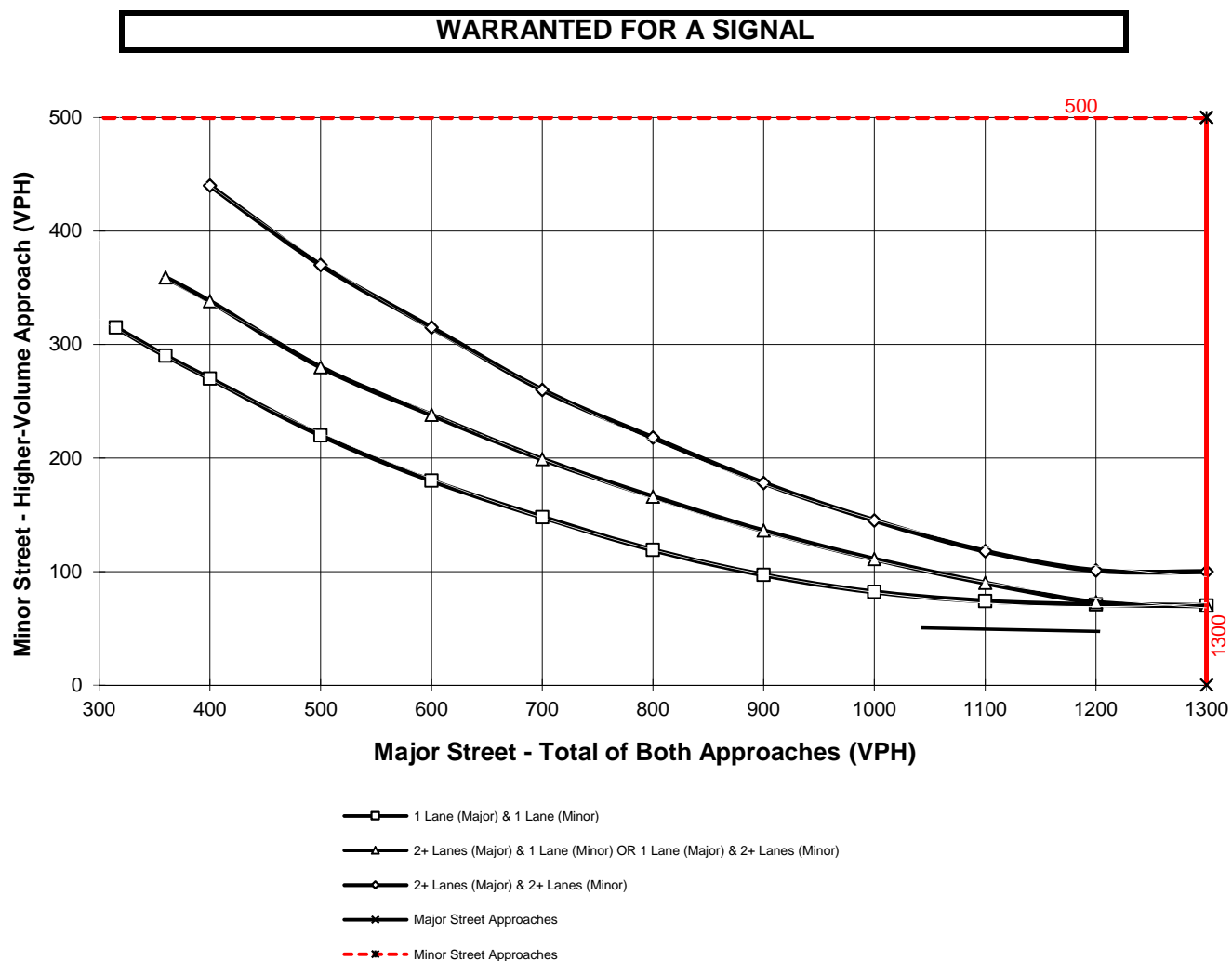
Traffic Conditions = **2040 Without Project AM PEAK HOUR WARRANTS**

Major Street Name = **Avenue 60**

Total of Both Approaches (VPH) = **1,632**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Madison St.**

High Volume Approach (VPH) = **1,114**
Number of Approach Lanes Minor Street = **1**



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #10

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

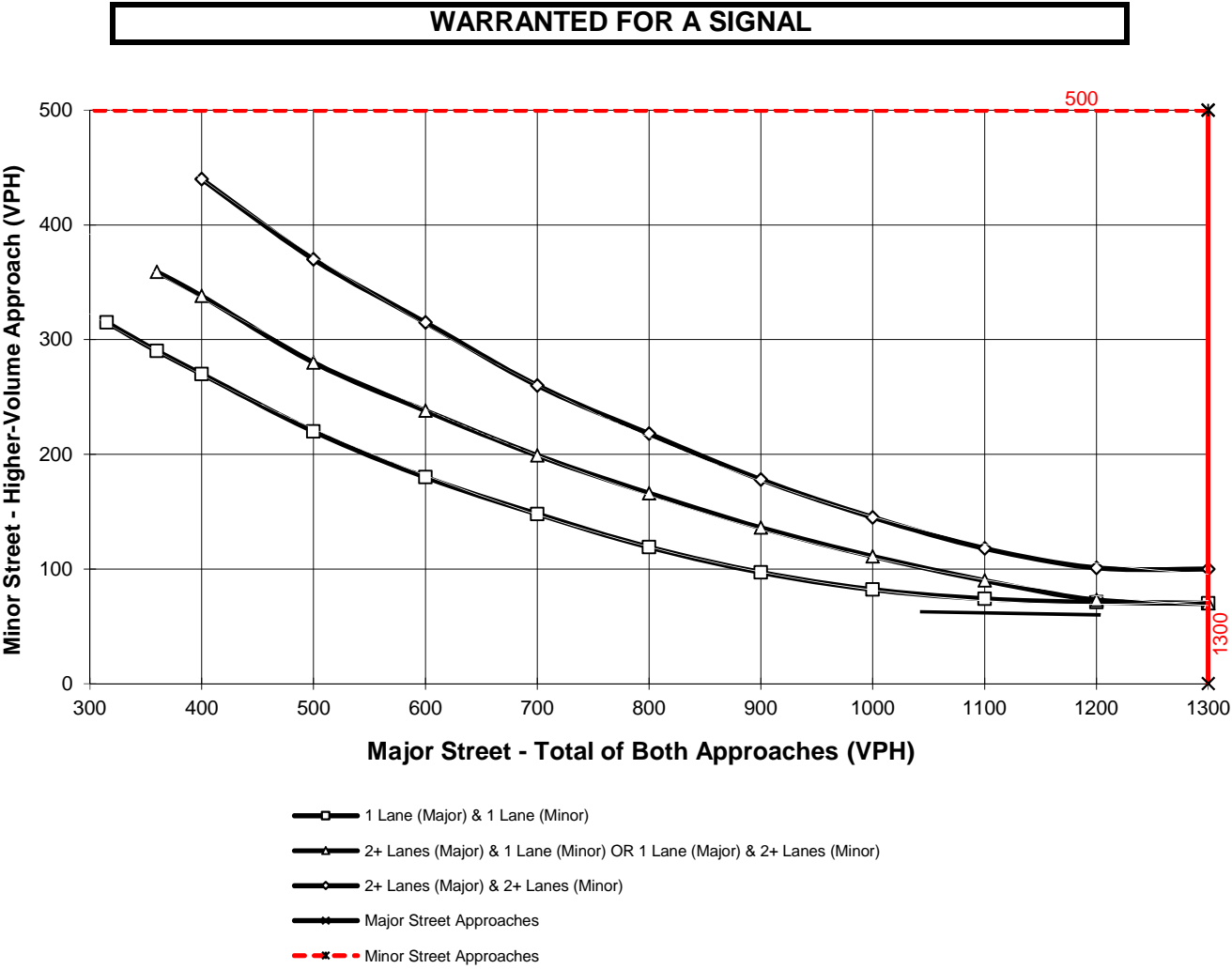
Traffic Conditions = **2040 Without Project PM PEAK HOUR WARRANTS**

Major Street Name = **Avenue 60**

Total of Both Approaches (VPH) = **2,642**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Madison St.**

High Volume Approach (VPH) = **1,036**
Number of Approach Lanes Minor Street = **1**



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 75 vph applies as the lower threshold for a minor-street approach with one lane
























APPENDIX 7.3:

GENERAL PLAN BUILDOUT (YEAR 2040) WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS AND PROJECT ACCESS QUEUEING ANALYSIS WORKSHEETS

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Lanes, Volumes, Timings
1: Madison St. & Avenue 58

2040 WP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	322	183	38	39	188	138	40	650	93	320	1080	144
Future Volume (vph)	322	183	38	39	188	138	40	650	93	320	1080	144
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	32.5	43.4		11.6	22.5	32.4	11.5	32.6	32.6	32.4	53.5	53.5
Total Split (%)	27.1%	36.2%		9.7%	18.8%	27.0%	9.6%	27.2%	27.2%	27.0%	44.6%	44.6%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

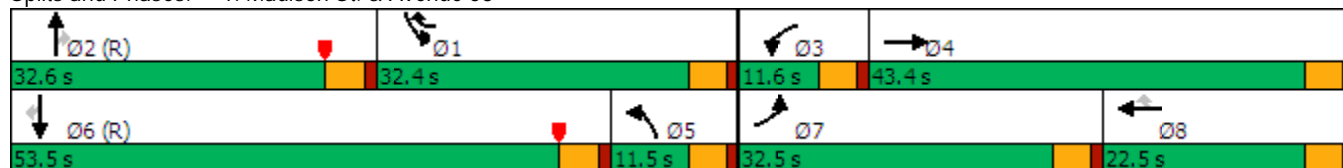
Actuated Cycle Length: 120

Offset: 87.9 (73%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated
























Splits and Phases: 1: Madison St. & Avenue 58



HCM 6th Signalized Intersection Summary
























1: Madison St. & Avenue 58

2040 WP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	322	183	38	39	188	138	40	650	93	320	1080	144
Future Volume (veh/h)	322	183	38	39	188	138	40	650	93	320	1080	144
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	329	187	39	40	192	141	41	663	95	327	1102	147
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	357	692	141	75	274	633	272	810	361	574	1413	630
Arrive On Green	0.21	0.24	0.24	0.04	0.08	0.08	0.16	0.23	0.23	0.33	0.41	0.41
Sat Flow, veh/h	1734	2862	585	1734	3460	1543	1734	3460	1543	1734	3460	1543
Grp Volume(v), veh/h	329	112	114	40	192	141	41	663	95	327	1102	147
Grp Sat Flow(s),veh/h/ln	1734	1730	1716	1734	1730	1543	1734	1730	1543	1734	1730	1543
Q Serve(g_s), s	22.3	6.3	6.5	2.7	6.5	2.9	2.4	21.8	5.1	18.6	33.2	3.9
Cycle Q Clear(g_c), s	22.3	6.3	6.5	2.7	6.5	2.9	2.4	21.8	5.1	18.6	33.2	3.9
Prop In Lane	1.00		0.34	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	357	418	415	75	274	633	272	810	361	574	1413	630
V/C Ratio(X)	0.92	0.27	0.28	0.54	0.70	0.22	0.15	0.82	0.26	0.57	0.78	0.23
Avail Cap(c_a), veh/h	405	561	556	103	519	743	272	810	361	574	1413	630
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.7	36.9	37.0	56.3	53.9	8.8	43.7	43.5	26.8	33.1	30.8	6.4
Incr Delay (d2), s/veh	24.9	0.3	0.4	5.9	3.3	0.2	0.3	9.0	1.8	1.3	4.3	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.7	2.6	2.7	1.3	2.9	1.0	1.0	9.9	2.4	7.7	13.7	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.6	37.2	37.3	62.1	57.1	9.0	43.9	52.5	28.6	34.4	35.1	7.3
LnGrp LOS	E	D	D	E	E	A	D	D	C	C	D	A
Approach Vol, veh/h	555			373			799			1576		
Approach Delay, s/veh	57.6			39.5			49.3			32.4		
Approach LOS	E			D			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	44.2	32.6	9.7	33.5	23.3	53.5	29.2	14.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	27.9	28.1	7.1	38.9	7.0	49.0	28.0	18.0				
Max Q Clear Time (g_c+I1), s	20.6	23.8	4.7	8.5	4.4	35.2	24.3	8.5				
Green Ext Time (p_c), s	0.6	1.7	0.0	1.1	0.0	6.3	0.4	1.0				
Intersection Summary												
HCM 6th Ctrl Delay	41.5											
HCM 6th LOS	D											

Lanes, Volumes, Timings
1: Madison St. & Avenue 58

2040 WP AM Peak hour
With Additional Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	322	183	38	39	188	138	40	650	93	320	1080	144
Future Volume (vph)	322	183	38	39	188	138	40	650	93	320	1080	144
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	22.0	32.9		11.6	22.5	38.0	11.7	37.5	37.5	38.0	63.8	63.8
Total Split (%)	18.3%	27.4%		9.7%	18.8%	31.7%	9.8%	31.3%	31.3%	31.7%	53.2%	53.2%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

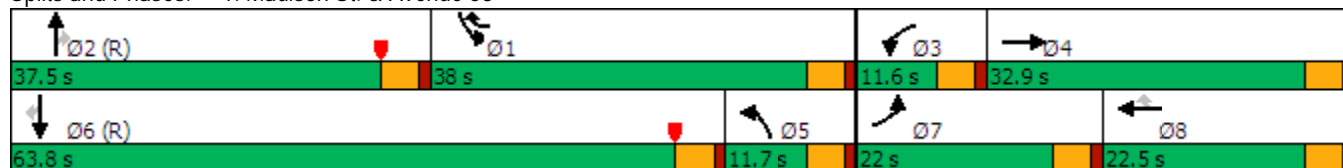
Actuated Cycle Length: 120

Offset: 87.9 (73%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated
























Splits and Phases: 1: Madison St. & Avenue 58



HCM 6th Signalized Intersection Summary















1: Madison St. & Avenue 58

2040 WP AM Peak hour
With Additional Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	322	183	38	39	188	138	40	650	93	320	1080	144
Future Volume (veh/h)	322	183	38	39	188	138	40	650	93	320	1080	144
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	329	187	39	40	192	141	41	663	95	327	1102	147
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	390	435	89	75	274	708	279	952	424	659	1710	763
Arrive On Green	0.12	0.15	0.15	0.04	0.08	0.08	0.16	0.28	0.28	0.38	0.49	0.49
Sat Flow, veh/h	3365	2862	585	1734	3460	1543	1734	3460	1543	1734	3460	1543
Grp Volume(v), veh/h	329	112	114	40	192	141	41	663	95	327	1102	147
Grp Sat Flow(s),veh/h/ln	1682	1730	1716	1734	1730	1543	1734	1730	1543	1734	1730	1543
Q Serve(g_s), s	11.5	7.0	7.3	2.7	6.5	1.9	2.4	20.6	4.8	17.3	28.4	4.0
Cycle Q Clear(g_c), s	11.5	7.0	7.3	2.7	6.5	1.9	2.4	20.6	4.8	17.3	28.4	4.0
Prop In Lane	1.00		0.34	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	390	263	261	75	274	708	279	952	424	659	1710	763
V/C Ratio(X)	0.84	0.42	0.44	0.54	0.70	0.20	0.15	0.70	0.22	0.50	0.64	0.19
Avail Cap(c_a), veh/h	491	409	406	103	519	818	279	952	424	659	1710	763
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.0	46.1	46.2	56.3	53.9	8.0	43.3	39.0	23.6	28.4	22.5	6.6
Incr Delay (d2), s/veh	10.4	1.1	1.2	5.9	3.3	0.1	0.2	4.2	1.2	0.6	1.9	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	3.0	3.1	1.3	2.9	1.1	1.0	8.9	2.2	6.9	11.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.4	47.2	47.4	62.1	57.1	8.1	43.5	43.2	24.8	29.0	24.4	7.1
LnGrp LOS	E	D	D	E	E	A	D	D	C	C	C	A
Approach Vol, veh/h	555			373			799			1576		
Approach Delay, s/veh	56.2			39.1			41.1			23.8		
Approach LOS	E			D			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	50.1	37.5	9.7	22.8	23.8	63.8	18.4	14.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	33.5	33.0	7.1	28.4	7.2	59.3	17.5	18.0				
Max Q Clear Time (g_c+I1), s	19.3	22.6	4.7	9.3	4.4	30.4	13.5	8.5				
Green Ext Time (p_c), s	0.8	3.1	0.0	1.0	0.0	8.7	0.4	1.0				
Intersection Summary												
HCM 6th Ctrl Delay	35.1											
HCM 6th LOS	D											

Lanes, Volumes, Timings
2: Madison St. & Airport Bl.

2040 WP AM Peak hour

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	167	167	1	1090	154	372	1367
Future Volume (vph)	167	167	1	1090	154	372	1367
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		8			2		
Detector Phase	3	8	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	20.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	24.0	24.0	11.5	54.0	54.0	42.0	84.5
Total Split (%)	20.0%	20.0%	9.6%	45.0%	45.0%	35.0%	70.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

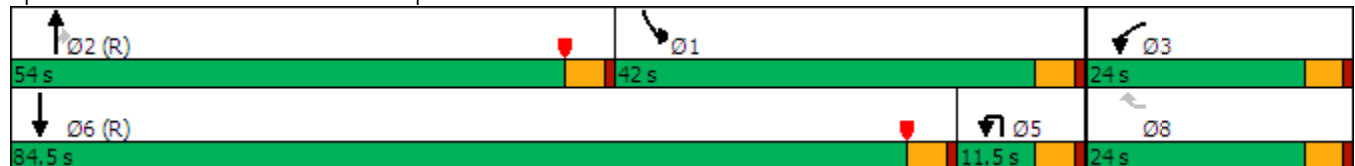
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated















Splits and Phases: 2: Madison St. & Airport Bl.



HCM 6th Signalized Intersection Summary

























2: Madison St. & Airport Bl.

2040 WP AM Peak hour

							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	167	167	1	1090	154	372	1367
Future Volume (veh/h)	167	167	1	1090	154	372	1367
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	170	170		1112	157	380	1395
Peak Hour Factor	0.98	0.98		0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	229	204		1442	643	609	2773
Arrive On Green	0.13	0.13		0.42	0.42	0.35	0.80
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	170	170		1112	157	380	1395
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	11.3	12.9		33.1	5.1	21.8	16.1
Cycle Q Clear(g_c), s	11.3	12.9		33.1	5.1	21.8	16.1
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	229	204		1442	643	609	2773
V/C Ratio(X)	0.74	0.83		0.77	0.24	0.62	0.50
Avail Cap(c_a), veh/h	289	257		1442	643	609	2773
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(l)	0.96	0.96		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.1	50.8		30.1	9.6	32.3	4.0
Incr Delay (d2), s/veh	7.3	16.4		4.1	0.9	2.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	5.7		13.6	2.8	9.0	3.6
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	57.4	67.2		34.1	10.6	34.3	4.6
LnGrp LOS	E	E		C	B	C	A
Approach Vol, veh/h	340			1269			1775
Approach Delay, s/veh	62.3			31.2			11.0
Approach LOS	E			C			B
Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	46.2	54.0				100.2	19.8
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	37.5	49.5				80.0	19.5
Max Q Clear Time (g_c+I1), s	23.8	35.1				18.1	14.9
Green Ext Time (p_c), s	0.9	6.5				13.5	0.4
Intersection Summary							
HCM 6th Ctrl Delay			23.7				
HCM 6th LOS			C				
Notes							
User approved ignoring U-Turning movement.							

Lanes, Volumes, Timings
3: Madison St. & Avenue 54

2040 WP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	583	1183	139	319	160	421	964	74	228	1012	57
Future Volume (vph)	84	583	1183	139	319	160	421	964	74	228	1012	57
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		1	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Free	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			Free			8			2			
Detector Phase	7	4		3	8	1	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5	22.5	11.5	22.5	
Total Split (s)	17.2	29.0		18.2	30.0	25.2	23.6	47.6	47.6	25.2	49.2	
Total Split (%)	14.3%	24.2%		15.2%	25.0%	21.0%	19.7%	39.7%	39.7%	21.0%	41.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

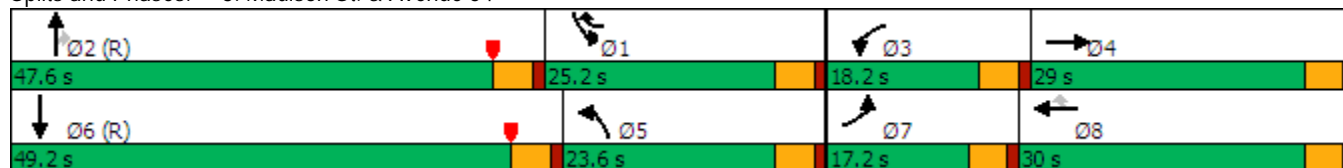
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated






























Splits and Phases: 3: Madison St. & Avenue 54



HCM 6th Signalized Intersection Summary

























3: Madison St. & Avenue 54

2040 WP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 			 	
Traffic Volume (veh/h)	84	583	1183	139	319	160	421	964	74	228	1012	57
Future Volume (veh/h)	84	583	1183	139	319	160	421	964	74	228	1012	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	86	595	0	142	326	163	430	984	76	233	1033	58
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	108	662		168	782	661	637	1243	554	351	1241	70
Arrive On Green	0.06	0.19	0.00	0.10	0.23	0.23	0.19	0.36	0.36	0.20	0.37	0.37
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	1734	3331	187
Grp Volume(v), veh/h	86	595	0	142	326	163	430	984	76	233	537	554
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1734	1730	1787
Q Serve(g_s), s	5.9	20.2	0.0	9.7	9.7	1.4	14.3	30.6	2.9	14.8	33.8	33.9
Cycle Q Clear(g_c), s	5.9	20.2	0.0	9.7	9.7	1.4	14.3	30.6	2.9	14.8	33.8	33.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	108	662		168	782	661	637	1243	554	351	644	666
V/C Ratio(X)	0.80	0.90		0.85	0.42	0.25	0.68	0.79	0.14	0.66	0.83	0.83
Avail Cap(c_a), veh/h	184	706		198	782	661	637	1243	554	351	644	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.5	47.4	0.0	53.3	39.7	11.2	45.2	34.4	13.9	44.1	34.2	34.2
Incr Delay (d2), s/veh	1.2	1.6	0.0	24.2	0.4	0.2	2.8	5.2	0.5	4.6	12.0	11.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	8.4	0.0	5.2	4.0	1.7	6.0	13.0	1.4	6.6	15.5	15.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.7	49.0	0.0	77.5	40.1	11.4	48.0	39.6	14.4	48.7	46.2	45.9
LnGrp LOS	E	D		E	D	B	D	D	B	D	D	D
Approach Vol, veh/h		681	A		631			1490			1324	
Approach Delay, s/veh		49.9			41.1			40.8			46.5	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	28.8	47.6	16.1	27.5	27.2	49.2	12.0	31.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	20.7	43.1	13.7	24.5	19.1	44.7	12.7	25.5				
Max Q Clear Time (g_c+I1), s	16.8	32.6	11.7	22.2	16.3	35.9	7.9	11.7				
Green Ext Time (p_c), s	0.2	4.6	0.1	0.8	0.5	4.1	0.1	1.9				
Intersection Summary												
HCM 6th Ctrl Delay			44.2									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

Lanes, Volumes, Timings
4: Madison St. & Avenue 52

2040 WP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	748	122	87	622	137	236	921	60	173	1009	115
Future Volume (vph)	100	748	122	87	622	137	236	921	60	173	1009	115
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	16.0	40.0	40.0	15.0	39.0	39.0	17.0	49.0	49.0	16.0	48.0	48.0
Total Split (%)	13.3%	33.3%	33.3%	12.5%	32.5%	32.5%	14.2%	40.8%	40.8%	13.3%	40.0%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

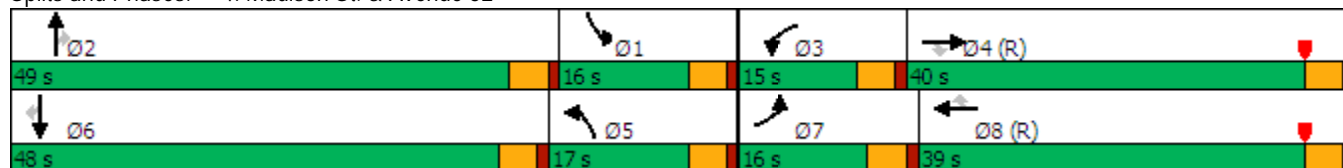
Actuated Cycle Length: 120

Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 4: Madison St. & Avenue 52



























HCM 6th Signalized Intersection Summary 4: Madison St. & Avenue 52

2040 WP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	748	122	87	622	137	236	921	60	173	1009	115
Future Volume (veh/h)	100	748	122	87	622	137	236	921	60	173	1009	115
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	102	763	124	89	635	140	241	940	61	177	1030	117
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	126	1160	517	111	1130	504	297	1283	572	269	1254	559
Arrive On Green	0.07	0.34	0.34	0.06	0.33	0.33	0.09	0.37	0.37	0.08	0.36	0.36
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	102	763	124	89	635	140	241	940	61	177	1030	117
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	7.0	22.6	5.3	6.1	18.2	6.2	8.4	28.2	2.4	6.1	32.4	4.8
Cycle Q Clear(g_c), s	7.0	22.6	5.3	6.1	18.2	6.2	8.4	28.2	2.4	6.1	32.4	4.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	126	1160	517	111	1130	504	297	1283	572	269	1254	559
V/C Ratio(X)	0.81	0.66	0.24	0.80	0.56	0.28	0.81	0.73	0.11	0.66	0.82	0.21
Avail Cap(c_a), veh/h	166	1160	517	152	1130	504	350	1283	572	322	1254	559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.8	34.0	16.4	55.4	33.3	17.7	53.7	32.6	15.0	53.6	34.7	15.6
Incr Delay (d2), s/veh	19.7	2.9	1.1	18.9	2.0	1.4	11.7	3.7	0.4	3.7	6.1	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	9.6	2.5	3.1	7.5	3.0	3.9	11.7	1.1	2.6	13.9	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.5	37.0	17.5	74.3	35.3	19.1	65.4	36.3	15.4	57.3	40.8	16.4
LnGrp LOS	E	D	B	E	D	B	E	D	B	E	D	B
Approach Vol, veh/h	989			864			1242			1324		
Approach Delay, s/veh	38.4			36.7			40.9			40.9		
Approach LOS	D			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.1	49.0	12.2	44.7	15.1	48.0	13.2	43.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.5	44.5	10.5	35.5	12.5	43.5	11.5	34.5				
Max Q Clear Time (g_c+I1), s	8.1	30.2	8.1	24.6	10.4	34.4	9.0	20.2				
Green Ext Time (p_c), s	0.2	5.2	0.0	3.9	0.2	4.5	0.0	3.6				
Intersection Summary												
HCM 6th Ctrl Delay	39.5											
HCM 6th LOS	D											

Lanes, Volumes, Timings
5: Madison St. & Avenue 50/50th Avenue

2040 WP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	546	86	39	626	124	225	895	82	296	1250	253
Future Volume (vph)	165	546	86	39	626	124	225	895	82	296	1250	253
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	11.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	20.0	40.4	40.4	11.6	32.0	21.9	15.0	46.1	46.1	21.9	53.0	53.0
Total Split (%)	16.7%	33.7%	33.7%	9.7%	26.7%	18.3%	12.5%	38.4%	38.4%	18.3%	44.2%	44.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

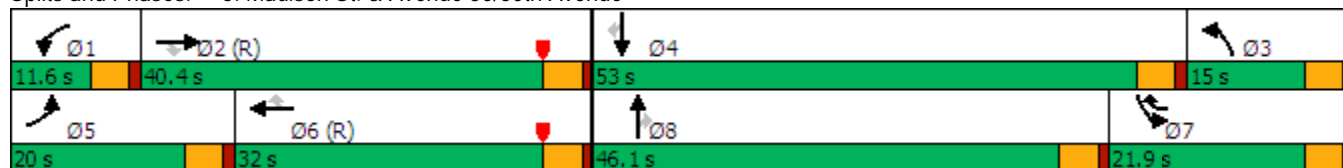
Actuated Cycle Length: 120

Offset: 77.7 (65%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 95

























Control Type: Actuated-Coordinated

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue



























HCM 6th Signalized Intersection Summary
5: Madison St. & Avenue 50/50th Avenue

2040 WP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	546	86	39	626	124	225	895	82	296	1250	253
Future Volume (veh/h)	165	546	86	39	626	124	225	895	82	296	1250	253
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	168	557	88	40	639	127	230	913	84	302	1276	258
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	194	1104	492	75	865	604	282	1724	535	476	1398	624
Arrive On Green	0.13	0.38	0.38	0.05	0.30	0.30	0.10	0.42	0.42	0.17	0.49	0.49
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	4972	1543	3365	3460	1543
Grp Volume(v), veh/h	168	557	88	40	639	127	230	913	84	302	1276	258
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1657	1543	1682	1730	1543
Q Serve(g_s), s	11.4	14.8	3.5	2.7	19.9	1.5	8.0	16.5	3.3	10.0	40.9	8.9
Cycle Q Clear(g_c), s	11.4	14.8	3.5	2.7	19.9	1.5	8.0	16.5	3.3	10.0	40.9	8.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	194	1104	492	75	865	604	282	1724	535	476	1398	624
V/C Ratio(X)	0.87	0.50	0.18	0.54	0.74	0.21	0.81	0.53	0.16	0.63	0.91	0.41
Avail Cap(c_a), veh/h	224	1104	492	103	865	604	294	1724	535	488	1398	624
HCM Platoon Ratio	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.1	29.8	15.6	55.7	38.5	10.3	53.0	27.7	16.2	46.9	28.9	10.2
Incr Delay (d2), s/veh	25.6	1.6	0.8	5.9	5.6	0.8	15.5	1.2	0.6	2.6	10.6	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	5.9	1.7	1.3	8.4	1.3	3.8	6.0	1.5	4.1	16.5	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.7	31.4	16.4	61.6	44.1	11.1	68.6	28.9	16.8	49.5	39.5	12.3
LnGrp LOS	E	C	B	E	D	B	E	C	B	D	D	B
Approach Vol, veh/h		813			806			1227			1836	
Approach Delay, s/veh		39.2			39.7			35.5			37.3	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.7	42.8	14.6	53.0	17.9	34.5	21.5	46.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.1	35.9	10.5	48.5	15.5	27.5	17.4	41.6				
Max Q Clear Time (g_c+I1), s	4.7	16.8	10.0	42.9	13.4	21.9	12.0	18.5				
Green Ext Time (p_c), s	0.0	3.5	0.0	3.9	0.1	2.1	0.5	6.2				
Intersection Summary												
HCM 6th Ctrl Delay			37.6									
HCM 6th LOS			D									

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54

2040 WP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	10	13	43	8	771	5	249	29	1778	194	27
Future Volume (vph)	8	10	13	43	8	771	5	249	29	1778	194	27
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		1	1		0	1		1	2		1
Taper Length (ft)	0			110			90			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	11.5	22.5	22.5	11.5	22.5	63.0	22.5	23.0	23.0	63.0	63.5	63.5
Total Split (%)	9.6%	18.8%	18.8%	9.6%	18.8%	52.5%	18.8%	19.2%	19.2%	52.5%	52.9%	52.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	C-Max	C-Max	Max	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120









Actuated Cycle Length: 120

Offset: 22.5 (19%), Referenced to phase 2:NBT, Start of Yellow

Natural Cycle: 130

























Control Type: Actuated-Coordinated

Splits and Phases: 6: Jefferson St. & Avenue 54

 Ø2 (R)	 Ø1	 Ø3	 Ø4
23 s	63 s	11.5 s	22.5 s
 Ø6	 Ø5	 Ø7	 Ø8
63.5 s	22.5 s	11.5 s	22.5 s





















HCM 6th Signalized Intersection Summary 6: Jefferson St. & Avenue 54

2040 WP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	10	13	43	8	771	5	249	29	1778	194	27
Future Volume (veh/h)	8	10	13	43	8	771	5	249	29	1778	194	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	8	10	13	44	8	787	5	254	30	1814	198	28
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	24	106	90	78	163	1853	442	533	238	1994	1701	759
Arrive On Green	0.01	0.06	0.06	0.04	0.09	0.09	0.26	0.15	0.15	0.59	0.49	0.49
Sat Flow, veh/h	1734	1821	1543	1734	1821	2716	1734	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	8	10	13	44	8	787	5	254	30	1814	198	28
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1821	1358	1734	1730	1543	1682	1730	1543
Q Serve(g_s), s	0.5	0.6	0.6	3.0	0.5	2.5	0.3	8.0	1.7	57.2	3.7	0.9
Cycle Q Clear(g_c), s	0.5	0.6	0.6	3.0	0.5	2.5	0.3	8.0	1.7	57.2	3.7	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	24	106	90	78	163	1853	442	533	238	1994	1701	759
V/C Ratio(X)	0.34	0.09	0.14	0.57	0.05	0.42	0.01	0.48	0.13	0.91	0.12	0.04
Avail Cap(c_a), veh/h	101	273	232	101	273	2017	442	533	238	1994	1701	759
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.71	0.71	0.71	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.6	53.5	22.6	56.2	50.0	3.3	33.4	46.3	32.2	21.6	16.4	10.8
Incr Delay (d2), s/veh	8.2	0.4	0.7	4.5	0.1	0.1	0.0	3.0	1.1	7.7	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.3	0.4	1.4	0.2	1.4	0.1	3.5	0.8	20.9	1.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.8	53.9	23.4	60.7	50.0	3.4	33.4	49.4	33.3	29.3	16.6	10.9
LnGrp LOS	E	D	C	E	D	A	C	D	C	C	B	B
Approach Vol, veh/h	31			839			289			2040		
Approach Delay, s/veh	44.4			6.9			47.4			27.8		
Approach LOS	D			A			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	75.6	23.0	9.9	11.5	35.1	63.5	6.1	15.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	58.5	18.5	7.0	18.0	18.0	59.0	7.0	18.0				
Max Q Clear Time (g_c+I1), s	59.2	10.0	5.0	2.6	2.3	5.7	2.5	4.5				
Green Ext Time (p_c), s	0.0	0.9	0.0	0.0	0.0	1.2	0.0	2.8				
Intersection Summary												
HCM 6th Ctrl Delay	24.2											
HCM 6th LOS	C											

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

2040 WP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	572	664	59	515	428	336	578	60	390	1106	187
Future Volume (vph)	140	572	664	59	515	428	336	578	60	390	1106	187
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											

The Wave - Coral Mountain TIA (JN:12615)
 2040 With Project
 AM Peak Hour






















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                        Level Of Service Computation Report
                        FHWA Roundabout Method (Base Volume Alternative)
*****
Intersection #7 Jefferson St. / Avenue 52
*****
Average Delay (sec/veh):      5.9      Level Of Service: A
*****
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Control:      Yield Sign      Yield Sign      Yield Sign      Yield Sign
Lanes:      2      2      3      3
-----|-----|-----|-----|
Volume Module:
Base Vol:      336  578    60    390 1106    187    140  572    664    59  515    428
Growth Adj:    1.00 1.00    1.00    1.00 1.00    1.00    1.00 1.00    1.00    1.00 1.00    1.00
Initial Bse:    336  578    60    390 1106    187    140  572    664    59  515    428
User Adj:      1.00 1.00    1.00    1.00 1.00    1.00    1.00 1.00    0.00    1.00 1.00    0.00
PHF Adj:      0.98 0.98    0.98    0.98 0.98    0.98    0.98 0.98    0.00    0.98 0.98    0.00
PHF Volume:    343  590    61    398 1129    191    143  584      0    60  526      0
Reduct Vol:      0    0      0      0    0      0      0    0      0    0    0      0
Reduced Vol:    343  590    61    398 1129    191    143  584      0    60  526      0
PCE Adj:      1.00 1.00    1.00    1.00 1.00    1.00    1.00 1.00    0.00    1.00 1.00    0.00
MLF Adj:      1.00 1.00    1.00    1.00 1.00    1.00    1.00 1.00    0.00    1.00 1.00    0.00
FinalVolume:    343  590    61    398 1129    191    143  584      0    60  526      0
-----|-----|-----|-----|
PCE Module:
AutoPCE:      343  590    61    398 1129    191    143  584      0    60  526      0
TruckPCE:      0    0      0      0    0      0      0    0      0    0    0      0
ComboPCE:      0    0      0      0    0      0      0    0      0    0    0      0
BicyclePCE:    0    0      0      0    0      0      0    0      0    0    0      0
AdjVolume:    343  590    61    398 1129    191    143  584      0    60  526      0
-----|-----|-----|-----|
Delay Module: >> Time Period: 0.25 hours <<
CircVolume:      398      343      1527      933
MaxVolume:      2137      2177      xxxxxx      xxxxxx
PedVolume:      0        0        0        0
AdjMaxVol:      2137      2177      xxxxxx      xxxxxx
ApproachVol:      994      1717      xxxxxx      xxxxxx
ApproachV/C:      0.46      0.79      1.00      1.00
ApproachDel:      3.1      7.5      xxxxxx      xxxxxx
ApproachLOS:      A        A        *        *
Queue:      2.6      9.6      xxxx      xxxx

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Lanes, Volumes, Timings
8: Jefferson St. & Pomelo

2040 WP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	1	2	4	1	16	13	1047	13	40	1657	51
Future Volume (vph)	37	1	2	4	1	16	13	1047	13	40	1657	51
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	54.0		18.0	54.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	15.0%	45.0%		15.0%	45.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary

Area Type: Other

Cycle Length: 120

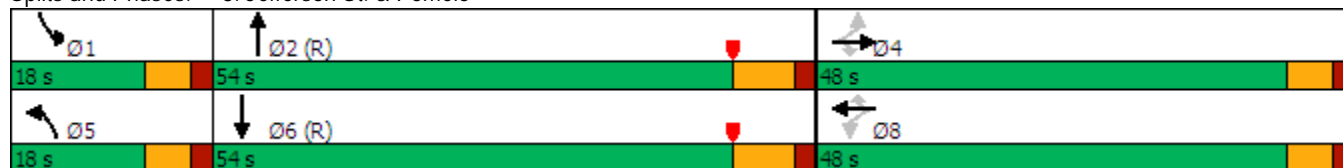
Actuated Cycle Length: 120

Offset: 30 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110

























Control Type: Actuated-Coordinated

Splits and Phases: 8: Jefferson St. & Pomelo



























HCM 6th Signalized Intersection Summary 8: Jefferson St. & Pomelo

2040 WP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (veh/h)	37	1	2	4	1	16	13	1047	13	40	1657	51
Future Volume (veh/h)	37	1	2	4	1	16	13	1047	13	40	1657	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	38	1	2	4	1	16	13	1068	13	41	1691	52
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	62	1	182	55	8	182	61	3265	40	129	3391	104
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.04	0.64	0.64	0.15	1.00	1.00
Sat Flow, veh/h	19	7	1543	10	67	1543	1734	5063	62	1734	4956	152
Grp Volume(v), veh/h	39	0	2	5	0	16	13	699	382	41	1131	612
Grp Sat Flow(s),veh/h/ln	27	0	1543	76	0	1543	1734	1657	1810	1734	1657	1794
Q Serve(g_s), s	0.2	0.0	0.1	0.0	0.0	1.1	0.9	11.4	11.4	2.5	0.0	0.0
Cycle Q Clear(g_c), s	14.2	0.0	0.1	14.1	0.0	1.1	0.9	11.4	11.4	2.5	0.0	0.0
Prop In Lane	0.97		1.00	0.80		1.00	1.00		0.03	1.00		0.08
Lane Grp Cap(c), veh/h	62	0	182	63	0	182	61	2137	1167	129	2268	1227
V/C Ratio(X)	0.63	0.00	0.01	0.08	0.00	0.09	0.21	0.33	0.33	0.32	0.50	0.50
Avail Cap(c_a), veh/h	388	0	540	406	0	540	173	2137	1167	173	2268	1227
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.47	0.47	0.47
Uniform Delay (d), s/veh	59.7	0.0	46.7	47.6	0.0	47.2	56.3	9.6	9.6	48.3	0.0	0.0
Incr Delay (d2), s/veh	19.9	0.0	0.1	1.1	0.0	0.4	3.7	0.4	0.7	1.4	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.1	0.2	0.0	0.5	0.4	3.6	4.0	1.1	0.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.6	0.0	46.8	48.7	0.0	47.6	59.9	10.0	10.3	49.7	0.4	0.7
LnGrp LOS	E	A	D	D	A	D	E	A	B	D	A	A
Approach Vol, veh/h	41				21				1094		1784	
Approach Delay, s/veh	78.0				47.9				10.7		1.6	
Approach LOS	E				D				B		A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.9	84.8		20.3	10.2	89.5		20.3				
Change Period (Y+Rc), s	6.0	7.5		6.0	6.0	7.5		6.0				
Max Green Setting (Gmax), s	12.0	46.5		42.0	12.0	46.5		42.0				
Max Q Clear Time (g_c+I1), s	4.5	13.4		16.2	2.9	2.0		16.1				
Green Ext Time (p_c), s	0.1	14.3		0.3	0.0	30.1		0.1				
Intersection Summary												
HCM 6th Ctrl Delay	6.4											
HCM 6th LOS	A											

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

2040 WP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	256	347	79	236	390	385	135	857	108	359	1440	362
Future Volume (vph)	256	347	79	236	390	385	135	857	108	359	1440	362
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	2		1	2		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	18.0	37.0	37.0	20.0	39.0	39.0	18.0	41.0	41.0	22.0	45.0	45.0
Total Split (%)	15.0%	30.8%	30.8%	16.7%	32.5%	32.5%	15.0%	34.2%	34.2%	18.3%	37.5%	37.5%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

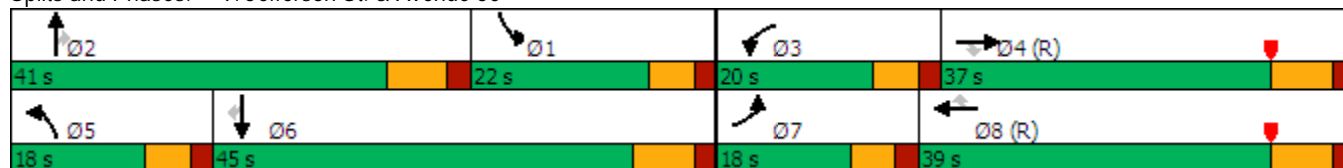
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 115

Control Type: Actuated-Coordinated

























Splits and Phases: 9: Jefferson St. & Avenue 50



HCM 6th Signalized Intersection Summary


9: Jefferson St. & Avenue 50

2040 WP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	256	347	79	236	390	385	135	857	108	359	1440	362
Future Volume (veh/h)	256	347	79	236	390	385	135	857	108	359	1440	362
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	261	354	81	241	398	393	138	874	110	366	1469	369
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	336	916	409	336	916	409	172	1116	346	583	1547	480
Arrive On Green	0.15	0.40	0.40	0.15	0.40	0.40	0.15	0.34	0.34	0.26	0.47	0.47
Sat Flow, veh/h	3365	3460	1543	3365	3460	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	261	354	81	241	398	393	138	874	110	366	1469	369
Grp Sat Flow(s),veh/h/ln	1682	1730	1543	1682	1730	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	9.0	8.7	4.1	8.2	10.1	17.7	9.2	19.0	4.6	11.5	34.0	23.9
Cycle Q Clear(g_c), s	9.0	8.7	4.1	8.2	10.1	17.7	9.2	19.0	4.6	11.5	34.0	23.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	336	916	409	336	916	409	172	1116	346	583	1547	480
V/C Ratio(X)	0.78	0.39	0.20	0.72	0.43	0.96	0.80	0.78	0.32	0.63	0.95	0.77
Avail Cap(c_a), veh/h	336	916	409	393	916	409	173	1388	431	583	1554	482
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.7	29.2	27.8	49.4	29.6	12.6	50.0	37.2	17.4	41.0	31.1	28.4
Incr Delay (d2), s/veh	10.4	1.2	1.1	3.8	1.5	35.9	20.8	2.7	0.7	1.6	12.9	7.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	3.4	1.6	3.4	4.0	8.6	4.7	6.7	2.3	4.4	12.2	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.2	30.5	28.9	53.2	31.1	48.4	70.8	39.8	18.1	42.6	44.0	36.2
LnGrp LOS	E	C	C	D	C	D	E	D	B	D	D	D
Approach Vol, veh/h	696			1032			1122			2204		
Approach Delay, s/veh	41.4			42.9			41.5			42.5		
Approach LOS	D			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	28.3	34.4	18.0	39.3	17.9	44.8	18.0	39.3				
Change Period (Y+Rc), s	7.5	* 7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	16.0	* 34	14.0	29.5	12.0	37.5	12.0	31.5				
Max Q Clear Time (g_c+I1), s	13.5	21.0	10.2	10.7	11.2	36.0	11.0	19.7				
Green Ext Time (p_c), s	0.1	5.9	0.1	4.0	0.0	1.4	0.1	5.4				
Intersection Summary												
HCM 6th Ctrl Delay	42.2											
HCM 6th LOS	D											
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
10: Avenue 60 & Madison St.

2040 WP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	375	411	1	1	672	270	1	2	1	351	1	789
Future Volume (vph)	375	411	1	1	672	270	1	2	1	351	1	789
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	150		0	150		150
Storage Lanes	2		0	1		1	0		0	2		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			40	
Link Distance (ft)		973			661			281			437	
Travel Time (s)		16.6			11.3			7.7			7.4	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6			8		7	4	5
Permitted Phases						6	8					4
Detector Phase	5	2		1	6	6	8	8		7	4	5
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	11.5	22.5		11.5	22.5	22.5	22.5	22.5		22.5	22.5	11.5
Total Split (s)	41.0	63.5		11.5	34.0	34.0	22.5	22.5		22.5	45.0	41.0
Total Split (%)	34.2%	52.9%		9.6%	28.3%	28.3%	18.8%	18.8%		18.8%	37.5%	34.2%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lead		Lag		Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		Yes
Recall Mode	None	C-Max		None	None	None	Max	Max		Max	Max	None

Intersection Summary

Area Type: Other

Cycle Length: 120

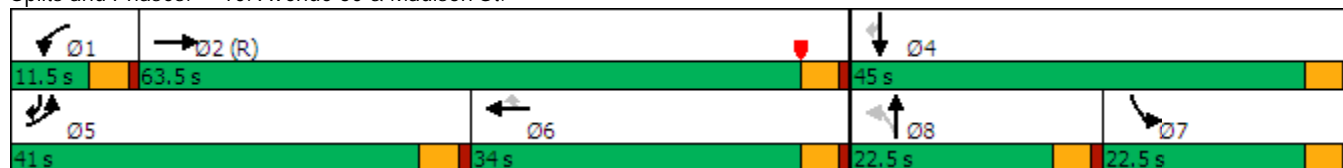
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT, Start of Yellow

Natural Cycle: 90






















Control Type: Actuated-Coordinated

Splits and Phases: 10: Avenue 60 & Madison St.
























HCM 6th Signalized Intersection Summary
10: Avenue 60 & Madison St.

2040 WP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	375	411	1	1	672	270	1	2	1	351	1	789
Future Volume (veh/h)	375	411	1	1	672	270	1	2	1	351	1	789
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	383	419	1	1	686	276	1	2	1	358	1	805
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	467	1941	5	3	1513	641	70	125	52	520	615	729
Arrive On Green	0.13	0.55	0.55	0.00	0.42	0.42	0.15	0.15	0.15	0.15	0.34	0.34
Sat Flow, veh/h	3469	3541	8	1734	3642	1543	214	832	349	3469	1821	1543
Grp Volume(v), veh/h	383	205	215	1	686	276	4	0	0	358	1	805
Grp Sat Flow(s),veh/h/ln	1734	1730	1820	1734	1821	1543	1395	0	0	1734	1821	1543
Q Serve(g_s), s	12.9	7.3	7.3	0.1	16.3	9.4	0.0	0.0	0.0	11.7	0.0	40.5
Cycle Q Clear(g_c), s	12.9	7.3	7.3	0.1	16.3	9.4	0.2	0.0	0.0	11.7	0.0	40.5
Prop In Lane	1.00		0.00	1.00		1.00	0.25		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	467	948	997	3	1513	641	247	0	0	520	615	729
V/C Ratio(X)	0.82	0.22	0.22	0.30	0.45	0.43	0.02	0.00	0.00	0.69	0.00	1.10
Avail Cap(c_a), veh/h	1055	948	997	101	1513	641	247	0	0	520	615	729
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.5	13.9	13.9	59.8	25.3	9.5	43.5	0.0	0.0	48.3	26.3	31.7
Incr Delay (d2), s/veh	3.6	0.5	0.5	44.3	0.2	0.5	0.1	0.0	0.0	7.3	0.0	65.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	2.9	3.0	0.1	6.9	3.2	0.1	0.0	0.0	5.5	0.0	33.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.1	14.4	14.4	104.2	25.5	9.9	43.6	0.0	0.0	55.6	26.4	97.4
LnGrp LOS	D	B	B	F	C	A	D	A	A	E	C	F
Approach Vol, veh/h	803			963			4			1164		
Approach Delay, s/veh	33.3			21.1			43.6			84.5		
Approach LOS	C			C			D			F		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.7	70.3		45.0	20.7	54.3	22.5	22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.0	59.0		40.5	36.5	29.5	18.0	18.0				
Max Q Clear Time (g_c+I1), s	2.1	9.3		42.5	14.9	18.3	13.7	2.2				
Green Ext Time (p_c), s	0.0	2.5		0.0	1.3	4.1	0.5	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	49.6											
HCM 6th LOS	D											

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

2040 WP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	225	373	18	268	284	279	545	39	183	434	296
Future Volume (vph)	150	225	373	18	268	284	279	545	39	183	434	296
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Detector Phase	7	4		3	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5		11.5	22.5	
Total Split (s)	21.0	39.5		11.5	30.0	28.0	28.6	41.0		28.0	40.4	
Total Split (%)	17.5%	32.9%		9.6%	25.0%	23.3%	23.8%	34.2%		23.3%	33.7%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

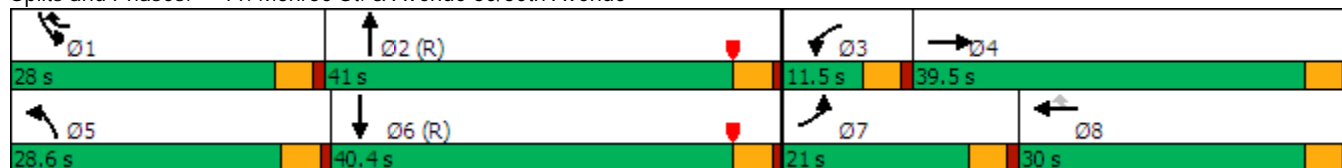
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 80






















Control Type: Actuated-Coordinated

Splits and Phases: 11: Monroe St. & Avenue 60/60th Avenue



























HCM 6th Signalized Intersection Summary
11: Monroe St. & Avenue 60/60th Avenue

2040 WP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	225	373	18	268	284	279	545	39	183	434	296
Future Volume (veh/h)	150	225	373	18	268	284	279	545	39	183	434	296
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	153	230	381	18	273	290	285	556	40	187	443	302
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	180	464	414	46	347	487	312	1410	101	216	741	502
Arrive On Green	0.10	0.27	0.27	0.03	0.19	0.19	0.18	0.43	0.43	0.12	0.38	0.38
Sat Flow, veh/h	1734	1730	1543	1734	1821	1543	1734	3274	235	1734	1974	1337
Grp Volume(v), veh/h	153	230	381	18	273	290	285	293	303	187	388	357
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1730	1779	1734	1730	1580
Q Serve(g_s), s	10.4	13.5	28.8	1.2	17.1	19.0	19.4	13.9	14.0	12.7	21.7	21.9
Cycle Q Clear(g_c), s	10.4	13.5	28.8	1.2	17.1	19.0	19.4	13.9	14.0	12.7	21.7	21.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		0.85
Lane Grp Cap(c), veh/h	180	464	414	46	347	487	312	745	766	216	650	594
V/C Ratio(X)	0.85	0.50	0.92	0.39	0.79	0.60	0.91	0.39	0.39	0.86	0.60	0.60
Avail Cap(c_a), veh/h	238	505	450	101	387	520	348	745	766	340	650	594
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.9	37.1	42.7	57.5	46.2	34.6	48.3	23.4	23.4	51.5	30.1	30.2
Incr Delay (d2), s/veh	19.3	0.8	23.2	5.4	9.3	1.7	26.1	1.6	1.5	13.0	4.0	4.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	5.6	13.2	0.6	8.4	7.1	10.3	5.7	5.9	6.1	9.2	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.1	37.9	65.8	62.9	55.6	36.3	74.4	25.0	25.0	64.5	34.2	34.7
LnGrp LOS	E	D	E	E	E	D	E	C	C	E	C	C
Approach Vol, veh/h	764				581				881			
Approach Delay, s/veh	58.7				46.2				41.0			
Approach LOS	E				D				D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.5	56.2	7.7	36.7	26.1	49.6	17.0	27.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	23.5	36.5	7.0	35.0	24.1	35.9	16.5	25.5				
Max Q Clear Time (g_c+I1), s	14.7	16.0	3.2	30.8	21.4	23.9	12.4	21.0				
Green Ext Time (p_c), s	0.3	3.0	0.0	1.4	0.2	3.3	0.1	1.1				
Intersection Summary												
HCM 6th Ctrl Delay	46.1											
HCM 6th LOS	D											

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

2040 WP AM Peak hour
With Additional Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	225	373	18	268	284	279	545	39	183	434	296
Future Volume (vph)	150	225	373	18	268	284	279	545	39	183	434	296
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	100		150	320		150
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						6
Detector Phase	7	4	5	3	8	1	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	11.5	11.5	22.5	11.5	11.5	22.5		11.5	22.5	22.5
Total Split (s)	25.0	37.0	39.0	12.0	24.0	28.0	39.0	43.0		28.0	32.0	32.0
Total Split (%)	20.8%	30.8%	32.5%	10.0%	20.0%	23.3%	32.5%	35.8%		23.3%	26.7%	26.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

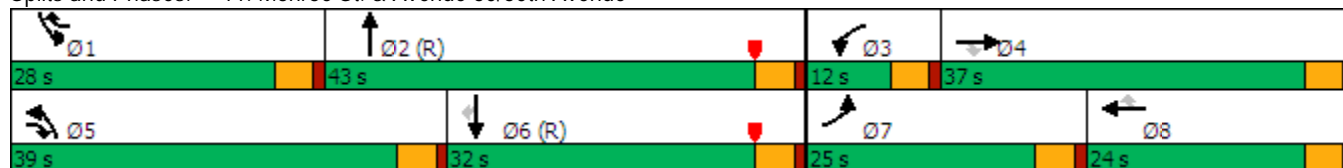
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated
























Splits and Phases: 11: Monroe St. & Avenue 60/60th Avenue



HCM 6th Signalized Intersection Summary























11: Monroe St. & Avenue 60/60th Avenue

2040 WP AM Peak hour
With Additional Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	225	373	18	268	284	279	545	39	183	434	296
Future Volume (veh/h)	150	225	373	18	268	284	279	545	39	183	434	296
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	153	230	381	18	273	290	285	556	40	187	443	302
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	181	833	653	46	562	443	317	1500	108	216	1385	618
Arrive On Green	0.10	0.24	0.24	0.03	0.16	0.16	0.18	0.46	0.46	0.12	0.40	0.40
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	1734	3274	235	1734	3460	1543
Grp Volume(v), veh/h	153	230	381	18	273	290	285	293	303	187	443	302
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1734	1730	1779	1734	1730	1543
Q Serve(g_s), s	10.4	6.5	22.7	1.2	8.6	19.5	19.3	13.3	13.3	12.7	10.6	17.5
Cycle Q Clear(g_c), s	10.4	6.5	22.7	1.2	8.6	19.5	19.3	13.3	13.3	12.7	10.6	17.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	181	833	653	46	562	443	317	793	815	216	1385	618
V/C Ratio(X)	0.84	0.28	0.58	0.39	0.49	0.65	0.90	0.37	0.37	0.86	0.32	0.49
Avail Cap(c_a), veh/h	296	937	700	108	562	443	499	793	815	340	1385	618
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.8	37.1	26.5	57.5	45.7	37.5	48.0	21.2	21.2	51.5	24.7	26.8
Incr Delay (d2), s/veh	11.2	0.2	1.1	5.4	0.7	3.4	12.9	1.3	1.3	13.0	0.6	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	2.7	8.1	0.6	3.7	7.6	9.1	5.3	5.5	6.1	4.2	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.0	37.2	27.6	62.9	46.3	41.0	60.9	22.5	22.5	64.5	25.4	29.6
LnGrp LOS	E	D	C	E	D	D	E	C	C	E	C	C
Approach Vol, veh/h	764			581			881			932		
Approach Delay, s/veh	37.8			44.2			34.9			34.6		
Approach LOS	D			D			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.5	59.5	7.7	33.4	26.4	52.5	17.0	24.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	23.5	38.5	7.5	32.5	34.5	27.5	20.5	19.5				
Max Q Clear Time (g_c+I1), s	14.7	15.3	3.2	24.7	21.3	19.5	12.4	21.5				
Green Ext Time (p_c), s	0.3	3.1	0.0	1.7	0.6	2.3	0.2	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	37.2											
HCM 6th LOS	D											

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

2040 WP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	345	129	344	102	104	139	603	276	134	939	75
Future Volume (vph)	121	345	129	344	102	104	139	603	276	134	939	75
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		0	150		150	150		150
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			732			913			1519	
Travel Time (s)		9.1			16.6			12.5			20.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5		11.5	22.5	22.5	11.5	22.5	
Total Split (s)	19.2	25.0		32.1	37.9		19.6	43.9	43.9	19.0	43.3	
Total Split (%)	16.0%	20.8%		26.8%	31.6%		16.3%	36.6%	36.6%	15.8%	36.1%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

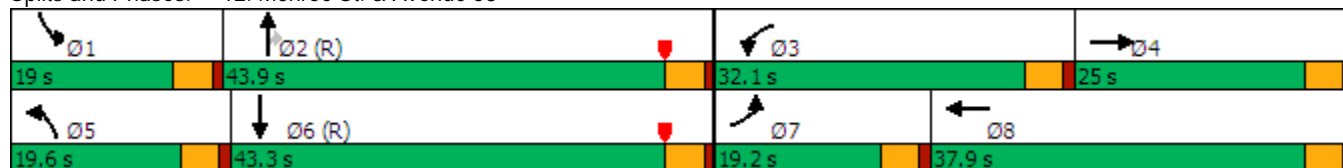
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 90























Control Type: Actuated-Coordinated

Splits and Phases: 12: Monroe St. & Avenue 58


























HCM 6th Signalized Intersection Summary
12: Monroe St. & Avenue 58

2040 WP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	345	129	344	102	104	139	603	276	134	939	75
Future Volume (veh/h)	121	345	129	344	102	104	139	603	276	134	939	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	123	352	132	351	104	106	142	615	282	137	958	77
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	149	400	148	377	507	452	168	1305	582	163	1213	97
Arrive On Green	0.09	0.16	0.16	0.22	0.29	0.29	0.10	0.38	0.38	0.09	0.37	0.37
Sat Flow, veh/h	1734	2474	913	1734	1730	1543	1734	3460	1543	1734	3244	261
Grp Volume(v), veh/h	123	244	240	351	104	106	142	615	282	137	511	524
Grp Sat Flow(s),veh/h/ln	1734	1730	1657	1734	1730	1543	1734	1730	1543	1734	1730	1774
Q Serve(g_s), s	8.4	16.6	17.0	23.8	5.4	6.3	9.7	16.2	16.7	9.3	31.5	31.5
Cycle Q Clear(g_c), s	8.4	16.6	17.0	23.8	5.4	6.3	9.7	16.2	16.7	9.3	31.5	31.5
Prop In Lane	1.00		0.55	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	149	280	268	377	507	452	168	1305	582	163	647	664
V/C Ratio(X)	0.83	0.87	0.89	0.93	0.21	0.23	0.84	0.47	0.48	0.84	0.79	0.79
Avail Cap(c_a), veh/h	212	296	283	399	507	452	218	1305	582	210	647	664
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.0	49.1	49.3	46.1	31.9	32.2	53.3	28.3	28.5	53.5	33.4	33.4
Incr Delay (d2), s/veh	16.2	23.0	27.3	27.8	0.2	0.3	20.2	1.2	2.9	20.5	9.5	9.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	8.7	8.8	13.1	2.3	2.4	5.0	6.6	6.6	4.9	14.1	14.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.2	72.1	76.6	73.9	32.1	32.5	73.4	29.5	31.4	74.0	42.9	42.7
LnGrp LOS	E	E	E	E	C	C	E	C	C	E	D	D
Approach Vol, veh/h		607			561			1039			1172	
Approach Delay, s/veh		73.5			58.4			36.0			46.4	
Approach LOS		E			E			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.8	49.7	30.6	23.9	16.2	49.4	14.8	39.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	14.5	39.4	27.6	20.5	15.1	38.8	14.7	33.4				
Max Q Clear Time (g_c+I1), s	11.3	18.7	25.8	19.0	11.7	33.5	10.4	8.3				
Green Ext Time (p_c), s	0.1	4.6	0.2	0.4	0.1	2.7	0.1	1.2				
Intersection Summary												
HCM 6th Ctrl Delay			50.1									
HCM 6th LOS			D									

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

2040 WP AM Peak hour
With Additional Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	345	129	344	102	104	139	603	276	134	939	75
Future Volume (vph)	121	345	129	344	102	104	139	603	276	134	939	75
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		0	150		150	150		150
Storage Lanes	1		1	1		0	2		1	2		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			732			913			1519	
Travel Time (s)		9.1			16.6			12.5			20.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3	8		5	2	3	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5		11.5	22.5	11.5	11.5	22.5	
Total Split (s)	20.8	22.6	22.6	36.0	37.8		12.2	47.2	36.0	14.2	49.2	
Total Split (%)	17.3%	18.8%	18.8%	30.0%	31.5%		10.2%	39.3%	30.0%	11.8%	41.0%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	None	None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

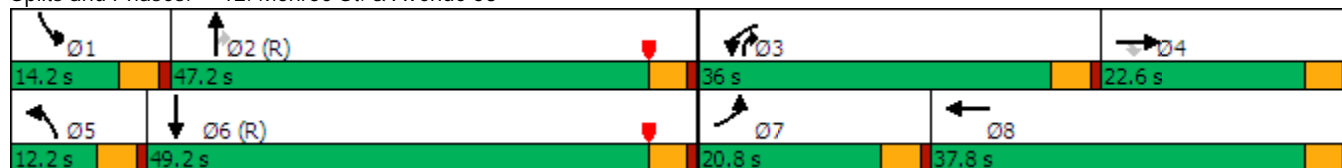
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated
























Splits and Phases: 12: Monroe St. & Avenue 58



HCM 6th Signalized Intersection Summary























12: Monroe St. & Avenue 58

2040 WP AM Peak hour
With Additional Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	345	129	344	102	104	139	603	276	134	939	75
Future Volume (veh/h)	121	345	129	344	102	104	139	603	276	134	939	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	123	352	132	351	104	106	142	615	282	137	958	77
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	149	429	191	381	445	397	195	1553	1032	194	1456	117
Arrive On Green	0.09	0.12	0.12	0.22	0.26	0.26	0.06	0.45	0.45	0.06	0.45	0.45
Sat Flow, veh/h	1734	3460	1543	1734	1730	1543	3365	3460	1543	3365	3244	261
Grp Volume(v), veh/h	123	352	132	351	104	106	142	615	282	137	511	524
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1774
Q Serve(g_s), s	8.4	11.9	9.8	23.8	5.7	6.6	5.0	14.3	8.9	4.8	27.7	27.7
Cycle Q Clear(g_c), s	8.4	11.9	9.8	23.8	5.7	6.6	5.0	14.3	8.9	4.8	27.7	27.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	149	429	191	381	445	397	195	1553	1032	194	776	796
V/C Ratio(X)	0.82	0.82	0.69	0.92	0.23	0.27	0.73	0.40	0.27	0.71	0.66	0.66
Avail Cap(c_a), veh/h	236	522	233	455	480	428	216	1553	1032	272	776	796
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.9	51.3	50.4	45.8	35.2	35.5	55.6	22.2	8.1	55.5	25.9	25.9
Incr Delay (d2), s/veh	12.3	8.5	6.5	22.0	0.3	0.4	10.6	0.8	0.7	4.8	4.3	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	5.5	4.1	12.5	2.5	2.5	2.3	5.6	3.0	2.1	11.5	11.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.2	59.8	56.8	67.9	35.5	35.9	66.2	22.9	8.7	60.3	30.2	30.1
LnGrp LOS	E	E	E	E	D	D	E	C	A	E	C	C
Approach Vol, veh/h	607				561			1039			1172	
Approach Delay, s/veh	60.5				55.8			25.0			33.7	
Approach LOS	E				E			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.4	58.4	30.8	19.4	11.4	58.4	14.8	35.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	9.7	42.7	31.5	18.1	7.7	44.7	16.3	33.3				
Max Q Clear Time (g_c+I1), s	6.8	16.3	25.8	13.9	7.0	29.7	10.4	8.6				
Green Ext Time (p_c), s	0.1	4.9	0.6	1.0	0.0	5.2	0.1	1.2				
Intersection Summary												
HCM 6th Ctrl Delay	39.5											
HCM 6th LOS	D											

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.

2040 WP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	391	97	54	224	235	49	789	94	234	936	65
Future Volume (vph)	32	391	97	54	224	235	49	789	94	234	936	65
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	60			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						6
Detector Phase	7	4		3	8	1	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5		11.5	22.5	22.5
Total Split (s)	11.8	22.6		14.4	25.2	26.0	18.5	57.0		26.0	64.5	64.5
Total Split (%)	9.8%	18.8%		12.0%	21.0%	21.7%	15.4%	47.5%		21.7%	53.8%	53.8%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120






Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 80























Control Type: Actuated-Coordinated

Splits and Phases: 13: Monroe St. & Airport Bl.

 Ø1	 Ø2 (R)	 Ø3	 Ø4
26 s	57 s	14.4 s	22.6 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
18.5 s	64.5 s	11.8 s	25.2 s

























HCM 6th Signalized Intersection Summary
13: Monroe St. & Airport Bl.

2040 WP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	391	97	54	224	235	49	789	94	234	936	65
Future Volume (veh/h)	32	391	97	54	224	235	49	789	94	234	936	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	33	399	99	55	229	240	50	805	96	239	955	66
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	67	415	102	85	557	485	82	1546	184	266	2086	930
Arrive On Green	0.04	0.15	0.15	0.05	0.16	0.16	0.05	0.50	0.50	0.15	0.60	0.60
Sat Flow, veh/h	1734	2753	676	1734	3460	1543	1734	3113	371	1734	3460	1543
Grp Volume(v), veh/h	33	249	249	55	229	240	50	447	454	239	955	66
Grp Sat Flow(s),veh/h/ln	1734	1730	1699	1734	1730	1543	1734	1730	1754	1734	1730	1543
Q Serve(g_s), s	2.2	17.1	17.5	3.7	7.1	15.1	3.4	21.1	21.1	16.2	18.2	2.1
Cycle Q Clear(g_c), s	2.2	17.1	17.5	3.7	7.1	15.1	3.4	21.1	21.1	16.2	18.2	2.1
Prop In Lane	1.00		0.40	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	67	261	256	85	557	485	82	859	871	266	2086	930
V/C Ratio(X)	0.49	0.96	0.97	0.65	0.41	0.49	0.61	0.52	0.52	0.90	0.46	0.07
Avail Cap(c_a), veh/h	106	261	256	143	597	503	202	859	871	311	2086	930
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.72	0.72	0.72	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.5	50.5	50.7	56.0	45.2	33.4	56.1	20.5	20.5	49.9	13.1	9.9
Incr Delay (d2), s/veh	3.9	35.6	39.7	8.0	0.5	0.8	7.1	2.3	2.2	24.6	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	9.7	10.0	1.8	3.0	5.5	1.6	8.4	8.5	8.6	6.4	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.4	86.1	90.4	64.0	45.7	34.2	63.2	22.8	22.7	74.4	13.8	10.0
LnGrp LOS	E	F	F	E	D	C	E	C	C	E	B	B
Approach Vol, veh/h		531			524			951			1260	
Approach Delay, s/veh		86.5			42.4			24.9			25.1	
Approach LOS		F			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.9	64.1	10.4	22.6	10.2	76.8	9.2	23.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	21.5	52.5	9.9	18.1	14.0	60.0	7.3	20.7				
Max Q Clear Time (g_c+I1), s	18.2	23.1	5.7	19.5	5.4	20.2	4.2	17.1				
Green Ext Time (p_c), s	0.2	5.5	0.0	0.0	0.0	7.3	0.0	0.7				
Intersection Summary												
HCM 6th Ctrl Delay			37.8									
HCM 6th LOS			D									

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

2040 WP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	169	480	217	108	397	52	79	939	152	51	1134	209
Future Volume (vph)	169	480	217	108	397	52	79	939	152	51	1134	209
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	100			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	12.4	29.0	29.0	15.4	32.0	32.0	19.6	58.6	58.6	17.0	56.0	56.0
Total Split (%)	10.3%	24.2%	24.2%	12.8%	26.7%	26.7%	16.3%	48.8%	48.8%	14.2%	46.7%	46.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120



Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 80

























Control Type: Actuated-Coordinated

Splits and Phases: 14: Monroe St. & Avenue 54

 Ø1	 Ø2 (R)	 Ø4	 Ø3
17 s	58.6 s	29 s	15.4 s
 Ø5	 Ø6 (R)	 Ø8	 Ø7
19.6 s	56 s	32 s	12.4 s

























HCM 6th Signalized Intersection Summary
14: Monroe St. & Avenue 54

2040 WP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	480	217	108	397	52	79	939	152	51	1134	209
Future Volume (veh/h)	169	480	217	108	397	52	79	939	152	51	1134	209
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	172	490	221	110	405	53	81	958	155	52	1157	213
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	350	596	253	134	511	216	103	2043	866	83	2003	849
Arrive On Green	0.10	0.16	0.16	0.08	0.14	0.14	0.06	0.56	0.56	0.05	0.55	0.55
Sat Flow, veh/h	3469	3642	1543	1734	3642	1543	1734	3642	1543	1734	3642	1543
Grp Volume(v), veh/h	172	490	221	110	405	53	81	958	155	52	1157	213
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1821	1543	1734	1821	1543	1734	1821	1543
Q Serve(g_s), s	5.6	15.6	14.1	7.5	12.9	3.1	5.5	18.8	3.8	3.5	25.1	5.3
Cycle Q Clear(g_c), s	5.6	15.6	14.1	7.5	12.9	3.1	5.5	18.8	3.8	3.5	25.1	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	350	596	253	134	511	216	103	2043	866	83	2003	849
V/C Ratio(X)	0.49	0.82	0.88	0.82	0.79	0.24	0.79	0.47	0.18	0.62	0.58	0.25
Avail Cap(c_a), veh/h	350	744	315	158	835	354	218	2043	866	181	2003	849
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.0	48.5	34.5	54.5	49.9	33.7	55.7	15.7	5.5	56.1	17.8	5.2
Incr Delay (d2), s/veh	1.1	6.0	19.7	24.7	2.8	0.6	12.5	0.8	0.5	7.4	1.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	7.3	6.4	4.1	5.8	1.4	2.7	7.3	1.8	1.7	9.9	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.1	54.5	54.2	79.2	52.7	34.3	68.3	16.5	5.9	63.5	19.0	5.9
LnGrp LOS	D	D	D	E	D	C	E	B	A	E	B	A
Approach Vol, veh/h	883			568			1194			1422		
Approach Delay, s/veh	54.0			56.1			18.6			18.7		
Approach LOS	D			E			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.3	71.8	13.8	24.1	11.6	70.5	16.6	21.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	12.5	54.1	10.9	24.5	15.1	51.5	7.9	27.5				
Max Q Clear Time (g_c+I1), s	5.5	20.8	9.5	17.6	7.5	27.1	7.6	14.9				
Green Ext Time (p_c), s	0.0	7.6	0.0	2.0	0.1	9.1	0.0	1.9				
Intersection Summary												
HCM 6th Ctrl Delay	31.6											
HCM 6th LOS	C											

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52

2040 WP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	601	213	71	559	178	237	790	51	188	1089	62
Future Volume (vph)	135	601	213	71	559	178	237	790	51	188	1089	62
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	17.6	38.6	38.6	18.0	39.0	39.0	15.7	50.1	50.1	13.3	47.7	47.7
Total Split (%)	14.7%	32.2%	32.2%	15.0%	32.5%	32.5%	13.1%	41.8%	41.8%	11.1%	39.8%	39.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

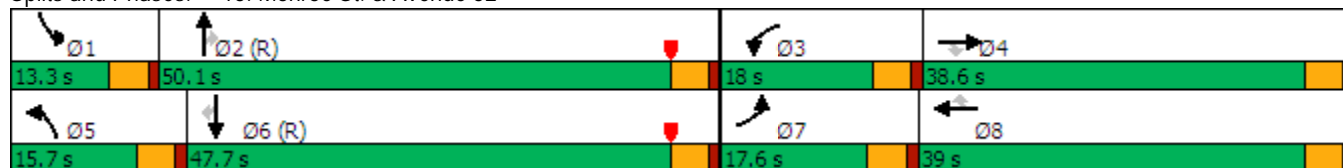
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 80
























Control Type: Actuated-Coordinated

Splits and Phases: 15: Monroe St. & Avenue 52



























HCM 6th Signalized Intersection Summary
15: Monroe St. & Avenue 52

2040 WP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	601	213	71	559	178	237	790	51	188	1089	62
Future Volume (veh/h)	135	601	213	71	559	178	237	790	51	188	1089	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	138	613	217	72	570	182	242	806	52	192	1111	63
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	858	363	92	707	300	296	1780	754	245	1725	731
Arrive On Green	0.09	0.24	0.24	0.05	0.19	0.19	0.09	0.49	0.49	0.07	0.47	0.47
Sat Flow, veh/h	1734	3642	1543	1734	3642	1543	3365	3642	1543	3365	3642	1543
Grp Volume(v), veh/h	138	613	217	72	570	182	242	806	52	192	1111	63
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1821	1543	1682	1821	1543	1682	1821	1543
Q Serve(g_s), s	9.4	18.6	15.0	4.9	17.9	12.9	8.5	17.4	2.1	6.7	27.7	2.7
Cycle Q Clear(g_c), s	9.4	18.6	15.0	4.9	17.9	12.9	8.5	17.4	2.1	6.7	27.7	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	164	858	363	92	707	300	296	1780	754	245	1725	731
V/C Ratio(X)	0.84	0.71	0.60	0.78	0.81	0.61	0.82	0.45	0.07	0.78	0.64	0.09
Avail Cap(c_a), veh/h	189	1035	439	195	1047	444	314	1780	754	247	1725	731
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.5	42.2	40.8	56.1	46.2	44.2	53.8	20.1	16.2	54.7	23.9	17.3
Incr Delay (d2), s/veh	25.0	1.9	1.6	13.4	2.9	2.0	14.9	0.8	0.2	15.1	1.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	8.1	5.6	2.4	8.0	4.9	4.1	7.1	0.7	3.3	11.4	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.5	44.0	42.4	69.5	49.1	46.2	68.7	21.0	16.4	69.9	25.8	17.6
LnGrp LOS	E	D	D	E	D	D	E	C	B	E	C	B
Approach Vol, veh/h	968			824			1100			1366		
Approach Delay, s/veh	48.6			50.2			31.3			31.6		
Approach LOS	D			D			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.2	63.2	10.9	32.8	15.0	61.3	15.8	27.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	8.8	45.6	13.5	34.1	11.2	43.2	13.1	34.5				
Max Q Clear Time (g_c+I1), s	8.7	19.4	6.9	20.6	10.5	29.7	11.4	19.9				
Green Ext Time (p_c), s	0.0	5.4	0.1	3.6	0.1	6.0	0.0	3.4				
Intersection Summary												
HCM 6th Ctrl Delay	39.0											
HCM 6th LOS	D											

Lanes, Volumes, Timings
16: Monroe St. & 50th Avenue

2040 WP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	760	101	43	654	130	79	958	62	102	1347	53
Future Volume (vph)	30	760	101	43	654	130	79	958	62	102	1347	53
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	2		1	1		1	2		1	2		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8			2			
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	20.5	20.5	11.5	20.5	11.5	11.5	20.5	20.5	11.5	20.5	
Total Split (s)	11.5	41.1	41.1	11.5	41.1	11.5	12.2	55.9	55.9	11.5	55.2	
Total Split (%)	9.6%	34.3%	34.3%	9.6%	34.3%	9.6%	10.2%	46.6%	46.6%	9.6%	46.0%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	0.0	-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.0	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120









Actuated Cycle Length: 120

Offset: 11.5 (10%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 90

























Control Type: Actuated-Coordinated

Splits and Phases: 16: Monroe St. & 50th Avenue

			
Ø1	Ø2 (R)	Ø4	Ø3
11.5 s	55.9 s	41.1 s	11.5 s
			
Ø5	Ø6 (R)	Ø8	Ø7
12.2 s	55.2 s	41.1 s	11.5 s





















HCM 6th Signalized Intersection Summary
16: Monroe St. & 50th Avenue

2040 WP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	760	101	43	654	130	79	958	62	102	1347	53
Future Volume (veh/h)	30	760	101	43	654	130	79	958	62	102	1347	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	31	776	103	44	667	133	81	978	63	104	1374	54
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	267	924	391	85	822	442	203	1834	770	210	1760	69
Arrive On Green	0.08	0.25	0.25	0.05	0.23	0.23	0.06	0.53	0.52	0.06	0.53	0.53
Sat Flow, veh/h	3469	3642	1543	1734	3642	1543	3469	3642	1543	3469	3481	137
Grp Volume(v), veh/h	31	776	103	44	667	133	81	978	63	104	718	710
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1821	1543	1734	1821	1543	1734	1821	1797
Q Serve(g_s), s	1.0	24.3	5.3	3.0	20.8	6.0	2.7	21.2	1.9	3.5	37.9	38.1
Cycle Q Clear(g_c), s	1.0	24.3	5.3	3.0	20.8	6.0	2.7	21.2	1.9	3.5	37.9	38.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	267	924	391	85	822	442	203	1834	770	210	921	908
V/C Ratio(X)	0.12	0.84	0.26	0.52	0.81	0.30	0.40	0.53	0.08	0.49	0.78	0.78
Avail Cap(c_a), veh/h	267	1126	477	108	1126	571	237	1834	770	217	921	908
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.05	1.05	1.05	1.05
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.6	42.5	24.1	55.7	44.0	19.4	54.3	19.0	8.6	54.4	22.8	22.9
Incr Delay (d2), s/veh	0.2	4.9	0.4	4.8	3.3	0.4	1.3	1.1	0.2	1.8	6.5	6.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	11.0	2.3	1.4	9.4	2.4	1.2	8.3	0.8	1.5	15.9	15.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.8	47.4	24.5	60.5	47.3	19.7	55.5	20.1	8.8	56.2	29.3	29.5
LnGrp LOS	D	D	C	E	D	B	E	C	A	E	C	C
Approach Vol, veh/h	910				844				1122			
Approach Delay, s/veh	45.0				43.6				22.1			
Approach LOS	D				D				C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.3	64.4	9.9	34.4	11.0	64.7	13.2	31.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.0	51.4	7.0	36.6	7.7	50.7	7.0	36.6				
Max Q Clear Time (g_c+I1), s	5.5	23.2	5.0	26.3	4.7	40.1	3.0	22.8				
Green Ext Time (p_c), s	0.0	7.1	0.0	3.7	0.0	6.1	0.0	3.8				
Intersection Summary												
HCM 6th Ctrl Delay	34.1											
HCM 6th LOS	C											

Lanes, Volumes, Timings
17: Jackson St. & 58th Avenue

2040 WP AM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	531	39	15	361	20	45	708	5	23	769	28
Future Volume (vph)	50	531	39	15	361	20	45	708	5	23	769	28
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		4534			1079			1013			510	
Travel Time (s)		61.8			14.7			12.6			6.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5		11.5	22.5		11.5	22.5	
Total Split (s)	15.0	44.4		11.6	41.0		13.0	52.4		11.6	51.0	
Total Split (%)	12.5%	37.0%		9.7%	34.2%		10.8%	43.7%		9.7%	42.5%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

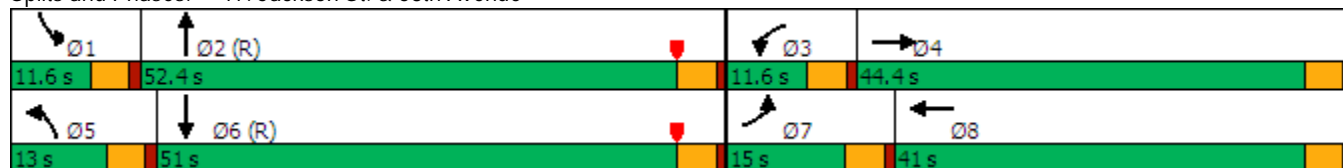
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 70





















Control Type: Actuated-Coordinated

Splits and Phases: 17: Jackson St. & 58th Avenue



HCM 6th Signalized Intersection Summary
17: Jackson St. & 58th Avenue

2040 WP AM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	531	39	15	361	20	45	708	5	23	769	28
Future Volume (veh/h)	50	531	39	15	361	20	45	708	5	23	769	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	51	542	40	15	368	20	46	722	5	23	785	29
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	83	654	48	40	585	32	79	2098	15	54	1978	73
Arrive On Green	0.05	0.20	0.20	0.02	0.18	0.18	0.05	0.60	0.60	0.03	0.58	0.58
Sat Flow, veh/h	1734	3267	241	1734	3338	181	1734	3522	24	1734	3403	126
Grp Volume(v), veh/h	51	286	296	15	190	198	46	355	372	23	399	415
Grp Sat Flow(s),veh/h/ln	1734	1730	1778	1734	1730	1789	1734	1730	1817	1734	1730	1799
Q Serve(g_s), s	3.5	19.0	19.1	1.0	12.2	12.3	3.1	12.5	12.5	1.6	15.1	15.1
Cycle Q Clear(g_c), s	3.5	19.0	19.1	1.0	12.2	12.3	3.1	12.5	12.5	1.6	15.1	15.1
Prop In Lane	1.00		0.14	1.00		0.10	1.00		0.01	1.00		0.07
Lane Grp Cap(c), veh/h	83	346	356	40	303	314	79	1031	1082	54	1006	1045
V/C Ratio(X)	0.62	0.83	0.83	0.38	0.63	0.63	0.58	0.34	0.34	0.42	0.40	0.40
Avail Cap(c_a), veh/h	152	575	591	103	526	544	123	1031	1082	103	1006	1045
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.1	46.0	46.0	57.8	45.8	45.9	56.1	12.3	12.3	57.1	13.7	13.7
Incr Delay (d2), s/veh	7.3	5.1	5.0	5.8	2.1	2.1	6.5	0.9	0.9	5.2	1.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	8.3	8.6	0.5	5.2	5.5	1.5	4.5	4.7	0.7	5.5	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.3	51.1	51.1	63.6	48.0	48.0	62.7	13.2	13.2	62.3	14.9	14.8
LnGrp LOS	E	D	D	E	D	D	E	B	B	E	B	B
Approach Vol, veh/h	633			403			773			837		
Approach Delay, s/veh	52.1			48.5			16.2			16.1		
Approach LOS	D			D			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.2	76.0	7.3	28.5	10.0	74.2	10.2	25.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.1	47.9	7.1	39.9	8.5	46.5	10.5	36.5				
Max Q Clear Time (g_c+I1), s	3.6	14.5	3.0	21.1	5.1	17.1	5.5	14.3				
Green Ext Time (p_c), s	0.0	4.0	0.0	2.9	0.0	4.6	0.0	1.9				
Intersection Summary												
HCM 6th Ctrl Delay	29.7											
HCM 6th LOS	C											

Lanes, Volumes, Timings
18: Avenue 60 & S. Access

2040 WP AM Peak hour






Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	684	1379	24	72	1
Future Volume (vph)	1	684	1379	24	72	1
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		25	
Link Distance (ft)		207	799		380	
Travel Time (s)		3.5	13.6		10.4	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
18: Avenue 60 & S. Access

2040 WP AM Peak hour

Intersection

Int Delay, s/veh 1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	684	1379	24	72	1
Future Vol, veh/h	1	684	1379	24	72	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	698	1407	24	73	1












Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1431	0	0 2119 1419
Stage 1	-	-	- 1419 -
Stage 2	-	-	- 700 -
Critical Hdwy	4.12	-	- 6 6
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 2.6 2.6
Pot Cap-1 Maneuver	475	-	- 79 208
Stage 1	-	-	- 261 -
Stage 2	-	-	- 615 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	475	-	- 79 208
Mov Cap-2 Maneuver	-	-	- 196 -
Stage 1	-	-	- 260 -
Stage 2	-	-	- 615 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	34.2
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	475	-	-	-	196
HCM Lane V/C Ratio	0.002	-	-	-	0.38
HCM Control Delay (s)	12.6	0	-	-	34.2
HCM Lane LOS	B	A	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	1.7







Lanes, Volumes, Timings
19: Madison St. & Main Access

2040 WP AM Peak hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	207	15	19	576	1083	67
Future Volume (vph)	207	15	19	576	1083	67
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100	0	150			0
Storage Lanes	1	1	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	25			50	50	
Link Distance (ft)	499			880	169	
Travel Time (s)	13.6			12.0	2.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					












HCM 6th TWSC
19: Madison St. & Main Access

2040 WP AM Peak hour

Intersection						
Int Delay, s/veh	12.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	207	15	19	576	1083	67
Future Vol, veh/h	207	15	19	576	1083	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	211	15	19	588	1105	68
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1471	587	1173	0	-	0
Stage 1	1139	-	-	-	-	-
Stage 2	332	-	-	-	-	-
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	~ 118	453	591	-	-	-
Stage 1	267	-	-	-	-	-
Stage 2	699	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 114	453	591	-	-	-
Mov Cap-2 Maneuver	~ 209	-	-	-	-	-
Stage 1	258	-	-	-	-	-
Stage 2	699	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	106.4	0.4		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	591	-	209	453	-	-
HCM Lane V/C Ratio	0.033	-	1.011	0.034	-	-
HCM Control Delay (s)	11.3	-	113.2	13.2	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	9	0.1	-	-
Notes						
-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						

Lanes, Volumes, Timings
19: Madison St. & Main Access

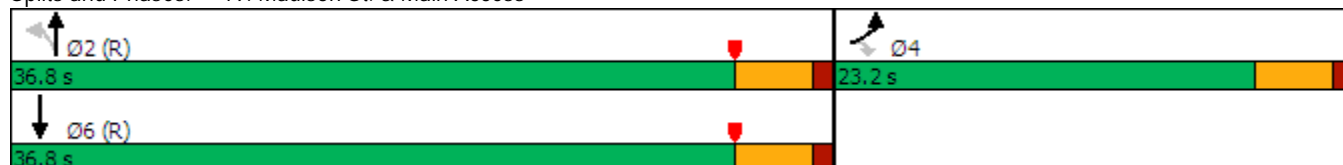
2040 WP AM Peak hour
With Additional Improvements

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	207	15	19	576	1083	67
Future Volume (vph)	207	15	19	576	1083	67
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100	0	150			0
Storage Lanes	1	1	1			0
Taper Length (ft)	90		90			
Right Turn on Red		Yes				Yes
Link Speed (mph)	25			50	50	
Link Distance (ft)	499			880	169	
Travel Time (s)	13.6			12.0	2.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4	2			
Detector Phase	4	4	2	2	6	
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	
Total Split (s)	23.2	23.2	36.8	36.8	36.8	
Total Split (%)	38.7%	38.7%	61.3%	61.3%	61.3%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
Natural Cycle: 50
Control Type: Actuated-Coordinated












Splits and Phases: 19: Madison St. & Main Access



HCM 6th Signalized Intersection Summary











19: Madison St. & Main Access

2040 WP AM Peak hour
With Additional Improvements

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	207	15	19	576	1083	67
Future Volume (veh/h)	207	15	19	576	1083	67
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	211	15	19	588	1105	68
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	268	238	380	2407	2303	142
Arrive On Green	0.15	0.15	0.70	0.70	0.70	0.70
Sat Flow, veh/h	1734	1543	478	3551	3402	204
Grp Volume(v), veh/h	211	15	19	588	577	596
Grp Sat Flow(s),veh/h/ln	1734	1543	478	1730	1730	1784
Q Serve(g_s), s	7.0	0.5	1.1	3.7	9.1	9.2
Cycle Q Clear(g_c), s	7.0	0.5	10.3	3.7	9.1	9.2
Prop In Lane	1.00	1.00	1.00			0.11
Lane Grp Cap(c), veh/h	268	238	380	2407	1204	1241
V/C Ratio(X)	0.79	0.06	0.05	0.24	0.48	0.48
Avail Cap(c_a), veh/h	541	481	380	2407	1204	1241
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.4	21.7	6.5	3.3	4.2	4.2
Incr Delay (d2), s/veh	5.1	0.1	0.2	0.2	1.4	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.2	0.1	0.5	1.6	1.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.6	21.8	6.8	3.6	5.5	5.5
LnGrp LOS	C	C	A	A	A	A
Approach Vol, veh/h	226			607	1173	
Approach Delay, s/veh	29.0			3.7	5.5	
Approach LOS	C			A	A	
Timer - Assigned Phs	2			4		6
Phs Duration (G+Y+Rc), s	46.2			13.8		46.2
Change Period (Y+Rc), s	4.5			4.5		4.5
Max Green Setting (Gmax), s	32.3			18.7		32.3
Max Q Clear Time (g_c+I1), s	12.3			9.0		11.2
Green Ext Time (p_c), s	3.6			0.5		7.1
Intersection Summary						
HCM 6th Ctrl Delay			7.6			
HCM 6th LOS			A			

Lanes, Volumes, Timings
20: Project Access 1 & Avenue 58

2040 WP AM Peak hour

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	546	5	16	355	5	2
Future Volume (vph)	546	5	16	355	5	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)		0	50		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			60		60	
Link Speed (mph)	50			50	25	
Link Distance (ft)	403			335	383	
Travel Time (s)	5.5			4.6	10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
20: Project Access 1 & Avenue 58

2040 WP AM Peak hour

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↘	
Traffic Vol, veh/h	546	5	16	355	5	2
Future Vol, veh/h	546	5	16	355	5	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	593	5	17	386	5	2










Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	598	0	823	299
Stage 1	-	-	-	-	596	-
Stage 2	-	-	-	-	227	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	975	-	312	697
Stage 1	-	-	-	-	513	-
Stage 2	-	-	-	-	789	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	975	-	307	697
Mov Cap-2 Maneuver	-	-	-	-	407	-
Stage 1	-	-	-	-	504	-
Stage 2	-	-	-	-	789	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	12.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	462	-	-	975	-
HCM Lane V/C Ratio	0.016	-	-	0.018	-
HCM Control Delay (s)	12.9	-	-	8.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Lanes, Volumes, Timings
21: Project Access 2 & Avenue 58












2040 WP AM Peak hour

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	540	8	0	371	0	3
Future Volume (vph)	540	8	0	371	0	3
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	50			50	25	
Link Distance (ft)	335			276	233	
Travel Time (s)	4.6			3.8	6.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↱			↑↑		↱
Traffic Vol, veh/h	540	8	0	371	0	3
Future Vol, veh/h	540	8	0	371	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	587	9	0	403	0	3
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	298
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	698
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	698
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		10.2	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	698	-	-	-		
HCM Lane V/C Ratio	0.005	-	-	-		
HCM Control Delay (s)	10.2	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0	-	-	-		

Lanes, Volumes, Timings
22: Madison St. & Project Access 3

2040 WP AM Peak hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				 	 	
Traffic Volume (vph)	0	6	0	783	1144	13
Future Volume (vph)	0	6	0	783	1144	13
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	25			50	50	
Link Distance (ft)	210			224	288	
Travel Time (s)	5.7			3.1	3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
























HCM 6th TWSC
22: Madison St. & Project Access 3

2040 WP AM Peak hour

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	6	0	783	1144	13
Future Vol, veh/h	0	6	0	783	1144	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	7	0	851	1243	14
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	629	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	425	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	425	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	13.6	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT EBLn1		SBT	SBR		
Capacity (veh/h)	- 425		-	-		
HCM Lane V/C Ratio	- 0.015		-	-		
HCM Control Delay (s)	- 13.6		-	-		
HCM Lane LOS	- B		-	-		
HCM 95th %tile Q(veh)	- 0		-	-		

Lanes, Volumes, Timings
1: Madison St. & Avenue 58

2040 WP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	292	227	45	101	269	684	80	1120	64	413	1045	350
Future Volume (vph)	292	227	45	101	269	684	80	1120	64	413	1045	350
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	24.0	28.1		18.4	22.5	32.0	16.9	41.5	41.5	32.0	56.6	56.6
Total Split (%)	20.0%	23.4%		15.3%	18.8%	26.7%	14.1%	34.6%	34.6%	26.7%	47.2%	47.2%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

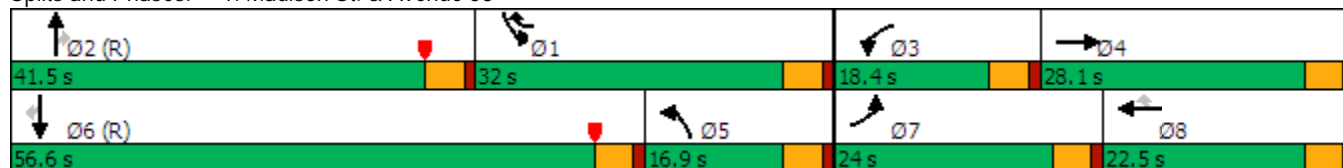
Actuated Cycle Length: 120

Offset: 87.9 (73%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 120

Control Type: Actuated-Coordinated




























Splits and Phases: 1: Madison St. & Avenue 58



HCM 6th Signalized Intersection Summary
























1: Madison St. & Avenue 58

2040 WP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	292	227	45	101	269	684	80	1120	64	413	1045	350
Future Volume (veh/h)	292	227	45	101	269	684	80	1120	64	413	1045	350
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	298	232	46	103	274	698	82	1143	65	421	1066	357
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	282	674	131	127	500	585	189	1067	476	407	1502	670
Arrive On Green	0.16	0.23	0.23	0.07	0.14	0.14	0.11	0.31	0.31	0.23	0.43	0.43
Sat Flow, veh/h	1734	2887	563	1734	3460	1543	1734	3460	1543	1734	3460	1543
Grp Volume(v), veh/h	298	137	141	103	274	698	82	1143	65	421	1066	357
Grp Sat Flow(s),veh/h/ln	1734	1730	1720	1734	1730	1543	1734	1730	1543	1734	1730	1543
Q Serve(g_s), s	19.5	7.9	8.2	7.0	8.8	14.7	5.3	37.0	2.9	28.2	30.2	11.9
Cycle Q Clear(g_c), s	19.5	7.9	8.2	7.0	8.8	14.7	5.3	37.0	2.9	28.2	30.2	11.9
Prop In Lane	1.00		0.33	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	282	404	402	127	500	585	189	1067	476	407	1502	670
V/C Ratio(X)	1.06	0.34	0.35	0.81	0.55	1.19	0.43	1.07	0.14	1.03	0.71	0.53
Avail Cap(c_a), veh/h	282	404	402	201	519	594	189	1067	476	407	1502	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.3	38.3	38.4	54.8	47.7	15.4	50.0	41.5	18.5	45.9	27.8	8.4
Incr Delay (d2), s/veh	69.5	0.5	0.5	12.4	1.1	102.8	1.6	48.8	0.6	53.6	2.9	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.6	3.3	3.4	3.4	3.8	24.0	2.3	22.1	1.4	17.6	12.2	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	119.8	38.8	38.9	67.1	48.8	118.2	51.6	90.3	19.1	99.5	30.6	11.4
LnGrp LOS	F	D	D	E	D	F	D	F	B	F	C	B
Approach Vol, veh/h	576		1075				1290		1844			
Approach Delay, s/veh	80.7		95.7				84.2		42.6			
Approach LOS	F		F				F		D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	32.7	41.5	13.3	32.5	17.6	56.6	24.0	21.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	27.5	37.0	13.9	23.6	12.4	52.1	19.5	18.0				
Max Q Clear Time (g_c+I1), s	30.2	39.0	9.0	10.2	7.3	32.2	21.5	16.7				
Green Ext Time (p_c), s	0.0	0.0	0.1	1.1	0.1	8.2	0.0	0.7				
Intersection Summary												
HCM 6th Ctrl Delay	70.3											
HCM 6th LOS	E											

Lanes, Volumes, Timings
1: Madison St. & Avenue 58

2040 WP PM Peak hour
With Additional Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	292	227	45	101	269	684	80	1120	64	413	1045	350
Future Volume (vph)	292	227	45	101	269	684	80	1120	64	413	1045	350
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8			2			6
Detector Phase	7	4		3	8	1	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	15.8	25.5		12.8	22.5	37.0	16.9	44.7	44.7	37.0	64.8	64.8
Total Split (%)	13.2%	21.3%		10.7%	18.8%	30.8%	14.1%	37.3%	37.3%	30.8%	54.0%	54.0%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

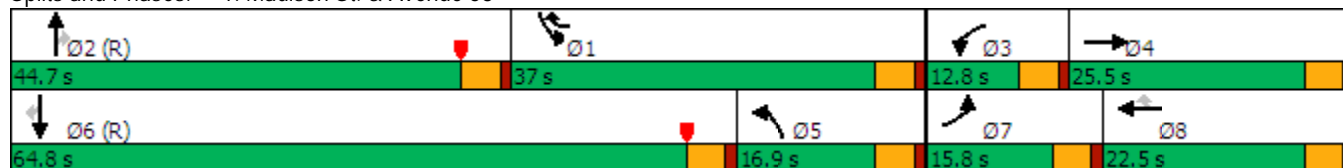
Actuated Cycle Length: 120

Offset: 103 (86%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 120

Control Type: Actuated-Coordinated
























Splits and Phases: 1: Madison St. & Avenue 58



HCM 6th Signalized Intersection Summary















1: Madison St. & Avenue 58

2040 WP PM Peak hour
With Additional Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	292	227	45	101	269	684	80	1120	64	413	1045	350
Future Volume (veh/h)	292	227	45	101	269	684	80	1120	64	413	1045	350
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	298	232	46	103	274	698	82	1143	65	421	1066	357
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	317	253	50	120	508	649	185	1159	517	475	1739	776
Arrive On Green	0.09	0.17	0.17	0.07	0.15	0.15	0.11	0.34	0.34	0.27	0.50	0.50
Sat Flow, veh/h	3365	1476	293	1734	3460	1543	1734	3460	1543	1734	3460	1543
Grp Volume(v), veh/h	298	0	278	103	274	698	82	1143	65	421	1066	357
Grp Sat Flow(s),veh/h/ln	1682	0	1768	1734	1730	1543	1734	1730	1543	1734	1730	1543
Q Serve(g_s), s	10.6	0.0	18.5	7.1	8.8	11.5	5.3	39.4	2.7	27.9	26.6	11.9
Cycle Q Clear(g_c), s	10.6	0.0	18.5	7.1	8.8	11.5	5.3	39.4	2.7	27.9	26.6	11.9
Prop In Lane	1.00		0.17	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	317	0	304	120	508	649	185	1159	517	475	1739	776
V/C Ratio(X)	0.94	0.00	0.92	0.86	0.54	1.07	0.44	0.99	0.13	0.89	0.61	0.46
Avail Cap(c_a), veh/h	317	0	309	120	519	655	185	1159	517	475	1739	776
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.0	0.0	48.8	55.3	47.4	16.2	50.3	39.6	17.0	41.7	21.5	8.4
Incr Delay (d2), s/veh	35.2	0.0	30.1	42.5	1.1	57.1	1.7	23.3	0.5	17.8	1.6	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	0.0	10.4	4.4	3.7	20.0	2.3	19.4	1.3	13.7	10.3	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.2	0.0	79.0	97.8	48.5	73.3	51.9	62.9	17.5	59.6	23.1	10.4
LnGrp LOS	F	A	E	F	D	F	D	E	B	E	C	B
Approach Vol, veh/h	576		1075				1290				1844	
Approach Delay, s/veh	84.3		69.3				59.9				29.0	
Approach LOS	F		E				E				C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	37.4	44.7	12.8	25.1	17.3	64.8	15.8	22.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	32.5	40.2	8.3	21.0	12.4	60.3	11.3	18.0				
Max Q Clear Time (g_c+I1), s	29.9	41.4	9.1	20.5	7.3	28.6	12.6	13.5				
Green Ext Time (p_c), s	0.4	0.0	0.0	0.1	0.1	9.7	0.0	1.9				
Intersection Summary												
HCM 6th Ctrl Delay	53.0											
HCM 6th LOS	D											

Lanes, Volumes, Timings
2: Madison St. & Airport Bl.

2040 WP PM Peak hour

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	365	332	1	1712	313	146	1414
Future Volume (vph)	365	332	1	1712	313	146	1414
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		8			2		
Detector Phase	3	8	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	20.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	33.0	33.0	11.5	70.0	70.0	17.0	75.5
Total Split (%)	27.5%	27.5%	9.6%	58.3%	58.3%	14.2%	62.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated















Splits and Phases: 2: Madison St. & Airport Bl.



HCM 6th Signalized Intersection Summary

























2: Madison St. & Airport Bl.

2040 WP PM Peak hour

							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	365	332	1	1712	313	146	1414
Future Volume (veh/h)	365	332	1	1712	313	146	1414
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	372	339		1747	319	149	1443
Peak Hour Factor	0.98	0.98		0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	412	366		1903	849	195	2408
Arrive On Green	0.24	0.24		0.55	0.55	0.11	0.70
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	372	339		1747	319	149	1443
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	25.0	25.8		55.1	4.3	10.0	26.1
Cycle Q Clear(g_c), s	25.0	25.8		55.1	4.3	10.0	26.1
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	412	366		1903	849	195	2408
V/C Ratio(X)	0.90	0.93		0.92	0.38	0.76	0.60
Avail Cap(c_a), veh/h	419	373		1903	849	195	2408
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.4	44.7		24.5	1.5	51.7	9.5
Incr Delay (d2), s/veh	17.1	22.3		8.6	1.3	16.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	11.7		22.0	3.9	5.1	8.2
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	61.6	67.0		33.1	2.8	67.9	10.6
LnGrp LOS	E	E		C	A	E	B
Approach Vol, veh/h	711			2066			1592
Approach Delay, s/veh	64.1			28.4			16.0
Approach LOS	E			C			B
Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	17.5	70.0				87.5	32.5
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	12.5	65.5				71.0	28.5
Max Q Clear Time (g_c+I1), s	12.0	57.1				28.1	27.8
Green Ext Time (p_c), s	0.0	6.7				13.4	0.2
Intersection Summary							
HCM 6th Ctrl Delay			29.7				
HCM 6th LOS			C				
Notes							
User approved ignoring U-Turning movement.							

Lanes, Volumes, Timings
3: Madison St. & Avenue 54

2040 WP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	521	1231	114	450	470	804	1503	229	263	969	51
Future Volume (vph)	84	521	1231	114	450	470	804	1503	229	263	969	51
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		1	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Free	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			Free			8			2			
Detector Phase	7	4		3	8	1	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5	22.5	11.5	22.5	
Total Split (s)	11.5	23.1		13.2	24.8	24.0	35.4	59.7	59.7	24.0	48.3	
Total Split (%)	9.6%	19.3%		11.0%	20.7%	20.0%	29.5%	49.8%	49.8%	20.0%	40.3%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

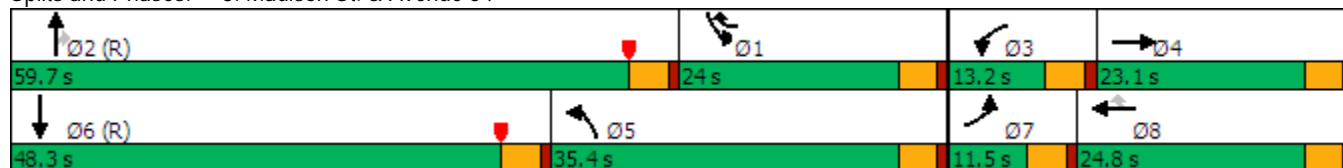
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110

Control Type: Actuated-Coordinated

























Splits and Phases: 3: Madison St. & Avenue 54



HCM 6th Signalized Intersection Summary

3: Madison St. & Avenue 54

2040 WP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	521	1231	114	450	470	804	1503	229	263	969	51
Future Volume (veh/h)	84	521	1231	114	450	470	804	1503	229	263	969	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	86	532	0	116	459	480	820	1534	234	268	989	52
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	101	536		126	585	512	866	1592	710	282	1220	64
Arrive On Green	0.06	0.15	0.00	0.07	0.17	0.17	0.26	0.46	0.46	0.16	0.36	0.36
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	1734	3344	176
Grp Volume(v), veh/h	86	532	0	116	459	480	820	1534	234	268	512	529
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1734	1730	1789
Q Serve(g_s), s	5.9	18.4	0.0	8.0	15.2	12.6	28.7	51.6	8.4	18.4	32.0	32.0
Cycle Q Clear(g_c), s	5.9	18.4	0.0	8.0	15.2	12.6	28.7	51.6	8.4	18.4	32.0	32.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	101	536		126	585	512	866	1592	710	282	631	653
V/C Ratio(X)	0.85	0.99		0.92	0.78	0.94	0.95	0.96	0.33	0.95	0.81	0.81
Avail Cap(c_a), veh/h	101	536		126	585	512	866	1592	710	282	631	653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	50.6	0.0	55.3	47.8	24.6	43.7	31.4	10.9	49.8	34.4	34.4
Incr Delay (d2), s/veh	6.3	9.9	0.0	56.9	6.9	25.2	18.9	15.4	1.2	40.4	10.8	10.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	8.3	0.0	5.3	6.8	15.8	13.6	23.0	3.9	10.8	14.5	14.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.3	60.5	0.0	112.2	54.7	49.8	62.6	46.9	12.1	90.1	45.2	44.8
LnGrp LOS	E	E		F	D	D	E	D	B	F	D	D
Approach Vol, veh/h			618	A			1055			2588		
Approach Delay, s/veh			60.7				58.8			48.7		
Approach LOS			E				E			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	24.0	59.7	13.2	23.1	35.4	48.3	11.5	24.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	19.5	55.2	8.7	18.6	30.9	43.8	7.0	20.3				
Max Q Clear Time (g_c+I1), s	20.4	53.6	10.0	20.4	30.7	34.0	7.9	17.2				
Green Ext Time (p_c), s	0.0	1.3	0.0	0.0	0.1	4.1	0.0	1.4				

Intersection Summary

























HCM 6th Ctrl Delay	53.3
HCM 6th LOS	D

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
4: Madison St. & Avenue 52

2040 WP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	696	133	123	940	224	285	1395	180	223	979	139
Future Volume (vph)	135	696	133	123	940	224	285	1395	180	223	979	139
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	14.6	36.9	36.9	16.8	39.1	39.1	18.0	53.0	53.0	13.3	48.3	48.3
Total Split (%)	12.2%	30.8%	30.8%	14.0%	32.6%	32.6%	15.0%	44.2%	44.2%	11.1%	40.3%	40.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

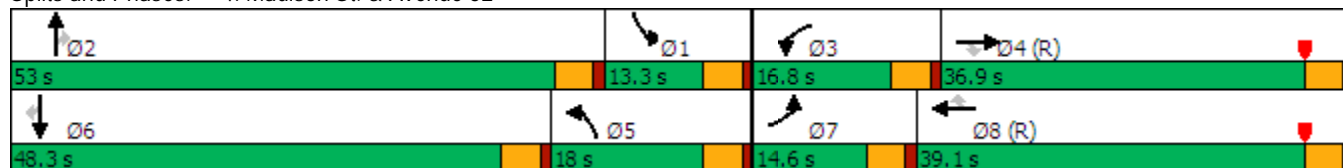
Actuated Cycle Length: 120

Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 125
























Control Type: Actuated-Coordinated

Splits and Phases: 4: Madison St. & Avenue 52



























HCM 6th Signalized Intersection Summary 4: Madison St. & Avenue 52

2040 WP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	696	133	123	940	224	285	1395	180	223	979	139
Future Volume (veh/h)	135	696	133	123	940	224	285	1395	180	223	979	139
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	138	710	136	126	959	229	291	1423	184	228	999	142
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	146	987	440	151	998	445	379	1398	624	247	1263	563
Arrive On Green	0.08	0.29	0.29	0.09	0.29	0.29	0.11	0.40	0.40	0.07	0.36	0.36
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	138	710	136	126	959	229	291	1423	184	228	999	142
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	9.5	22.1	6.1	8.6	32.7	11.8	10.1	48.5	7.0	8.1	30.9	5.8
Cycle Q Clear(g_c), s	9.5	22.1	6.1	8.6	32.7	11.8	10.1	48.5	7.0	8.1	30.9	5.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	146	987	440	151	998	445	379	1398	624	247	1263	563
V/C Ratio(X)	0.95	0.72	0.31	0.83	0.96	0.51	0.77	1.02	0.29	0.92	0.79	0.25
Avail Cap(c_a), veh/h	146	987	440	178	998	445	379	1398	624	247	1263	563
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.7	38.6	18.3	53.9	42.0	22.4	51.7	35.7	12.8	55.3	34.0	15.0
Incr Delay (d2), s/veh	58.0	4.5	1.8	24.4	20.5	4.2	9.3	28.5	1.2	37.3	5.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	9.7	3.1	4.6	15.9	4.5	4.6	24.4	3.4	4.6	13.1	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	112.7	43.1	20.1	78.3	62.6	26.6	61.0	64.3	14.0	92.6	39.1	16.0
LnGrp LOS	F	D	C	E	E	C	E	F	B	F	D	B
Approach Vol, veh/h	984				1314				1898			
Approach Delay, s/veh	49.7				57.8				58.9		45.6	
Approach LOS	D				E				E		D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.3	53.0	15.0	38.7	18.0	48.3	14.6	39.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	8.8	48.5	12.3	32.4	13.5	43.8	10.1	34.6				
Max Q Clear Time (g_c+I1), s	10.1	50.5	10.6	24.1	12.1	32.9	11.5	34.7				
Green Ext Time (p_c), s	0.0	0.0	0.0	3.1	0.1	5.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	53.8											
HCM 6th LOS	D											

Lanes, Volumes, Timings
5: Madison St. & Avenue 50/50th Avenue

2040 WP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	264	822	189	78	909	439	204	1546	73	352	1257	277
Future Volume (vph)	264	822	189	78	909	439	204	1546	73	352	1257	277
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	11.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	22.0	44.8	44.8	13.2	36.0	17.8	12.5	44.2	44.2	17.8	49.5	49.5
Total Split (%)	18.3%	37.3%	37.3%	11.0%	30.0%	14.8%	10.4%	36.8%	36.8%	14.8%	41.3%	41.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	None	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

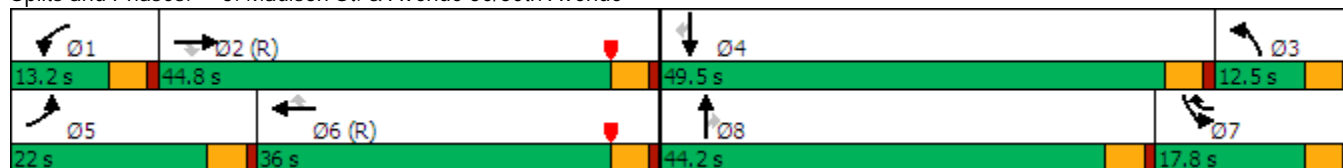
Actuated Cycle Length: 120

Offset: 77.7 (65%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 125
































Control Type: Actuated-Coordinated

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue



























HCM 6th Signalized Intersection Summary 5: Madison St. & Avenue 50/50th Avenue

2040 WP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	  		 	 	
Traffic Volume (veh/h)	264	822	189	78	909	439	204	1546	73	352	1257	277
Future Volume (veh/h)	264	822	189	78	909	439	204	1546	73	352	1257	277
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	269	839	193	80	928	448	208	1578	74	359	1283	283
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	253	1213	541	100	908	576	224	1645	511	373	1298	579
Arrive On Green	0.18	0.42	0.42	0.07	0.31	0.31	0.08	0.40	0.40	0.13	0.45	0.45
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	4972	1543	3365	3460	1543
Grp Volume(v), veh/h	269	839	193	80	928	448	208	1578	74	359	1283	283
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1657	1543	1682	1730	1543
Q Serve(g_s), s	17.5	23.8	8.0	5.5	31.5	12.5	7.4	37.1	3.0	12.7	44.1	10.0
Cycle Q Clear(g_c), s	17.5	23.8	8.0	5.5	31.5	12.5	7.4	37.1	3.0	12.7	44.1	10.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	253	1213	541	100	908	576	224	1645	511	373	1298	579
V/C Ratio(X)	1.06	0.69	0.36	0.80	1.02	0.78	0.93	0.96	0.14	0.96	0.99	0.49
Avail Cap(c_a), veh/h	253	1213	541	126	908	576	224	1645	511	373	1298	579
HCM Platoon Ratio	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.5	29.5	15.6	55.1	41.1	15.0	54.9	35.4	16.3	51.8	32.7	10.4
Incr Delay (d2), s/veh	74.4	3.3	1.8	23.9	35.5	9.9	40.5	14.4	0.6	36.8	22.4	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.3	9.4	3.6	3.0	16.6	6.4	4.2	15.4	1.4	7.0	20.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	123.9	32.7	17.5	79.0	76.6	24.9	95.4	49.8	16.9	88.5	55.2	13.3
LnGrp LOS	F	C	B	E	F	C	F	D	B	F	E	B
Approach Vol, veh/h	1301			1456			1860			1925		
Approach Delay, s/veh	49.3			60.8			53.6			55.3		
Approach LOS	D			E			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.4	46.6	12.5	49.5	22.0	36.0	17.8	44.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	8.7	40.3	8.0	45.0	17.5	31.5	13.3	39.7				
Max Q Clear Time (g_c+I1), s	7.5	25.8	9.4	46.1	19.5	33.5	14.7	39.1				
Green Ext Time (p_c), s	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.5				
Intersection Summary												
HCM 6th Ctrl Delay	54.8											
HCM 6th LOS	D											

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54

2040 WP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	24	2	34	11	1395	6	251	53	1747	315	2
Future Volume (vph)	31	24	2	34	11	1395	6	251	53	1747	315	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		1	1		0	1		1	2		1
Taper Length (ft)	0			110			90			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6	7	3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	7	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	11.5	22.9	22.9	11.5	22.9	63.1	22.5	22.5	22.5	63.1	63.1	63.1
Total Split (%)	9.6%	19.1%	19.1%	9.6%	19.1%	52.6%	18.8%	18.8%	18.8%	52.6%	52.6%	52.6%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	None	Max	Max	Max	Max	Max	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

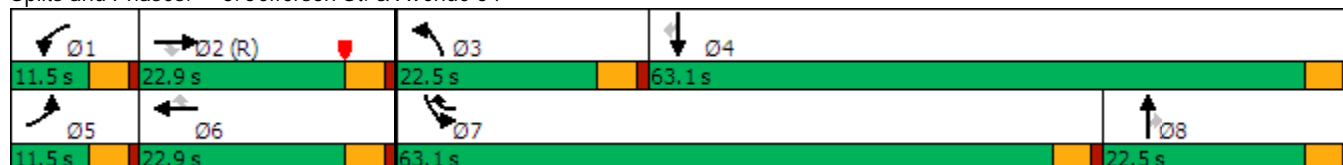
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT, Start of Yellow

Natural Cycle: 130

























Control Type: Actuated-Coordinated

Splits and Phases: 6: Jefferson St. & Avenue 54























HCM 6th Signalized Intersection Summary 6: Jefferson St. & Avenue 54

2040 WP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	24	2	34	11	1395	6	251	53	1747	315	2
Future Volume (veh/h)	31	24	2	34	11	1395	6	251	53	1747	315	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	32	24	2	35	11	1423	6	256	54	1783	321	2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	66	312	265	70	316	1797	260	519	232	1643	1690	754
Arrive On Green	0.04	0.17	0.17	0.04	0.17	0.17	0.15	0.15	0.15	0.49	0.49	0.49
Sat Flow, veh/h	1734	1821	1543	1734	1821	2716	1734	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	32	24	2	35	11	1423	6	256	54	1783	321	2
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1821	1358	1734	1730	1543	1682	1730	1543
Q Serve(g_s), s	2.2	1.3	0.1	2.4	0.6	20.8	0.4	8.1	3.7	58.6	6.3	0.1
Cycle Q Clear(g_c), s	2.2	1.3	0.1	2.4	0.6	20.8	0.4	8.1	3.7	58.6	6.3	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	66	312	265	70	316	1797	260	519	232	1643	1690	754
V/C Ratio(X)	0.48	0.08	0.01	0.50	0.03	0.79	0.02	0.49	0.23	1.09	0.19	0.00
Avail Cap(c_a), veh/h	101	312	265	101	316	1797	260	519	232	1643	1690	754
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.5	41.7	41.2	56.4	41.2	14.4	43.5	46.8	44.9	30.7	17.3	15.7
Incr Delay (d2), s/veh	5.3	0.5	0.1	1.8	0.0	0.8	0.2	3.3	2.3	49.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.6	0.1	1.0	0.3	11.1	0.2	3.6	1.5	32.2	2.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.9	42.2	41.3	58.3	41.3	15.3	43.7	50.1	47.3	79.9	17.6	15.7
LnGrp LOS	E	D	D	E	D	B	D	D	D	F	B	B
Approach Vol, veh/h	58			1469			316			2106		
Approach Delay, s/veh	53.0			16.5			49.5			70.3		
Approach LOS	D			B			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.3	25.1	22.5	63.1	9.1	25.3	63.1	22.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.0	18.4	18.0	58.6	7.0	18.4	58.6	18.0				
Max Q Clear Time (g_c+I1), s	4.4	3.3	2.4	8.3	4.2	22.8	60.6	10.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay	48.4											
HCM 6th LOS	D											

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52

2040 WP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	122	553	547	34	885	565	593	1046	99	258	1179	216
Future Volume (vph)	122	553	547	34	885	565	593	1046	99	258	1179	216
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											

The Wave - Coral Mountain TIA (JN:12615)
2040 With Project
PM Peak Hour























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                        Level Of Service Computation Report
                        FHWA Roundabout Method (Base Volume Alternative)
*****
Intersection #7 Jefferson St. / Avenue 52
*****
Average Delay (sec/veh):      9.1      Level Of Service: A
*****
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Control:      Yield Sign      Yield Sign      Yield Sign      Yield Sign
Lanes:      2      2      3      3
-----|-----|-----|-----|
Volume Module:
Base Vol:      593 1046      99      258 1179      216      122 553      547      34 885      565
Growth Adj:      1.00 1.00      1.00      1.00 1.00      1.00      1.00 1.00      1.00      1.00 1.00      1.00
Initial Bse:      593 1046      99      258 1179      216      122 553      547      34 885      565
User Adj:      1.00 1.00      1.00      1.00 1.00      1.00      1.00 1.00      0.00      1.00 1.00      0.00
PHF Adj:      0.98 0.98      0.98      0.98 0.98      0.98      0.98 0.98      0.00      0.98 0.98      0.00
PHF Volume:      605 1067      101      263 1203      220      124 564      0      35 903      0
Reduct Vol:      0      0      0      0      0      0      0      0      0      0      0      0
Reduced Vol:      605 1067      101      263 1203      220      124 564      0      35 903      0
PCE Adj:      1.00 1.00      1.00      1.00 1.00      1.00      1.00 1.00      0.00      1.00 1.00      0.00
MLF Adj:      1.00 1.00      1.00      1.00 1.00      1.00      1.00 1.00      0.00      1.00 1.00      0.00
FinalVolume:      605 1067      101      263 1203      220      124 564      0      35 903      0
-----|-----|-----|-----|
PCE Module:
AutoPCE:      605 1067      101      263 1203      220      124 564      0      35 903      0
TruckPCE:      0      0      0      0      0      0      0      0      0      0      0      0
ComboPCE:      0      0      0      0      0      0      0      0      0      0      0      0
BicyclePCE:      0      0      0      0      0      0      0      0      0      0      0      0
AdjVolume:      605 1067      101      263 1203      220      124 564      0      35 903      0
-----|-----|-----|-----|
Delay Module: >> Time Period: 0.25 hours <<
CircVolume:      263      605      1466      1672
MaxVolume:      2234      1988      xxxxxx      xxxxxx
PedVolume:      0      0      0      0
AdjMaxVol:      2234      1988      xxxxxx      xxxxxx
ApproachVol:      1773      1687      xxxxxx      xxxxxx
ApproachV/C:      0.79      0.85      1.00      1.00
ApproachDel:      7.4      10.8      xxxxxx      xxxxxx
ApproachLOS:      A      B      *      *
Queue:      9.9      12.6      xxxx      xxxx

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Lanes, Volumes, Timings 8: Jefferson St. & Pomelo

2040 WP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	2	21	9	1	42	3	1834	7	23	1673	68
Future Volume (vph)	66	2	21	9	1	42	3	1834	7	23	1673	68
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	54.0		18.0	54.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	15.0%	45.0%		15.0%	45.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary

Area Type: Other

Cycle Length: 120

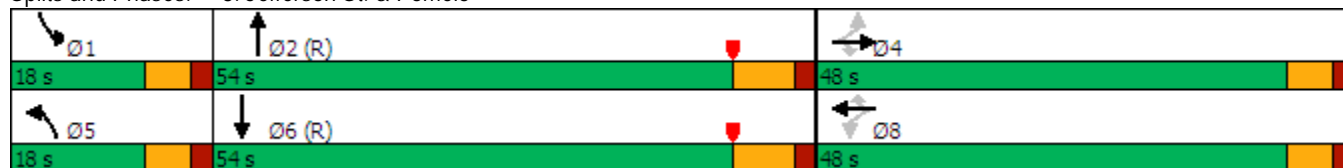
Actuated Cycle Length: 120

Offset: 30 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110























Control Type: Actuated-Coordinated

Splits and Phases: 8: Jefferson St. & Pomelo



























HCM 6th Signalized Intersection Summary 8: Jefferson St. & Pomelo

2040 WP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	2	21	9	1	42	3	1834	7	23	1673	68
Future Volume (veh/h)	66	2	21	9	1	42	3	1834	7	23	1673	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	67	2	21	9	1	43	3	1871	7	23	1707	69
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	73	1	514	66	4	514	17	2304	9	93	2425	98
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.01	0.45	0.45	0.11	0.99	0.99
Sat Flow, veh/h	41	4	1543	28	13	1543	1734	5113	19	1734	4902	198
Grp Volume(v), veh/h	69	0	21	10	0	43	3	1213	665	23	1154	622
Grp Sat Flow(s),veh/h/ln	45	0	1543	41	0	1543	1734	1657	1818	1734	1657	1785
Q Serve(g_s), s	1.2	0.0	1.1	0.6	0.0	2.3	0.2	38.0	38.0	1.5	1.5	1.5
Cycle Q Clear(g_c), s	40.0	0.0	1.1	39.7	0.0	2.3	0.2	38.0	38.0	1.5	1.5	1.5
Prop In Lane	0.97		1.00	0.90		1.00	1.00		0.01	1.00		0.11
Lane Grp Cap(c), veh/h	74	0	514	71	0	514	17	1494	819	93	1640	883
V/C Ratio(X)	0.93	0.00	0.04	0.14	0.00	0.08	0.18	0.81	0.81	0.25	0.70	0.70
Avail Cap(c_a), veh/h	97	0	540	94	0	540	173	1494	819	173	1640	883
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.54	0.54	0.54
Uniform Delay (d), s/veh	59.3	0.0	27.0	46.2	0.0	27.4	59.0	28.6	28.6	51.4	0.3	0.3
Incr Delay (d2), s/veh	69.5	0.0	0.1	1.9	0.0	0.1	10.9	4.9	8.6	1.6	1.4	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	0.4	0.3	0.0	0.9	0.1	14.7	17.0	0.6	0.5	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	128.9	0.0	27.1	48.1	0.0	27.6	69.8	33.5	37.2	52.9	1.7	2.9
LnGrp LOS	F	A	C	D	A	C	E	C	D	D	A	A
Approach Vol, veh/h	90			53			1881			1799		
Approach Delay, s/veh	105.1			31.5			34.8			2.8		
Approach LOS	F			C			C			A		
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	12.4	60.8	46.8		7.1	66.0	46.8					
Change Period (Y+Rc), s	6.0	7.5	6.0		6.0	7.5	6.0					
Max Green Setting (Gmax), s	12.0	46.5	42.0		12.0	46.5	42.0					
Max Q Clear Time (g_c+I1), s	3.5	40.0	42.0		2.2	3.5	41.7					
Green Ext Time (p_c), s	0.0	6.0	0.0		0.0	30.0	0.0					
Intersection Summary												
HCM 6th Ctrl Delay	21.4											
HCM 6th LOS	C											

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

2040 WP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	362	506	146	382	584	300	159	1498	285	408	1246	285
Future Volume (vph)	362	506	146	382	584	300	159	1498	285	408	1246	285
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	2		1	2		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	18.0	34.0	34.0	23.0	39.0	39.0	20.0	43.0	43.0	20.0	43.0	43.0
Total Split (%)	15.0%	28.3%	28.3%	19.2%	32.5%	32.5%	16.7%	35.8%	35.8%	16.7%	35.8%	35.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

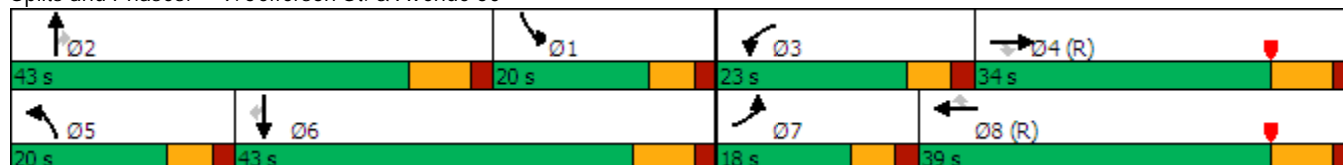
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 125

























Control Type: Actuated-Coordinated

Splits and Phases: 9: Jefferson St. & Avenue 50



HCM 6th Signalized Intersection Summary 9: Jefferson St. & Avenue 50

2040 WP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	362	506	146	382	584	300	159	1498	285	408	1246	285
Future Volume (veh/h)	362	506	146	382	584	300	159	1498	285	408	1246	285
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	369	516	149	390	596	306	162	1529	291	416	1271	291
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	336	760	339	439	865	386	186	1471	457	393	1579	490
Arrive On Green	0.15	0.33	0.33	0.20	0.38	0.38	0.16	0.44	0.44	0.17	0.48	0.48
Sat Flow, veh/h	3365	3460	1543	3365	3460	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	369	516	149	390	596	306	162	1529	291	416	1271	291
Grp Sat Flow(s),veh/h/ln	1682	1730	1543	1682	1730	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	12.0	15.5	9.1	13.5	17.4	14.3	10.9	35.5	11.5	14.0	26.1	16.5
Cycle Q Clear(g_c), s	12.0	15.5	9.1	13.5	17.4	14.3	10.9	35.5	11.5	14.0	26.1	16.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	336	760	339	439	865	386	186	1471	457	393	1579	490
V/C Ratio(X)	1.10	0.68	0.44	0.89	0.69	0.79	0.87	1.04	0.64	1.06	0.80	0.59
Avail Cap(c_a), veh/h	336	764	341	477	908	405	202	1471	457	393	1579	490
HCM Platoon Ratio	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.82	0.82	0.82	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.0	36.6	34.4	47.4	33.6	16.0	49.5	33.4	12.2	49.5	28.3	25.8
Incr Delay (d2), s/veh	77.5	4.8	4.1	16.5	4.5	15.4	23.8	32.3	2.8	62.1	3.3	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	6.2	3.5	6.1	6.8	5.7	5.5	15.5	3.5	8.6	8.3	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	128.5	41.4	38.5	63.9	38.0	31.3	73.3	65.7	15.0	111.6	31.6	28.1
LnGrp LOS	F	D	D	E	D	C	E	F	B	F	C	C
Approach Vol, veh/h	1034			1292			1982			1978		
Approach Delay, s/veh	72.1			44.2			58.9			47.9		
Approach LOS	E			D			E			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.5	43.0	21.6	33.9	18.9	45.6	18.0	37.5				
Change Period (Y+Rc), s	7.5	* 7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	14.0	* 36	17.0	26.5	14.0	35.5	12.0	31.5				
Max Q Clear Time (g_c+I1), s	16.0	37.5	15.5	17.5	12.9	28.1	14.0	19.4				
Green Ext Time (p_c), s	0.0	0.0	0.1	4.0	0.0	5.6	0.0	6.4				

Intersection Summary

HCM 6th Ctrl Delay	54.6
HCM 6th LOS	D






















Notes

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

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings
10: Avenue 60 & Madison St.

2040 WP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	967	790	2	2	699	300	2	2	2	684	2	401
Future Volume (vph)	967	790	2	2	699	300	2	2	2	684	2	401
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	150		0	150		150
Storage Lanes	2		0	1		1	0		0	2		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		40			40			25			40	
Link Distance (ft)		1137			661			281			437	
Travel Time (s)		19.4			11.3			7.7			7.4	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6			8		7	4	5
Permitted Phases						6	8					4
Detector Phase	5	2		1	6	6	8	8		7	4	5
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	11.5	22.5		11.5	22.5	22.5	22.5	22.5		22.5	22.5	11.5
Total Split (s)	39.0	57.0		11.5	29.5	29.5	22.5	22.5		29.0	51.5	39.0
Total Split (%)	32.5%	47.5%		9.6%	24.6%	24.6%	18.8%	18.8%		24.2%	42.9%	32.5%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lead		Lag		Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		Yes
Recall Mode	None	C-Max		None	None	None	Max	Max		Max	Max	None

Intersection Summary

Area Type: Other

Cycle Length: 120

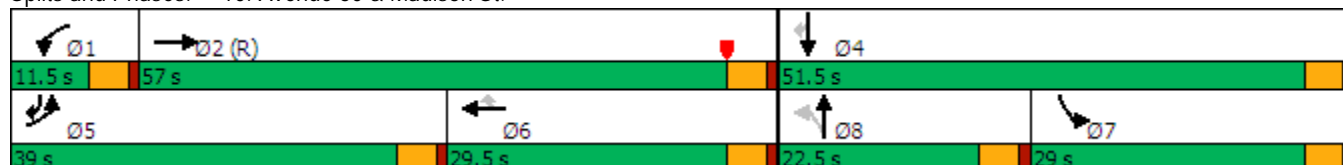
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBT, Start of Yellow

Natural Cycle: 120






















Control Type: Actuated-Coordinated

Splits and Phases: 10: Avenue 60 & Madison St.
























HCM 6th Signalized Intersection Summary
10: Avenue 60 & Madison St.

2040 WP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	967	790	2	2	699	300	2	2	2	684	2	401
Future Volume (veh/h)	967	790	2	2	699	300	2	2	2	684	2	401
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	987	806	2	2	713	306	2	2	2	698	2	409
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	997	1742	4	7	759	322	93	90	71	708	713	1048
Arrive On Green	0.29	0.49	0.49	0.00	0.21	0.21	0.15	0.15	0.15	0.20	0.39	0.39
Sat Flow, veh/h	3469	3541	9	1734	3642	1543	352	600	476	3469	1821	1543
Grp Volume(v), veh/h	987	394	414	2	713	306	6	0	0	698	2	409
Grp Sat Flow(s),veh/h/ln	1734	1730	1820	1734	1821	1543	1429	0	0	1734	1821	1543
Q Serve(g_s), s	34.0	18.0	18.0	0.1	23.1	15.2	0.0	0.0	0.0	24.1	0.1	13.9
Cycle Q Clear(g_c), s	34.0	18.0	18.0	0.1	23.1	15.2	0.4	0.0	0.0	24.1	0.1	13.9
Prop In Lane	1.00		0.00	1.00		1.00	0.33		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	997	851	895	7	759	322	254	0	0	708	713	1048
V/C Ratio(X)	0.99	0.46	0.46	0.31	0.94	0.95	0.02	0.00	0.00	0.99	0.00	0.39
Avail Cap(c_a), veh/h	997	851	895	101	759	322	254	0	0	708	713	1048
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.6	20.0	20.0	59.6	46.8	19.7	43.5	0.0	0.0	47.6	22.2	8.4
Incr Delay (d2), s/veh	25.9	1.8	1.7	24.4	19.5	37.4	0.2	0.0	0.0	30.5	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.7	7.4	7.7	0.1	12.3	8.8	0.2	0.0	0.0	13.1	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.5	21.8	21.8	84.0	66.2	57.1	43.7	0.0	0.0	78.1	22.2	9.5
LnGrp LOS	E	C	C	F	E	E	D	A	A	E	C	A
Approach Vol, veh/h	1795				1021				6			
Approach Delay, s/veh	47.5				63.5				43.7			
Approach LOS	D				E				D			
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	63.5		51.5	39.0	29.5	29.0	22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.0	52.5		47.0	34.5	25.0	24.5	18.0				
Max Q Clear Time (g_c+I1), s	2.1	20.0		15.9	36.0	25.1	26.1	2.4				
Green Ext Time (p_c), s	0.0	5.2		1.5	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	53.1											
HCM 6th LOS	D											

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

2040 WP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	272	576	583	43	418	324	322	1060	32	381	618	234
Future Volume (vph)	272	576	583	43	418	324	322	1060	32	381	618	234
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Detector Phase	7	4		3	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5		11.5	22.5	
Total Split (s)	21.0	39.5		11.5	30.0	28.0	28.6	41.0		28.0	40.4	
Total Split (%)	17.5%	32.9%		9.6%	25.0%	23.3%	23.8%	34.2%		23.3%	33.7%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

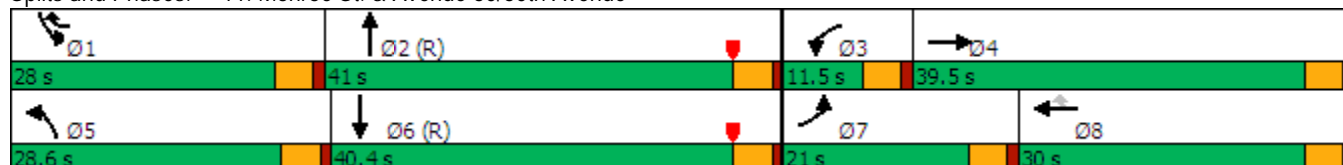
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 130






















Control Type: Actuated-Coordinated

Splits and Phases: 11: Monroe St. & Avenue 60/60th Avenue



























HCM 6th Signalized Intersection Summary
11: Monroe St. & Avenue 60/60th Avenue

2040 WP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	272	576	583	43	418	324	322	1060	32	381	618	234
Future Volume (veh/h)	272	576	583	43	418	324	322	1060	32	381	618	234
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	278	588	595	44	427	331	329	1082	33	389	631	239
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	528	471	78	387	630	348	1043	32	340	734	278
Arrive On Green	0.14	0.31	0.31	0.04	0.21	0.21	0.20	0.30	0.30	0.20	0.30	0.30
Sat Flow, veh/h	1734	1730	1543	1734	1821	1543	1734	3428	105	1734	2455	929
Grp Volume(v), veh/h	278	588	595	44	427	331	329	546	569	389	445	425
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1730	1802	1734	1730	1654
Q Serve(g_s), s	16.5	36.6	36.6	3.0	25.5	19.4	22.4	36.5	36.5	23.5	29.1	29.1
Cycle Q Clear(g_c), s	16.5	36.6	36.6	3.0	25.5	19.4	22.4	36.5	36.5	23.5	29.1	29.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.06	1.00		0.56
Lane Grp Cap(c), veh/h	238	528	471	78	387	630	348	526	548	340	518	495
V/C Ratio(X)	1.17	1.11	1.26	0.57	1.10	0.53	0.94	1.04	1.04	1.15	0.86	0.86
Avail Cap(c_a), veh/h	238	528	471	101	387	630	348	526	548	340	518	495
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.8	41.7	41.7	56.2	47.3	26.7	47.3	41.8	41.8	48.3	39.7	39.7
Incr Delay (d2), s/veh	110.4	74.3	134.7	6.3	76.7	0.8	34.0	49.3	48.6	94.3	16.8	17.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.3	25.8	30.9	1.4	19.4	6.9	12.6	21.9	22.7	18.6	14.1	13.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	162.2	116.0	176.4	62.5	123.9	27.5	81.3	91.1	90.3	142.6	56.4	57.1
LnGrp LOS	F	F	F	E	F	C	F	F	F	F	E	E
Approach Vol, veh/h	1461			802			1444			1259		
Approach Delay, s/veh	149.4			80.8			88.6			83.3		
Approach LOS	F			F			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	28.0	41.0	9.9	41.1	28.6	40.4	21.0	30.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	23.5	36.5	7.0	35.0	24.1	35.9	16.5	25.5				
Max Q Clear Time (g_c+I1), s	25.5	38.5	5.0	38.6	24.4	31.1	18.5	27.5				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	103.9											
HCM 6th LOS	F											

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

2040 WP PM Peak hour
With Additional Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	272	576	583	43	418	324	322	1060	32	381	618	234
Future Volume (vph)	272	576	583	43	418	324	322	1060	32	381	618	234
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	100		150	320		150
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						6
Detector Phase	7	4	5	3	8	1	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	11.5	11.5	22.5	11.5	11.5	22.5		11.5	22.5	22.5
Total Split (s)	24.2	34.9	32.6	11.9	22.6	31.6	32.6	41.6		31.6	40.6	40.6
Total Split (%)	20.2%	29.1%	27.2%	9.9%	18.8%	26.3%	27.2%	34.7%		26.3%	33.8%	33.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120









Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 120

Control Type: Actuated-Coordinated

























Splits and Phases: 11: Monroe St. & Avenue 60/60th Avenue

			
Ø1	Ø2 (R)	Ø4	Ø3
31.6 s	41.6 s	34.9 s	11.9 s
			
Ø5	Ø6 (R)	Ø8	Ø7
32.6 s	40.6 s	22.6 s	24.2 s

HCM 6th Signalized Intersection Summary






















11: Monroe St. & Avenue 60/60th Avenue

2040 WP PM Peak hour
With Additional Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	272	576	583	43	418	324	322	1060	32	381	618	234
Future Volume (veh/h)	272	576	583	43	418	324	322	1060	32	381	618	234
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	278	588	595	44	427	331	329	1082	33	389	631	239
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	285	875	708	94	494	569	357	1115	34	392	1229	521
Arrive On Green	0.16	0.25	0.25	0.05	0.14	0.14	0.21	0.32	0.32	0.23	0.34	0.34
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	1734	3516	107	1734	3642	1543
Grp Volume(v), veh/h	278	588	595	44	427	331	329	560	555	389	631	239
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1734	1821	1802	1734	1821	1543
Q Serve(g_s), s	19.1	18.4	28.2	3.0	14.5	11.6	22.3	36.4	36.4	26.9	16.7	9.3
Cycle Q Clear(g_c), s	19.1	18.4	28.2	3.0	14.5	11.6	22.3	36.4	36.4	26.9	16.7	9.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	285	875	708	94	494	569	357	578	571	392	1229	521
V/C Ratio(X)	0.98	0.67	0.84	0.47	0.86	0.58	0.92	0.97	0.97	0.99	0.51	0.46
Avail Cap(c_a), veh/h	285	877	708	107	522	581	406	578	571	392	1229	521
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.9	40.4	14.5	55.1	50.3	12.7	46.7	40.4	40.4	46.4	31.9	12.7
Incr Delay (d2), s/veh	46.7	2.0	9.0	3.6	13.5	1.4	24.7	30.8	31.1	43.6	1.5	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.7	7.8	10.4	1.4	7.0	3.7	11.7	20.3	20.1	15.8	7.3	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	96.6	42.4	23.5	58.6	63.8	14.1	71.4	71.2	71.5	89.9	33.4	15.6
LnGrp LOS	F	D	C	E	E	B	E	E	E	F	C	B
Approach Vol, veh/h		1461			802			1444			1259	
Approach Delay, s/veh		45.0			43.0			71.4			47.5	
Approach LOS		D			D			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.6	42.6	11.0	34.8	29.2	45.0	24.2	21.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	27.1	37.1	7.4	30.4	28.1	36.1	19.7	18.1				
Max Q Clear Time (g_c+I1), s	28.9	38.4	5.0	30.2	24.3	18.7	21.1	16.5				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.4	4.3	0.0	0.7				
Intersection Summary												
HCM 6th Ctrl Delay			53.0									
HCM 6th LOS			D									

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

2040 WP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	512	99	412	511	190	211	1096	280	206	926	140
Future Volume (vph)	150	512	99	412	511	190	211	1096	280	206	926	140
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		0	150		150	150		150
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			732			913			1519	
Travel Time (s)		9.1			16.6			12.5			20.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5		11.5	22.5	22.5	11.5	22.5	
Total Split (s)	19.2	25.0		32.1	37.9		19.6	43.9	43.9	19.0	43.3	
Total Split (%)	16.0%	20.8%		26.8%	31.6%		16.3%	36.6%	36.6%	15.8%	36.1%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

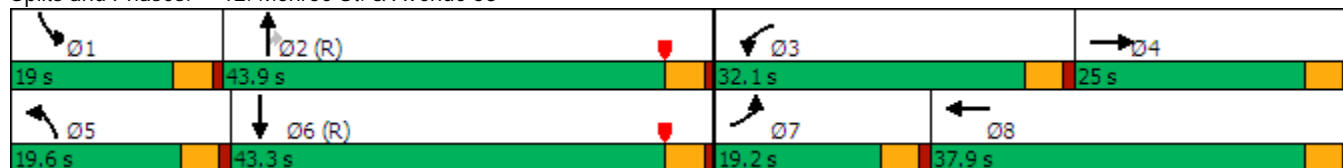
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 120























Control Type: Actuated-Coordinated

Splits and Phases: 12: Monroe St. & Avenue 58


























HCM 6th Signalized Intersection Summary
12: Monroe St. & Avenue 58

2040 WP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	512	99	412	511	190	211	1096	280	206	926	140
Future Volume (veh/h)	150	512	99	412	511	190	211	1096	280	206	926	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	153	522	101	420	521	194	215	1118	286	210	945	143
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	179	494	95	399	735	272	218	1136	507	210	974	147
Arrive On Green	0.10	0.17	0.17	0.23	0.30	0.30	0.13	0.33	0.33	0.12	0.32	0.32
Sat Flow, veh/h	1734	2893	557	1734	2471	916	1734	3460	1543	1734	3013	456
Grp Volume(v), veh/h	153	311	312	420	364	351	215	1118	286	210	542	546
Grp Sat Flow(s),veh/h/ln	1734	1730	1721	1734	1730	1656	1734	1730	1543	1734	1730	1739
Q Serve(g_s), s	10.4	20.5	20.5	27.6	22.5	22.7	14.8	38.5	18.3	14.5	37.1	37.1
Cycle Q Clear(g_c), s	10.4	20.5	20.5	27.6	22.5	22.7	14.8	38.5	18.3	14.5	37.1	37.1
Prop In Lane	1.00		0.32	1.00		0.55	1.00		1.00	1.00		0.26
Lane Grp Cap(c), veh/h	179	296	294	399	515	493	218	1136	507	210	559	562
V/C Ratio(X)	0.85	1.05	1.06	1.05	0.71	0.71	0.99	0.98	0.56	1.00	0.97	0.97
Avail Cap(c_a), veh/h	212	296	294	399	515	493	218	1136	507	210	559	562
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.9	49.8	49.8	46.2	37.5	37.6	52.3	40.0	33.2	52.8	40.0	40.0
Incr Delay (d2), s/veh	24.0	67.0	69.4	59.6	4.4	4.8	56.5	23.1	4.5	62.7	31.3	31.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	14.0	14.1	18.4	10.1	9.8	9.6	19.0	7.5	9.7	19.7	19.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.9	116.7	119.1	105.8	42.0	42.4	108.8	63.1	37.7	115.4	71.3	71.3
LnGrp LOS	E	F	F	F	D	D	F	E	D	F	E	E
Approach Vol, veh/h	776				1135				1619		1298	
Approach Delay, s/veh	109.8				65.7				64.7		78.4	
Approach LOS	F				E				E		E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.0	43.9	32.1	25.0	19.6	43.3	16.9	40.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	14.5	39.4	27.6	20.5	15.1	38.8	14.7	33.4				
Max Q Clear Time (g_c+I1), s	16.5	40.5	29.6	22.5	16.8	39.1	12.4	24.7				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.1	3.0				
Intersection Summary												
HCM 6th Ctrl Delay	75.9											
HCM 6th LOS	E											

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

2040 WP PM Peak hour
With Additional Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	512	99	412	511	190	211	1096	280	206	926	140
Future Volume (vph)	150	512	99	412	511	190	211	1096	280	206	926	140
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		0	150		150	150		150
Storage Lanes	1		1	1		0	2		1	2		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			732			913			1519	
Travel Time (s)		9.1			16.6			12.5			20.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3	8		5	2	3	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5		11.5	22.5	11.5	11.5	22.5	
Total Split (s)	19.2	24.0	24.0	37.0	41.8		13.6	46.0	37.0	13.0	45.4	
Total Split (%)	16.0%	20.0%	20.0%	30.8%	34.8%		11.3%	38.3%	30.8%	10.8%	37.8%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	None	None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120









Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 100
























Control Type: Actuated-Coordinated

Splits and Phases: 12: Monroe St. & Avenue 58

 Ø1	 Ø2 (R)	 Ø3	 Ø4
13 s	46 s	37 s	24 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
13.6 s	45.4 s	19.2 s	41.8 s























HCM 6th Signalized Intersection Summary 12: Monroe St. & Avenue 58

2040 WP PM Peak hour
With Additional Improvements

																
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR				
Lane Configurations																
Traffic Volume (veh/h)	150	512	99	412	511	190	211	1096	280	206	926	140				
Future Volume (veh/h)	150	512	99	412	511	190	211	1096	280	206	926	140				
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0				
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00				
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Work Zone On Approach	No			No			No			No						
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821				
Adj Flow Rate, veh/h	153	522	101	420	521	194	215	1118	286	210	945	143				
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98				
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2				
Cap, veh/h	179	562	251	445	780	289	255	1311	952	238	1097	166				
Arrive On Green	0.10	0.16	0.16	0.26	0.32	0.32	0.08	0.36	0.36	0.07	0.35	0.35				
Sat Flow, veh/h	1734	3460	1543	1734	2471	916	3365	3642	1543	3365	3091	468				
Grp Volume(v), veh/h	153	522	101	420	364	351	215	1118	286	210	557	531				
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1656	1682	1821	1543	1682	1821	1737				
Q Serve(g_s), s	10.4	17.9	7.0	28.5	21.9	22.1	7.6	34.0	10.5	7.4	34.1	34.1				
Cycle Q Clear(g_c), s	10.4	17.9	7.0	28.5	21.9	22.1	7.6	34.0	10.5	7.4	34.1	34.1				
Prop In Lane	1.00		1.00	1.00		0.55	1.00		1.00	1.00		0.27				
Lane Grp Cap(c), veh/h	179	562	251	445	546	523	255	1311	952	238	646	616				
V/C Ratio(X)	0.85	0.93	0.40	0.94	0.67	0.67	0.84	0.85	0.30	0.88	0.86	0.86				
Avail Cap(c_a), veh/h	212	562	251	470	546	523	255	1311	952	238	646	616				
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Uniform Delay (d), s/veh	52.9	49.6	45.0	43.7	35.6	35.6	54.7	35.5	10.8	55.2	36.0	36.0				
Incr Delay (d2), s/veh	24.0	21.9	1.0	27.1	3.1	3.3	21.8	7.2	0.8	29.4	14.1	14.7				
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
%ile BackOfQ(50%),veh/ln	5.6	9.1	2.8	15.5	9.7	9.3	3.9	15.5	3.7	4.0	16.8	16.1				
Unsig. Movement Delay, s/veh																
LnGrp Delay(d),s/veh	76.9	71.5	46.1	70.8	38.6	38.9	76.5	42.7	11.6	84.6	50.1	50.7				
LnGrp LOS	E	E	D	E	D	D	E	D	B	F	D	D				
Approach Vol, veh/h	776		1135				1619				1298					
Approach Delay, s/veh	69.2		50.7				41.7				55.9					
Approach LOS	E		D				D				E					
Timer - Assigned Phs	1	2	3	4	5	6	7	8								
Phs Duration (G+Y+Rc), s	13.0	47.7	35.3	24.0	13.6	47.1	16.9	42.4								
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5								
Max Green Setting (Gmax), s	8.5	41.5	32.5	19.5	9.1	40.9	14.7	37.3								
Max Q Clear Time (g_c+I1), s	9.4	36.0	30.5	19.9	9.6	36.1	12.4	24.1								
Green Ext Time (p_c), s	0.0	3.5	0.3	0.0	0.0	2.6	0.1	3.8								
Intersection Summary																
HCM 6th Ctrl Delay	52.0															
HCM 6th LOS	D															

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.

2040 WP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	325	54	119	491	367	102	1317	94	276	1096	130
Future Volume (vph)	71	325	54	119	491	367	102	1317	94	276	1096	130
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	60			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						6
Detector Phase	7	4		3	8	1	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	11.5	22.5		11.5	22.5	11.5	11.5	22.5		11.5	22.5	22.5
Total Split (s)	11.8	22.6		14.4	25.2	26.0	18.5	57.0		26.0	64.5	64.5
Total Split (%)	9.8%	18.8%		12.0%	21.0%	21.7%	15.4%	47.5%		21.7%	53.8%	53.8%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120




Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110























Control Type: Actuated-Coordinated

Splits and Phases: 13: Monroe St. & Airport Bl.

 Ø1	 Ø2 (R)	 Ø3	 Ø4
26 s	57 s	14.4 s	22.6 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
18.5 s	64.5 s	11.8 s	25.2 s

























HCM 6th Signalized Intersection Summary
13: Monroe St. & Airport Bl.

2040 WP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	325	54	119	491	367	102	1317	94	276	1096	130
Future Volume (veh/h)	71	325	54	119	491	367	102	1317	94	276	1096	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	72	332	55	121	501	374	104	1344	96	282	1118	133
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	92	426	70	143	597	539	128	1467	104	307	1905	849
Arrive On Green	0.05	0.14	0.14	0.08	0.17	0.17	0.07	0.45	0.45	0.18	0.55	0.55
Sat Flow, veh/h	1734	2975	488	1734	3460	1543	1734	3276	233	1734	3460	1543
Grp Volume(v), veh/h	72	192	195	121	501	374	104	708	732	282	1118	133
Grp Sat Flow(s),veh/h/ln	1734	1730	1733	1734	1730	1543	1734	1730	1779	1734	1730	1543
Q Serve(g_s), s	4.9	12.8	13.1	8.3	16.8	20.7	7.1	45.9	46.3	19.2	25.8	5.1
Cycle Q Clear(g_c), s	4.9	12.8	13.1	8.3	16.8	20.7	7.1	45.9	46.3	19.2	25.8	5.1
Prop In Lane	1.00		0.28	1.00		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	92	247	248	143	597	539	128	775	797	307	1905	849
V/C Ratio(X)	0.78	0.77	0.79	0.85	0.84	0.69	0.81	0.91	0.92	0.92	0.59	0.16
Avail Cap(c_a), veh/h	106	261	261	143	597	539	202	775	797	311	1905	849
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.1	49.6	49.7	54.3	48.0	33.5	54.7	31.0	31.1	48.6	17.9	13.3
Incr Delay (d2), s/veh	24.1	11.1	12.3	34.8	10.3	3.8	12.4	17.1	17.4	31.0	1.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	6.1	6.3	4.9	7.8	9.4	3.4	21.2	22.0	10.6	9.6	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.3	60.7	61.9	89.1	58.4	37.4	67.1	48.1	48.5	79.6	19.2	13.7
LnGrp LOS	F	E	E	F	E	D	E	D	D	E	B	B
Approach Vol, veh/h	459			996			1544			1533		
Approach Delay, s/veh	64.3			54.2			49.6			29.9		
Approach LOS	E			D			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.7	58.2	14.4	21.7	13.4	70.6	10.9	25.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	21.5	52.5	9.9	18.1	14.0	60.0	7.3	20.7				
Max Q Clear Time (g_c+I1), s	21.2	48.3	10.3	15.1	9.1	27.8	6.9	22.7				
Green Ext Time (p_c), s	0.0	2.9	0.0	0.6	0.1	9.1	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	45.4											
HCM 6th LOS	D											

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

2040 WP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	215	609	205	147	820	206	115	1594	48	177	1156	92
Future Volume (vph)	215	609	205	147	820	206	115	1594	48	177	1156	92
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	100			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	12.4	29.0	29.0	15.4	32.0	32.0	19.6	58.6	58.6	17.0	56.0	56.0
Total Split (%)	10.3%	24.2%	24.2%	12.8%	26.7%	26.7%	16.3%	48.8%	48.8%	14.2%	46.7%	46.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120





Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110
























Control Type: Actuated-Coordinated

Splits and Phases: 14: Monroe St. & Avenue 54

 Ø1	 Ø2 (R)	 Ø4	 Ø3
17 s	58.6 s	29 s	15.4 s
 Ø5	 Ø6 (R)	 Ø8	 Ø7
19.6 s	56 s	32 s	12.4 s

























HCM 6th Signalized Intersection Summary
14: Monroe St. & Avenue 54

2040 WP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	215	609	205	147	820	206	115	1594	48	177	1156	92
Future Volume (veh/h)	215	609	205	147	820	206	115	1594	48	177	1156	92
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	219	621	209	150	837	210	117	1627	49	181	1180	94
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	228	700	297	178	835	354	143	1642	696	181	1722	730
Arrive On Green	0.07	0.19	0.19	0.10	0.23	0.23	0.08	0.45	0.45	0.10	0.47	0.47
Sat Flow, veh/h	3469	3642	1543	1734	3642	1543	1734	3642	1543	1734	3642	1543
Grp Volume(v), veh/h	219	621	209	150	837	210	117	1627	49	181	1180	94
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1821	1543	1734	1821	1543	1734	1821	1543
Q Serve(g_s), s	7.6	19.9	12.2	10.2	27.5	11.2	8.0	53.2	1.5	12.5	30.3	3.0
Cycle Q Clear(g_c), s	7.6	19.9	12.2	10.2	27.5	11.2	8.0	53.2	1.5	12.5	30.3	3.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	228	700	297	178	835	354	143	1642	696	181	1722	730
V/C Ratio(X)	0.96	0.89	0.70	0.84	1.00	0.59	0.82	0.99	0.07	1.00	0.69	0.13
Avail Cap(c_a), veh/h	228	744	315	178	835	354	218	1642	696	181	1722	730
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.9	47.2	29.4	52.9	46.3	24.3	54.2	32.7	8.5	53.8	24.7	9.5
Incr Delay (d2), s/veh	47.9	12.1	6.5	28.6	31.8	2.7	13.5	20.1	0.2	67.4	2.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	9.8	4.8	5.7	15.4	4.1	3.9	25.9	0.8	8.6	12.6	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	103.8	59.3	35.9	81.4	78.1	27.0	67.7	52.8	8.7	121.2	26.9	9.9
LnGrp LOS	F	E	D	F	F	C	E	D	A	F	C	A
Approach Vol, veh/h	1049			1197			1793			1455		
Approach Delay, s/veh	64.0			69.5			52.6			37.5		
Approach LOS	E			E			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	58.6	16.8	27.6	14.4	61.2	12.4	32.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	12.5	54.1	10.9	24.5	15.1	51.5	7.9	27.5				
Max Q Clear Time (g_c+I1), s	14.5	55.2	12.2	21.9	10.0	32.3	9.6	29.5				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.1	0.1	7.9	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	54.5											
HCM 6th LOS	D											

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52

2040 WP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	179	647	266	95	1034	287	229	1331	144	225	1089	138
Future Volume (vph)	179	647	266	95	1034	287	229	1331	144	225	1089	138
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	17.6	38.6	38.6	18.0	39.0	39.0	15.7	50.1	50.1	13.3	47.7	47.7
Total Split (%)	14.7%	32.2%	32.2%	15.0%	32.5%	32.5%	13.1%	41.8%	41.8%	11.1%	39.8%	39.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120









Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 120

























Control Type: Actuated-Coordinated

Splits and Phases: 15: Monroe St. & Avenue 52

			
Ø1	Ø2 (R)	Ø3	Ø4
13.3 s	50.1 s	18 s	38.6 s
			
Ø5	Ø6 (R)	Ø7	Ø8
15.7 s	47.7 s	17.6 s	39 s

























HCM 6th Signalized Intersection Summary
15: Monroe St. & Avenue 52

2040 WP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	647	266	95	1034	287	229	1331	144	225	1089	138
Future Volume (veh/h)	179	647	266	95	1034	287	229	1331	144	225	1089	138
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	183	660	271	97	1055	293	234	1358	147	230	1111	141
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	189	1191	505	121	1047	444	288	1384	586	247	1339	568
Arrive On Green	0.11	0.33	0.33	0.07	0.29	0.29	0.09	0.38	0.38	0.07	0.37	0.37
Sat Flow, veh/h	1734	3642	1543	1734	3642	1543	3365	3642	1543	3365	3642	1543
Grp Volume(v), veh/h	183	660	271	97	1055	293	234	1358	147	230	1111	141
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1821	1543	1682	1821	1543	1682	1821	1543
Q Serve(g_s), s	12.6	17.9	17.2	6.6	34.5	20.0	8.2	44.2	7.8	8.2	33.3	7.6
Cycle Q Clear(g_c), s	12.6	17.9	17.2	6.6	34.5	20.0	8.2	44.2	7.8	8.2	33.3	7.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	189	1191	505	121	1047	444	288	1384	586	247	1339	568
V/C Ratio(X)	0.97	0.55	0.54	0.80	1.01	0.66	0.81	0.98	0.25	0.93	0.83	0.25
Avail Cap(c_a), veh/h	189	1191	505	195	1047	444	314	1384	586	247	1339	568
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.2	33.2	33.0	55.0	42.8	37.6	53.9	36.8	25.5	55.3	34.5	26.4
Incr Delay (d2), s/veh	55.5	0.6	1.1	11.7	29.7	3.6	13.9	20.1	1.0	39.2	6.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	7.5	6.2	3.2	18.8	7.6	3.9	22.1	2.9	4.7	14.9	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	108.7	33.7	34.1	66.7	72.4	41.2	67.8	56.9	26.5	94.5	40.6	27.4
LnGrp LOS	F	C	C	E	F	D	E	E	C	F	D	C
Approach Vol, veh/h	1114			1445			1739			1482		
Approach Delay, s/veh	46.1			65.7			55.8			47.7		
Approach LOS	D			E			E			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.3	50.1	12.8	43.8	14.8	48.6	17.6	39.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	8.8	45.6	13.5	34.1	11.2	43.2	13.1	34.5				
Max Q Clear Time (g_c+I1), s	10.2	46.2	8.6	19.9	10.2	35.3	14.6	36.5				
Green Ext Time (p_c), s	0.0	0.0	0.1	4.1	0.1	4.4	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	54.3											
HCM 6th LOS	D											

Lanes, Volumes, Timings
16: Monroe St. & 50th Avenue

2040 WP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	972	209	64	1124	132	209	1577	116	158	1344	47
Future Volume (vph)	59	972	209	64	1124	132	209	1577	116	158	1344	47
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	2		1	1		1	2		1	2		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			4			8			2			
Detector Phase	7	4	4	3	8	1	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	20.5	20.5	11.5	20.5	11.5	11.5	20.5	20.5	11.5	20.5	
Total Split (s)	11.5	41.1	41.1	11.5	41.1	11.5	12.2	55.9	55.9	11.5	55.2	
Total Split (%)	9.6%	34.3%	34.3%	9.6%	34.3%	9.6%	10.2%	46.6%	46.6%	9.6%	46.0%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	0.0	-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.0	
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120









Actuated Cycle Length: 120

Offset: 11.5 (10%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 130

























Control Type: Actuated-Coordinated

Splits and Phases: 16: Monroe St. & 50th Avenue

			
Ø1	Ø2 (R)	Ø4	Ø3
11.5 s	55.9 s	41.1 s	11.5 s
			
Ø5	Ø6 (R)	Ø8	Ø7
12.2 s	55.2 s	41.1 s	11.5 s





















HCM 6th Signalized Intersection Summary
16: Monroe St. & 50th Avenue

2040 WP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	972	209	64	1124	132	209	1577	116	158	1344	47
Future Volume (veh/h)	59	972	209	64	1124	132	209	1577	116	158	1344	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	60	992	213	65	1147	135	213	1609	118	161	1371	48
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	189	1090	462	112	1126	574	237	1604	673	217	1520	53
Arrive On Green	0.05	0.30	0.30	0.06	0.31	0.31	0.07	0.46	0.46	0.07	0.46	0.45
Sat Flow, veh/h	3469	3642	1543	1734	3642	1543	3469	3642	1543	3469	3498	122
Grp Volume(v), veh/h	60	992	213	65	1147	135	213	1609	118	161	713	706
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1821	1543	1734	1821	1543	1734	1821	1799
Q Serve(g_s), s	2.0	31.5	10.7	4.4	37.1	5.4	7.3	52.8	4.1	5.5	43.4	43.6
Cycle Q Clear(g_c), s	2.0	31.5	10.7	4.4	37.1	5.4	7.3	52.8	4.1	5.5	43.4	43.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	189	1090	462	112	1126	574	237	1604	673	217	791	782
V/C Ratio(X)	0.32	0.91	0.46	0.58	1.02	0.24	0.90	1.00	0.18	0.74	0.90	0.90
Avail Cap(c_a), veh/h	217	1126	477	112	1126	574	237	1604	673	217	791	782
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.05	1.05	1.05	1.05	1.05
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.6	40.5	21.6	54.6	41.5	15.0	55.3	32.3	11.4	55.1	30.2	30.3
Incr Delay (d2), s/veh	0.9	10.7	0.7	7.4	31.6	0.2	32.9	23.2	0.6	12.9	15.4	15.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	14.9	3.7	2.1	20.6	2.1	4.2	26.0	1.9	2.7	20.5	20.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.5	51.2	22.3	61.9	73.0	15.2	88.2	55.5	12.0	68.0	45.6	46.1
LnGrp LOS	E	D	C	E	F	B	F	F	B	E	D	D
Approach Vol, veh/h	1265			1347			1940			1580		
Approach Delay, s/veh	46.6			66.7			56.4			48.1		
Approach LOS	D			E			E			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.5	56.8	11.7	39.9	12.2	56.1	10.6	41.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.0	51.4	7.0	36.6	7.7	50.7	7.0	36.6				
Max Q Clear Time (g_c+I1), s	7.5	54.8	6.4	33.5	9.3	45.6	4.0	39.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.9	0.0	3.5	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	54.5											
HCM 6th LOS	D											

Lanes, Volumes, Timings
17: Jackson St. & 58th Avenue

2040 WP PM Peak hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	634	28	18	830	36	67	1028	32	11	883	90
Future Volume (vph)	78	634	28	18	830	36	67	1028	32	11	883	90
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		4534			1079			1013			510	
Travel Time (s)		61.8			14.7			12.6			6.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5		11.5	22.5		11.5	22.5	
Total Split (s)	15.0	44.4		11.6	41.0		13.0	52.4		11.6	51.0	
Total Split (%)	12.5%	37.0%		9.7%	34.2%		10.8%	43.7%		9.7%	42.5%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

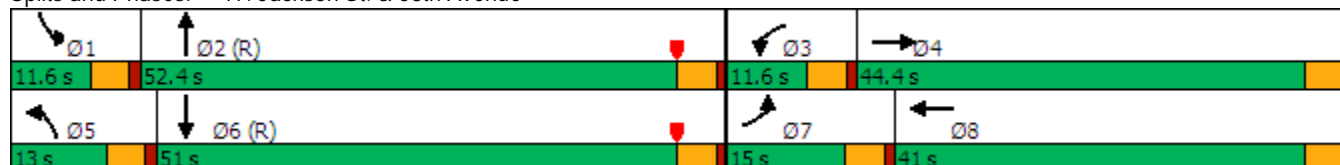
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 90





















Control Type: Actuated-Coordinated

Splits and Phases: 17: Jackson St. & 58th Avenue



HCM 6th Signalized Intersection Summary
17: Jackson St. & 58th Avenue

2040 WP PM Peak hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	634	28	18	830	36	67	1028	32	11	883	90
Future Volume (veh/h)	78	634	28	18	830	36	67	1028	32	11	883	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	80	647	29	18	847	37	68	1049	33	11	901	92
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	101	1045	47	46	938	41	91	1699	53	31	1463	149
Arrive On Green	0.06	0.31	0.31	0.03	0.28	0.28	0.05	0.50	0.50	0.02	0.46	0.46
Sat Flow, veh/h	1734	3373	151	1734	3377	148	1734	3424	108	1734	3169	324
Grp Volume(v), veh/h	80	332	344	18	434	450	68	530	552	11	492	501
Grp Sat Flow(s),veh/h/ln	1734	1730	1794	1734	1730	1795	1734	1730	1802	1734	1730	1763
Q Serve(g_s), s	5.5	19.6	19.7	1.2	29.0	29.0	4.6	26.7	26.7	0.8	25.7	25.7
Cycle Q Clear(g_c), s	5.5	19.6	19.7	1.2	29.0	29.0	4.6	26.7	26.7	0.8	25.7	25.7
Prop In Lane	1.00		0.08	1.00		0.08	1.00		0.06	1.00		0.18
Lane Grp Cap(c), veh/h	101	536	556	46	481	499	91	858	894	31	799	814
V/C Ratio(X)	0.79	0.62	0.62	0.39	0.90	0.90	0.75	0.62	0.62	0.35	0.62	0.62
Avail Cap(c_a), veh/h	152	575	596	103	526	546	123	858	894	103	799	814
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.8	35.4	35.4	57.5	41.8	41.8	56.1	22.0	22.0	58.2	24.3	24.3
Incr Delay (d2), s/veh	15.2	1.8	1.8	5.4	17.9	17.4	15.7	3.3	3.2	6.7	3.5	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	8.2	8.5	0.6	14.1	14.6	2.3	10.6	11.0	0.4	10.4	10.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.0	37.2	37.1	62.9	59.6	59.1	71.8	25.3	25.2	65.0	27.8	27.8
LnGrp LOS	E	D	D	E	E	E	E	C	C	E	C	C
Approach Vol, veh/h		756			902			1150			1004	
Approach Delay, s/veh		40.7			59.4			28.0			28.2	
Approach LOS		D			E			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.6	64.0	7.7	41.7	10.8	59.9	11.5	37.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.1	47.9	7.1	39.9	8.5	46.5	10.5	36.5				
Max Q Clear Time (g_c+I1), s	2.8	28.7	3.2	21.7	6.6	27.7	7.5	31.0				
Green Ext Time (p_c), s	0.0	5.9	0.0	3.4	0.0	5.3	0.0	2.3				
Intersection Summary												
HCM 6th Ctrl Delay			38.0									
HCM 6th LOS			D									

Lanes, Volumes, Timings
18: Avenue 60 & S. Access

2040 WP PM Peak hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	1693	991	76	45	1
Future Volume (vph)	1	1693	991	76	45	1
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		25	
Link Distance (ft)		207	635		380	
Travel Time (s)		3.5	10.8		10.4	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other




Control Type: Unsignalized

HCM 6th TWSC
18: Avenue 60 & S. Access

2040 WP PM Peak hour

Intersection

Int Delay, s/veh 0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	1693	991	76	45	1
Future Vol, veh/h	1	1693	991	76	45	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	1728	1011	78	46	1














Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1089	0	0 2780 1050
Stage 1	-	-	- 1050 -
Stage 2	-	-	- 1730 -
Critical Hdwy	4.12	-	- 5 5
Critical Hdwy Stg 1	-	-	- 4.9 -
Critical Hdwy Stg 2	-	-	- 4.9 -
Follow-up Hdwy	2.218	-	- 2.6 2.6
Pot Cap-1 Maneuver	641	-	- 68 460
Stage 1	-	-	- 473 -
Stage 2	-	-	- 230 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	641	-	- 65 460
Mov Cap-2 Maneuver	-	-	- 165 -
Stage 1	-	-	- 455 -
Stage 2	-	-	- 230 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	34.8
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	641	-	-	-	167
HCM Lane V/C Ratio	0.002	-	-	-	0.281
HCM Control Delay (s)	10.6	0	-	-	34.8
HCM Lane LOS	B	A	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	1.1







Lanes, Volumes, Timings
19: Madison St. & Main Access

2040 WP PM Peak hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				 	 	
Traffic Volume (vph)	150	13	45	1113	978	213
Future Volume (vph)	150	13	45	1113	978	213
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100	0	150			0
Storage Lanes	1	1	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	25			50	50	
Link Distance (ft)	499			880	169	
Travel Time (s)	13.6			12.0	2.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
19: Madison St. & Main Access

2040 WP PM Peak hour

Intersection						
Int Delay, s/veh	5.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	150	13	45	1113	978	213
Future Vol, veh/h	150	13	45	1113	978	213
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	153	13	46	1136	998	217

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1767	608	1215	0	-	0
Stage 1	1107	-	-	-	-	-
Stage 2	660	-	-	-	-	-
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	~ 75	439	570	-	-	-
Stage 1	278	-	-	-	-	-
Stage 2	476	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 69	439	570	-	-	-
Mov Cap-2 Maneuver	175	-	-	-	-	-
Stage 1	255	-	-	-	-	-
Stage 2	476	-	-	-	-	-












Approach	EB	NB	SB
HCM Control Delay, s	85.5	0.5	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	570	-	175	439	-	-
HCM Lane V/C Ratio	0.081	-	0.875	0.03	-	-
HCM Control Delay (s)	11.9	-	91.7	13.5	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.3	-	6.3	0.1	-	-

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

Lanes, Volumes, Timings
19: Madison St. & Main Access

2040 WP PM Peak hour
With Additional Improvements

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	150	13	45	1113	978	213
Future Volume (vph)	150	13	45	1113	978	213
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100	0	150			0
Storage Lanes	1	1	1			0
Taper Length (ft)	90		90			
Right Turn on Red		Yes				Yes
Link Speed (mph)	25			50	50	
Link Distance (ft)	499			880	169	
Travel Time (s)	13.6			12.0	2.3	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Detector Phase	4	4	5	2	6	
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	22.5	22.5	11.5	22.5	22.5	
Total Split (s)	22.6	22.6	11.6	37.4	25.8	
Total Split (%)	37.7%	37.7%	19.3%	62.3%	43.0%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	None	C-Max	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

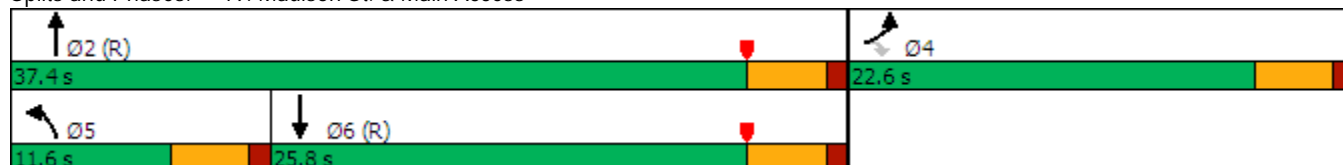
Actuated Cycle Length: 60

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated














Splits and Phases: 19: Madison St. & Main Access



HCM 6th Signalized Intersection Summary











19: Madison St. & Main Access

2040 WP PM Peak hour
With Additional Improvements

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				 	 	
Traffic Volume (veh/h)	150	13	45	1113	978	213
Future Volume (veh/h)	150	13	45	1113	978	213
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	153	13	46	1136	998	217
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	202	180	108	2538	1686	366
Arrive On Green	0.12	0.12	0.06	0.73	0.60	0.60
Sat Flow, veh/h	1734	1543	1734	3551	2918	613
Grp Volume(v), veh/h	153	13	46	1136	610	605
Grp Sat Flow(s),veh/h/ln	1734	1543	1734	1730	1730	1711
Q Serve(g_s), s	5.1	0.5	1.5	7.8	13.2	13.3
Cycle Q Clear(g_c), s	5.1	0.5	1.5	7.8	13.2	13.3
Prop In Lane	1.00	1.00	1.00			0.36
Lane Grp Cap(c), veh/h	202	180	108	2538	1031	1020
V/C Ratio(X)	0.76	0.07	0.42	0.45	0.59	0.59
Avail Cap(c_a), veh/h	523	466	205	2538	1031	1020
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.7	23.6	27.1	3.2	7.6	7.6
Incr Delay (d2), s/veh	5.7	0.2	2.6	0.6	2.5	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.4	0.6	0.7	3.5	3.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	31.4	23.8	29.7	3.7	10.0	10.1
LnGrp LOS	C	C	C	A	B	B
Approach Vol, veh/h	166			1182	1215	
Approach Delay, s/veh	30.8			4.8	10.1	
Approach LOS	C			A	B	
Timer - Assigned Phs	2			4	5	6
Phs Duration (G+Y+Rc), s	48.5			11.5	8.2	40.3
Change Period (Y+Rc), s	4.5			4.5	4.5	4.5
Max Green Setting (Gmax), s	32.9			18.1	7.1	21.3
Max Q Clear Time (g_c+I1), s	9.8			7.1	3.5	15.3
Green Ext Time (p_c), s	7.8			0.3	0.0	3.5
Intersection Summary						
HCM 6th Ctrl Delay			9.0			
HCM 6th LOS			A			

Lanes, Volumes, Timings
20: Project Access 1 & Avenue 58

2040 WP PM Peak hour

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	552	8	27	672	23	12
Future Volume (vph)	552	8	27	672	23	12
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)		0	50		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			60		60	
Link Speed (mph)	50			50	25	
Link Distance (ft)	403			335	383	
Travel Time (s)	5.5			4.6	10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
20: Project Access 1 & Avenue 58

2040 WP PM Peak hour

Intersection						
Int Delay, s/veh	0.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↘	
Traffic Vol, veh/h	552	8	27	672	23	12
Future Vol, veh/h	552	8	27	672	23	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	600	9	29	730	25	13
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	609	0	1028	305
Stage 1	-	-	-	-	605	-
Stage 2	-	-	-	-	423	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	966	-	230	691
Stage 1	-	-	-	-	508	-
Stage 2	-	-	-	-	629	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	966	-	223	691
Mov Cap-2 Maneuver	-	-	-	-	347	-
Stage 1	-	-	-	-	493	-
Stage 2	-	-	-	-	629	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.3		14.5	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	418	-	-	966	-	
HCM Lane V/C Ratio	0.091	-	-	0.03	-	
HCM Control Delay (s)	14.5	-	-	8.8	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-	

Lanes, Volumes, Timings
21: Project Access 2 & Avenue 58












2040 WP PM Peak hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↗
Traffic Volume (vph)	549	15	0	699	0	15
Future Volume (vph)	549	15	0	699	0	15
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	50			50	25	
Link Distance (ft)	335			276	233	
Travel Time (s)	4.6			3.8	6.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↱			↑↑		↱
Traffic Vol, veh/h	549	15	0	699	0	15
Future Vol, veh/h	549	15	0	699	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	597	16	0	760	0	16
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	307
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	689
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	689
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		10.4	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	689	-	-	-		
HCM Lane V/C Ratio	0.024	-	-	-		
HCM Control Delay (s)	10.4	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	-		

Lanes, Volumes, Timings
22: Madison St. & Project Access 3

2040 WP PM Peak hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				 	 	
Traffic Volume (vph)	0	29	0	1263	1162	29
Future Volume (vph)	0	29	0	1263	1162	29
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	25			50	50	
Link Distance (ft)	210			224	288	
Travel Time (s)	5.7			3.1	3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
22: Madison St. & Project Access 3

2040 WP PM Peak hour

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	29	0	1263	1162	29
Future Vol, veh/h	0	29	0	1263	1162	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	32	0	1373	1263	32
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	-	648	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	413	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	413	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	14.4	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR		
Capacity (veh/h)	-	413	-	-		
HCM Lane V/C Ratio	-	0.076	-	-		
HCM Control Delay (s)	-	14.4	-	-		
HCM Lane LOS	-	B	-	-		
HCM 95th %tile Q(veh)	-	0.2	-	-		

Intersection: 18: Avenue 60 & S. Access

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	17	103
Average Queue (ft)	2	51
95th Queue (ft)	28	97
Link Distance (ft)	184	334
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 19: Madison St. & Main Access

Movement	EB	EB	NB	NB	NB	SB	SB	B51	B51
Directions Served	L	R	L	T	T	T	TR	T	T
Maximum Queue (ft)	136	90	38	82	62	157	160	17	12
Average Queue (ft)	86	20	17	39	27	97	94	3	2
95th Queue (ft)	141	93	43	83	69	174	165	21	15
Link Distance (ft)		452		848	848	105	105	173	173
Upstream Blk Time (%)						3	3		
Queuing Penalty (veh)						21	21		
Storage Bay Dist (ft)	100		150						
Storage Blk Time (%)	4	0							
Queuing Penalty (veh)	1	0							

Intersection: 20: Project Access 1 & Avenue 58

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	25	25
Average Queue (ft)	5	4
95th Queue (ft)	23	22
Link Distance (ft)		336
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	50	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 21: Project Access 2 & Avenue 58

Movement	EB	NB
Directions Served	T	R
Maximum Queue (ft)	36	14
Average Queue (ft)	8	3
95th Queue (ft)	35	18
Link Distance (ft)	286	173
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 22: Madison St. & Project Access 3

Movement	EB	NB	NB
Directions Served	R	T	T
Maximum Queue (ft)	33	96	79
Average Queue (ft)	9	31	20
95th Queue (ft)	32	100	83
Link Distance (ft)	164	173	173
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 42

Intersection: 18: Avenue 60 & S. Access

Movement	EB	EB	SB
Directions Served	LT	T	LR
Maximum Queue (ft)	75	68	195
Average Queue (ft)	16	19	136
95th Queue (ft)	99	116	232
Link Distance (ft)	184	184	334
Upstream Blk Time (%)	2	1	0
Queuing Penalty (veh)	0	0	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 19: Madison St. & Main Access

Movement	EB	EB	NB	NB	NB	SB	SB	B51	B51
Directions Served	L	R	L	T	T	T	TR	T	T
Maximum Queue (ft)	126	38	76	158	142	176	183	73	98
Average Queue (ft)	77	9	38	95	71	106	127	14	24
95th Queue (ft)	130	41	76	175	148	189	212	64	87
Link Distance (ft)		452		848	848	105	105	173	173
Upstream Blk Time (%)						6	12		0
Queuing Penalty (veh)						38	77		0
Storage Bay Dist (ft)	100		150						
Storage Blk Time (%)	3	0		2					
Queuing Penalty (veh)	0	0		1					

Intersection: 20: Project Access 1 & Avenue 58

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	35	48
Average Queue (ft)	11	23
95th Queue (ft)	38	52
Link Distance (ft)		336
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	50	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	1	

Intersection: 21: Project Access 2 & Avenue 58

Movement	EB	EB	NB
Directions Served	T	TR	R
Maximum Queue (ft)	86	146	41
Average Queue (ft)	24	63	16
95th Queue (ft)	88	172	52
Link Distance (ft)	286	286	187
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 22: Madison St. & Project Access 3

Movement	EB	NB	NB	B51	B51
Directions Served	R	T	T	T	T
Maximum Queue (ft)	54	253	240	139	129
Average Queue (ft)	26	209	192	57	51
95th Queue (ft)	57	308	300	174	159
Link Distance (ft)	164	173	173	105	105
Upstream Blk Time (%)		28	23	9	5
Queuing Penalty (veh)		182	148	57	34
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Zone Summary

Zone wide Queuing Penalty: 537

APPENDIX 7.4:

**GENERAL PLAN BUILDOUT (YEAR 2040) WITH PROJECT CONDITIONS
TRAFFIC SIGNAL WARRANTS ANALYSIS WORKSHEETS**

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Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	CALC	TRAFFIC CONDITIONS	2040WP
Jurisdiction: <u>City of La Quinta</u>				CHK	<u>JC</u>	DATE <u>10/08/19</u>
Major Street: <u>Avenue 60</u>						DATE
Minor Street: <u>S. Access</u>						
					Critical Approach Speed (Major)	<u>50</u> mph
					Critical Approach Speed (Minor)	<u>30</u> mph
Major Street Approach Lanes = <u>2</u> lane				Minor Street Approach Lanes: <u>1</u> lane		
Major Street Future ADT = <u>17,238</u> vpd				Minor Street Future ADT = <u>606</u> vpd		
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						<input checked="" type="checkbox"/>
						or
In built up area of isolated community of < 10,000 population						<input type="checkbox"/>

RURAL (R)**(Based on Estimated Average Daily Traffic - See Note)**

URBAN		RURAL		Minimum Requirements ADT			
CONDITION A - Minimum Vehicular Volume		XX		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>		<u>Not Satisfied</u>	XX				
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
<u>Major Street</u>		<u>Minor Street</u>					
<u>1</u>		<u>1</u>		8,000	5,600	2,400	1,680
<u>2 + 17,238</u>		<u>1 606</u>		9,600	6,720 *	2,400	1,680
<u>2 +</u>		<u>2 +</u>		9,600	6,720	3,200	2,240
<u>1</u>		<u>2 +</u>		8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		XX		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>		<u>Not Satisfied</u>	XX				
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
<u>Major Street</u>		<u>Minor Street</u>					
<u>1</u>		<u>1</u>		12,000	8,400	1,200	850
<u>2 + 17,238</u>		<u>1 606</u>		14,400	10,080 *	1,200	850
<u>2 +</u>		<u>2 +</u>		14,400	10,080	1,600	1,120
<u>1</u>		<u>2 +</u>		12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B		XX		2 CONDITIONS 80%		2 CONDITIONS 80%	
<u>Satisfied</u>		<u>Not Satisfied</u>	XX				
No one condition satisfied, but following conditions fulfilled 80% of more							
		<u>A</u>	<u>B</u>				
		36%	71%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	CALC	TRAFFIC CONDITIONS	2040WP
Jurisdiction: <u>City of La Quinta</u>				CHK	<u>JC</u>	DATE <u>10/08/19</u>
Major Street: <u>Avenue 58</u>						DATE
Minor Street: <u>Project Access 1</u>					Critical Approach Speed (Major)	<u>50</u> mph
					Critical Approach Speed (Minor)	<u>30</u> mph
Major Street Approach Lanes = <u>2</u> lane				Minor Street Approach Lanes: <u>1</u> lane		
Major Street Future ADT = <u>12,476</u> vpd				Minor Street Future ADT = <u>458</u> vpd		
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						<input checked="" type="checkbox"/>
						or
In built up area of isolated community of < 10,000 population						<input type="checkbox"/>

RURAL (R)**(Based on Estimated Average Daily Traffic - See Note)**

URBAN		RURAL		Minimum Requirements ADT			
CONDITION A - Minimum Vehicular Volume		XX		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>		<u>Not Satisfied</u>	XX				
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach					
<u>Major Street</u>		<u>Minor Street</u>		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>1</u>		<u>1</u>		8,000	5,600	2,400	1,680
<u>2 + 12,476</u>		<u>1 458</u>		9,600	6,720 *	2,400	1,680
<u>2 +</u>		<u>2 +</u>		9,600	6,720	3,200	2,240
<u>1</u>		<u>2 +</u>		8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		XX		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>		<u>Not Satisfied</u>	XX				
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach					
<u>Major Street</u>		<u>Minor Street</u>		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>1</u>		<u>1</u>		12,000	8,400	1,200	850
<u>2 + 12,476</u>		<u>1 458</u>		14,400	10,080 *	1,200	850
<u>2 +</u>		<u>2 +</u>		14,400	10,080	1,600	1,120
<u>1</u>		<u>2 +</u>		12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B		XX		2 CONDITIONS 80%		2 CONDITIONS 80%	
<u>Satisfied</u>		<u>Not Satisfied</u>	XX				
No one condition satisfied, but following conditions fulfilled 80% of more							
		<u>A</u>	<u>B</u>				
		27%	54%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

























APPENDIX 8.1:

**EAPC PROJECT BUILDOUT (2026) WEEKEND SPECIAL EVENT CONDITIONS
INTERSECTION OPERATIONS ANALYSIS WORKSHEETS AND
PROJECT ACCESS QUEUEING ANALYSIS WORKSHEETS**










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Lanes, Volumes, Timings
1: Madison St. & Avenue 58

EAPC (2026) Weekend SE Arrival

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	116	18	90	150	138	12	382	72	108	562	136
Future Volume (vph)	115	116	18	90	150	138	12	382	72	108	562	136
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Intersection Delay, s/veh	41.6											
Intersection LOS	E											

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	115	116	18	90	150	138	12	382	72	108	562	136
Future Vol, veh/h	115	116	18	90	150	138	12	382	72	108	562	136
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	125	126	20	98	163	150	13	415	78	117	611	148
Number of Lanes	1	1	1	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	20	21.2	33.2	62.7
HCM LOS	C	C	D	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	64%	0%	100%	0%	0%	100%	27%	0%	100%
Vol Right, %	0%	0%	36%	0%	0%	100%	0%	0%	73%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	12	255	199	115	116	18	90	100	188	108	375
LT Vol	12	0	0	115	0	0	90	0	0	108	0
Through Vol	0	255	127	0	116	0	0	100	50	0	375
RT Vol	0	0	72	0	0	18	0	0	138	0	0
Lane Flow Rate	13	277	217	125	126	20	98	109	204	117	407
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.038	0.773	0.59	0.389	0.376	0.055	0.294	0.312	0.558	0.317	1.042
Departure Headway (Hd)	10.544	10.056	9.809	11.377	10.877	10.177	10.961	10.461	9.947	9.708	9.208
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	339	360	368	319	333	354	330	346	366	370	395
Service Time	8.315	7.815	7.562	9.077	8.577	7.877	8.661	8.161	7.647	7.488	6.988
HCM Lane V/C Ratio	0.038	0.769	0.59	0.392	0.378	0.056	0.297	0.315	0.557	0.316	1.03
HCM Control Delay	13.7	40	25.8	21.1	20	13.5	18.2	17.8	24.5	17	88.1
HCM Lane LOS	B	E	D	C	C	B	C	C	C	C	F
HCM 95th-tile Q	0.1	6.3	3.6	1.8	1.7	0.2	1.2	1.3	3.3	1.3	13.4

Lanes, Volumes, Timings
1: Madison St. & Avenue 58

EAPC (2026) Weekend SE Arrival
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	116	18	90	150	138	12	382	72	108	562	136
Future Volume (vph)	115	116	18	90	150	138	12	382	72	108	562	136
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	27.0	31.0	31.0	24.0	28.0	28.0	13.0	38.0	38.0	27.0	52.0	52.0
Total Split (%)	22.5%	25.8%	25.8%	20.0%	23.3%	23.3%	10.8%	31.7%	31.7%	22.5%	43.3%	43.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

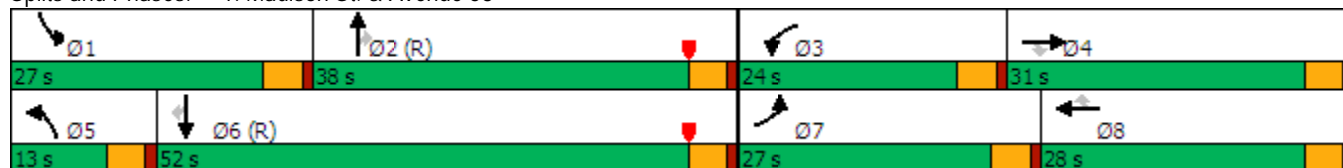
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated

























Splits and Phases: 1: Madison St. & Avenue 58



HCM 6th Signalized Intersection Summary















1: Madison St. & Avenue 58

EAPC (2026) Weekend SE Arrival
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	116	18	90	150	138	12	382	72	108	562	136
Future Volume (veh/h)	115	116	18	90	150	138	12	382	72	108	562	136
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	125	126	20	98	163	150	13	415	78	117	611	148
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	152	249	211	123	413	184	36	1937	864	144	2153	960
Arrive On Green	0.09	0.14	0.14	0.07	0.12	0.12	0.02	0.56	0.56	0.08	0.62	0.62
Sat Flow, veh/h	1734	1821	1543	1734	3460	1543	1734	3460	1543	1734	3460	1543
Grp Volume(v), veh/h	125	126	20	98	163	150	13	415	78	117	611	148
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1730	1543	1734	1730	1543	1734	1730	1543
Q Serve(g_s), s	8.5	7.7	1.4	6.7	5.2	11.4	0.9	7.2	2.8	8.0	9.7	4.8
Cycle Q Clear(g_c), s	8.5	7.7	1.4	6.7	5.2	11.4	0.9	7.2	2.8	8.0	9.7	4.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	152	249	211	123	413	184	36	1937	864	144	2153	960
V/C Ratio(X)	0.82	0.51	0.09	0.80	0.39	0.81	0.37	0.21	0.09	0.81	0.28	0.15
Avail Cap(c_a), veh/h	325	402	341	282	678	302	123	1937	864	325	2153	960
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.8	48.1	45.3	54.9	48.8	51.5	58.0	13.2	12.2	54.1	10.4	9.5
Incr Delay (d2), s/veh	10.3	1.6	0.2	11.3	0.6	8.4	6.2	0.3	0.2	10.5	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	3.5	0.5	3.2	2.2	4.7	0.4	2.6	0.9	3.8	3.4	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.1	49.7	45.5	66.2	49.5	60.0	64.2	13.5	12.4	64.6	10.7	9.8
LnGrp LOS	E	D	D	E	D	E	E	B	B	E	B	A
Approach Vol, veh/h		271			411			506			876	
Approach Delay, s/veh		56.0			57.3			14.6			17.8	
Approach LOS		E			E			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.4	71.7	13.0	20.9	7.0	79.2	15.0	18.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	22.5	33.5	19.5	26.5	8.5	47.5	22.5	23.5				
Max Q Clear Time (g_c+I1), s	10.0	9.2	8.7	9.7	2.9	11.7	10.5	13.4				
Green Ext Time (p_c), s	0.2	2.6	0.1	0.5	0.0	4.5	0.2	0.9				
Intersection Summary												
HCM 6th Ctrl Delay			29.9									
HCM 6th LOS			C									

Lanes, Volumes, Timings
2: Madison St. & Airport Bl.

EAPC (2026) Weekend SE Arrival

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	82	89	1	522	64	63	643
Future Volume (vph)	82	89	1	522	64	63	643
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		8			2		
Detector Phase	3	8	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	20.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	21.0	21.0	12.0	27.0	27.0	12.0	27.0
Total Split (%)	35.0%	35.0%	20.0%	45.0%	45.0%	20.0%	45.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 60

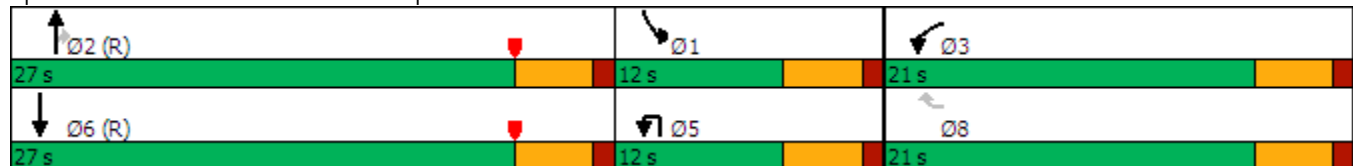
Actuated Cycle Length: 60

Offset: 28 (47%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55















Control Type: Actuated-Coordinated

Splits and Phases: 2: Madison St. & Airport Bl.






























HCM 6th Signalized Intersection Summary 2: Madison St. & Airport Bl.

EAPC (2026) Weekend SE Arrival

							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	82	89	1	522	64	63	643
Future Volume (veh/h)	82	89	1	522	64	63	643
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	92	100		587	72	71	722
Peak Hour Factor	0.89	0.89		0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	209	186		1326	592	514	2583
Arrive On Green	0.12	0.12		0.38	0.38	0.30	0.75
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	92	100		587	72	71	722
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	3.0	3.7		7.6	1.0	1.8	4.0
Cycle Q Clear(g_c), s	3.0	3.7		7.6	1.0	1.8	4.0
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	209	186		1326	592	514	2583
V/C Ratio(X)	0.44	0.54		0.44	0.12	0.14	0.28
Avail Cap(c_a), veh/h	491	437		1326	592	514	2583
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.5	24.8		13.7	4.0	15.5	2.4
Incr Delay (d2), s/veh	1.5	2.4		1.1	0.4	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.3		2.5	0.5	0.6	0.3
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	26.0	27.2		14.8	4.4	15.6	2.7
LnGrp LOS	C	C		B	A	B	A
Approach Vol, veh/h	192			659			793
Approach Delay, s/veh	26.6			13.7			3.9
Approach LOS	C			B			A
Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	21.8	27.0				48.8	11.2
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	7.5	22.5				22.5	16.5
Max Q Clear Time (g_c+I1), s	3.8	9.6				6.0	5.7
Green Ext Time (p_c), s	0.0	3.0				4.0	0.4
Intersection Summary							
HCM 6th Ctrl Delay			10.5				
HCM 6th LOS			B				
Notes							
User approved ignoring U-Turning movement.							

Lanes, Volumes, Timings
3: Madison St. & Avenue 54









EAPC (2026) Weekend SE Arrival

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 			 	
Traffic Volume (vph)	20	272	425	57	170	111	330	446	87	90	348	15
Future Volume (vph)	20	272	425	57	170	111	330	446	87	90	348	15
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 45.9

Intersection LOS F
























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	272	425	57	170	111	330	446	87	90	348	15
Future Vol, veh/h	20	272	425	57	170	111	330	446	87	90	348	15
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	306	478	64	191	125	371	501	98	101	391	17
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	316.2	29.9	100.9	48.5
HCM LOS	F	D	F	E

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	63%	0%	100%	18%	0%	100%	34%	0%	100%	89%
Vol Right, %	0%	0%	37%	0%	0%	82%	0%	0%	66%	0%	0%	11%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	330	297	236	20	181	516	57	113	168	90	232	131
LT Vol	330	0	0	20	0	0	57	0	0	90	0	0
Through Vol	0	297	149	0	181	91	0	113	57	0	232	116
RT Vol	0	0	87	0	0	425	0	0	111	0	0	15
Lane Flow Rate	371	334	265	22	204	579	64	127	188	101	261	147
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	1.18	1.018	0.789	0.079	0.687	1.862	0.234	0.449	0.64	0.361	0.895	0.502
Departure Headway (Hd)	12.475	11.975	11.717	12.626	12.137	11.572	13.686	13.186	12.723	13.782	13.282	13.201
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	293	304	312	285	300	319	264	275	286	263	274	275
Service Time	10.175	9.675	9.417	10.342	9.842	9.265	11.386	10.886	10.423	11.482	10.982	10.901
HCM Lane V/C Ratio	1.266	1.099	0.849	0.077	0.68	1.815	0.242	0.462	0.657	0.384	0.953	0.535
HCM Control Delay	146.6	92.9	47	16.4	37.8	425.7	20.5	26.2	35.5	24.1	69.2	28.5
HCM Lane LOS	F	F	E	C	E	F	C	D	E	C	F	D
HCM 95th-tile Q	15	11.1	6.3	0.3	4.7	39.1	0.9	2.2	4	1.6	7.9	2.6

Lanes, Volumes, Timings
3: Madison St. & Avenue 54

EAPC (2026) Weekend SE Arrival
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	272	425	57	170	111	330	446	87	90	348	15
Future Volume (vph)	20	272	425	57	170	111	330	446	87	90	348	15
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	
Total Split (s)	12.2	43.0		16.0	46.8	46.8	28.0	40.0	40.0	21.0	33.0	
Total Split (%)	10.2%	35.8%		13.3%	39.0%	39.0%	23.3%	33.3%	33.3%	17.5%	27.5%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

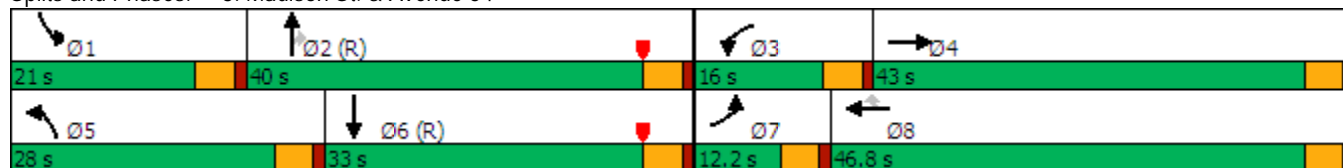
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 70
























Control Type: Actuated-Coordinated

Splits and Phases: 3: Madison St. & Avenue 54



























HCM 6th Signalized Intersection Summary 3: Madison St. & Avenue 54

EAPC (2026) Weekend SE Arrival
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	272	425	57	170	111	330	446	87	90	348	15
Future Volume (veh/h)	20	272	425	57	170	111	330	446	87	90	348	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	22	306	478	64	191	125	371	501	98	101	391	17
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	53	555	495	89	1183	528	442	1403	626	126	1170	51
Arrive On Green	0.03	0.32	0.32	0.05	0.34	0.34	0.13	0.41	0.41	0.07	0.35	0.35
Sat Flow, veh/h	1734	1730	1543	1734	3460	1543	3365	3460	1543	1734	3378	147
Grp Volume(v), veh/h	22	306	478	64	191	125	371	501	98	101	200	208
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1734	1730	1795
Q Serve(g_s), s	1.5	17.5	36.6	4.4	4.6	7.0	12.9	12.1	4.8	6.9	10.2	10.3
Cycle Q Clear(g_c), s	1.5	17.5	36.6	4.4	4.6	7.0	12.9	12.1	4.8	6.9	10.2	10.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	53	555	495	89	1183	528	442	1403	626	126	599	622
V/C Ratio(X)	0.42	0.55	0.97	0.72	0.16	0.24	0.84	0.36	0.16	0.80	0.33	0.33
Avail Cap(c_a), veh/h	111	555	495	166	1220	544	659	1403	626	238	599	622
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.1	33.6	40.1	56.1	27.5	28.3	50.9	24.8	22.7	54.8	29.0	29.0
Incr Delay (d2), s/veh	4.7	1.0	29.5	10.3	0.1	0.2	6.2	0.7	0.5	11.3	1.5	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	7.1	17.0	2.1	1.8	2.5	5.6	4.8	1.7	3.3	4.3	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.8	34.7	69.6	66.3	27.6	28.5	57.1	25.5	23.2	66.1	30.5	30.4
LnGrp LOS	E	C	E	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h		806			380			970			509	
Approach Delay, s/veh		56.1			34.4			37.4			37.5	
Approach LOS		E			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.2	53.1	10.7	43.0	20.3	46.1	8.1	45.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	16.5	35.5	11.5	38.5	23.5	28.5	7.7	42.3				
Max Q Clear Time (g_c+I1), s	8.9	14.1	6.4	38.6	14.9	12.3	3.5	9.0				
Green Ext Time (p_c), s	0.1	3.2	0.0	0.0	0.8	1.8	0.0	1.4				
Intersection Summary												
HCM 6th Ctrl Delay			42.6									
HCM 6th LOS			D									

Lanes, Volumes, Timings
4: Madison St. & Avenue 52

EAPC (2026) Weekend SE Arrival

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	453	84	50	412	58	108	376	51	65	317	63
Future Volume (vph)	71	453	84	50	412	58	108	376	51	65	317	63
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	22.0	45.0	45.0	19.0	42.0	42.0	18.0	41.0	41.0	15.0	38.0	38.0
Total Split (%)	18.3%	37.5%	37.5%	15.8%	35.0%	35.0%	15.0%	34.2%	34.2%	12.5%	31.7%	31.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

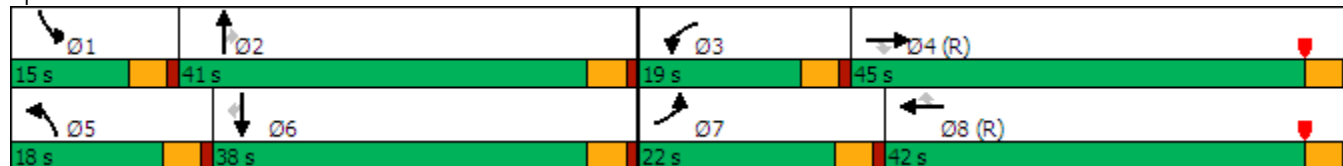
Actuated Cycle Length: 120

Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 4: Madison St. & Avenue 52



























HCM 6th Signalized Intersection Summary 4: Madison St. & Avenue 52

EAPC (2026) Weekend SE Arrival

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	453	84	50	412	58	108	376	51	65	317	63
Future Volume (veh/h)	71	453	84	50	412	58	108	376	51	65	317	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	83	527	98	58	479	67	126	437	59	76	369	73
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	105	1530	683	87	1493	666	193	1052	469	181	1039	464
Arrive On Green	0.06	0.44	0.44	0.05	0.43	0.43	0.06	0.30	0.30	0.05	0.30	0.30
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	83	527	98	58	479	67	126	437	59	76	369	73
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	5.7	12.0	4.5	3.9	11.0	3.1	4.4	12.1	3.3	2.6	10.0	4.2
Cycle Q Clear(g_c), s	5.7	12.0	4.5	3.9	11.0	3.1	4.4	12.1	3.3	2.6	10.0	4.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	105	1530	683	87	1493	666	193	1052	469	181	1039	464
V/C Ratio(X)	0.79	0.34	0.14	0.67	0.32	0.10	0.65	0.42	0.13	0.42	0.35	0.16
Avail Cap(c_a), veh/h	253	1530	683	210	1493	666	379	1052	469	294	1039	464
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.6	22.0	19.9	56.0	22.5	20.3	55.4	33.3	30.2	55.0	32.9	30.8
Incr Delay (d2), s/veh	12.2	0.6	0.4	8.6	0.6	0.3	3.7	1.2	0.6	1.6	0.9	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	4.8	1.6	1.9	4.3	1.1	1.9	5.0	1.2	1.1	4.2	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.8	22.6	20.4	64.7	23.1	20.6	59.1	34.5	30.8	56.5	33.8	31.5
LnGrp LOS	E	C	C	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h	708			604			622			518		
Approach Delay, s/veh	27.6			26.8			39.1			36.8		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.9	41.0	10.5	57.6	11.4	40.5	11.8	56.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	36.5	14.5	40.5	13.5	33.5	17.5	37.5				
Max Q Clear Time (g_c+I1), s	4.6	14.1	5.9	14.0	6.4	12.0	7.7	13.0				
Green Ext Time (p_c), s	0.1	2.7	0.1	3.6	0.2	2.2	0.1	2.9				
Intersection Summary												
HCM 6th Ctrl Delay	32.3											
HCM 6th LOS	C											

Lanes, Volumes, Timings
5: Madison St. & Avenue 50/50th Avenue

EAPC (2026) Weekend SE Arrival

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	412	145	45	353	64	120	433	37	60	303	95
Future Volume (vph)	92	412	145	45	353	64	120	433	37	60	303	95
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	24.0	47.0	47.0	18.0	41.0	41.0	18.0	41.0	41.0	14.0	37.0	37.0
Total Split (%)	20.0%	39.2%	39.2%	15.0%	34.2%	34.2%	15.0%	34.2%	34.2%	11.7%	30.8%	30.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

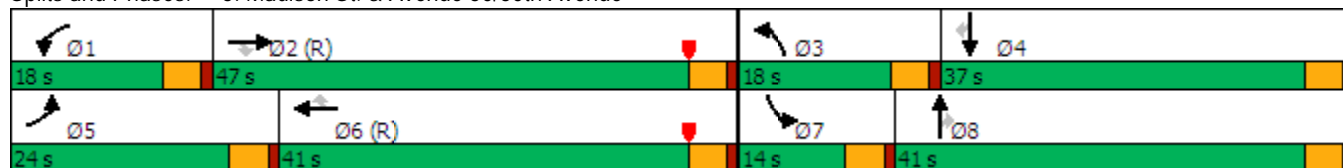
Actuated Cycle Length: 120

Offset: 64.5 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue




























HCM 6th Signalized Intersection Summary 5: Madison St. & Avenue 50/50th Avenue

EAPC (2026) Weekend SE Arrival

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	412	145	45	353	64	120	433	37	60	303	95
Future Volume (veh/h)	92	412	145	45	353	64	120	433	37	60	303	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	98	438	154	48	376	68	128	461	39	64	322	101
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	1550	691	81	1466	654	194	1052	469	173	1031	460
Arrive On Green	0.07	0.45	0.45	0.05	0.42	0.42	0.06	0.30	0.30	0.05	0.30	0.30
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	98	438	154	48	376	68	128	461	39	64	322	101
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	6.7	9.6	7.3	3.3	8.4	3.2	4.5	12.8	2.2	2.2	8.6	5.9
Cycle Q Clear(g_c), s	6.7	9.6	7.3	3.3	8.4	3.2	4.5	12.8	2.2	2.2	8.6	5.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	123	1550	691	81	1466	654	194	1052	469	173	1031	460
V/C Ratio(X)	0.80	0.28	0.22	0.59	0.26	0.10	0.66	0.44	0.08	0.37	0.31	0.22
Avail Cap(c_a), veh/h	282	1550	691	195	1466	654	379	1052	469	266	1031	460
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	20.9	20.3	56.1	22.4	20.8	55.4	33.5	29.8	55.0	32.6	31.6
Incr Delay (d2), s/veh	11.2	0.5	0.7	6.8	0.4	0.3	3.8	1.3	0.3	1.3	0.8	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	3.8	2.6	1.5	3.3	1.2	1.9	5.4	0.8	0.9	3.6	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.2	21.4	21.1	62.9	22.8	21.2	59.2	34.8	30.2	56.3	33.4	32.7
LnGrp LOS	E	C	C	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h		690			492			628			487	
Approach Delay, s/veh		27.7			26.5			39.5			36.3	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.1	58.2	11.4	40.3	13.0	55.3	10.7	41.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	13.5	42.5	13.5	32.5	19.5	36.5	9.5	36.5				
Max Q Clear Time (g_c+I1), s	5.3	11.6	6.5	10.6	8.7	10.4	4.2	14.8				
Green Ext Time (p_c), s	0.0	3.3	0.2	2.1	0.1	2.4	0.0	2.7				
Intersection Summary												
HCM 6th Ctrl Delay			32.5									
HCM 6th LOS			C									

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54









EAPC (2026) Weekend SE Arrival

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 		 	 	
Traffic Volume (vph)	26	20	2	28	8	491	5	209	44	632	253	2
Future Volume (vph)	26	20	2	28	8	491	5	209	44	632	253	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh91.6

Intersection LOS F






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	20	2	28	8	491	5	209	44	632	253	2
Future Vol, veh/h	26	20	2	28	8	491	5	209	44	632	253	2
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	24	2	34	10	599	6	255	54	771	309	2
Number of Lanes	1	2	0	1	1	1	0	2	0	2	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	15.5	208.8	20	47
HCM LOS	C	F	C	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	5%	0%	100%	0%	0%	100%	0%	0%	100%	100%	0%
Vol Thru, %	95%	70%	0%	100%	77%	0%	100%	0%	0%	0%	99%
Vol Right, %	0%	30%	0%	0%	23%	0%	0%	100%	0%	0%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	110	149	26	13	9	28	8	491	316	316	255
LT Vol	5	0	26	0	0	28	0	0	316	316	0
Through Vol	105	105	0	13	7	0	8	0	0	0	253
RT Vol	0	44	0	0	2	0	0	491	0	0	2
Lane Flow Rate	134	181	32	16	11	34	10	599	385	385	311
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.352	0.466	0.099	0.048	0.031	0.092	0.025	1.414	0.898	0.898	0.682
Departure Headway (Hd)	10.234	10.004	12.144	11.621	11.452	9.724	9.215	8.501	9.29	9.29	8.779
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	354	362	297	310	315	370	390	431	393	393	414
Service Time	7.934	7.704	9.844	9.321	9.152	7.442	6.932	6.218	6.99	6.99	6.479
HCM Lane V/C Ratio	0.379	0.5	0.108	0.052	0.035	0.092	0.026	1.39	0.98	0.98	0.751
HCM Control Delay	18.4	21.1	16.2	14.9	14.5	13.4	12.2	223.1	54.5	54.5	28.3
HCM Lane LOS	C	C	C	B	B	B	B	F	F	F	D
HCM 95th-tile Q	1.5	2.4	0.3	0.2	0.1	0.3	0.1	29.5	9.2	9.2	4.9

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54

EAPC (2026) Weekend SE Arrival
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	20	2	28	8	491	5	209	44	632	253	2
Future Volume (vph)	26	20	2	28	8	491	5	209	44	632	253	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases		2			6	4	8	8		4	4	
Permitted Phases	2			6		6						4
Detector Phase	2	2		6	6	4	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5		22.5	22.5	22.5
Total Split (s)	27.0	27.0		27.0	27.0	64.0	29.0	29.0		64.0	64.0	64.0
Total Split (%)	22.5%	22.5%		22.5%	22.5%	53.3%	24.2%	24.2%		53.3%	53.3%	53.3%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		None	None	Max	Max	Max		Max	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

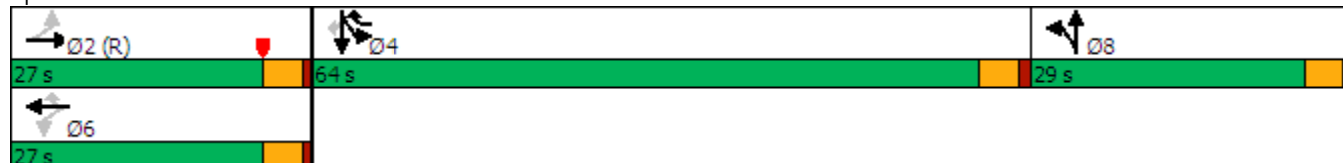
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 70






















Control Type: Actuated-Coordinated

Splits and Phases: 6: Jefferson St. & Avenue 54























HCM 6th Signalized Intersection Summary 6: Jefferson St. & Avenue 54

EAPC (2026) Weekend SE Arrival
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	20	2	28	8	491	5	209	44	632	253	2
Future Volume (veh/h)	26	20	2	28	8	491	5	209	44	632	253	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	32	24	2	34	10	599	6	255	54	771	309	2
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	209	607	50	311	341	1055	13	579	128	1668	1716	765
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.20	0.20	0.20	0.50	0.50	0.50
Sat Flow, veh/h	812	3237	266	1385	1821	1543	65	2835	626	3365	3460	1543
Grp Volume(v), veh/h	32	13	13	34	10	599	168	0	147	771	309	2
Grp Sat Flow(s),veh/h/ln	812	1730	1773	1385	1821	1543	1818	0	1708	1682	1730	1543
Q Serve(g_s), s	4.0	0.7	0.7	2.5	0.5	22.5	9.7	0.0	9.0	18.0	5.9	0.1
Cycle Q Clear(g_c), s	4.6	0.7	0.7	3.2	0.5	22.5	9.7	0.0	9.0	18.0	5.9	0.1
Prop In Lane	1.00		0.15	1.00		1.00	0.04		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	209	324	332	311	341	1055	371	0	349	1668	1716	765
V/C Ratio(X)	0.15	0.04	0.04	0.11	0.03	0.57	0.45	0.00	0.42	0.46	0.18	0.00
Avail Cap(c_a), veh/h	209	324	332	311	341	1055	371	0	349	1668	1716	765
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.82	0.82	0.82	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.7	39.9	39.9	41.2	39.8	9.6	41.9	0.0	41.6	19.8	16.7	15.3
Incr Delay (d2), s/veh	1.6	0.2	0.2	0.1	0.0	0.6	3.9	0.0	3.7	0.9	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.3	0.3	0.8	0.2	17.7	4.6	0.0	4.0	6.6	2.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.2	40.1	40.1	41.3	39.9	10.2	45.8	0.0	45.3	20.7	17.0	15.3
LnGrp LOS	D	D	D	D	D	B	D	A	D	C	B	B
Approach Vol, veh/h	58			643				315			1082	
Approach Delay, s/veh	41.9			12.3				45.6			19.6	
Approach LOS	D			B				D			B	
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	27.0			64.0			27.0			29.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	22.5			59.5			22.5			24.5		
Max Q Clear Time (g_c+I1), s	6.6			20.0			24.5			11.7		
Green Ext Time (p_c), s	0.2			5.0			0.0			1.2		
Intersection Summary												
HCM 6th Ctrl Delay	21.9											
HCM 6th LOS	C											

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52






















EAPC (2026) Weekend SE Arrival

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	354	302	25	390	276	210	604	63	166	636	129
Future Volume (vph)	89	354	302	25	390	276	210	604	63	166	636	129
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		100	0		100	0		0	0		0
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	60			60			60			60		
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											

Intersection									
Intersection Delay, s/veh	91.0								
Intersection LOS	F								
Approach	EB		WB		NB		SB		
Entry Lanes	1		1		1		1		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	802		743		943		1001		
Demand Flow Rate, veh/h	819		758		962		1022		
Vehicles Circulating, veh/h	908		991		669		686		
Vehicles Exiting, veh/h	658		571		726		760		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	26.2		29.6		145.8		136.9		
Approach LOS	D		D		F		F		
Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Bypass	
Designated Moves	LT	R	LT	R	LT	R	LT	R	
Assumed Moves	LT	R	LT	R	LT	R	LT	R	
RT Channelized		Free		Free		Free		Free	
Lane Util	1.000		1.000		1.000		1.000		
Follow-Up Headway, s	2.609		2.609		2.609		2.609		
Critical Headway, s	4.976	331	4.976	303	4.976	69	4.976	142	
Entry Flow, veh/h	487	1887	455	1887	893	1887	880	1887	
Cap Entry Lane, veh/h	547	0.980	502	0.980	697	0.980	685	0.980	
Entry HV Adj Factor	0.980	325	0.979	297	0.980	68	0.980	139	
Flow Entry, veh/h	477	1850	446	1850	875	1850	862	1850	
Cap Entry, veh/h	536	0.176	492	0.161	683	0.037	672	0.075	
V/C Ratio	0.891	0.0	0.906	0.0	1.280	0.0	1.284	0.0	
Control Delay, s/veh	44.1	A	49.3	A	157.1	A	158.9	A	
LOS	E	1	E	1	F	0	F	0	
95th %tile Queue, veh	10		10		34		33		

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52






















EAPC (2026) Weekend SE Arrival
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	354	302	25	390	276	210	604	63	166	636	129
Future Volume (vph)	89	354	302	25	390	276	210	604	63	166	636	129
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		100	0		100	0		0	0		0
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	60			60			60			60		
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											

Intersection										
Intersection Delay, s/veh	13.5									
Intersection LOS	B									
Approach	EB		WB		NB		SB			
Entry Lanes	1		1		2		2			
Conflicting Circle Lanes	2		2		2		2			
Adj Approach Flow, veh/h	802		743		943		1001			
Demand Flow Rate, veh/h	819		758		962		1022			
Vehicles Circulating, veh/h	908		991		669		686			
Vehicles Exiting, veh/h	658		571		726		760			
Ped Vol Crossing Leg, #/h	0		0		0		0			
Ped Cap Adj	1.000		1.000		1.000		1.000			
Approach Delay, s/veh	14.1		15.1		13.1		12.3			
Approach LOS	B		C		B		B			
Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
Assumed Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
RT Channelized		Free		Free			Free			Free
Lane Util	1.000		1.000		0.470	0.530		0.470	0.530	
Follow-Up Headway, s	2.535		2.535		2.667	2.535		2.667	2.535	
Critical Headway, s	4.328	331	4.328	303	4.645	4.328	69	4.645	4.328	142
Entry Flow, veh/h	487	1887	455	1887	420	473	1887	414	466	1887
Cap Entry Lane, veh/h	656	0.980	612	0.980	729	804	0.980	718	793	0.980
Entry HV Adj Factor	0.980	325	0.979	297	0.979	0.980	68	0.979	0.981	139
Flow Entry, veh/h	477	1850	446	1850	411	464	1850	405	457	1850
Cap Entry, veh/h	643	0.176	599	0.161	714	788	0.037	703	777	0.075
V/C Ratio	0.742	0.0	0.744	0.0	0.576	0.588	0.0	0.576	0.588	0.0
Control Delay, s/veh	23.6	A	25.1	A	14.5	13.8	A	14.7	14.0	A
LOS	C	1	D	1	B	B	0	B	B	0
95th %tile Queue, veh	7		7		4	4		4	4	

Lanes, Volumes, Timings 8: Jefferson St. & Pomelo

EAPC (2026) Weekend SE Arrival

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	2	17	7	1	35	2	982	6	19	980	56
Future Volume (vph)	55	2	17	7	1	35	2	982	6	19	980	56
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	54.0		18.0	54.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	15.0%	45.0%		15.0%	45.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary

Area Type: Other

Cycle Length: 120

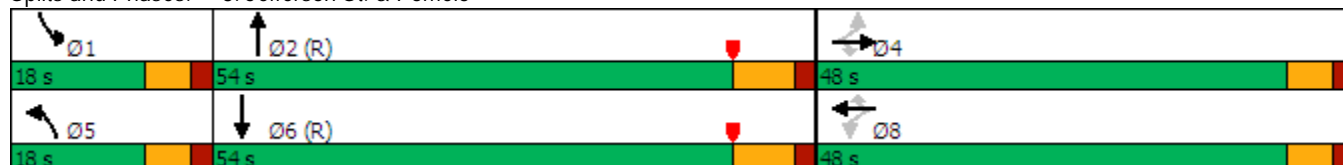
Actuated Cycle Length: 120

Offset: 30 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110


Control Type: Actuated-Coordinated

Splits and Phases: 8: Jefferson St. & Pomelo



























HCM 6th Signalized Intersection Summary 8: Jefferson St. & Pomelo

EAPC (2026) Weekend SE Arrival

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↩	↩		↩	↩	↩	↩↩↩		↩	↩↩↩	
Traffic Volume (veh/h)	55	2	17	7	1	35	2	982	6	19	980	56
Future Volume (veh/h)	55	2	17	7	1	35	2	982	6	19	980	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	58	2	18	7	1	37	2	1034	6	20	1032	59
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	74	2	457	65	6	457	11	2514	15	84	2574	147
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.01	0.49	0.49	0.02	0.18	0.18
Sat Flow, veh/h	51	5	1543	29	19	1543	1734	5101	30	1734	4811	275
Grp Volume(v), veh/h	60	0	18	8	0	37	2	672	368	20	711	380
Grp Sat Flow(s),veh/h/ln	56	0	1543	47	0	1543	1734	1657	1816	1734	1657	1772
Q Serve(g_s), s	1.4	0.0	1.0	0.3	0.0	2.1	0.1	15.5	15.5	1.4	22.8	22.8
Cycle Q Clear(g_c), s	35.5	0.0	1.0	35.0	0.0	2.1	0.1	15.5	15.5	1.4	22.8	22.8
Prop In Lane	0.97		1.00	0.87		1.00	1.00		0.02	1.00		0.16
Lane Grp Cap(c), veh/h	76	0	457	70	0	457	11	1634	895	84	1774	948
V/C Ratio(X)	0.79	0.00	0.04	0.11	0.00	0.08	0.18	0.41	0.41	0.24	0.40	0.40
Avail Cap(c_a), veh/h	150	0	540	148	0	540	173	1634	895	173	1774	948
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.76	0.76	0.76
Uniform Delay (d), s/veh	59.2	0.0	30.1	40.5	0.0	30.5	59.3	19.4	19.4	56.8	32.4	32.4
Incr Delay (d2), s/veh	31.5	0.0	0.1	1.5	0.0	0.2	15.5	0.8	1.4	2.3	0.5	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.4	0.3	0.0	0.8	0.1	5.6	6.3	0.6	10.1	11.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	90.7	0.0	30.2	42.0	0.0	30.6	74.8	20.1	20.8	59.1	32.9	33.3
LnGrp LOS	F	A	C	D	A	C	E	C	C	E	C	C
Approach Vol, veh/h	78			45			1042			1111		
Approach Delay, s/veh	76.7			32.7			20.4			33.5		
Approach LOS	E			C			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.8	65.9		42.3	6.8	70.9		42.3				
Change Period (Y+Rc), s	6.0	7.5		6.0	6.0	7.5		6.0				
Max Green Setting (Gmax), s	12.0	46.5		42.0	12.0	46.5		42.0				
Max Q Clear Time (g_c+I1), s	3.4	17.5		37.5	2.1	24.8		37.0				
Green Ext Time (p_c), s	0.0	12.8		0.2	0.0	11.6		0.1				
Intersection Summary												
HCM 6th Ctrl Delay	29.0											
HCM 6th LOS	C											

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

EAPC (2026) Weekend SE Arrival

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	300	336	122	127	308	177	118	869	85	250	802	198
Future Volume (vph)	300	336	122	127	308	177	118	869	85	250	802	198
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	39.5	39.5	22.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	32.9%	32.9%	18.3%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120

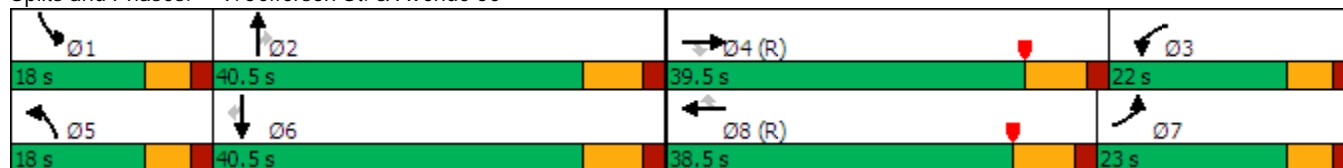
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 115

























Control Type: Actuated-Coordinated

Splits and Phases: 9: Jefferson St. & Avenue 50



























HCM 6th Signalized Intersection Summary 9: Jefferson St. & Avenue 50

EAPC (2026) Weekend SE Arrival

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	300	336	122	127	308	177	118	869	85	250	802	198
Future Volume (veh/h)	300	336	122	127	308	177	118	869	85	250	802	198
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	309	346	126	131	318	182	122	896	88	258	827	204
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	402	508	227	508	378	321	170	1171	363	336	1179	366
Arrive On Green	0.23	0.15	0.15	0.29	0.21	0.21	0.03	0.08	0.08	0.10	0.24	0.24
Sat Flow, veh/h	1734	3460	1543	1734	1821	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	309	346	126	131	318	182	122	896	88	258	827	204
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	20.0	11.4	6.9	6.9	20.1	9.3	8.4	21.2	3.0	9.0	18.3	7.6
Cycle Q Clear(g_c), s	20.0	11.4	6.9	6.9	20.1	9.3	8.4	21.2	3.0	9.0	18.3	7.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	402	508	227	508	378	321	170	1171	363	336	1179	366
V/C Ratio(X)	0.77	0.68	0.56	0.26	0.84	0.57	0.72	0.77	0.24	0.77	0.70	0.56
Avail Cap(c_a), veh/h	402	923	412	508	470	399	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.1	48.5	27.0	32.5	45.6	22.9	56.4	52.1	10.0	52.6	41.9	12.1
Incr Delay (d2), s/veh	8.4	7.2	9.5	0.1	19.7	7.1	10.8	2.5	0.5	9.2	1.6	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	5.2	3.9	2.8	10.9	3.9	4.2	9.6	2.4	4.1	7.3	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.5	55.7	36.5	32.6	65.3	30.0	67.2	54.6	10.5	61.9	43.5	14.0
LnGrp LOS	D	E	D	C	E	C	E	D	B	E	D	B
Approach Vol, veh/h		781			631			1106			1289	
Approach Delay, s/veh		51.0			48.3			52.5			42.5	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	35.8	41.1	25.1	17.8	36.0	33.8	32.4				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	12.0	33.0	16.0	32.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	11.0	23.2	8.9	13.4	10.4	20.3	22.0	22.1				
Green Ext Time (p_c), s	0.0	5.1	0.0	4.2	0.0	6.1	0.0	2.8				
Intersection Summary												
HCM 6th Ctrl Delay			48.1									
HCM 6th LOS			D									
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

EAPC (2026) Weekend SE Arrival
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	300	336	122	127	308	177	118	869	85	250	802	198
Future Volume (vph)	300	336	122	127	308	177	118	869	85	250	802	198
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	39.5	39.5	22.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	32.9%	32.9%	18.3%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120









Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 115

























Control Type: Actuated-Coordinated

Splits and Phases: 9: Jefferson St. & Avenue 50

			
Ø1	Ø2	Ø4 (R)	Ø3
18 s	40.5 s	39.5 s	22 s
			
Ø5	Ø6	Ø8 (R)	Ø7
18 s	40.5 s	38.5 s	23 s

HCM 6th Signalized Intersection Summary 9: Jefferson St. & Avenue 50

EAPC (2026) Weekend SE Arrival
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	300	336	122	127	308	177	118	869	85	250	802	198
Future Volume (veh/h)	300	336	122	127	308	177	118	869	85	250	802	198
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	309	346	126	131	318	182	122	896	88	258	827	204
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	518	508	227	508	487	217	170	1171	363	336	1179	366
Arrive On Green	0.30	0.15	0.15	0.29	0.14	0.14	0.03	0.08	0.08	0.10	0.24	0.24
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	309	346	126	131	318	182	122	896	88	258	827	204
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	18.2	11.4	6.9	6.9	10.4	10.4	8.4	21.2	3.0	9.0	18.3	6.4
Cycle Q Clear(g_c), s	18.2	11.4	6.9	6.9	10.4	10.4	8.4	21.2	3.0	9.0	18.3	6.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	518	508	227	508	487	217	170	1171	363	336	1179	366
V/C Ratio(X)	0.60	0.68	0.56	0.26	0.65	0.84	0.72	0.77	0.24	0.77	0.70	0.56
Avail Cap(c_a), veh/h	518	923	412	508	894	399	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.9	48.5	27.0	32.5	48.8	28.5	56.4	52.1	10.0	52.6	41.9	8.5
Incr Delay (d2), s/veh	1.6	7.2	9.5	0.1	6.7	30.3	10.8	2.5	0.5	9.2	1.6	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	5.2	3.9	2.8	4.8	5.5	4.2	9.6	2.4	4.1	7.3	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.5	55.7	36.5	32.6	55.5	58.8	67.2	54.6	10.5	61.9	43.5	10.4
LnGrp LOS	D	E	D	C	E	E	E	D	B	E	D	B
Approach Vol, veh/h	781			631			1106			1289		
Approach Delay, s/veh	45.4			51.7			52.5			41.9		
Approach LOS	D			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	35.8	41.1	25.1	17.8	36.0	41.9	24.4				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	12.0	33.0	16.0	32.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	11.0	23.2	8.9	13.4	10.4	20.3	20.2	12.4				
Green Ext Time (p_c), s	0.0	5.1	0.0	4.2	0.0	6.1	0.0	4.4				
Intersection Summary												
HCM 6th Ctrl Delay			47.3									
HCM 6th LOS			D									
Notes												

Lanes, Volumes, Timings
10: Avenue 60 & Madison St.

EAPC (2026) Weekend SE Arrival



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	46	48	58	185	272	60
Future Volume (vph)	46	48	58	185	272	60
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		40	
Link Distance (ft)		1772	661		437	
Travel Time (s)		30.2	11.3		7.4	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)						
Sign Control		Stop	Stop		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Intersection Delay, s/veh	12.7
Intersection LOS	B





















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↱	↱	↱	↱	↱
Traffic Vol, veh/h	46	48	58	185	272	60
Future Vol, veh/h	46	48	58	185	272	60
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	56	59	71	226	332	73
Number of Lanes	0	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	10.5	10.2	15.2
HCM LOS	B	B	C

Lane	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	49%	0%	0%	100%	0%
Vol Thru, %	51%	100%	0%	0%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	94	58	185	272	60
LT Vol	46	0	0	272	0
Through Vol	48	58	0	0	0
RT Vol	0	0	185	0	60
Lane Flow Rate	115	71	226	332	73
Geometry Grp	4	7	7	7	7
Degree of Util (X)	0.193	0.117	0.329	0.567	0.101
Departure Headway (Hd)	6.057	5.961	5.252	6.155	4.946
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	593	605	688	587	726
Service Time	4.087	3.661	2.952	3.876	2.667
HCM Lane V/C Ratio	0.194	0.117	0.328	0.566	0.101
HCM Control Delay	10.5	9.4	10.5	16.7	8.2
HCM Lane LOS	B	A	B	C	A
HCM 95th-tile Q	0.7	0.4	1.4	3.5	0.3

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

EAPC (2026) Weekend SE Arrival

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	151	127	18	112	109	84	273	12	169	344	41
Future Volume (vph)	42	151	127	18	112	109	84	273	12	169	344	41
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	47
Intersection LOS	E





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰↱		↰	↱		↰	↱	↰
Traffic Vol, veh/h	42	151	127	18	112	109	84	273	12	169	344	41
Future Vol, veh/h	42	151	127	18	112	109	84	273	12	169	344	41
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	172	144	20	127	124	95	310	14	192	391	47
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	24.8	38.6	46.8	63.6
HCM LOS	C	E	E	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	22%	0%	8%	100%	0%	0%
Vol Thru, %	0%	96%	78%	0%	47%	0%	100%	0%
Vol Right, %	0%	4%	0%	100%	46%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	84	285	193	127	239	169	344	41
LT Vol	84	0	42	0	18	169	0	0
Through Vol	0	273	151	0	112	0	344	0
RT Vol	0	12	0	127	109	0	0	41
Lane Flow Rate	95	324	219	144	272	192	391	47
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.275	0.884	0.623	0.38	0.753	0.539	1.041	0.115
Departure Headway (Hd)	10.712	10.153	10.562	9.716	10.321	10.105	9.583	8.852
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	338	359	344	372	353	359	383	407
Service Time	8.412	7.853	8.262	7.416	8.021	7.81	7.288	6.557
HCM Lane V/C Ratio	0.281	0.903	0.637	0.387	0.771	0.535	1.021	0.115
HCM Control Delay	17.4	55.5	29.2	18.2	38.6	24	89.2	12.7
HCM Lane LOS	C	F	D	C	E	C	F	B
HCM 95th-tile Q	1.1	8.6	4	1.7	5.9	3.1	13.1	0.4

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

EAPC (2026) Weekend SE Arrival
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	151	127	18	112	109	84	273	12	169	344	41
Future Volume (vph)	42	151	127	18	112	109	84	273	12	169	344	41
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red		Yes				Yes			Yes			Yes
Link Speed (mph)		45				45			50			50
Link Distance (ft)		598				1045			1022			1291
Travel Time (s)		9.1				15.8			13.9			17.6
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4				8		5	2		1	6
Permitted Phases	4		4	8								6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		11.5	22.5		11.5	22.5	22.5
Total Split (s)	39.0	39.0	39.0	39.0	39.0		21.0	48.0		33.0	60.0	60.0
Total Split (%)	32.5%	32.5%	32.5%	32.5%	32.5%		17.5%	40.0%		27.5%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

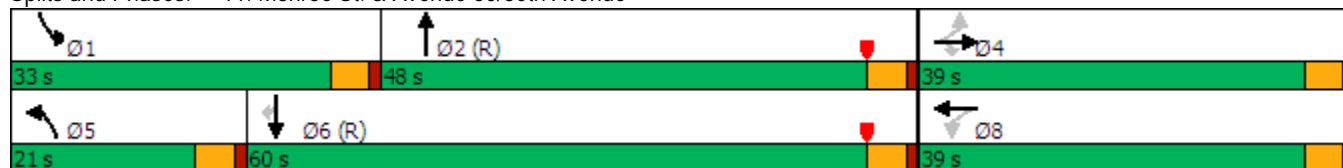
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60

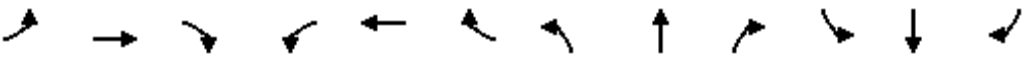
Control Type: Actuated-Coordinated

Splits and Phases: 11: Monroe St. & Avenue 60/60th Avenue




















HCM 6th Signalized Intersection Summary 11: Monroe St. & Avenue 60/60th Avenue

EAPC (2026) Weekend SE Arrival
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱	↰	↱		↰	↱	↱
Traffic Volume (veh/h)	42	151	127	18	112	109	84	273	12	169	344	41
Future Volume (veh/h)	42	151	127	18	112	109	84	273	12	169	344	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	48	172	144	20	127	124	95	310	14	192	391	47
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	81	253	364	42	155	138	119	905	41	222	1062	900
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.07	0.52	0.52	0.13	0.58	0.58
Sat Flow, veh/h	187	1070	1543	39	655	585	1734	1729	78	1734	1821	1543
Grp Volume(v), veh/h	220	0	144	271	0	0	95	0	324	192	391	47
Grp Sat Flow(s),veh/h/ln	1257	0	1543	1279	0	0	1734	0	1807	1734	1821	1543
Q Serve(g_s), s	0.0	0.0	9.4	6.6	0.0	0.0	6.5	0.0	12.5	13.0	13.7	1.6
Cycle Q Clear(g_c), s	18.9	0.0	9.4	25.5	0.0	0.0	6.5	0.0	12.5	13.0	13.7	1.6
Prop In Lane	0.22		1.00	0.07		0.46	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	333	0	364	334	0	0	119	0	945	222	1062	900
V/C Ratio(X)	0.66	0.00	0.40	0.81	0.00	0.00	0.80	0.00	0.34	0.86	0.37	0.05
Avail Cap(c_a), veh/h	416	0	444	417	0	0	238	0	945	412	1062	900
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	0.0	38.6	43.6	0.0	0.0	55.1	0.0	16.6	51.3	13.3	10.8
Incr Delay (d2), s/veh	2.7	0.0	0.7	9.4	0.0	0.0	11.6	0.0	1.0	9.6	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	0.0	3.5	8.5	0.0	0.0	3.1	0.0	5.0	6.1	5.3	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.7	0.0	39.3	53.0	0.0	0.0	66.6	0.0	17.6	60.8	14.3	10.9
LnGrp LOS	D	A	D	D	A	A	E	A	B	E	B	B
Approach Vol, veh/h	364			271			419			630		
Approach Delay, s/veh	42.0			53.0			28.7			28.2		
Approach LOS	D			D			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.9	67.3		32.8	12.7	74.4		32.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	28.5	43.5		34.5	16.5	55.5		34.5				
Max Q Clear Time (g_c+I1), s	15.0	14.5		20.9	8.5	15.7		27.5				
Green Ext Time (p_c), s	0.4	1.7		1.3	0.1	2.3		0.8				
Intersection Summary												
HCM 6th Ctrl Delay	35.3											
HCM 6th LOS	D											

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAPC (2026) Weekend SE Arrival

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	152	52	55	140	51	73	387	60	44	447	97
Future Volume (vph)	86	152	52	55	140	51	73	387	60	44	447	97
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	185.9
Intersection LOS	F





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	86	152	52	55	140	51	73	387	60	44	447	97
Future Vol, veh/h	86	152	52	55	140	51	73	387	60	44	447	97
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	105	185	63	67	171	62	89	472	73	54	545	118
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	59.3	44.8	281.9	222.4
HCM LOS	F	E	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	14%	30%	22%	9%	0%
Vol Thru, %	74%	52%	57%	91%	0%
Vol Right, %	12%	18%	21%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	520	290	246	491	97
LT Vol	73	86	55	44	0
Through Vol	387	152	140	447	0
RT Vol	60	52	51	0	97
Lane Flow Rate	634	354	300	599	118
Geometry Grp	5	2	2	7	7
Degree of Util (X)	1.542	0.879	0.767	1.495	0.271
Departure Headway (Hd)	9.781	11.304	11.731	10.225	9.443
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	380	325	312	359	383
Service Time	7.781	9.304	9.731	7.925	7.143
HCM Lane V/C Ratio	1.668	1.089	0.962	1.669	0.308
HCM Control Delay	281.9	59.3	44.8	263.2	15.6
HCM Lane LOS	F	F	E	F	C
HCM 95th-tile Q	31.7	8.1	5.9	28.7	1.1

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAPC (2026) Weekend SE Arrival
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	152	52	55	140	51	73	387	60	44	447	97
Future Volume (vph)	86	152	52	55	140	51	73	387	60	44	447	97
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		0	150		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		11.5	22.5		11.5	22.5	
Total Split (s)	34.0	34.0		34.0	34.0		16.0	73.4		12.6	70.0	
Total Split (%)	28.3%	28.3%		28.3%	28.3%		13.3%	61.2%		10.5%	58.3%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

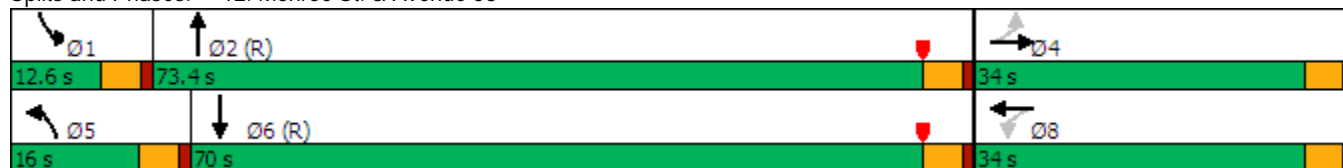
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 65





















Control Type: Actuated-Coordinated

Splits and Phases: 12: Monroe St. & Avenue 58
























HCM 6th Signalized Intersection Summary 12: Monroe St. & Avenue 58

EAPC (2026) Weekend SE Arrival
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	152	52	55	140	51	73	387	60	44	447	97
Future Volume (veh/h)	86	152	52	55	140	51	73	387	60	44	447	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	105	185	63	67	171	62	89	472	73	54	545	118
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	186	298	101	174	292	106	111	939	145	84	862	187
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.06	0.61	0.61	0.05	0.59	0.59
Sat Flow, veh/h	1147	1299	442	1132	1275	462	1734	1540	238	1734	1451	314
Grp Volume(v), veh/h	105	0	248	67	0	233	89	0	545	54	0	663
Grp Sat Flow(s),veh/h/ln	1147	0	1742	1132	0	1738	1734	0	1778	1734	0	1765
Q Serve(g_s), s	10.8	0.0	15.4	6.8	0.0	14.3	6.1	0.0	20.7	3.7	0.0	29.3
Cycle Q Clear(g_c), s	25.1	0.0	15.4	22.1	0.0	14.3	6.1	0.0	20.7	3.7	0.0	29.3
Prop In Lane	1.00		0.25	1.00		0.27	1.00		0.13	1.00		0.18
Lane Grp Cap(c), veh/h	186	0	399	174	0	398	111	0	1084	84	0	1049
V/C Ratio(X)	0.56	0.00	0.62	0.38	0.00	0.59	0.80	0.00	0.50	0.64	0.00	0.63
Avail Cap(c_a), veh/h	205	0	428	193	0	427	166	0	1084	117	0	1049
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.3	0.0	41.6	51.5	0.0	41.2	55.4	0.0	13.2	56.0	0.0	15.8
Incr Delay (d2), s/veh	2.9	0.0	2.5	1.4	0.0	1.8	15.0	0.0	1.7	7.8	0.0	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	6.6	2.0	0.0	6.3	3.0	0.0	7.8	1.7	0.0	11.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.3	0.0	44.1	52.9	0.0	43.0	70.4	0.0	14.8	63.8	0.0	18.7
LnGrp LOS	E	A	D	D	A	D	E	A	B	E	A	B
Approach Vol, veh/h	353			300			634			717		
Approach Delay, s/veh	47.4			45.2			22.6			22.1		
Approach LOS	D			D			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.3	77.7		32.0	12.2	75.8		32.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	8.1	68.9		29.5	11.5	65.5		29.5				
Max Q Clear Time (g_c+I1), s	5.7	22.7		27.1	8.1	31.3		24.1				
Green Ext Time (p_c), s	0.0	3.4		0.4	0.0	4.5		0.7				
Intersection Summary												
HCM 6th Ctrl Delay				30.2								
HCM 6th LOS				C								

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.









EAPC (2026) Weekend SE Arrival

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	92	25	61	100	55	23	412	56	55	481	16
Future Volume (vph)	8	92	25	61	100	55	23	412	56	55	481	16
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh66.3

Intersection LOS F






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	92	25	61	100	55	23	412	56	55	481	16
Future Vol, veh/h	8	92	25	61	100	55	23	412	56	55	481	16
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	106	29	70	115	63	26	474	64	63	553	18
Number of Lanes	1	1	1	0	1	0	1	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	1
Conflicting Approach RightNB		SB	WB	EB
Conflicting Lanes Right	2	3	1	3
HCM Control Delay	14.6	25.7	138	30
HCM LOS	B	D	F	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	100%	0%	0%	28%	100%	0%	0%
Vol Thru, %	0%	88%	0%	100%	0%	46%	0%	100%	91%
Vol Right, %	0%	12%	0%	0%	100%	25%	0%	0%	9%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	23	468	8	92	25	216	55	321	176
LT Vol	23	0	8	0	0	61	55	0	0
Through Vol	0	412	0	92	0	100	0	321	160
RT Vol	0	56	0	0	25	55	0	0	16
Lane Flow Rate	26	538	9	106	29	248	63	369	203
Geometry Grp	8	8	7	7	7	8	8	8	8
Degree of Util (X)	0.064	1.221	0.024	0.259	0.065	0.61	0.149	0.817	0.446
Departure Headway (Hd)	8.77	8.17	9.936	9.413	8.68	9.381	9.029	8.512	8.446
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	409	446	362	384	415	387	400	428	430
Service Time	6.518	5.918	7.636	7.113	6.38	7.081	6.729	6.212	6.146
HCM Lane V/C Ratio	0.064	1.206	0.025	0.276	0.07	0.641	0.158	0.862	0.472
HCM Control Delay	12.1	144.2	12.9	15.4	12	25.7	13.3	39.5	17.8
HCM Lane LOS	B	F	B	C	B	D	B	E	C
HCM 95th-tile Q	0.2	21.5	0.1	1	0.2	3.9	0.5	7.5	2.2

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.

EAPC (2026) Weekend SE Arrival
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	92	25	61	100	55	23	412	56	55	481	16
Future Volume (vph)	8	92	25	61	100	55	23	412	56	55	481	16
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		11.5	22.5		11.5	22.5	22.5
Total Split (s)	40.4	40.4	40.4	40.4	40.4		11.8	62.6		17.0	67.8	67.8
Total Split (%)	33.7%	33.7%	33.7%	33.7%	33.7%		9.8%	52.2%		14.2%	56.5%	56.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

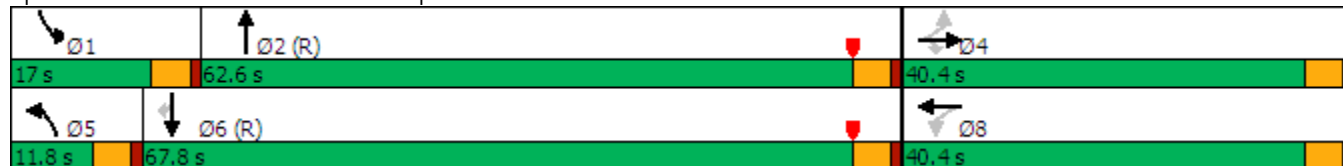
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60






















Control Type: Actuated-Coordinated

Splits and Phases: 13: Monroe St. & Airport Bl.





















HCM 6th Signalized Intersection Summary 13: Monroe St. & Airport Bl.

EAPC (2026) Weekend SE Arrival
With Improvements







												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	92	25	61	100	55	23	412	56	55	481	16
Future Volume (veh/h)	8	92	25	61	100	55	23	412	56	55	481	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	9	106	29	70	115	63	26	474	64	63	553	18
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	194	360	305	103	144	71	59	1003	135	89	2269	1012
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.03	0.64	0.64	0.05	0.66	0.66
Sat Flow, veh/h	1206	1821	1543	328	730	360	1734	1571	212	1734	3460	1543
Grp Volume(v), veh/h	9	106	29	248	0	0	26	0	538	63	553	18
Grp Sat Flow(s),veh/h/ln	1206	1821	1543	1419	0	0	1734	0	1783	1734	1730	1543
Q Serve(g_s), s	0.0	5.9	1.8	14.8	0.0	0.0	1.8	0.0	18.7	4.3	7.9	0.5
Cycle Q Clear(g_c), s	1.5	5.9	1.8	20.7	0.0	0.0	1.8	0.0	18.7	4.3	7.9	0.5
Prop In Lane	1.00		1.00	0.28		0.25	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	194	360	305	319	0	0	59	0	1138	89	2269	1012
V/C Ratio(X)	0.05	0.29	0.09	0.78	0.00	0.00	0.44	0.00	0.47	0.71	0.24	0.02
Avail Cap(c_a), veh/h	317	545	462	476	0	0	106	0	1138	181	2269	1012
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	0.99	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	41.0	39.3	47.5	0.0	0.0	56.9	0.0	11.2	56.1	8.5	7.2
Incr Delay (d2), s/veh	0.1	0.4	0.1	4.7	0.0	0.0	5.2	0.0	1.4	9.9	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.6	0.7	7.4	0.0	0.0	0.8	0.0	6.8	2.1	2.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.3	41.4	39.5	52.1	0.0	0.0	62.0	0.0	12.6	66.0	8.7	7.2
LnGrp LOS	D	D	D	D	A	A	E	A	B	E	A	A
Approach Vol, veh/h	144				248				564			
Approach Delay, s/veh	40.9				52.1				14.9			
Approach LOS	D				D				B			
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	81.1		28.2	8.6	83.2		28.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	12.5	58.1		35.9	7.3	63.3		35.9				
Max Q Clear Time (g_c+I1), s	6.3	20.7		7.9	3.8	9.9		22.7				
Green Ext Time (p_c), s	0.0	3.3		0.6	0.0	3.7		1.0				
Intersection Summary												
HCM 6th Ctrl Delay	22.9											
HCM 6th LOS	C											

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAPC (2026) Weekend SE Arrival

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	241	110	32	174	55	67	451	32	78	411	37
Future Volume (vph)	73	241	110	32	174	55	67	451	32	78	411	37
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	157.6
Intersection LOS	F





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	73	241	110	32	174	55	67	451	32	78	411	37
Future Vol, veh/h	73	241	110	32	174	55	67	451	32	78	411	37
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	77	254	116	34	183	58	71	475	34	82	433	39
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	56.5	45.6	272.2	174.9
HCM LOS	F	E	F	F

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	12%	100%	0%	12%	16%	0%
Vol Thru, %	82%	0%	69%	67%	84%	0%
Vol Right, %	6%	0%	31%	21%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	550	73	351	261	489	37
LT Vol	67	73	0	32	78	0
Through Vol	451	0	241	174	411	0
RT Vol	32	0	110	55	0	37
Lane Flow Rate	579	77	369	275	515	39
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	1.515	0.207	0.922	0.758	1.309	0.091
Departure Headway (Hd)	10.315	11.45	10.688	12.347	10.351	9.53
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	359	316	344	297	355	378
Service Time	8.315	9.15	8.388	10.347	8.051	7.23
HCM Lane V/C Ratio	1.613	0.244	1.073	0.926	1.451	0.103
HCM Control Delay	272.2	17.1	64.7	45.6	187.1	13.2
HCM Lane LOS	F	C	F	E	F	B
HCM 95th-tile Q	29.2	0.8	9.3	5.7	21.4	0.3

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAPC (2026) Weekend SE Arrival
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	241	110	32	174	55	67	451	32	78	411	37
Future Volume (vph)	73	241	110	32	174	55	67	451	32	78	411	37
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		11.5	22.5		11.5	22.5	
Total Split (s)	44.0	44.0		44.0	44.0		15.0	60.0		16.0	61.0	
Total Split (%)	36.7%	36.7%		36.7%	36.7%		12.5%	50.0%		13.3%	50.8%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60





















Control Type: Actuated-Coordinated

Splits and Phases: 14: Monroe St. & Avenue 54

























HCM 6th Signalized Intersection Summary 14: Monroe St. & Avenue 54

EAPC (2026) Weekend SE Arrival
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	241	110	32	174	55	67	451	32	78	411	37
Future Volume (veh/h)	73	241	110	32	174	55	67	451	32	78	411	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No				No				No			
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	77	254	116	34	183	58	71	475	34	82	433	39
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	220	307	140	117	343	109	92	955	68	103	947	85
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.05	0.57	0.57	0.06	0.58	0.58
Sat Flow, veh/h	1139	1183	540	1012	1325	420	1734	1679	120	1734	1646	148
Grp Volume(v), veh/h	77	0	370	34	0	241	71	0	509	82	0	472
Grp Sat Flow(s),veh/h/ln	1139	0	1724	1012	0	1746	1734	0	1800	1734	0	1794
Q Serve(g_s), s	7.5	0.0	24.3	3.9	0.0	14.2	4.9	0.0	20.4	5.6	0.0	18.2
Cycle Q Clear(g_c), s	21.7	0.0	24.3	28.2	0.0	14.2	4.9	0.0	20.4	5.6	0.0	18.2
Prop In Lane	1.00		0.31	1.00		0.24	1.00		0.07	1.00		0.08
Lane Grp Cap(c), veh/h	220	0	447	117	0	452	92	0	1024	103	0	1033
V/C Ratio(X)	0.35	0.00	0.83	0.29	0.00	0.53	0.77	0.00	0.50	0.79	0.00	0.46
Avail Cap(c_a), veh/h	300	0	567	188	0	575	152	0	1024	166	0	1033
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.6	0.0	41.9	55.3	0.0	38.2	56.1	0.0	15.6	55.7	0.0	14.7
Incr Delay (d2), s/veh	0.9	0.0	8.0	1.3	0.0	1.0	12.9	0.0	1.7	12.7	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	10.7	1.0	0.0	5.9	2.4	0.0	8.0	2.7	0.0	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.5	0.0	50.0	56.6	0.0	39.2	69.0	0.0	17.3	68.4	0.0	16.1
LnGrp LOS	D	A	D	E	A	D	E	A	B	E	A	B
Approach Vol, veh/h	447				275				580			
Approach Delay, s/veh	49.7				41.3				23.6			
Approach LOS	D				D				C			
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	11.6	72.8	35.6		10.8	73.6	35.6					
Change Period (Y+Rc), s	4.5	4.5	4.5		4.5	4.5	4.5					
Max Green Setting (Gmax), s	11.5	55.5	39.5		10.5	56.5	39.5					
Max Q Clear Time (g_c+I1), s	7.6	22.4	26.3		6.9	20.2	30.2					
Green Ext Time (p_c), s	0.0	3.0	1.8		0.0	2.8	0.9					
Intersection Summary												
HCM 6th Ctrl Delay	32.6											
HCM 6th LOS	C											

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52










EAPC (2026) Weekend SE Arrival

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	96	369	76	56	366	102	53	449	64	106	411	80
Future Volume (vph)	96	369	76	56	366	102	53	449	64	106	411	80
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 199.3

Intersection LOS F























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	96	369	76	56	366	102	53	449	64	106	411	80
Future Vol, veh/h	96	369	76	56	366	102	53	449	64	106	411	80
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	112	429	88	65	426	119	62	522	74	123	478	93
Number of Lanes	1	1	1	0	2	1	0	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay	159.3	53.3	531.6	48.5
HCM LOS	F	F	F	E

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	9%	100%	0%	0%	31%	0%	0%	100%	0%	0%
Vol Thru, %	79%	0%	100%	0%	69%	100%	0%	0%	100%	63%
Vol Right, %	11%	0%	0%	100%	0%	0%	100%	0%	0%	37%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	566	96	369	76	178	244	102	106	274	217
LT Vol	53	96	0	0	56	0	0	106	0	0
Through Vol	449	0	369	0	122	244	0	0	274	137
RT Vol	64	0	0	76	0	0	102	0	0	80
Lane Flow Rate	658	112	429	88	207	284	119	123	319	252
Geometry Grp	8	8	8	8	8	8	8	7	7	7
Degree of Util (X)	2.1	0.37	1.363	0.264	0.658	0.89	0.349	0.358	0.883	0.681
Departure Headway (Hd)	11.983	14.723	14.166	13.386	14.939	14.762	13.973	13.542	12.991	12.706
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	309	247	262	270	244	247	260	267	280	288
Service Time	9.683	12.423	11.866	11.086	12.639	12.462	11.673	11.242	10.691	10.406
HCM Lane V/C Ratio	2.129	0.453	1.637	0.326	0.848	1.15	0.458	0.461	1.139	0.875
HCM Control Delay	531.6	25.8	222.5	20.8	42.4	73.5	24	23.6	65.9	38.7
HCM Lane LOS	F	D	F	C	E	F	C	C	F	E
HCM 95th-tile Q	46.4	1.6	18.5	1	4.1	7.5	1.5	1.6	7.8	4.6

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52

EAPC (2026) Weekend SE Arrival
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	96	369	76	56	366	102	53	449	64	106	411	80
Future Volume (vph)	96	369	76	56	366	102	53	449	64	106	411	80
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2			6		
Detector Phase	7	4	4	3	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	20.1	40.0	40.0	12.0	31.9	31.9	68.0	68.0		68.0	68.0	
Total Split (%)	16.8%	33.3%	33.3%	10.0%	26.6%	26.6%	56.7%	56.7%		56.7%	56.7%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5		4.5		4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	None	None	None	None	None	C-Max	C-Max		C-Max	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

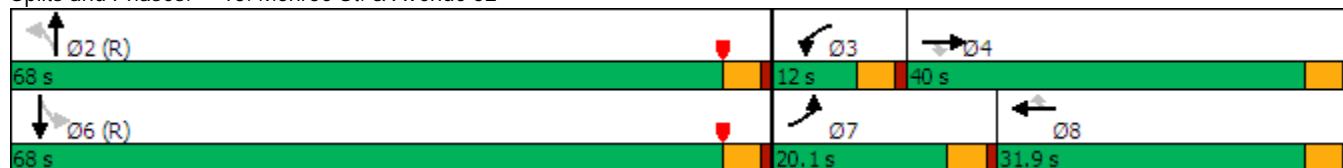
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 80























Control Type: Actuated-Coordinated

Splits and Phases: 15: Monroe St. & Avenue 52



























HCM 6th Signalized Intersection Summary 15: Monroe St. & Avenue 52

EAPC (2026) Weekend SE Arrival
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	369	76	56	366	102	53	449	64	106	411	80
Future Volume (veh/h)	96	369	76	56	366	102	53	449	64	106	411	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	113	434	89	66	431	120	62	528	75	125	484	94
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	472	400	90	800	357	100	778	107	386	1667	322
Arrive On Green	0.08	0.26	0.26	0.05	0.23	0.23	0.58	0.58	0.58	0.58	0.58	0.58
Sat Flow, veh/h	1734	1821	1543	1734	3460	1543	116	1349	186	816	2892	559
Grp Volume(v), veh/h	113	434	89	66	431	120	665	0	0	125	288	290
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1730	1543	1651	0	0	816	1730	1721
Q Serve(g_s), s	7.7	27.8	5.4	4.5	13.1	7.8	17.0	0.0	0.0	1.5	10.2	10.3
Cycle Q Clear(g_c), s	7.7	27.8	5.4	4.5	13.1	7.8	32.8	0.0	0.0	34.3	10.2	10.3
Prop In Lane	1.00		1.00	1.00		1.00	0.09		0.11	1.00		0.32
Lane Grp Cap(c), veh/h	138	472	400	90	800	357	985	0	0	386	997	992
V/C Ratio(X)	0.82	0.92	0.22	0.73	0.54	0.34	0.68	0.00	0.00	0.32	0.29	0.29
Avail Cap(c_a), veh/h	225	539	457	108	800	357	985	0	0	386	997	992
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.3	43.2	34.9	56.1	40.5	38.5	17.4	0.0	0.0	18.9	12.9	12.9
Incr Delay (d2), s/veh	11.1	19.7	0.3	18.5	0.7	0.6	3.7	0.0	0.0	2.2	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	14.4	2.0	2.4	5.4	2.9	12.2	0.0	0.0	2.5	3.8	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.5	62.9	35.2	74.5	41.2	39.0	21.1	0.0	0.0	21.1	13.6	13.7
LnGrp LOS	E	E	D	E	D	D	C	A	A	C	B	B
Approach Vol, veh/h	636				617				665		703	
Approach Delay, s/veh	59.5				44.4				21.1		15.0	
Approach LOS	E				D				C		B	
Timer - Assigned Phs	2		3	4	6		7	8				
Phs Duration (G+Y+Rc), s	73.7		10.7	35.6	73.7		14.1	32.2				
Change Period (Y+Rc), s	4.5		4.5	4.5	4.5		4.5	4.5				
Max Green Setting (Gmax), s	63.5		7.5	35.5	63.5		15.6	27.4				
Max Q Clear Time (g_c+I1), s	34.8		6.5	29.8	36.3		9.7	15.1				
Green Ext Time (p_c), s	4.6		0.0	1.3	4.1		0.1	2.2				
Intersection Summary												
HCM 6th Ctrl Delay	34.3											
HCM 6th LOS	C											

Lanes, Volumes, Timings
16: Monroe St. & 50th Avenue

EAPC (2026) Weekend SE Arrival

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	427	48	41	351	104	42	601	71	113	480	35
Future Volume (vph)	49	427	48	41	351	104	42	601	71	113	480	35
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	20.5	20.5	20.5	20.5	20.5	11.5	11.5	20.5		11.5	20.5	
Total Split (s)	25.0	25.0	25.0	25.0	25.0	12.0	11.5	23.0		12.0	23.5	
Total Split (%)	41.7%	41.7%	41.7%	41.7%	41.7%	20.0%	19.2%	38.3%		20.0%	39.2%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag						Lead	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

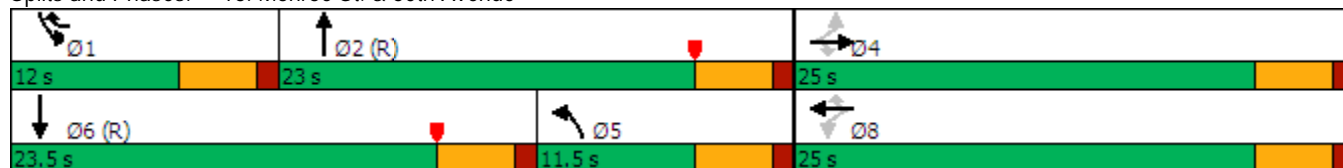
Actuated Cycle Length: 60

Offset: 14.6 (24%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

























Control Type: Actuated-Coordinated

Splits and Phases: 16: Monroe St. & 50th Avenue



















HCM 6th Signalized Intersection Summary 16: Monroe St. & 50th Avenue

EAPC (2026) Weekend SE Arrival





												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	427	48	41	351	104	42	601	71	113	480	35
Future Volume (veh/h)	49	427	48	41	351	104	42	601	71	113	480	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	54	474	53	46	390	116	47	668	79	126	533	39
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	255	607	514	207	607	685	246	1109	131	192	1063	78
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.14	0.36	0.35	0.11	0.32	0.32
Sat Flow, veh/h	893	1821	1543	876	1821	1543	1734	3117	368	1734	3270	239
Grp Volume(v), veh/h	54	474	53	46	390	116	47	370	377	126	282	290
Grp Sat Flow(s),veh/h/ln	893	1821	1543	876	1821	1543	1734	1730	1755	1734	1730	1778
Q Serve(g_s), s	3.3	14.1	1.4	3.0	10.9	2.7	1.4	10.5	10.6	4.2	7.9	7.9
Cycle Q Clear(g_c), s	14.2	14.1	1.4	17.1	10.9	2.7	1.4	10.5	10.6	4.2	7.9	7.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		0.13
Lane Grp Cap(c), veh/h	255	607	514	207	607	685	246	616	625	192	562	578
V/C Ratio(X)	0.21	0.78	0.10	0.22	0.64	0.17	0.19	0.60	0.60	0.66	0.50	0.50
Avail Cap(c_a), veh/h	270	637	540	221	637	711	246	616	625	231	562	578
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.0	18.0	13.8	25.7	17.0	10.0	22.7	15.8	15.9	25.6	16.3	16.4
Incr Delay (d2), s/veh	0.4	6.0	0.1	0.5	2.1	0.1	0.4	4.3	4.3	5.0	3.2	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	5.7	0.4	0.6	4.0	0.7	0.5	4.0	4.1	1.8	3.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	24.0	13.9	26.3	19.0	10.1	23.1	20.1	20.2	30.5	19.5	19.5
LnGrp LOS	C	C	B	C	B	B	C	C	C	C	B	B
Approach Vol, veh/h	581			552			794			698		
Approach Delay, s/veh	23.0			17.8			20.3			21.5		
Approach LOS	C			B			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	25.4		24.0	12.5	23.5		24.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	18.5		20.5	7.0	19.0		20.5				
Max Q Clear Time (g_c+I1), s	6.2	12.6		16.2	3.4	9.9		19.1				
Green Ext Time (p_c), s	0.0	2.1		1.2	0.0	2.0		0.4				
Intersection Summary												
HCM 6th Ctrl Delay				20.7								
HCM 6th LOS				C								

Lanes, Volumes, Timings
17: Jackson St. & 58th Avenue

EAPC (2026) Weekend SE Arrival

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	173	8	0	151	10	13	203	15	6	180	45
Future Volume (vph)	46	173	8	0	151	10	13	203	15	6	180	45
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		5266			1079			1013			510	
Travel Time (s)		71.8			14.7			12.6			6.3	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	14.6
Intersection LOS	B










Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	46	173	8	0	151	10	13	203	15	6	180	45
Future Vol, veh/h	46	173	8	0	151	10	13	203	15	6	180	45
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	58	219	10	0	191	13	16	257	19	8	228	57
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	15.2	12.9	15	14.7
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	20%	0%	3%
Vol Thru, %	88%	76%	94%	78%
Vol Right, %	6%	4%	6%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	231	227	161	231
LT Vol	13	46	0	6
Through Vol	203	173	151	180
RT Vol	15	8	10	45
Lane Flow Rate	292	287	204	292
Geometry Grp	1	1	1	1
Degree of Util (X)	0.494	0.495	0.359	0.488
Departure Headway (Hd)	6.083	6.203	6.343	6.006
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	591	580	567	599
Service Time	4.129	4.249	4.394	4.051
HCM Lane V/C Ratio	0.494	0.495	0.36	0.487
HCM Control Delay	15	15.2	12.9	14.7
HCM Lane LOS	B	C	B	B
HCM 95th-tile Q	2.7	2.7	1.6	2.7




Lanes, Volumes, Timings
18: Avenue 60 & S. Access

EAPC (2026) Weekend SE Arrival

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	68	52	0
Future Volume (vph)	0	0	0	68	52	0
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		25	
Link Distance (ft)		207	1772		380	
Travel Time (s)		3.5	30.2		10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Int Delay, s/veh 3.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	68	52	0
Future Vol, veh/h	0	0	0	68	52	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	74	57	0












Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	74	0	0 37 37
Stage 1	-	-	- 37 -
Stage 2	-	-	- 0 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1526	-	- 975 1035
Stage 1	-	-	- 985 -
Stage 2	-	-	- - -
Platoon blocked, %		-	- -
Mov Cap-1 Maneuver	1526	-	- 975 1035
Mov Cap-2 Maneuver	-	-	- 975 -
Stage 1	-	-	- 985 -
Stage 2	-	-	- - -







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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1526	-	-	-	975
HCM Lane V/C Ratio	-	-	-	-	0.058
HCM Control Delay (s)	0	-	-	-	8.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Lanes, Volumes, Timings
19: Madison St. & Main Access

EAPC (2026) Weekend SE Arrival

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	175	15	110	292	430	189
Future Volume (vph)	175	15	110	292	430	189
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100	0	150			0
Storage Lanes	1	1	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	25			50	50	
Link Distance (ft)	499			880	178	
Travel Time (s)	13.6			12.0	2.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	5.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	175	15	110	292	430	189
Future Vol, veh/h	175	15	110	292	430	189
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	190	16	120	317	467	205











Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	969	336	672	0	-	0
Stage 1	570	-	-	-	-	-
Stage 2	399	-	-	-	-	-
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	251	660	915	-	-	-
Stage 1	529	-	-	-	-	-
Stage 2	647	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	218	660	915	-	-	-
Mov Cap-2 Maneuver	323	-	-	-	-	-
Stage 1	460	-	-	-	-	-
Stage 2	647	-	-	-	-	-






Approach	EB	NB	SB
HCM Control Delay, s	29.3	2.6	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	915	-	323	660	-	-
HCM Lane V/C Ratio	0.131	-	0.589	0.025	-	-
HCM Control Delay (s)	9.5	-	30.9	10.6	-	-
HCM Lane LOS	A	-	D	B	-	-
HCM 95th %tile Q(veh)	0.4	-	3.5	0.1	-	-

Lanes, Volumes, Timings
20: Project Access 1 & Avenue 58











EAPC (2026) Weekend SE Arrival

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	272	34	106	192	27	14
Future Volume (vph)	272	34	106	192	27	14
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)		0	50		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			60		60	
Link Speed (mph)	50			50	25	
Link Distance (ft)	403			335	383	
Travel Time (s)	5.5			4.6	10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	2.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	272	34	106	192	27	14
Future Vol, veh/h	272	34	106	192	27	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	296	37	115	209	29	15
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	333	0	650	315
Stage 1	-	-	-	-	315	-
Stage 2	-	-	-	-	335	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1225	-	418	725
Stage 1	-	-	-	-	739	-
Stage 2	-	-	-	-	697	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1225	-	379	725
Mov Cap-2 Maneuver	-	-	-	-	455	-
Stage 1	-	-	-	-	670	-
Stage 2	-	-	-	-	697	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		2.9		12.6	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	521	-	-	1225	-	
HCM Lane V/C Ratio	0.086	-	-	0.094	-	
HCM Control Delay (s)	12.6	-	-	8.2	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0.3	-	-	0.3	-	

Lanes, Volumes, Timings
21: Project Access 2 & Avenue 58













EAPC (2026) Weekend SE Arrival

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations				 		
Traffic Volume (vph)	231	55	0	298	0	18
Future Volume (vph)	231	55	0	298	0	18
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	50			50	25	
Link Distance (ft)	335			276	233	
Travel Time (s)	4.6			3.8	6.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↱↱		↱
Traffic Vol, veh/h	231	55	0	298	0	18
Future Vol, veh/h	231	55	0	298	0	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	251	60	0	324	0	20
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	281
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	-	-	0	-	0	757
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	757
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		9.9	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	757	-	-	-		
HCM Lane V/C Ratio	0.026	-	-	-		
HCM Control Delay (s)	9.9	-	-	-		
HCM Lane LOS	A	-	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	-		

Lanes, Volumes, Timings
22: Madison St. & Project Access 3

























EAPC (2026) Weekend SE Arrival

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				 	  	
Traffic Volume (vph)	0	34	0	466	586	84
Future Volume (vph)	0	34	0	466	586	84
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	25			50	50	
Link Distance (ft)	210			215	288	
Travel Time (s)	5.7			2.9	3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					










Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	34	0	466	586	84
Future Vol, veh/h	0	34	0	466	586	84
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	37	0	507	637	91
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	364	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	633	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	633	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR		
Capacity (veh/h)	-	633	-	-		
HCM Lane V/C Ratio	-	0.058	-	-		
HCM Control Delay (s)	-	11	-	-		
HCM Lane LOS	-	B	-	-		
HCM 95th %tile Q(veh)	-	0.2	-	-		

Lanes, Volumes, Timings
1: Madison St. & Avenue 58

EAPC (2026) Weekend SE Departure

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	148	149	18	80	105	138	12	422	88	108	500	114
Future Volume (vph)	148	149	18	80	105	138	12	422	88	108	500	114
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection												
Intersection Delay, s/veh	37.8											
Intersection LOS	E											

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	148	149	18	80	105	138	12	422	88	108	500	114
Future Vol, veh/h	148	149	18	80	105	138	12	422	88	108	500	114
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	161	162	20	87	114	150	13	459	96	117	543	124
Number of Lanes	1	1	1	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	23.2	20.9	41	49.4
HCM LOS	C	C	E	E

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	62%	0%	100%	0%	0%	100%	20%	0%	100%
Vol Right, %	0%	0%	38%	0%	0%	100%	0%	0%	80%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	12	281	229	148	149	18	80	70	173	108	333
LT Vol	12	0	0	148	0	0	80	0	0	108	0
Through Vol	0	281	141	0	149	0	0	70	35	0	333
RT Vol	0	0	88	0	0	18	0	0	138	0	0
Lane Flow Rate	13	306	249	161	162	20	87	76	188	117	362
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.038	0.855	0.676	0.5	0.481	0.054	0.271	0.227	0.531	0.328	0.962
Departure Headway (Hd)	10.56	10.06	9.791	11.199	10.699	9.999	11.225	10.725	10.167	10.058	9.558
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	340	361	370	322	337	358	320	335	355	359	380
Service Time	8.286	7.786	7.516	8.964	8.464	7.764	8.986	8.486	7.927	7.778	7.278
HCM Lane V/C Ratio	0.038	0.848	0.673	0.5	0.481	0.056	0.272	0.227	0.53	0.326	0.953
HCM Control Delay	13.7	50.5	30.7	24.7	23	13.3	18.1	16.6	23.9	17.6	68.7
HCM Lane LOS	B	F	D	C	C	B	C	C	C	C	F
HCM 95th-tile Q	0.1	7.9	4.7	2.6	2.5	0.2	1.1	0.9	3	1.4	10.8

Lanes, Volumes, Timings
1: Madison St. & Avenue 58

EAPC (2026) Weekend SE Departure
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	148	149	18	80	105	138	12	422	88	108	500	114
Future Volume (vph)	148	149	18	80	105	138	12	422	88	108	500	114
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100		100	180		180	330		160	160		50
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		276			988			288			752	
Travel Time (s)		3.8			13.5			3.9			10.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	22.5
Total Split (s)	27.0	31.0	31.0	24.0	28.0	28.0	13.0	38.0	38.0	27.0	52.0	52.0
Total Split (%)	22.5%	25.8%	25.8%	20.0%	23.3%	23.3%	10.8%	31.7%	31.7%	22.5%	43.3%	43.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

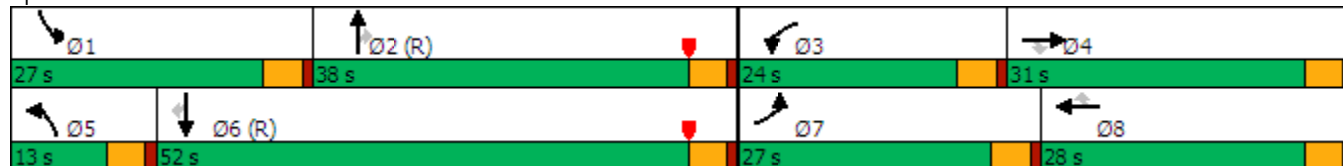
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated

























Splits and Phases: 1: Madison St. & Avenue 58



HCM 6th Signalized Intersection Summary















1: Madison St. & Avenue 58

EAPC (2026) Weekend SE Departure
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	149	18	80	105	138	12	422	88	108	500	114
Future Volume (veh/h)	148	149	18	80	105	138	12	422	88	108	500	114
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	161	162	20	87	114	150	13	459	96	117	543	124
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	190	298	253	110	407	182	36	1868	833	144	2084	930
Arrive On Green	0.11	0.16	0.16	0.06	0.12	0.12	0.02	0.54	0.54	0.08	0.60	0.60
Sat Flow, veh/h	1734	1821	1543	1734	3460	1543	1734	3460	1543	1734	3460	1543
Grp Volume(v), veh/h	161	162	20	87	114	150	13	459	96	117	543	124
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1730	1543	1734	1730	1543	1734	1730	1543
Q Serve(g_s), s	10.9	9.8	1.3	5.9	3.6	11.4	0.9	8.4	3.7	8.0	8.9	4.2
Cycle Q Clear(g_c), s	10.9	9.8	1.3	5.9	3.6	11.4	0.9	8.4	3.7	8.0	8.9	4.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	190	298	253	110	407	182	36	1868	833	144	2084	930
V/C Ratio(X)	0.85	0.54	0.08	0.79	0.28	0.83	0.37	0.25	0.12	0.81	0.26	0.13
Avail Cap(c_a), veh/h	325	402	341	282	678	302	123	1868	833	325	2084	930
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	46.1	42.5	55.4	48.3	51.7	58.0	14.6	13.5	54.1	11.3	10.3
Incr Delay (d2), s/veh	10.0	1.5	0.1	11.9	0.4	9.1	6.2	0.3	0.3	10.5	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	4.4	0.5	2.9	1.5	4.7	0.4	3.1	1.2	3.8	3.1	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.5	47.6	42.6	67.3	48.7	60.8	64.2	15.0	13.8	64.6	11.6	10.6
LnGrp LOS	E	D	D	E	D	E	E	B	B	E	B	B
Approach Vol, veh/h	343			351			568			784		
Approach Delay, s/veh	54.3			58.5			15.9			19.3		
Approach LOS	D			E			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.4	69.3	12.1	24.1	7.0	76.8	17.6	18.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	22.5	33.5	19.5	26.5	8.5	47.5	22.5	23.5				
Max Q Clear Time (g_c+I1), s	10.0	10.4	7.9	11.8	2.9	10.9	12.9	13.4				
Green Ext Time (p_c), s	0.2	2.9	0.1	0.6	0.0	3.9	0.3	0.7				
Intersection Summary												
HCM 6th Ctrl Delay	30.9											
HCM 6th LOS	C											

Lanes, Volumes, Timings
2: Madison St. & Airport Bl.

EAPC (2026) Weekend SE Departure

							
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	70	89	1	562	76	63	594
Future Volume (vph)	70	89	1	562	76	63	594
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150	150	150		50	150	
Storage Lanes	0	0	1		1	1	
Taper Length (ft)	25		140			90	
Right Turn on Red		Yes			Yes		
Link Speed (mph)	50			50			50
Link Distance (ft)	5252			767			818
Travel Time (s)	71.6			10.5			11.2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)							
Turn Type	Prot	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	3		5	2		1	6
Permitted Phases		8			2		
Detector Phase	3	8	5	2	2	1	6
Switch Phase							
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	20.5	11.5	20.5	20.5	11.5	20.5
Total Split (s)	21.0	21.0	12.0	27.0	27.0	12.0	27.0
Total Split (%)	35.0%	35.0%	20.0%	45.0%	45.0%	20.0%	45.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 60







Actuated Cycle Length: 60

Offset: 28 (47%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated















Splits and Phases: 2: Madison St. & Airport Bl.

 Ø2 (R)	 Ø1	 Ø3
27 s	12 s	21 s
 Ø6 (R)	 Ø5	 Ø8
27 s	12 s	21 s

HCM 6th Signalized Intersection Summary




























2: Madison St. & Airport Bl.

EAPC (2026) Weekend SE Departure

							
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	70	89	1	562	76	63	594
Future Volume (veh/h)	70	89	1	562	76	63	594
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00			1.00	1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No
Adj Sat Flow, veh/h/ln	1821	1821		1821	1821	1821	1821
Adj Flow Rate, veh/h	79	100		631	85	71	667
Peak Hour Factor	0.89	0.89		0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2		2	2	2	2
Cap, veh/h	207	184		1326	592	516	2587
Arrive On Green	0.12	0.12		0.38	0.38	0.30	0.75
Sat Flow, veh/h	1734	1543		3551	1543	1734	3551
Grp Volume(v), veh/h	79	100		631	85	71	667
Grp Sat Flow(s),veh/h/ln	1734	1543		1730	1543	1734	1730
Q Serve(g_s), s	2.5	3.7		8.3	1.2	1.8	3.6
Cycle Q Clear(g_c), s	2.5	3.7		8.3	1.2	1.8	3.6
Prop In Lane	1.00	1.00			1.00	1.00	
Lane Grp Cap(c), veh/h	207	184		1326	592	516	2587
V/C Ratio(X)	0.38	0.54		0.48	0.14	0.14	0.26
Avail Cap(c_a), veh/h	491	437		1326	592	516	2587
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.4	24.9		14.0	4.0	15.4	2.4
Incr Delay (d2), s/veh	1.2	2.5		1.2	0.5	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	1.3		2.7	0.6	0.6	0.3
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	25.6	27.4		15.2	4.5	15.6	2.6
LnGrp LOS	C	C		B	A	B	A
Approach Vol, veh/h	179			716			738
Approach Delay, s/veh	26.6			13.9			3.9
Approach LOS	C			B			A
Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	21.9	27.0				48.9	11.1
Change Period (Y+Rc), s	4.5	4.5				4.5	4.5
Max Green Setting (Gmax), s	7.5	22.5				22.5	16.5
Max Q Clear Time (g_c+I1), s	3.8	10.3				5.6	5.7
Green Ext Time (p_c), s	0.0	3.2				3.7	0.3
Intersection Summary							
HCM 6th Ctrl Delay			10.8				
HCM 6th LOS			B				
Notes							
User approved ignoring U-Turning movement.							

Lanes, Volumes, Timings
3: Madison St. & Avenue 54









EAPC (2026) Weekend SE Departure

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 			 	
Traffic Volume (vph)	20	272	409	45	170	111	343	461	99	90	329	15
Future Volume (vph)	20	272	409	45	170	111	343	461	99	90	329	15
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 39.3

Intersection LOS F
























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	272	409	45	170	111	343	461	99	90	329	15
Future Vol, veh/h	20	272	409	45	170	111	343	461	99	90	329	15
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	306	460	51	191	125	385	518	111	101	370	17
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	290.5	30	107.4	43.4
HCM LOS	F	D	F	E

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	61%	0%	100%	18%	0%	100%	34%	0%	100%	88%
Vol Right, %	0%	0%	39%	0%	0%	82%	0%	0%	66%	0%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	343	307	253	20	181	500	45	113	168	90	219	125
LT Vol	343	0	0	20	0	0	45	0	0	90	0	0
Through Vol	0	307	154	0	181	91	0	113	57	0	219	110
RT Vol	0	0	99	0	0	409	0	0	111	0	0	15
Lane Flow Rate	385	345	284	22	204	561	51	127	188	101	246	140
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	1.21	1.039	0.833	0.078	0.681	1.788	0.184	0.447	0.638	0.361	0.845	0.477
Departure Headway (Hd)	12.25	11.75	11.476	12.627	12.127	11.466	13.689	13.189	12.726	13.809	13.309	13.224
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	301	311	318	285	300	320	264	275	286	262	274	275
Service Time	9.95	9.45	9.176	10.327	9.827	9.254	11.389	10.889	10.426	11.509	11.009	10.924
HCM Lane V/C Ratio	1.279	1.109	0.893	0.077	0.68	1.753	0.193	0.462	0.657	0.385	0.898	0.509
HCM Control Delay	156.6	97.9	52.2	16.4	37.2	393.4	19.5	26.1	35.4	24.1	60.4	27.4
HCM Lane LOS	F	F	F	C	E	F	C	D	E	C	F	D
HCM 95th-tile Q	16	11.7	7.2	0.3	4.6	36.4	0.7	2.2	4	1.6	7	2.4

Lanes, Volumes, Timings
3: Madison St. & Avenue 54

EAPC (2026) Weekend SE Departure
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	272	409	45	170	111	343	461	99	90	329	15
Future Volume (vph)	20	272	409	45	170	111	343	461	99	90	329	15
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	160		150	910		150	160		120	305		150
Storage Lanes	1		0	1		1	2		1	1		0
Taper Length (ft)	80			120			120			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		5080			840			924			2398	
Travel Time (s)		63.0			10.4			12.6			32.7	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	11.5	22.5		11.5	22.5	22.5	11.5	22.5	22.5	11.5	22.5	
Total Split (s)	13.0	43.0		15.0	45.0	45.0	30.0	41.0	41.0	21.0	32.0	
Total Split (%)	10.8%	35.8%		12.5%	37.5%	37.5%	25.0%	34.2%	34.2%	17.5%	26.7%	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max	C-Max	None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

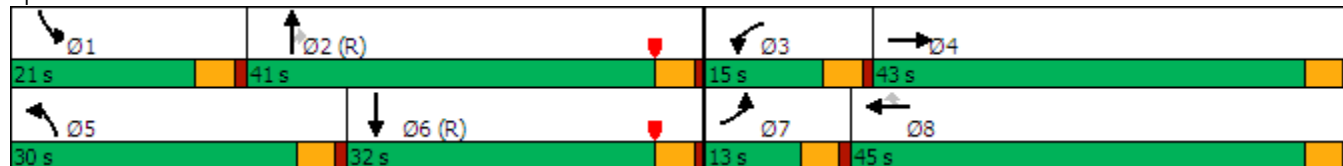
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated























Splits and Phases: 3: Madison St. & Avenue 54



HCM 6th Signalized Intersection Summary

























3: Madison St. & Avenue 54

EAPC (2026) Weekend SE Departure
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	272	409	45	170	111	343	461	99	90	329	15
Future Volume (veh/h)	20	272	409	45	170	111	343	461	99	90	329	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	22	306	460	51	191	125	385	518	111	101	370	17
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	53	543	484	83	1146	511	458	1440	642	126	1187	54
Arrive On Green	0.03	0.31	0.31	0.05	0.33	0.33	0.14	0.42	0.42	0.07	0.35	0.35
Sat Flow, veh/h	1734	1730	1543	1734	3460	1543	3365	3460	1543	1734	3369	154
Grp Volume(v), veh/h	22	306	460	51	191	125	385	518	111	101	189	198
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1734	1730	1793
Q Serve(g_s), s	1.5	17.7	35.0	3.5	4.7	7.1	13.4	12.3	5.4	6.9	9.6	9.6
Cycle Q Clear(g_c), s	1.5	17.7	35.0	3.5	4.7	7.1	13.4	12.3	5.4	6.9	9.6	9.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	53	543	484	83	1146	511	458	1440	642	126	609	632
V/C Ratio(X)	0.42	0.56	0.95	0.62	0.17	0.24	0.84	0.36	0.17	0.80	0.31	0.31
Avail Cap(c_a), veh/h	123	555	495	152	1168	521	715	1440	642	238	609	632
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.1	34.3	40.2	56.1	28.4	29.2	50.5	24.1	22.0	54.8	28.3	28.3
Incr Delay (d2), s/veh	4.7	1.1	26.1	7.3	0.1	0.2	5.3	0.7	0.6	11.3	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	7.2	15.9	1.6	1.9	2.5	5.8	4.9	2.0	3.3	4.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.8	35.5	66.3	63.3	28.5	29.4	55.9	24.8	22.6	66.1	29.6	29.6
LnGrp LOS	E	D	E	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h	788			367			1014			488		
Approach Delay, s/veh	54.2			33.6			36.3			37.2		
Approach LOS	D			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.2	54.4	10.2	42.2	20.8	46.8	8.1	44.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	16.5	36.5	10.5	38.5	25.5	27.5	8.5	40.5				
Max Q Clear Time (g_c+I1), s	8.9	14.3	5.5	37.0	15.4	11.6	3.5	9.1				
Green Ext Time (p_c), s	0.1	3.4	0.0	0.7	1.0	1.7	0.0	1.4				
Intersection Summary												
HCM 6th Ctrl Delay	41.4											
HCM 6th LOS	D											

Lanes, Volumes, Timings
4: Madison St. & Avenue 52

EAPC (2026) Weekend SE Departure

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	453	82	38	412	58	109	378	63	65	311	63
Future Volume (vph)	71	453	82	38	412	58	109	378	63	65	311	63
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	435		50	200		325	160		160	255		50
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	105			120			140			160		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			55			50			50	
Link Distance (ft)		1169			798			1237			1379	
Travel Time (s)		17.7			9.9			16.9			18.8	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	31.5	31.5	11.5	30.5	30.5
Total Split (s)	22.0	48.0	48.0	16.0	42.0	42.0	18.0	41.0	41.0	15.0	38.0	38.0
Total Split (%)	18.3%	40.0%	40.0%	13.3%	35.0%	35.0%	15.0%	34.2%	34.2%	12.5%	31.7%	31.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

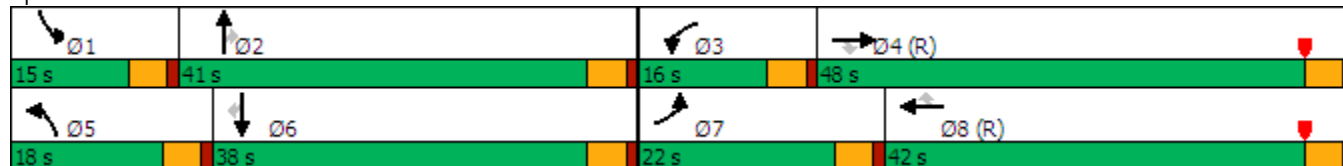
Actuated Cycle Length: 120

Offset: 65.5 (55%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 85

























Control Type: Actuated-Coordinated

Splits and Phases: 4: Madison St. & Avenue 52



























HCM 6th Signalized Intersection Summary 4: Madison St. & Avenue 52

EAPC (2026) Weekend SE Departure

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	453	82	38	412	58	109	378	63	65	311	63
Future Volume (veh/h)	71	453	82	38	412	58	109	378	63	65	311	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	83	527	95	44	479	67	127	440	73	76	362	73
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	105	1548	690	78	1493	666	193	1052	469	181	1039	464
Arrive On Green	0.06	0.45	0.45	0.04	0.43	0.43	0.06	0.30	0.30	0.05	0.30	0.30
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	83	527	95	44	479	67	127	440	73	76	362	73
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	5.7	11.9	4.4	3.0	11.0	3.1	4.4	12.2	4.1	2.6	9.8	4.2
Cycle Q Clear(g_c), s	5.7	11.9	4.4	3.0	11.0	3.1	4.4	12.2	4.1	2.6	9.8	4.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	105	1548	690	78	1493	666	193	1052	469	181	1039	464
V/C Ratio(X)	0.79	0.34	0.14	0.57	0.32	0.10	0.66	0.42	0.16	0.42	0.35	0.16
Avail Cap(c_a), veh/h	253	1548	690	166	1493	666	379	1052	469	294	1039	464
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.6	21.6	19.5	56.2	22.5	20.3	55.4	33.3	30.5	55.0	32.8	30.8
Incr Delay (d2), s/veh	12.2	0.6	0.4	6.3	0.6	0.3	3.8	1.2	0.7	1.6	0.9	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	4.8	1.5	1.4	4.3	1.1	1.9	5.1	1.6	1.1	4.1	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.8	22.2	19.9	62.5	23.1	20.6	59.1	34.5	31.2	56.5	33.7	31.6
LnGrp LOS	E	C	B	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h	705			590			640			511		
Approach Delay, s/veh	27.3			25.7			39.0			36.8		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.9	41.0	9.9	58.2	11.4	40.5	11.8	56.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	36.5	11.5	43.5	13.5	33.5	17.5	37.5				
Max Q Clear Time (g_c+I1), s	4.6	14.2	5.0	13.9	6.4	11.8	7.7	13.0				
Green Ext Time (p_c), s	0.1	2.7	0.0	3.7	0.2	2.2	0.1	2.9				
Intersection Summary												
HCM 6th Ctrl Delay	32.0											
HCM 6th LOS	C											

Lanes, Volumes, Timings
5: Madison St. & Avenue 50/50th Avenue

EAPC (2026) Weekend SE Departure

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	412	143	45	353	64	121	434	37	60	300	95
Future Volume (vph)	92	412	143	45	353	64	121	434	37	60	300	95
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		210	300		240	290		220	200		200
Storage Lanes	1		1	1		1	2		1	2		1
Taper Length (ft)	120			90			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			50			50			50	
Link Distance (ft)		579			1049			1270			550	
Travel Time (s)		8.8			14.3			17.3			7.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5	11.5	30.5	30.5
Total Split (s)	24.0	47.0	47.0	18.0	41.0	41.0	18.0	41.0	41.0	14.0	37.0	37.0
Total Split (%)	20.0%	39.2%	39.2%	15.0%	34.2%	34.2%	15.0%	34.2%	34.2%	11.7%	30.8%	30.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

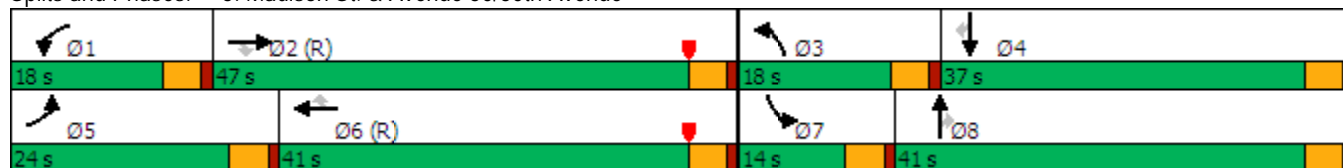
Actuated Cycle Length: 120

Offset: 64.5 (54%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 85































Control Type: Actuated-Coordinated

Splits and Phases: 5: Madison St. & Avenue 50/50th Avenue




























HCM 6th Signalized Intersection Summary 5: Madison St. & Avenue 50/50th Avenue

EAPC (2026) Weekend SE Departure

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 		 	 	
Traffic Volume (veh/h)	92	412	143	45	353	64	121	434	37	60	300	95
Future Volume (veh/h)	92	412	143	45	353	64	121	434	37	60	300	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	98	438	152	48	376	68	129	462	39	64	319	101
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	1550	691	81	1466	654	194	1052	469	173	1031	460
Arrive On Green	0.07	0.45	0.45	0.05	0.42	0.42	0.06	0.30	0.30	0.05	0.30	0.30
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	3365	3460	1543	3365	3460	1543
Grp Volume(v), veh/h	98	438	152	48	376	68	129	462	39	64	319	101
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1682	1730	1543	1682	1730	1543
Q Serve(g_s), s	6.7	9.6	7.2	3.3	8.4	3.2	4.5	12.9	2.2	2.2	8.6	5.9
Cycle Q Clear(g_c), s	6.7	9.6	7.2	3.3	8.4	3.2	4.5	12.9	2.2	2.2	8.6	5.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	123	1550	691	81	1466	654	194	1052	469	173	1031	460
V/C Ratio(X)	0.80	0.28	0.22	0.59	0.26	0.10	0.67	0.44	0.08	0.37	0.31	0.22
Avail Cap(c_a), veh/h	282	1550	691	195	1466	654	379	1052	469	266	1031	460
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	20.9	20.3	56.1	22.4	20.8	55.4	33.5	29.8	55.0	32.6	31.6
Incr Delay (d2), s/veh	11.2	0.5	0.7	6.8	0.4	0.3	3.9	1.3	0.3	1.3	0.8	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	3.8	2.6	1.5	3.3	1.2	2.0	5.4	0.8	0.9	3.6	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.2	21.4	21.0	62.9	22.8	21.2	59.3	34.9	30.2	56.3	33.3	32.7
LnGrp LOS	E	C	C	E	C	C	E	C	C	E	C	C
Approach Vol, veh/h		688			492			630			484	
Approach Delay, s/veh		27.7			26.5			39.6			36.3	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.1	58.2	11.4	40.3	13.0	55.3	10.7	41.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	13.5	42.5	13.5	32.5	19.5	36.5	9.5	36.5				
Max Q Clear Time (g_c+I1), s	5.3	11.6	6.5	10.6	8.7	10.4	4.2	14.9				
Green Ext Time (p_c), s	0.0	3.3	0.2	2.0	0.1	2.4	0.0	2.7				
Intersection Summary												
HCM 6th Ctrl Delay			32.5									
HCM 6th LOS			C									

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54









EAPC (2026) Weekend SE Departure

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 		 	 	
Traffic Volume (vph)	26	20	2	28	8	504	5	209	44	616	253	2
Future Volume (vph)	26	20	2	28	8	504	5	209	44	616	253	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 95

Intersection LOS F






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	20	2	28	8	504	5	209	44	616	253	2
Future Vol, veh/h	26	20	2	28	8	504	5	209	44	616	253	2
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	24	2	34	10	615	6	255	54	751	309	2
Number of Lanes	1	2	0	1	1	1	0	2	0	2	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	3	3
HCM Control Delay	15.5	219.8	20	44.2
HCM LOS	C	F	C	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	5%	0%	100%	0%	0%	100%	0%	0%	100%	100%	0%
Vol Thru, %	95%	70%	0%	100%	77%	0%	100%	0%	0%	0%	99%
Vol Right, %	0%	30%	0%	0%	23%	0%	0%	100%	0%	0%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	110	149	26	13	9	28	8	504	308	308	255
LT Vol	5	0	26	0	0	28	0	0	308	308	0
Through Vol	105	105	0	13	7	0	8	0	0	0	253
RT Vol	0	44	0	0	2	0	0	504	0	0	2
Lane Flow Rate	134	181	32	16	11	34	10	615	376	376	311
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.35	0.464	0.098	0.048	0.031	0.092	0.025	1.442	0.875	0.875	0.681
Departure Headway (Hd)	10.238	10.007	12.146	11.623	11.454	9.669	9.159	8.445	9.335	9.335	8.823
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	354	362	297	310	314	372	392	436	391	391	414
Service Time	7.938	7.707	9.846	9.323	9.154	7.389	6.88	6.166	7.035	7.035	6.523
HCM Lane V/C Ratio	0.379	0.5	0.108	0.052	0.035	0.091	0.026	1.411	0.962	0.962	0.751
HCM Control Delay	18.4	21.1	16.2	14.9	14.5	13.4	12.1	234.6	50.7	50.7	28.4
HCM Lane LOS	C	C	C	B	B	B	B	F	F	F	D
HCM 95th-tile Q	1.5	2.4	0.3	0.2	0.1	0.3	0.1	30.9	8.6	8.6	4.9

Lanes, Volumes, Timings
6: Jefferson St. & Avenue 54

EAPC (2026) Weekend SE Departure
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	20	2	28	8	504	5	209	44	616	253	2
Future Volume (vph)	26	20	2	28	8	504	5	209	44	616	253	2
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	110		110	140		140	150		150	240		0
Storage Lanes	0		2	1		0	0		0	2		1
Taper Length (ft)	0			110			25			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		531			5080			436			1277	
Travel Time (s)		6.6			63.0			5.4			15.8	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases		2			6	4	8	8		4	4	
Permitted Phases	2			6		6						4
Detector Phase	2	2		6	6	4	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5		22.5	22.5	22.5
Total Split (s)	27.0	27.0		27.0	27.0	64.0	29.0	29.0		64.0	64.0	64.0
Total Split (%)	22.5%	22.5%		22.5%	22.5%	53.3%	24.2%	24.2%		53.3%	53.3%	53.3%
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		None	None	Max	Max	Max		Max	Max	Max

Intersection Summary

Area Type: Other

Cycle Length: 120

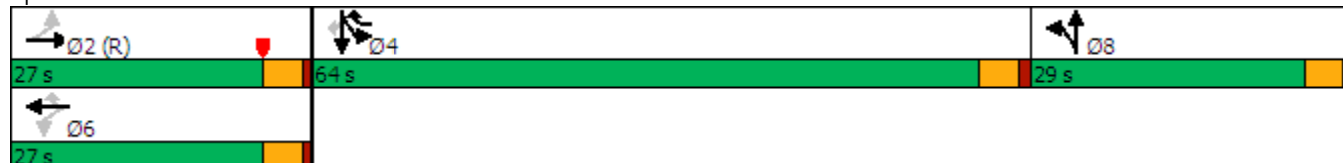
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 70






















Control Type: Actuated-Coordinated

Splits and Phases: 6: Jefferson St. & Avenue 54























HCM 6th Signalized Intersection Summary 6: Jefferson St. & Avenue 54

EAPC (2026) Weekend SE Departure
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	20	2	28	8	504	5	209	44	616	253	2
Future Volume (veh/h)	26	20	2	28	8	504	5	209	44	616	253	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	32	24	2	34	10	615	6	255	54	751	309	2
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	206	607	50	311	341	1055	13	579	128	1668	1716	765
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.20	0.20	0.20	0.50	0.50	0.50
Sat Flow, veh/h	800	3237	266	1385	1821	1543	65	2835	626	3365	3460	1543
Grp Volume(v), veh/h	32	13	13	34	10	615	168	0	147	751	309	2
Grp Sat Flow(s),veh/h/ln	800	1730	1773	1385	1821	1543	1818	0	1708	1682	1730	1543
Q Serve(g_s), s	4.1	0.7	0.7	2.5	0.5	22.5	9.7	0.0	9.0	17.4	5.9	0.1
Cycle Q Clear(g_c), s	4.6	0.7	0.7	3.2	0.5	22.5	9.7	0.0	9.0	17.4	5.9	0.1
Prop In Lane	1.00		0.15	1.00		1.00	0.04		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	206	324	332	311	341	1055	371	0	349	1668	1716	765
V/C Ratio(X)	0.16	0.04	0.04	0.11	0.03	0.58	0.45	0.00	0.42	0.45	0.18	0.00
Avail Cap(c_a), veh/h	206	324	332	311	341	1055	371	0	349	1668	1716	765
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.81	0.81	0.81	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.7	39.9	39.9	41.2	39.8	9.6	41.9	0.0	41.6	19.6	16.7	15.3
Incr Delay (d2), s/veh	1.6	0.2	0.2	0.1	0.0	0.7	3.9	0.0	3.7	0.9	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.3	0.3	0.8	0.2	18.2	4.6	0.0	4.0	6.4	2.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.3	40.1	40.1	41.3	39.9	10.2	45.8	0.0	45.3	20.5	17.0	15.3
LnGrp LOS	D	D	D	D	D	B	D	A	D	C	B	B
Approach Vol, veh/h	58			659				315			1062	
Approach Delay, s/veh	41.9			12.3				45.6			19.5	
Approach LOS	D			B				D			B	
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	27.0			64.0			27.0			29.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	22.5			59.5			22.5			24.5		
Max Q Clear Time (g_c+I1), s	6.6			19.4			24.5			11.7		
Green Ext Time (p_c), s	0.2			4.9			0.0			1.2		
Intersection Summary												
HCM 6th Ctrl Delay	21.8											
HCM 6th LOS	C											

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52





















EAPC (2026) Weekend SE Departure

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	352	302	25	391	276	210	606	63	166	630	129
Future Volume (vph)	89	352	302	25	391	276	210	606	63	166	630	129
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		100	0		100	0		0	0		0
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	60			60			60			60		
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											

Intersection									
Intersection Delay, s/veh	89.9								
Intersection LOS	F								
Approach	EB		WB		NB		SB		
Entry Lanes	1		1		1		1		
Conflicting Circle Lanes	1		1		1		1		
Adj Approach Flow, veh/h	799		744		946		994		
Demand Flow Rate, veh/h	816		759		965		1015		
Vehicles Circulating, veh/h	901		994		666		687		
Vehicles Exiting, veh/h	659		568		719		763		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	24.9		30.2		145.9		133.6		
Approach LOS	C		D		F		F		
Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left	Bypass	
Designated Moves	LT	R	LT	R	LT	R	LT	R	
Assumed Moves	LT	R	LT	R	LT	R	LT	R	
RT Channelized		Free		Free		Free		Free	
Lane Util	1.000		1.000		1.000		1.000		
Follow-Up Headway, s	2.609		2.609		2.609		2.609		
Critical Headway, s	4.976	331	4.976	303	4.976	69	4.976	142	
Entry Flow, veh/h	484	1887	456	1887	896	1887	873	1887	
Cap Entry Lane, veh/h	551	0.980	501	0.980	700	0.980	685	0.980	
Entry HV Adj Factor	0.980	325	0.979	297	0.980	68	0.980	139	
Flow Entry, veh/h	474	1850	447	1850	878	1850	855	1850	
Cap Entry, veh/h	540	0.176	490	0.161	686	0.037	671	0.075	
V/C Ratio	0.879	0.0	0.911	0.0	1.281	0.0	1.275	0.0	
Control Delay, s/veh	42.0	A	50.2	A	157.2	A	155.3	A	
LOS	E	1	F	1	F	0	F	0	
95th %tile Queue, veh	10		10		34		33		

Lanes, Volumes, Timings
7: Jefferson St. & Avenue 52






















EAPC (2026) Weekend SE Departure
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	352	302	25	391	276	210	606	63	166	630	129
Future Volume (vph)	89	352	302	25	391	276	210	606	63	166	630	129
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		100	0		100	0		0	0		0
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	60			60			60			60		
Link Speed (mph)		50			50			50			55	
Link Distance (ft)		709			813			334			462	
Travel Time (s)		9.7			11.1			4.6			5.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	
Intersection Summary												
Area Type:	Other											
Control Type:	Roundabout											

Intersection										
Intersection Delay, s/veh	13.4									
Intersection LOS	B									
Approach	EB		WB		NB		SB			
Entry Lanes	1		1		2		2			
Conflicting Circle Lanes	2		2		2		2			
Adj Approach Flow, veh/h	799		744		946		994			
Demand Flow Rate, veh/h	816		759		965		1015			
Vehicles Circulating, veh/h	901		994		666		687			
Vehicles Exiting, veh/h	659		568		719		763			
Ped Vol Crossing Leg, #/h	0		0		0		0			
Ped Cap Adj	1.000		1.000		1.000		1.000			
Approach Delay, s/veh	13.6		15.3		13.1		12.2			
Approach LOS	B		C		B		B			
Lane	Left	Bypass	Left	Bypass	Left	Right	Bypass	Left	Right	Bypass
Designated Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
Assumed Moves	LT	R	LT	R	LT	TR	R	LT	TR	R
RT Channelized		Free		Free			Free			Free
Lane Util	1.000		1.000		0.470	0.530		0.470	0.530	
Follow-Up Headway, s	2.535		2.535		2.667	2.535		2.667	2.535	
Critical Headway, s	4.328	331	4.328	303	4.645	4.328	69	4.645	4.328	142
Entry Flow, veh/h	484	1887	456	1887	421	475	1887	410	463	1887
Cap Entry Lane, veh/h	660	0.980	610	0.980	732	806	0.980	718	792	0.980
Entry HV Adj Factor	0.980	325	0.979	297	0.980	0.980	68	0.981	0.979	139
Flow Entry, veh/h	474	1850	447	1850	413	465	1850	402	453	1850
Cap Entry, veh/h	647	0.176	597	0.161	717	790	0.037	704	775	0.075
V/C Ratio	0.733	0.0	0.748	0.0	0.576	0.589	0.0	0.571	0.585	0.0
Control Delay, s/veh	22.9	A	25.4	A	14.5	13.8	A	14.6	13.9	A
LOS	C	1	D	1	B	B	0	B	B	0
95th %tile Queue, veh	6		7		4	4		4	4	

Lanes, Volumes, Timings 8: Jefferson St. & Pomelo

EAPC (2026) Weekend SE Departure

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	2	17	7	1	35	2	984	6	19	974	56
Future Volume (vph)	55	2	17	7	1	35	2	984	6	19	974	56
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	0		0	0		0	160		0	180		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		509			561			1820			1343	
Travel Time (s)		13.9			15.3			22.6			16.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Minimum Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	40.5		18.0	39.5	
Total Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	18.0	54.0		18.0	54.0	
Total Split (%)	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	15.0%	45.0%		15.0%	45.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5		4.0	5.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	7.5		6.0	7.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	

Intersection Summary

Area Type: Other

Cycle Length: 120

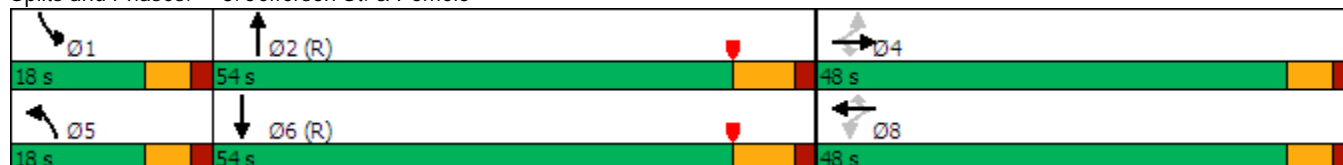
Actuated Cycle Length: 120

Offset: 30 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 110






















Control Type: Actuated-Coordinated

Splits and Phases: 8: Jefferson St. & Pomelo



HCM 6th Signalized Intersection Summary 8: Jefferson St. & Pomelo

























EAPC (2026) Weekend SE Departure

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	2	17	7	1	35	2	984	6	19	974	56
Future Volume (veh/h)	55	2	17	7	1	35	2	984	6	19	974	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	58	2	18	7	1	37	2	1036	6	20	1025	59
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	74	2	457	65	6	457	11	2514	15	84	2573	148
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.01	0.49	0.49	0.02	0.18	0.18
Sat Flow, veh/h	51	5	1543	29	19	1543	1734	5101	30	1734	4809	276
Grp Volume(v), veh/h	60	0	18	8	0	37	2	673	369	20	706	378
Grp Sat Flow(s),veh/h/ln	56	0	1543	47	0	1543	1734	1657	1816	1734	1657	1771
Q Serve(g_s), s	1.4	0.0	1.0	0.3	0.0	2.1	0.1	15.5	15.5	1.4	22.6	22.7
Cycle Q Clear(g_c), s	35.5	0.0	1.0	35.0	0.0	2.1	0.1	15.5	15.5	1.4	22.6	22.7
Prop In Lane	0.97		1.00	0.87		1.00	1.00		0.02	1.00		0.16
Lane Grp Cap(c), veh/h	76	0	457	70	0	457	11	1634	895	84	1774	948
V/C Ratio(X)	0.79	0.00	0.04	0.11	0.00	0.08	0.18	0.41	0.41	0.24	0.40	0.40
Avail Cap(c_a), veh/h	150	0	540	148	0	540	173	1634	895	173	1774	948
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.76	0.76	0.76
Uniform Delay (d), s/veh	59.2	0.0	30.1	40.5	0.0	30.5	59.3	19.4	19.4	56.8	32.3	32.3
Incr Delay (d2), s/veh	31.5	0.0	0.1	1.5	0.0	0.2	15.5	0.8	1.4	2.3	0.5	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.4	0.3	0.0	0.8	0.1	5.6	6.3	0.6	10.0	10.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	90.7	0.0	30.2	42.0	0.0	30.6	74.8	20.1	20.8	59.1	32.8	33.3
LnGrp LOS	F	A	C	D	A	C	E	C	C	E	C	C
Approach Vol, veh/h	78			45			1044			1104		
Approach Delay, s/veh	76.7			32.7			20.5			33.4		
Approach LOS	E			C			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.8	65.9		42.3	6.8	70.9		42.3				
Change Period (Y+Rc), s	6.0	7.5		6.0	6.0	7.5		6.0				
Max Green Setting (Gmax), s	12.0	46.5		42.0	12.0	46.5		42.0				
Max Q Clear Time (g_c+I1), s	3.4	17.5		37.5	2.1	24.7		37.0				
Green Ext Time (p_c), s	0.0	12.9		0.2	0.0	11.5		0.1				
Intersection Summary												
HCM 6th Ctrl Delay	28.9											
HCM 6th LOS	C											

Lanes, Volumes, Timings

9: Jefferson St. & Avenue 50

EAPC (2026) Weekend SE Departure

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	300	334	120	127	309	177	119	870	85	250	799	198
Future Volume (vph)	300	334	120	127	309	177	119	870	85	250	799	198
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	39.5	39.5	22.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	32.9%	32.9%	18.3%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120









Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 115

Control Type: Actuated-Coordinated































Splits and Phases: 9: Jefferson St. & Avenue 50

			
Ø1	Ø2	Ø4 (R)	Ø3
18 s	40.5 s	39.5 s	22 s
			
Ø5	Ø6	Ø8 (R)	Ø7
18 s	40.5 s	38.5 s	23 s

HCM 6th Signalized Intersection Summary

























9: Jefferson St. & Avenue 50

EAPC (2026) Weekend SE Departure

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  		 	  	
Traffic Volume (veh/h)	300	334	120	127	309	177	119	870	85	250	799	198
Future Volume (veh/h)	300	334	120	127	309	177	119	870	85	250	799	198
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	309	344	124	131	319	182	123	897	88	258	824	204
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	401	505	225	509	379	321	171	1172	364	336	1180	366
Arrive On Green	0.23	0.15	0.15	0.29	0.21	0.21	0.03	0.08	0.08	0.10	0.24	0.24
Sat Flow, veh/h	1734	3460	1543	1734	1821	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	309	344	124	131	319	182	123	897	88	258	824	204
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1821	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	20.0	11.3	6.7	6.9	20.2	9.3	8.4	21.2	3.0	9.0	18.2	7.7
Cycle Q Clear(g_c), s	20.0	11.3	6.7	6.9	20.2	9.3	8.4	21.2	3.0	9.0	18.2	7.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	401	505	225	509	379	321	171	1172	364	336	1180	366
V/C Ratio(X)	0.77	0.68	0.55	0.26	0.84	0.57	0.72	0.77	0.24	0.77	0.70	0.56
Avail Cap(c_a), veh/h	401	923	412	509	470	399	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.2	48.6	27.0	32.4	45.6	22.8	56.4	52.1	10.0	52.6	41.8	12.1
Incr Delay (d2), s/veh	8.6	7.2	9.3	0.1	19.7	7.1	11.3	2.5	0.5	9.2	1.6	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	5.2	3.9	2.8	10.9	3.9	4.3	9.6	2.4	4.1	7.2	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.7	55.8	36.3	32.5	65.3	29.9	67.7	54.6	10.4	61.9	43.4	14.0
LnGrp LOS	D	E	D	C	E	C	E	D	B	E	D	B
Approach Vol, veh/h		777			632			1108			1286	
Approach Delay, s/veh		51.1			48.3			52.5			42.5	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	35.8	41.2	25.0	17.8	36.0	33.7	32.5				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	12.0	33.0	16.0	32.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	11.0	23.2	8.9	13.3	10.4	20.2	22.0	22.2				
Green Ext Time (p_c), s	0.0	5.0	0.0	4.2	0.0	6.1	0.0	2.8				
Intersection Summary												
HCM 6th Ctrl Delay			48.1									
HCM 6th LOS			D									
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
9: Jefferson St. & Avenue 50

EAPC (2026) Weekend SE Departure
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	300	334	120	127	309	177	119	870	85	250	799	198
Future Volume (vph)	300	334	120	127	309	177	119	870	85	250	799	198
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	245		100	105		0	360		220	280		230
Storage Lanes	1		1	1		1	1		1	2		1
Taper Length (ft)	120			60			120			120		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			45			55			55	
Link Distance (ft)		693			995			1343			697	
Travel Time (s)		9.5			15.1			16.6			8.6	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	18.0	31.5	31.5	18.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (s)	23.0	39.5	39.5	22.0	38.5	38.5	18.0	40.5	40.5	18.0	40.5	40.5
Total Split (%)	19.2%	32.9%	32.9%	18.3%	32.1%	32.1%	15.0%	33.8%	33.8%	15.0%	33.8%	33.8%
Yellow Time (s)	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5	6.0	7.5	7.5
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Area Type: Other

Cycle Length: 120









Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 115

























Control Type: Actuated-Coordinated

Splits and Phases: 9: Jefferson St. & Avenue 50

			
Ø1	Ø2	Ø4 (R)	Ø3
18 s	40.5 s	39.5 s	22 s
			
Ø5	Ø6	Ø8 (R)	Ø7
18 s	40.5 s	38.5 s	23 s

HCM 6th Signalized Intersection Summary 9: Jefferson St. & Avenue 50

EAPC (2026) Weekend SE Departure
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	300	334	120	127	309	177	119	870	85	250	799	198
Future Volume (veh/h)	300	334	120	127	309	177	119	870	85	250	799	198
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	309	344	124	131	319	182	123	897	88	258	824	204
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	517	505	225	509	488	218	171	1172	364	336	1180	366
Arrive On Green	0.30	0.15	0.15	0.29	0.14	0.14	0.03	0.08	0.08	0.10	0.24	0.24
Sat Flow, veh/h	1734	3460	1543	1734	3460	1543	1734	4972	1543	3365	4972	1543
Grp Volume(v), veh/h	309	344	124	131	319	182	123	897	88	258	824	204
Grp Sat Flow(s),veh/h/ln	1734	1730	1543	1734	1730	1543	1734	1657	1543	1682	1657	1543
Q Serve(g_s), s	18.3	11.3	6.7	6.9	10.5	10.4	8.4	21.2	3.0	9.0	18.2	6.4
Cycle Q Clear(g_c), s	18.3	11.3	6.7	6.9	10.5	10.4	8.4	21.2	3.0	9.0	18.2	6.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	517	505	225	509	488	218	171	1172	364	336	1180	366
V/C Ratio(X)	0.60	0.68	0.55	0.26	0.65	0.84	0.72	0.77	0.24	0.77	0.70	0.56
Avail Cap(c_a), veh/h	517	923	412	509	894	399	173	1367	424	336	1367	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.9	48.6	27.0	32.4	48.8	28.4	56.4	52.1	10.0	52.6	41.8	8.6
Incr Delay (d2), s/veh	1.7	7.2	9.3	0.1	6.7	30.0	11.3	2.5	0.5	9.2	1.6	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	5.2	3.9	2.8	4.9	5.5	4.3	9.6	2.4	4.1	7.2	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.6	55.8	36.3	32.5	55.4	58.5	67.7	54.6	10.4	61.9	43.4	10.4
LnGrp LOS	D	E	D	C	E	E	E	D	B	E	D	B
Approach Vol, veh/h		777			632			1108			1286	
Approach Delay, s/veh		45.5			51.6			52.5			41.9	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	35.8	41.2	25.0	17.8	36.0	41.8	24.4				
Change Period (Y+Rc), s	6.0	7.5	6.0	7.5	6.0	7.5	6.0	7.5				
Max Green Setting (Gmax), s	12.0	33.0	16.0	32.0	12.0	33.0	17.0	31.0				
Max Q Clear Time (g_c+I1), s	11.0	23.2	8.9	13.3	10.4	20.2	20.3	12.5				
Green Ext Time (p_c), s	0.0	5.0	0.0	4.2	0.0	6.1	0.0	4.5				
Intersection Summary												
HCM 6th Ctrl Delay			47.3									
HCM 6th LOS			D									
Notes												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings
10: Avenue 60 & Madison St.

EAPC (2026) Weekend SE Departure



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	47	50	52	150	306	57
Future Volume (vph)	47	50	52	150	306	57
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		40	
Link Distance (ft)		1772	661		437	
Travel Time (s)		30.2	11.3		7.4	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)						
Sign Control		Stop	Stop		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Intersection Delay, s/veh	13.9
Intersection LOS	B





















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕	↕	↕	↕
Traffic Vol, veh/h	47	50	52	150	306	57
Future Vol, veh/h	47	50	52	150	306	57
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	61	63	183	373	70
Number of Lanes	0	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	10.7	9.9	16.9
HCM LOS	B	A	C









Lane	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	48%	0%	0%	100%	0%
Vol Thru, %	52%	100%	0%	0%	0%
Vol Right, %	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	97	52	150	306	57
LT Vol	47	0	0	306	0
Through Vol	50	52	0	0	0
RT Vol	0	0	150	0	57
Lane Flow Rate	118	63	183	373	70
Geometry Grp	4	7	7	7	7
Degree of Util (X)	0.201	0.107	0.273	0.628	0.094
Departure Headway (Hd)	6.106	6.08	5.371	6.06	4.852
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	589	593	673	597	740
Service Time	4.135	3.78	3.071	3.781	2.572
HCM Lane V/C Ratio	0.2	0.106	0.272	0.625	0.095
HCM Control Delay	10.7	9.5	10.1	18.5	8.1
HCM Lane LOS	B	A	B	C	A
HCM 95th-tile Q	0.7	0.4	1.1	4.4	0.3

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

EAPC (2026) Weekend SE Departure

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	174	128	18	86	109	82	273	12	169	344	39
Future Volume (vph)	43	174	128	18	86	109	82	273	12	169	344	39
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		598			1045			1022			1291	
Travel Time (s)		9.1			15.8			13.9			17.6	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	45.2
Intersection LOS	E





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	43	174	128	18	86	109	82	273	12	169	344	39
Future Vol, veh/h	43	174	128	18	86	109	82	273	12	169	344	39
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	198	145	20	98	124	93	310	14	192	391	44
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	27.2	31.9	45.5	61.5
HCM LOS	D	D	E	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	20%	0%	8%	100%	0%	0%
Vol Thru, %	0%	96%	80%	0%	40%	0%	100%	0%
Vol Right, %	0%	4%	0%	100%	51%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	82	285	217	128	213	169	344	39
LT Vol	82	0	43	0	18	169	0	0
Through Vol	0	273	174	0	86	0	344	0
RT Vol	0	12	0	128	109	0	0	39
Lane Flow Rate	93	324	247	145	242	192	391	44
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.266	0.876	0.686	0.375	0.673	0.534	1.03	0.108
Departure Headway (Hd)	10.608	10.049	10.326	9.492	10.336	10.007	9.485	8.755
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	341	363	353	381	351	363	387	412
Service Time	8.308	7.749	8.026	7.192	8.036	7.712	7.19	6.46
HCM Lane V/C Ratio	0.273	0.893	0.7	0.381	0.689	0.529	1.01	0.107
HCM Control Delay	17.1	53.7	32.8	17.8	31.9	23.6	85.6	12.5
HCM Lane LOS	C	F	D	C	D	C	F	B
HCM 95th-tile Q	1.1	8.4	4.8	1.7	4.7	3	12.8	0.4

Lanes, Volumes, Timings
11: Monroe St. & Avenue 60/60th Avenue

EAPC (2026) Weekend SE Departure
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	174	128	18	86	109	82	273	12	169	344	39
Future Volume (vph)	43	174	128	18	86	109	82	273	12	169	344	39
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		0	150		150	100		150	320		150
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red		Yes				Yes			Yes			Yes
Link Speed (mph)		45				45			50			50
Link Distance (ft)		598				1045			1022			1291
Travel Time (s)		9.1				15.8			13.9			17.6
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4				8		5	2		1	6
Permitted Phases	4		4	8								6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		11.5	22.5		11.5	22.5	22.5
Total Split (s)	39.0	39.0	39.0	39.0	39.0		21.0	48.0		33.0	60.0	60.0
Total Split (%)	32.5%	32.5%	32.5%	32.5%	32.5%		17.5%	40.0%		27.5%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated





















Splits and Phases: 11: Monroe St. & Avenue 60/60th Avenue



HCM 6th Signalized Intersection Summary


















11: Monroe St. & Avenue 60/60th Avenue

EAPC (2026) Weekend SE Departure
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	174	128	18	86	109	82	273	12	169	344	39
Future Volume (veh/h)	43	174	128	18	86	109	82	273	12	169	344	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	49	198	145	20	98	124	93	310	14	192	391	44
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	78	265	372	40	125	139	117	897	40	222	1055	894
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.07	0.52	0.52	0.13	0.58	0.58
Sat Flow, veh/h	175	1103	1543	32	518	578	1734	1729	78	1734	1821	1543
Grp Volume(v), veh/h	247	0	145	242	0	0	93	0	324	192	391	44
Grp Sat Flow(s),veh/h/ln	1278	0	1543	1127	0	0	1734	0	1807	1734	1821	1543
Q Serve(g_s), s	0.0	0.0	9.4	4.4	0.0	0.0	6.3	0.0	12.6	13.0	13.8	1.5
Cycle Q Clear(g_c), s	21.8	0.0	9.4	26.2	0.0	0.0	6.3	0.0	12.6	13.0	13.8	1.5
Prop In Lane	0.20		1.00	0.08		0.51	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	344	0	372	304	0	0	117	0	937	222	1055	894
V/C Ratio(X)	0.72	0.00	0.39	0.80	0.00	0.00	0.80	0.00	0.35	0.86	0.37	0.05
Avail Cap(c_a), veh/h	420	0	444	378	0	0	238	0	937	412	1055	894
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.6	0.0	38.2	42.2	0.0	0.0	55.2	0.0	16.9	51.3	13.5	10.9
Incr Delay (d2), s/veh	4.6	0.0	0.7	9.2	0.0	0.0	11.7	0.0	1.0	9.6	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	0.0	3.5	7.7	0.0	0.0	3.1	0.0	5.1	6.1	5.4	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.2	0.0	38.8	51.4	0.0	0.0	66.8	0.0	18.0	60.8	14.5	11.0
LnGrp LOS	D	A	D	D	A	A	E	A	B	E	B	B
Approach Vol, veh/h	392				242				417			
Approach Delay, s/veh	43.5				51.4				28.9			
Approach LOS	D				D				C			
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.9	66.7		33.4	12.6	74.0		33.4				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	28.5	43.5		34.5	16.5	55.5		34.5				
Max Q Clear Time (g_c+I1), s	15.0	14.6		23.8	8.3	15.8		28.2				
Green Ext Time (p_c), s	0.4	1.7		1.3	0.1	2.3		0.6				
Intersection Summary												
HCM 6th Ctrl Delay	35.4											
HCM 6th LOS	D											

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAPC (2026) Weekend SE Departure

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	166	52	55	124	51	73	388	60	44	445	81
Future Volume (vph)	99	166	52	55	124	51	73	388	60	44	445	81
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	0		0	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	193.1
Intersection LOS	F





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	99	166	52	55	124	51	73	388	60	44	445	81
Future Vol, veh/h	99	166	52	55	124	51	73	388	60	44	445	81
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	121	202	63	67	151	62	89	473	73	54	543	99
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	73.8	42.2	290.6	231.2
HCM LOS	F	E	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	14%	31%	24%	9%	0%
Vol Thru, %	74%	52%	54%	91%	0%
Vol Right, %	12%	16%	22%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	521	317	230	489	81
LT Vol	73	99	55	44	0
Through Vol	388	166	124	445	0
RT Vol	60	52	51	0	81
Lane Flow Rate	635	387	280	596	99
Geometry Grp	5	2	2	7	7
Degree of Util (X)	1.561	0.952	0.731	1.503	0.228
Departure Headway (Hd)	9.952	11.277	12.152	10.367	9.584
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	369	325	300	358	377
Service Time	7.952	9.277	10.152	8.067	7.284
HCM Lane V/C Ratio	1.721	1.191	0.933	1.665	0.263
HCM Control Delay	290.6	73.8	42.2	267	15.1
HCM Lane LOS	F	F	E	F	C
HCM 95th-tile Q	32	9.8	5.3	28.7	0.9

Lanes, Volumes, Timings
12: Monroe St. & Avenue 58

EAPC (2026) Weekend SE Departure
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	166	52	55	124	51	73	388	60	44	445	81
Future Volume (vph)	99	166	52	55	124	51	73	388	60	44	445	81
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		0	150		150	150		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			30			50			50	
Link Distance (ft)		670			5266			913			1519	
Travel Time (s)		9.1			119.7			12.5			20.7	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		11.5	22.5		11.5	22.5	
Total Split (s)	34.0	34.0		34.0	34.0		16.0	73.4		12.6	70.0	
Total Split (%)	28.3%	28.3%		28.3%	28.3%		13.3%	61.2%		10.5%	58.3%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

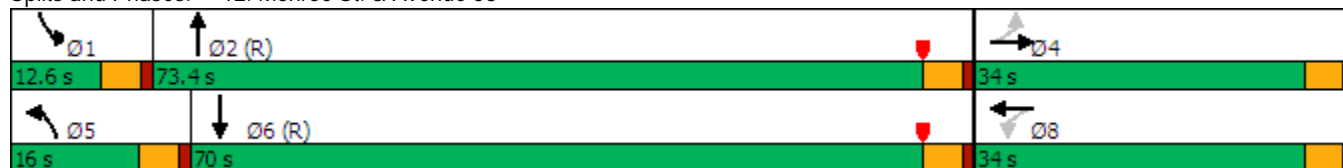
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 65





















Control Type: Actuated-Coordinated

Splits and Phases: 12: Monroe St. & Avenue 58
























HCM 6th Signalized Intersection Summary 12: Monroe St. & Avenue 58

EAPC (2026) Weekend SE Departure With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	166	52	55	124	51	73	388	60	44	445	81
Future Volume (veh/h)	99	166	52	55	124	51	73	388	60	44	445	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	121	202	63	67	151	62	89	473	73	54	543	99
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	202	306	95	163	282	116	111	938	145	84	889	162
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.06	0.61	0.61	0.05	0.59	0.59
Sat Flow, veh/h	1168	1331	415	1114	1227	504	1734	1541	238	1734	1499	273
Grp Volume(v), veh/h	121	0	265	67	0	213	89	0	546	54	0	642
Grp Sat Flow(s),veh/h/ln	1168	0	1746	1114	0	1730	1734	0	1778	1734	0	1772
Q Serve(g_s), s	12.2	0.0	16.5	7.0	0.0	13.0	6.1	0.0	20.8	3.7	0.0	27.7
Cycle Q Clear(g_c), s	25.1	0.0	16.5	23.5	0.0	13.0	6.1	0.0	20.8	3.7	0.0	27.7
Prop In Lane	1.00		0.24	1.00		0.29	1.00		0.13	1.00		0.15
Lane Grp Cap(c), veh/h	202	0	401	163	0	398	111	0	1083	84	0	1052
V/C Ratio(X)	0.60	0.00	0.66	0.41	0.00	0.54	0.80	0.00	0.50	0.64	0.00	0.61
Avail Cap(c_a), veh/h	221	0	429	180	0	425	166	0	1083	117	0	1052
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.6	0.0	42.0	52.6	0.0	40.6	55.4	0.0	13.2	56.0	0.0	15.6
Incr Delay (d2), s/veh	3.8	0.0	3.4	1.7	0.0	1.1	15.0	0.0	1.7	7.8	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.0	7.2	2.0	0.0	5.7	3.0	0.0	7.8	1.7	0.0	10.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.4	0.0	45.4	54.3	0.0	41.7	70.4	0.0	14.9	63.8	0.0	18.2
LnGrp LOS	E	A	D	D	A	D	E	A	B	E	A	B
Approach Vol, veh/h	386			280			635			696		
Approach Delay, s/veh	48.5			44.7			22.7			21.7		
Approach LOS	D			D			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.3	77.6		32.1	12.2	75.7		32.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	8.1	68.9		29.5	11.5	65.5		29.5				
Max Q Clear Time (g_c+I1), s	5.7	22.8		27.1	8.1	29.7		25.5				
Green Ext Time (p_c), s	0.0	3.5		0.4	0.0	4.3		0.5				
Intersection Summary												
HCM 6th Ctrl Delay				30.4								
HCM 6th LOS				C								

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.









EAPC (2026) Weekend SE Departure

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	92	25	59	100	55	23	414	57	55	475	16
Future Volume (vph)	8	92	25	59	100	55	23	414	57	55	475	16
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh66.4

Intersection LOS F






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	92	25	59	100	55	23	414	57	55	475	16
Future Vol, veh/h	8	92	25	59	100	55	23	414	57	55	475	16
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	106	29	68	115	63	26	476	66	63	546	18
Number of Lanes	1	1	1	0	1	0	1	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	3	3	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	2	3	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	3	1	3
HCM Control Delay	14.5	25.2	138.6	29.2
HCM LOS	B	D	F	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	100%	0%	0%	28%	100%	0%	0%
Vol Thru, %	0%	88%	0%	100%	0%	47%	0%	100%	91%
Vol Right, %	0%	12%	0%	0%	100%	26%	0%	0%	9%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	23	471	8	92	25	214	55	317	174
LT Vol	23	0	8	0	0	59	55	0	0
Through Vol	0	414	0	92	0	100	0	317	158
RT Vol	0	57	0	0	25	55	0	0	16
Lane Flow Rate	26	541	9	106	29	246	63	364	200
Geometry Grp	8	8	7	7	7	8	8	8	8
Degree of Util (X)	0.064	1.223	0.024	0.258	0.064	0.602	0.149	0.808	0.441
Departure Headway (Hd)	8.734	8.133	9.912	9.389	8.656	9.361	9.011	8.493	8.427
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	410	449	363	385	416	389	400	430	431
Service Time	6.482	5.881	7.612	7.089	6.356	7.061	6.711	6.193	6.127
HCM Lane V/C Ratio	0.063	1.205	0.025	0.275	0.07	0.632	0.158	0.847	0.464
HCM Control Delay	12.1	144.8	12.9	15.3	11.9	25.2	13.3	38.4	17.6
HCM Lane LOS	B	F	B	C	B	D	B	E	C
HCM 95th-tile Q	0.2	21.6	0.1	1	0.2	3.8	0.5	7.3	2.2

Lanes, Volumes, Timings
13: Monroe St. & Airport Bl.

EAPC (2026) Weekend SE Departure
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	92	25	59	100	55	23	414	57	55	475	16
Future Volume (vph)	8	92	25	59	100	55	23	414	57	55	475	16
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	280		150	150		150	105		150	160		50
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	60			25			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5252			1251			918			726	
Travel Time (s)		71.6			17.1			12.5			9.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8								6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		11.5	22.5		11.5	22.5	22.5
Total Split (s)	40.4	40.4	40.4	40.4	40.4		11.8	62.6		17.0	67.8	67.8
Total Split (%)	33.7%	33.7%	33.7%	33.7%	33.7%		9.8%	52.2%		14.2%	56.5%	56.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60






















Control Type: Actuated-Coordinated

Splits and Phases: 13: Monroe St. & Airport Bl.





















HCM 6th Signalized Intersection Summary 13: Monroe St. & Airport Bl.

EAPC (2026) Weekend SE Departure
With Improvements







												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	92	25	59	100	55	23	414	57	55	475	16
Future Volume (veh/h)	8	92	25	59	100	55	23	414	57	55	475	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	9	106	29	68	115	63	26	476	66	63	546	18
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	192	356	302	101	145	71	59	1003	139	89	2277	1016
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.03	0.64	0.64	0.05	0.66	0.66
Sat Flow, veh/h	1206	1821	1543	321	739	365	1734	1565	217	1734	3460	1543
Grp Volume(v), veh/h	9	106	29	246	0	0	26	0	542	63	546	18
Grp Sat Flow(s),veh/h/ln	1206	1821	1543	1425	0	0	1734	0	1782	1734	1730	1543
Q Serve(g_s), s	0.0	6.0	1.8	14.5	0.0	0.0	1.8	0.0	18.8	4.3	7.7	0.5
Cycle Q Clear(g_c), s	1.5	6.0	1.8	20.5	0.0	0.0	1.8	0.0	18.8	4.3	7.7	0.5
Prop In Lane	1.00		1.00	0.28		0.26	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	192	356	302	317	0	0	59	0	1142	89	2277	1016
V/C Ratio(X)	0.05	0.30	0.10	0.78	0.00	0.00	0.44	0.00	0.47	0.71	0.24	0.02
Avail Cap(c_a), veh/h	317	545	462	478	0	0	106	0	1142	181	2277	1016
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	0.99	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	41.2	39.6	47.6	0.0	0.0	56.9	0.0	11.1	56.1	8.3	7.1
Incr Delay (d2), s/veh	0.1	0.5	0.1	4.5	0.0	0.0	5.2	0.0	1.4	9.9	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.6	0.7	7.3	0.0	0.0	0.8	0.0	6.8	2.1	2.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.5	41.7	39.7	52.0	0.0	0.0	62.0	0.0	12.6	66.0	8.6	7.1
LnGrp LOS	D	D	D	D	A	A	E	A	B	E	A	A
Approach Vol, veh/h	144			246			568			627		
Approach Delay, s/veh	41.1			52.0			14.8			14.3		
Approach LOS	D			D			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	81.4		28.0	8.6	83.5		28.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	12.5	58.1		35.9	7.3	63.3		35.9				
Max Q Clear Time (g_c+I1), s	6.3	20.8		8.0	3.8	9.7		22.5				
Green Ext Time (p_c), s	0.0	3.4		0.6	0.0	3.6		1.0				
Intersection Summary												
HCM 6th Ctrl Delay	22.8											
HCM 6th LOS	C											

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAPC (2026) Weekend SE Departure

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	242	110	32	172	55	67	453	32	78	405	37
Future Volume (vph)	73	242	110	32	172	55	67	453	32	78	405	37
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (ft)	100			25			25			25		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	156
Intersection LOS	F





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	73	242	110	32	172	55	67	453	32	78	405	37
Future Vol, veh/h	73	242	110	32	172	55	67	453	32	78	405	37
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	77	255	116	34	181	58	71	477	34	82	426	39
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	56.8	44.8	273.3	168.1
HCM LOS	F	E	F	F

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	12%	100%	0%	12%	16%	0%
Vol Thru, %	82%	0%	69%	66%	84%	0%
Vol Right, %	6%	0%	31%	21%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	552	73	352	259	483	37
LT Vol	67	73	0	32	78	0
Through Vol	453	0	242	172	405	0
RT Vol	32	0	110	55	0	37
Lane Flow Rate	581	77	371	273	508	39
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	1.518	0.207	0.924	0.752	1.291	0.09
Departure Headway (Hd)	10.265	11.411	10.65	12.317	10.346	9.524
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	360	317	345	297	356	379
Service Time	8.265	9.111	8.35	10.317	8.046	7.224
HCM Lane V/C Ratio	1.614	0.243	1.075	0.919	1.427	0.103
HCM Control Delay	273.3	17.1	65	44.8	180	13.2
HCM Lane LOS	F	C	F	E	F	B
HCM 95th-tile Q	29.5	0.8	9.3	5.6	20.8	0.3

Lanes, Volumes, Timings
14: Monroe St. & Avenue 54

EAPC (2026) Weekend SE Departure
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	242	110	32	172	55	67	453	32	78	405	37
Future Volume (vph)	73	242	110	32	172	55	67	453	32	78	405	37
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	305		150	150		150	150		150	150		700
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		672			623			677			775	
Travel Time (s)		8.3			7.7			9.2			10.6	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		11.5	22.5		11.5	22.5	
Total Split (s)	44.0	44.0		44.0	44.0		15.0	60.0		16.0	61.0	
Total Split (%)	36.7%	36.7%		36.7%	36.7%		12.5%	50.0%		13.3%	50.8%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated





















Splits and Phases: 14: Monroe St. & Avenue 54

 Ø1	 Ø2 (R)	 Ø4
16 s	60 s	44 s
 Ø5	 Ø6 (R)	 Ø8
15 s	61 s	44 s

HCM 6th Signalized Intersection Summary























14: Monroe St. & Avenue 54

EAPC (2026) Weekend SE Departure
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	242	110	32	172	55	67	453	32	78	405	37
Future Volume (veh/h)	73	242	110	32	172	55	67	453	32	78	405	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	77	255	116	34	181	58	71	477	34	82	426	39
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	222	308	140	117	343	110	92	955	68	103	945	87
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.05	0.57	0.57	0.06	0.58	0.58
Sat Flow, veh/h	1141	1185	539	1011	1321	423	1734	1680	120	1734	1644	150
Grp Volume(v), veh/h	77	0	371	34	0	239	71	0	511	82	0	465
Grp Sat Flow(s),veh/h/ln	1141	0	1724	1011	0	1745	1734	0	1800	1734	0	1794
Q Serve(g_s), s	7.5	0.0	24.4	3.9	0.0	14.1	4.9	0.0	20.5	5.6	0.0	17.8
Cycle Q Clear(g_c), s	21.6	0.0	24.4	28.3	0.0	14.1	4.9	0.0	20.5	5.6	0.0	17.8
Prop In Lane	1.00		0.31	1.00		0.24	1.00		0.07	1.00		0.08
Lane Grp Cap(c), veh/h	222	0	447	117	0	453	92	0	1023	103	0	1032
V/C Ratio(X)	0.35	0.00	0.83	0.29	0.00	0.53	0.77	0.00	0.50	0.79	0.00	0.45
Avail Cap(c_a), veh/h	302	0	568	188	0	574	152	0	1023	166	0	1032
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.4	0.0	41.9	55.3	0.0	38.1	56.1	0.0	15.6	55.7	0.0	14.6
Incr Delay (d2), s/veh	0.9	0.0	8.1	1.4	0.0	1.0	12.9	0.0	1.7	12.7	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	10.8	1.0	0.0	5.8	2.4	0.0	8.1	2.7	0.0	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.3	0.0	50.0	56.6	0.0	39.1	69.0	0.0	17.4	68.4	0.0	16.0
LnGrp LOS	D	A	D	E	A	D	E	A	B	E	A	B
Approach Vol, veh/h	448			273			582			547		
Approach Delay, s/veh	49.7			41.3			23.7			23.9		
Approach LOS	D			D			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.6	72.7		35.6	10.8	73.5		35.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	11.5	55.5		39.5	10.5	56.5		39.5				
Max Q Clear Time (g_c+I1), s	7.6	22.5		26.4	6.9	19.8		30.3				
Green Ext Time (p_c), s	0.0	3.0		1.8	0.0	2.7		0.8				
Intersection Summary												
HCM 6th Ctrl Delay				32.6								
HCM 6th LOS				C								

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52









EAPC (2026) Weekend SE Departure

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	96	370	76	56	364	102	53	451	64	106	405	80
Future Volume (vph)	96	370	76	56	364	102	53	451	64	106	405	80
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection

Intersection Delay, s/veh 99.6

Intersection LOS F























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	96	370	76	56	364	102	53	451	64	106	405	80
Future Vol, veh/h	96	370	76	56	364	102	53	451	64	106	405	80
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	112	430	88	65	423	119	62	524	74	123	471	93
Number of Lanes	1	1	1	0	2	1	0	1	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	3	1	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	3	3	3
HCM Control Delay	159.3	52.5	531.9	47
HCM LOS	F	F	F	E

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	9%	100%	0%	0%	32%	0%	0%	100%	0%	0%
Vol Thru, %	79%	0%	100%	0%	68%	100%	0%	0%	100%	63%
Vol Right, %	11%	0%	0%	100%	0%	0%	100%	0%	0%	37%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	568	96	370	76	177	243	102	106	270	215
LT Vol	53	96	0	0	56	0	0	106	0	0
Through Vol	451	0	370	0	121	243	0	0	270	135
RT Vol	64	0	0	76	0	0	102	0	0	80
Lane Flow Rate	660	112	430	88	206	282	119	123	314	250
Geometry Grp	8	8	8	8	8	8	8	7	7	7
Degree of Util (X)	2.101	0.369	1.363	0.263	0.654	0.883	0.348	0.358	0.869	0.674
Departure Headway (Hd)	11.953	14.697	14.14	13.36	14.924	14.746	13.957	13.534	12.983	12.696
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	310	247	262	270	243	248	260	267	283	288
Service Time	9.653	12.397	11.84	11.06	12.624	12.446	11.657	11.234	10.683	10.396
HCM Lane V/C Ratio	2.129	0.453	1.641	0.326	0.848	1.137	0.458	0.461	1.11	0.868
HCM Control Delay	531.9	25.7	222.4	20.8	42	72.1	23.9	23.6	63.3	38.1
HCM Lane LOS	F	D	F	C	E	F	C	C	F	E
HCM 95th-tile Q	46.5	1.6	18.6	1	4.1	7.4	1.5	1.6	7.5	4.5

Lanes, Volumes, Timings
15: Monroe St. & Avenue 52

EAPC (2026) Weekend SE Departure
With Improvements

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	96	370	76	56	364	102	53	451	64	106	405	80
Future Volume (vph)	96	370	76	56	364	102	53	451	64	106	405	80
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	190		200	100		50	150		150	195		150
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	90			90			25			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		817			587			676			1348	
Travel Time (s)		10.1			7.3			9.2			18.4	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2			6		
Detector Phase	7	4	4	3	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	11.5	22.5	22.5	11.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	20.1	40.0	40.0	12.0	31.9	31.9	68.0	68.0		68.0	68.0	
Total Split (%)	16.8%	33.3%	33.3%	10.0%	26.6%	26.6%	56.7%	56.7%		56.7%	56.7%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5		4.5		4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	None	None	None	None	None	C-Max	C-Max		C-Max	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 120

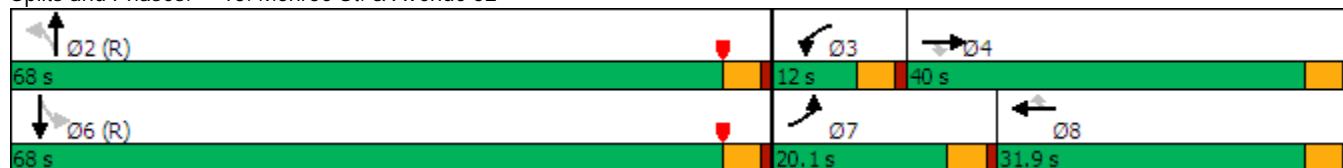
Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 80























Control Type: Actuated-Coordinated

Splits and Phases: 15: Monroe St. & Avenue 52



























HCM 6th Signalized Intersection Summary 15: Monroe St. & Avenue 52

EAPC (2026) Weekend SE Departure
With Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	370	76	56	364	102	53	451	64	106	405	80
Future Volume (veh/h)	96	370	76	56	364	102	53	451	64	106	405	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	113	435	89	66	428	120	62	531	75	125	476	94
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	473	401	90	802	358	99	779	107	383	1661	326
Arrive On Green	0.08	0.26	0.26	0.05	0.23	0.23	0.58	0.58	0.58	0.58	0.58	0.58
Sat Flow, veh/h	1734	1821	1543	1734	3460	1543	116	1352	186	814	2883	566
Grp Volume(v), veh/h	113	435	89	66	428	120	668	0	0	125	285	285
Grp Sat Flow(s),veh/h/ln	1734	1821	1543	1734	1730	1543	1653	0	0	814	1730	1719
Q Serve(g_s), s	7.7	27.9	5.4	4.5	13.0	7.8	17.3	0.0	0.0	1.5	10.0	10.1
Cycle Q Clear(g_c), s	7.7	27.9	5.4	4.5	13.0	7.8	33.1	0.0	0.0	34.6	10.0	10.1
Prop In Lane	1.00		1.00	1.00		1.00	0.09		0.11	1.00		0.33
Lane Grp Cap(c), veh/h	138	473	401	90	802	358	985	0	0	383	997	990
V/C Ratio(X)	0.82	0.92	0.22	0.73	0.53	0.34	0.68	0.00	0.00	0.33	0.29	0.29
Avail Cap(c_a), veh/h	225	539	457	108	802	358	985	0	0	383	997	990
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.3	43.2	34.9	56.1	40.4	38.4	17.5	0.0	0.0	19.0	12.9	12.9
Incr Delay (d2), s/veh	11.1	19.7	0.3	18.5	0.7	0.5	3.8	0.0	0.0	2.3	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	14.4	2.0	2.4	5.3	2.9	12.3	0.0	0.0	2.5	3.7	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.5	63.0	35.2	74.5	41.1	39.0	21.3	0.0	0.0	21.3	13.6	13.7
LnGrp LOS	E	E	D	E	D	D	C	A	A	C	B	B
Approach Vol, veh/h	637				614				668			
Approach Delay, s/veh	59.5				44.3				21.3			
Approach LOS	E				D				C			
Timer - Assigned Phs	2		3	4		6		7	8			
Phs Duration (G+Y+Rc), s	73.6		10.7	35.7		73.6		14.1	32.3			
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5		4.5	4.5			
Max Green Setting (Gmax), s	63.5		7.5	35.5		63.5		15.6	27.4			
Max Q Clear Time (g_c+I1), s	35.1		6.5	29.9		36.6		9.7	15.0			
Green Ext Time (p_c), s	4.7		0.0	1.3		4.0		0.1	2.2			
Intersection Summary												
HCM 6th Ctrl Delay	34.3											
HCM 6th LOS	C											

Lanes, Volumes, Timings
16: Monroe St. & 50th Avenue

EAPC (2026) Weekend SE Departure

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	427	48	39	351	104	42	602	72	113	477	35
Future Volume (vph)	49	427	48	39	351	104	42	602	72	113	477	35
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	210		120	220		150	200		150	170		150
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	120			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		710			640			1322			436	
Travel Time (s)		9.7			8.7			18.0			5.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		4			8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Detector Phase	4	4	4	8	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Minimum Split (s)	20.5	20.5	20.5	20.5	20.5	11.5	11.5	20.5		11.5	20.5	
Total Split (s)	25.0	25.0	25.0	25.0	25.0	12.0	11.5	23.0		12.0	23.5	
Total Split (%)	41.7%	41.7%	41.7%	41.7%	41.7%	20.0%	19.2%	38.3%		20.0%	39.2%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		-0.5	-0.5	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag						Lead	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?						Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max		None	C-Max	

Intersection Summary

Area Type: Other

Cycle Length: 60

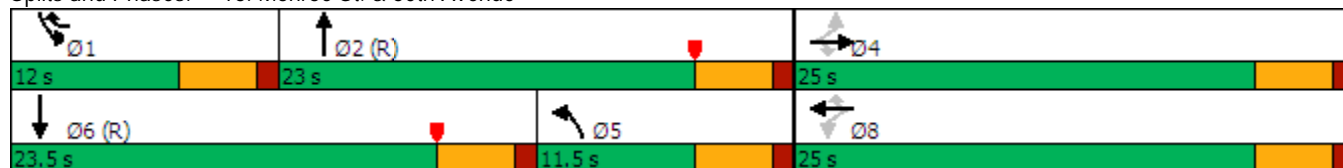
Actuated Cycle Length: 60

Offset: 14.6 (24%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 55























Control Type: Actuated-Coordinated

Splits and Phases: 16: Monroe St. & 50th Avenue



















HCM 6th Signalized Intersection Summary 16: Monroe St. & 50th Avenue

EAPC (2026) Weekend SE Departure

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	427	48	39	351	104	42	602	72	113	477	35
Future Volume (veh/h)	49	427	48	39	351	104	42	602	72	113	477	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No				No				No			
Adj Sat Flow, veh/h/ln	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
Adj Flow Rate, veh/h	54	474	53	43	390	116	47	669	80	126	530	39
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	253	604	511	204	604	682	249	1114	133	192	1062	78
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.14	0.36	0.35	0.11	0.32	0.32
Sat Flow, veh/h	893	1821	1543	876	1821	1543	1734	3113	372	1734	3268	240
Grp Volume(v), veh/h	54	474	53	43	390	116	47	372	377	126	280	289
Grp Sat Flow(s),veh/h/ln	893	1821	1543	876	1821	1543	1734	1730	1754	1734	1730	1778
Q Serve(g_s), s	3.3	14.1	1.4	2.8	10.9	2.7	1.4	10.5	10.6	4.2	7.8	7.9
Cycle Q Clear(g_c), s	14.2	14.1	1.4	16.9	10.9	2.7	1.4	10.5	10.6	4.2	7.8	7.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		0.13
Lane Grp Cap(c), veh/h	253	604	511	204	604	682	249	619	628	192	562	578
V/C Ratio(X)	0.21	0.79	0.10	0.21	0.65	0.17	0.19	0.60	0.60	0.66	0.50	0.50
Avail Cap(c_a), veh/h	270	637	540	221	637	711	249	619	628	231	562	578
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.1	18.1	13.9	25.8	17.1	10.1	22.6	15.8	15.8	25.6	16.3	16.4
Incr Delay (d2), s/veh	0.4	6.1	0.1	0.5	2.1	0.1	0.4	4.3	4.2	5.0	3.1	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	5.8	0.4	0.5	4.0	0.7	0.5	4.0	4.1	1.8	3.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.5	24.3	14.0	26.3	19.2	10.2	23.0	20.0	20.0	30.5	19.4	19.4
LnGrp LOS	C	C	B	C	B	B	C	C	C	C	B	B
Approach Vol, veh/h	581				549				796			
Approach Delay, s/veh	23.3				17.8				20.2			
Approach LOS	C				B				C			
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	10.6	25.5	23.9		12.6	23.5	23.9					
Change Period (Y+Rc), s	4.5	4.5	4.5		4.5	4.5	4.5					
Max Green Setting (Gmax), s	7.5	18.5	20.5		7.0	19.0	20.5					
Max Q Clear Time (g_c+I1), s	6.2	12.6	16.2		3.4	9.9	18.9					
Green Ext Time (p_c), s	0.0	2.1	1.2		0.0	2.0	0.5					
Intersection Summary												
HCM 6th Ctrl Delay	20.7											
HCM 6th LOS	C											

Lanes, Volumes, Timings
17: Jackson St. & 58th Avenue

EAPC (2026) Weekend SE Departure

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	186	8	0	137	10	13	203	15	6	180	43
Future Volume (vph)	47	186	8	0	137	10	13	203	15	6	180	43
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		5266			1079			1013			510	
Travel Time (s)		71.8			14.7			12.6			6.3	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

Intersection	
Intersection Delay, s/veh	14.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	47	186	8	0	137	10	13	203	15	6	180	43
Future Vol, veh/h	47	186	8	0	137	10	13	203	15	6	180	43
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	59	235	10	0	173	13	16	257	19	8	228	54
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	15.7	12.5	14.9	14.6
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	20%	0%	3%
Vol Thru, %	88%	77%	93%	79%
Vol Right, %	6%	3%	7%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	231	241	147	229
LT Vol	13	47	0	6
Through Vol	203	186	137	180
RT Vol	15	8	10	43
Lane Flow Rate	292	305	186	290
Geometry Grp	1	1	1	1
Degree of Util (X)	0.493	0.521	0.329	0.483
Departure Headway (Hd)	6.073	6.15	6.367	6.004
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	594	586	564	600
Service Time	4.115	4.192	4.416	4.047
HCM Lane V/C Ratio	0.492	0.52	0.33	0.483
HCM Control Delay	14.9	15.7	12.5	14.6
HCM Lane LOS	B	C	B	B
HCM 95th-tile Q	2.7	3	1.4	2.6

Lanes, Volumes, Timings
18: Avenue 60 & S. Access

EAPC (2026) Weekend SE Departure



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	59	56	0
Future Volume (vph)	0	0	0	59	56	0
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)		40	40		25	
Link Distance (ft)		207	1772		380	
Travel Time (s)		3.5	30.2		10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	




Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 4.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	59	56	0
Future Vol, veh/h	0	0	0	59	56	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	64	61	0












Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	64	0	0 32 32
Stage 1	-	-	- 32 -
Stage 2	-	-	- 0 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1538	-	- 982 1042
Stage 1	-	-	- 991 -
Stage 2	-	-	- - -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1538	-	- 982 1042
Mov Cap-2 Maneuver	-	-	- 982 -
Stage 1	-	-	- 991 -
Stage 2	-	-	- - -

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1538	-	-	-	982
HCM Lane V/C Ratio	-	-	-	-	0.062
HCM Control Delay (s)	0	-	-	-	8.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2







Lanes, Volumes, Timings
19: Madison St. & Main Access

EAPC (2026) Weekend SE Departure

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	229	27	53	292	472	165
Future Volume (vph)	229	27	53	292	472	165
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)	100	0	150			0
Storage Lanes	1	1	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	25			50	50	
Link Distance (ft)	499			880	178	
Travel Time (s)	13.6			12.0	2.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

HCM 6th TWSC
19: Madison St. & Main Access






EAPC (2026) Weekend SE Departure

Intersection						
Int Delay, s/veh	6.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	229	27	53	292	472	165
Future Vol, veh/h	229	27	53	292	472	165
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	249	29	58	317	513	179
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	878	346	692	0	-	0
Stage 1	603	-	-	-	-	-
Stage 2	275	-	-	-	-	-
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	287	650	899	-	-	-
Stage 1	509	-	-	-	-	-
Stage 2	747	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	268	650	899	-	-	-
Mov Cap-2 Maneuver	372	-	-	-	-	-
Stage 1	476	-	-	-	-	-
Stage 2	747	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	29.9	1.4		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	899	-	372	650	-	-
HCM Lane V/C Ratio	0.064	-	0.669	0.045	-	-
HCM Control Delay (s)	9.3	-	32.2	10.8	-	-
HCM Lane LOS	A	-	D	B	-	-
HCM 95th %tile Q(veh)	0.2	-	4.7	0.1	-	-

Lanes, Volumes, Timings
20: Project Access 1 & Avenue 58











EAPC (2026) Weekend SE Departure

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰		↱	↰↰	↱↱	
Traffic Volume (vph)	238	12	39	192	82	47
Future Volume (vph)	238	12	39	192	82	47
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Storage Length (ft)		0	50		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			60		60	
Link Speed (mph)	50			50	25	
Link Distance (ft)	403			335	383	
Travel Time (s)	5.5			4.6	10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	3.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	238	12	39	192	82	47
Future Vol, veh/h	238	12	39	192	82	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	259	13	42	209	89	51
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	272	0	455	266
Stage 1	-	-	-	-	266	-
Stage 2	-	-	-	-	189	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1290	-	548	772
Stage 1	-	-	-	-	778	-
Stage 2	-	-	-	-	825	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1290	-	530	772
Mov Cap-2 Maneuver	-	-	-	-	592	-
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	825	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.3		12.1	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	647	-	-	1290	-	
HCM Lane V/C Ratio	0.217	-	-	0.033	-	
HCM Control Delay (s)	12.1	-	-	7.9	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-	




Lanes, Volumes, Timings
21: Project Access 2 & Avenue 58

EAPC (2026) Weekend SE Departure

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations				 		
Traffic Volume (vph)	264	21	0	231	0	51
Future Volume (vph)	264	21	0	231	0	51
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	50			50	25	
Link Distance (ft)	335			276	233	
Travel Time (s)	4.6			3.8	6.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection

Int Delay, s/veh 0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	264	21	0	231	0	51
Future Vol, veh/h	264	21	0	231	0	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	287	23	0	251	0	55












Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 299
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 6.23
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.319
Pot Cap-1 Maneuver	-	-	0 - 0 740
Stage 1	-	-	0 - 0
Stage 2	-	-	0 - 0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - - 740
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	740	-	-	-
HCM Lane V/C Ratio	0.075	-	-	-
HCM Control Delay (s)	10.3	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

Lanes, Volumes, Timings
22: Madison St. & Project Access 3

EAPC (2026) Weekend SE Departure

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				 	 	
Traffic Volume (vph)	0	78	0	522	558	39
Future Volume (vph)	0	78	0	522	558	39
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Link Speed (mph)	25			50	50	
Link Distance (ft)	210			215	288	
Travel Time (s)	5.7			2.9	3.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	78	0	522	558	39
Future Vol, veh/h	0	78	0	522	558	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	85	0	567	607	42
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	-	325	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	671	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	671	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.1	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT EBLn1		SBT	SBR		
Capacity (veh/h)	- 671		-	-		
HCM Lane V/C Ratio	- 0.126		-	-		
HCM Control Delay (s)	- 11.1		-	-		
HCM Lane LOS	- B		-	-		
HCM 95th %tile Q(veh)	- 0.4		-	-		

Intersection: 18: Avenue 60 & S. Access

Movement	SB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	27
95th Queue (ft)	44
Link Distance (ft)	352
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 19: Madison St. & Main Access

Movement	EB	EB	NB
Directions Served	L	R	L
Maximum Queue (ft)	110	30	94
Average Queue (ft)	73	20	52
95th Queue (ft)	107	41	89
Link Distance (ft)		452	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100		150
Storage Blk Time (%)	2		
Queuing Penalty (veh)	0		

Intersection: 20: Project Access 1 & Avenue 58

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	31	28
Average Queue (ft)	22	4
95th Queue (ft)	44	20
Link Distance (ft)		348
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	50	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 21: Project Access 2 & Avenue 58

Movement	EB	NB
Directions Served	TR	R
Maximum Queue (ft)	52	56
Average Queue (ft)	12	17
95th Queue (ft)	44	52
Link Distance (ft)	285	199
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 22: Madison St. & Project Access 3

Movement	EB	SB	SB
Directions Served	R	T	TR
Maximum Queue (ft)	30	63	100
Average Queue (ft)	21	9	14
95th Queue (ft)	43	45	72
Link Distance (ft)	164	213	213
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 0

Intersection: 18: Avenue 60 & S. Access

Movement	SB
Directions Served	LR
Maximum Queue (ft)	51
Average Queue (ft)	25
95th Queue (ft)	53
Link Distance (ft)	352
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 19: Madison St. & Main Access

Movement	EB	EB	NB	SB
Directions Served	L	R	L	TR
Maximum Queue (ft)	157	30	72	22
Average Queue (ft)	79	20	21	3
95th Queue (ft)	137	42	61	16
Link Distance (ft)		452		105
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	100		150	
Storage Blk Time (%)	9			
Queuing Penalty (veh)	3			

Intersection: 20: Project Access 1 & Avenue 58

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	30	72
Average Queue (ft)	13	43
95th Queue (ft)	37	69
Link Distance (ft)		348
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	50	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 21: Project Access 2 & Avenue 58

Movement	NB
Directions Served	R
Maximum Queue (ft)	31
Average Queue (ft)	26
95th Queue (ft)	44
Link Distance (ft)	199
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 22: Madison St. & Project Access 3

Movement	EB
Directions Served	R
Maximum Queue (ft)	30
Average Queue (ft)	25
95th Queue (ft)	42
Link Distance (ft)	164
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Zone Summary

Zone wide Queuing Penalty: 3
