APPENDIX 1.1:

APPROVED SCOPING AGREEMENT

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SCOPING AGREEMENT

DATE: July 3, 2025
TO: Eva Covarrubias, County of Riverside
FROM: Charlene So, Urban Crossroads, Inc.
JOB NO: 14164-01 TA Scope

SUBJECT: WOODCREST RETAIL CENTER TRAFFIC STUDY SCOPING AGREEMENT

Urban Crossroads, Inc. has prepared the following Traffic Study Scoping Agreement for the Woodcrest Retail Center development (Project), which is located on the northwest corner of Washington Street and Van Buren Boulevard in the Lake Mathews-Woodcrest area of Riverside County. This letter describes the proposed Project trip generation, trip distribution, and analysis methodology, which have been used to establish the draft proposed Project study area and analysis locations. The proposed analysis methodology and assumptions are in accordance with the County's Transportation Analysis Guidelines for Level of Service Vehicle Miles Traveled (dated December 2020) (County Guidelines). The County scoping form is included in Appendix 1.

PROJECT DESCRIPTION

The site is largely undeveloped/vacant, however, there are two parcels developed with existing uses. Assessor's Parcel Number (APN) 273-141-004 is currently developed with in-line shops and a 7-Eleven with Gas Station. The 7-Eleven is approximately 2,400 square feet (with four vehicle fueling positions), the existing bike store is 2,400 square feet, the smoke shop is 1,200 square feet, the nail shop is 1,200 square feet, and the fish taco shop is 1,200 square feet. All existing structures on this parcel will be demolished and redeveloped as part of the Project. APN 273-141-005 is an existing Farmer Boys fast food restaurant that is approximately 2,640 square feet. This pad will be redeveloped as a 3,390 square foot restaurant pad with drive-through window. There is an existing bank (Valley Bank) located on APN 273-141-008) and is not-a-part of this project and may be redeveloped by others under a future application. For the purposes of analysis, the assumed Project Opening Year is 2027.

The Project Site Plan Development Concept is presented in Exhibit 1. The Project proposes a Base Development Concept, and a "Parcel 1 Option" development concept. Under the Base Development Concept, Parcel 1 would be developed with a convenience store/retail gas station. Under the Parcel 1 Option, it would be developed with retail/restaurant uses. Under either development concept, the remainder of the Project site (Parcels 2 – 6) would be developed with a supermarket, shops, and restaurant uses as illustrated on Exhibit 1. Access is the same for both plans.

Access to the Project site will be accommodated via the following driveways:

- Driveway 1 on Van Buren Boulevard – right-in/right-out access only
- Driveway 2 on Van Buren Boulevard – right-in/right-out access only
- Driveway 3 on Washington Street – full access
- Driveway 4 on Washington Street – full access (to align with existing center to the east)
- Driveway 5 on Washington Street – right-in access only

The Traffic Study will evaluate Project land uses that would result in likely maximum impacts. Generally, uses that generate the greatest traffic volumes tend to have the greatest potential environmental impacts. This is because, all other factors being equal, development-related traffic volumes correlate directly with transportation deficiencies, vehicular-source criteria pollutants and greenhouse gases, and vehicular-source noise. All of these impacts are further increased under congested traffic conditions.

EXHIBIT 1: PRELIMINARY SITE PLAN

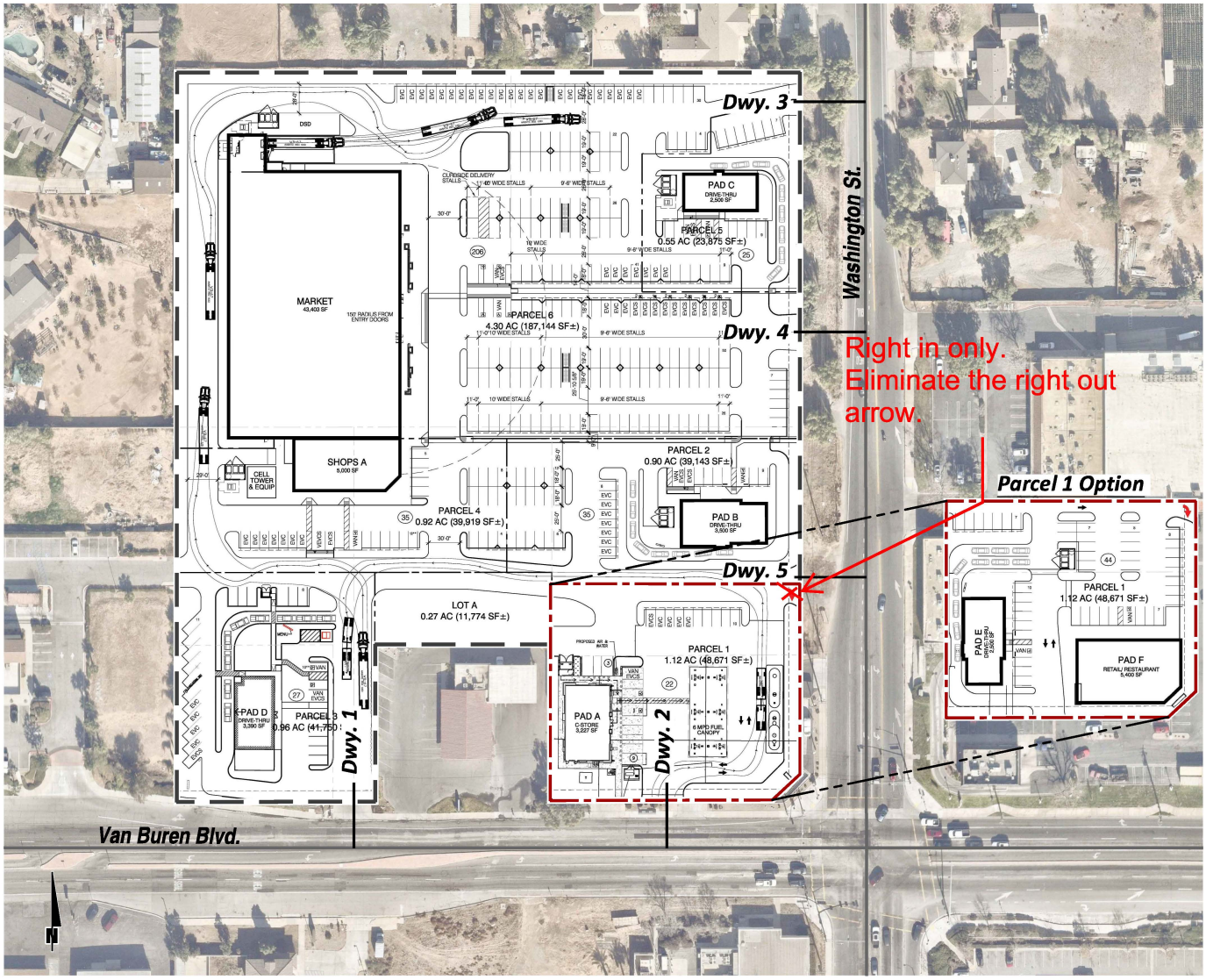


TABLE 1: WOODCREST RETAIL CENTER DEVELOPMENT CONCEPT

Site Plan Designation		Land Use(s)	Building Area[1]
Parcel 1	Pad A	Convenience Store/Gas Station	3,227 SF store w/ 6 Multi-Product Dispenser (MPD) Fuel Canopy (12 VFP)
Parcel 1 (Alt.)	Pad E	Drive-Through Restaurant	2,500 SF
Parcel 1 (Alt.)	Pad F	Retail/Sit-Down Restaurant	5,400 SF
Parcel 2	Pad B	Drive-Through Restaurant	3,500 SF
Parcel 3	Pad D	Drive-Through Restaurant (Farmer Boys)	3,390 SF
Parcel 4	Shops A	Retail *	5,000 SF
Parcel 5	Pad C	Drive-Through Restaurant	2,500 SF
Parcel 6	Market	Grocery Store (Stater Bros.)	43,403 SF
Lot A	--	Drainage/Stormwater Management	--
Total Project (Base)			**61,020 Square Feet**
Total Project (Parcel 1 Option)			**65,693 Square Feet**

Source: Woodcrest Retail Center Site Plan Concept, March 2025.

Note: * A proposed wireless communications antenna would be located within Parcel 4.

[1] VFP = Vehicle Fueling Positions; SF = Square Feet

TRIP GENERATION

Trip generation represents the amount of traffic, which is both attracted to, and produced by, a land use project. 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, specific land uses being proposed for a given development.

EXISTING USES

As noted previously, the site is currently developed with in-line shops and a 7-Eleven with Gas Station and an existing Farmer Boys restaurant. In an effort to understand the existing traffic associated with the existing uses, traffic counts were collected at all applicable driveways on Wednesday, February 26, 2025, and Thursday, February 27, 2025.

Table 2 summarizes the average trip generation based on the count data collected over the two days for the existing Farmer Boys restaurant located on Van Buren Boulevard. The existing restaurant generates an average of 706 two-way trips per day, with 47 trips during the AM peak hour and 54 trips during the PM peak hour. As this existing tenant is anticipated to occupy the same location, the same trip generation below is used for the proposed Project for Pad D. A detailed summary of the count data collected at the existing Farmer Boys is provided in Appendix 2.

TABLE 2: FARMER BOYS TRIP GENERATION

Existing Farmer Boys	AM Peak Hour			PM Peak Hour			Daily
	In	Out	Total	In	Out	Total	
February 26, 2025 - Wednesday							
Wednesday Total Trips	19	13	32	26	26	52	729
February 27, 2025 - Thursday							
Thursday Total Trips	31	31	62	29	26	55	681
2-Day Average	**25**	**22**	**47**	**28**	**26**	**54**	**706**

* Note: data is an average of counts collected on February 26 and 27, 2025.

Table 3 summarizes the average trip generation based on the count data collected over the two days for the remaining existing uses (7-11, bike store, smoke shop, nail shop, and fish taco restaurant) located on the northwest corner of Washington Street and Van Buren Boulevard. The remaining existing uses generate an average of 1,184 two-way trips per day, with 75 trips during the AM peak hour and 94 trips during the PM peak hour. These trips will be applied to the Project trip generation as a credit as new uses would be replacing the existing uses. A detailed summary of the count data collected at the remaining site uses is provided in Appendix 3.

TABLE 3: TRIP GENERATION FOR REMAINING EXISTING USES

Remaining Existing Uses	AM Peak Hour			PM Peak Hour			Daily
	In	Out	Total	In	Out	Total	
February 26, 2025 - Wednesday							
Wednesday Total Trips	39	38	77	42	48	90	1,184
February 27, 2025 - Thursday							
Thursday Total Trips	36	36	72	47	49	96	1,182
2-Day Average	**38**	**37**	**75**	**45**	**49**	**94**	**1,184**

* Note: data is an average of counts collected on February 26 and 27, 2025.

PROPOSED PROJECT

In order to develop the traffic characteristics of the proposed project, trip-generation statistics published in the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition, 2021) was used to estimate the trip generation (see Table 4).

TABLE 4: TRIP GENERATION RATES

Land Use[1]	ITE Land Use Code	Units[2]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Strip Retail Plaza (<40,000 SF)	822	TSF	1.42	0.94	2.36	3.30	3.29	6.59	54.45
Supermarket	850	TSF	1.69	1.17	2.86	4.48	4.47	8.95	93.84
Fast Food without Drive-Thru	933	TSF	25.04	18.14	43.18	16.61	16.60	33.21	450.49
Fast Food with Drive-Thru	934	TSF	22.75	21.86	44.61	17.18	15.85	33.03	467.48
Gas Station w/ Convenience Market	945	VFP	8.03	8.03	16.06	9.21	9.21	18.42	265.12

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 11th Edition (2021).

[2] TSF = thousand square feet; VFP = Vehicle Fueling Position

Internal capture is a percentage reduction that can be applied to the trip generation estimates for individual land uses to account for trips internal to the site (trips that travel between uses without leaving the site). In other words, trips may be made between the gas station use and the retail or restaurant uses proposed on-site which can be made either by walking or using internal roadways without using external streets. The internal capture is based on the National Cooperative Highway Research Program's (NCHRP Report 684) internal capture trip capture estimation tool. These internal capture worksheets are attached to this scoping agreement (see Appendix 4 for the Base Development Concept and the and Appendix 5 for the Parcel 1 Option).

Pass-by percentages have been obtained from the ITE Trip Generation Manual (11th Edition, 2021). Pass-by trips account for trips that are currently on the existing roadway network that would stop by uses within the proposed Project on the way to their ultimate destination.

The trip generation summary illustrates daily, and peak hour trip generation estimates for the Base Development Concept are shown in Table 5. As shown in Table 5, the Base Development Concept assumes the development of a convenience store and 12 vehicle fueling position gas station on Pad A of Parcel 1. As noted previously, the trip generation shown in Table 2 for the existing Farmer Boys is used for Pad D and the remaining existing uses (shown in Table 3) have been credited against the Base Development Concept. The Base Development Concept is anticipated to generate 2,910 two-way trip-ends per day with 278 AM peak hour trips and 277 PM peak hour trips.

The trip generation summary illustrates daily, and peak hour trip generation estimates for the Parcel 1 Option are shown in Table 6. As shown in Table 6, the Parcel 1 Option assumes the development of a fast-food restaurant with drive-through pad (Pad E) and retail/sit-down restaurant (Pad F) in lieu of the convenience store and 12 vehicle fueling position gas station on Parcel 1. As noted previously, the trip generation shown in Table 2 for the existing Farmer Boys is used for Pad D and the remaining existing uses (shown in Table 3) have been credited against the Parcel 1 Option. The Parcel 1 Option is anticipated to generate 3,160 two-way trip-ends per day with 471 AM peak hour trips and 289 PM peak hour trips.

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 route where the Project traffic would distribute. The Project trip distribution and assignment process represents the directional orientation of traffic to and from the Project site. The trip distribution pattern is heavily influenced by the geographical location of the site, the location of surrounding land uses, and the proximity to the regional freeway system. The Project trip distribution patterns are graphically depicted in Exhibit 2. These distribution patterns will be verified/adjusted once traffic counts are collected.

Exhibits 3 and 4 show the pass-by volumes applied to the Base Development Concept and Parcel 1 Option, respectively, consistent with the pass-by reductions in Tables 5 and 6. The pass-by reduction process for each development scenario began by identifying the likely access point(s) for a given land use. Where multiple access points were probable, the pass-by reduction was appropriately allocated among them. Directional reductions were then determined based on the proportion of trips at that direction's through movement, relative to the total volume across the applicable through movements at the intersection. The reduced volumes were subsequently added back to the applicable movements of the affected intersection(s). Daily pass-by reductions were calculated using the PM peak hour's proportion of the total daily pass-by reduction for each land use. The traffic counts used for verification purposes are included in Appendix 6.

TABLE 5: BASE DEVELOPMENT CONCEPT TRIP GENERATION

Base Development Concept Land Uses	Quantity	Units[1]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Pad A: Gas Station w/Market	12	VFP	96	96	192	111	111	222	3,182
Internal Capture:			-6	-8	-14	-29	-22	-51	-732
Pass-By (76% AM; 75% PM/Daily):			-67	-67	-134	-62	-62	-124	-1,838
Market: Supermarket	43.403	TSF	73	51	124	194	194	388	4,074
Internal Capture:			-8	-10	-18	-37	-28	-65	-684
Pass-By (24% PM/Daily):			0	0	0	-40	-40	-80	-814
Shops A: Strip Retail	2.500	TSF	4	2	6	8	8	16	136
Internal Capture:			0	-1	-1	-1	0	-1	-10
Pass-By (40% PM/Daily):			0	0	0	-3	-3	-6	-52
Retail Subtotal			69	42	111	121	131	252	2,650
Shops A: Fast Food without Drive-Thru	2.500	TSF	63	45	108	42	42	84	1,126
Internal Capture:			-5	-4	-9	-12	-16	-28	-376
Pass-By (43% PM/Daily):			0	0	0	-11	-11	-22	-324
Pad D: Fast Food with Drive-Thru[2]	3.390	TSF	25	22	47	28	26	54	706
Internal Capture:			-3	-2	-5	-8	-10	-18	-236
Pass-By (50% AM; 55% PM/Daily):			-11	-11	-22	-9	-9	-18	-260
Pads B, C & E: Fast Food with Drive-Thru	6.000	TSF	137	131	268	103	95	198	2,806
Internal Capture:			-11	-8	-19	-30	-41	-71	-1,008
Pass-By (50% AM; 55% PM/Daily):			-63	-63	-126	-30	-30	-60	-990
Restaurant Subtotal			132	110	242	73	46	119	1,444
Credit for Existing Uses			-38	-37	-75	-45	-49	-94	-1,184
Project Total			**163**	**115**	**278**	**149**	**128**	**277**	**2,910**

[1] TSF = thousand square feet; VFP = Vehicle Fueling Position

[2] Trip generation is based on existing driveway counts as this tenant is anticipated to remain the same (in the same location).

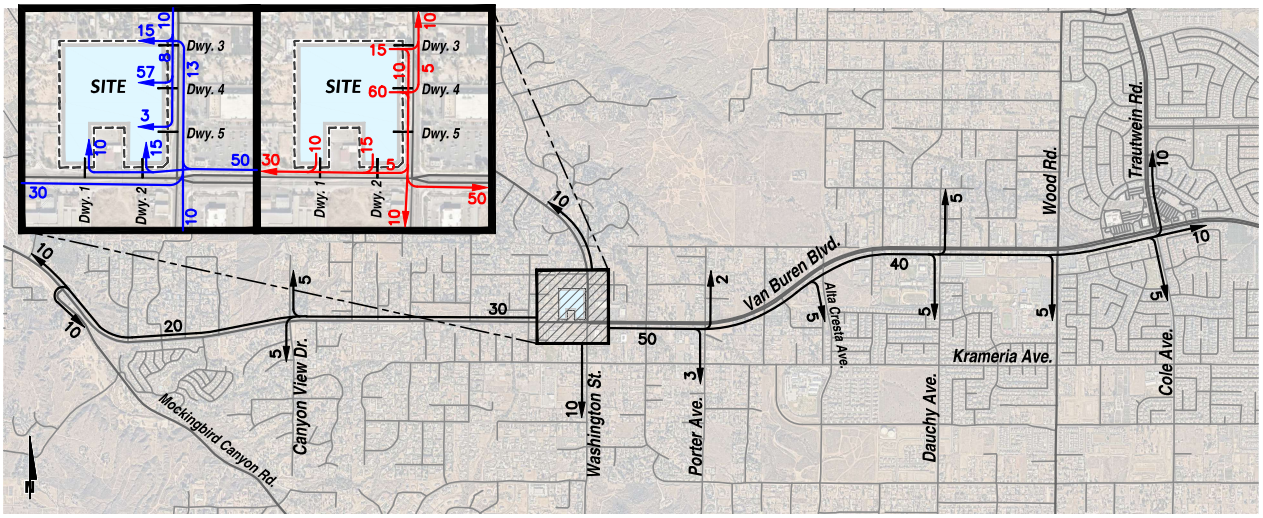
TABLE 6: PARCEL 1 OPTION PROJECT TRIP GENERATION

Parcel 1 Option Land Uses	Quantity	Units[1]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Market: Supermarket	43.403	TSF	73	51	124	194	194	388	4,074
Internal Capture:			-6	-7	-13	-94	-57	-151	-1,586
Pass-By (24% PM/Daily):			0	0	0	-33	-33	-66	-598
Shops A/Pad F: Strip Retail	5.200	TSF	7	5	12	17	17	34	284
Internal Capture:			0	0	0	-7	-4	-11	-92
Pass-By (40% PM/Daily):			0	0	0	-4	-4	-8	-78
Retail Subtotal			74	49	123	73	113	186	2,004
Shops A/Pad F: Fast Food without Drive-Thru	5.200	TSF	130	94	224	86	86	172	2,344
Internal Capture:			-2	-2	-4	-20	-34	-54	-736
Pass-By (43% PM/Daily):			0	0	0	-22	-22	-44	-692
Pad D: Fast Food with Drive-Thru[2]	3.390	TSF	25	22	47	28	26	54	706
Internal Capture:			-1	-1	-2	-6	-10	-16	-210
Pass-By (50% AM; 55% PM/Daily):			-12	-12	-24	-9	-9	-18	-274
Pads B, C & E: Fast Food with Drive-Thru	8.500	TSF	193	186	379	146	135	281	3,974
Internal Capture:			-4	-3	-7	-35	-57	-92	-1,302
Pass-By (50% AM; 55% PM/Daily):			-95	-95	-190	-43	-43	-86	-1,470
Restaurant Subtotal			234	189	423	125	72	197	2,340
Credit for Existing Uses			-38	-37	-75	-45	-49	-94	-1,184
Project Total			**270**	**201**	**471**	**153**	**136**	**289**	**3,160**

[1] TSF = thousand square feet; VFP = Vehicle Fueling Position

[2] Trip generation is based on existing driveway counts as this tenant is anticipated to remain the same (in the same location).

EXHIBIT 2: PROJECT TRIP DISTRIBUTION



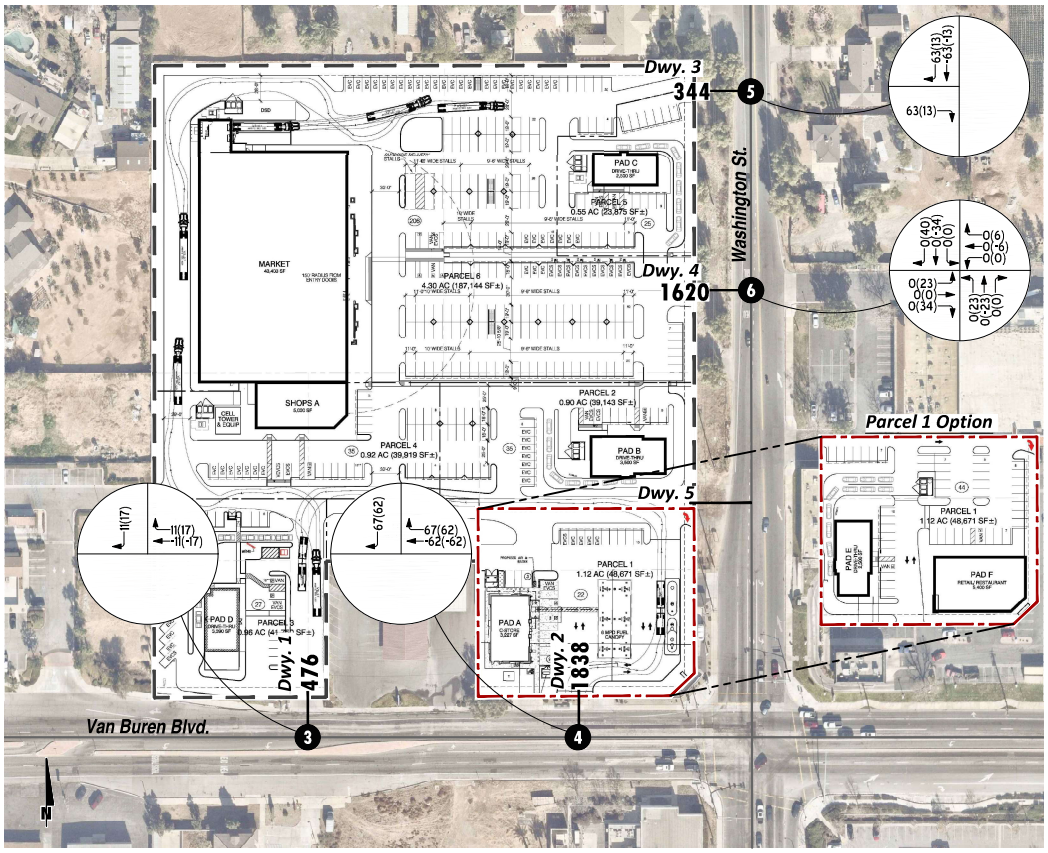
LEGEND:

10 = *Percent To/From Project*

= *Inbound Distribution*

= *Outbound Distribution*

EXHIBIT 3: BASE DEVELOPMENT CONCEPT PASS-BY REDUCTIONS



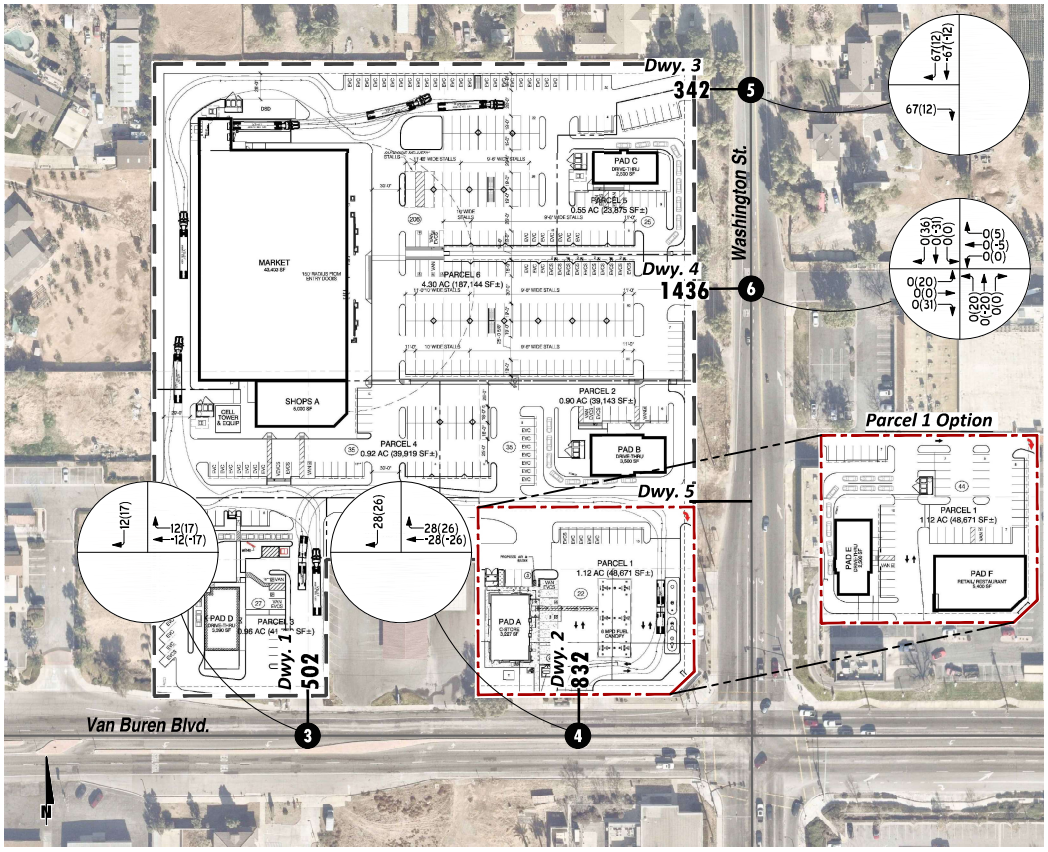
LEGEND:

0 = *Intersection Analysis Location*

00(00) = *AM(PM) Peak Hour Volume*

00 = *Average Daily Traffic (ADT)*

EXHIBIT 4: PARCEL 1 OPTION PASS-BY REDUCTIONS



LEGEND:

0 = *Intersection Analysis Location*

00(00) = *AM(PM) Peak Hour Volume*

00 = *Average Daily Traffic (ADT)*

ANALYSIS SCENARIOS

Since the proposed Project is anticipated to generate more than 100 peak hour trips and would contribute more than 50 peak hour trips to study area intersections, intersection operations analysis is proposed for the following analysis scenarios:

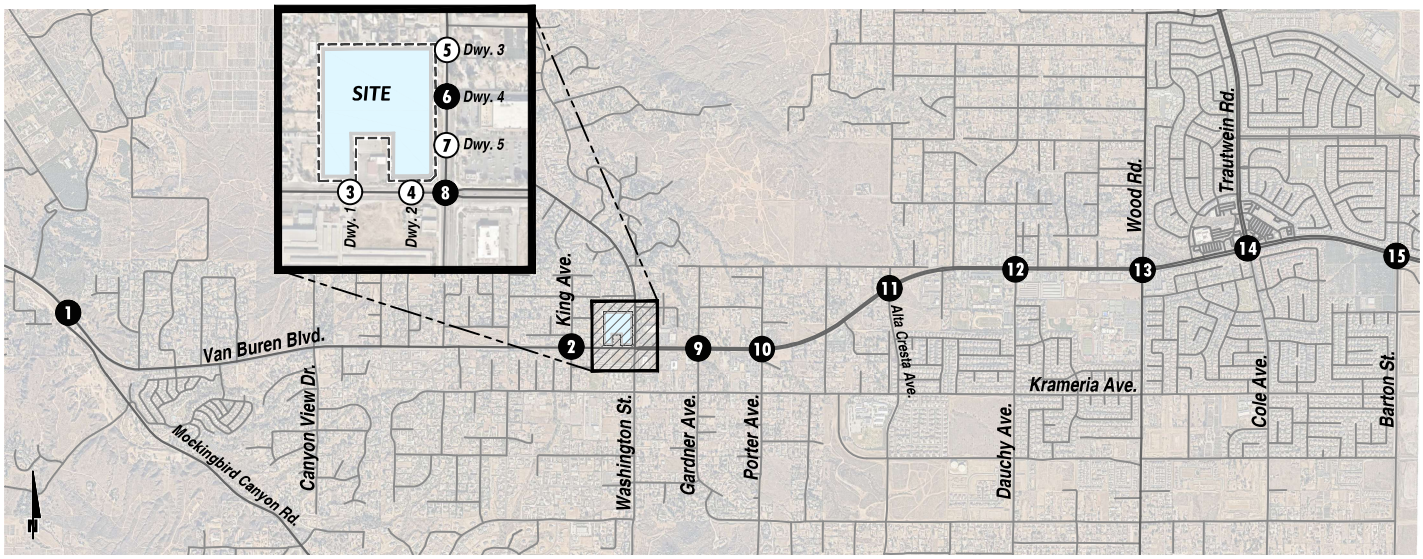
- Existing (2025) Conditions
- Existing plus Ambient Growth plus Project (EAP) (2027) Conditions
- Existing plus Ambient Growth plus Project plus Cumulative (EAPC) (2027) Conditions
- Horizon Year (2045) Without and With Project Conditions – forecasts will be derived using the RIVCOM traffic model

All study area intersections will be evaluated using the Highway Capacity Manual (HCM) 7th Edition analysis methodology. The study area that is proposed to be evaluated is listed in Table 7 and shown on Exhibit 5.

TABLE 7: LIST OF STUDY AREA INTERSECTIONS

#	Intersection	Jurisdiction
1	Van Buren Bl. & Mockingbird Canyon Rd.	County of Riverside
2	Driveway 1 & Van Buren Bl.	County of Riverside
3	Driveway 2 & Van Buren Bl.	County of Riverside
4	Washington St. & Driveway 3	County of Riverside
5	Washington St. & Driveway 4	County of Riverside
6	Washington St. & Driveway 5	County of Riverside
7	Washington St. & Van Buren Bl.	County of Riverside
8	Porter Av. & Van Buren Bl.	County of Riverside
9	Chicago Av./Alta Cresta Av. & Van Buren Bl.	County of Riverside, Riverside
10	Wood Rd. & Van Buren Bl.	Riverside
11	Trautwein Rd./Cole Av. & Van Buren Bl.	Riverside

EXHIBIT 5: STUDY AREA



LEGEND:

● = *Existing Intersection Analysis Location*

Ⓞ = *Future Intersection Analysis Location*

TRAFFIC COUNTS

New traffic counts will be conducted during a typical weekday when local schools are in session and operating on a typical bell schedule. No adjustments are proposed to the traffic counts for the baseline traffic condition with the exception of volume balancing between closely spaced intersections. Traffic counts will be conducted once the scoping agreement has been approved (or the initial study area has been reviewed).

AMBIENT GROWTH

An ambient growth rate of 2% per year is proposed for the study area intersection to approximate background growth not identified by nearby cumulative development projects. As such, a total of 4.04% will be applied to the baseline for 2027 conditions (2% per year over 2 years).

CUMULATIVE PROJECTS

It is requested that the County provide any additional current cumulative projects within the study area for inclusion in Traffic Analysis. The City of Riverside will also be contacted for a current list of cumulative projects within their jurisdiction.

SPECIAL ISSUES

The following special issues will also be addressed:

- VMT analysis will be evaluated in a separate document.
- Conduct traffic signal warrant analysis for all existing and future unsignalized study area intersections, except for intersections and driveways with movement restrictions (e.g., right-in/right-out access).
- Provide a queuing analysis for the Project driveways and site adjacent intersection. This will be used to determine the appropriate turn pocket lengths needed to accommodate peak hour queues. This queuing analysis will include the intersection of Washington Street and Van Buren Boulevard.
- Provide a queuing analysis at all signalized intersections.

If you have any questions, please contact me directly at cso@urbanxroads.com.

APPENDIX 1

COUNTY SCOPING FORM

EXHIBIT B

SCOPING AGREEMENT FOR TRAFFIC IMPACT STUDY

This letter acknowledges the Riverside County Transportation Department requirements for traffic impact analysis of the following project. The analysis must follow the Riverside County Transportation Department Traffic Study Guidelines dated December 2020.

Case No.
Related Cases-
SP No.
EIR No.
GPA No.
CZ No.
Project Name: Woodcrest Retail Center
Project Address: northwest corner of Washington St. & Van Buren Boulevard
Project Description: 61,020 square feet of retail/restaurant uses

	Consultant	Developer Representative
Name:	Urban Crossroads Inc. - Charlene So	Applied Planning - Ross Geller
Address:	1133 Camelback St. #8329	11762 De Palma Rd., 1-C 310
	Newport Beach, CA 92658	Corona, CA 92883
Telephone:	(949) 861-0177	(949) 677-7411
email:	cso@urbanxroads.com	rgeller@appliedplanning.com

A. Trip Generation Source: ITE Trip Generation Manual (11th Edition, 2021)

Current GP Land Use	RC-VLDR & CR		Proposed Land Use	CR	
Current Zoning	A-1-1/C-P-S		Proposed Zoning	C-P-S	

	Current Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips				**270**	**201**	**471**
PM Trips				**153**	**136**	**289**

Internal Trip Allowance ■ Yes ☐ No (Varies % Trip Discount)
Pass-By Trip Allowance ■ Yes ☐ No (Varies % Trip Discount)

A passby trip discount of 25% is allowed for appropriate land uses. The passby trips at adjacent study area intersections and project driveways shall be indicated on a report figure.

B. Trip Geographic Distribution:

N **32** % S **48** % E **10** % W **10** %

C. Background Traffic

Project Build-out Year: 2027 Annual Ambient Growth Rate: 2 %
Phase Year(s) No Phasing

Other area Projects to be analyzed: To be provided by County staff
Model/Forecast Methodology: Not Appplicable

URBAN CROSSROADS

D. Study Intersections: *(NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments form other agencies).* (See Exhibit 2)

1.	See attached memo	11.	
2.		12.	
3.		13.	
4.		14.	
5.		15.	
6.		16.	
7.		17.	
8.		18.	
9.		19.	
10.		20.	

E. Study Roadway Segments: *(NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments form other agencies).*

1.	None	2.	

F. Other Jurisdictional Impacts

Is this project within a City's Sphere of influence or one mile radius of City boundaries? ■ Yes ☐ No

If so, name of City jurisdiction: City of Riverside

G. Site Plan (please attach reduced copy)

H. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline) (To be filled out by Transportation Department)
(NOTE: If the traffic study states that "a traffic signal is warranted" (or "a traffic signal appears to be warranted", or similar statement) at an existing unsignalized intersection under existing conditions, 8-hour approach traffic volume information must be submitted in addition to the peak hourly turning movement counts for that intersection.

I. Existing Conditions
Traffic count data must be new or recent. Provide traffic count dates if using other than new counts.
Date of counts: New counts to be conducted once scoping agreement is approved

***NOTE* Traffic Study Submittal Form and appropriate fee must be submitted with, or prior to submittal of this form. Transportation Department staff will not process the Scoping Agreement prior to receipt of the fee.**

Recommended by:

Charlene So — 3/26/2025

Consultant's Representative — Date

Approved Scoping Agreement:

Eva Cavarrubias — 7/17/2025

Riverside County Transportation Department — Date

Scoping Agreement Revised on _____

URBAN CROSSROADS

APPENDIX 2

FARMER BOYS DRIVEWAY COUNTS

24 Hour Driveway Counts

LOCATION: Farmer Boys Driveways
16880 Van Buren Blvd
CITY: Riverside

DATE: 2/26/2025
DAY: Wednesday

AM PERIOD				PM PERIOD			
Time	Entering	Exiting	TOTAL	Time	Entering	Exiting	TOTAL
0:00	0	1	**1**	12:00	10	6	**16**
0:15	0	0	**0**	12:15	8	8	**16**
0:30	1	0	**1**	12:30	6	11	**17**
0:45	0	0	**0**	12:45	11	8	**19**
1:00	1	0	**1**	13:00	8	10	**18**
1:15	0	0	**0**	13:15	7	7	**14**
1:30	0	0	**0**	13:30	6	9	**15**
1:45	0	0	**0**	13:45	4	6	**10**
2:00	0	0	**0**	14:00	5	8	**13**
2:15	0	1	**1**	14:15	3	5	**8**
2:30	0	1	**1**	14:30	4	2	**6**
2:45	0	0	**0**	14:45	4	3	**7**
3:00	0	0	**0**	15:00	4	4	**8**
3:15	0	0	**0**	15:15	8	7	**15**
3:30	0	0	**0**	15:30	7	6	**13**
3:45	0	0	**0**	15:45	3	5	**8**
4:00	0	0	**0**	16:00	4	5	**9**
4:15	0	0	**0**	16:15	1	6	**7**
4:30	1	0	**1**	16:30	7	2	**9**
4:45	1	1	**2**	16:45	9	10	**19**
5:00	0	0	**0**	17:00	3	5	**8**
5:15	0	0	**0**	17:15	7	9	**16**
5:30	0	0	**0**	17:30	3	4	**7**
5:45	0	0	**0**	17:45	10	6	**16**
6:00	3	1	**4**	18:00	4	7	**11**
6:15	2	1	**3**	18:15	11	12	**23**
6:30	2	1	**3**	18:30	12	6	**18**
6:45	3	1	**4**	18:45	15	6	**21**
7:00	5	5	**10**	19:00	3	9	**12**
7:15	3	1	**4**	19:15	5	7	**12**
7:30	7	3	**10**	19:30	3	8	**11**
7:45	1	4	**5**	19:45	4	3	**7**
8:00	1	2	**3**	20:00	5	4	**9**
8:15	9	5	**14**	20:15	2	6	**8**
8:30	5	5	**10**	20:30	1	4	**5**
8:45	4	1	**5**	20:45	0	6	**6**
9:00	4	2	**6**	21:00	0	3	**3**
9:15	11	3	**14**	21:15	1	0	**1**
9:30	5	10	**15**	21:30	3	12	**15**
9:45	3	3	**6**	21:45	0	2	**2**
10:00	8	6	**14**	22:00	1	1	**2**
10:15	8	6	**14**	22:15	0	1	**1**
10:30	11	10	**21**	22:30	0	0	**0**
10:45	11	8	**19**	22:45	0	0	**0**
11:00	9	6	**15**	23:00	0	0	**0**
11:15	6	8	**14**	23:15	0	0	**0**
11:30	13	13	**26**	23:30	0	0	**0**
11:45	12	9	**21**	23:45	0	0	**0**
AM TOTAL	150	118	**268**	PM TOTAL	212	249	**461**
				24 HOUR TOTAL	**362**	**367**	**729**

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24 Hour Driveway Counts

LOCATION: Farmer Boys Driveways
16880 Van Buren Blvd
CITY: Riverside

DATE: 2/27/2025
DAY: Thursday

AM PERIOD				PM PERIOD			
Time	Entering	Exiting	TOTAL	Time	Entering	Exiting	TOTAL
0:00	0	0	**0**	12:00	6	7	**13**
0:15	1	0	**1**	12:15	10	10	**20**
0:30	0	1	**1**	12:30	7	11	**18**
0:45	0	0	**0**	12:45	3	4	**7**
1:00	0	0	**0**	13:00	4	6	**10**
1:15	0	0	**0**	13:15	11	8	**19**
1:30	0	0	**0**	13:30	7	9	**16**
1:45	0	0	**0**	13:45	9	5	**14**
2:00	0	0	**0**	14:00	4	5	**9**
2:15	0	0	**0**	14:15	5	9	**14**
2:30	0	0	**0**	14:30	3	4	**7**
2:45	0	0	**0**	14:45	4	2	**6**
3:00	1	0	**1**	15:00	4	2	**6**
3:15	0	0	**0**	15:15	3	10	**13**
3:30	0	0	**0**	15:30	6	2	**8**
3:45	0	0	**0**	15:45	4	2	**6**
4:00	0	0	**0**	16:00	4	5	**9**
4:15	0	0	**0**	16:15	5	4	**9**
4:30	1	0	**1**	16:30	10	6	**16**
4:45	1	0	**1**	16:45	8	9	**17**
5:00	1	1	**2**	17:00	6	7	**13**
5:15	0	0	**0**	17:15	5	4	**9**
5:30	1	0	**1**	17:30	4	7	**11**
5:45	0	0	**0**	17:45	7	5	**12**
6:00	2	1	**3**	18:00	6	6	**12**
6:15	5	2	**7**	18:15	10	8	**18**
6:30	1	2	**3**	18:30	8	9	**17**
6:45	6	3	**9**	18:45	3	4	**7**
7:00	3	3	**6**	19:00	4	4	**8**
7:15	6	3	**9**	19:15	5	7	**12**
7:30	4	5	**9**	19:30	4	3	**7**
7:45	6	4	**10**	19:45	4	5	**9**
8:00	5	7	**12**	20:00	3	2	**5**
8:15	12	8	**20**	20:15	2	3	**5**
8:30	7	13	**20**	20:30	3	7	**10**
8:45	7	3	**10**	20:45	1	3	**4**
9:00	5	6	**11**	21:00	2	3	**5**
9:15	3	2	**5**	21:15	1	3	**4**
9:30	8	4	**12**	21:30	2	2	**4**
9:45	5	3	**8**	21:45	1	2	**3**
10:00	6	8	**14**	22:00	0	0	**0**
10:15	4	6	**10**	22:15	2	4	**6**
10:30	6	7	**13**	22:30	1	0	**1**
10:45	4	5	**9**	22:45	0	0	**0**
11:00	8	4	**12**	23:00	0	0	**0**
11:15	8	8	**16**	23:15	0	1	**1**
11:30	7	4	**11**	23:30	0	0	**0**
11:45	6	8	**14**	23:45	0	0	**0**
AM TOTAL	140	121	**261**	PM TOTAL	201	219	**420**
				24 HOUR TOTAL	**341**	**340**	**681**

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APPENDIX 3

REMAINING EXISTING USES DRIVEWAY COUNTS

24 Hour Driveway Counts

LOCATION: Remaining Existing Uses

CITY: Riverside

DATE: 2/26/2025

DAY: Wednesday

	AM PERIOD				PM PERIOD			
Time	Entering	Exiting	TOTAL	Time	Entering	Exiting	TOTAL
0:00	2	4	**6**	12:00	9	8	**17**
0:15	1	1	**2**	12:15	10	10	**20**
0:30	0	1	**1**	12:30	11	10	**21**
0:45	0	0	**0**	12:45	15	14	**29**
1:00	1	1	**2**	13:00	15	16	**31**
1:15	0	0	**0**	13:15	11	17	**28**
1:30	1	1	**2**	13:30	11	10	**21**
1:45	0	0	**0**	13:45	5	6	**11**
2:00	2	2	**4**	14:00	6	5	**11**
2:15	1	1	**2**	14:15	7	5	**12**
2:30	1	0	**1**	14:30	7	11	**18**
2:45	0	1	**1**	14:45	10	8	**18**
3:00	0	0	**0**	15:00	8	8	**16**
3:15	0	0	**0**	15:15	4	6	**10**
3:30	0	0	**0**	15:30	12	9	**21**
3:45	2	0	**2**	15:45	11	6	**17**
4:00	3	4	**7**	16:00	9	14	**23**
4:15	1	1	**2**	16:15	13	13	**26**
4:30	2	1	**3**	16:30	8	8	**16**
4:45	0	2	**2**	16:45	12	13	**25**
5:00	5	3	**8**	17:00	9	7	**16**
5:15	3	4	**7**	17:15	10	10	**20**
5:30	4	4	**8**	17:30	11	13	**24**
5:45	2	1	**3**	17:45	11	13	**24**
6:00	7	7	**14**	18:00	14	12	**26**
6:15	11	11	**22**	18:15	6	10	**16**
6:30	4	8	**12**	18:30	10	11	**21**
6:45	6	5	**11**	18:45	12	9	**21**
7:00	10	5	**15**	19:00	10	13	**23**
7:15	5	8	**13**	19:15	8	9	**17**
7:30	2	2	**4**	19:30	11	9	**20**
7:45	13	11	**24**	19:45	2	8	**10**
8:00	5	7	**12**	20:00	6	4	**10**
8:15	11	10	**21**	20:15	4	6	**10**
8:30	10	10	**20**	20:30	2	3	**5**
8:45	6	7	**13**	20:45	3	3	**6**
9:00	7	6	**13**	21:00	4	4	**8**
9:15	11	3	**14**	21:15	2	5	**7**
9:30	5	8	**13**	21:30	8	5	**13**
9:45	7	6	**13**	21:45	5	6	**11**
10:00	9	11	**20**	22:00	1	3	**4**
10:15	9	6	**15**	22:15	2	0	**2**
10:30	7	6	**13**	22:30	2	2	**4**
10:45	10	9	**19**	22:45	3	5	**8**
11:00	9	8	**17**	23:00	5	5	**10**
11:15	10	9	**19**	23:15	4	3	**7**
11:30	8	10	**18**	23:30	3	2	**5**
11:45	11	9	**20**	23:45	3	4	**7**
AM TOTAL	224	214	**438**	PM TOTAL	365	381	**746**
				24 HOUR TOTAL	**589**	**595**	**1184**

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24 Hour Driveway Counts

LOCATION: Remaining Existing Uses

CITY: Riverside

DATE: 2/27/2025

DAY: Thursday

AM PERIOD				PM PERIOD			
Time	Entering	Exiting	TOTAL	Time	Entering	Exiting	TOTAL
0:00	3	3	**6**	12:00	10	10	**20**
0:15	1	2	**3**	12:15	15	12	**27**
0:30	3	2	**5**	12:30	16	12	**28**
0:45	1	1	**2**	12:45	5	15	**20**
1:00	0	1	**1**	13:00	16	13	**29**
1:15	1	0	**1**	13:15	7	10	**17**
1:30	2	2	**4**	13:30	8	6	**14**
1:45	0	1	**1**	13:45	5	9	**14**
2:00	0	0	**0**	14:00	7	10	**17**
2:15	1	0	**1**	14:15	11	6	**17**
2:30	0	1	**1**	14:30	10	11	**21**
2:45	0	0	**0**	14:45	13	14	**27**
3:00	1	1	**2**	15:00	12	12	**24**
3:15	0	0	**0**	15:15	8	9	**17**
3:30	1	1	**2**	15:30	7	9	**16**
3:45	1	0	**1**	15:45	12	10	**22**
4:00	1	2	**3**	16:00	10	4	**14**
4:15	0	0	**0**	16:15	10	15	**25**
4:30	1	0	**1**	16:30	15	10	**25**
4:45	1	2	**3**	16:45	10	14	**24**
5:00	8	6	**14**	17:00	12	10	**22**
5:15	2	4	**6**	17:15	10	12	**22**
5:30	4	2	**6**	17:30	8	9	**17**
5:45	3	4	**7**	17:45	11	10	**21**
6:00	5	4	**9**	18:00	6	6	**12**
6:15	6	6	**12**	18:15	11	6	**17**
6:30	4	3	**7**	18:30	6	14	**20**
6:45	4	6	**10**	18:45	8	7	**15**
7:00	8	6	**14**	19:00	10	11	**21**
7:15	4	2	**6**	19:15	8	10	**18**
7:30	9	6	**15**	19:30	12	7	**19**
7:45	10	8	**18**	19:45	8	7	**15**
8:00	9	13	**22**	20:00	2	9	**11**
8:15	5	5	**10**	20:15	4	5	**9**
8:30	10	5	**15**	20:30	4	3	**7**
8:45	12	13	**25**	20:45	3	2	**5**
9:00	8	9	**17**	21:00	3	3	**6**
9:15	7	7	**14**	21:15	3	5	**8**
9:30	7	6	**13**	21:30	4	4	**8**
9:45	4	5	**9**	21:45	1	2	**3**
10:00	10	7	**17**	22:00	4	3	**7**
10:15	7	9	**16**	22:15	5	5	**10**
10:30	7	6	**13**	22:30	6	3	**9**
10:45	10	11	**21**	22:45	2	3	**5**
11:00	12	12	**24**	23:00	2	5	**7**
11:15	10	9	**19**	23:15	2	2	**4**
11:30	13	11	**24**	23:30	5	2	**7**
11:45	9	5	**14**	23:45	1	4	**5**
AM TOTAL	225	209	**434**	PM TOTAL	368	380	**748**
				24 HOUR TOTAL	**593**	**589**	**1182**

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APPENDIX 4

BASE DEVELOPMENT CONCEPT INTERNAL CAPTURE WORKSHEETS

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Woodcrest Retail	**Organization:**	Urban Crossroads Inc.
Project Location:	Riverside	**Performed By:**	CS
Scenario Description:	Primary	**Date:**	2/25/2025
Analysis Year:		**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail				322	173	149
Restaurant				423	225	198
Cinema/Entertainment				0		
Residential				0		
Hotel				0		
All Other Land Uses[2]				0		
Total				745	398	347

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		19	0	0	0
Restaurant	0	14		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	745	398	347
Internal Capture Percentage	9%	8%	10%
External Vehicle-Trips[3]	679	365	314
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	8%	13%
Restaurant	8%	7%
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Woodcrest Retail	**Organization:**	Urban Crossroads Inc.
Project Location:	Riverside	**Performed By:**	CS
Scenario Description:	Primary	**Date:**	2/25/2025
Analysis Year:		**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail				626	313	313
Restaurant				336	173	163
Cinema/Entertainment				0		
Residential				0		
Hotel				0		
All Other Land Uses[2]				0		
Total				962	486	476

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		50	0	0	0
Restaurant	0	67		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	962	486	476
Internal Capture Percentage	24%	24%	25%
External Vehicle-Trips[3]	728	369	359
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	21%	16%
Restaurant	29%	41%
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

APPENDIX 5

PARCEL 1 OPTION INTERNAL CAPTURE WORKSHEETS

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Woodcrest Retail	**Organization:**	Urban Crossroads Inc.
Project Location:	Riverside	**Performed By:**	CS
Scenario Description:	Parcel 1 Alternative	**Date:**	2/25/2025
Analysis Year:		**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail				136	80	56
Restaurant				650	348	302
Cinema/Entertainment				0		
Residential				0		
Hotel				0		
All Other Land Uses[2]				0		
Total				786	428	358

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		7	0	0	0
Restaurant	0	6		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	786	428	358
Internal Capture Percentage	3%	3%	4%
External Vehicle-Trips[3]	760	415	345
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	8%	13%
Restaurant	2%	2%
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Woodcrest Retail	**Organization:**	Urban Crossroads Inc.
Project Location:	Riverside	**Performed By:**	CS
Scenario Description:	Parcel 1 Alternative	**Date:**	2/25/2025
Analysis Year:		**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail				422	211	211
Restaurant				507	260	247
Cinema/Entertainment				0		
Residential				0		
Hotel				0		
All Other Land Uses[2]				0		
Total				929	471	458

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		61	0	0	0
Restaurant	0	101		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	929	471	458
Internal Capture Percentage	35%	34%	35%
External Vehicle-Trips[3]	605	309	296
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	48%	29%
Restaurant	23%	41%
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

APPENDIX 6

TRAFFIC COUNTS

Counts Unlimited, Inc.
PO Box 1178
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(951) 268-6268

City of Riverside
N/S: Washington Street
E/W: Driveway 4
Weather: Clear

File Name : 06_RIV_Wash_DW4 AM
Site Code : 05125515
Start Date : 5/8/2025
Page No : 1

Groups Printed- Total Volume

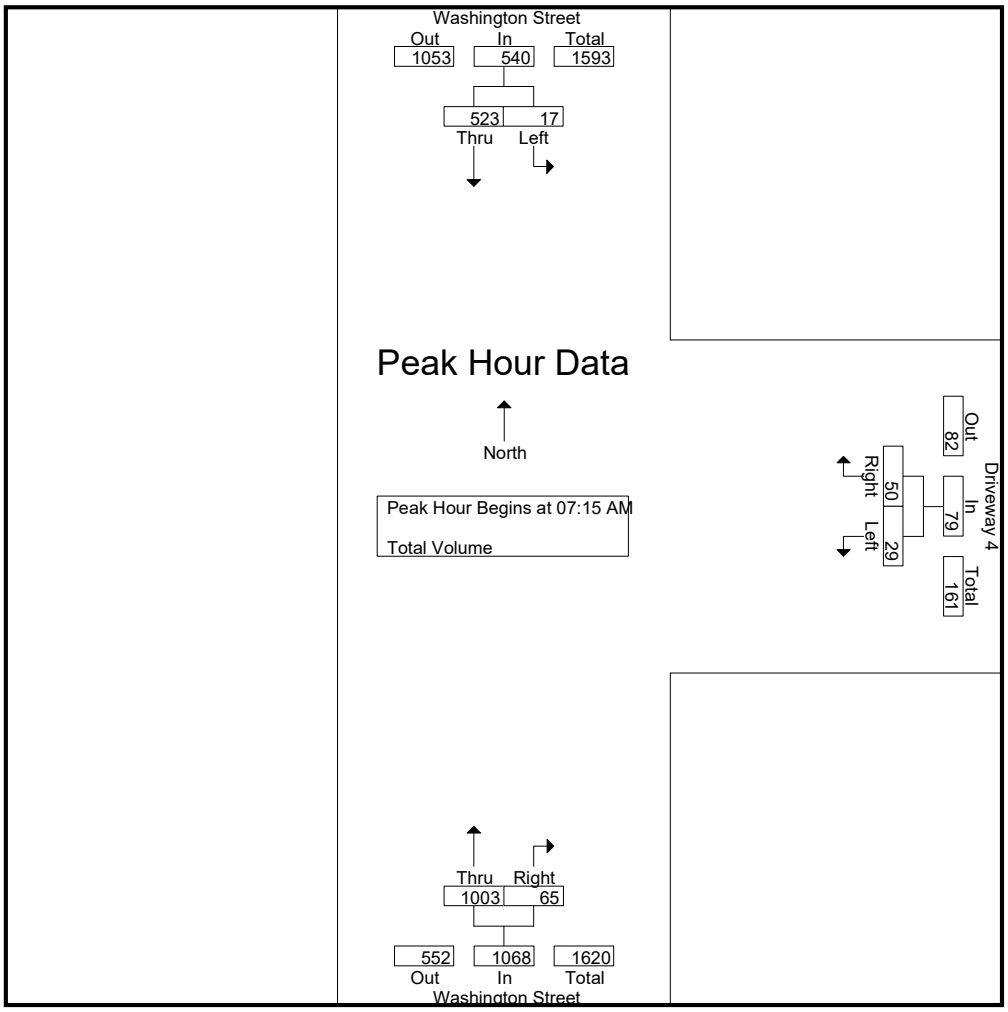
	Washington Street Southbound			Driveway 4 Westbound			Washington Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	7	89	96	2	7	9	226	6	232	337
07:15 AM	3	106	109	5	10	15	289	10	299	423
07:30 AM	5	116	121	5	13	18	259	16	275	414
07:45 AM	5	161	166	9	15	24	207	18	225	415
Total	20	472	492	21	45	66	981	50	1031	1589
08:00 AM	4	140	144	10	12	22	248	21	269	435
08:15 AM	6	121	127	15	16	31	198	15	213	371
08:30 AM	7	82	89	4	10	14	200	22	222	325
08:45 AM	10	91	101	10	9	19	179	22	201	321
Total	27	434	461	39	47	86	825	80	905	1452
Grand Total	47	906	953	60	92	152	1806	130	1936	3041
Apprch %	4.9	95.1		39.5	60.5		93.3	6.7		
Total %	1.5	29.8	31.3	2	3	5	59.4	4.3	63.7	

	Washington Street Southbound			Driveway 4 Westbound			Washington Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	3	106	109	5	10	15	**289**	10	**299**	423
07:30 AM	**5**	116	121	5	13	18	259	16	275	414
07:45 AM	5	**161**	**166**	9	**15**	**24**	207	18	225	415
08:00 AM	4	140	144	**10**	12	22	248	**21**	269	**435**
Total Volume	17	523	540	29	50	79	1003	65	1068	1687
% App. Total	3.1	96.9		36.7	63.3		93.9	6.1		
PHF	.850	.812	.813	.725	.833	.823	.868	.774	.893	.970

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City of Riverside
N/S: Washington Street
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File Name : 06_RIV_Wash_DW4 AM
Site Code : 05125515
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:15 AM		
+0 mins.	5	116	121	5	13	18	**289**	10	**299**
+15 mins.	5	**161**	**166**	9	15	24	259	16	275
+30 mins.	4	140	144	10	12	22	207	18	225
+45 mins.	**6**	121	127	**15**	**16**	**31**	248	**21**	269
Total Volume	20	538	558	39	56	95	1003	65	1068
% App. Total	3.6	96.4		41.1	58.9		93.9	6.1	
PHF	.833	.835	.840	.650	.875	.766	.868	.774	.893

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City of Riverside
N/S: Washington Street
E/W: Driveway 4
Weather: Clear

File Name : 06_RIV_Wash_DW4 PM
Site Code : 05125515
Start Date : 5/8/2025
Page No : 1

Groups Printed- Total Volume

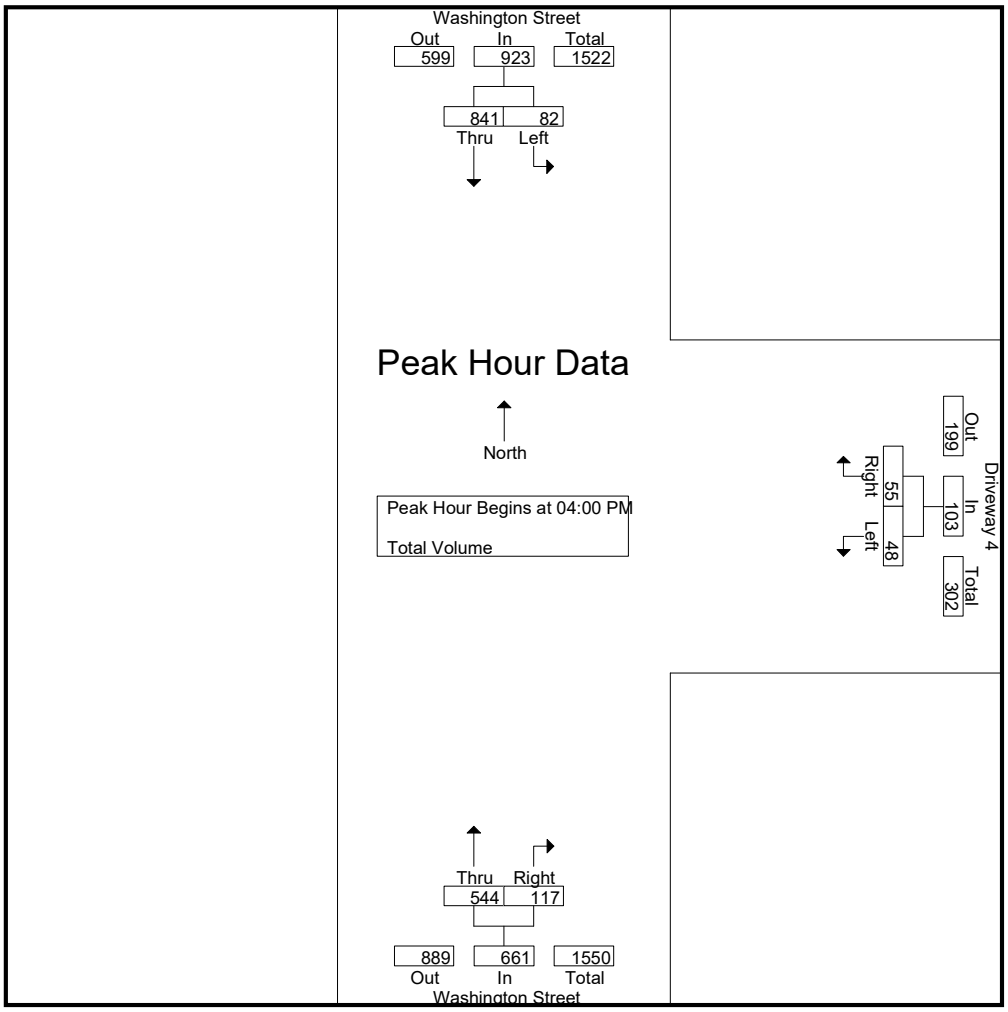
	Washington Street Southbound			Driveway 4 Westbound			Washington Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	24	235	259	12	11	23	145	36	181	463
04:15 PM	18	213	231	14	17	31	130	19	149	411
04:30 PM	15	192	207	11	17	28	143	23	166	401
04:45 PM	25	201	226	11	10	21	126	39	165	412
Total	82	841	923	48	55	103	544	117	661	1687
05:00 PM	14	207	221	17	12	29	130	33	163	413
05:15 PM	13	223	236	11	11	22	143	29	172	430
05:30 PM	13	218	231	14	10	24	131	31	162	417
05:45 PM	14	197	211	13	10	23	116	26	142	376
Total	54	845	899	55	43	98	520	119	639	1636
Grand Total	136	1686	1822	103	98	201	1064	236	1300	3323
Apprch %	7.5	92.5		51.2	48.8		81.8	18.2		
Total %	4.1	50.7	54.8	3.1	2.9	6	32	7.1	39.1	

	Washington Street Southbound			Driveway 4 Westbound			Washington Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	24	**235**	**259**	12	11	23	**145**	36	**181**	**463**
04:15 PM	18	213	231	**14**	**17**	**31**	130	19	149	411
04:30 PM	15	192	207	11	17	28	143	23	166	401
04:45 PM	**25**	201	226	11	10	21	126	**39**	165	412
Total Volume	82	841	923	48	55	103	544	117	661	1687
% App. Total	8.9	91.1		46.6	53.4		82.3	17.7		
PHF	.820	.895	.891	.857	.809	.831	.938	.750	.913	.911

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City of Riverside
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Site Code : 05125515
Start Date : 5/8/2025
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:15 PM			04:30 PM		
+0 mins.	24	**235**	**259**	14	**17**	**31**	**143**	23	166
+15 mins.	18	213	231	11	17	28	126	**39**	165
+30 mins.	15	192	207	11	10	21	130	33	163
+45 mins.	**25**	201	226	**17**	12	29	143	29	**172**
Total Volume	82	841	923	53	56	109	542	124	666
% App. Total	8.9	91.1		48.6	51.4		81.4	18.6	
PHF	.820	.895	.891	.779	.824	.879	.948	.795	.968

Location: Riverside
N/S: Washington Street
E/W: Driveway 4

Date: 5/8/2025
Day: Thursday

PEDESTRIANS

	North Leg Washington Street	East Leg Driveway 4	South Leg Washington Street	West Leg Dead End	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	3	0	0	3
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	2	2
8:15 AM	0	0	2	2	4
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	3	2	4	9

	North Leg Washington Street	East Leg Driveway 4	South Leg Washington Street	West Leg Dead End	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	1	0	0	1	2
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	0	0	1	2

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Location: Riverside
N/S: Washington Street
E/W: Driveway 4

Date: 5/8/2025
Day: Thursday

BICYCLES

	Southbound Washington Street			Westbound Driveway 4			Northbound Washington Street			Eastbound Dead End			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	1	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	1	0	0	0	0	0	0	1	0	0	0	2

	Southbound Washington Street			Westbound Driveway 4			Northbound Washington Street			Eastbound Dead End			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	0	1	0	0	0	0	2

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City of Riverside
N/S: Washington Street
E/W: Van Buren Boulevard
Weather: Clear

File Name : 08_RIV_Wash_VB AM
Site Code : 05125515
Start Date : 5/8/2025
Page No : 1

Groups Printed- Total Volume

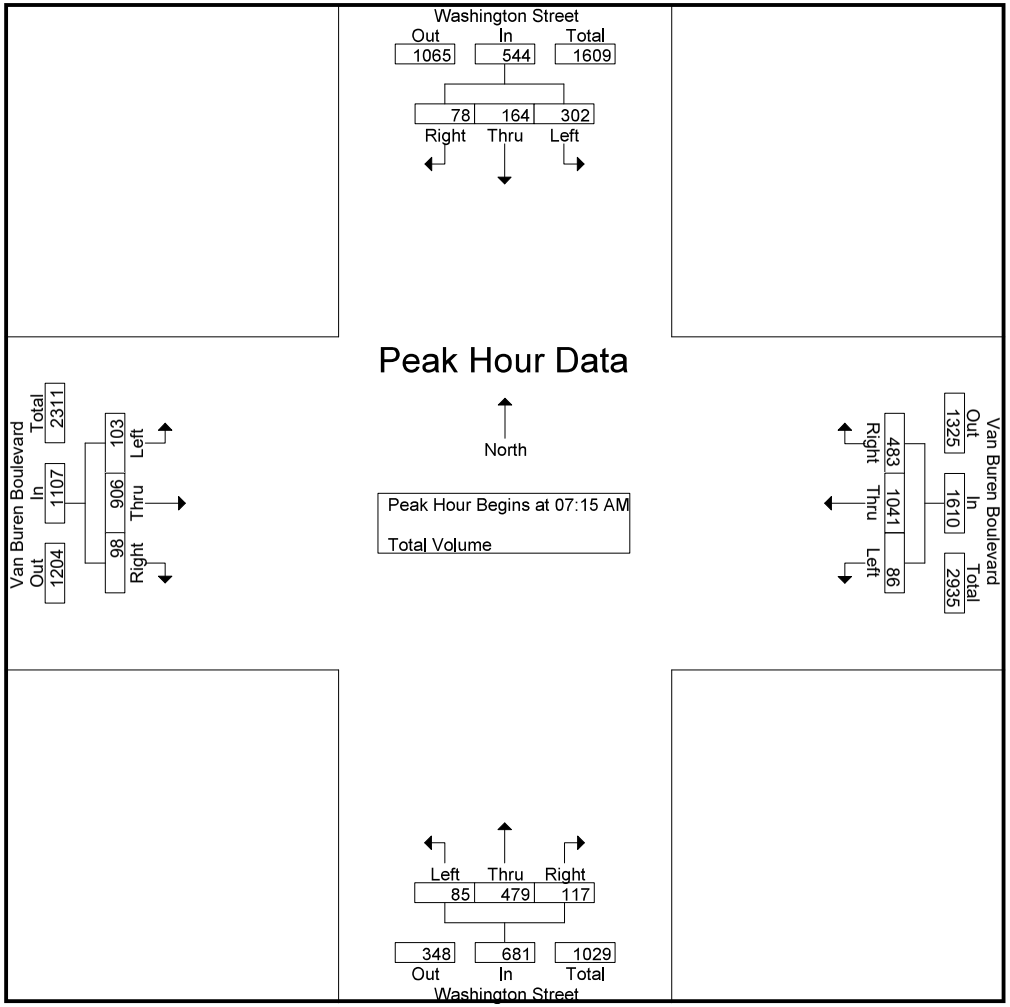
	Washington Street Southbound					Van Buren Boulevard Westbound					Washington Street Northbound					Van Buren Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	51	32	15	10	98	8	254	107	34	369	8	101	23	17	132	22	182	5	1	209	62	808	870
07:15 AM	59	37	17	14	113	15	243	138	47	396	15	132	22	15	169	28	180	9	2	217	78	895	973
07:30 AM	62	32	22	14	116	28	262	139	55	429	29	119	29	14	177	20	241	26	8	287	91	1009	1100
07:45 AM	95	59	18	11	172	22	273	89	41	384	22	107	41	15	170	25	278	34	12	337	79	1063	1142
Total	267	160	72	49	499	73	1032	473	177	1578	74	459	115	61	648	95	881	74	23	1050	310	3775	4085
08:00 AM	86	36	21	15	143	21	263	117	45	401	19	121	25	15	165	30	207	29	14	266	89	975	1064
08:15 AM	67	39	27	16	133	12	270	84	32	366	13	96	22	17	131	34	167	10	7	211	72	841	913
08:30 AM	50	28	16	9	94	12	186	74	29	272	13	115	19	14	147	32	138	9	3	179	55	692	747
08:45 AM	45	41	14	7	100	9	178	73	29	260	12	112	27	15	151	15	143	6	2	164	53	675	728
Total	248	144	78	47	470	54	897	348	135	1299	57	444	93	61	594	111	655	54	26	820	269	3183	3452
Grand Total	515	304	150	96	969	127	1929	821	312	2877	131	903	208	122	1242	206	1536	128	49	1870	579	6958	7537
Apprch %	53.1	31.4	15.5			4.4	67	28.5			10.5	72.7	16.7			11	82.1	6.8					
Total %	7.4	4.4	2.2		13.9	1.8	27.7	11.8		41.3	1.9	13	3		17.8	3	22.1	1.8		26.9	7.7	92.3	

	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren 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 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	59	37	17	113	15	243	138	396	15	**132**	22	169	28	180	9	217	895
07:30 AM	62	32	**22**	116	**28**	262	**139**	**429**	**29**	119	29	**177**	20	241	26	287	1009
07:45 AM	**95**	**59**	18	**172**	22	**273**	89	384	22	107	**41**	170	25	**278**	**34**	**337**	**1063**
08:00 AM	86	36	21	143	21	263	117	401	19	121	25	165	**30**	207	29	266	975
Total Volume	302	164	78	544	86	1041	483	1610	85	479	117	681	103	906	98	1107	3942
% App. Total	55.5	30.1	14.3		5.3	64.7	30		12.5	70.3	17.2		9.3	81.8	8.9		
PHF	.795	.695	.886	.791	.768	.953	.869	.938	.733	.907	.713	.962	.858	.815	.721	.821	.927

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City of Riverside
N/S: Washington Street
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File Name : 08_RIV_Wash_VB AM
Site Code : 05125515
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	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren 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 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:30 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	62	32	22	116	15	243	138	396	15	**132**	22	169	28	180	9	217	
+15 mins.	**95**	**59**	18	**172**	**28**	262	**139**	**429**	**29**	119	29	**177**	20	241	26	287	
+30 mins.	86	36	21	143	22	**273**	89	384	22	107	**41**	170	25	**278**	**34**	**337**	
+45 mins.	67	39	**27**	133	21	263	117	401	19	121	25	165	**30**	207	29	266	
Total Volume	310	166	88	564	86	1041	483	1610	85	479	117	681	103	906	98	1107	
% App. Total	55	29.4	15.6		5.3	64.7	30		12.5	70.3	17.2		9.3	81.8	8.9		
PHF	.816	.703	.815	.820	.768	.953	.869	.938	.733	.907	.713	.962	.858	.815	.721	.821	

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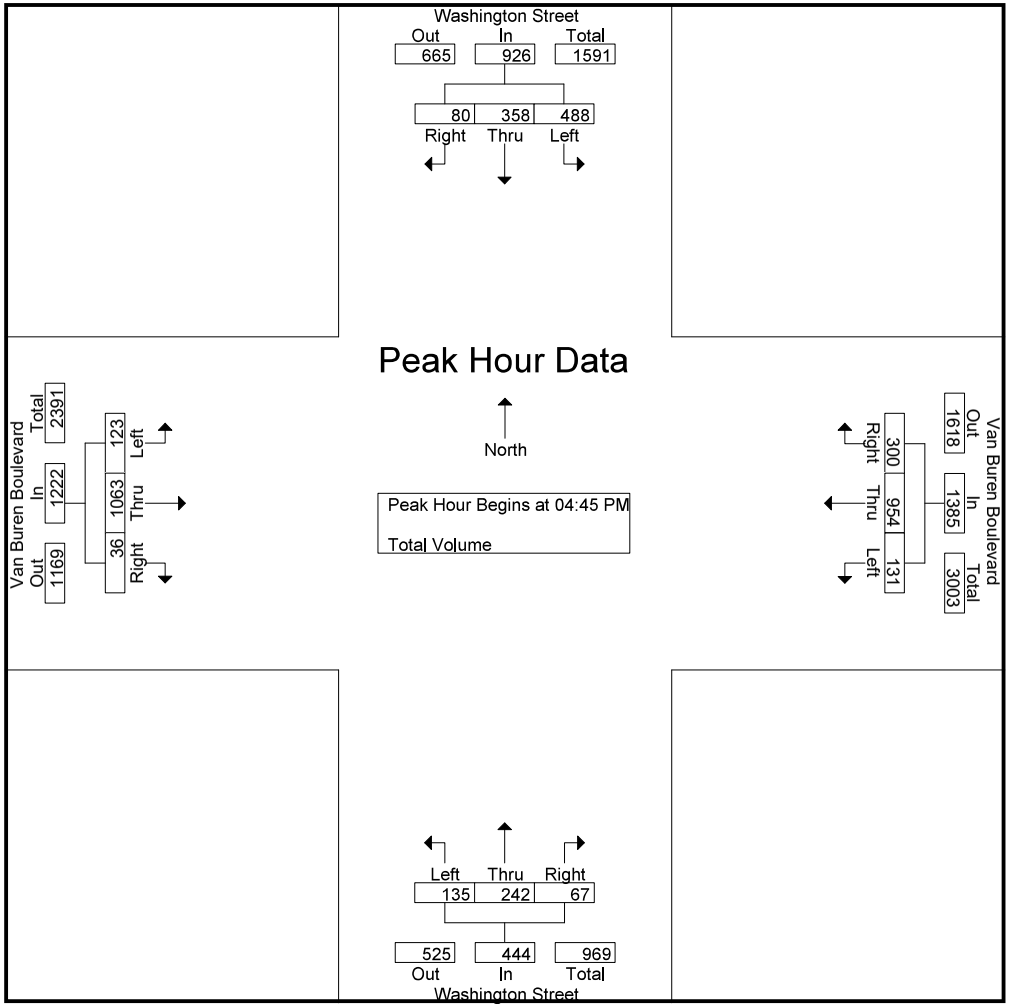
	Washington Street Southbound					Van Buren Boulevard Westbound					Washington Street Northbound					Van Buren Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	116	98	30	19	244	31	224	73	17	328	33	75	17	12	125	28	262	14	7	304	55	1001	1056
04:15 PM	116	77	21	11	214	26	237	71	13	334	25	48	23	5	96	35	292	12	5	339	34	983	1017
04:30 PM	103	74	19	9	196	38	253	74	14	365	37	61	16	11	114	29	255	11	2	295	36	970	1006
04:45 PM	119	93	26	16	238	38	229	71	19	338	39	57	15	11	111	37	250	8	4	295	50	982	1032
Total	454	342	96	55	892	133	943	289	63	1365	134	241	71	39	446	129	1059	45	18	1233	175	3936	4111
05:00 PM	100	91	14	7	205	32	222	81	16	335	32	58	18	7	108	30	290	7	4	327	34	975	1009
05:15 PM	136	82	23	13	241	32	249	86	29	367	35	55	17	7	107	29	271	5	0	305	49	1020	1069
05:30 PM	133	92	17	13	242	29	254	62	30	345	29	72	17	11	118	27	252	16	9	295	63	1000	1063
05:45 PM	93	99	16	8	208	39	244	55	14	338	38	57	18	11	113	32	264	13	5	309	38	968	1006
Total	462	364	70	41	896	132	969	284	89	1385	134	242	70	36	446	118	1077	41	18	1236	184	3963	4147
Grand Total	916	706	166	96	1788	265	1912	573	152	2750	268	483	141	75	892	247	2136	86	36	2469	359	7899	8258
Apprch %	51.2	39.5	9.3			9.6	69.5	20.8			30	54.1	15.8			10	86.5	3.5					
Total %	11.6	8.9	2.1		22.6	3.4	24.2	7.3		34.8	3.4	6.1	1.8		11.3	3.1	27	1.1		31.3	4.3	95.7	

	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren 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 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	119	**93**	**26**	238	**38**	229	71	338	**39**	57	15	111	**37**	250	8	295	982
05:00 PM	100	91	14	205	32	222	81	335	32	58	**18**	108	30	**290**	7	**327**	975
05:15 PM	**136**	82	23	241	32	249	**86**	**367**	35	55	17	107	29	271	5	305	**1020**
05:30 PM	133	92	17	**242**	29	**254**	62	345	29	**72**	17	**118**	27	252	**16**	295	1000
Total Volume	488	358	80	926	131	954	300	1385	135	242	67	444	123	1063	36	1222	3977
% App. Total	52.7	38.7	8.6		9.5	68.9	21.7		30.4	54.5	15.1		10.1	87	2.9		
PHF	.897	.962	.769	.957	.862	.939	.872	.943	.865	.840	.931	.941	.831	.916	.563	.934	.975

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E/W: Van Buren Boulevard
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File Name : 08_RIV_Wash_VB PM
Site Code : 05125515
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E/W: Van Buren Boulevard
Weather: Clear

File Name : 08_RIV_Wash_VB PM
Site Code : 05125515
Start Date : 5/8/2025

	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren 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 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:30 PM				04:00 PM				04:15 PM				
+0 mins.	119	**93**	**26**	238	**38**	**253**	74	365	33	**75**	17	**125**	35	**292**	**12**	**339**	
+15 mins.	100	91	14	205	38	229	71	338	25	48	**23**	96	29	255	11	295	
+30 mins.	**136**	82	23	241	32	222	81	335	37	61	16	114	**37**	250	8	295	
+45 mins.	133	92	17	**242**	32	249	**86**	**367**	**39**	57	15	111	30	290	7	327	
Total Volume	488	358	80	926	140	953	312	1405	134	241	71	446	131	1087	38	1256	
% App. Total	52.7	38.7	8.6		10	67.8	22.2		30	54	15.9		10.4	86.5	3		
PHF	.897	.962	.769	.957	.921	.942	.907	.957	.859	.803	.772	.892	.885	.931	.792	.926	

Location: Riverside
N/S: Washington Street
E/W: Van Buren Boulevard

Date: 5/8/2025
Day: Thursday

PEDESTRIANS

	North Leg Washington Street Pedestrians	East Leg Van Buren Boulevard Pedestrians	South Leg Washington Street Pedestrians	West Leg Van Buren Boulevard Pedestrians	
7:00 AM	3	0	0	3	6
7:15 AM	0	2	0	0	2
7:30 AM	1	2	2	5	10
7:45 AM	2	2	2	1	7
8:00 AM	0	0	0	3	3
8:15 AM	2	1	3	1	7
8:30 AM	1	2	0	0	3
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	9	9	7	13	38

	North Leg Washington Street Pedestrians	East Leg Van Buren Boulevard Pedestrians	South Leg Washington Street Pedestrians	West Leg Van Buren Boulevard Pedestrians	
4:00 PM	3	1	0	0	4
4:15 PM	1	0	0	0	1
4:30 PM	1	0	1	2	4
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	1	1	0	1	3
5:30 PM	0	0	0	1	1
5:45 PM	0	2	0	1	3
TOTAL VOLUMES:	6	4	1	5	16

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951-268-6268

Location: Riverside
N/S: Washington Street
E/W: Van Buren Boulevard

Date: 5/8/2025
Day: Thursday

BICYCLES

	Southbound Washington Street			Westbound Van Buren Boulevard			Northbound Washington Street			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Washington Street			Westbound Van Buren Boulevard			Northbound Washington Street			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

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APPENDIX 1.2:

SITE ADJACENT QUEUES

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Intersection: 3: Van Buren Bl. & Driveway 1

Movement	EB	EB	WB	WB	SB
Directions Served	T	T	T	R	R
Maximum Queue (ft)	796	802	28	6	57
Average Queue (ft)	780	783	1	0	22
95th Queue (ft)	791	794	12	4	48
Link Distance (ft)	773	773	244	244	134
Upstream Blk Time (%)	25	29			
Queuing Penalty (veh)	231	266			
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 4: Van Buren Bl. & Driveway 2

Movement	EB	EB	EB	WB	WB	SB
Directions Served	T	T	T	T	TR	R
Maximum Queue (ft)	278	291	253	10	11	67
Average Queue (ft)	252	256	222	0	0	31
95th Queue (ft)	265	275	299	7	8	59
Link Distance (ft)	244	244	244	108	108	159
Upstream Blk Time (%)	66	54	7			
Queuing Penalty (veh)	352	288	39			
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 5: Washington St & Driveway 3

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	244	68	336
Average Queue (ft)	219	3	305
95th Queue (ft)	242	34	319
Link Distance (ft)	214	167	287
Upstream Blk Time (%)	99	0	72
Queuing Penalty (veh)	0	0	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Washington St & Driveway 4

Movement	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	T	R	LT	T	TR
Maximum Queue (ft)	146	141	180	199	56	192	169	175
Average Queue (ft)	52	54	32	183	21	180	82	102
95th Queue (ft)	105	110	101	194	47	191	160	172
Link Distance (ft)	216	169		181	181	167	167	167
Upstream Blk Time (%)		0	0	17		65	4	4
Queuing Penalty (veh)		0	0	126		162	9	10
Storage Bay Dist (ft)			170					
Storage Blk Time (%)			0	19				
Queuing Penalty (veh)			0	27				

Intersection: 7: Washington St & Driveway 5

Movement	EB	NB	NB	SB	SB	SB
Directions Served	R	T	T	T	T	T
Maximum Queue (ft)	26	176	158	128	17	12
Average Queue (ft)	6	158	12	36	1	1
95th Queue (ft)	22	184	79	99	9	8
Link Distance (ft)	196	159	159	181	181	181
Upstream Blk Time (%)		10	0	0		
Queuing Penalty (veh)		115	3	0		
Storage Bay Dist (ft)						
Storage Blk Time (%)						0
Queuing Penalty (veh)						0

Intersection: 8: Washington St & Van Buren Bl.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	B40	B40	B40
Directions Served	L	T	T	TR	L	T	T	T	R	T	T	T
Maximum Queue (ft)	107	178	165	145	450	659	670	670	365	575	604	616
Average Queue (ft)	99	152	128	93	352	604	608	608	362	299	321	422
95th Queue (ft)	121	184	156	137	590	731	723	746	392	700	719	802
Link Distance (ft)		108	108	108		565	565	565		593	593	593
Upstream Blk Time (%)	45	79	64	18		52	58	53		4	2	9
Queuing Penalty (veh)	0	421	340	95		416	468	429		31	15	74
Storage Bay Dist (ft)	285				350				300			
Storage Blk Time (%)	45	79			0	63		43	49			
Queuing Penalty (veh)	212	173			2	118		393	259			

Intersection: 8: Washington St & Van Buren Bl.

Movement	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	L	T	T	R	L	L	T	T	R
Maximum Queue (ft)	152	325	856	849	440	159	178	132	137	111
Average Queue (ft)	34	294	827	819	282	142	155	32	41	22
95th Queue (ft)	100	438	841	865	616	166	176	100	104	76
Link Distance (ft)			811	811			159	159	159	
Upstream Blk Time (%)			91	58		7	29	1	1	0
Queuing Penalty (veh)			0	0		0	86	2	2	0
Storage Bay Dist (ft)	145	145			140	180				130
Storage Blk Time (%)	1	1	90	26	0	7	29		1	0
Queuing Penalty (veh)	3	8	276	82	1	18	77		2	0

Zone Summary

Zone wide Queuing Penalty: 5631

Intersection: 3: Van Buren Bl. & Driveway 1

Movement	EB	EB	WB	WB	SB
Directions Served	T	T	T	R	R
Maximum Queue (ft)	792	796	42	52	59
Average Queue (ft)	778	781	3	3	22
95th Queue (ft)	799	795	24	24	49
Link Distance (ft)	773	773	244	244	134
Upstream Blk Time (%)	21	23			
Queuing Penalty (veh)	194	213			
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 4: Van Buren Bl. & Driveway 2

Movement	EB	EB	EB	WB	WB	SB
Directions Served	T	T	T	T	TR	R
Maximum Queue (ft)	278	287	248	28	31	72
Average Queue (ft)	252	255	210	1	2	26
95th Queue (ft)	264	271	311	13	18	56
Link Distance (ft)	244	244	244	108	108	159
Upstream Blk Time (%)	59	56	6			
Queuing Penalty (veh)	343	323	33			
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 5: Washington St & Driveway 3

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	224	61	325
Average Queue (ft)	128	4	304
95th Queue (ft)	265	35	316
Link Distance (ft)	214	167	287
Upstream Blk Time (%)	31	0	62
Queuing Penalty (veh)	0	0	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Washington St & Driveway 4

Movement	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	T	R	LT	T	TR
Maximum Queue (ft)	210	145	180	197	87	187	178	179
Average Queue (ft)	69	69	55	183	37	178	110	120
95th Queue (ft)	146	151	143	193	67	189	175	181
Link Distance (ft)	216	169		181	181	167	167	167
Upstream Blk Time (%)	0	7	0	28		57	4	6
Queuing Penalty (veh)	0	0	0	128		222	15	22
Storage Bay Dist (ft)			170					
Storage Blk Time (%)			0	31				
Queuing Penalty (veh)			0	31				

Intersection: 7: Washington St & Driveway 5

Movement	EB	NB	NB	SB	SB	SB
Directions Served	R	T	T	T	T	T
Maximum Queue (ft)	30	180	178	195	92	92
Average Queue (ft)	8	151	41	133	7	15
95th Queue (ft)	26	202	152	214	41	57
Link Distance (ft)	196	159	159	181	181	181
Upstream Blk Time (%)		14	1	8		
Queuing Penalty (veh)		72	7	33		
Storage Bay Dist (ft)						
Storage Blk Time (%)						3
Queuing Penalty (veh)						0

Intersection: 8: Washington St & Van Buren Bl.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	B40	B40	B40
Directions Served	L	T	T	TR	L	T	T	T	R	T	T	T
Maximum Queue (ft)	107	182	162	132	450	667	662	648	365	616	616	608
Average Queue (ft)	85	140	123	87	389	608	607	522	314	390	387	358
95th Queue (ft)	120	179	147	129	598	760	755	764	464	765	751	741
Link Distance (ft)		108	108	108		562	562	562		596	596	596
Upstream Blk Time (%)	18	67	67	15		56	66	21		5	3	3
Queuing Penalty (veh)	0	388	384	85		374	443	141		35	22	20
Storage Bay Dist (ft)	285				350				300			
Storage Blk Time (%)	18	67			2	64		34	23			
Queuing Penalty (veh)	90	129			7	136		182	106			

Intersection: 8: Washington St & Van Buren Bl.

Movement	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	L	L	T	T	R	L	L	T	T	R
Maximum Queue (ft)	132	167	254	157	101	159	185	175	175	157
Average Queue (ft)	33	98	149	46	49	149	164	128	135	70
95th Queue (ft)	97	153	231	111	84	166	177	174	181	146
Link Distance (ft)			811	811			159	159	159	
Upstream Blk Time (%)						8	30	8	10	0
Queuing Penalty (veh)						0	120	32	39	0
Storage Bay Dist (ft)	145	145			140	180				130
Storage Blk Time (%)	0	2	12	0		8	30		21	1
Queuing Penalty (veh)	0	3	15	1		29	109		41	2

Zone Summary

Zone wide Queuing Penalty: 4569

APPENDIX 3.1:

TRAFFIC COUNTS – MAY 2025

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Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Riverside
N/S: Mocking Bird Canyon Road
E/W: Van Buren Boulevard
Weather: Clear

File Name : 01_RIV_MbCyn_VB AM
Site Code : 05125515
Start Date : 5/8/2025
Page No : 1

Groups Printed- Total Volume

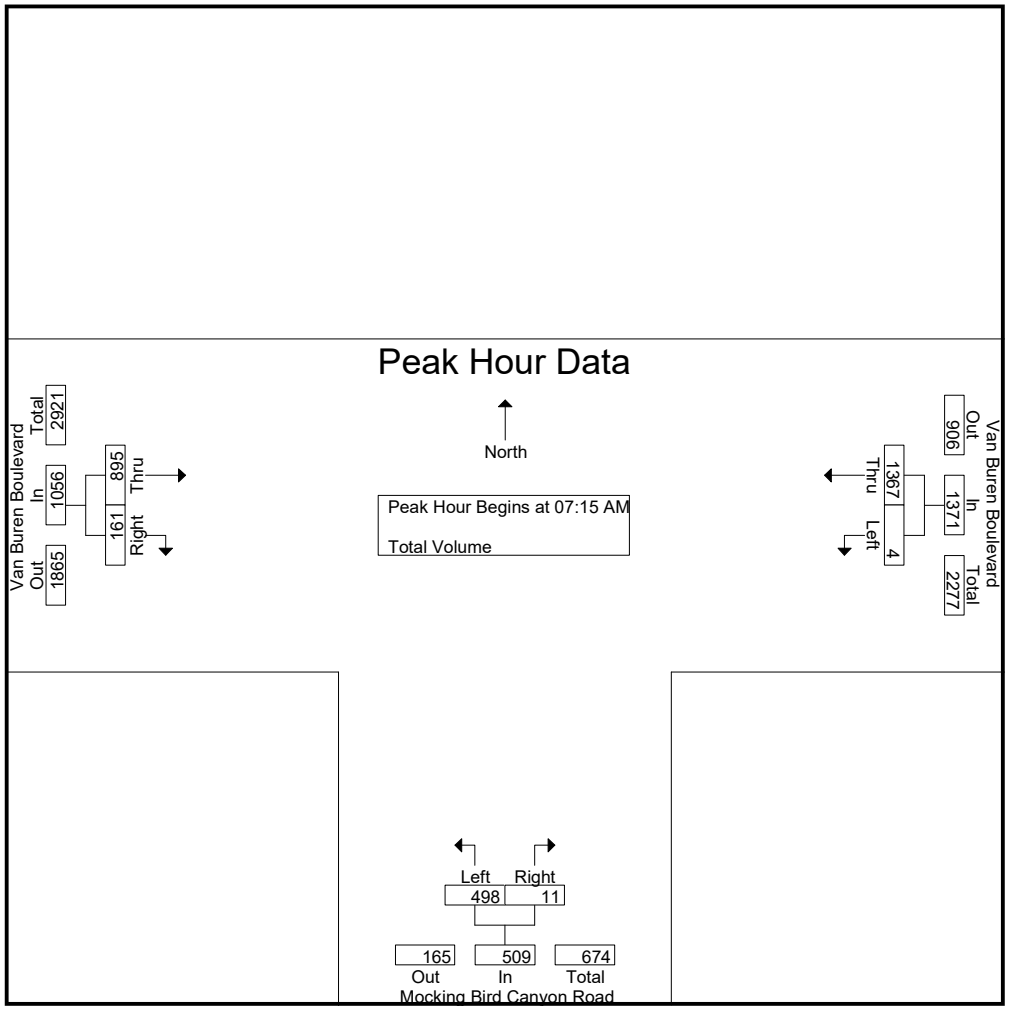
	Van Buren Boulevard Westbound				Mocking Bird Canyon Road Northbound				Van Buren Boulevard Eastbound						
Start Time	Left	Thru	RTOR	App. Total	Left	Right	RTOR	App. Total	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	3	309	0	312	98	1	0	99	191	28	0	219	0	630	630
07:15 AM	0	349	0	349	130	0	0	130	205	31	0	236	0	715	715
07:30 AM	1	336	0	337	112	6	3	118	252	38	1	290	4	745	749
07:45 AM	2	340	0	342	138	1	0	139	256	44	1	300	1	781	782
Total	6	1334	0	1340	478	8	3	486	904	141	2	1045	5	2871	2876
08:00 AM	1	342	0	343	118	4	2	122	182	48	0	230	2	695	697
08:15 AM	1	362	0	363	88	2	1	90	184	51	1	235	2	688	690
08:30 AM	0	313	0	313	69	1	0	70	160	55	1	215	1	598	599
08:45 AM	0	269	0	269	74	3	3	77	141	41	0	182	3	528	531
Total	2	1286	0	1288	349	10	6	359	667	195	2	862	8	2509	2517
Grand Total	8	2620	0	2628	827	18	9	845	1571	336	4	1907	13	5380	5393
Apprch %	0.3	99.7			97.9	2.1			82.4	17.6					
Total %	0.1	48.7		48.8	15.4	0.3		15.7	29.2	6.2		35.4	0.2	99.8	

	Van Buren Boulevard Westbound			Mocking Bird Canyon Road Northbound			Van Buren Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	**349**	**349**	130	0	130	205	31	236	715
07:30 AM	1	336	337	112	**6**	118	252	38	290	745
07:45 AM	**2**	340	342	**138**	1	**139**	**256**	44	**300**	**781**
08:00 AM	1	342	343	118	4	122	182	**48**	230	695
Total Volume	4	1367	1371	498	11	509	895	161	1056	2936
% App. Total	0.3	99.7		97.8	2.2		84.8	15.2		
PHF	.500	.979	.982	.902	.458	.915	.874	.839	.880	.940

Counts Unlimited, Inc.
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City of Riverside
N/S: Mocking Bird Canyon Road
E/W: Van Buren Boulevard
Weather: Clear

File Name : 01_RIV_MbCyn_VB AM
Site Code : 05125515
Start Date : 5/8/2025



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:15 AM			07:15 AM		
+0 mins.	1	336	337	130	0	130	205	31	236
+15 mins.	**2**	340	342	112	**6**	118	252	38	290
+30 mins.	1	342	343	**138**	1	**139**	**256**	44	**300**
+45 mins.	1	**362**	**363**	118	4	122	182	**48**	230
Total Volume	5	1380	1385	498	11	509	895	161	1056
% App. Total	0.4	99.6		97.8	2.2		84.8	15.2	
PHF	.625	.953	.954	.902	.458	.915	.874	.839	.880

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City of Riverside
N/S: Mocking Bird Canyon Road
E/W: Van Buren Boulevard
Weather: Clear

File Name : 01_RIV_MbCyn_VB PM
Site Code : 05125515
Start Date : 5/8/2025
Page No : 1

Groups Printed- Total Volume

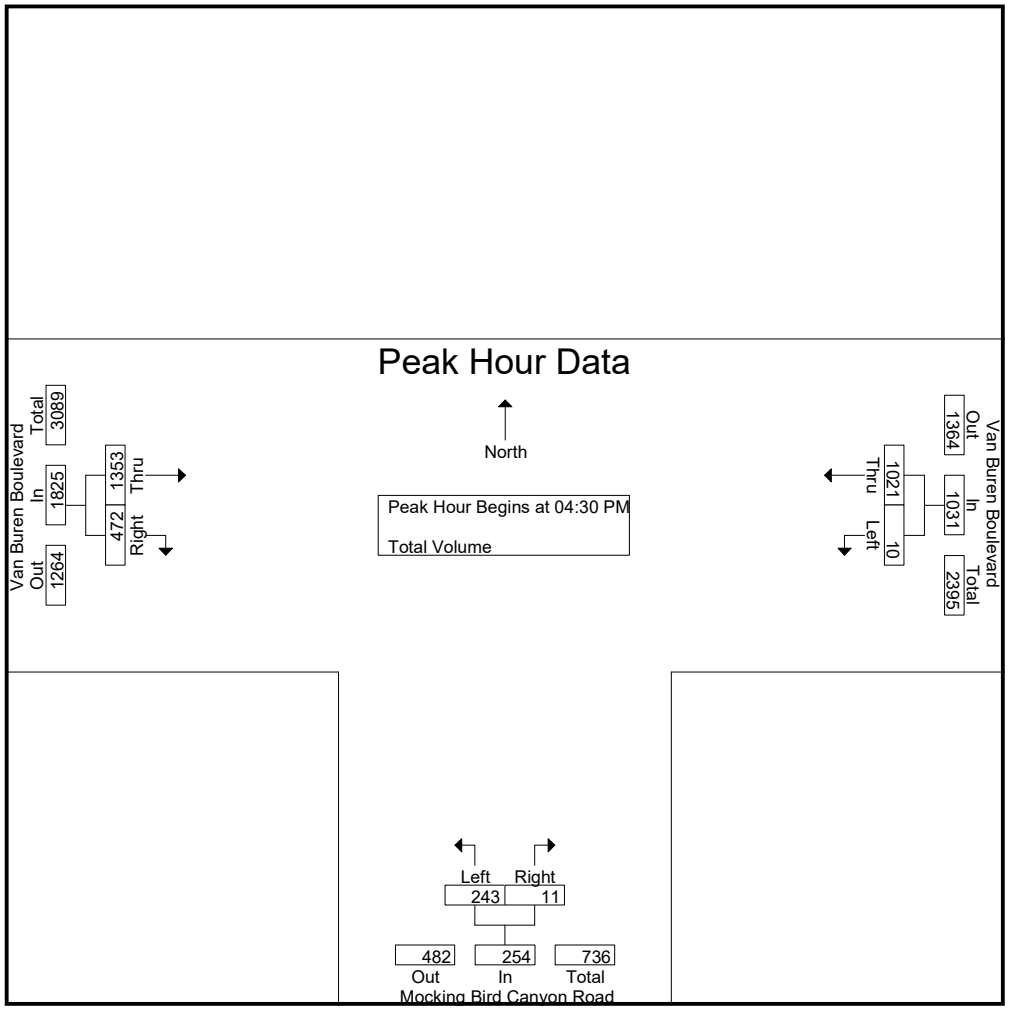
	Van Buren Boulevard Westbound				Mocking Bird Canyon Road Northbound				Van Buren Boulevard Eastbound						
Start Time	Left	Thru	RTOR	App. Total	Left	Right	RTOR	App. Total	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	3	223	0	226	35	2	0	37	305	87	2	392	2	655	657
04:15 PM	2	256	0	258	67	4	0	71	312	90	3	402	3	731	734
04:30 PM	2	283	0	285	58	4	0	62	344	94	3	438	3	785	788
04:45 PM	5	241	0	246	56	2	1	58	318	122	1	440	2	744	746
Total	12	1003	0	1015	216	12	1	228	1279	393	9	1672	10	2915	2925
05:00 PM	2	241	0	243	64	2	0	66	333	135	3	468	3	777	780
05:15 PM	1	256	0	257	65	3	2	68	358	121	1	479	3	804	807
05:30 PM	0	290	0	290	35	1	0	36	310	94	0	404	0	730	730
05:45 PM	0	253	0	253	42	0	0	42	373	107	0	480	0	775	775
Total	3	1040	0	1043	206	6	2	212	1374	457	4	1831	6	3086	3092
Grand Total	15	2043	0	2058	422	18	3	440	2653	850	13	3503	16	6001	6017
Apprch %	0.7	99.3			95.9	4.1			75.7	24.3					
Total %	0.2	34		34.3	7	0.3		7.3	44.2	14.2		58.4	0.3	99.7	

	Van Buren Boulevard Westbound			Mocking Bird Canyon Road Northbound			Van Buren Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	2	**283**	**285**	58	**4**	62	344	94	438	785
04:45 PM	**5**	241	246	56	2	58	318	122	440	744
05:00 PM	2	241	243	64	2	66	333	**135**	468	777
05:15 PM	1	256	257	**65**	3	**68**	**358**	121	**479**	**804**
Total Volume	10	1021	1031	243	11	254	1353	472	1825	3110
% App. Total	1	99		95.7	4.3		74.1	25.9		
PHF	.500	.902	.904	.935	.688	.934	.945	.874	.953	.967

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City of Riverside
N/S: Mocking Bird Canyon Road
E/W: Van Buren Boulevard
Weather: Clear

File Name : 01_RIV_MbCyn_VB PM
Site Code : 05125515
Start Date : 5/8/2025



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM			04:15 PM			05:00 PM		
+0 mins.	**2**	241	243	**67**	**4**	**71**	333	**135**	468
+15 mins.	1	256	257	58	4	62	358	121	479
+30 mins.	0	**290**	**290**	56	2	58	310	94	404
+45 mins.	0	253	253	64	2	66	**373**	107	**480**
Total Volume	3	1040	1043	245	12	257	1374	457	1831
% App. Total	0.3	99.7		95.3	4.7		75	25	
PHF	.375	.897	.899	.914	.750	.905	.921	.846	.954

Location: Riverside
N/S: Mocking Bird Canyon Road
E/W: Van Buren Boulevard

Date: 5/8/2025
Day: Thursday

PEDESTRIANS

	North Leg Mocking Bird Canyon Road	East Leg Van Buren Boulevard	South Leg Mocking Bird Canyon Road	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Mocking Bird Canyon Road	East Leg Van Buren Boulevard	South Leg Mocking Bird Canyon Road	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

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PO Box 1178
Corona, CA 92878
951-268-6268

Location: Riverside
N/S: Mocking Bird Canyon Road
E/W: Van Buren Boulevard

Date: 5/8/2025
Day: Thursday

BICYCLES

	Southbound Mocking Bird Canyon Road			Westbound Van Buren Boulevard			Northbound Mocking Bird Canyon Road			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Mocking Bird Canyon Road			Westbound Van Buren Boulevard			Northbound Mocking Bird Canyon Road			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	1	0	1

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City of Riverside
N/S: Kings Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 02_RIV_KINGS_VB AM
Site Code : 05125515
Start Date : 5/8/2025
Page No : 1

Groups Printed- Total Volume

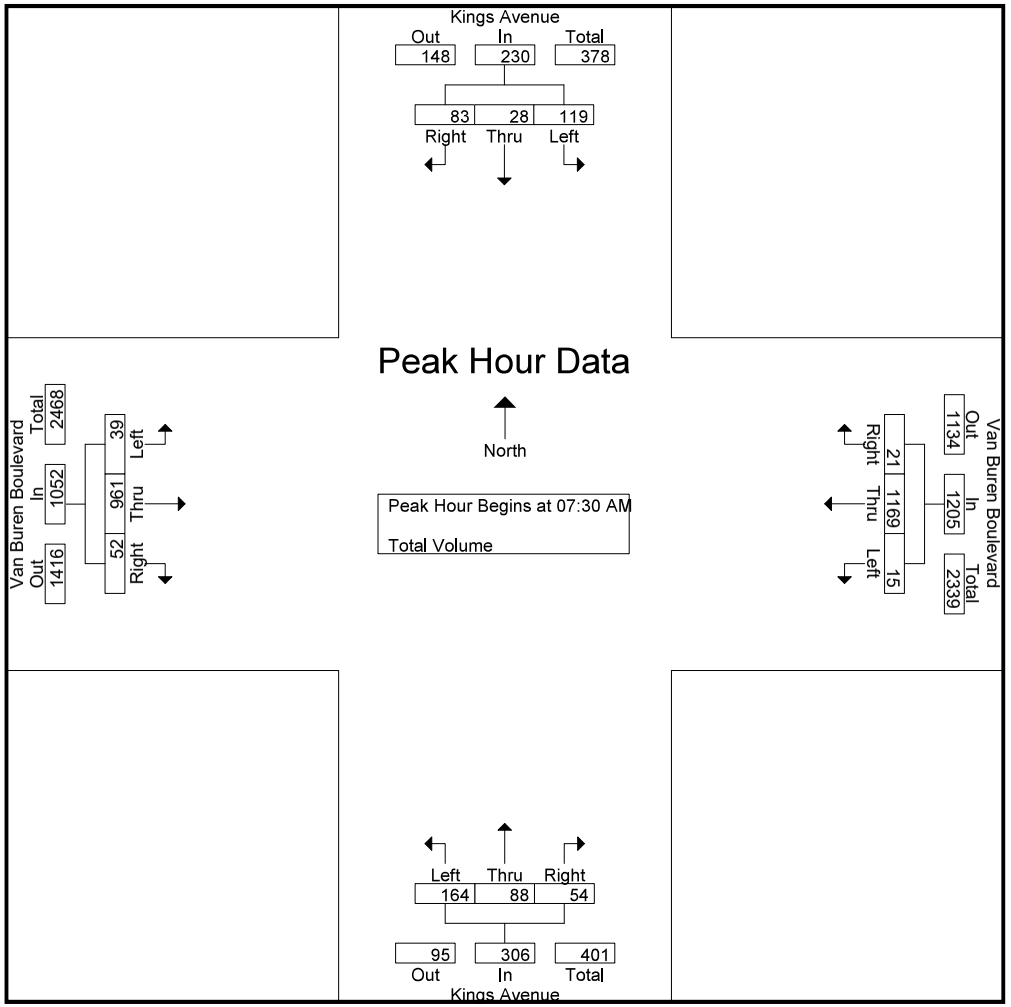
	Kings Avenue Southbound					Van Buren Boulevard Westbound						Kings Avenue Northbound					Van Buren Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	U-Turns	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	18	10	27	10	55	0	261	6	3	0	267	14	5	3	2	22	5	204	6	0	215	15	559	574
07:15 AM	24	4	22	7	50	4	279	4	4	0	287	22	6	2	1	30	11	206	9	1	226	13	593	606
07:30 AM	27	5	16	6	48	3	284	5	3	0	292	35	12	4	1	51	13	267	9	3	289	13	680	693
07:45 AM	42	11	24	9	77	6	284	5	1	1	295	37	30	19	5	86	7	304	16	3	327	19	785	804
Total	111	30	89	32	230	13	1108	20	11	1	1141	108	53	28	9	189	36	981	40	7	1057	60	2617	2677
08:00 AM	33	6	26	10	65	3	290	7	1	3	300	45	22	20	6	87	10	225	19	5	254	25	706	731
08:15 AM	17	6	17	5	40	3	311	4	1	0	318	47	24	11	3	82	9	165	8	3	182	12	622	634
08:30 AM	16	4	32	15	52	2	242	10	3	1	254	40	10	5	3	55	6	168	6	2	180	24	541	565
08:45 AM	17	5	20	9	42	0	219	6	3	0	225	34	11	8	5	53	5	146	3	0	154	17	474	491
Total	83	21	95	39	199	8	1062	27	8	4	1097	166	67	44	17	277	30	704	36	10	770	78	2343	2421
Grand Total	194	51	184	71	429	21	2170	47	19	5	2238	274	120	72	26	466	66	1685	76	17	1827	138	4960	5098
Apprch %	45.2	11.9	42.9			0.9	97	2.1				58.8	25.8	15.5			3.6	92.2	4.2					
Total %	3.9	1	3.7		8.6	0.4	43.8	0.9			45.1	5.5	2.4	1.5		9.4	1.3	34	1.5		36.8	2.7	97.3	

	Kings Avenue Southbound				Van Buren Boulevard Westbound				Kings Avenue Northbound				Van Buren 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 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	27	5	16	48	3	284	5	292	35	12	4	51	13	267	9	289	680
07:45 AM	42	11	24	77	6	284	5	295	37	30	19	86	7	304	16	327	785
08:00 AM	33	6	26	65	3	290	7	300	45	22	20	87	10	225	19	254	706
08:15 AM	17	6	17	40	3	311	4	318	47	24	11	82	9	165	8	182	622
Total Volume	119	28	83	230	15	1169	21	1205	164	88	54	306	39	961	52	1052	2793
% App. Total	51.7	12.2	36.1		1.2	97	1.7		53.6	28.8	17.6		3.7	91.3	4.9		
PHF	.708	.636	.798	.747	.625	.940	.750	.947	.872	.733	.675	.879	.750	.790	.684	.804	.889

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City of Riverside
N/S: Kings Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 02_RIV_KINGS_VB AM
Site Code : 05125515
Start Date : 5/8/2025
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City of Riverside
N/S: Kings Avenue
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File Name : 02_RIV_KINGS_VB AM
Site Code : 05125515
Start Date : 5/8/2025
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	Kings Avenue Southbound				Van Buren Boulevard Westbound				Kings Avenue Northbound				Van Buren 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 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:30 AM				07:45 AM				07:15 AM				
+0 mins.	24	4	22	50	3	284	5	292	37	30	19	86	11	206	9	226	
+15 mins.	27	5	16	48	6	284	5	295	45	22	20	87	13	267	9	289	
+30 mins.	42	11	24	77	3	290	7	300	47	24	11	82	7	304	16	327	
+45 mins.	33	6	26	65	3	311	4	318	40	10	5	55	10	225	19	254	
Total Volume	126	26	88	240	15	1169	21	1205	169	86	55	310	41	1002	53	1096	
% App. Total	52.5	10.8	36.7		1.2	97	1.7		54.5	27.7	17.7		3.7	91.4	4.8		
PHF	.750	.591	.846	.779	.625	.940	.750	.947	.899	.717	.688	.891	.788	.824	.697	.838	

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City of Riverside
N/S: Kings Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 02_RIV_KINGS_VB PM
Site Code : 05125515
Start Date : 5/8/2025

Groups Printed- Total Volume

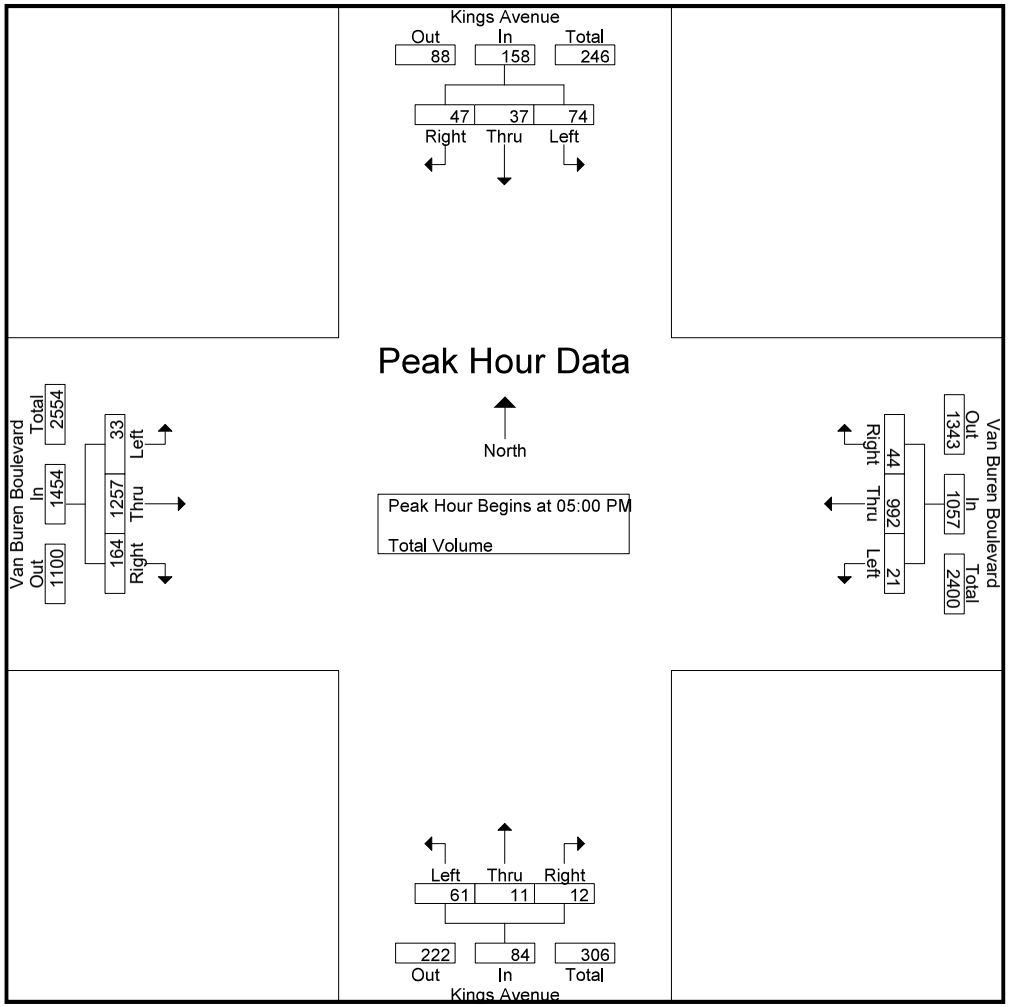
	Kings Avenue Southbound					Van Buren Boulevard Westbound						Kings Avenue Northbound					Van Buren Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	U-Turns	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	14	10	19	7	43	10	227	9	2	0	246	19	8	7	4	34	8	298	37	9	343	22	666	688
04:15 PM	18	8	10	4	36	9	251	4	1	0	264	15	4	4	4	23	7	313	23	3	343	12	666	678
04:30 PM	17	6	7	2	30	3	251	12	1	2	266	11	6	3	2	20	7	321	27	3	355	10	671	681
04:45 PM	16	5	14	3	35	4	243	10	3	1	257	14	3	2	1	19	5	304	26	8	335	16	646	662
Total	65	29	50	16	144	26	972	35	7	3	1033	59	21	16	11	96	27	1236	113	23	1376	60	2649	2709
05:00 PM	23	10	7	1	40	6	233	10	4	1	249	8	6	4	2	18	7	283	36	10	326	18	633	651
05:15 PM	14	6	11	4	31	6	242	15	4	2	263	18	3	2	2	23	8	345	48	7	401	19	718	737
05:30 PM	17	14	10	3	41	4	259	8	4	0	271	22	1	3	3	26	11	293	41	17	345	27	683	710
05:45 PM	20	7	19	5	46	5	258	11	1	0	274	13	1	3	2	17	7	336	39	6	382	14	719	733
Total	74	37	47	13	158	21	992	44	13	3	1057	61	11	12	9	84	33	1257	164	40	1454	78	2753	2831
Grand Total	139	66	97	29	302	47	1964	79	20	6	2090	120	32	28	20	180	60	2493	277	63	2830	138	5402	5540
Apprch %	46	21.9	32.1			2.2	94	3.8				66.7	17.8	15.6			2.1	88.1	9.8					
Total %	2.6	1.2	1.8		5.6	0.9	36.4	1.5			38.7	2.2	0.6	0.5		3.3	1.1	46.1	5.1		52.4	2.5	97.5	

	Kings Avenue Southbound				Van Buren Boulevard Westbound				Kings Avenue Northbound				Van Buren 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 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	23	10	7	40	6	233	10	249	8	6	4	18	7	283	36	326	633
05:15 PM	14	6	11	31	6	242	15	263	18	3	2	23	8	345	48	401	718
05:30 PM	17	14	10	41	4	259	8	271	22	1	3	26	11	293	41	345	683
05:45 PM	20	7	19	46	5	258	11	274	13	1	3	17	7	336	39	382	719
Total Volume	74	37	47	158	21	992	44	1057	61	11	12	84	33	1257	164	1454	2753
% App. Total	46.8	23.4	29.7		2	93.9	4.2		72.6	13.1	14.3		2.3	86.5	11.3		
PHF	.804	.661	.618	.859	.875	.958	.733	.964	.693	.458	.750	.808	.750	.911	.854	.906	.957

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City of Riverside
N/S: Kings Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 02_RIV_KINGS_VB PM
Site Code : 05125515
Start Date : 5/8/2025
Page No : 2



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City of Riverside
N/S: Kings Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 02_RIV_KINGS_VB PM
Site Code : 05125515
Start Date : 5/8/2025

	Kings Avenue Southbound				Van Buren Boulevard Westbound				Kings Avenue Northbound				Van Buren 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 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	05:00 PM				05:00 PM				04:00 PM				05:00 PM				
+0 mins.	23	10	7	40	6	233	10	249	19	8	7	34	7	283	36	326	
+15 mins.	14	6	11	31	6	242	15	263	15	4	4	23	8	345	48	401	
+30 mins.	17	14	10	41	4	259	8	271	11	6	3	20	11	293	41	345	
+45 mins.	20	7	19	46	5	258	11	274	14	3	2	19	7	336	39	382	
Total Volume	74	37	47	158	21	992	44	1057	59	21	16	96	33	1257	164	1454	
% App. Total	46.8	23.4	29.7		2	93.9	4.2		61.5	21.9	16.7		2.3	86.5	11.3		
PHF	.804	.661	.618	.859	.875	.958	.733	.964	.776	.656	.571	.706	.750	.911	.854	.906	

Location: Riverside
N/S: Kings Avenue
E/W: Van Buren Boulevard

Date: 5/8/2025
Day: Thursday

PEDESTRIANS

	North Leg Kings Avenue Pedestrians	East Leg Van Buren Boulevard Pedestrians	South Leg Kings Avenue Pedestrians	West Leg Van Buren Boulevard Pedestrians	
7:00 AM	1	0	0	1	2
7:15 AM	2	0	0	4	6
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	4	4
8:00 AM	0	0	0	2	2
8:15 AM	0	0	0	0	0
8:30 AM	1	0	0	1	2
8:45 AM	1	0	0	0	1
TOTAL VOLUMES:	5	0	0	12	17

	North Leg Kings Avenue Pedestrians	East Leg Van Buren Boulevard Pedestrians	South Leg Kings Avenue Pedestrians	West Leg Van Buren Boulevard Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	2	0	0	2
5:30 PM	2	0	0	1	3
5:45 PM	3	0	0	2	5
TOTAL VOLUMES:	5	2	0	3	10

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951-268-6268

Location: Riverside
N/S: Kings Avenue
E/W: Van Buren Boulevard

Date: 5/8/2025
Day: Thursday

BICYCLES

	Southbound Kings Avenue			Westbound Van Buren Boulevard			Northbound Kings Avenue			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	0	0	0	0	0	0	1

	Southbound Kings Avenue			Westbound Van Buren Boulevard			Northbound Kings Avenue			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	1	0	1

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City of Riverside
N/S: Washington Street
E/W: Driveway 4
Weather: Clear

File Name : 06_RIV_Wash_DW4 AM
Site Code : 05125515
Start Date : 5/8/2025
Page No : 1

Groups Printed- Total Volume

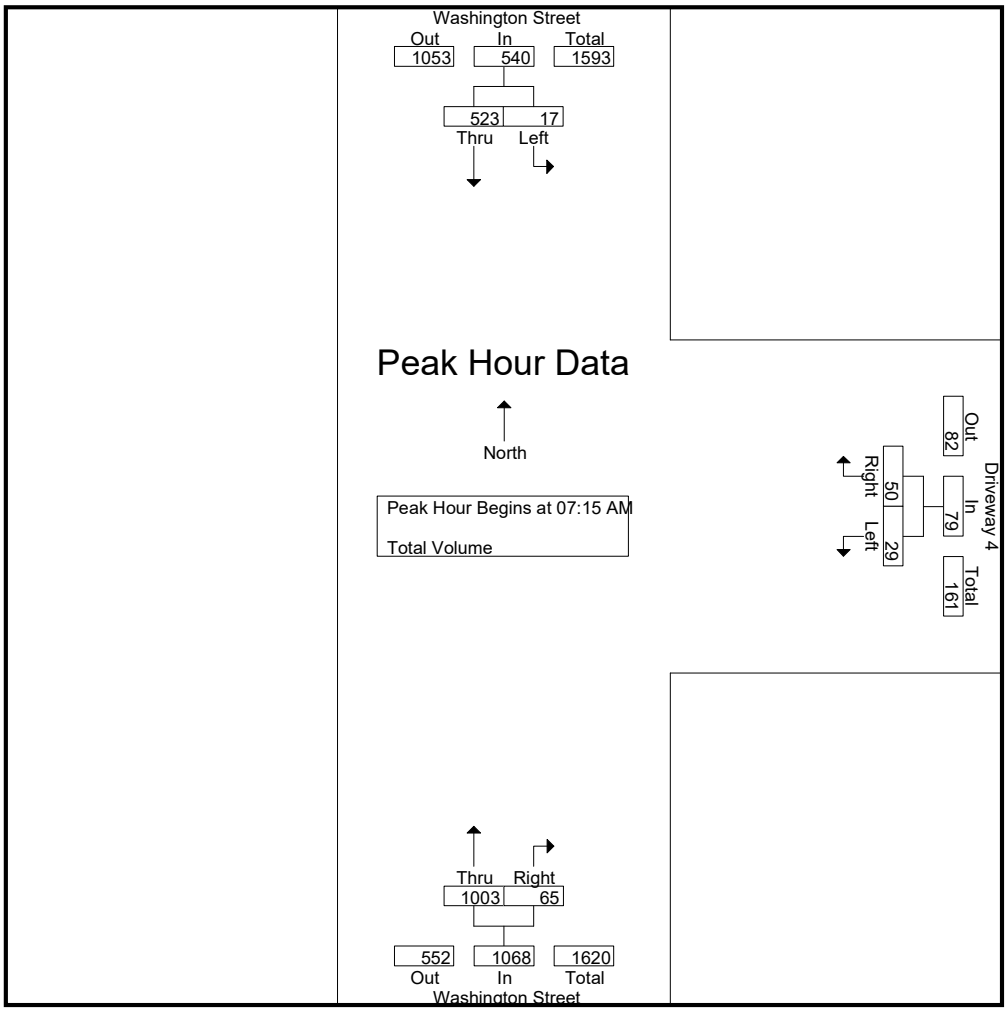
	Washington Street Southbound			Driveway 4 Westbound			Washington Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	7	89	96	2	7	9	226	6	232	337
07:15 AM	3	106	109	5	10	15	289	10	299	423
07:30 AM	5	116	121	5	13	18	259	16	275	414
07:45 AM	5	161	166	9	15	24	207	18	225	415
Total	20	472	492	21	45	66	981	50	1031	1589
08:00 AM	4	140	144	10	12	22	248	21	269	435
08:15 AM	6	121	127	15	16	31	198	15	213	371
08:30 AM	7	82	89	4	10	14	200	22	222	325
08:45 AM	10	91	101	10	9	19	179	22	201	321
Total	27	434	461	39	47	86	825	80	905	1452
Grand Total	47	906	953	60	92	152	1806	130	1936	3041
Apprch %	4.9	95.1		39.5	60.5		93.3	6.7		
Total %	1.5	29.8	31.3	2	3	5	59.4	4.3	63.7	

	Washington Street Southbound			Driveway 4 Westbound			Washington Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	3	106	109	5	10	15	**289**	10	**299**	423
07:30 AM	**5**	116	121	5	13	18	259	16	275	414
07:45 AM	5	**161**	**166**	9	**15**	**24**	207	18	225	415
08:00 AM	4	140	144	**10**	12	22	248	**21**	269	**435**
Total Volume	17	523	540	29	50	79	1003	65	1068	1687
% App. Total	3.1	96.9		36.7	63.3		93.9	6.1		
PHF	.850	.812	.813	.725	.833	.823	.868	.774	.893	.970

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City of Riverside
N/S: Washington Street
E/W: Driveway 4
Weather: Clear

File Name : 06_RIV_Wash_DW4 AM
Site Code : 05125515
Start Date : 5/8/2025
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:15 AM		
+0 mins.	5	116	121	5	13	18	**289**	10	**299**
+15 mins.	5	**161**	**166**	9	15	24	259	16	275
+30 mins.	4	140	144	10	12	22	207	18	225
+45 mins.	**6**	121	127	**15**	**16**	**31**	248	**21**	269
Total Volume	20	538	558	39	56	95	1003	65	1068
% App. Total	3.6	96.4		41.1	58.9		93.9	6.1	
PHF	.833	.835	.840	.650	.875	.766	.868	.774	.893

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City of Riverside
N/S: Washington Street
E/W: Driveway 4
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File Name : 06_RIV_Wash_DW4 PM
Site Code : 05125515
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Page No : 1

Groups Printed- Total Volume

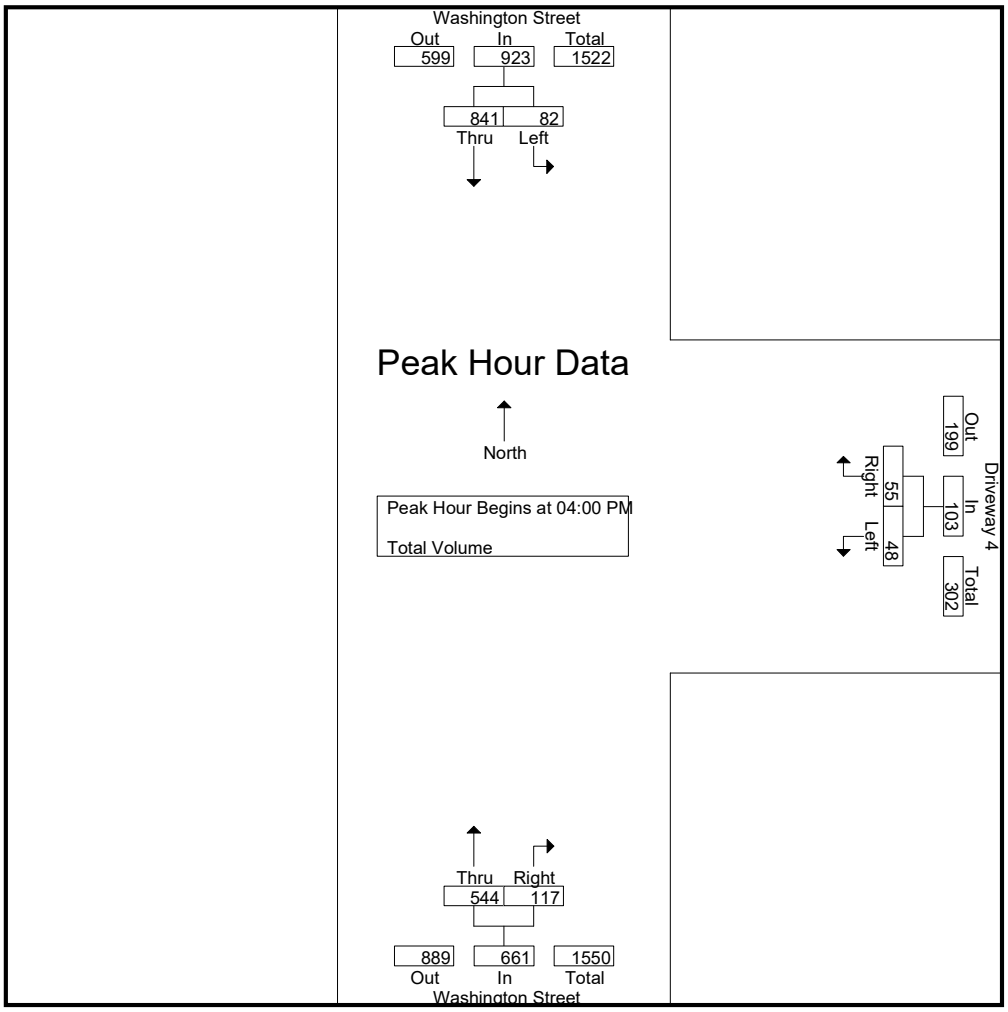
	Washington Street Southbound			Driveway 4 Westbound			Washington Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	24	235	259	12	11	23	145	36	181	463
04:15 PM	18	213	231	14	17	31	130	19	149	411
04:30 PM	15	192	207	11	17	28	143	23	166	401
04:45 PM	25	201	226	11	10	21	126	39	165	412
Total	82	841	923	48	55	103	544	117	661	1687
05:00 PM	14	207	221	17	12	29	130	33	163	413
05:15 PM	13	223	236	11	11	22	143	29	172	430
05:30 PM	13	218	231	14	10	24	131	31	162	417
05:45 PM	14	197	211	13	10	23	116	26	142	376
Total	54	845	899	55	43	98	520	119	639	1636
Grand Total	136	1686	1822	103	98	201	1064	236	1300	3323
Apprch %	7.5	92.5		51.2	48.8		81.8	18.2		
Total %	4.1	50.7	54.8	3.1	2.9	6	32	7.1	39.1	

	Washington Street Southbound			Driveway 4 Westbound			Washington Street Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	24	**235**	**259**	12	11	23	**145**	36	**181**	**463**
04:15 PM	18	213	231	**14**	**17**	**31**	130	19	149	411
04:30 PM	15	192	207	11	17	28	143	23	166	401
04:45 PM	**25**	201	226	11	10	21	126	**39**	165	412
Total Volume	82	841	923	48	55	103	544	117	661	1687
% App. Total	8.9	91.1		46.6	53.4		82.3	17.7		
PHF	.820	.895	.891	.857	.809	.831	.938	.750	.913	.911

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City of Riverside
N/S: Washington Street
E/W: Driveway 4
Weather: Clear

File Name : 06_RIV_Wash_DW4 PM
Site Code : 05125515
Start Date : 5/8/2025
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:15 PM			04:30 PM		
+0 mins.	24	**235**	**259**	14	**17**	**31**	**143**	23	166
+15 mins.	18	213	231	11	17	28	126	**39**	165
+30 mins.	15	192	207	11	10	21	130	33	163
+45 mins.	**25**	201	226	**17**	12	29	143	29	**172**
Total Volume	82	841	923	53	56	109	542	124	666
% App. Total	8.9	91.1		48.6	51.4		81.4	18.6	
PHF	.820	.895	.891	.779	.824	.879	.948	.795	.968

Location: Riverside
N/S: Washington Street
E/W: Driveway 4

Date: 5/8/2025
Day: Thursday

PEDESTRIANS

	North Leg Washington Street Pedestrians	East Leg Driveway 4 Pedestrians	South Leg Washington Street Pedestrians	West Leg Dead End Pedestrians	
7:00 AM	0	3	0	0	3
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	2	2
8:15 AM	0	0	2	2	4
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	3	2	4	9

	North Leg Washington Street Pedestrians	East Leg Driveway 4 Pedestrians	South Leg Washington Street Pedestrians	West Leg Dead End Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	1	0	0	1	2
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	0	0	1	2

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951-268-6268

Location: Riverside
N/S: Washington Street
E/W: Driveway 4

Date: 5/8/2025
Day: Thursday

BICYCLES

	Southbound Washington Street			Westbound Driveway 4			Northbound Washington Street			Eastbound Dead End			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	1	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	1	0	0	0	0	0	0	1	0	0	0	2

	Southbound Washington Street			Westbound Driveway 4			Northbound Washington Street			Eastbound Dead End			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	0	1	0	0	0	0	2

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City of Riverside
N/S: Washington Street
E/W: Van Buren Boulevard
Weather: Clear

File Name : 08_RIV_Wash_VB AM
Site Code : 05125515
Start Date : 5/8/2025
Page No : 1

Groups Printed- Total Volume

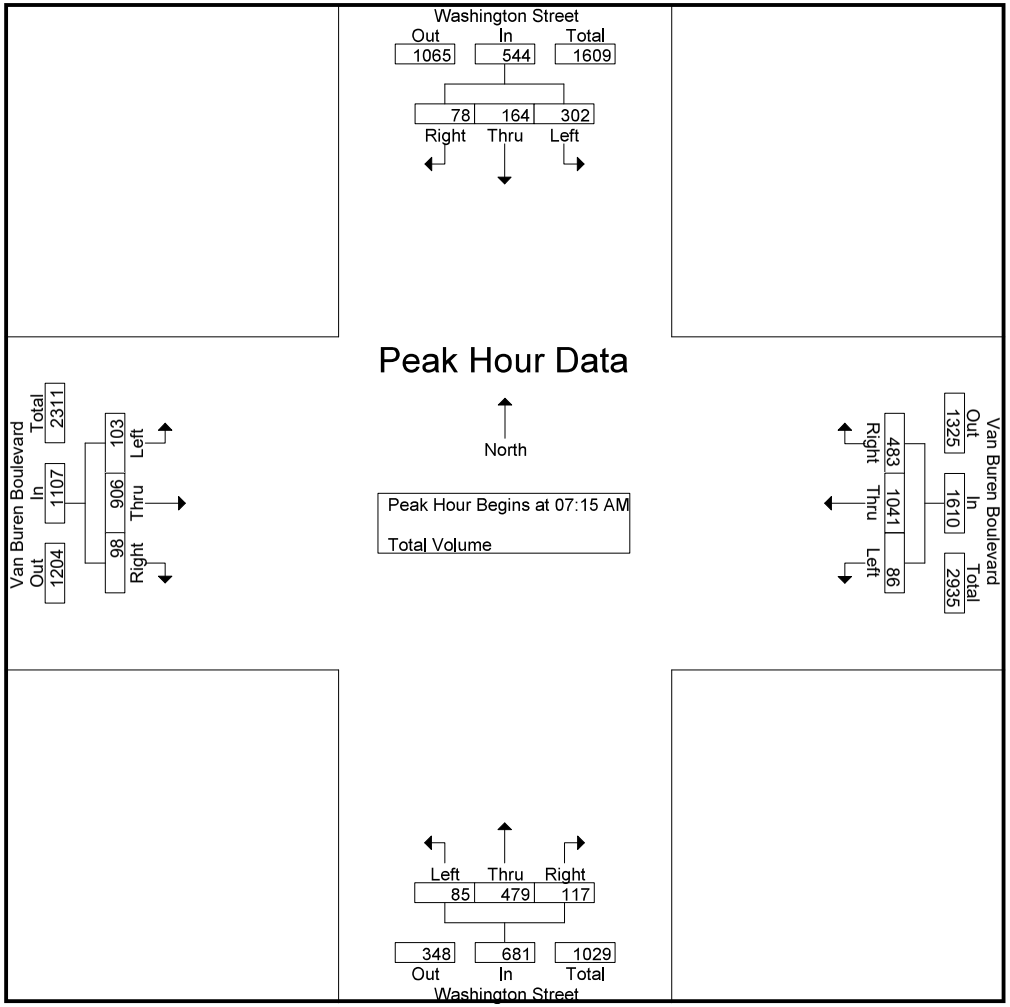
	Washington Street Southbound					Van Buren Boulevard Westbound					Washington Street Northbound					Van Buren Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	51	32	15	10	98	8	254	107	34	369	8	101	23	17	132	22	182	5	1	209	62	808	870
07:15 AM	59	37	17	14	113	15	243	138	47	396	15	132	22	15	169	28	180	9	2	217	78	895	973
07:30 AM	62	32	22	14	116	28	262	139	55	429	29	119	29	14	177	20	241	26	8	287	91	1009	1100
07:45 AM	95	59	18	11	172	22	273	89	41	384	22	107	41	15	170	25	278	34	12	337	79	1063	1142
Total	267	160	72	49	499	73	1032	473	177	1578	74	459	115	61	648	95	881	74	23	1050	310	3775	4085
08:00 AM	86	36	21	15	143	21	263	117	45	401	19	121	25	15	165	30	207	29	14	266	89	975	1064
08:15 AM	67	39	27	16	133	12	270	84	32	366	13	96	22	17	131	34	167	10	7	211	72	841	913
08:30 AM	50	28	16	9	94	12	186	74	29	272	13	115	19	14	147	32	138	9	3	179	55	692	747
08:45 AM	45	41	14	7	100	9	178	73	29	260	12	112	27	15	151	15	143	6	2	164	53	675	728
Total	248	144	78	47	470	54	897	348	135	1299	57	444	93	61	594	111	655	54	26	820	269	3183	3452
Grand Total	515	304	150	96	969	127	1929	821	312	2877	131	903	208	122	1242	206	1536	128	49	1870	579	6958	7537
Apprch %	53.1	31.4	15.5			4.4	67	28.5			10.5	72.7	16.7			11	82.1	6.8					
Total %	7.4	4.4	2.2		13.9	1.8	27.7	11.8		41.3	1.9	13	3		17.8	3	22.1	1.8		26.9	7.7	92.3	

	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren 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 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	59	37	17	113	15	243	138	396	15	**132**	22	169	28	180	9	217	895
07:30 AM	62	32	**22**	116	**28**	262	**139**	**429**	**29**	119	29	**177**	20	241	26	287	1009
07:45 AM	**95**	**59**	18	**172**	22	**273**	89	384	22	107	**41**	170	25	**278**	**34**	**337**	**1063**
08:00 AM	86	36	21	143	21	263	117	401	19	121	25	165	**30**	207	29	266	975
Total Volume	302	164	78	544	86	1041	483	1610	85	479	117	681	103	906	98	1107	3942
% App. Total	55.5	30.1	14.3		5.3	64.7	30		12.5	70.3	17.2		9.3	81.8	8.9		
PHF	.795	.695	.886	.791	.768	.953	.869	.938	.733	.907	.713	.962	.858	.815	.721	.821	.927

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City of Riverside
N/S: Washington Street
E/W: Van Buren Boulevard
Weather: Clear

File Name : 08_RIV_Wash_VB AM
Site Code : 05125515
Start Date : 5/8/2025
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City of Riverside
N/S: Washington Street
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File Name : 08_RIV_Wash_VB AM
Site Code : 05125515
Start Date : 5/8/2025

	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren 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 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:30 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	62	32	22	116	15	243	138	396	15	**132**	22	169	28	180	9	217	
+15 mins.	**95**	**59**	18	**172**	**28**	262	**139**	**429**	**29**	119	29	**177**	20	241	26	287	
+30 mins.	86	36	21	143	22	**273**	89	384	22	107	**41**	170	25	**278**	**34**	**337**	
+45 mins.	67	39	**27**	133	21	263	117	401	19	121	25	165	**30**	207	29	266	
Total Volume	310	166	88	564	86	1041	483	1610	85	479	117	681	103	906	98	1107	
% App. Total	55	29.4	15.6		5.3	64.7	30		12.5	70.3	17.2		9.3	81.8	8.9		
PHF	.816	.703	.815	.820	.768	.953	.869	.938	.733	.907	.713	.962	.858	.815	.721	.821	

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City of Riverside
N/S: Washington Street
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Weather: Clear

File Name : 08_RIV_Wash_VB PM
Site Code : 05125515
Start Date : 5/8/2025
Page No : 1

Groups Printed- Total Volume

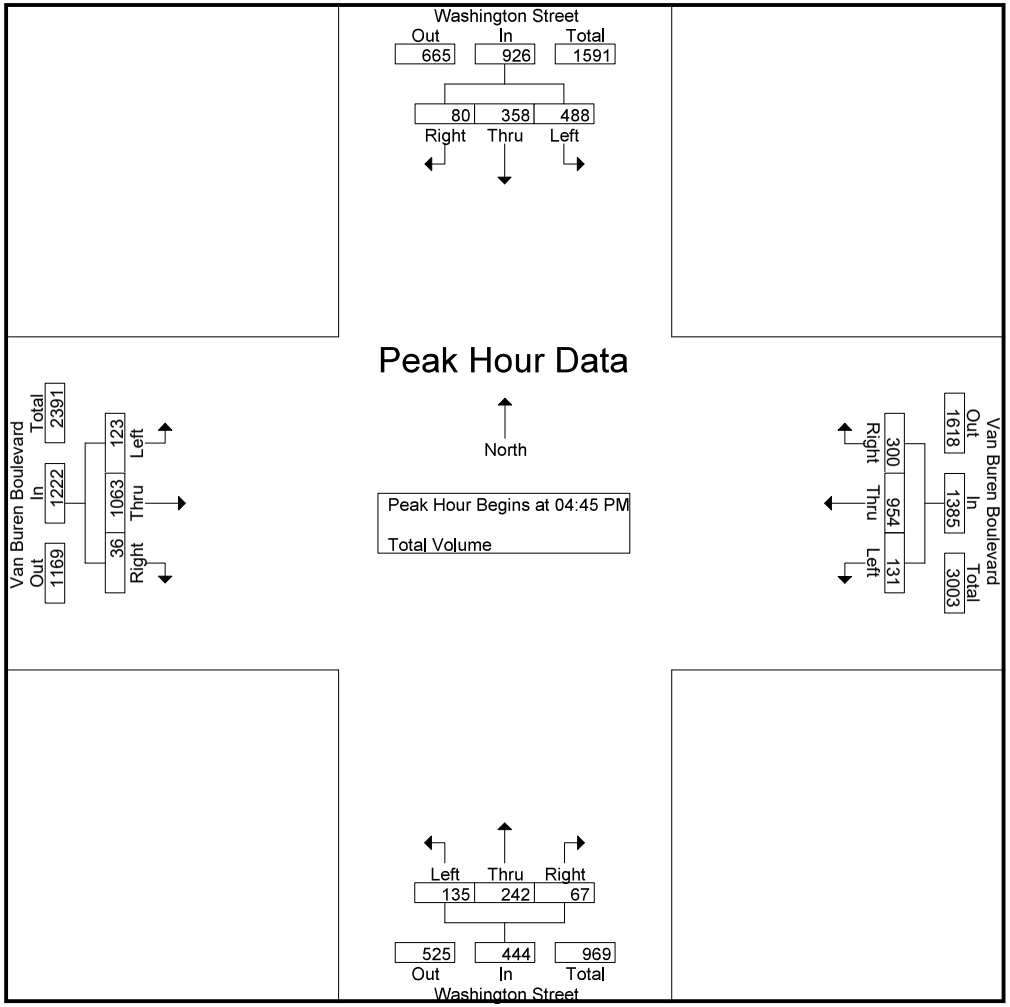
	Washington Street Southbound					Van Buren Boulevard Westbound					Washington Street Northbound					Van Buren Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	116	98	30	19	244	31	224	73	17	328	33	75	17	12	125	28	262	14	7	304	55	1001	1056
04:15 PM	116	77	21	11	214	26	237	71	13	334	25	48	23	5	96	35	292	12	5	339	34	983	1017
04:30 PM	103	74	19	9	196	38	253	74	14	365	37	61	16	11	114	29	255	11	2	295	36	970	1006
04:45 PM	119	93	26	16	238	38	229	71	19	338	39	57	15	11	111	37	250	8	4	295	50	982	1032
Total	454	342	96	55	892	133	943	289	63	1365	134	241	71	39	446	129	1059	45	18	1233	175	3936	4111
05:00 PM	100	91	14	7	205	32	222	81	16	335	32	58	18	7	108	30	290	7	4	327	34	975	1009
05:15 PM	136	82	23	13	241	32	249	86	29	367	35	55	17	7	107	29	271	5	0	305	49	1020	1069
05:30 PM	133	92	17	13	242	29	254	62	30	345	29	72	17	11	118	27	252	16	9	295	63	1000	1063
05:45 PM	93	99	16	8	208	39	244	55	14	338	38	57	18	11	113	32	264	13	5	309	38	968	1006
Total	462	364	70	41	896	132	969	284	89	1385	134	242	70	36	446	118	1077	41	18	1236	184	3963	4147
Grand Total	916	706	166	96	1788	265	1912	573	152	2750	268	483	141	75	892	247	2136	86	36	2469	359	7899	8258
Apprch %	51.2	39.5	9.3			9.6	69.5	20.8			30	54.1	15.8			10	86.5	3.5					
Total %	11.6	8.9	2.1		22.6	3.4	24.2	7.3		34.8	3.4	6.1	1.8		11.3	3.1	27	1.1		31.3	4.3	95.7	

	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren 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 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	119	**93**	**26**	238	**38**	229	71	338	**39**	57	15	111	**37**	250	8	295	982
05:00 PM	100	91	14	205	32	222	81	335	32	58	**18**	108	30	**290**	7	**327**	975
05:15 PM	**136**	82	23	241	32	249	**86**	**367**	35	55	17	107	29	271	5	305	**1020**
05:30 PM	133	92	17	**242**	29	**254**	62	345	29	**72**	17	**118**	27	252	**16**	295	1000
Total Volume	488	358	80	926	131	954	300	1385	135	242	67	444	123	1063	36	1222	3977
% App. Total	52.7	38.7	8.6		9.5	68.9	21.7		30.4	54.5	15.1		10.1	87	2.9		
PHF	.897	.962	.769	.957	.862	.939	.872	.943	.865	.840	.931	.941	.831	.916	.563	.934	.975

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City of Riverside
N/S: Washington Street
E/W: Van Buren Boulevard
Weather: Clear

File Name : 08_RIV_Wash_VB PM
Site Code : 05125515
Start Date : 5/8/2025
Page No : 2



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City of Riverside
N/S: Washington Street
E/W: Van Buren Boulevard
Weather: Clear

File Name : 08_RIV_Wash_VB PM
Site Code : 05125515
Start Date : 5/8/2025

	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren 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 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:45 PM				04:30 PM				04:00 PM				04:15 PM				
+0 mins.	119	**93**	**26**	238	**38**	**253**	74	365	33	**75**	17	**125**	35	**292**	**12**	**339**	
+15 mins.	100	91	14	205	38	229	71	338	25	48	**23**	96	29	255	11	295	
+30 mins.	**136**	82	23	241	32	222	81	335	37	61	16	114	**37**	250	8	295	
+45 mins.	133	92	17	**242**	32	249	**86**	**367**	**39**	57	15	111	30	290	7	327	
Total Volume	488	358	80	926	140	953	312	1405	134	241	71	446	131	1087	38	1256	
% App. Total	52.7	38.7	8.6		10	67.8	22.2		30	54	15.9		10.4	86.5	3		
PHF	.897	.962	.769	.957	.921	.942	.907	.957	.859	.803	.772	.892	.885	.931	.792	.926	

Location: Riverside
N/S: Washington Street
E/W: Van Buren Boulevard

Date: 5/8/2025
Day: Thursday

PEDESTRIANS

	North Leg Washington Street Pedestrians	East Leg Van Buren Boulevard Pedestrians	South Leg Washington Street Pedestrians	West Leg Van Buren Boulevard Pedestrians	
7:00 AM	3	0	0	3	6
7:15 AM	0	2	0	0	2
7:30 AM	1	2	2	5	10
7:45 AM	2	2	2	1	7
8:00 AM	0	0	0	3	3
8:15 AM	2	1	3	1	7
8:30 AM	1	2	0	0	3
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	9	9	7	13	38

	North Leg Washington Street Pedestrians	East Leg Van Buren Boulevard Pedestrians	South Leg Washington Street Pedestrians	West Leg Van Buren Boulevard Pedestrians	
4:00 PM	3	1	0	0	4
4:15 PM	1	0	0	0	1
4:30 PM	1	0	1	2	4
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	1	1	0	1	3
5:30 PM	0	0	0	1	1
5:45 PM	0	2	0	1	3
TOTAL VOLUMES:	6	4	1	5	16

Counts Unlimited, Inc.
PO Box 1178
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951-268-6268

Location: Riverside
N/S: Washington Street
E/W: Van Buren Boulevard

Date: 5/8/2025
Day: Thursday

BICYCLES

	Southbound Washington Street			Westbound Van Buren Boulevard			Northbound Washington Street			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Washington Street			Westbound Van Buren Boulevard			Northbound Washington Street			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

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City of Riverside
N/S: Gardner Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 09_RIV_Gar_VB AM
Site Code : 05125515
Start Date : 5/8/2025
Page No : 1

Groups Printed- Total Volume

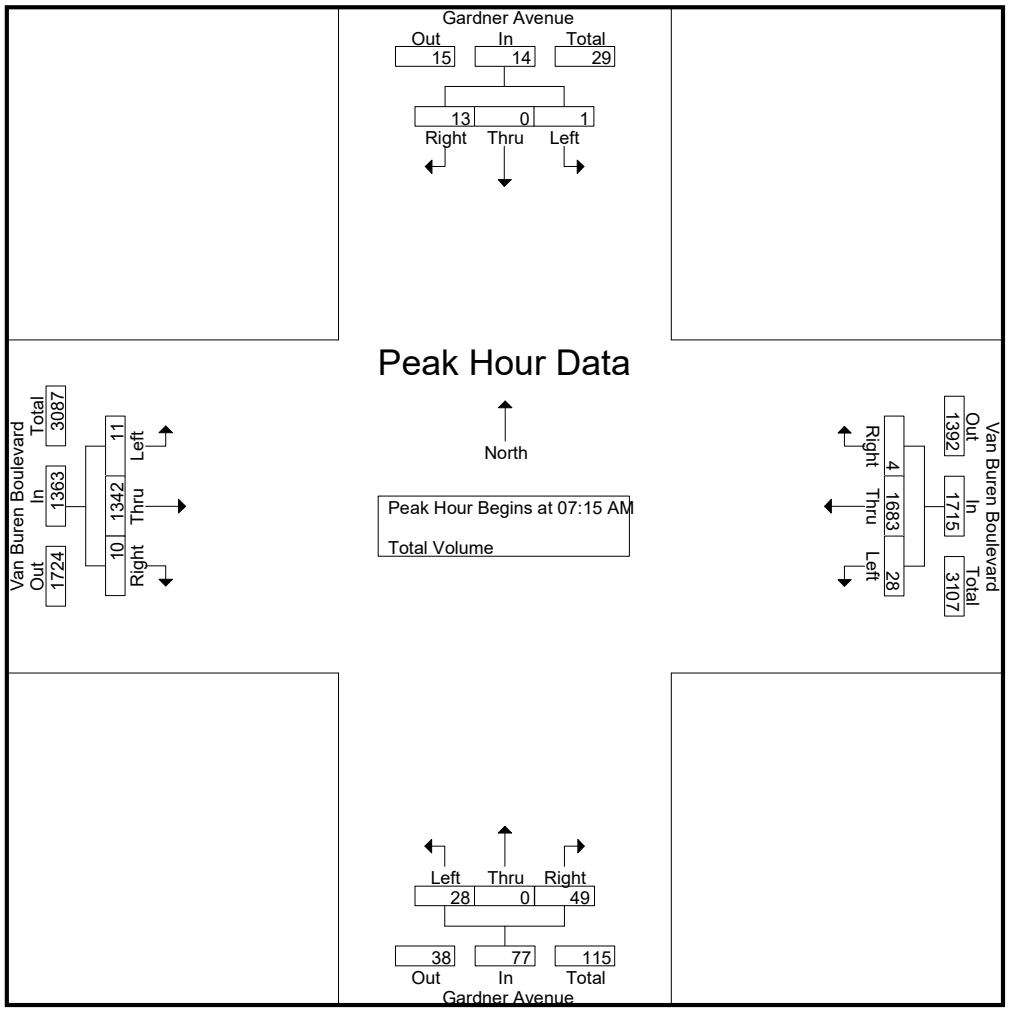
	Gardner Avenue Southbound				Van Buren Boulevard Westbound				Gardner Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	5	6	9	367	1	377	9	0	9	18	0	242	0	242	643
07:15 AM	0	0	1	1	7	435	1	443	7	0	6	13	3	266	3	272	729
07:30 AM	0	0	3	3	8	430	1	439	8	0	6	14	5	342	2	349	805
07:45 AM	1	0	6	7	8	387	0	395	8	0	23	31	0	401	3	404	837
Total	1	1	15	17	32	1619	3	1654	32	0	44	76	8	1251	8	1267	3014
08:00 AM	0	0	3	3	5	431	2	438	5	0	14	19	3	333	2	338	798
08:15 AM	0	0	5	5	5	348	4	357	6	0	8	14	2	257	4	263	639
08:30 AM	0	0	3	3	1	271	1	273	1	0	6	7	2	213	2	217	500
08:45 AM	0	0	5	5	2	252	2	256	2	0	5	7	3	207	1	211	479
Total	0	0	16	16	13	1302	9	1324	14	0	33	47	10	1010	9	1029	2416
Grand Total	1	1	31	33	45	2921	12	2978	46	0	77	123	18	2261	17	2296	5430
Apprch %	3	3	93.9		1.5	98.1	0.4		37.4	0	62.6		0.8	98.5	0.7		
Total %	0	0	0.6	0.6	0.8	53.8	0.2	54.8	0.8	0	1.4	2.3	0.3	41.6	0.3	42.3	

	Gardner Avenue Southbound				Van Buren Boulevard Westbound				Gardner Avenue Northbound				Van Buren 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 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	1	1	7	**435**	1	**443**	7	0	6	13	3	266	**3**	272	729
07:30 AM	0	0	3	3	**8**	430	1	439	**8**	0	6	14	**5**	342	2	349	805
07:45 AM	**1**	0	**6**	**7**	8	387	0	395	8	0	**23**	**31**	0	**401**	3	**404**	**837**
08:00 AM	0	0	3	3	5	431	**2**	438	5	0	14	19	3	333	2	338	798
Total Volume	1	0	13	14	28	1683	4	1715	28	0	49	77	11	1342	10	1363	3169
% App. Total	7.1	0	92.9		1.6	98.1	0.2		36.4	0	63.6		0.8	98.5	0.7		
PHF	.250	.000	.542	.500	.875	.967	.500	.968	.875	.000	.533	.621	.550	.837	.833	.843	.947

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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:15 AM				07:30 AM				07:15 AM			
+0 mins.	0	0	3	3	7	**435**	1	**443**	**8**	0	6	14	3	266	**3**	272
+15 mins.	**1**	0	**6**	**7**	**8**	430	1	439	8	0	**23**	**31**	**5**	342	2	349
+30 mins.	0	0	3	3	8	387	0	395	5	0	14	19	0	**401**	3	**404**
+45 mins.	0	0	5	5	5	431	**2**	438	6	0	8	14	3	333	2	338
Total Volume	1	0	17	18	28	1683	4	1715	27	0	51	78	11	1342	10	1363
% App. Total	5.6	0	94.4		1.6	98.1	0.2		34.6	0	65.4		0.8	98.5	0.7	
PHF	.250	.000	.708	.643	.875	.967	.500	.968	.844	.000	.554	.629	.550	.837	.833	.843

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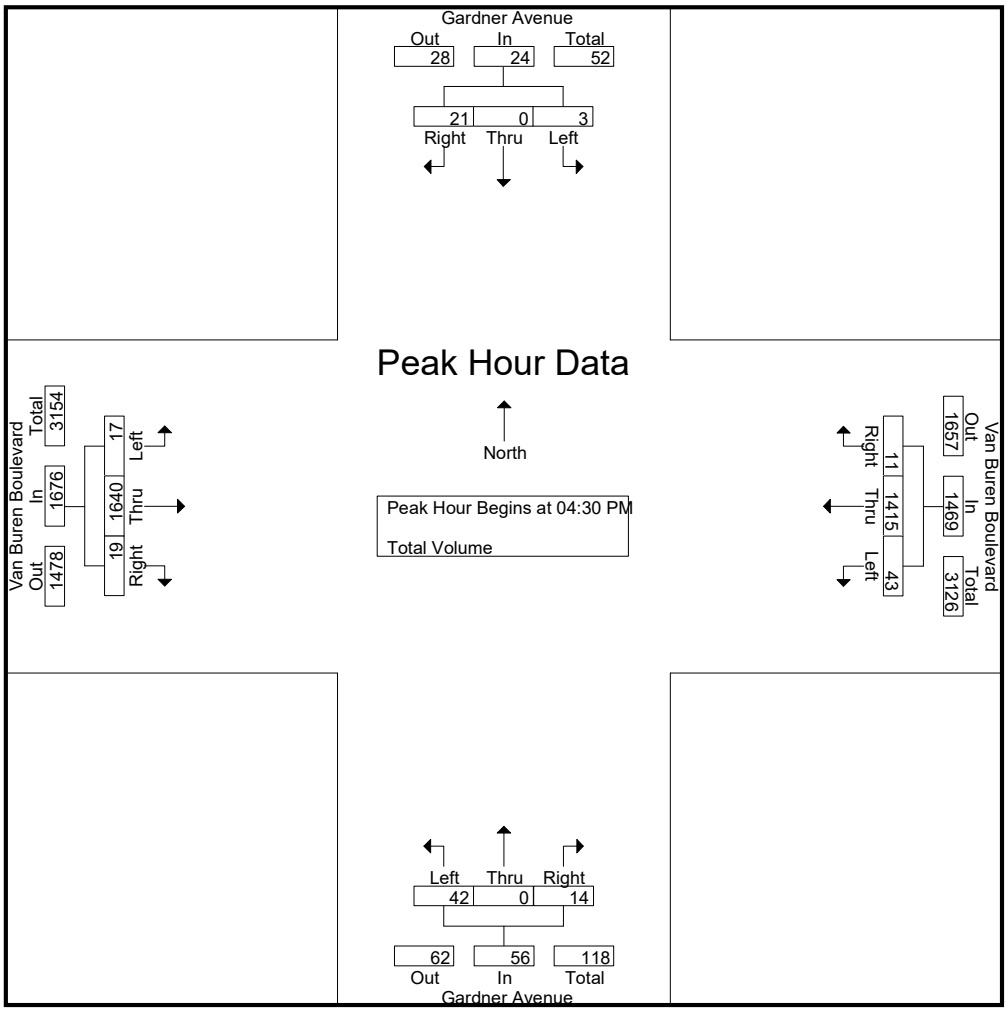
	Gardner Avenue Southbound				Van Buren Boulevard Westbound				Gardner Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	7	7	9	321	3	333	9	0	1	10	1	413	10	424	774
04:15 PM	0	0	7	7	12	308	3	323	10	0	5	15	6	468	4	478	823
04:30 PM	0	0	7	7	9	373	1	383	9	0	4	13	3	370	6	379	782
04:45 PM	0	0	3	3	11	338	5	354	10	0	5	15	5	403	8	416	788
Total	0	0	24	24	41	1340	12	1393	38	0	15	53	15	1654	28	1697	3167
05:00 PM	0	0	6	6	14	307	2	323	14	0	2	16	5	432	4	441	786
05:15 PM	3	0	5	8	9	397	3	409	9	0	3	12	4	435	1	440	869
05:30 PM	0	0	2	2	11	327	2	340	11	0	2	13	4	409	4	417	772
05:45 PM	0	0	5	5	9	308	1	318	9	0	0	9	9	401	9	419	751
Total	3	0	18	21	43	1339	8	1390	43	0	7	50	22	1677	18	1717	3178
Grand Total	3	0	42	45	84	2679	20	2783	81	0	22	103	37	3331	46	3414	6345
Apprch %	6.7	0	93.3		3	96.3	0.7		78.6	0	21.4		1.1	97.6	1.3		
Total %	0	0	0.7	0.7	1.3	42.2	0.3	43.9	1.3	0	0.3	1.6	0.6	52.5	0.7	53.8	

	Gardner Avenue Southbound				Van Buren Boulevard Westbound				Gardner Avenue Northbound				Van Buren 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 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	**7**	7	9	373	1	383	9	0	4	13	3	370	6	379	782
04:45 PM	0	0	3	3	11	338	**5**	354	10	0	**5**	15	**5**	403	**8**	416	788
05:00 PM	0	0	6	6	**14**	307	2	323	**14**	0	2	**16**	5	432	4	**441**	786
05:15 PM	**3**	0	5	**8**	9	**397**	3	**409**	9	0	3	12	4	**435**	1	440	**869**
Total Volume	3	0	21	24	43	1415	11	1469	42	0	14	56	17	1640	19	1676	3225
% App. Total	12.5	0	87.5		2.9	96.3	0.7		75	0	25		1	97.9	1.1		
PHF	.250	.000	.750	.750	.768	.891	.550	.898	.750	.000	.700	.875	.850	.943	.594	.950	.928

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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				04:15 PM				05:00 PM			
+0 mins.	0	0	**7**	**7**	9	373	1	383	10	0	**5**	15	5	432	4	**441**
+15 mins.	0	0	7	7	11	338	**5**	354	9	0	4	13	4	**435**	1	440
+30 mins.	0	0	7	7	**14**	307	2	323	10	0	5	15	4	409	4	417
+45 mins.	0	0	3	3	9	**397**	3	**409**	**14**	0	2	**16**	**9**	401	**9**	419
Total Volume	0	0	24	24	43	1415	11	1469	43	0	16	59	22	1677	18	1717
% App. Total	0	0	100		2.9	96.3	0.7		72.9	0	27.1		1.3	97.7	1	
PHF	.000	.000	.857	.857	.768	.891	.550	.898	.768	.000	.800	.922	.611	.964	.500	.973

Location: Riverside
N/S: Gardner Avenue
E/W: Van Buren Boulevard

Date: 5/8/2025
Day: Thursday

PEDESTRIANS

	North Leg Gardner Avenue	East Leg Van Buren Boulevard	South Leg Gardner Avenue	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	1	0	0	0	1
7:15 AM	2	0	0	0	2
7:30 AM	3	0	1	0	4
7:45 AM	0	0	0	0	0
8:00 AM	1	0	0	0	1
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	7	0	1	0	8

	North Leg Gardner Avenue	East Leg Van Buren Boulevard	South Leg Gardner Avenue	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	3	0	0	0	3
4:15 PM	0	0	0	0	0
4:30 PM	2	2	0	0	4
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	1	0	0	0	1
TOTAL VOLUMES:	6	2	0	0	8

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Location: Riverside
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E/W: Van Buren Boulevard

Date: 5/8/2025
Day: Thursday

BICYCLES

	Southbound Gardner Avenue			Westbound Van Buren Boulevard			Northbound Gardner Avenue			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	0	0	1

	Southbound Gardner Avenue			Westbound Van Buren Boulevard			Northbound Gardner Avenue			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	1	0	0	0	0	0	0	2	0	0	3
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	1	0	1	0	0	0	0	0	0	0	2
TOTAL VOLUMES:	0	0	2	0	2	0	0	0	0	3	0	0	7

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Site Code : 05125515
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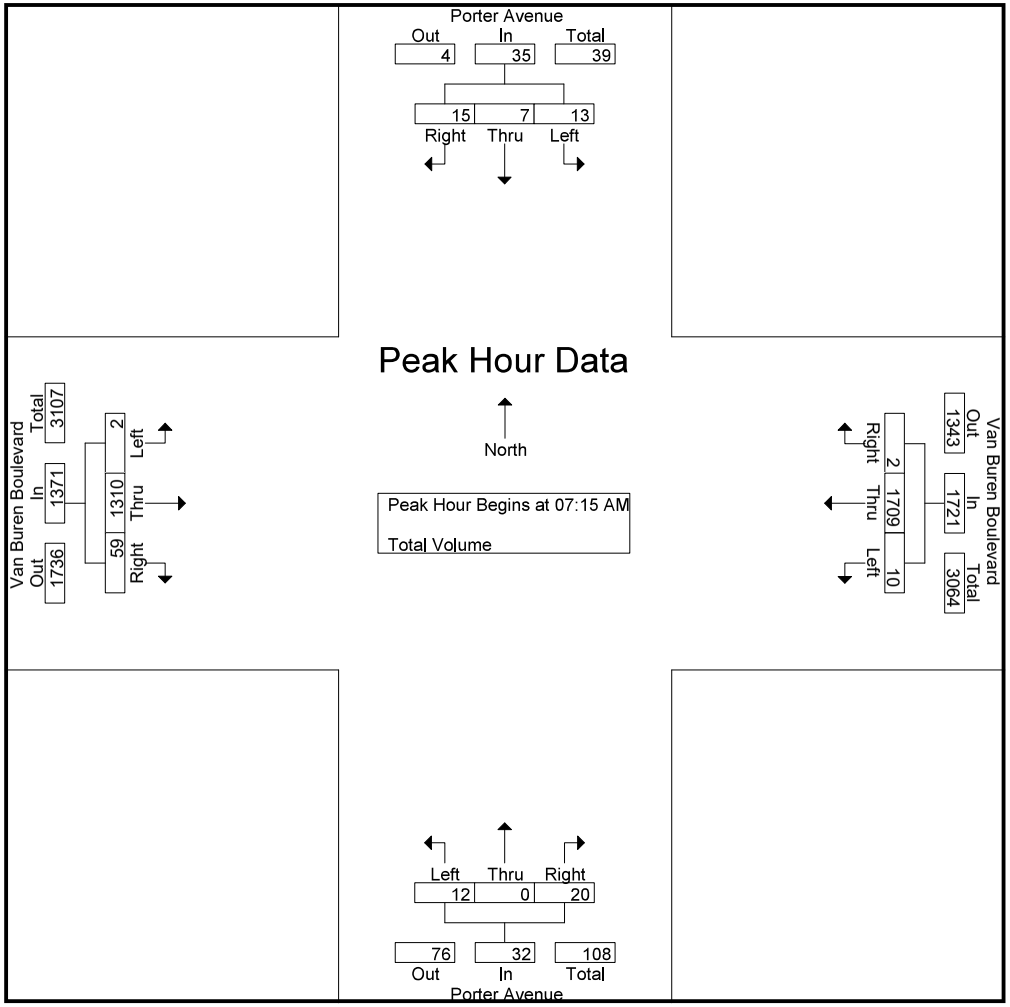
	Porter Avenue Southbound					Van Buren Boulevard Westbound					Porter Avenue Northbound					Van Buren Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	3	0	3	3	6	1	361	1	0	363	0	0	1	1	1	0	250	10	0	260	4	630	634
07:15 AM	1	0	5	2	6	1	449	1	0	451	1	0	1	0	2	1	254	9	1	264	3	723	726
07:30 AM	7	2	2	1	11	2	431	0	0	433	3	0	5	3	8	0	304	28	2	332	6	784	790
07:45 AM	1	4	5	1	10	3	390	1	0	394	4	0	5	0	9	0	406	18	4	424	5	837	842
Total	12	6	15	7	33	7	1631	3	0	1641	8	0	12	4	20	1	1214	65	7	1280	18	2974	2992
08:00 AM	4	1	3	1	8	4	439	0	0	443	4	0	9	5	13	1	346	4	2	351	8	815	823
08:15 AM	2	0	0	0	2	7	307	5	1	319	7	2	2	1	11	3	252	9	2	264	4	596	600
08:30 AM	4	1	2	1	7	34	275	3	0	312	33	1	2	2	36	3	212	6	2	221	5	576	581
08:45 AM	2	1	3	1	6	27	256	4	2	287	25	3	2	2	30	4	196	10	2	210	7	533	540
Total	12	3	8	3	23	72	1277	12	3	1361	69	6	15	10	90	11	1006	29	8	1046	24	2520	2544
Grand Total	24	9	23	10	56	79	2908	15	3	3002	77	6	27	14	110	12	2220	94	15	2326	42	5494	5536
Apprch %	42.9	16.1	41.1			2.6	96.9	0.5			70	5.5	24.5			0.5	95.4	4					
Total %	0.4	0.2	0.4		1	1.4	52.9	0.3		54.6	1.4	0.1	0.5		2	0.2	40.4	1.7		42.3	0.8	99.2	

	Porter Avenue Southbound				Van Buren Boulevard Westbound				Porter Avenue Northbound				Van Buren 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 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	1	0	**5**	6	1	**449**	**1**	**451**	1	0	1	2	**1**	254	9	264	723
07:30 AM	**7**	2	2	**11**	2	431	0	433	3	0	5	8	0	304	**28**	332	784
07:45 AM	1	**4**	5	10	3	390	1	394	**4**	0	5	9	0	**406**	18	**424**	**837**
08:00 AM	4	1	3	8	**4**	439	0	443	4	0	**9**	**13**	1	346	4	351	815
Total Volume	13	7	15	35	10	1709	2	1721	12	0	20	32	2	1310	59	1371	3159
% App. Total	37.1	20	42.9		0.6	99.3	0.1		37.5	0	62.5		0.1	95.6	4.3		
PHF	.464	.438	.750	.795	.625	.952	.500	.954	.750	.000	.556	.615	.500	.807	.527	.808	.944

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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 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				08:00 AM				07:15 AM				
+0 mins.	1	0	**5**	6	1	**449**	**1**	**451**	4	0	**9**	13	**1**	254	9	264	
+15 mins.	**7**	2	2	**11**	2	431	0	433	7	2	2	11	0	304	**28**	332	
+30 mins.	1	**4**	5	10	3	390	1	394	**33**	1	2	**36**	0	**406**	18	**424**	
+45 mins.	4	1	3	8	**4**	439	0	443	25	**3**	2	30	1	346	4	351	
Total Volume	13	7	15	35	10	1709	2	1721	69	6	15	90	2	1310	59	1371	
% App. Total	37.1	20	42.9		0.6	99.3	0.1		76.7	6.7	16.7		0.1	95.6	4.3		
PHF	.464	.438	.750	.795	.625	.952	.500	.954	.523	.500	.417	.625	.500	.807	.527	.808	

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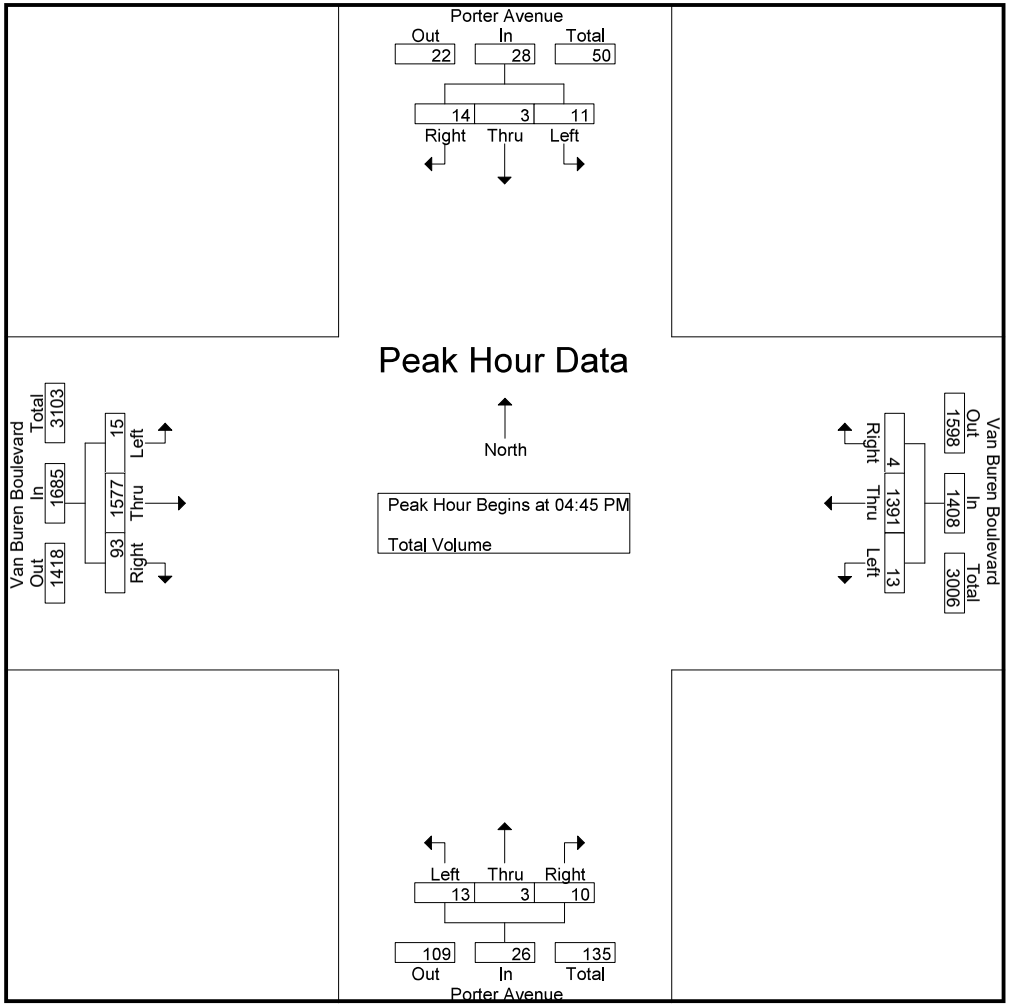
	Porter Avenue Southbound					Van Buren Boulevard Westbound					Porter Avenue Northbound					Van Buren Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	1	1	2	2	4	4	334	4	1	342	4	0	4	3	8	2	382	39	4	423	10	777	787
04:15 PM	6	2	2	1	10	4	305	3	1	312	4	2	2	2	8	9	410	36	7	455	11	785	796
04:30 PM	11	1	2	2	14	3	359	8	0	370	3	1	4	3	8	0	355	20	4	375	9	767	776
04:45 PM	2	0	2	1	4	4	356	1	0	361	4	1	1	0	6	3	383	22	4	408	5	779	784
Total	20	4	8	6	32	15	1354	16	2	1385	15	4	11	8	30	14	1530	117	19	1661	35	3108	3143
05:00 PM	3	1	3	2	7	4	301	0	0	305	4	1	3	1	8	3	399	24	3	426	6	746	752
05:15 PM	5	1	5	4	11	3	396	2	1	401	3	1	3	2	7	5	394	19	2	418	9	837	846
05:30 PM	1	1	4	2	6	2	338	1	0	341	2	0	3	2	5	4	401	28	3	433	7	785	792
05:45 PM	3	0	1	1	4	1	308	1	0	310	1	0	4	3	5	0	371	19	1	390	5	709	714
Total	12	3	13	9	28	10	1343	4	1	1357	10	2	13	8	25	12	1565	90	9	1667	27	3077	3104
Grand Total	32	7	21	15	60	25	2697	20	3	2742	25	6	24	16	55	26	3095	207	28	3328	62	6185	6247
Apprch %	53.3	11.7	35			0.9	98.4	0.7			45.5	10.9	43.6			0.8	93	6.2					
Total %	0.5	0.1	0.3		1	0.4	43.6	0.3		44.3	0.4	0.1	0.4		0.9	0.4	50	3.3		53.8	1	99	

	Porter Avenue Southbound				Van Buren Boulevard Westbound				Porter Avenue Northbound				Van Buren 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 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	2	0	2	4	**4**	356	1	361	**4**	**1**	1	6	3	383	22	408	779
05:00 PM	3	**1**	3	7	4	301	0	305	4	1	**3**	**8**	3	399	24	426	746
05:15 PM	**5**	1	**5**	**11**	3	**396**	**2**	**401**	3	1	3	7	**5**	394	19	418	**837**
05:30 PM	1	1	4	6	2	338	1	341	2	0	3	5	4	**401**	**28**	**433**	785
Total Volume	11	3	14	28	13	1391	4	1408	13	3	10	26	15	1577	93	1685	3147
% App. Total	39.3	10.7	50		0.9	98.8	0.3		50	11.5	38.5		0.9	93.6	5.5		
PHF	.550	.750	.700	.636	.813	.878	.500	.878	.813	.750	.833	.813	.750	.983	.830	.973	.940

Counts Unlimited, Inc.
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City of Riverside
N/S: Porter Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 10_RIV_Por_VB PM
Site Code : 05125515
Start Date : 5/8/2025
Page No : 2



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City of Riverside
N/S: Porter Avenue
E/W: Van Buren Boulevard
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File Name : 10_RIV_Por_VB PM
Site Code : 05125515
Start Date : 5/8/2025
Page No : 3

	Porter Avenue Southbound				Van Buren Boulevard Westbound				Porter Avenue Northbound				Van Buren 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 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:00 PM				04:45 PM				
+0 mins.	**11**	**1**	2	**14**	3	359	**8**	370	**4**	0	**4**	**8**	3	383	22	408	
+15 mins.	2	0	2	4	**4**	356	1	361	4	**2**	2	8	3	399	24	426	
+30 mins.	3	1	3	7	4	301	0	305	3	1	4	8	**5**	394	19	418	
+45 mins.	5	1	**5**	11	3	**396**	2	**401**	4	1	1	6	4	**401**	**28**	**433**	
Total Volume	21	3	12	36	14	1412	11	1437	15	4	11	30	15	1577	93	1685	
% App. Total	58.3	8.3	33.3		1	98.3	0.8		50	13.3	36.7		0.9	93.6	5.5		
PHF	.477	.750	.600	.643	.875	.891	.344	.896	.938	.500	.688	.938	.750	.983	.830	.973	

Location: Riverside
N/S: Porter Avenue
E/W: Van Buren Boulevard

Date: 5/8/2025
Day: Thursday

PEDESTRIANS

	North Leg Porter Avenue	East Leg Van Buren Boulevard	South Leg Porter Avenue	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	3	0	0	0	3
7:30 AM	0	0	0	1	1
7:45 AM	1	0	0	0	1
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	4	0	0	1	5

	North Leg Porter Avenue	East Leg Van Buren Boulevard	South Leg Porter Avenue	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	3	0	0	0	3
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	1	0	0	0	1
5:30 PM	0	0	0	0	0
5:45 PM	1	0	0	0	1
TOTAL VOLUMES:	5	0	0	0	5

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Location: Riverside
N/S: Porter Avenue
E/W: Van Buren Boulevard

Date: 5/8/2025
Day: Thursday

BICYCLES

	Southbound Porter Avenue			Westbound Van Buren Boulevard			Northbound Porter Avenue			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	0	0	1

	Southbound Porter Avenue			Westbound Van Buren Boulevard			Northbound Porter Avenue			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	1	1	0	0	0	0	0	0	2

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City of Riverside
N/S: Chicago Avenue/Alta Cresta Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 11_RIV_AV_VB AM
Site Code : 05125515
Start Date : 5/8/2025
Page No : 1

Groups Printed- Total Volume

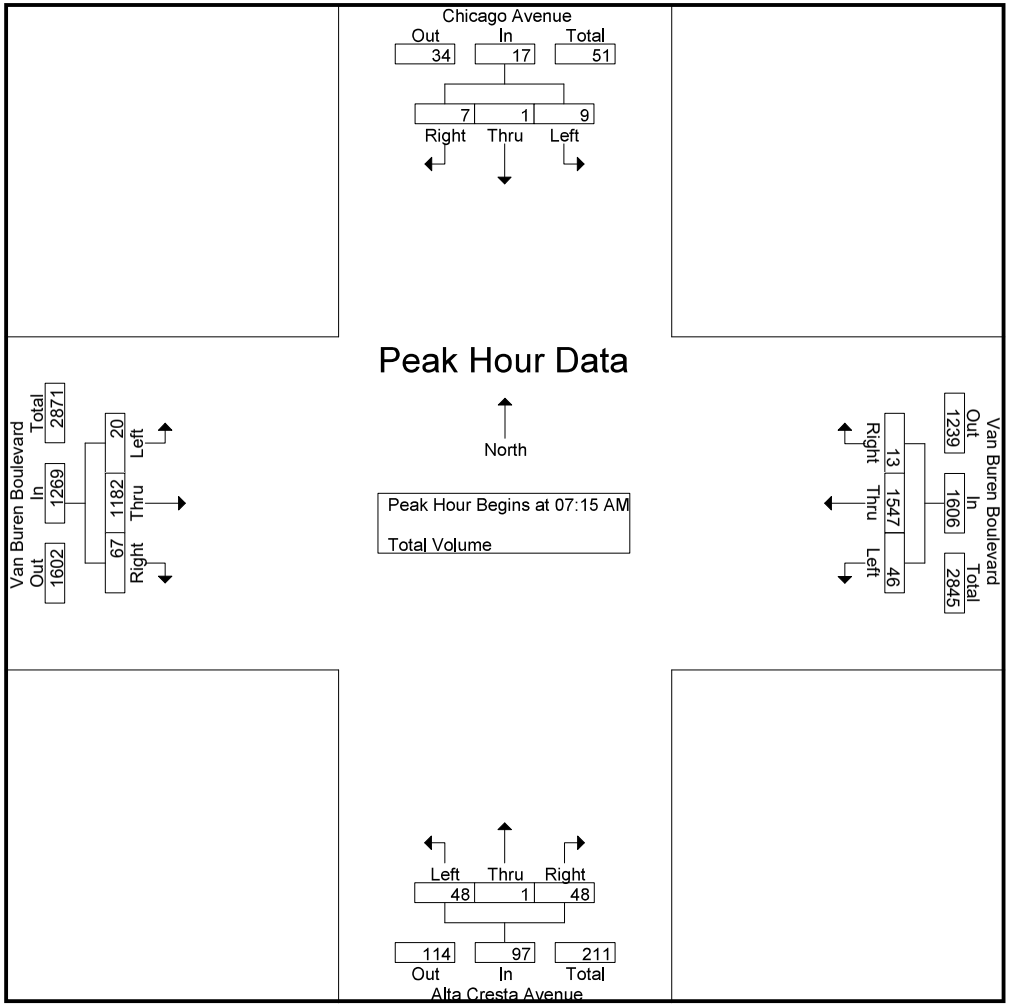
	Chicago Avenue Southbound					Van Buren Boulevard Westbound					Alta Cresta Avenue Northbound					Van Buren Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	4	0	1	1	5	4	331	5	0	340	4	0	3	2	7	9	249	4	0	262	3	614	617
07:15 AM	2	0	1	1	3	4	410	3	0	417	4	0	8	4	12	6	238	16	3	260	8	692	700
07:30 AM	3	1	2	2	6	18	425	6	0	449	19	0	7	5	26	3	254	13	1	270	8	751	759
07:45 AM	3	0	2	1	5	20	378	1	0	399	21	1	22	10	44	7	321	27	10	355	21	803	824
Total	12	1	6	5	19	46	1544	15	0	1605	48	1	40	21	89	25	1062	60	14	1147	40	2860	2900
08:00 AM	1	0	2	2	3	4	334	3	1	341	4	0	11	6	15	4	369	11	1	384	10	743	753
08:15 AM	6	2	2	2	10	7	333	4	0	344	6	1	6	5	13	4	239	23	3	266	10	633	643
08:30 AM	2	0	1	1	3	11	335	4	0	350	11	1	8	8	20	6	226	8	3	240	12	613	625
08:45 AM	4	0	0	0	4	3	325	2	1	330	3	0	5	5	8	7	199	4	0	210	6	552	558
Total	13	2	5	5	20	25	1327	13	2	1365	24	2	30	24	56	21	1033	46	7	1100	38	2541	2579
Grand Total	25	3	11	10	39	71	2871	28	2	2970	72	3	70	45	145	46	2095	106	21	2247	78	5401	5479
Apprch %	64.1	7.7	28.2			2.4	96.7	0.9			49.7	2.1	48.3			2	93.2	4.7					
Total %	0.5	0.1	0.2		0.7	1.3	53.2	0.5		55	1.3	0.1	1.3		2.7	0.9	38.8	2		41.6	1.4	98.6	

	Chicago Avenue Southbound				Van Buren Boulevard Westbound				Alta Cresta Avenue Northbound				Van Buren 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 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	2	0	1	3	4	410	3	417	4	0	8	12	6	238	16	260	692
07:30 AM	**3**	**1**	**2**	**6**	18	**425**	**6**	**449**	19	0	7	26	3	254	13	270	751
07:45 AM	3	0	2	5	**20**	378	1	399	**21**	**1**	**22**	**44**	**7**	321	**27**	355	**803**
08:00 AM	1	0	2	3	4	334	3	341	4	0	11	15	4	**369**	11	**384**	743
Total Volume	9	1	7	17	46	1547	13	1606	48	1	48	97	20	1182	67	1269	2989
% App. Total	52.9	5.9	41.2		2.9	96.3	0.8		49.5	1	49.5		1.6	93.1	5.3		
PHF	.750	.250	.875	.708	.575	.910	.542	.894	.571	.250	.545	.551	.714	.801	.620	.826	.931

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City of Riverside
N/S: Chicago Avenue/Alta Cresta Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 11_RIV_AV_VB AM
Site Code : 05125515
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City of Riverside
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File Name : 11_RIV_AV_VB AM
Site Code : 05125515
Start Date : 5/8/2025

	Chicago Avenue Southbound				Van Buren Boulevard Westbound				Alta Cresta Avenue Northbound				Van Buren 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 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:30 AM				07:15 AM				07:30 AM				07:30 AM				
+0 mins.	3	1	**2**	6	4	410	3	417	19	0	7	26	3	254	13	270	
+15 mins.	3	0	2	5	18	**425**	**6**	**449**	**21**	**1**	**22**	**44**	**7**	321	**27**	355	
+30 mins.	1	0	2	3	**20**	378	1	399	4	0	11	15	4	**369**	11	**384**	
+45 mins.	**6**	**2**	2	**10**	4	334	3	341	6	1	6	13	4	239	23	266	
Total Volume	13	3	8	24	46	1547	13	1606	50	2	46	98	18	1183	74	1275	
% App. Total	54.2	12.5	33.3		2.9	96.3	0.8		51	2	46.9		1.4	92.8	5.8		
PHF	.542	.375	1.000	.600	.575	.910	.542	.894	.595	.500	.523	.557	.643	.801	.685	.830	

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City of Riverside
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Weather: Clear

File Name : 11_RIV_AV_VB PM
Site Code : 05125515
Start Date : 5/8/2025
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Groups Printed- Total Volume

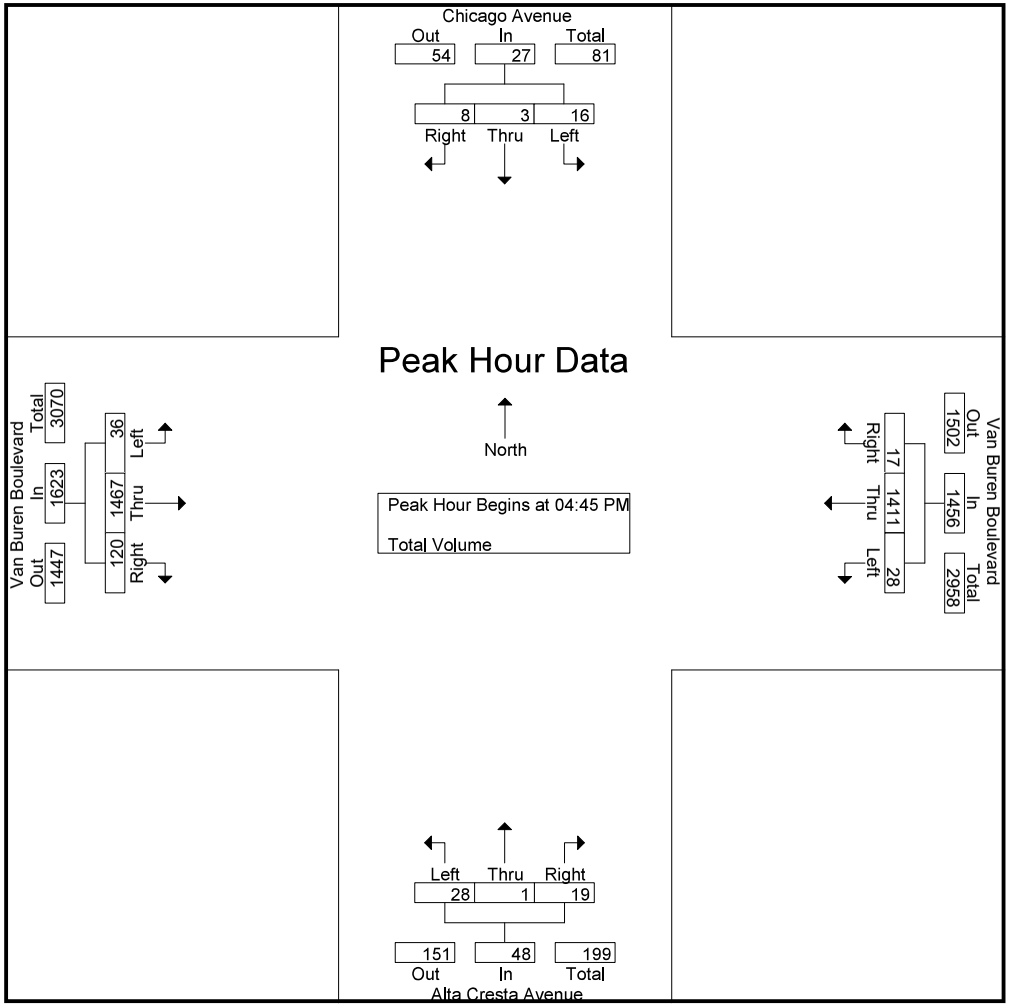
	Chicago Avenue Southbound					Van Buren Boulevard Westbound					Alta Cresta Avenue Northbound					Van Buren Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	4	0	3	1	7	5	351	4	0	360	5	0	2	2	7	11	331	41	3	383	6	757	763
04:15 PM	3	2	1	0	6	9	314	4	2	327	9	1	4	3	14	14	371	31	3	416	8	763	771
04:30 PM	6	1	0	0	7	2	349	3	0	354	2	0	8	5	10	6	357	32	2	395	7	766	773
04:45 PM	1	1	3	1	5	1	360	2	0	363	1	0	1	1	2	12	334	33	4	379	6	749	755
Total	14	4	7	2	25	17	1374	13	2	1404	17	1	15	11	33	43	1393	137	12	1573	27	3035	3062
05:00 PM	5	0	2	1	7	10	314	9	0	333	10	0	7	4	17	10	371	21	4	402	9	759	768
05:15 PM	6	2	2	1	10	8	377	2	0	387	8	0	5	4	13	9	380	36	3	425	8	835	843
05:30 PM	4	0	1	1	5	9	360	4	0	373	9	1	6	1	16	5	382	30	6	417	8	811	819
05:45 PM	4	1	2	1	7	4	294	3	0	301	4	0	4	2	8	5	346	32	3	383	6	699	705
Total	19	3	7	4	29	31	1345	18	0	1394	31	1	22	11	54	29	1479	119	16	1627	31	3104	3135
Grand Total	33	7	14	6	54	48	2719	31	2	2798	48	2	37	22	87	72	2872	256	28	3200	58	6139	6197
Apprch %	61.1	13	25.9			1.7	97.2	1.1			55.2	2.3	42.5			2.2	89.8	8					
Total %	0.5	0.1	0.2		0.9	0.8	44.3	0.5		45.6	0.8	0	0.6		1.4	1.2	46.8	4.2		52.1	0.9	99.1	

	Chicago Avenue Southbound				Van Buren Boulevard Westbound				Alta Cresta Avenue Northbound				Van Buren 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 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	1	1	**3**	5	1	360	2	363	1	0	1	2	**12**	334	33	379	749
05:00 PM	5	0	2	7	**10**	314	**9**	333	**10**	0	**7**	**17**	10	371	21	402	759
05:15 PM	**6**	**2**	2	**10**	8	**377**	2	**387**	8	0	5	13	9	380	**36**	**425**	**835**
05:30 PM	4	0	1	5	9	360	4	373	9	**1**	6	16	5	**382**	30	417	811
Total Volume	16	3	8	27	28	1411	17	1456	28	1	19	48	36	1467	120	1623	3154
% App. Total	59.3	11.1	29.6		1.9	96.9	1.2		58.3	2.1	39.6		2.2	90.4	7.4		
PHF	.667	.375	.667	.675	.700	.936	.472	.941	.700	.250	.679	.706	.750	.960	.833	.955	.944

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City of Riverside
N/S: Chicago Avenue/Alta Cresta Avenue
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Weather: Clear

File Name : 11_RIV_AV_VB PM
Site Code : 05125515
Start Date : 5/8/2025
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N/S: Chicago Avenue/Alta Cresta Avenue
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Weather: Clear

File Name : 11_RIV_AV_VB PM
Site Code : 05125515
Start Date : 5/8/2025

	Chicago Avenue Southbound				Van Buren Boulevard Westbound				Alta Cresta Avenue Northbound				Van Buren 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 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:45 PM				05:00 PM				05:00 PM				
+0 mins.	**6**	1	0	7	1	360	2	363	**10**	0	**7**	**17**	**10**	371	21	402	
+15 mins.	1	1	**3**	5	**10**	314	**9**	333	8	0	5	13	9	380	**36**	**425**	
+30 mins.	5	0	2	7	8	**377**	2	**387**	9	**1**	6	16	5	**382**	30	417	
+45 mins.	6	**2**	2	**10**	9	360	4	373	4	0	4	8	5	346	32	383	
Total Volume	18	4	7	29	28	1411	17	1456	31	1	22	54	29	1479	119	1627	
% App. Total	62.1	13.8	24.1		1.9	96.9	1.2		57.4	1.9	40.7		1.8	90.9	7.3		
PHF	.750	.500	.583	.725	.700	.936	.472	.941	.775	.250	.786	.794	.725	.968	.826	.957	

Location: Riverside
N/S: Chicago Ave/Alta Cresta Ave
E/W: Van Buren Boulevard

Date: 5/8/2025
Day: Thursday

PEDESTRIANS

	North Leg Chicago Avenue	East Leg Van Buren Boulevard	South Leg Alta Cresta Avenue	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	1	0	0	0	1
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	1	0	0	0	1

	North Leg Chicago Avenue	East Leg Van Buren Boulevard	South Leg Alta Cresta Avenue	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	1	0	0	0	1
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	1	0	1
TOTAL VOLUMES:	1	0	1	0	2

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Location: Riverside
N/S: Chicago Ave/Alta Cresta Ave
E/W: Van Buren Boulevard

Date: 5/8/2025
Day: Thursday

BICYCLES

	Southbound Chicago Avenue			Westbound Van Buren Boulevard			Northbound Alta Cresta Avenue			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	2	0	0	0	0	0	0	0	2

	Southbound Chicago Avenue			Westbound Van Buren Boulevard			Northbound Alta Cresta Avenue			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	4	0	0	1	0	0	0	0	0	0	0	5
5:45 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
TOTAL VOLUMES:	0	4	0	0	2	0	0	0	0	0	1	0	7

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City of Riverside
N/S: Dauchy Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 12_RIV_Dau_VB AM
Site Code : 05125515
Start Date : 5/8/2025

Groups Printed- Total Volume

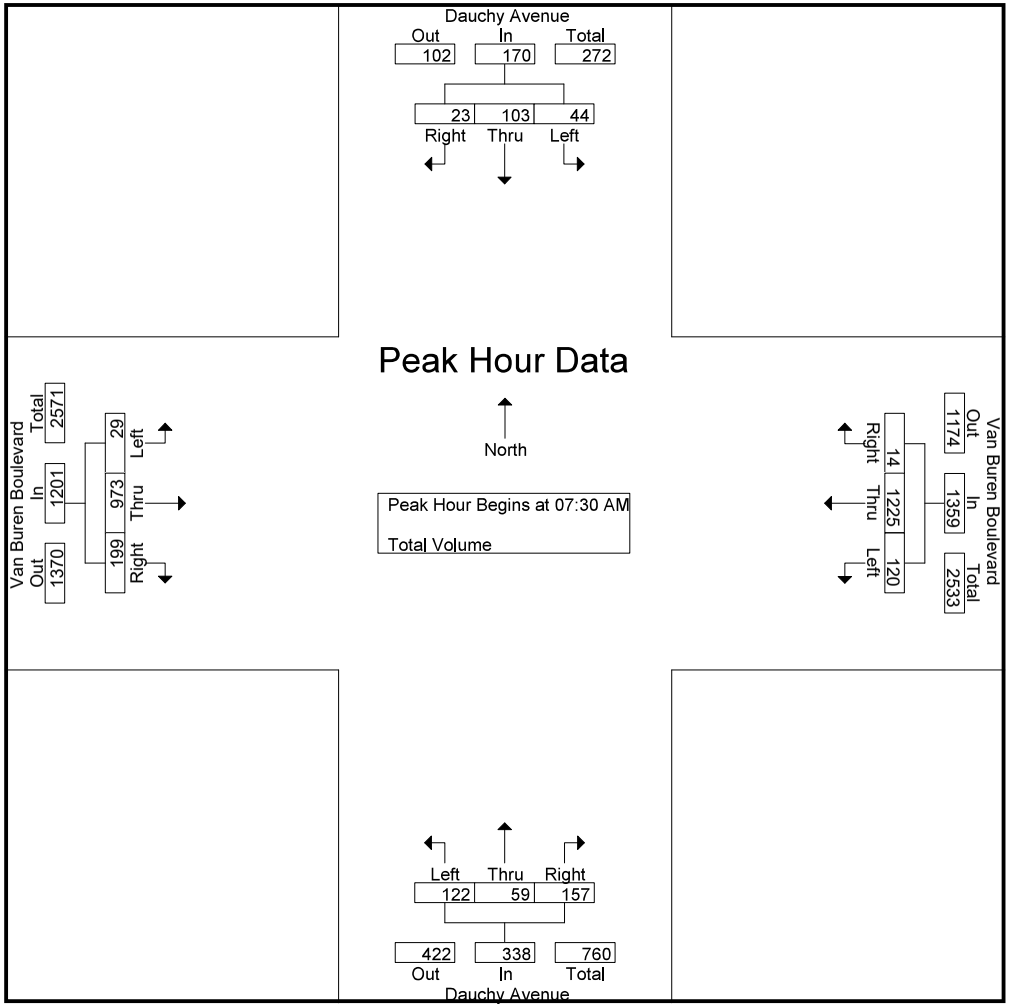
	Dauchy Avenue Southbound					Van Buren Boulevard Westbound					Dauchy Avenue Northbound					Van Buren Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	5	3	3	1	11	23	322	5	0	350	25	3	19	11	47	4	208	23	6	235	18	643	661
07:15 AM	6	5	4	3	15	20	340	0	0	360	20	3	16	7	39	3	228	17	3	248	13	662	675
07:30 AM	5	12	5	4	22	21	355	2	1	378	22	5	17	10	44	3	219	30	8	252	23	696	719
07:45 AM	11	16	10	6	37	40	330	3	2	373	40	5	39	14	84	8	265	44	11	317	33	811	844
Total	27	36	22	14	85	104	1347	10	3	1461	107	16	91	42	214	18	920	114	28	1052	87	2812	2899
08:00 AM	15	34	2	0	51	34	272	6	2	312	34	18	54	13	106	8	278	80	32	366	47	835	882
08:15 AM	13	41	6	3	60	25	268	3	1	296	26	31	47	13	104	10	211	45	23	266	40	726	766
08:30 AM	5	4	5	3	14	8	297	2	0	307	9	5	11	6	25	3	191	10	3	204	12	550	562
08:45 AM	3	2	7	5	12	13	307	2	0	322	11	4	8	4	23	9	209	9	1	227	10	584	594
Total	36	81	20	11	137	80	1144	13	3	1237	80	58	120	36	258	30	889	144	59	1063	109	2695	2804
Grand Total	63	117	42	25	222	184	2491	23	6	2698	187	74	211	78	472	48	1809	258	87	2115	196	5507	5703
Apprch %	28.4	52.7	18.9			6.8	92.3	0.9			39.6	15.7	44.7			2.3	85.5	12.2					
Total %	1.1	2.1	0.8		4	3.3	45.2	0.4		49	3.4	1.3	3.8		8.6	0.9	32.8	4.7		38.4	3.4	96.6	

	Dauchy Avenue Southbound				Van Buren Boulevard Westbound				Dauchy Avenue Northbound				Van Buren 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 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	5	12	5	22	21	**355**	2	**378**	22	5	17	44	3	219	30	252	696
07:45 AM	11	16	**10**	37	**40**	330	3	373	**40**	5	39	84	8	265	44	317	811
08:00 AM	**15**	34	2	51	34	272	**6**	312	34	18	**54**	**106**	8	**278**	**80**	**366**	**835**
08:15 AM	13	**41**	6	**60**	25	268	3	296	26	**31**	47	104	**10**	211	45	266	726
Total Volume	44	103	23	170	120	1225	14	1359	122	59	157	338	29	973	199	1201	3068
% App. Total	25.9	60.6	13.5		8.8	90.1	1		36.1	17.5	46.4		2.4	81	16.6		
PHF	.733	.628	.575	.708	.750	.863	.583	.899	.763	.476	.727	.797	.725	.875	.622	.820	.919

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City of Riverside
N/S: Dauchy Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 12_RIV_Dau_VB AM
Site Code : 05125515
Start Date : 5/8/2025
Page No : 2



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City of Riverside
N/S: Dauchy Avenue
E/W: Van Buren Boulevard
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File Name : 12_RIV_Dau_VB AM
Site Code : 05125515
Start Date : 5/8/2025

	Dauchy Avenue Southbound				Van Buren Boulevard Westbound				Dauchy Avenue Northbound				Van Buren 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 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:30 AM				07:00 AM				07:30 AM				07:30 AM				
+0 mins.	5	12	5	22	23	322	**5**	350	22	5	17	44	3	219	30	252	
+15 mins.	11	16	**10**	37	20	340	0	360	**40**	5	39	84	8	265	44	317	
+30 mins.	**15**	34	2	51	21	**355**	2	**378**	34	18	**54**	**106**	8	**278**	**80**	**366**	
+45 mins.	13	**41**	6	**60**	**40**	330	3	373	26	**31**	47	104	**10**	211	45	266	
Total Volume	44	103	23	170	104	1347	10	1461	122	59	157	338	29	973	199	1201	
% App. Total	25.9	60.6	13.5		7.1	92.2	0.7		36.1	17.5	46.4		2.4	81	16.6		
PHF	.733	.628	.575	.708	.650	.949	.500	.966	.763	.476	.727	.797	.725	.875	.622	.820	

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File Name : 12_RIV_Dau_VB PM
Site Code : 05125515
Start Date : 5/8/2025
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Groups Printed- Total Volume

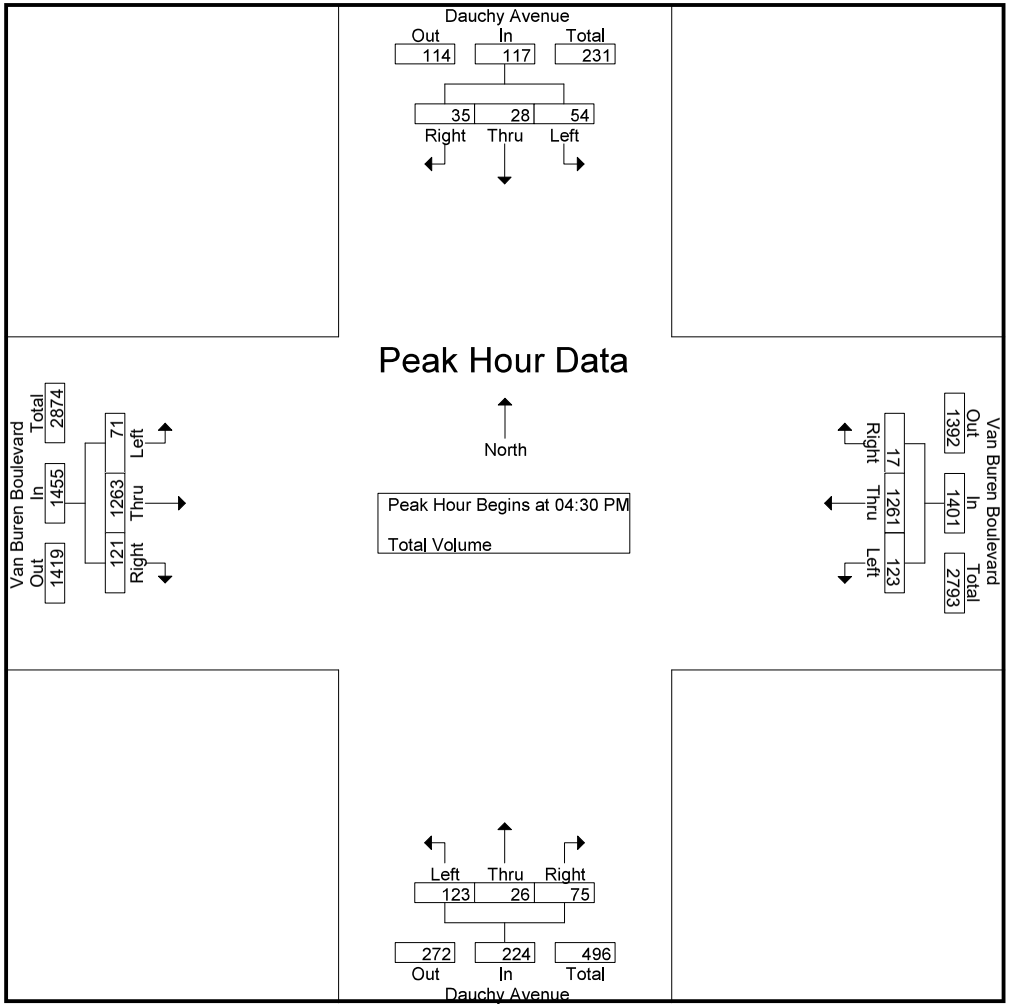
	Dauchy Avenue Southbound					Van Buren Boulevard Westbound					Dauchy Avenue Northbound					Van Buren Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	9	8	10	6	27	27	304	4	1	335	27	5	16	2	48	18	261	35	7	314	16	724	740
04:15 PM	13	11	11	4	35	27	274	5	2	306	28	15	19	9	62	19	308	39	10	366	25	769	794
04:30 PM	14	6	8	5	28	28	312	5	1	345	28	9	18	7	55	15	320	25	15	360	28	788	816
04:45 PM	10	7	8	6	25	32	312	4	2	348	32	8	13	6	53	20	296	31	8	347	22	773	795
Total	46	32	37	21	115	114	1202	18	6	1334	115	37	66	24	218	72	1185	130	40	1387	91	3054	3145
05:00 PM	14	10	9	6	33	27	287	4	3	318	27	2	18	11	47	23	321	37	7	381	27	779	806
05:15 PM	16	5	10	5	31	36	350	4	2	390	36	7	26	5	69	13	326	28	13	367	25	857	882
05:30 PM	13	4	8	5	25	16	284	5	0	305	16	9	15	3	40	26	361	26	11	413	19	783	802
05:45 PM	9	3	10	7	22	23	272	7	3	302	23	6	5	1	34	17	306	27	7	350	18	708	726
Total	52	22	37	23	111	102	1193	20	8	1315	102	24	64	20	190	79	1314	118	38	1511	89	3127	3216
Grand Total	98	54	74	44	226	216	2395	38	14	2649	217	61	130	44	408	151	2499	248	78	2898	180	6181	6361
Apprch %	43.4	23.9	32.7			8.2	90.4	1.4			53.2	15	31.9			5.2	86.2	8.6					
Total %	1.6	0.9	1.2		3.7	3.5	38.7	0.6		42.9	3.5	1	2.1		6.6	2.4	40.4	4		46.9	2.8	97.2	

	Dauchy Avenue Southbound				Van Buren Boulevard Westbound				Dauchy Avenue Northbound				Van Buren 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 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	14	6	8	28	28	312	**5**	345	28	**9**	18	55	15	320	25	360	788
04:45 PM	10	7	8	25	32	312	4	348	32	8	13	53	20	296	31	347	773
05:00 PM	14	**10**	9	**33**	27	287	4	318	27	2	18	47	**23**	321	**37**	**381**	779
05:15 PM	**16**	5	**10**	31	**36**	**350**	4	**390**	**36**	7	**26**	**69**	13	**326**	28	367	**857**
Total Volume	54	28	35	117	123	1261	17	1401	123	26	75	224	71	1263	121	1455	3197
% App. Total	46.2	23.9	29.9		8.8	90	1.2		54.9	11.6	33.5		4.9	86.8	8.3		
PHF	.844	.700	.875	.886	.854	.901	.850	.898	.854	.722	.721	.812	.772	.969	.818	.955	.933

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City of Riverside
N/S: Dauchy Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 12_RIV_Dau_VB PM
Site Code : 05125515
Start Date : 5/8/2025
Page No : 2



Counts Unlimited, Inc.
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City of Riverside
N/S: Dauchy Avenue
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File Name : 12_RIV_Dau_VB PM
Site Code : 05125515
Start Date : 5/8/2025

	Dauchy Avenue Southbound				Van Buren Boulevard Westbound				Dauchy Avenue Northbound				Van Buren 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 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:30 PM				04:30 PM				05:00 PM				
+0 mins.	13	**11**	**11**	**35**	28	312	**5**	345	28	**9**	18	55	23	321	**37**	381	
+15 mins.	**14**	6	8	28	32	312	4	348	32	8	13	53	13	326	28	367	
+30 mins.	10	7	8	25	27	287	4	318	27	2	18	47	**26**	**361**	26	**413**	
+45 mins.	14	10	9	33	**36**	**350**	4	**390**	**36**	7	**26**	**69**	17	306	27	350	
Total Volume	51	34	36	121	123	1261	17	1401	123	26	75	224	79	1314	118	1511	
% App. Total	42.1	28.1	29.8		8.8	90	1.2		54.9	11.6	33.5		5.2	87	7.8		
PHF	.911	.773	.818	.864	.854	.901	.850	.898	.854	.722	.721	.812	.760	.910	.797	.915	

Location: Riverside
N/S: Dauchy Avenue
E/W: Van Buren Boulevard

Date: 5/8/2025
Day: Thursday

PEDESTRIANS

	North Leg Dauchy Avenue	East Leg Van Buren Boulevard	South Leg Dauchy Avenue	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	1	1
7:15 AM	1	0	0	1	2
7:30 AM	0	0	0	1	1
7:45 AM	0	0	0	0	0
8:00 AM	1	0	0	0	1
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	2	0	0	3	5

	North Leg Dauchy Avenue	East Leg Van Buren Boulevard	South Leg Dauchy Avenue	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	1	0	0	0	1
4:15 PM	0	0	4	0	4
4:30 PM	1	0	0	0	1
4:45 PM	0	0	0	0	0
5:00 PM	0	0	1	1	2
5:15 PM	0	0	0	0	0
5:30 PM	1	0	0	0	1
5:45 PM	1	0	0	0	1
TOTAL VOLUMES:	4	0	5	1	10

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Location: Riverside
N/S: Dauchy Avenue
E/W: Van Buren Boulevard

Date: 5/8/2025
Day: Thursday

BICYCLES

	Southbound Dauchy Avenue			Westbound Van Buren Boulevard			Northbound Dauchy Avenue			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	1	0	0	0	0	0	1	0	3

	Southbound Dauchy Avenue			Westbound Van Buren Boulevard			Northbound Dauchy Avenue			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	1	1	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	2	1	0	0	0	0	1	0	0	0	0	4

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City of Riverside
N/S: Wood Road
E/W: Van Buren Boulevard
Weather: Clear

File Name : 13_RIV_Wood_VB AM
Site Code : 05125515
Start Date : 5/8/2025
Page No : 1

Groups Printed- Total Volume

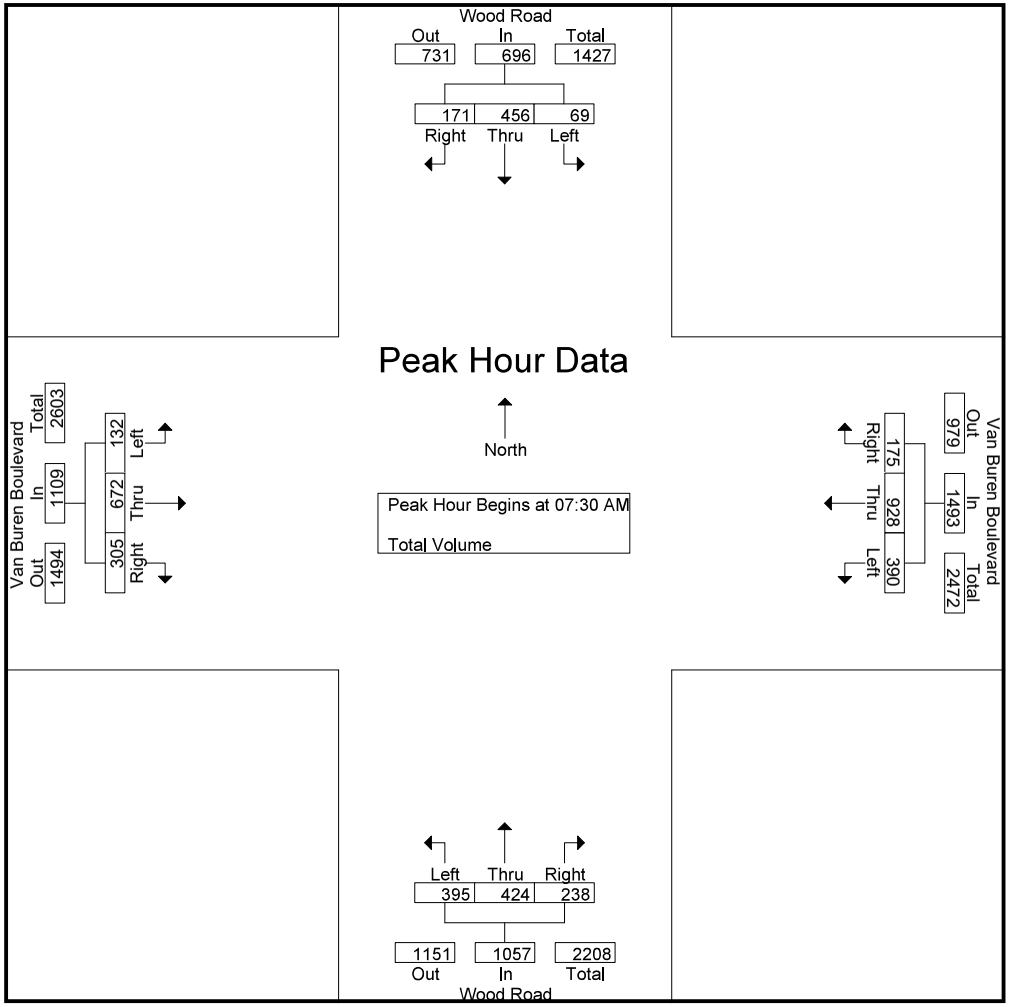
	Wood Road Southbound					Van Buren Boulevard Westbound					Wood Road Northbound					Van Buren Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	10	27	37	17	74	21	220	14	3	255	21	83	22	13	126	15	205	26	8	246	41	701	742
07:15 AM	7	43	36	30	86	35	261	10	3	306	34	69	18	11	121	30	187	30	21	247	65	760	825
07:30 AM	17	63	51	26	131	73	236	44	24	353	77	98	41	24	216	28	146	45	24	219	98	919	1017
07:45 AM	23	128	57	24	208	69	239	42	15	350	68	96	67	34	231	39	187	96	57	322	130	1111	1241
Total	57	261	181	97	499	198	956	110	45	1264	200	346	148	82	694	112	725	197	110	1034	334	3491	3825
08:00 AM	9	141	29	11	179	136	240	55	22	431	138	103	60	46	301	27	182	85	45	294	124	1205	1329
08:15 AM	20	124	34	15	178	112	213	34	11	359	112	127	70	36	309	38	157	79	39	274	101	1120	1221
08:30 AM	14	42	35	14	91	24	239	16	11	279	26	71	51	23	148	37	230	27	19	294	67	812	879
08:45 AM	14	29	34	15	77	28	274	19	12	321	28	36	24	21	88	30	158	20	7	208	55	694	749
Total	57	336	132	55	525	300	966	124	56	1390	304	337	205	126	846	132	727	211	110	1070	347	3831	4178
Grand Total	114	597	313	152	1024	498	1922	234	101	2654	504	683	353	208	1540	244	1452	408	220	2104	681	7322	8003
Apprch %	11.1	58.3	30.6			18.8	72.4	8.8			32.7	44.4	22.9			11.6	69	19.4					
Total %	1.6	8.2	4.3		14	6.8	26.2	3.2		36.2	6.9	9.3	4.8		21	3.3	19.8	5.6		28.7	8.5	91.5	

	Wood Road Southbound				Van Buren Boulevard Westbound				Wood Road Northbound				Van Buren 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 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	17	63	51	131	73	236	44	353	77	98	41	216	28	146	45	219	919
07:45 AM	**23**	128	**57**	**208**	69	239	42	350	68	96	67	231	**39**	**187**	**96**	**322**	1111
08:00 AM	9	**141**	29	179	**136**	**240**	**55**	**431**	**138**	103	60	301	27	182	85	294	**1205**
08:15 AM	20	124	34	178	112	213	34	359	112	**127**	**70**	**309**	38	157	79	274	1120
Total Volume	69	456	171	696	390	928	175	1493	395	424	238	1057	132	672	305	1109	4355
% App. Total	9.9	65.5	24.6		26.1	62.2	11.7		37.4	40.1	22.5		11.9	60.6	27.5		
PHF	.750	.809	.750	.837	.717	.967	.795	.866	.716	.835	.850	.855	.846	.898	.794	.861	.904

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City of Riverside
N/S: Wood Road
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Weather: Clear

File Name : 13_RIV_Wood_VB AM
Site Code : 05125515
Start Date : 5/8/2025
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City of Riverside
N/S: Wood Road
E/W: Van Buren Boulevard
Weather: Clear

File Name : 13_RIV_Wood_VB AM
Site Code : 05125515
Start Date : 5/8/2025
Page No : 3

	Wood Road Southbound				Van Buren Boulevard Westbound				Wood Road Northbound				Van Buren 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 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:30 AM				07:30 AM				07:30 AM				07:45 AM				
+0 mins.	17	63	51	131	73	236	44	353	77	98	41	216	**39**	187	**96**	**322**	
+15 mins.	**23**	128	**57**	**208**	69	239	42	350	68	96	67	231	27	182	85	294	
+30 mins.	9	**141**	29	179	**136**	**240**	**55**	**431**	**138**	103	60	301	38	157	79	274	
+45 mins.	20	124	34	178	112	213	34	359	112	**127**	**70**	**309**	37	**230**	27	294	
Total Volume	69	456	171	696	390	928	175	1493	395	424	238	1057	141	756	287	1184	
% App. Total	9.9	65.5	24.6		26.1	62.2	11.7		37.4	40.1	22.5		11.9	63.9	24.2		
PHF	.750	.809	.750	.837	.717	.967	.795	.866	.716	.835	.850	.855	.904	.822	.747	.919	

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City of Riverside
N/S: Wood Road
E/W: Van Buren Boulevard
Weather: Clear

File Name : 13_RIV_Wood_VB PM
Site Code : 05125515
Start Date : 5/8/2025
Page No : 1

Groups Printed- Total Volume

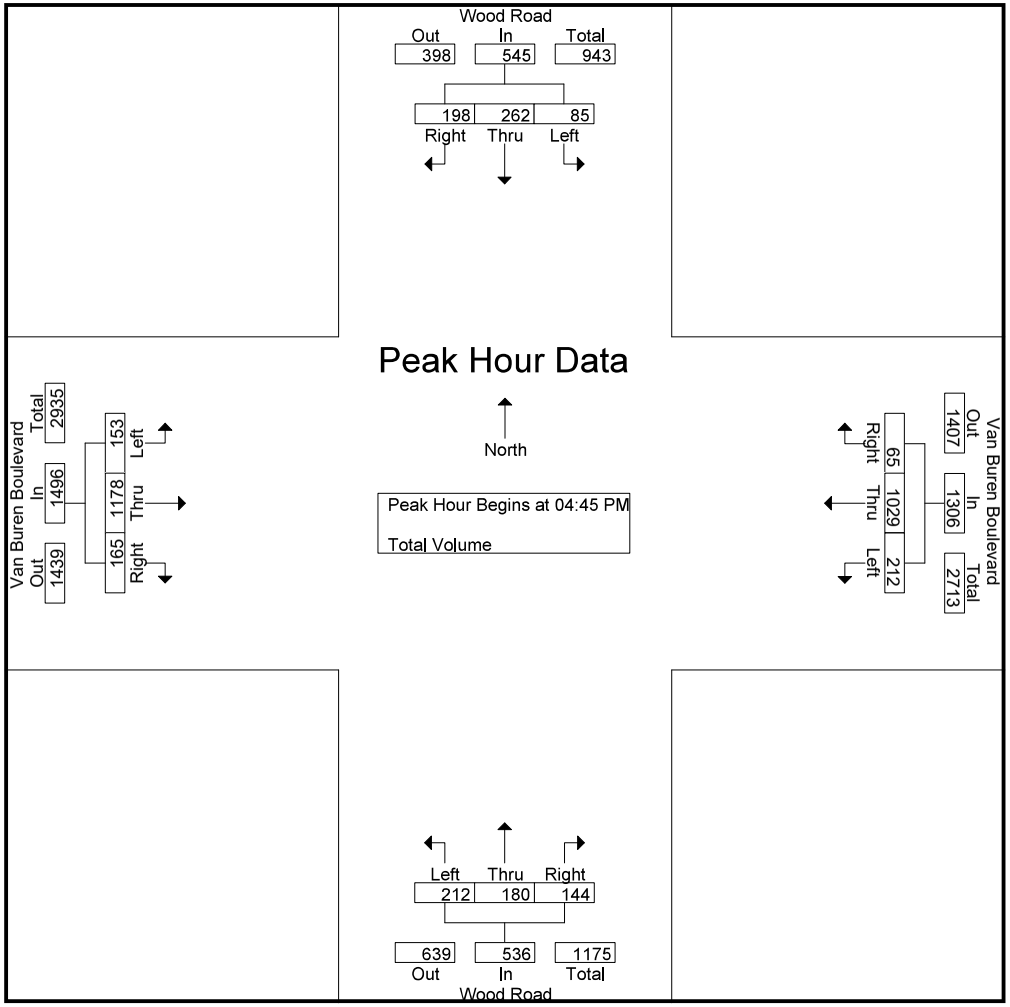
	Wood Road Southbound					Van Buren Boulevard Westbound					Wood Road Northbound					Van Buren Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	20	60	57	13	137	43	236	15	9	294	41	55	42	22	138	23	270	41	23	334	67	903	970
04:15 PM	18	74	48	14	140	58	241	18	9	317	57	65	35	10	157	39	271	53	21	363	54	977	1031
04:30 PM	19	69	51	22	139	45	239	16	11	300	47	60	38	19	145	33	295	43	19	371	71	955	1026
04:45 PM	17	45	49	29	111	57	298	23	15	378	55	46	29	13	130	30	305	46	24	381	81	1000	1081
Total	74	248	205	78	527	203	1014	72	44	1289	200	226	144	64	570	125	1141	183	87	1449	273	3835	4108
05:00 PM	17	76	52	19	145	56	228	13	8	297	56	47	35	18	138	32	263	41	13	336	58	916	974
05:15 PM	23	80	41	16	144	41	269	16	9	326	42	46	37	28	125	48	294	43	21	385	74	980	1054
05:30 PM	28	61	56	21	145	58	234	13	6	305	59	41	43	18	143	43	316	35	18	394	63	987	1050
05:45 PM	17	69	56	21	142	65	225	14	7	304	64	50	33	17	147	27	288	45	13	360	58	953	1011
Total	85	286	205	77	576	220	956	56	30	1232	221	184	148	81	553	150	1161	164	65	1475	253	3836	4089
Grand Total	159	534	410	155	1103	423	1970	128	74	2521	421	410	292	145	1123	275	2302	347	152	2924	526	7671	8197
Apprch %	14.4	48.4	37.2			16.8	78.1	5.1			37.5	36.5	26			9.4	78.7	11.9			6.4	93.6	
Total %	2.1	7	5.3		14.4	5.5	25.7	1.7		32.9	5.5	5.3	3.8		14.6	3.6	30	4.5		38.1			

	Wood Road Southbound				Van Buren Boulevard Westbound				Wood Road Northbound				Van Buren 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 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	17	45	49	111	57	**298**	**23**	**378**	55	46	29	130	30	305	**46**	381	**1000**
05:00 PM	17	76	52	**145**	56	228	13	297	56	**47**	35	138	32	263	41	336	916
05:15 PM	23	**80**	41	144	41	269	16	326	42	46	37	125	**48**	294	43	385	980
05:30 PM	**28**	61	**56**	145	**58**	234	13	305	**59**	41	**43**	**143**	43	**316**	35	**394**	987
Total Volume	85	262	198	545	212	1029	65	1306	212	180	144	536	153	1178	165	1496	3883
% App. Total	15.6	48.1	36.3		16.2	78.8	5		39.6	33.6	26.9		10.2	78.7	11		
PHF	.759	.819	.884	.940	.914	.863	.707	.864	.898	.957	.837	.937	.797	.932	.897	.949	.971

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City of Riverside
N/S: Wood Road
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Weather: Clear

File Name : 13_RIV_Wood_VB PM
Site Code : 05125515
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Page No : 2



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City of Riverside
N/S: Wood Road
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File Name : 13_RIV_Wood_VB PM
Site Code : 05125515
Start Date : 5/8/2025

	Wood Road Southbound				Van Buren Boulevard Westbound				Wood Road Northbound				Van Buren 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 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	05:00 PM				04:45 PM				04:00 PM				04:45 PM				
+0 mins.	17	76	52	**145**	57	**298**	**23**	**378**	41	55	**42**	138	30	305	**46**	381	
+15 mins.	23	**80**	41	144	56	228	13	297	**57**	**65**	35	**157**	32	263	41	336	
+30 mins.	**28**	61	**56**	145	41	269	16	326	47	60	38	145	**48**	294	43	385	
+45 mins.	17	69	56	142	**58**	234	13	305	55	46	29	130	43	**316**	35	**394**	
Total Volume	85	286	205	576	212	1029	65	1306	200	226	144	570	153	1178	165	1496	
% App. Total	14.8	49.7	35.6		16.2	78.8	5		35.1	39.6	25.3		10.2	78.7	11		
PHF	.759	.894	.915	.993	.914	.863	.707	.864	.877	.869	.857	.908	.797	.932	.897	.949	

Location: Riverside
N/S: Wood Road
E/W: Van Buren Boulevard

Date: 5/8/2025
Day: Thursday

PEDESTRIANS

	North Leg Wood Road Pedestrians	East Leg Van Buren Boulevard Pedestrians	South Leg Wood Road Pedestrians	West Leg Van Buren Boulevard Pedestrians	
7:00 AM	0	3	0	0	3
7:15 AM	5	6	2	0	13
7:30 AM	3	10	6	0	19
7:45 AM	1	17	9	0	27
8:00 AM	4	31	12	0	47
8:15 AM	1	10	2	0	13
8:30 AM	2	3	5	0	10
8:45 AM	0	0	0	1	1
TOTAL VOLUMES:	16	80	36	1	133

	North Leg Wood Road Pedestrians	East Leg Van Buren Boulevard Pedestrians	South Leg Wood Road Pedestrians	West Leg Van Buren Boulevard Pedestrians	
4:00 PM	2	9	2	0	13
4:15 PM	5	8	3	0	16
4:30 PM	1	3	2	0	6
4:45 PM	1	3	5	0	9
5:00 PM	3	2	1	0	6
5:15 PM	2	3	2	0	7
5:30 PM	2	2	0	0	4
5:45 PM	0	1	2	0	3
TOTAL VOLUMES:	16	31	17	0	64

Location: Riverside
N/S: Wood Road
E/W: Van Buren Boulevard

Date: 5/8/2025
Day: Thursday

BICYCLES

	Southbound Wood Road			Westbound Van Buren Boulevard			Northbound Wood Road			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	0	0	0	0	1	0	2

	Southbound Wood Road			Westbound Van Buren Boulevard			Northbound Wood Road			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	0	0	0	0	0	0	1

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City of Riverside
N/S: Trautwein Road/Cole Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 14_RIV_Cole_VB AM
Site Code : 05125515
Start Date : 5/8/2025

Groups Printed- Total Volume

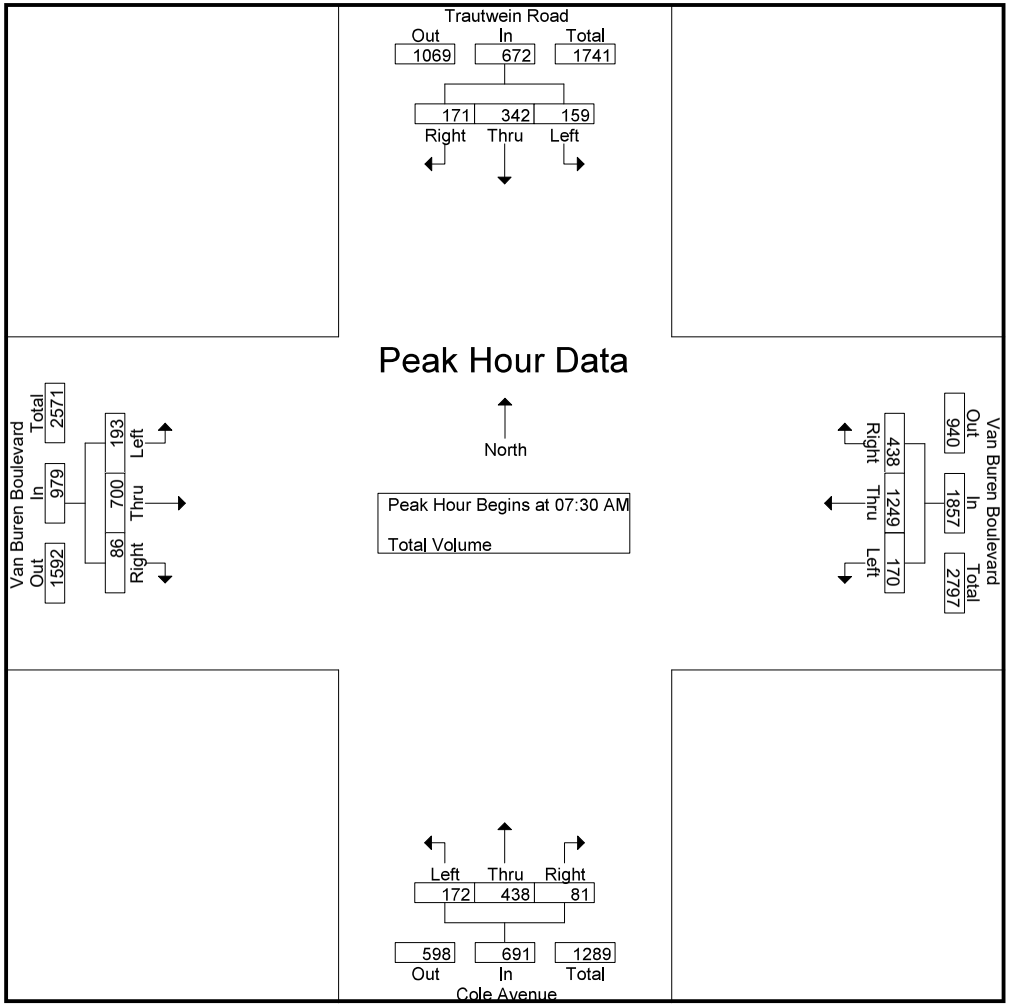
	Trautwein Road Southbound					Van Buren Boulevard Westbound					Cole Avenue Northbound					Van Buren Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	21	45	37	13	103	15	231	117	29	363	14	113	12	0	139	38	193	7	1	238	43	843	886
07:15 AM	41	43	33	14	117	13	226	109	30	348	13	125	16	1	154	29	148	9	0	186	45	805	850
07:30 AM	47	65	39	12	151	19	352	120	31	491	19	81	20	2	120	30	169	12	0	211	45	973	1018
07:45 AM	37	65	49	14	151	41	327	118	32	486	41	94	18	1	153	49	209	28	7	286	54	1076	1130
Total	146	218	158	53	522	88	1136	464	122	1688	87	413	66	4	566	146	719	56	8	921	187	3697	3884
08:00 AM	36	120	54	15	210	61	317	124	38	502	61	126	23	1	210	57	157	23	11	237	65	1159	1224
08:15 AM	39	92	29	10	160	49	253	76	27	378	51	137	20	0	208	57	165	23	10	245	47	991	1038
08:30 AM	34	53	29	17	116	11	213	76	24	300	11	79	12	2	102	79	193	21	9	293	52	811	863
08:45 AM	28	35	37	22	100	14	211	97	22	322	14	68	5	1	87	51	118	9	4	178	49	687	736
Total	137	300	149	64	586	135	994	373	111	1502	137	410	60	4	607	244	633	76	34	953	213	3648	3861
Grand Total	283	518	307	117	1108	223	2130	837	233	3190	224	823	126	8	1173	390	1352	132	42	1874	400	7345	7745
Apprch %	25.5	46.8	27.7			7	66.8	26.2			19.1	70.2	10.7			20.8	72.1	7					
Total %	3.9	7.1	4.2		15.1	3	29	11.4		43.4	3	11.2	1.7		16	5.3	18.4	1.8		25.5	5.2	94.8	

	Trautwein Road Southbound				Van Buren Boulevard Westbound				Cole Avenue Northbound				Van Buren 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 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**47**	65	39	151	19	**352**	120	491	19	81	20	120	30	169	12	211	973
07:45 AM	37	65	49	151	41	327	118	486	41	94	18	153	49	**209**	**28**	**286**	1076
08:00 AM	36	**120**	**54**	**210**	**61**	317	**124**	**502**	**61**	126	**23**	**210**	**57**	157	23	237	**1159**
08:15 AM	39	92	29	160	49	253	76	378	51	**137**	20	208	57	165	23	245	991
Total Volume	159	342	171	672	170	1249	438	1857	172	438	81	691	193	700	86	979	4199
% App. Total	23.7	50.9	25.4		9.2	67.3	23.6		24.9	63.4	11.7		19.7	71.5	8.8		
PHF	.846	.713	.792	.800	.697	.887	.883	.925	.705	.799	.880	.823	.846	.837	.768	.856	.906

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City of Riverside
N/S: Trautwein Road/Cole Avenue
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Weather: Clear

File Name : 14_RIV_Cole_VB AM
Site Code : 05125515
Start Date : 5/8/2025
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File Name : 14_RIV_Cole_VB AM
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Start Date : 5/8/2025

	Trautwein Road Southbound				Van Buren Boulevard Westbound				Cole Avenue Northbound				Van Buren 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 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:30 AM				07:30 AM				07:30 AM				07:45 AM				
+0 mins.	**47**	65	39	151	19	**352**	120	491	19	81	20	120	49	**209**	**28**	286	
+15 mins.	37	65	49	151	41	327	118	486	41	94	18	153	57	157	23	237	
+30 mins.	36	**120**	**54**	**210**	**61**	317	**124**	**502**	**61**	126	**23**	**210**	57	165	23	245	
+45 mins.	39	92	29	160	49	253	76	378	51	**137**	20	208	**79**	193	21	**293**	
Total Volume	159	342	171	672	170	1249	438	1857	172	438	81	691	242	724	95	1061	
% App. Total	23.7	50.9	25.4		9.2	67.3	23.6		24.9	63.4	11.7		22.8	68.2	9		
PHF	.846	.713	.792	.800	.697	.887	.883	.925	.705	.799	.880	.823	.766	.866	.848	.905	

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Groups Printed- Total Volume

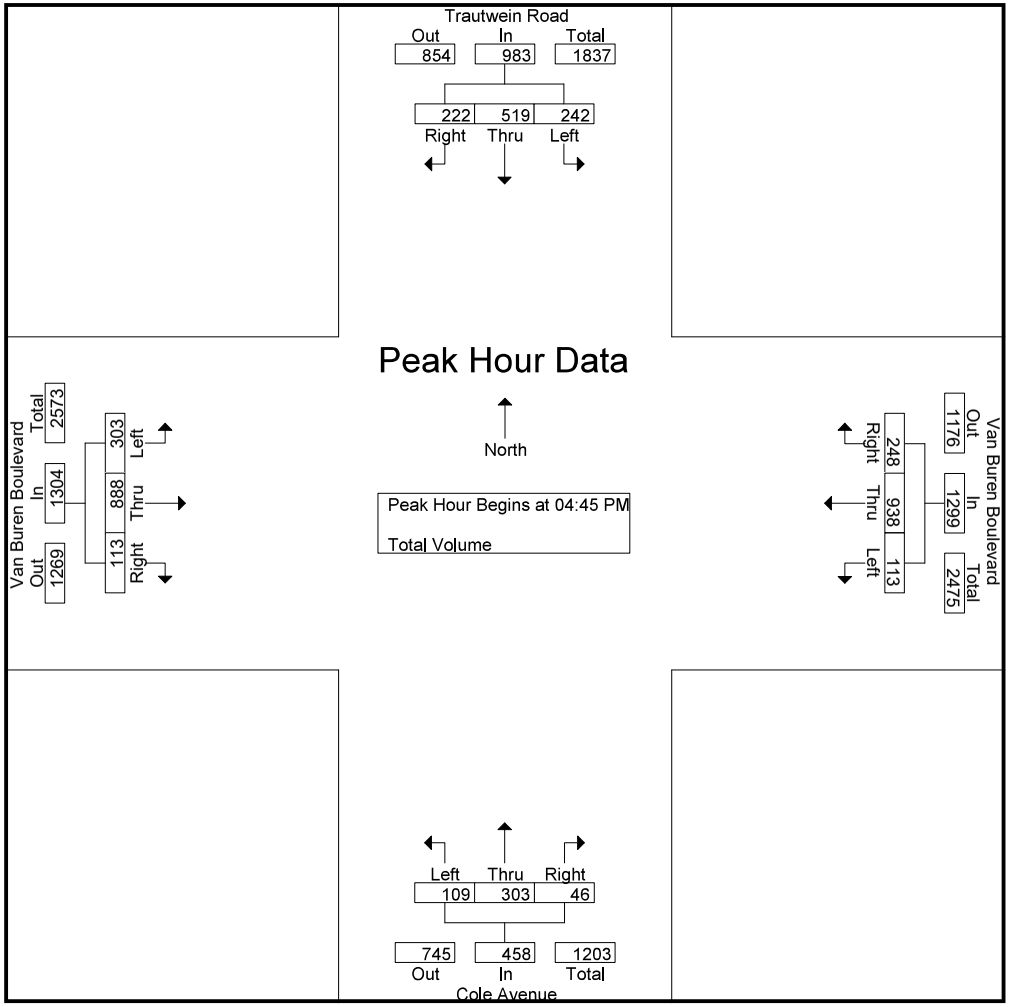
	Trautwein Road Southbound					Van Buren Boulevard Westbound					Cole Avenue Northbound					Van Buren Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	67	147	43	22	257	35	221	72	30	328	35	62	9	6	106	69	212	11	2	292	60	983	1043
04:15 PM	61	126	54	24	241	40	247	79	30	366	40	66	10	2	116	83	234	19	7	336	63	1059	1122
04:30 PM	59	130	43	25	232	19	215	60	26	294	18	76	12	2	106	66	237	24	12	327	65	959	1024
04:45 PM	52	119	39	18	210	33	276	71	32	380	32	58	12	1	102	80	224	27	10	331	61	1023	1084
Total	239	522	179	89	940	127	959	282	118	1368	125	262	43	11	430	298	907	81	31	1286	249	4024	4273
05:00 PM	64	149	78	35	291	28	207	62	23	297	28	82	15	2	125	75	180	27	16	282	76	995	1071
05:15 PM	63	138	45	22	246	20	256	55	25	331	18	72	9	3	99	63	243	35	19	341	69	1017	1086
05:30 PM	63	113	60	31	236	32	199	60	27	291	31	91	10	3	132	85	241	24	14	350	75	1009	1084
05:45 PM	72	105	50	30	227	26	194	49	21	269	23	96	15	1	134	81	234	21	10	336	62	966	1028
Total	262	505	233	118	1000	106	856	226	96	1188	100	341	49	9	490	304	898	107	59	1309	282	3987	4269
Grand Total	501	1027	412	207	1940	233	1815	508	214	2556	225	603	92	20	920	602	1805	188	90	2595	531	8011	8542
Apprch %	25.8	52.9	21.2			9.1	71	19.9			24.5	65.5	10			23.2	69.6	7.2					
Total %	6.3	12.8	5.1		24.2	2.9	22.7	6.3		31.9	2.8	7.5	1.1		11.5	7.5	22.5	2.3		32.4	6.2	93.8	

	Trautwein Road Southbound				Van Buren Boulevard Westbound				Cole Avenue Northbound				Van Buren 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 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	52	119	39	210	**33**	**276**	**71**	**380**	**32**	58	12	102	80	224	27	331	**1023**
05:00 PM	**64**	**149**	**78**	**291**	28	207	62	297	28	82	**15**	125	75	180	27	282	995
05:15 PM	63	138	45	246	20	256	55	331	18	72	9	99	63	**243**	**35**	341	1017
05:30 PM	63	113	60	236	32	199	60	291	31	**91**	10	**132**	**85**	241	24	**350**	1009
Total Volume	242	519	222	983	113	938	248	1299	109	303	46	458	303	888	113	1304	4044
% App. Total	24.6	52.8	22.6		8.7	72.2	19.1		23.8	66.2	10		23.2	68.1	8.7		
PHF	.945	.871	.712	.845	.856	.850	.873	.855	.852	.832	.767	.867	.891	.914	.807	.931	.988

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File Name : 14_RIV_Cole_VB PM
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File Name : 14_RIV_Cole_VB PM
Site Code : 05125515
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	Trautwein Road Southbound				Van Buren Boulevard Westbound				Cole Avenue Northbound				Van Buren 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 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	05:00 PM				04:00 PM				05:00 PM				05:00 PM				
+0 mins.	64	**149**	**78**	**291**	35	221	72	328	28	82	**15**	125	75	180	27	282	
+15 mins.	63	138	45	246	**40**	247	**79**	366	18	72	9	99	63	**243**	**35**	341	
+30 mins.	63	113	60	236	19	215	60	294	**31**	91	10	132	**85**	241	24	**350**	
+45 mins.	**72**	105	50	227	33	**276**	71	**380**	23	**96**	15	**134**	81	234	21	336	
Total Volume	262	505	233	1000	127	959	282	1368	100	341	49	490	304	898	107	1309	
% App. Total	26.2	50.5	23.3		9.3	70.1	20.6		20.4	69.6	10		23.2	68.6	8.2		
PHF	.910	.847	.747	.859	.794	.869	.892	.900	.806	.888	.817	.914	.894	.924	.764	.935	

Location: Riverside
N/S: Trautwein Rd/Cole Ave
E/W: Van Buren Boulevard

Date: 5/8/2025
Day: Thursday

PEDESTRIANS

	North Leg Trautwein Road	East Leg Van Buren Boulevard	South Leg Cole Avenue	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	1	0	1	0	2
7:15 AM	1	0	0	0	1
7:30 AM	3	0	0	0	3
7:45 AM	0	0	3	0	3
8:00 AM	1	1	2	1	5
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	1	1
8:45 AM	1	1	0	1	3
TOTAL VOLUMES:	7	2	6	3	18

	North Leg Trautwein Road	East Leg Van Buren Boulevard	South Leg Cole Avenue	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	1	0	1	0	2
4:30 PM	2	0	0	1	3
4:45 PM	4	3	0	0	7
5:00 PM	0	0	0	0	0
5:15 PM	0	2	0	0	2
5:30 PM	4	5	0	0	9
5:45 PM	1	0	0	0	1
TOTAL VOLUMES:	12	10	1	1	24

Location: Riverside
N/S: Trautwein Rd/Cole Ave
E/W: Van Buren Boulevard

Date: 5/8/2025
Day: Thursday

BICYCLES

	Southbound Trautwein Road			Westbound Van Buren Boulevard			Northbound Cole Avenue			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	1	0	0	1	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	2	0	0	1	0	0	1	0	0	0	0	4

	Southbound Trautwein Road			Westbound Van Buren Boulevard			Northbound Cole Avenue			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
4:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL VOLUMES:	0	0	0	1	0	1	0	0	0	0	1	0	3

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City of Riverside
N/S: Barton Street
E/W: Van Buren Boulevard
Weather: Clear

File Name : 15_RIV_Bar_VB AM
Site Code : 05125515
Start Date : 5/8/2025

Groups Printed- Total Volume

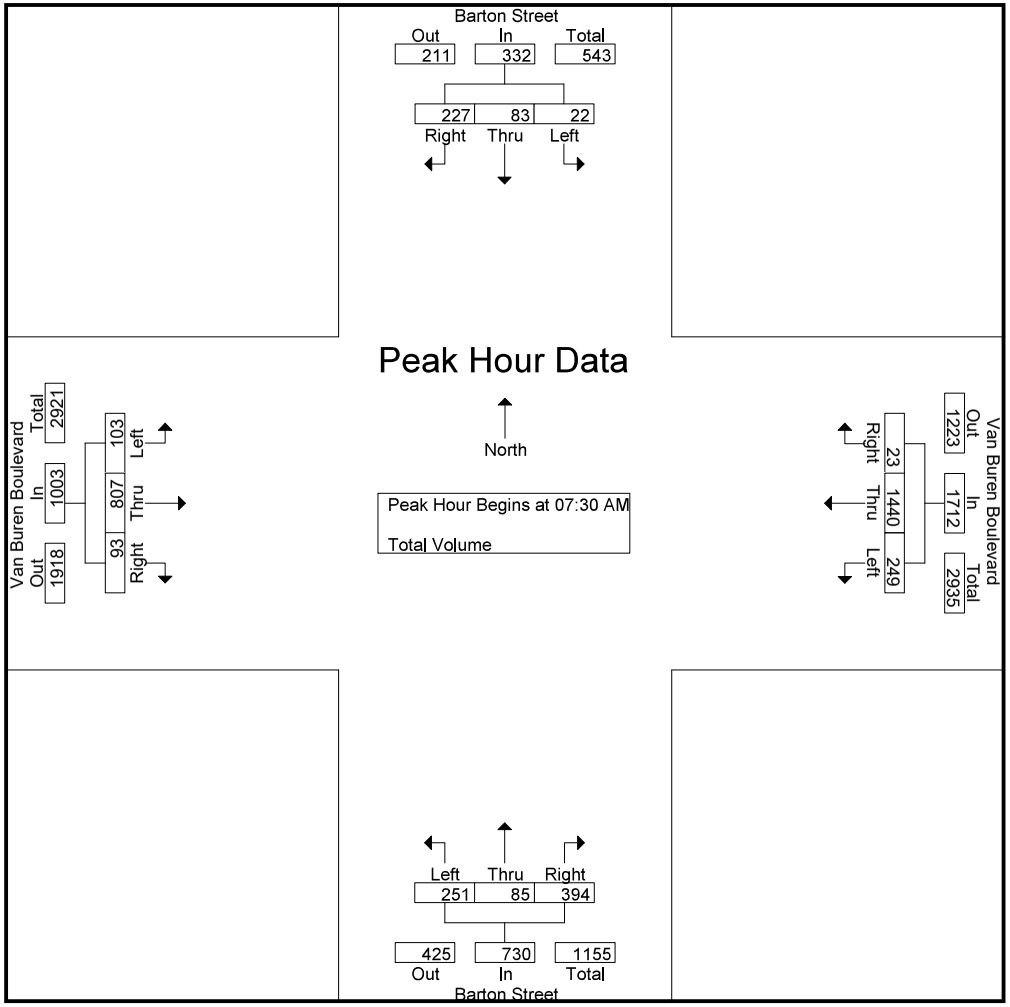
	Barton Street Southbound					Van Buren Boulevard Westbound					Barton Street Northbound					Van Buren Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	1	5	36	17	42	28	240	4	1	272	34	8	59	28	101	15	194	12	3	221	49	636	685
07:15 AM	6	11	32	17	49	33	263	8	2	304	32	11	81	33	124	14	192	16	3	222	55	699	754
07:30 AM	3	13	63	22	79	64	389	3	1	456	65	15	101	29	181	26	195	21	2	242	54	958	1012
07:45 AM	9	31	74	17	114	47	381	3	2	431	45	32	103	38	180	35	208	21	1	264	58	989	1047
Total	19	60	205	73	284	172	1273	18	6	1463	176	66	344	128	586	90	789	70	9	949	216	3282	3498
08:00 AM	5	24	62	15	91	80	425	14	6	519	82	12	92	43	186	21	203	23	5	247	69	1043	1112
08:15 AM	5	15	28	12	48	58	245	3	2	306	59	26	98	41	183	21	201	28	4	250	59	787	846
08:30 AM	4	5	17	11	26	40	223	2	1	265	39	18	91	41	148	17	218	37	11	272	64	711	775
08:45 AM	2	7	12	10	21	35	248	7	2	290	35	5	47	23	87	12	134	15	2	161	37	559	596
Total	16	51	119	48	186	213	1141	26	11	1380	215	61	328	148	604	71	756	103	22	930	229	3100	3329
Grand Total	35	111	324	121	470	385	2414	44	17	2843	391	127	672	276	1190	161	1545	173	31	1879	445	6382	6827
Apprch %	7.4	23.6	68.9			13.5	84.9	1.5			32.9	10.7	56.5			8.6	82.2	9.2					
Total %	0.5	1.7	5.1		7.4	6	37.8	0.7		44.5	6.1	2	10.5		18.6	2.5	24.2	2.7		29.4	6.5	93.5	

	Barton Street Southbound				Van Buren Boulevard Westbound				Barton Street Northbound				Van Buren 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 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	3	13	63	79	64	389	3	456	65	15	101	181	26	195	21	242	958
07:45 AM	**9**	**31**	**74**	**114**	47	381	3	431	45	**32**	**103**	180	**35**	**208**	21	**264**	989
08:00 AM	5	24	62	91	**80**	**425**	**14**	**519**	**82**	12	92	**186**	21	203	23	247	**1043**
08:15 AM	5	15	28	48	58	245	3	306	59	26	98	183	21	201	**28**	250	787
Total Volume	22	83	227	332	249	1440	23	1712	251	85	394	730	103	807	93	1003	3777
% App. Total	6.6	25	68.4		14.5	84.1	1.3		34.4	11.6	54		10.3	80.5	9.3		
PHF	.611	.669	.767	.728	.778	.847	.411	.825	.765	.664	.956	.981	.736	.970	.830	.950	.905

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City of Riverside
N/S: Barton Street
E/W: Van Buren Boulevard
Weather: Clear

File Name : 15_RIV_Bar_VB AM
Site Code : 05125515
Start Date : 5/8/2025
Page No : 2



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File Name : 15_RIV_Bar_VB AM
Site Code : 05125515
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	Barton Street Southbound				Van Buren Boulevard Westbound				Barton Street Northbound				Van Buren 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 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:30 AM				07:30 AM				07:45 AM				
+0 mins.	6	11	32	49	64	389	3	456	65	15	101	181	**35**	208	21	264	
+15 mins.	3	13	63	79	47	381	3	431	45	**32**	**103**	180	21	203	23	247	
+30 mins.	**9**	**31**	**74**	**114**	**80**	**425**	**14**	**519**	**82**	12	92	**186**	21	201	28	250	
+45 mins.	5	24	62	91	58	245	3	306	59	26	98	183	17	**218**	**37**	**272**	
Total Volume	23	79	231	333	249	1440	23	1712	251	85	394	730	94	830	109	1033	
% App. Total	6.9	23.7	69.4		14.5	84.1	1.3		34.4	11.6	54		9.1	80.3	10.6		
PHF	.639	.637	.780	.730	.778	.847	.411	.825	.765	.664	.956	.981	.671	.952	.736	.949	

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File Name : 15_RIV_Bar_VB PM
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Start Date : 5/8/2025

Groups Printed- Total Volume

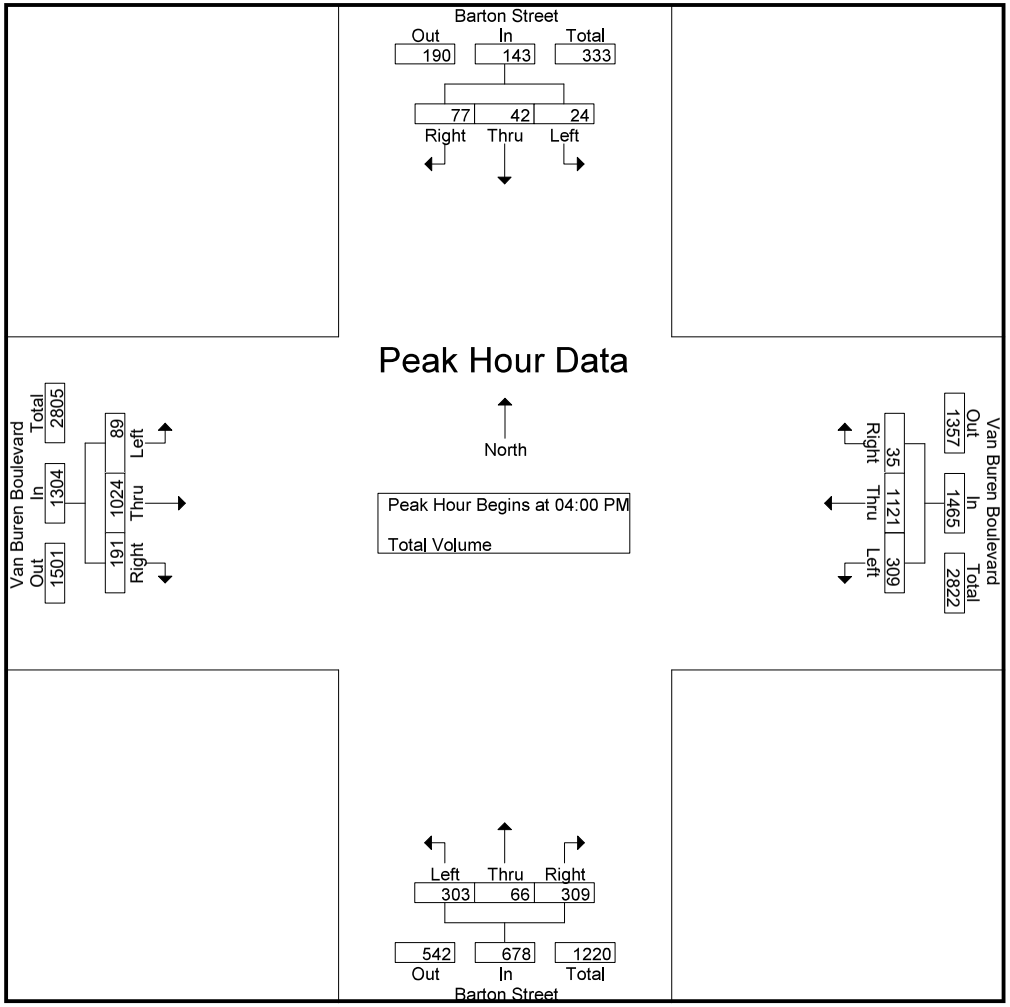
	Barton Street Southbound					Van Buren Boulevard Westbound					Barton Street Northbound					Van Buren Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	6	7	18	8	31	76	270	6	1	352	74	16	106	55	196	16	261	51	5	328	69	907	976
04:15 PM	3	12	19	12	34	73	301	11	2	385	73	14	81	36	168	29	284	51	1	364	51	951	1002
04:30 PM	9	9	17	4	35	98	291	7	4	396	96	16	69	36	181	24	229	43	5	296	49	908	957
04:45 PM	6	14	23	9	43	62	259	11	2	332	60	20	53	14	133	20	250	46	1	316	26	824	850
Total	24	42	77	33	143	309	1121	35	9	1465	303	66	309	141	678	89	1024	191	12	1304	195	3590	3785
05:00 PM	6	8	23	14	37	76	256	5	1	337	75	11	66	29	152	18	274	54	12	346	56	872	928
05:15 PM	6	10	19	14	35	86	247	8	1	341	85	11	101	61	197	16	251	45	5	312	81	885	966
05:30 PM	8	7	16	9	31	76	194	6	3	276	75	14	65	25	154	25	279	49	1	353	38	814	852
05:45 PM	8	14	19	6	41	57	232	6	1	295	58	23	59	18	140	18	290	33	8	341	33	817	850
Total	28	39	77	43	144	295	929	25	6	1249	293	59	291	133	643	77	1094	181	26	1352	208	3388	3596
Grand Total	52	81	154	76	287	604	2050	60	15	2714	596	125	600	274	1321	166	2118	372	38	2656	403	6978	7381
Apprch %	18.1	28.2	53.7			22.3	75.5	2.2			45.1	9.5	45.4			6.2	79.7	14					
Total %	0.7	1.2	2.2		4.1	8.7	29.4	0.9		38.9	8.5	1.8	8.6		18.9	2.4	30.4	5.3		38.1	5.5	94.5	

	Barton Street Southbound				Van Buren Boulevard Westbound				Barton Street Northbound				Van Buren 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 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	6	7	18	31	76	270	6	352	74	16	**106**	**196**	16	261	**51**	328	907
04:15 PM	3	12	19	34	73	**301**	**11**	385	73	14	81	168	**29**	**284**	51	**364**	**951**
04:30 PM	**9**	9	17	35	**98**	291	7	**396**	**96**	16	69	181	24	229	43	296	908
04:45 PM	6	**14**	**23**	**43**	62	259	11	332	60	**20**	53	133	20	250	46	316	824
Total Volume	24	42	77	143	309	1121	35	1465	303	66	309	678	89	1024	191	1304	3590
% App. Total	16.8	29.4	53.8		21.1	76.5	2.4		44.7	9.7	45.6		6.8	78.5	14.6		
PHF	.667	.750	.837	.831	.788	.931	.795	.925	.789	.825	.729	.865	.767	.901	.936	.896	.944

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N/S: Barton Street
E/W: Van Buren Boulevard
Weather: Clear

File Name : 15_RIV_Bar_VB PM
Site Code : 05125515
Start Date : 5/8/2025
Page No : 2



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City of Riverside
N/S: Barton Street
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Weather: Clear

File Name : 15_RIV_Bar_VB PM
Site Code : 05125515
Start Date : 5/8/2025

	Barton Street Southbound				Van Buren Boulevard Westbound				Barton Street Northbound				Van Buren 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 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:00 PM				04:00 PM				05:00 PM				
+0 mins.	**9**	9	17	35	76	270	6	352	74	16	**106**	**196**	18	274	**54**	346	
+15 mins.	6	**14**	**23**	**43**	73	**301**	**11**	385	73	14	81	168	16	251	45	312	
+30 mins.	6	8	23	37	**98**	291	7	**396**	**96**	16	69	181	**25**	279	49	**353**	
+45 mins.	6	10	19	35	62	259	11	332	60	**20**	53	133	18	**290**	33	341	
Total Volume	27	41	82	150	309	1121	35	1465	303	66	309	678	77	1094	181	1352	
% App. Total	18	27.3	54.7		21.1	76.5	2.4		44.7	9.7	45.6		5.7	80.9	13.4		
PHF	.750	.732	.891	.872	.788	.931	.795	.925	.789	.825	.729	.865	.770	.943	.838	.958	

Location: Riverside
N/S: Barton Street
E/W: Van Buren Boulevard

Date: 5/8/2025
Day: Thursday

PEDESTRIANS

	North Leg Barton Street	East Leg Van Buren Boulevard	South Leg Barton Street	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	2	0	0	0	2
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	1	0	1
TOTAL VOLUMES:	2	0	1	0	3

	North Leg Barton Street	East Leg Van Buren Boulevard	South Leg Barton Street	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	2	1	0	0	3
4:30 PM	1	1	0	0	2
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	3	2	0	0	5

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Location: Riverside
N/S: Barton Street
E/W: Van Buren Boulevard

Date: 5/8/2025
Day: Thursday

BICYCLES

	Southbound Barton Street			Westbound Van Buren Boulevard			Northbound Barton Street			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	1
8:15 AM	0	5	0	0	0	0	0	0	0	0	0	0	5
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	5	0	0	0	1	0	0	0	0	0	0	6

	Southbound Barton Street			Westbound Van Buren Boulevard			Northbound Barton Street			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL VOLUMES:	0	1	0	0	1	0	0	1	0	0	1	0	4

APPENDIX 3.2:

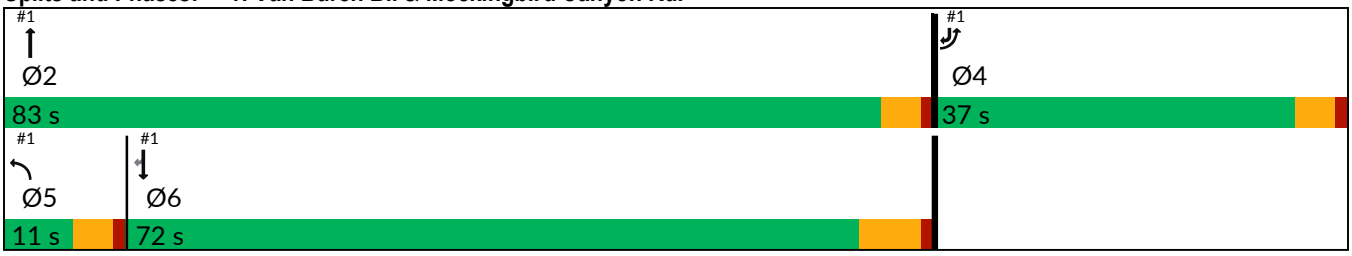
EXISTING (2025) INTERSECTION ANALYSIS

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Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	498	4	1367	895	161
Future Volume (vph)	498	4	1367	895	161
Turn Type	Prot	Prot	NA	NA	pm+ov
Protected Phases	4	5	2	6	4
Permitted Phases					6
Detector Phase	4	5	2	6	4
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	29.6	9.6	26.1	28.5	29.6
Total Split (s)	37.0	11.0	83.0	72.0	37.0
Total Split (%)	30.8%	9.2%	69.2%	60.0%	30.8%
Yellow Time (s)	3.6	3.6	3.6	5.5	3.6
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)	4.6	4.6	4.6	6.5	4.6
Lead/Lag		Lead		Lag	
Lead-Lag Optimize?		Yes		Yes	
Recall Mode	None	None	None	None	None
Act Effct Green (s)	14.9	5.4	31.8	28.4	54.5
Actuated g/C Ratio	0.26	0.10	0.56	0.50	0.96
v/c Ratio	0.60	0.02	0.73	0.54	0.11
Control Delay (s/veh)	22.2	31.5	12.1	12.1	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	22.2	31.5	12.1	12.1	0.3
LOS	C	C	B	B	A
Approach Delay (s/veh)	22.2		12.2	10.3	
Approach LOS	C		B	B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 56.5	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay (s/veh): 13.2	Intersection LOS: B
Intersection Capacity Utilization 60.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Van Buren Bl. & Mockingbird Canyon Rd.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	498	11	4	1367	895	161
Future Volume (veh/h)	498	11	4	1367	895	161
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	539	0	4	1454	952	166
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	739	329	10	1917	1526	1009
Arrive On Green	0.21	0.00	0.01	0.54	0.43	0.43
Sat Flow, veh/h	3563	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	539	0	4	1454	952	166
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1777	1777	1585
Q Serve(g_s), s	6.2	0.0	0.1	14.0	9.2	1.9
Cycle Q Clear(g_c), s	6.2	0.0	0.1	14.0	9.2	1.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	739	329	10	1917	1526	1009
V/C Ratio(X)	0.73	0.00	0.41	0.76	0.62	0.16
Avail Cap(c_a), veh/h	2630	1170	260	6348	5303	2694
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	16.2	0.0	21.8	7.9	9.8	3.2
Incr Delay (d2), s/veh	0.5	0.0	10.2	0.2	0.4	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	1.8	0.0	0.1	2.1	2.0	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	16.8	0.0	31.9	8.1	10.2	3.3
LnGrp LOS	B		C	A	B	A
Approach Vol, veh/h	539			1458	1118	
Approach Delay, s/veh	16.8			8.2	9.2	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		30.2		13.7	4.8	25.3
Change Period (Y+Rc), s		* 6.5		4.6	4.6	6.5
Max Green Setting (Gmax), s		* 78		32.4	6.4	65.5
Max Q Clear Time (g_c+I1), s		16.0		8.2	2.1	11.2
Green Ext Time (p_c), s		7.5		0.9	0.0	7.7

Intersection Summary	
HCM 7th Control Delay, s/veh	10.0
HCM 7th LOS	B

Notes

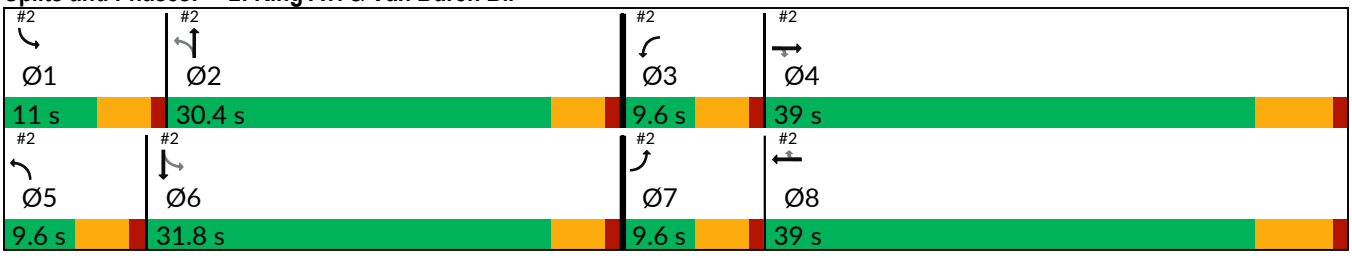
User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	39	961	52	15	1170	21	164	88	119	28
Future Volume (vph)	39	961	52	15	1170	21	164	88	119	28
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA
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	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.5	28.5	9.6	28.5	28.5	9.6	26.1	9.6	31.6
Total Split (s)	9.6	39.0	39.0	9.6	39.0	39.0	9.6	30.4	11.0	31.8
Total Split (%)	10.7%	43.3%	43.3%	10.7%	43.3%	43.3%	10.7%	33.8%	12.2%	35.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.2	37.4	37.4	5.2	33.8	33.8	17.2	13.4	18.3	14.5
Actuated g/C Ratio	0.07	0.52	0.52	0.07	0.47	0.47	0.24	0.19	0.25	0.20
v/c Ratio	0.35	0.59	0.07	0.13	0.79	0.03	0.57	0.45	0.37	0.31
Control Delay (s/veh)	44.7	16.2	0.1	39.6	24.0	0.0	28.8	25.8	22.1	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	44.7	16.2	0.1	39.6	24.0	0.0	28.8	25.8	22.1	11.5
LOS	D	B	A	D	C	A	C	C	C	B
Approach Delay (s/veh)		16.5			23.8			27.4		17.0
Approach LOS		B			C			C		B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 71.9	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay (s/veh): 20.9	Intersection LOS: C
Intersection Capacity Utilization 65.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 2: King Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	961	52	15	1170	21	164	88	54	119	28	83
Future Volume (veh/h)	39	961	52	15	1170	21	164	88	54	119	28	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	44	1080	42	17	1315	20	184	99	44	134	31	59
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	74	1630	727	36	1553	693	369	170	75	337	85	161
Arrive On Green	0.04	0.46	0.46	0.02	0.44	0.44	0.07	0.14	0.14	0.09	0.15	0.15
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1227	545	1781	566	1077
Grp Volume(v), veh/h	44	1080	42	17	1315	20	184	0	143	134	0	90
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	0	1772	1781	0	1643
Q Serve(g_s), s	1.6	15.9	1.0	0.6	22.2	0.5	5.0	0.0	5.1	4.2	0.0	3.3
Cycle Q Clear(g_c), s	1.6	15.9	1.0	0.6	22.2	0.5	5.0	0.0	5.1	4.2	0.0	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.31	1.00		0.66
Lane Grp Cap(c), veh/h	74	1630	727	36	1553	693	369	0	245	337	0	246
V/C Ratio(X)	0.59	0.66	0.06	0.47	0.85	0.03	0.50	0.00	0.58	0.40	0.00	0.37
Avail Cap(c_a), veh/h	132	1734	773	132	1734	773	369	0	680	355	0	665
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	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.7	14.2	10.1	32.6	16.9	10.8	23.8	0.0	27.1	22.1	0.0	25.7
Incr Delay (d2), s/veh	2.8	0.9	0.0	3.5	3.8	0.0	0.4	0.0	2.2	0.3	0.0	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	0.7	5.1	0.3	0.3	7.8	0.1	2.5	0.0	2.2	1.7	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.4	15.0	10.2	36.1	20.7	10.8	24.1	0.0	29.3	22.4	0.0	26.6
LnGrp LOS	C	B	B	D	C	B	C		C	C		C
Approach Vol, veh/h		1166			1352			327			224	
Approach Delay, s/veh		15.6			20.7			26.4			24.1	
Approach LOS		B			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	13.9	6.0	37.0	9.6	14.6	7.4	35.6
Change Period (Y+Rc), s	4.6	4.6	4.6	6.2	4.6	4.6	4.6	6.2
Max Green Setting (Gmax), s	6.4	25.8	5.0	32.8	5.0	27.2	5.0	32.8
Max Q Clear Time (g_c+I1), s	6.2	7.1	2.6	17.9	7.0	5.3	3.6	24.2
Green Ext Time (p_c), s	0.0	0.7	0.0	6.1	0.0	0.4	0.0	5.2

Intersection Summary	
HCM 7th Control Delay, s/veh	19.6
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	2.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	29	50	1003	65	17	523
Future Vol, veh/h	29	50	1003	65	17	523
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	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	52	1034	67	18	539

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1642	1068	0	0	1101	0
Stage 1	1068	-	-	-	-	-
Stage 2	574	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	110	270	-	-	634	-
Stage 1	330	-	-	-	-	-
Stage 2	563	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	106	270	-	-	634	-
Mov Cap-2 Maneuver	106	-	-	-	-	-
Stage 1	317	-	-	-	-	-
Stage 2	563	-	-	-	-	-

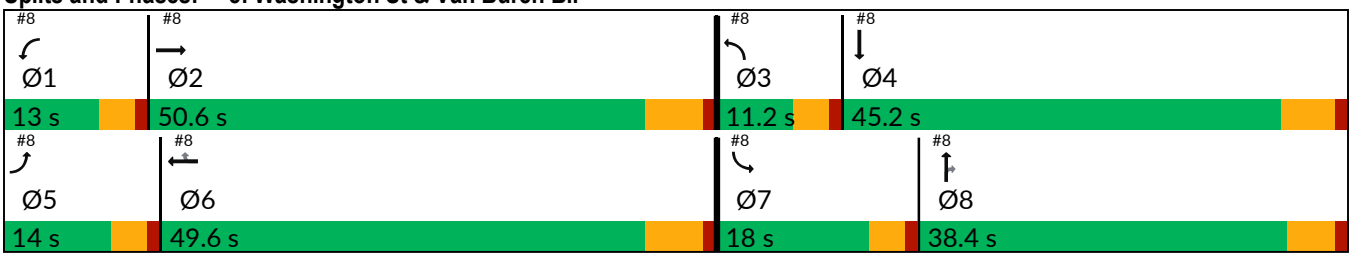
Approach	WB	NB	SB
HCM Ctrl Dly, s/v	43.57	0	0.34
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	172	634	-
HCM Lane V/C Ratio	-	-	0.474	0.028	-
HCM Ctrl Dly (s/v)	-	-	43.6	10.8	-
HCM Lane LOS	-	-	E	B	-
HCM 95th %tile Q(veh)	-	-	2.3	0.1	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	106	928	86	1042	483	85	479	117	307	166
Future Volume (vph)	106	928	86	1042	483	85	479	117	307	166
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	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.2	34.2	9.2	33.2	33.2	9.2	38.4	38.4	9.2	30.8
Total Split (s)	14.0	50.6	13.0	49.6	49.6	11.2	38.4	38.4	18.0	45.2
Total Split (%)	11.7%	42.2%	10.8%	41.3%	41.3%	9.3%	32.0%	32.0%	15.0%	37.7%
Yellow Time (s)	3.2	5.2	3.2	5.2	5.2	3.2	4.4	4.4	3.2	4.8
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)	4.2	6.2	4.2	6.2	6.2	4.2	5.4	5.4	4.2	5.8
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	None	None	None	None
Act Effct Green (s)	9.4	42.8	8.3	41.7	41.7	6.5	22.7	22.7	13.1	31.2
Actuated g/C Ratio	0.09	0.40	0.08	0.39	0.39	0.06	0.21	0.21	0.12	0.29
v/c Ratio	0.74	0.79	0.68	0.81	0.65	0.44	0.69	0.28	0.79	0.26
Control Delay (s/veh)	77.6	33.9	75.2	35.9	16.2	58.1	44.2	5.7	61.2	22.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	77.6	33.9	75.2	35.9	16.2	58.1	44.2	5.7	61.2	22.4
LOS	E	C	E	D	B	E	D	A	E	C
Approach Delay (s/veh)		38.0		32.1			39.3			44.0
Approach LOS		D		C			D			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 107.1	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay (s/veh): 36.7	Intersection LOS: D
Intersection Capacity Utilization 73.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 8: Washington St & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	928	100	86	1042	483	85	479	117	307	166	79
Future Volume (veh/h)	106	928	100	86	1042	483	85	479	117	307	166	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	114	998	69	92	1120	317	91	515	63	330	178	27
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	142	1382	96	117	1407	626	164	693	309	402	818	122
Arrive On Green	0.08	0.41	0.41	0.07	0.40	0.40	0.05	0.20	0.20	0.12	0.26	0.26
Sat Flow, veh/h	1781	3369	233	1781	3554	1581	3456	3554	1585	3456	3101	463
Grp Volume(v), veh/h	114	526	541	92	1120	317	91	515	63	330	101	104
Grp Sat Flow(s),veh/h/ln	1781	1777	1825	1781	1777	1581	1728	1777	1585	1728	1777	1787
Q Serve(g_s), s	6.0	23.8	23.8	4.9	26.7	14.5	2.5	13.1	3.2	8.9	4.2	4.4
Cycle Q Clear(g_c), s	6.0	23.8	23.8	4.9	26.7	14.5	2.5	13.1	3.2	8.9	4.2	4.4
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		0.26
Lane Grp Cap(c), veh/h	142	729	749	117	1407	626	164	693	309	402	469	471
V/C Ratio(X)	0.80	0.72	0.72	0.79	0.80	0.51	0.55	0.74	0.20	0.82	0.21	0.22
Avail Cap(c_a), veh/h	182	823	845	163	1608	716	252	1223	545	497	730	734
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	43.4	23.7	23.7	44.1	25.5	21.9	44.7	36.3	32.4	41.4	27.5	27.6
Incr Delay (d2), s/veh	13.7	3.1	3.1	10.0	2.8	0.9	1.1	1.6	0.3	7.2	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	3.1	9.6	9.8	2.4	10.6	5.5	1.1	5.8	1.3	4.2	1.8	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	57.1	26.8	26.8	54.2	28.3	22.8	45.8	37.9	32.7	48.6	27.8	27.8
LnGrp LOS	E	C	C	D	C	C	D	D	C	D	C	C
Approach Vol, veh/h		1181			1529			669			535	
Approach Delay, s/veh		29.7			28.7			38.5			40.6	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	45.5	8.8	31.1	11.9	44.2	15.4	24.5
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	8.8	44.4	7.0	39.4	9.8	43.4	13.8	* 33
Max Q Clear Time (g_c+I1), s	6.9	25.8	4.5	6.4	8.0	28.7	10.9	15.1
Green Ext Time (p_c), s	0.0	8.4	0.0	1.2	0.0	9.3	0.2	3.6

Intersection Summary	
HCM 7th Control Delay, s/veh	32.3
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	17.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	1342	10	28	1683	4	28	0	49	1	0	13
Future Vol, veh/h	11	1342	10	28	1683	4	28	0	49	1	0	13
Conflicting Peds, #/hr	0	0	1	0	0	6	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	275	-	-	255	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	1413	11	29	1772	4	29	0	52	1	0	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1782	0	0	1424	0	0	2387	3283	713	2568	3286	894
Stage 1	-	-	-	-	-	-	1442	1442	-	1839	1839	-
Stage 2	-	-	-	-	-	-	945	1841	-	729	1447	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	344	-	-	474	-	-	~ 18	9	375	13	9	284
Stage 1	-	-	-	-	-	-	139	196	-	78	125	-
Stage 2	-	-	-	-	-	-	282	124	-	380	195	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	342	-	-	473	-	-	~ 15	8	374	10	8	283
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 15	8	-	10	8	-
Stage 1	-	-	-	-	-	-	134	189	-	73	116	-
Stage 2	-	-	-	-	-	-	251	116	-	317	188	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.13	0.21	$ 710.12	49.19
HCM LOS			F	E

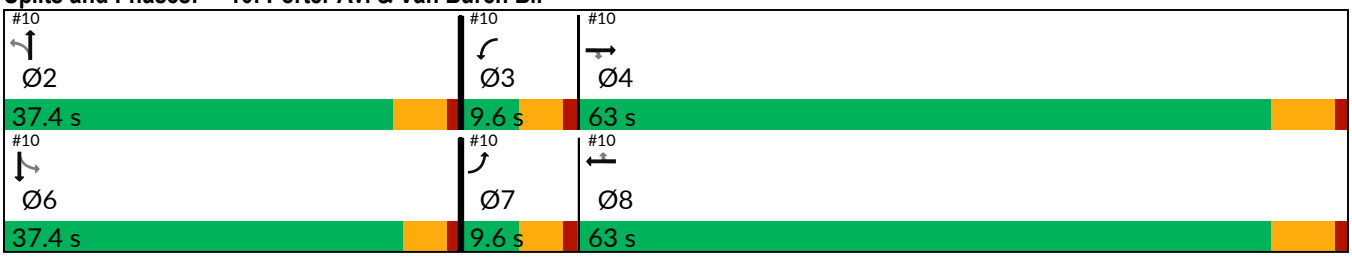
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	39	342	-	-	473	-	-	96
HCM Lane V/C Ratio	2.057	0.034	-	-	0.062	-	-	0.154
HCM Ctrl Dly (s/v)	$ 710.1	15.9	-	-	13.1	-	-	49.2
HCM Lane LOS	F	C	-	-	B	-	-	E
HCM 95th %tile Q(veh)	8.7	0.1	-	-	0.2	-	-	0.5

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	2	1310	59	10	1709	2	12	0	13	7
Future Volume (vph)	2	1310	59	10	1709	2	12	0	13	7
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)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	27.7	27.7	9.6	27.7	27.7	36.9	36.9	35.6	35.6
Total Split (s)	9.6	63.0	63.0	9.6	63.0	63.0	37.4	37.4	37.4	37.4
Total Split (%)	8.7%	57.3%	57.3%	8.7%	57.3%	57.3%	34.0%	34.0%	34.0%	34.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	4.4	4.4	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2		5.4		4.6
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	None	None	None	None
Act Effct Green (s)	5.7	53.9	53.9	5.7	53.9	53.9		14.1		14.5
Actuated g/C Ratio	0.08	0.79	0.79	0.08	0.79	0.79		0.21		0.21
v/c Ratio	0.01	0.50	0.05	0.07	0.65	0.00		0.09		0.11
Control Delay (s/veh)	43.0	8.8	2.5	42.9	11.5	0.0		0.5		20.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay (s/veh)	43.0	8.8	2.5	42.9	11.5	0.0		0.5		20.5
LOS	D	A	A	D	B	A		A		C
Approach Delay (s/veh)		8.6			11.7			0.5		20.5
Approach LOS		A			B			A		C

Intersection Summary		
Cycle Length: 110		
Actuated Cycle Length: 68.4		
Natural Cycle: 110		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.65		
Intersection Signal Delay (s/veh): 10.3	Intersection LOS: B	
Intersection Capacity Utilization 65.2%	ICU Level of Service C	
Analysis Period (min) 15		

Splits and Phases: 10: Porter Av. & Van Buren Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	1310	59	10	1709	2	12	0	20	13	7	15
Future Volume (veh/h)	2	1310	59	10	1709	2	12	0	20	13	7	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	1394	53	11	1818	2	13	0	12	14	7	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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	5	2323	1036	25	2363	1051	128	17	53	119	40	40
Arrive On Green	0.00	0.65	0.65	0.01	0.66	0.66	0.07	0.00	0.07	0.07	0.07	0.07
Sat Flow, veh/h	1781	3554	1585	1781	3554	1580	562	240	740	503	548	551
Grp Volume(v), veh/h	2	1394	53	11	1818	2	25	0	0	32	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1580	1543	0	0	1602	0	0
Q Serve(g_s), s	0.1	13.9	0.7	0.4	21.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	13.9	0.7	0.4	21.8	0.0	0.9	0.0	0.0	1.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.52		0.48	0.44		0.34
Lane Grp Cap(c), veh/h	5	2323	1036	25	2363	1051	199	0	0	199	0	0
V/C Ratio(X)	0.41	0.60	0.05	0.44	0.77	0.00	0.13	0.00	0.00	0.16	0.00	0.00
Avail Cap(c_a), veh/h	143	3244	1447	143	3244	1443	852	0	0	903	0	0
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	0.00	0.00
Uniform Delay (d), s/veh	31.0	6.1	3.9	30.4	7.2	3.5	27.2	0.0	0.0	27.3	0.0	0.0
Incr Delay (d2), s/veh	19.3	0.3	0.0	4.6	0.8	0.0	0.3	0.0	0.0	0.4	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	0.1	2.6	0.1	0.2	4.0	0.0	0.3	0.0	0.0	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	50.3	6.4	3.9	35.0	7.9	3.5	27.5	0.0	0.0	27.7	0.0	0.0
LnGrp LOS	D	A	A	D	A		C			C		
Approach Vol, veh/h		1449			1831			25			32	
Approach Delay, s/veh		6.4			8.1			27.5			27.7	
Approach LOS		A			A			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		9.9	5.5	46.9		9.9	4.8	47.6				
Change Period (Y+Rc), s		5.4	4.6	6.2		* 5.4	4.6	6.2				
Max Green Setting (Gmax), s		32.0	5.0	56.8		* 33	5.0	56.8				
Max Q Clear Time (g_c+I1), s		2.9	2.4	15.9		3.1	2.1	23.8				
Green Ext Time (p_c), s		0.1	0.0	12.8		0.1	0.0	17.5				

Intersection Summary	
HCM 7th Control Delay, s/veh	7.7
HCM 7th LOS	A

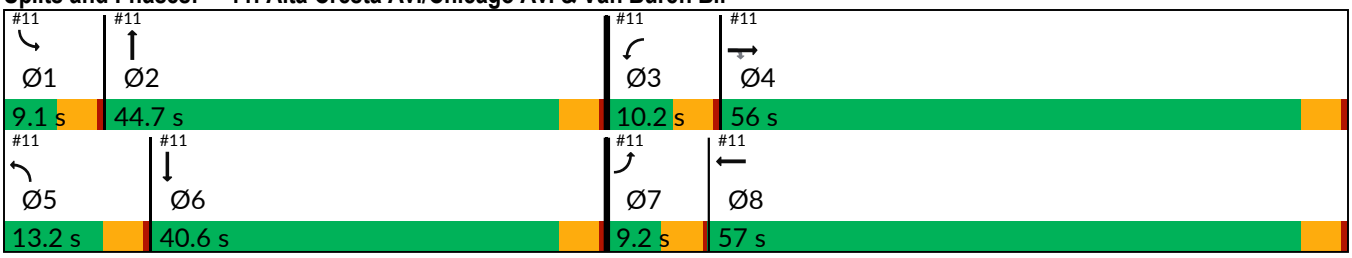
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	20	1182	67	46	1547	48	1	9	1
Future Volume (vph)	20	1182	67	46	1547	48	1	9	1
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.1	30.1	30.1	9.1	30.1	9.1	44.1	9.1	26.1
Total Split (s)	9.2	56.0	56.0	10.2	57.0	13.2	44.7	9.1	40.6
Total Split (%)	7.7%	46.7%	46.7%	8.5%	47.5%	11.0%	37.3%	7.6%	33.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	5.3	52.9	52.9	6.3	55.4	7.8	15.8	5.2	10.1
Actuated g/C Ratio	0.06	0.63	0.63	0.07	0.66	0.09	0.19	0.06	0.12
v/c Ratio	0.20	0.57	0.07	0.37	0.72	0.32	0.16	0.09	0.04
Control Delay (s/veh)	50.4	15.4	3.2	52.7	16.9	47.4	9.3	48.9	19.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	50.4	15.4	3.2	52.7	16.9	47.4	9.3	48.9	19.6
LOS	D	B	A	D	B	D	A	D	B
Approach Delay (s/veh)		15.3			17.9		28.2		35.0
Approach LOS		B			B		C		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 84.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay (s/veh): 17.2	Intersection LOS: B
Intersection Capacity Utilization 59.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 11: Alta Cresta Av./Chicago Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1182	67	46	1547	13	48	1	48	9	1	7
Future Volume (veh/h)	20	1182	67	46	1547	13	48	1	48	9	1	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	1271	56	49	1663	13	52	1	25	10	1	2
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	45	2032	906	81	2139	17	84	7	173	23	44	87
Arrive On Green	0.03	0.57	0.57	0.05	0.59	0.59	0.05	0.11	0.11	0.01	0.08	0.08
Sat Flow, veh/h	1781	3554	1585	1781	3613	28	1781	61	1533	1781	557	1113
Grp Volume(v), veh/h	22	1271	56	49	817	859	52	0	26	10	0	3
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1865	1781	0	1594	1781	0	1670
Q Serve(g_s), s	0.8	15.2	1.0	1.7	22.2	22.2	1.8	0.0	0.9	0.4	0.0	0.1
Cycle Q Clear(g_c), s	0.8	15.2	1.0	1.7	22.2	22.2	1.8	0.0	0.9	0.4	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.96	1.00		0.67
Lane Grp Cap(c), veh/h	45	2032	906	81	1052	1104	84	0	180	23	0	131
V/C Ratio(X)	0.49	0.63	0.06	0.60	0.78	0.78	0.62	0.00	0.14	0.44	0.00	0.02
Avail Cap(c_a), veh/h	142	2892	1290	170	1474	1547	254	0	1015	140	0	956
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	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.7	9.1	6.1	29.9	9.8	9.8	29.8	0.0	25.5	31.3	0.0	27.1
Incr Delay (d2), s/veh	8.0	0.3	0.0	7.1	1.8	1.7	7.2	0.0	0.4	12.9	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	0.4	3.9	0.2	0.8	5.7	6.0	0.9	0.0	0.4	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	38.6	9.4	6.1	36.9	11.6	11.5	37.0	0.0	25.9	44.1	0.0	27.2
LnGrp LOS	D	A	A	D	B	B	D		C	D		C
Approach Vol, veh/h		1349			1725			78			13	
Approach Delay, s/veh		9.8			12.3			33.3			40.2	
Approach LOS		A			B			C			D	

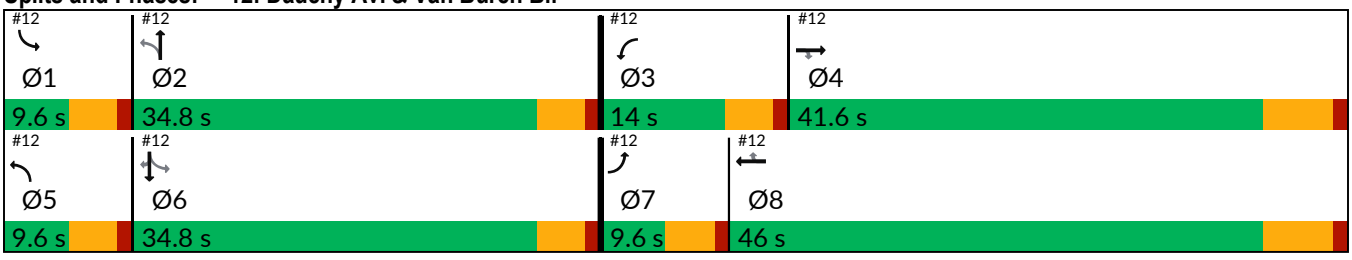
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.9	11.3	7.0	40.6	7.1	9.1	5.7	41.8
Change Period (Y+Rc), s	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Max Green Setting (Gmax), s	5.0	40.6	6.1	51.9	9.1	36.5	5.1	52.9
Max Q Clear Time (g_c+I1), s	2.4	2.9	3.7	17.2	3.8	2.1	2.8	24.2
Green Ext Time (p_c), s	0.0	0.1	0.0	10.7	0.0	0.0	0.0	13.5

Intersection Summary	
HCM 7th Control Delay, s/veh	11.8
HCM 7th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	29	973	199	120	1225	14	122	59	44	103	23
Future Volume (vph)	29	973	199	120	1225	14	122	59	44	103	23
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	28.2	28.2	9.6	28.2	28.2	9.6	26.6	9.6	33.6	33.6
Total Split (s)	9.6	41.6	41.6	14.0	46.0	46.0	9.6	34.8	9.6	34.8	34.8
Total Split (%)	9.6%	41.6%	41.6%	14.0%	46.0%	46.0%	9.6%	34.8%	9.6%	34.8%	34.8%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	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	None	None	None	None
Act Effct Green (s)	5.2	29.5	29.5	9.1	40.2	40.2	18.8	16.1	16.3	14.1	14.1
Actuated g/C Ratio	0.07	0.39	0.39	0.12	0.53	0.53	0.25	0.21	0.21	0.19	0.19
v/c Ratio	0.26	0.77	0.31	0.62	0.71	0.02	0.40	0.51	0.20	0.33	0.06
Control Delay (s/veh)	45.7	26.0	10.2	50.9	19.4	0.1	26.5	17.2	22.7	31.8	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	45.7	26.0	10.2	50.9	19.4	0.1	26.5	17.2	22.7	31.8	0.3
LOS	D	C	B	D	B	A	C	B	C	C	A
Approach Delay (s/veh)		23.9			22.0			20.5		25.2	
Approach LOS		C			C			C		C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 76	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay (s/veh): 22.7	Intersection LOS: C
Intersection Capacity Utilization 71.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 12: Dauchy Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	973	199	120	1225	14	122	59	157	44	103	23
Future Volume (veh/h)	29	973	199	120	1225	14	122	59	157	44	103	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	1058	136	130	1332	8	133	64	117	48	112	11
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	59	1441	643	165	1652	720	339	99	180	262	257	214
Arrive On Green	0.03	0.41	0.41	0.09	0.46	0.46	0.07	0.17	0.17	0.04	0.14	0.14
Sat Flow, veh/h	1781	3554	1585	1781	3554	1549	1781	592	1083	1781	1870	1557
Grp Volume(v), veh/h	32	1058	136	130	1332	8	133	0	181	48	112	11
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1549	1781	0	1675	1781	1870	1557
Q Serve(g_s), s	1.2	17.3	3.8	4.9	22.0	0.2	4.4	0.0	6.9	1.6	3.8	0.4
Cycle Q Clear(g_c), s	1.2	17.3	3.8	4.9	22.0	0.2	4.4	0.0	6.9	1.6	3.8	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.65	1.00		1.00
Lane Grp Cap(c), veh/h	59	1441	643	165	1652	720	339	0	279	262	257	214
V/C Ratio(X)	0.54	0.73	0.21	0.79	0.81	0.01	0.39	0.00	0.65	0.18	0.44	0.05
Avail Cap(c_a), veh/h	130	1834	818	244	2062	898	339	0	738	314	823	685
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	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.6	17.3	13.3	30.5	15.7	9.9	23.2	0.0	26.7	23.8	27.2	25.7
Incr Delay (d2), s/veh	2.8	1.1	0.2	5.4	2.0	0.0	0.3	0.0	2.5	0.1	1.2	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	0.5	5.9	1.1	2.1	7.3	0.1	1.8	0.0	2.9	0.6	1.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.5	18.4	13.4	35.9	17.7	9.9	23.5	0.0	29.2	24.0	28.3	25.8
LnGrp LOS	D	B	B	D	B	A	C		C	C	C	C
Approach Vol, veh/h		1226			1470			314			171	
Approach Delay, s/veh		18.3			19.2			26.8			26.9	
Approach LOS		B			B			C			C	

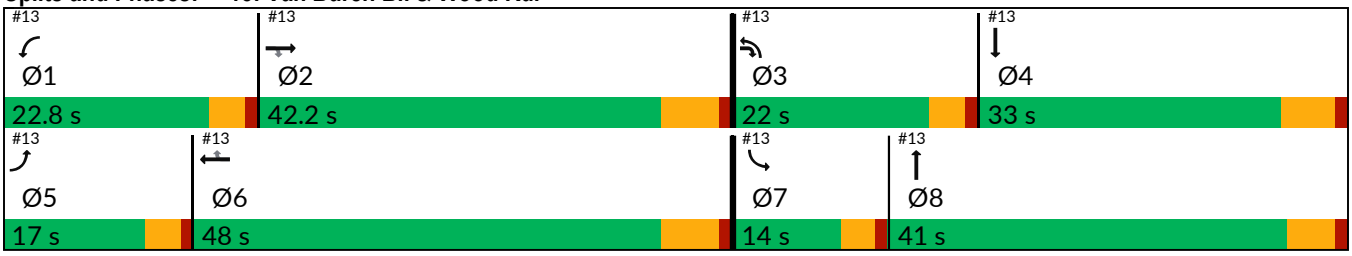
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	16.0	11.0	34.0	9.6	14.0	6.9	38.1
Change Period (Y+Rc), s	4.6	4.6	4.6	6.2	4.6	4.6	4.6	6.2
Max Green Setting (Gmax), s	5.0	30.2	9.4	35.4	5.0	30.2	5.0	39.8
Max Q Clear Time (g_c+I1), s	3.6	8.9	6.9	19.3	6.4	5.8	3.2	24.0
Green Ext Time (p_c), s	0.0	1.1	0.0	6.5	0.0	0.6	0.0	7.9

Intersection Summary	
HCM 7th Control Delay, s/veh	20.0
HCM 7th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	132	672	305	390	928	175	395	424	69	456
Future Volume (vph)	132	672	305	390	928	175	395	424	69	456
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6		3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	3	1	6	6	3	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.2	30.2	9.2	9.2	30.2	30.2	9.2	38.4	9.2	15.8
Total Split (s)	17.0	42.2	22.0	22.8	48.0	48.0	22.0	41.0	14.0	33.0
Total Split (%)	14.2%	35.2%	18.3%	19.0%	40.0%	40.0%	18.3%	34.2%	11.7%	27.5%
Yellow Time (s)	3.2	5.2	3.2	3.2	5.2	5.2	3.2	4.4	3.2	4.8
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)	4.2	6.2	4.2	4.2	6.2	6.2	4.2	5.4	4.2	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.9	34.3	53.2	17.2	39.6	39.6	16.9	36.9	8.4	25.6
Actuated g/C Ratio	0.10	0.30	0.46	0.15	0.35	0.35	0.15	0.32	0.07	0.22
v/c Ratio	0.80	0.71	0.44	0.84	0.84	0.29	0.87	0.66	0.60	0.88
Control Delay (s/veh)	81.9	40.5	14.6	63.5	42.7	6.2	66.9	34.0	72.5	55.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	81.9	40.5	14.6	63.5	42.7	6.2	66.9	34.0	72.5	55.1
LOS	F	D	B	E	D	A	E	C	E	E
Approach Delay (s/veh)		38.3			43.9			46.3		56.8
Approach LOS		D			D			D		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 114.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay (s/veh): 45.1	Intersection LOS: D
Intersection Capacity Utilization 80.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 13: Van Buren Bl. & Wood Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	672	305	390	928	175	395	424	238	69	456	171
Future Volume (veh/h)	132	672	305	390	928	175	395	424	238	69	456	171
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.93	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	147	747	156	433	1031	114	439	471	108	77	507	106
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	177	1085	702	501	1248	552	506	845	192	99	606	126
Arrive On Green	0.10	0.31	0.31	0.15	0.35	0.35	0.15	0.30	0.30	0.06	0.21	0.21
Sat Flow, veh/h	1781	3554	1540	3456	3554	1573	3456	2832	643	1781	2921	607
Grp Volume(v), veh/h	147	747	156	433	1031	114	439	294	285	77	307	306
Grp Sat Flow(s),veh/h/ln	1781	1777	1540	1728	1777	1573	1728	1777	1699	1781	1777	1752
Q Serve(g_s), s	8.4	19.2	6.4	12.7	27.6	5.3	12.9	14.5	14.7	4.4	17.3	17.4
Cycle Q Clear(g_c), s	8.4	19.2	6.4	12.7	27.6	5.3	12.9	14.5	14.7	4.4	17.3	17.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.38	1.00		0.35
Lane Grp Cap(c), veh/h	177	1085	702	501	1248	552	506	530	507	99	369	363
V/C Ratio(X)	0.83	0.69	0.22	0.86	0.83	0.21	0.87	0.55	0.56	0.78	0.83	0.84
Avail Cap(c_a), veh/h	219	1229	764	617	1427	632	591	608	581	168	464	458
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	46.0	31.8	17.4	43.5	30.9	23.6	43.5	30.7	30.8	48.5	39.5	39.6
Incr Delay (d2), s/veh	16.4	1.7	0.2	9.0	4.0	0.3	10.5	0.9	1.0	5.0	10.1	10.9
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	4.4	8.0	2.2	5.8	11.6	1.9	6.1	6.1	6.0	2.1	8.3	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	62.4	33.5	17.6	52.5	34.9	23.9	54.0	31.6	31.8	53.5	49.7	50.5
LnGrp LOS	E	C	B	D	C	C	D	C	C	D	D	D
Approach Vol, veh/h		1050			1578			1018			690	
Approach Delay, s/veh		35.2			38.9			41.3			50.5	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.3	38.0	19.4	27.4	14.5	42.8	10.0	36.9
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	18.6	36.0	17.8	27.2	12.8	41.8	9.8	* 36
Max Q Clear Time (g_c+I1), s	14.7	21.2	14.9	19.4	10.4	29.6	6.4	16.7
Green Ext Time (p_c), s	0.4	6.0	0.3	2.2	0.0	6.9	0.0	3.2

Intersection Summary	
HCM 7th Control Delay, s/veh	40.4
HCM 7th LOS	D

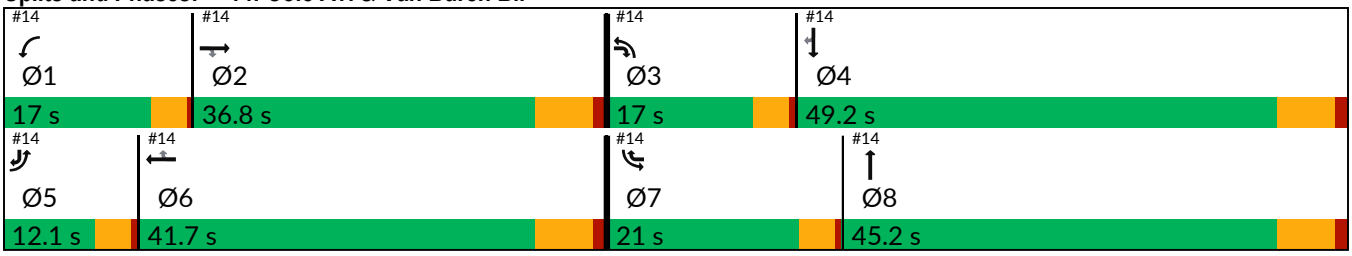
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	193	700	86	170	1249	438	172	438	159	342	171
Future Volume (vph)	193	700	86	170	1249	438	172	438	159	342	171
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8	7	4	5
Permitted Phases			2			6					4
Detector Phase	5	2	3	1	6	7	3	8	7	4	5
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0
Minimum Split (s)	9.1	36.2	9.1	9.1	36.2	9.1	9.1	42.2	9.1	49.2	9.1
Total Split (s)	12.1	36.8	17.0	17.0	41.7	21.0	17.0	45.2	21.0	49.2	12.1
Total Split (%)	10.1%	30.7%	14.2%	14.2%	34.8%	17.5%	14.2%	37.7%	17.5%	41.0%	10.1%
Yellow Time (s)	3.2	5.2	3.2	3.2	5.2	3.2	3.2	5.2	3.2	5.2	3.2
All-Red Time (s)	0.5	1.0	0.5	0.5	1.0	0.5	0.5	1.0	0.5	1.0	0.5
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)	3.7	6.2	3.7	3.7	6.2	3.7	3.7	6.2	3.7	6.2	3.7
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.5	29.4	45.4	13.4	34.3	46.1	13.4	23.1	9.3	19.0	30.0
Actuated g/C Ratio	0.09	0.31	0.48	0.14	0.36	0.48	0.14	0.24	0.10	0.20	0.32
v/c Ratio	0.70	0.70	0.12	0.75	0.75	0.58	0.76	0.67	0.52	0.53	0.34
Control Delay (s/veh)	57.2	34.4	1.7	61.8	30.9	14.8	61.9	35.8	48.1	36.4	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.2	34.4	1.7	61.8	30.9	14.8	61.9	35.8	48.1	36.4	12.3
LOS	E	C	A	E	C	B	E	D	D	D	B
Approach Delay (s/veh)		36.0			29.9			42.3		33.1	
Approach LOS		D			C			D		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 95.2	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay (s/veh): 33.9	Intersection LOS: C
Intersection Capacity Utilization 66.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 14: Cole Av. & Van Buren Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	193	700	86	170	1249	438	172	438	81	159	342	171
Future Volume (veh/h)	193	700	86	170	1249	438	172	438	81	159	342	171
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	212	769	64	187	1373	340	189	481	85	175	376	132
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	291	1211	739	224	1953	715	226	652	115	259	584	390
Arrive On Green	0.08	0.34	0.34	0.13	0.38	0.38	0.13	0.22	0.22	0.07	0.16	0.16
Sat Flow, veh/h	3456	3554	1578	1781	5106	1560	1781	3013	529	3456	3554	1561
Grp Volume(v), veh/h	212	769	64	187	1373	340	189	282	284	175	376	132
Grp Sat Flow(s),veh/h/ln	1728	1777	1578	1781	1702	1560	1781	1777	1766	1728	1777	1561
Q Serve(g_s), s	4.9	14.9	1.8	8.4	18.6	12.4	8.5	12.1	12.3	4.0	8.1	5.7
Cycle Q Clear(g_c), s	4.9	14.9	1.8	8.4	18.6	12.4	8.5	12.1	12.3	4.0	8.1	5.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	291	1211	739	224	1953	715	226	385	382	259	584	390
V/C Ratio(X)	0.73	0.63	0.09	0.83	0.70	0.48	0.83	0.73	0.74	0.68	0.64	0.34
Avail Cap(c_a), veh/h	355	1328	791	289	2214	795	289	846	841	730	1866	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	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	36.6	22.7	12.1	34.9	21.3	15.4	34.9	29.9	29.9	36.9	32.0	25.3
Incr Delay (d2), s/veh	4.2	1.1	0.1	12.1	1.0	0.7	12.5	2.7	2.8	1.2	1.2	0.5
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	5.7	0.6	4.1	6.6	3.8	4.2	5.0	5.0	1.6	3.3	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.7	23.8	12.1	47.0	22.4	16.1	47.3	32.6	32.8	38.1	33.2	25.8
LnGrp LOS	D	C	B	D	C	B	D	C	C	D	C	C
Approach Vol, veh/h		1045			1900			755			683	
Approach Delay, s/veh		26.5			23.7			36.4			33.0	
Approach LOS		C			C			D			C	

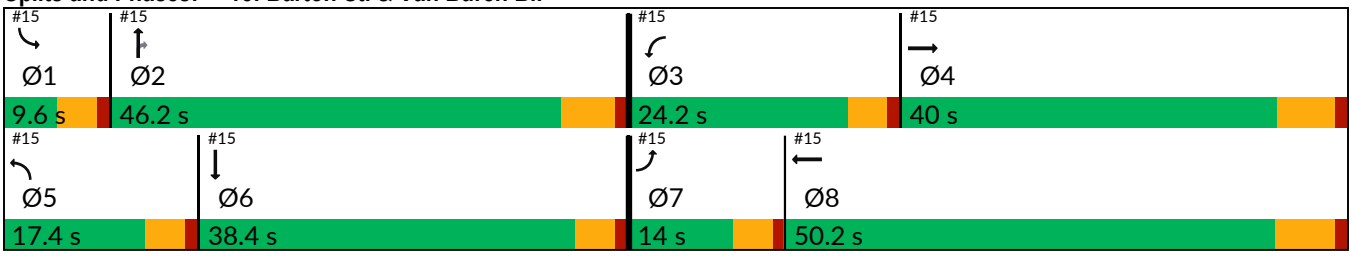
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	34.1	14.1	19.6	10.6	37.5	9.8	23.9
Change Period (Y+Rc), s	3.7	6.2	3.7	6.2	3.7	6.2	3.7	6.2
Max Green Setting (Gmax), s	13.3	30.6	13.3	43.0	8.4	35.5	17.3	39.0
Max Q Clear Time (g_c+I1), s	10.4	16.9	10.5	10.1	6.9	20.6	6.0	14.3
Green Ext Time (p_c), s	0.1	5.5	0.1	2.7	0.1	10.7	0.2	3.0

Intersection Summary	
HCM 7th Control Delay, s/veh	28.0
HCM 7th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	103	807	249	1440	251	85	394	22	83
Future Volume (vph)	103	807	249	1440	251	85	394	22	83
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)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.2	9.6	28.5	9.6	44.8	44.8	9.6	26.1
Total Split (s)	14.0	40.0	24.2	50.2	17.4	46.2	46.2	9.6	38.4
Total Split (%)	11.7%	33.3%	20.2%	41.8%	14.5%	38.5%	38.5%	8.0%	32.0%
Yellow Time (s)	3.6	5.2	3.6	5.5	3.6	4.8	4.8	3.6	3.6
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)	4.6	6.2	4.6	6.5	4.6	5.8	5.8	4.6	4.6
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	None	None	None	None
Act Effct Green (s)	9.1	34.1	19.3	43.9	11.8	33.0	33.0	5.0	21.3
Actuated g/C Ratio	0.09	0.32	0.18	0.41	0.11	0.31	0.31	0.05	0.20
v/c Ratio	0.75	0.89	0.87	0.78	0.74	0.16	0.59	0.29	0.82
Control Delay (s/veh)	80.0	46.8	70.5	31.6	59.6	28.2	9.7	61.9	43.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	80.0	46.8	70.5	31.6	59.6	28.2	9.7	61.9	43.0
LOS	E	D	E	C	E	C	A	E	D
Approach Delay (s/veh)		50.2		37.3		29.0			44.3
Approach LOS		D		D		C			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 106.6	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay (s/veh): 39.7	Intersection LOS: D
Intersection Capacity Utilization 81.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 15: Barton St. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	807	93	249	1440	23	251	85	394	22	83	227
Future Volume (veh/h)	103	807	93	249	1440	23	251	85	394	22	83	227
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	114	897	90	277	1600	14	279	94	270	24	92	179
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	142	1015	102	309	2114	18	349	507	430	44	109	212
Arrive On Green	0.08	0.31	0.31	0.17	0.41	0.41	0.10	0.27	0.27	0.02	0.19	0.19
Sat Flow, veh/h	1781	3261	327	1781	5219	46	3456	1870	1585	1781	560	1090
Grp Volume(v), veh/h	114	489	498	277	1044	570	279	94	270	24	0	271
Grp Sat Flow(s),veh/h/ln	1781	1777	1811	1781	1702	1861	1728	1870	1585	1781	0	1651
Q Serve(g_s), s	6.2	25.6	25.6	14.9	25.8	25.8	7.7	3.8	14.7	1.3	0.0	15.5
Cycle Q Clear(g_c), s	6.2	25.6	25.6	14.9	25.8	25.8	7.7	3.8	14.7	1.3	0.0	15.5
Prop In Lane	1.00		0.18	1.00		0.02	1.00		1.00	1.00		0.66
Lane Grp Cap(c), veh/h	142	553	564	309	1379	754	349	507	430	44	0	321
V/C Ratio(X)	0.80	0.88	0.88	0.90	0.76	0.76	0.80	0.19	0.63	0.55	0.00	0.84
Avail Cap(c_a), veh/h	171	613	625	357	1519	830	452	772	654	91	0	570
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	0.00	1.00
Uniform Delay (d), s/veh	44.3	32.0	32.0	39.6	25.0	25.0	43.0	27.4	31.3	47.2	0.0	38.0
Incr Delay (d2), s/veh	16.8	13.4	13.2	20.5	2.0	3.7	5.7	0.2	1.5	4.0	0.0	6.0
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	3.2	12.1	12.3	7.8	9.5	10.8	3.4	1.6	5.3	0.6	0.0	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.1	45.5	45.3	60.1	27.0	28.7	48.8	27.6	32.9	51.2	0.0	44.0
LnGrp LOS	E	D	D	E	C	C	D	C	C	D		D
Approach Vol, veh/h		1101			1891			643			295	
Approach Delay, s/veh		47.0			32.4			39.0			44.6	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	32.4	21.6	37.0	14.5	24.9	12.4	46.2
Change Period (Y+Rc), s	4.6	5.8	4.6	* 6.5	4.6	* 5.8	4.6	6.5
Max Green Setting (Gmax), s	5.0	40.4	19.6	* 34	12.8	* 34	9.4	43.7
Max Q Clear Time (g_c+I1), s	3.3	16.7	16.9	27.6	9.7	17.5	8.2	27.8
Green Ext Time (p_c), s	0.0	1.3	0.1	2.9	0.2	1.6	0.0	8.7

Intersection Summary	
HCM 7th Control Delay, s/veh	38.5
HCM 7th LOS	D

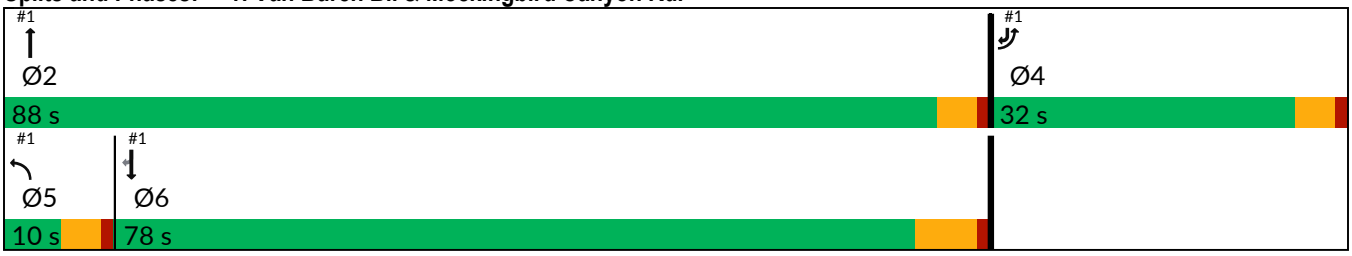
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	243	10	1021	1353	472
Future Volume (vph)	243	10	1021	1353	472
Turn Type	Prot	Prot	NA	NA	pm+ov
Protected Phases	4	5	2	6	4
Permitted Phases					6
Detector Phase	4	5	2	6	4
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	29.6	9.6	26.1	28.5	29.6
Total Split (s)	32.0	10.0	88.0	78.0	32.0
Total Split (%)	26.7%	8.3%	73.3%	65.0%	26.7%
Yellow Time (s)	3.6	3.6	3.6	5.5	3.6
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)	4.6	4.6	4.6	6.5	4.6
Lead/Lag		Lead		Lag	
Lead-Lag Optimize?		Yes		Yes	
Recall Mode	None	None	None	None	None
Act Effct Green (s)	11.3	5.7	34.9	31.7	55.0
Actuated g/C Ratio	0.20	0.10	0.62	0.56	0.97
v/c Ratio	0.38	0.06	0.48	0.70	0.31
Control Delay (s/veh)	23.3	34.6	6.7	12.2	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	23.3	34.6	6.7	12.2	0.6
LOS	C	C	A	B	A
Approach Delay (s/veh)	23.3		7.0	9.2	
Approach LOS	C		A	A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 56.6	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay (s/veh): 9.6	Intersection LOS: A
Intersection Capacity Utilization 54.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Van Buren Bl. & Mockingbird Canyon Rd.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	243	11	10	1021	1353	472
Future Volume (veh/h)	243	11	10	1021	1353	472
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	258	0	10	1053	1395	479
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	393	175	23	2454	2115	1118
Arrive On Green	0.11	0.00	0.01	0.69	0.60	0.60
Sat Flow, veh/h	3563	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	258	0	10	1053	1395	479
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1777	1777	1585
Q Serve(g_s), s	3.9	0.0	0.3	7.3	14.6	7.1
Cycle Q Clear(g_c), s	3.9	0.0	0.3	7.3	14.6	7.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	393	175	23	2454	2115	1118
V/C Ratio(X)	0.66	0.00	0.44	0.43	0.66	0.43
Avail Cap(c_a), veh/h	1751	779	173	5317	4558	2208
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	23.8	0.0	27.3	3.8	7.5	3.5
Incr Delay (d2), s/veh	0.7	0.0	4.8	0.0	0.4	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	1.4	0.0	0.1	0.6	2.7	1.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	24.5	0.0	32.1	3.8	7.9	3.7
LnGrp LOS	C		C	A	A	A
Approach Vol, veh/h	258			1063	1874	
Approach Delay, s/veh	24.5			4.1	6.8	
Approach LOS	C			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		45.0		10.8	5.3	39.7
Change Period (Y+Rc), s		* 6.5		4.6	4.6	6.5
Max Green Setting (Gmax), s		* 83		27.4	5.4	71.5
Max Q Clear Time (g_c+I1), s		9.3		5.9	2.3	16.6
Green Ext Time (p_c), s		4.6		0.4	0.0	16.6

Intersection Summary	
HCM 7th Control Delay, s/veh	7.3
HCM 7th LOS	A

Notes

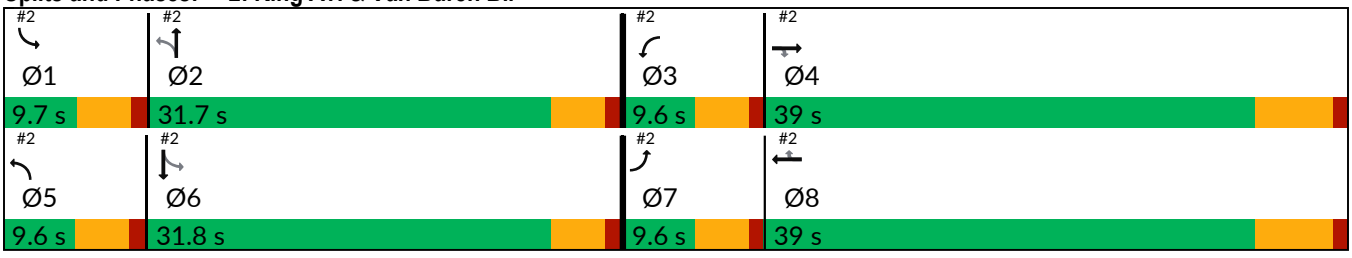
User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	33	1257	164	23	1097	49	61	11	74	37
Future Volume (vph)	33	1257	164	23	1097	49	61	11	74	37
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA
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	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.5	28.5	9.6	28.5	28.5	9.6	26.1	9.6	31.6
Total Split (s)	9.6	39.0	39.0	9.6	39.0	39.0	9.6	31.7	9.7	31.8
Total Split (%)	10.7%	43.3%	43.3%	10.7%	43.3%	43.3%	10.7%	35.2%	10.8%	35.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.6	36.7	36.7	5.6	36.7	36.7	11.1	13.6	15.2	13.7
Actuated g/C Ratio	0.09	0.59	0.59	0.09	0.59	0.59	0.18	0.22	0.24	0.22
v/c Ratio	0.21	0.63	0.17	0.15	0.55	0.05	0.23	0.06	0.22	0.21
Control Delay (s/veh)	38.3	17.8	5.8	37.6	16.2	0.1	22.8	16.9	19.6	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	38.3	17.8	5.8	37.6	16.2	0.1	22.8	16.9	19.6	14.7
LOS	D	B	A	D	B	A	C	B	B	B
Approach Delay (s/veh)		16.9			15.9			21.2		16.9
Approach LOS		B			B			C		B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 62.3	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay (s/veh): 16.6	Intersection LOS: B
Intersection Capacity Utilization 55.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 2: King Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	1257	164	23	1097	49	61	11	12	74	37	47
Future Volume (veh/h)	33	1257	164	23	1097	49	61	11	12	74	37	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	0.99		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	34	1309	129	24	1143	48	64	11	3	77	39	35
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	64	1634	729	49	1603	711	331	171	47	385	114	103
Arrive On Green	0.04	0.46	0.46	0.03	0.45	0.45	0.05	0.12	0.12	0.06	0.13	0.13
Sat Flow, veh/h	1781	3554	1585	1781	3554	1576	1781	1414	386	1781	906	813
Grp Volume(v), veh/h	34	1309	129	24	1143	48	64	0	14	77	0	74
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1576	1781	0	1799	1781	0	1719
Q Serve(g_s), s	1.1	19.0	2.9	0.8	15.7	1.0	1.9	0.0	0.4	2.2	0.0	2.4
Cycle Q Clear(g_c), s	1.1	19.0	2.9	0.8	15.7	1.0	1.9	0.0	0.4	2.2	0.0	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		0.47
Lane Grp Cap(c), veh/h	64	1634	729	49	1603	711	331	0	217	385	0	217
V/C Ratio(X)	0.53	0.80	0.18	0.49	0.71	0.07	0.19	0.00	0.06	0.20	0.00	0.34
Avail Cap(c_a), veh/h	148	1935	863	148	1935	858	382	0	809	429	0	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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.5	13.9	9.6	28.9	13.4	9.4	21.3	0.0	23.5	21.1	0.0	24.0
Incr Delay (d2), s/veh	2.5	2.1	0.1	2.8	1.0	0.0	0.1	0.0	0.1	0.1	0.0	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	0.5	5.9	0.8	0.3	4.8	0.3	0.7	0.0	0.2	0.9	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.0	16.1	9.7	31.7	14.4	9.4	21.4	0.0	23.6	21.2	0.0	25.0
LnGrp LOS	C	B	A	C	B	A	C		C	C		C
Approach Vol, veh/h		1472			1215			78			151	
Approach Delay, s/veh		15.8			14.5			21.8			23.1	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	11.9	6.3	33.9	7.9	12.2	6.8	33.4
Change Period (Y+Rc), s	4.6	4.6	4.6	6.2	4.6	4.6	4.6	6.2
Max Green Setting (Gmax), s	5.1	27.1	5.0	32.8	5.0	27.2	5.0	32.8
Max Q Clear Time (g_c+I1), s	4.2	2.4	2.8	21.0	3.9	4.4	3.1	17.7
Green Ext Time (p_c), s	0.0	0.0	0.0	6.7	0.0	0.3	0.0	6.6

Intersection Summary	
HCM 7th Control Delay, s/veh	15.8
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	50	55	557	120	82	876
Future Vol, veh/h	50	55	557	120	82	876
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	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	55	60	612	132	90	963

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1821	678	0	0	744	0
Stage 1	678	-	-	-	-	-
Stage 2	1143	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	85	452	-	-	864	-
Stage 1	504	-	-	-	-	-
Stage 2	304	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	66	452	-	-	864	-
Mov Cap-2 Maneuver	66	-	-	-	-	-
Stage 1	391	-	-	-	-	-
Stage 2	304	-	-	-	-	-

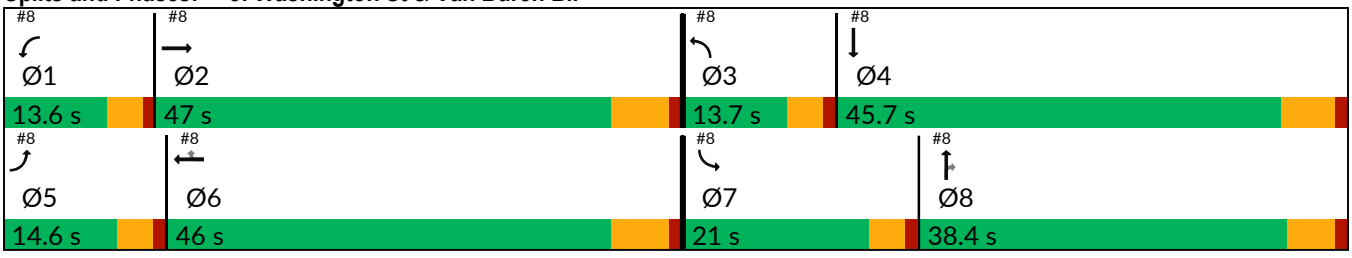
Approach	WB	NB	SB
HCM Ctrl Dly, s/v	141.96	0	0.83
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	120	154	-
HCM Lane V/C Ratio	-	-	0.965	0.104	-
HCM Ctrl Dly (s/v)	-	-	142	9.7	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	6.3	0.3	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	135	1168	131	954	300	135	242	67	488	358
Future Volume (vph)	135	1168	131	954	300	135	242	67	488	358
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	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.2	34.2	9.2	33.2	33.2	9.2	38.4	38.4	9.2	30.8
Total Split (s)	14.6	47.0	13.6	46.0	46.0	13.7	38.4	38.4	21.0	45.7
Total Split (%)	12.2%	39.2%	11.3%	38.3%	38.3%	11.4%	32.0%	32.0%	17.5%	38.1%
Yellow Time (s)	3.2	5.2	3.2	5.2	5.2	3.2	4.4	4.4	3.2	4.8
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)	4.2	6.2	4.2	6.2	6.2	4.2	5.4	5.4	4.2	5.8
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	None	None	None	None
Act Effct Green (s)	10.3	41.0	9.5	40.1	40.1	8.1	15.2	15.2	16.9	23.6
Actuated g/C Ratio	0.10	0.40	0.09	0.39	0.39	0.08	0.15	0.15	0.16	0.23
v/c Ratio	0.78	0.88	0.83	0.70	0.38	0.51	0.47	0.19	0.88	0.55
Control Delay (s/veh)	75.0	37.7	84.2	30.8	4.4	53.5	42.3	1.2	61.1	35.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	75.0	37.7	84.2	30.8	4.4	53.5	42.3	1.2	61.1	35.4
LOS	E	D	F	C	A	D	D	A	E	D
Approach Delay (s/veh)		41.4		30.2			39.6			49.0
Approach LOS		D		C			D			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 102.7	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay (s/veh): 39.1	Intersection LOS: D
Intersection Capacity Utilization 80.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 8: Washington St & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	1168	40	131	954	300	135	242	67	488	358	80
Future Volume (veh/h)	135	1168	40	131	954	300	135	242	67	488	358	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	138	1192	24	134	973	210	138	247	31	498	365	32
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	170	1423	29	165	1410	629	207	422	188	572	741	65
Arrive On Green	0.10	0.40	0.40	0.09	0.40	0.40	0.06	0.12	0.12	0.17	0.22	0.22
Sat Flow, veh/h	1781	3563	72	1781	3554	1584	3456	3554	1581	3456	3306	288
Grp Volume(v), veh/h	138	594	622	134	973	210	138	247	31	498	195	202
Grp Sat Flow(s),veh/h/ln	1781	1777	1857	1781	1777	1584	1728	1777	1581	1728	1777	1818
Q Serve(g_s), s	6.9	27.5	27.6	6.7	20.7	8.4	3.6	6.0	1.6	12.8	8.7	8.8
Cycle Q Clear(g_c), s	6.9	27.5	27.6	6.7	20.7	8.4	3.6	6.0	1.6	12.8	8.7	8.8
Prop In Lane	1.00		0.04	1.00		1.00	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	170	710	742	165	1410	629	207	422	188	572	398	408
V/C Ratio(X)	0.81	0.84	0.84	0.81	0.69	0.33	0.67	0.58	0.17	0.87	0.49	0.50
Avail Cap(c_a), veh/h	203	795	831	184	1551	691	360	1286	572	637	777	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	40.5	24.7	24.7	40.6	22.8	19.1	42.0	38.1	36.1	37.1	30.8	30.9
Incr Delay (d2), s/veh	16.0	7.7	7.4	19.3	1.4	0.4	1.4	1.3	0.4	10.8	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	3.6	11.7	12.2	3.7	8.0	3.1	1.6	2.7	0.6	6.2	3.8	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	56.5	32.4	32.1	59.9	24.2	19.6	43.3	39.3	36.5	47.9	31.8	31.8
LnGrp LOS	E	C	C	E	C	B	D	D	D	D	C	C
Approach Vol, veh/h		1354			1317			416			895	
Approach Delay, s/veh		34.7			27.1			40.5			40.7	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.6	42.6	9.7	26.2	12.9	42.4	19.3	16.6
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	9.4	40.8	9.5	39.9	10.4	39.8	16.8	* 33
Max Q Clear Time (g_c+I1), s	8.7	29.6	5.6	10.8	8.9	22.7	14.8	8.0
Green Ext Time (p_c), s	0.0	6.9	0.1	2.5	0.0	8.7	0.3	1.8

Intersection Summary	
HCM 7th Control Delay, s/veh	34.2
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	47.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	1640	19	43	1415	11	42	0	14	3	0	21
Future Vol, veh/h	17	1640	19	43	1415	11	42	0	14	3	0	21
Conflicting Peds, #/hr	0	0	0	0	0	2	0	0	2	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	275	-	-	255	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	1763	20	46	1522	12	45	0	15	3	0	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1535	0	0	1784	0	0	2663	3438	894	2542	3442	769
Stage 1	-	-	-	-	-	-	1810	1810	-	1622	1622	-
Stage 2	-	-	-	-	-	-	853	1628	-	920	1820	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	429	-	-	344	-	-	~ 11	7	284	14	7	344
Stage 1	-	-	-	-	-	-	81	129	-	107	160	-
Stage 2	-	-	-	-	-	-	320	159	-	291	127	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	428	-	-	344	-	-	~ 8	6	284	11	6	343
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 8	6	-	11	6	-
Stage 1	-	-	-	-	-	-	78	123	-	93	138	-
Stage 2	-	-	-	-	-	-	259	137	-	264	122	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.14	0.5	$ 2658.44	84.65
HCM LOS			F	F

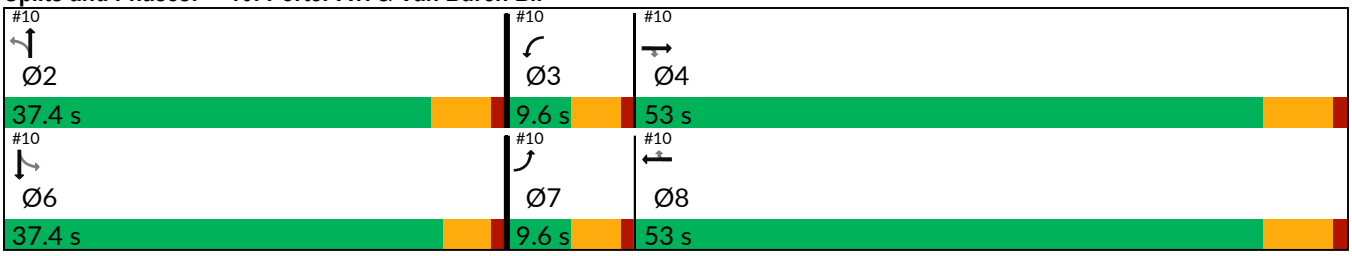
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	11	428	-	-	344	-	-	69
HCM Lane V/C Ratio	5.422	0.043	-	-	0.135	-	-	0.371
HCM Ctrl Dly (s/v)	$ 2658.4	13.8	-	-	17.1	-	-	84.7
HCM Lane LOS	F	B	-	-	C	-	-	F
HCM 95th %tile Q(veh)	8.7	0.1	-	-	0.5	-	-	1.4

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	15	1577	93	13	1391	4	13	3	11	3
Future Volume (vph)	15	1577	93	13	1391	4	13	3	11	3
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)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	27.7	27.7	9.6	27.7	27.7	36.9	36.9	35.6	35.6
Total Split (s)	9.6	53.0	53.0	9.6	53.0	53.0	37.4	37.4	37.4	37.4
Total Split (%)	9.6%	53.0%	53.0%	9.6%	53.0%	53.0%	37.4%	37.4%	37.4%	37.4%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	4.4	4.4	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2		5.4		4.6
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	None	None	None	None
Act Effct Green (s)	5.6	50.5	50.5	5.6	50.5	50.5		13.7		13.9
Actuated g/C Ratio	0.09	0.83	0.83	0.09	0.83	0.83		0.23		0.23
v/c Ratio	0.10	0.57	0.07	0.09	0.50	0.00		0.08		0.08
Control Delay (s/veh)	37.7	10.1	3.8	37.6	9.0	0.0		18.5		16.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay (s/veh)	37.7	10.1	3.8	37.6	9.0	0.0		18.5		16.6
LOS	D	B	A	D	A	A		B		B
Approach Delay (s/veh)		10.0			9.2			18.5		16.6
Approach LOS		A			A			B		B

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 60.7	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay (s/veh): 9.8	Intersection LOS: A
Intersection Capacity Utilization 61.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 10: Porter Av. & Van Buren Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	1577	93	13	1391	4	13	3	10	11	3	14
Future Volume (veh/h)	15	1577	93	13	1391	4	13	3	10	11	3	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	1678	86	14	1480	3	14	3	6	12	3	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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	35	2243	1000	31	2235	976	155	13	22	153	16	21
Arrive On Green	0.02	0.63	0.63	0.02	0.63	0.63	0.05	0.05	0.05	0.05	0.05	0.05
Sat Flow, veh/h	1781	3554	1585	1781	3554	1551	903	250	407	876	306	394
Grp Volume(v), veh/h	16	1678	86	14	1480	3	23	0	0	20	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1551	1560	0	0	1575	0	0
Q Serve(g_s), s	0.5	18.0	1.2	0.4	14.4	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	18.0	1.2	0.4	14.4	0.0	0.7	0.0	0.0	0.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.61		0.26	0.60		0.25
Lane Grp Cap(c), veh/h	35	2243	1000	31	2235	976	191	0	0	191	0	0
V/C Ratio(X)	0.46	0.75	0.09	0.45	0.66	0.00	0.12	0.00	0.00	0.10	0.00	0.00
Avail Cap(c_a), veh/h	164	3053	1362	164	3053	1333	991	0	0	1016	0	0
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	0.00	0.00
Uniform Delay (d), s/veh	26.4	7.0	3.9	26.5	6.4	3.8	24.7	0.0	0.0	24.6	0.0	0.0
Incr Delay (d2), s/veh	3.4	0.7	0.0	3.7	0.3	0.0	0.3	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	0.2	3.1	0.2	0.2	2.4	0.0	0.3	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.8	7.7	4.0	30.2	6.8	3.8	25.0	0.0	0.0	24.9	0.0	0.0
LnGrp LOS	C	A	A	C	A		C			C		
Approach Vol, veh/h		1780			1497			23			20	
Approach Delay, s/veh		7.7			7.0			25.0			24.9	
Approach LOS		A			A			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		8.3	5.6	40.6		8.3	5.7	40.5				
Change Period (Y+Rc), s		5.4	4.6	6.2		* 5.4	4.6	6.2				
Max Green Setting (Gmax), s		32.0	5.0	46.8		* 33	5.0	46.8				
Max Q Clear Time (g_c+I1), s		2.7	2.4	20.0		2.6	2.5	16.4				
Green Ext Time (p_c), s		0.1	0.0	14.4		0.1	0.0	12.5				

Intersection Summary	
HCM 7th Control Delay, s/veh	7.6
HCM 7th LOS	A

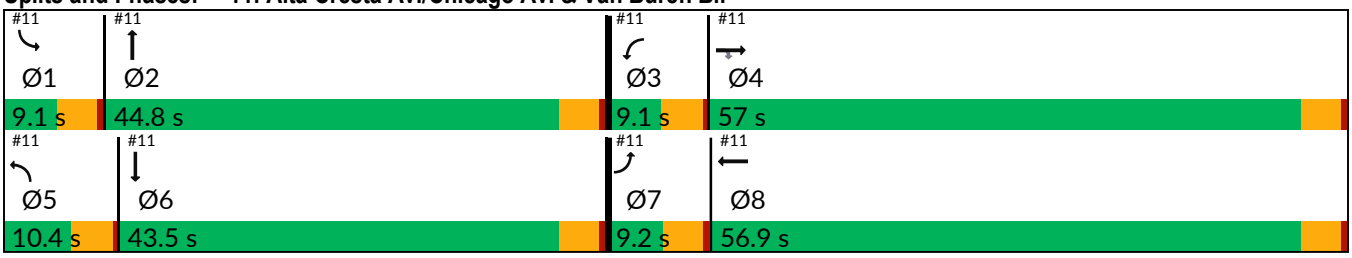
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	36	1467	120	28	1411	28	1	16	3
Future Volume (vph)	36	1467	120	28	1411	28	1	16	3
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.1	30.1	30.1	9.1	30.1	9.1	44.1	9.1	26.1
Total Split (s)	9.2	57.0	57.0	9.1	56.9	10.4	44.8	9.1	43.5
Total Split (%)	7.7%	47.5%	47.5%	7.6%	47.4%	8.7%	37.3%	7.6%	36.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	5.7	49.4	49.4	5.6	47.3	6.7	12.4	5.6	10.4
Actuated g/C Ratio	0.08	0.66	0.66	0.07	0.63	0.09	0.17	0.07	0.14
v/c Ratio	0.28	0.67	0.12	0.23	0.68	0.19	0.07	0.13	0.05
Control Delay (s/veh)	49.3	14.8	5.5	48.7	15.7	46.1	13.1	47.8	19.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.3	14.8	5.5	48.7	15.7	46.1	13.1	47.8	19.9
LOS	D	B	A	D	B	D	B	D	B
Approach Delay (s/veh)		14.9			16.3		32.5		36.3
Approach LOS		B			B		C		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 74.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay (s/veh): 16.0	Intersection LOS: B
Intersection Capacity Utilization 55.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 11: Alta Cresta Av./Chicago Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	1467	120	28	1411	17	28	1	19	16	3	8
Future Volume (veh/h)	36	1467	120	28	1411	17	28	1	19	16	3	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	38	1561	110	30	1501	18	30	1	9	17	3	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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	69	2085	930	58	2087	25	58	15	135	37	51	84
Arrive On Green	0.04	0.59	0.59	0.03	0.58	0.58	0.03	0.09	0.09	0.02	0.08	0.08
Sat Flow, veh/h	1781	3554	1585	1781	3595	43	1781	161	1449	1781	621	1035
Grp Volume(v), veh/h	38	1561	110	30	741	778	30	0	10	17	0	8
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1862	1781	0	1610	1781	0	1655
Q Serve(g_s), s	1.3	19.9	1.9	1.0	18.5	18.5	1.0	0.0	0.3	0.6	0.0	0.3
Cycle Q Clear(g_c), s	1.3	19.9	1.9	1.0	18.5	18.5	1.0	0.0	0.3	0.6	0.0	0.3
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.90	1.00		0.63
Lane Grp Cap(c), veh/h	69	2085	930	58	1031	1080	58	0	150	37	0	135
V/C Ratio(X)	0.55	0.75	0.12	0.52	0.72	0.72	0.52	0.00	0.07	0.47	0.00	0.06
Avail Cap(c_a), veh/h	148	3059	1364	145	1527	1599	183	0	1066	145	0	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(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.0	9.4	5.6	29.3	9.3	9.3	29.3	0.0	25.4	29.8	0.0	26.1
Incr Delay (d2), s/veh	6.6	0.6	0.1	6.9	1.0	0.9	6.9	0.0	0.2	9.0	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	0.6	4.7	0.4	0.5	4.6	4.8	0.5	0.0	0.1	0.3	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.6	10.0	5.7	36.2	10.2	10.2	36.2	0.0	25.6	38.7	0.0	26.2
LnGrp LOS	D	A	A	D	B	B	D		C	D		C
Approach Vol, veh/h		1709			1549			40			25	
Approach Delay, s/veh		10.3			10.7			33.5			34.7	
Approach LOS		B			B			C			C	

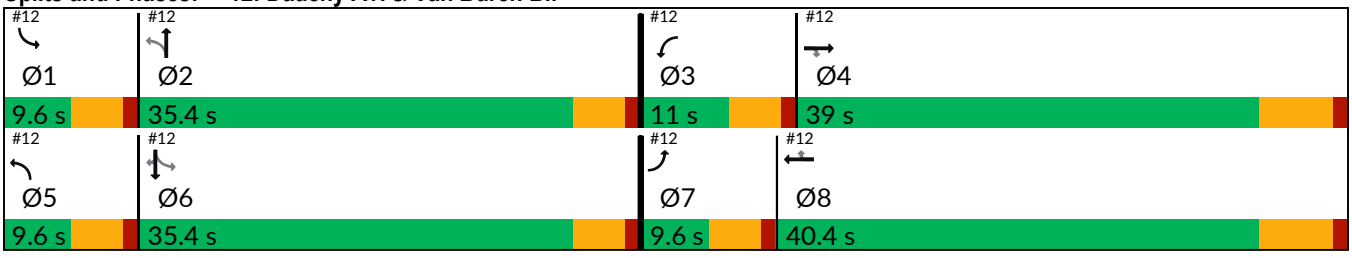
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.4	9.8	6.1	40.2	6.1	9.1	6.5	39.8
Change Period (Y+Rc), s	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Max Green Setting (Gmax), s	5.0	40.7	5.0	52.9	6.3	39.4	5.1	52.8
Max Q Clear Time (g_c+I1), s	2.6	2.3	3.0	21.9	3.0	2.3	3.3	20.5
Green Ext Time (p_c), s	0.0	0.0	0.0	14.1	0.0	0.0	0.0	12.1

Intersection Summary	
HCM 7th Control Delay, s/veh	10.9
HCM 7th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	71	1263	121	123	1261	17	123	26	54	28	35
Future Volume (vph)	71	1263	121	123	1261	17	123	26	54	28	35
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	28.2	28.2	9.6	28.2	28.2	9.6	26.6	9.6	33.6	33.6
Total Split (s)	9.6	39.0	39.0	11.0	40.4	40.4	9.6	35.4	9.6	35.4	35.4
Total Split (%)	10.1%	41.1%	41.1%	11.6%	42.5%	42.5%	10.1%	37.3%	10.1%	37.3%	37.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	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	None	None	None	None
Act Effct Green (s)	5.2	34.2	34.2	6.7	35.6	35.6	14.6	13.3	13.5	13.3	13.3
Actuated g/C Ratio	0.07	0.48	0.48	0.09	0.50	0.50	0.21	0.19	0.19	0.19	0.19
v/c Ratio	0.59	0.80	0.16	0.80	0.77	0.02	0.47	0.29	0.21	0.09	0.09
Control Delay (s/veh)	57.7	24.4	4.8	71.8	22.3	0.1	27.3	12.3	21.9	26.1	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.7	24.4	4.8	71.8	22.3	0.1	27.3	12.3	21.9	26.1	0.5
LOS	E	C	A	E	C	A	C	B	C	C	A
Approach Delay (s/veh)		24.4			26.4			20.5		16.4	
Approach LOS		C			C			C		B	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 71.2	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay (s/veh): 24.7	Intersection LOS: C
Intersection Capacity Utilization 68.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 12: Dauchy Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	1263	121	123	1261	17	123	26	75	54	28	35
Future Volume (veh/h)	71	1263	121	123	1261	17	123	26	75	54	28	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	76	1358	84	132	1356	9	132	28	50	58	30	14
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	100	1586	707	167	1718	766	340	68	121	287	166	139
Arrive On Green	0.06	0.45	0.45	0.09	0.48	0.48	0.07	0.11	0.11	0.05	0.09	0.09
Sat Flow, veh/h	1781	3554	1583	1781	3554	1583	1781	596	1065	1781	1870	1561
Grp Volume(v), veh/h	76	1358	84	132	1356	9	132	0	78	58	30	14
Grp Sat Flow(s),veh/h/ln	1781	1777	1583	1781	1777	1583	1781	0	1661	1781	1870	1561
Q Serve(g_s), s	2.8	23.1	2.1	4.9	21.5	0.2	4.5	0.0	2.9	2.0	1.0	0.6
Cycle Q Clear(g_c), s	2.8	23.1	2.1	4.9	21.5	0.2	4.5	0.0	2.9	2.0	1.0	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.64	1.00		1.00
Lane Grp Cap(c), veh/h	100	1586	707	167	1718	766	340	0	189	287	166	139
V/C Ratio(X)	0.76	0.86	0.12	0.79	0.79	0.01	0.39	0.00	0.41	0.20	0.18	0.10
Avail Cap(c_a), veh/h	132	1731	771	169	1805	804	340	0	760	332	855	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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	16.7	10.9	29.9	14.5	9.0	25.5	0.0	27.7	25.9	28.4	28.2
Incr Delay (d2), s/veh	11.1	4.2	0.1	20.1	2.3	0.0	0.3	0.0	1.4	0.1	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	1.4	8.1	0.6	2.8	7.0	0.1	1.9	0.0	1.2	0.8	0.5	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.4	20.9	11.0	50.0	16.9	9.0	25.7	0.0	29.2	26.0	28.9	28.5
LnGrp LOS	D	C	B	D	B	A	C		C	C	C	C
Approach Vol, veh/h		1518			1497			210			102	
Approach Delay, s/veh		21.4			19.7			27.0			27.2	
Approach LOS		C			B			C			C	

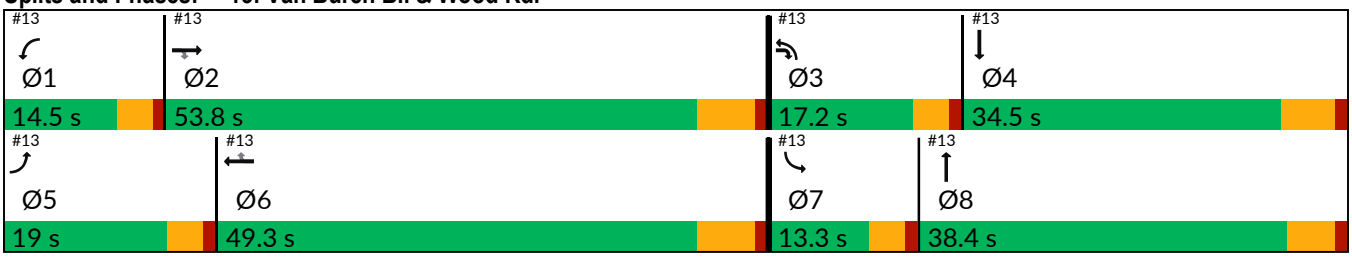
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	12.3	10.9	36.3	9.6	10.6	8.4	38.8
Change Period (Y+Rc), s	4.6	4.6	4.6	6.2	4.6	4.6	4.6	6.2
Max Green Setting (Gmax), s	5.0	30.8	6.4	32.8	5.0	30.8	5.0	34.2
Max Q Clear Time (g_c+I1), s	4.0	4.9	6.9	25.1	6.5	3.0	4.8	23.5
Green Ext Time (p_c), s	0.0	0.4	0.0	5.0	0.0	0.1	0.0	6.2

Intersection Summary	
HCM 7th Control Delay, s/veh	21.2
HCM 7th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	153	1178	165	212	1029	65	212	180	85	262
Future Volume (vph)	153	1178	165	212	1029	65	212	180	85	262
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6		3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	3	1	6	6	3	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.2	30.2	9.2	9.2	30.2	30.2	9.2	38.4	9.2	15.8
Total Split (s)	19.0	53.8	17.2	14.5	49.3	49.3	17.2	38.4	13.3	34.5
Total Split (%)	15.8%	44.8%	14.3%	12.1%	41.1%	41.1%	14.3%	32.0%	11.1%	28.8%
Yellow Time (s)	3.2	5.2	3.2	3.2	5.2	5.2	3.2	4.4	3.2	4.8
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)	4.2	6.2	4.2	4.2	6.2	6.2	4.2	5.4	4.2	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.7	42.2	54.9	9.7	39.2	39.2	10.7	22.6	8.3	17.1
Actuated g/C Ratio	0.13	0.42	0.55	0.10	0.39	0.39	0.11	0.22	0.08	0.17
v/c Ratio	0.71	0.82	0.18	0.66	0.77	0.10	0.60	0.39	0.61	0.69
Control Delay (s/veh)	63.2	32.3	2.3	57.1	32.6	0.3	52.9	20.7	67.2	32.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	63.2	32.3	2.3	57.1	32.6	0.3	52.9	20.7	67.2	32.8
LOS	E	C	A	E	C	A	D	C	E	C
Approach Delay (s/veh)		32.1			35.0			33.4		38.2
Approach LOS		C			C			C		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 100.7	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay (s/veh): 34.1	Intersection LOS: C
Intersection Capacity Utilization 75.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 13: Van Buren Bl. & Wood Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	153	1178	165	212	1029	65	212	180	144	85	262	198
Future Volume (veh/h)	153	1178	165	212	1029	65	212	180	144	85	262	198
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	158	1214	92	219	1061	28	219	186	69	88	270	116
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	193	1567	832	296	1486	659	299	452	162	113	375	156
Arrive On Green	0.11	0.44	0.44	0.09	0.42	0.42	0.09	0.18	0.18	0.06	0.15	0.15
Sat Flow, veh/h	1781	3554	1576	3456	3554	1576	3456	2553	912	1781	2433	1016
Grp Volume(v), veh/h	158	1214	92	219	1061	28	219	127	128	88	195	191
Grp Sat Flow(s),veh/h/ln	1781	1777	1576	1728	1777	1576	1728	1777	1688	1781	1777	1671
Q Serve(g_s), s	7.6	25.4	2.6	5.4	21.7	0.9	5.4	5.6	5.9	4.3	9.1	9.5
Cycle Q Clear(g_c), s	7.6	25.4	2.6	5.4	21.7	0.9	5.4	5.6	5.9	4.3	9.1	9.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.54	1.00		0.61
Lane Grp Cap(c), veh/h	193	1567	832	296	1486	659	299	315	299	113	274	258
V/C Ratio(X)	0.82	0.77	0.11	0.74	0.71	0.04	0.73	0.40	0.43	0.78	0.71	0.74
Avail Cap(c_a), veh/h	301	1933	994	407	1750	776	513	670	636	185	583	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	38.2	20.8	10.4	39.1	21.1	15.1	39.0	31.9	32.1	40.4	35.2	35.4
Incr Delay (d2), s/veh	5.0	1.9	0.1	2.6	1.4	0.0	1.3	0.8	1.0	4.4	3.4	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	3.4	9.4	0.8	2.3	8.1	0.3	2.3	2.4	2.4	1.9	4.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	43.2	22.7	10.5	41.6	22.5	15.1	40.3	32.8	33.0	44.7	38.6	39.5
LnGrp LOS	D	C	B	D	C	B	D	C	C	D	D	D
Approach Vol, veh/h		1464			1308			474			474	
Approach Delay, s/veh		24.1			25.5			36.3			40.1	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	44.8	11.8	19.3	13.7	42.8	9.7	21.3
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	10.3	47.6	13.0	28.7	14.8	43.1	9.1	* 33
Max Q Clear Time (g_c+I1), s	7.4	27.4	7.4	11.5	9.6	23.7	6.3	7.9
Green Ext Time (p_c), s	0.1	11.2	0.2	1.9	0.1	9.2	0.0	1.4

Intersection Summary	
HCM 7th Control Delay, s/veh	28.2
HCM 7th LOS	C

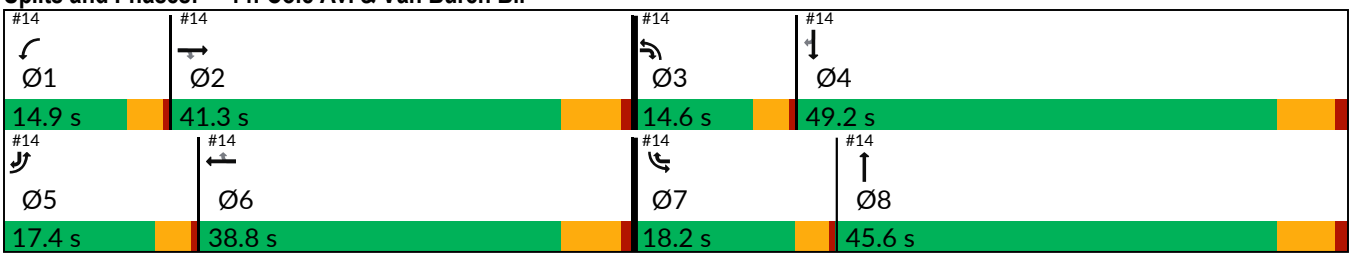
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	303	888	113	113	938	248	109	303	242	519	222
Future Volume (vph)	303	888	113	113	938	248	109	303	242	519	222
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8	7	4	5
Permitted Phases			2			6					4
Detector Phase	5	2	3	1	6	7	3	8	7	4	5
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0
Minimum Split (s)	9.1	36.2	9.1	9.1	36.2	9.1	9.1	42.2	9.1	49.2	9.1
Total Split (s)	17.4	41.3	14.6	14.9	38.8	18.2	14.6	45.6	18.2	49.2	17.4
Total Split (%)	14.5%	34.4%	12.2%	12.4%	32.3%	15.2%	12.2%	38.0%	15.2%	41.0%	14.5%
Yellow Time (s)	3.2	5.2	3.2	3.2	5.2	3.2	3.2	5.2	3.2	5.2	3.2
All-Red Time (s)	0.5	1.0	0.5	0.5	1.0	0.5	0.5	1.0	0.5	1.0	0.5
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)	3.7	6.2	3.7	3.7	6.2	3.7	3.7	6.2	3.7	6.2	3.7
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.2	30.6	46.6	9.8	28.2	41.7	9.6	20.2	10.9	21.5	40.2
Actuated g/C Ratio	0.13	0.33	0.51	0.11	0.31	0.45	0.10	0.22	0.12	0.23	0.44
v/c Ratio	0.67	0.76	0.13	0.61	0.61	0.30	0.60	0.46	0.60	0.63	0.31
Control Delay (s/veh)	48.7	33.8	3.7	57.8	30.2	3.4	57.9	32.3	47.6	35.6	13.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	48.7	33.8	3.7	57.8	30.2	3.4	57.9	32.3	47.6	35.6	13.4
LOS	D	C	A	E	C	A	E	C	D	D	B
Approach Delay (s/veh)		34.7			27.5			38.4		33.6	
Approach LOS		C			C			D		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 92	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay (s/veh): 32.5	Intersection LOS: C
Intersection Capacity Utilization 70.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 14: Cole Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	303	888	113	113	938	248	109	303	46	242	519	222
Future Volume (veh/h)	303	888	113	113	938	248	109	303	46	242	519	222
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	306	897	54	114	947	143	110	306	37	244	524	117
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	399	1227	672	145	1589	644	141	687	82	337	831	554
Arrive On Green	0.12	0.35	0.35	0.08	0.31	0.31	0.08	0.22	0.22	0.10	0.23	0.23
Sat Flow, veh/h	3456	3554	1585	1781	5106	1573	1781	3190	382	3456	3554	1585
Grp Volume(v), veh/h	306	897	54	114	947	143	110	169	174	244	524	117
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1702	1573	1781	1777	1795	1728	1777	1585
Q Serve(g_s), s	6.5	16.8	1.5	4.8	11.9	4.5	4.6	6.3	6.4	5.2	10.1	3.9
Cycle Q Clear(g_c), s	6.5	16.8	1.5	4.8	11.9	4.5	4.6	6.3	6.4	5.2	10.1	3.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	399	1227	672	145	1589	644	141	382	386	337	831	554
V/C Ratio(X)	0.77	0.73	0.08	0.78	0.60	0.22	0.78	0.44	0.45	0.72	0.63	0.21
Avail Cap(c_a), veh/h	623	1641	857	262	2190	829	255	921	930	659	2010	1080
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	32.6	21.8	13.1	34.3	22.1	14.6	34.4	25.9	25.9	33.3	26.2	17.4
Incr Delay (d2), s/veh	1.2	1.5	0.1	3.5	0.5	0.2	3.6	0.8	0.8	1.1	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	2.6	6.3	0.5	2.0	4.2	1.4	2.0	2.5	2.5	2.1	3.9	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.8	23.3	13.1	37.7	22.7	14.9	37.9	26.7	26.7	34.4	27.0	17.6
LnGrp LOS	C	C	B	D	C	B	D	C	C	C	C	B
Approach Vol, veh/h		1257			1204			453			885	
Approach Delay, s/veh		25.4			23.2			29.4			27.8	
Approach LOS		C			C			C			C	

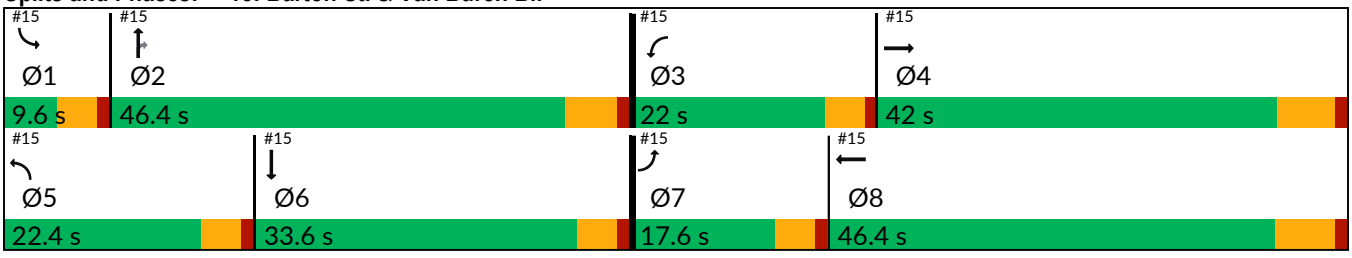
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	32.4	9.7	24.0	12.5	29.9	11.1	22.6
Change Period (Y+Rc), s	3.7	6.2	3.7	6.2	3.7	6.2	3.7	6.2
Max Green Setting (Gmax), s	11.2	35.1	10.9	43.0	13.7	32.6	14.5	39.4
Max Q Clear Time (g_c+I1), s	6.8	18.8	6.6	12.1	8.5	13.9	7.2	8.4
Green Ext Time (p_c), s	0.0	7.1	0.0	3.6	0.3	8.4	0.2	1.8

Intersection Summary	
HCM 7th Control Delay, s/veh	25.7
HCM 7th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	89	1024	309	1121	303	66	309	24	42
Future Volume (vph)	89	1024	309	1121	303	66	309	24	42
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)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.2	9.6	28.5	9.6	44.8	44.8	9.6	26.1
Total Split (s)	17.6	42.0	22.0	46.4	22.4	46.4	46.4	9.6	33.6
Total Split (%)	14.7%	35.0%	18.3%	38.7%	18.7%	38.7%	38.7%	8.0%	28.0%
Yellow Time (s)	3.6	5.2	3.6	5.5	3.6	4.8	4.8	3.6	3.6
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)	4.6	6.2	4.6	6.5	4.6	5.8	5.8	4.6	4.6
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	None	None	None	None
Act Effct Green (s)	9.5	36.1	17.5	46.1	13.4	26.4	26.4	5.0	13.2
Actuated g/C Ratio	0.09	0.36	0.17	0.46	0.13	0.26	0.26	0.05	0.13
v/c Ratio	0.57	1.03	1.06	0.53	0.70	0.14	0.51	0.30	0.45
Control Delay (s/veh)	58.5	66.3	110.8	22.9	51.1	29.8	7.2	58.1	24.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	58.5	66.3	110.8	22.9	51.1	29.8	7.2	58.1	24.2
LOS	E	E	F	C	D	C	A	E	C
Approach Delay (s/veh)		65.8		41.4		29.0			29.9
Approach LOS		E		D		C			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 100.3	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay (s/veh): 47.5	Intersection LOS: D
Intersection Capacity Utilization 81.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 15: Barton St. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	1024	191	309	1121	35	303	66	309	24	42	77
Future Volume (veh/h)	89	1024	191	309	1121	35	303	66	309	24	42	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	95	1089	190	329	1193	27	322	70	179	26	45	47
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	121	1131	197	324	2503	57	399	363	302	46	87	91
Arrive On Green	0.07	0.37	0.37	0.18	0.49	0.49	0.12	0.19	0.19	0.03	0.10	0.10
Sat Flow, veh/h	1781	3026	526	1781	5134	116	3456	1870	1559	1781	831	868
Grp Volume(v), veh/h	95	638	641	329	791	429	322	70	179	26	0	92
Grp Sat Flow(s),veh/h/ln	1781	1777	1776	1781	1702	1846	1728	1870	1559	1781	0	1699
Q Serve(g_s), s	5.0	33.6	33.9	17.4	14.9	14.9	8.7	3.0	10.0	1.4	0.0	4.9
Cycle Q Clear(g_c), s	5.0	33.6	33.9	17.4	14.9	14.9	8.7	3.0	10.0	1.4	0.0	4.9
Prop In Lane	1.00		0.30	1.00		0.06	1.00		1.00	1.00		0.51
Lane Grp Cap(c), veh/h	121	664	664	324	1660	900	399	363	302	46	0	177
V/C Ratio(X)	0.78	0.96	0.97	1.02	0.48	0.48	0.81	0.19	0.59	0.56	0.00	0.52
Avail Cap(c_a), veh/h	242	664	664	324	1660	900	642	793	661	93	0	515
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	0.00	1.00
Uniform Delay (d), s/veh	43.9	29.3	29.4	39.2	16.4	16.4	41.3	32.3	35.2	46.1	0.0	40.6
Incr Delay (d2), s/veh	4.2	25.5	26.5	54.3	0.2	0.4	1.5	0.3	1.8	3.9	0.0	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	2.2	17.5	17.8	11.9	5.0	5.5	3.6	1.3	3.7	0.7	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.1	54.7	55.9	93.5	16.6	16.8	42.8	32.6	37.0	50.0	0.0	42.9
LnGrp LOS	D	D	E	F	B	B	D	C	D	D		D
Approach Vol, veh/h		1374			1549			571			118	
Approach Delay, s/veh		54.8			33.0			39.7			44.5	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	24.4	22.0	42.3	15.7	15.8	11.1	53.2
Change Period (Y+Rc), s	4.6	5.8	4.6	* 6.5	4.6	* 5.8	4.6	6.5
Max Green Setting (Gmax), s	5.0	40.6	17.4	* 36	17.8	* 29	13.0	39.9
Max Q Clear Time (g_c+I1), s	3.4	12.0	19.4	35.9	10.7	6.9	7.0	16.9
Green Ext Time (p_c), s	0.0	0.9	0.0	0.0	0.4	0.5	0.0	7.5

Intersection Summary	
HCM 7th Control Delay, s/veh	42.7
HCM 7th LOS	D

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

APPENDIX 3.3:

EXISTING (2025) SIGNAL WARRANTS

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

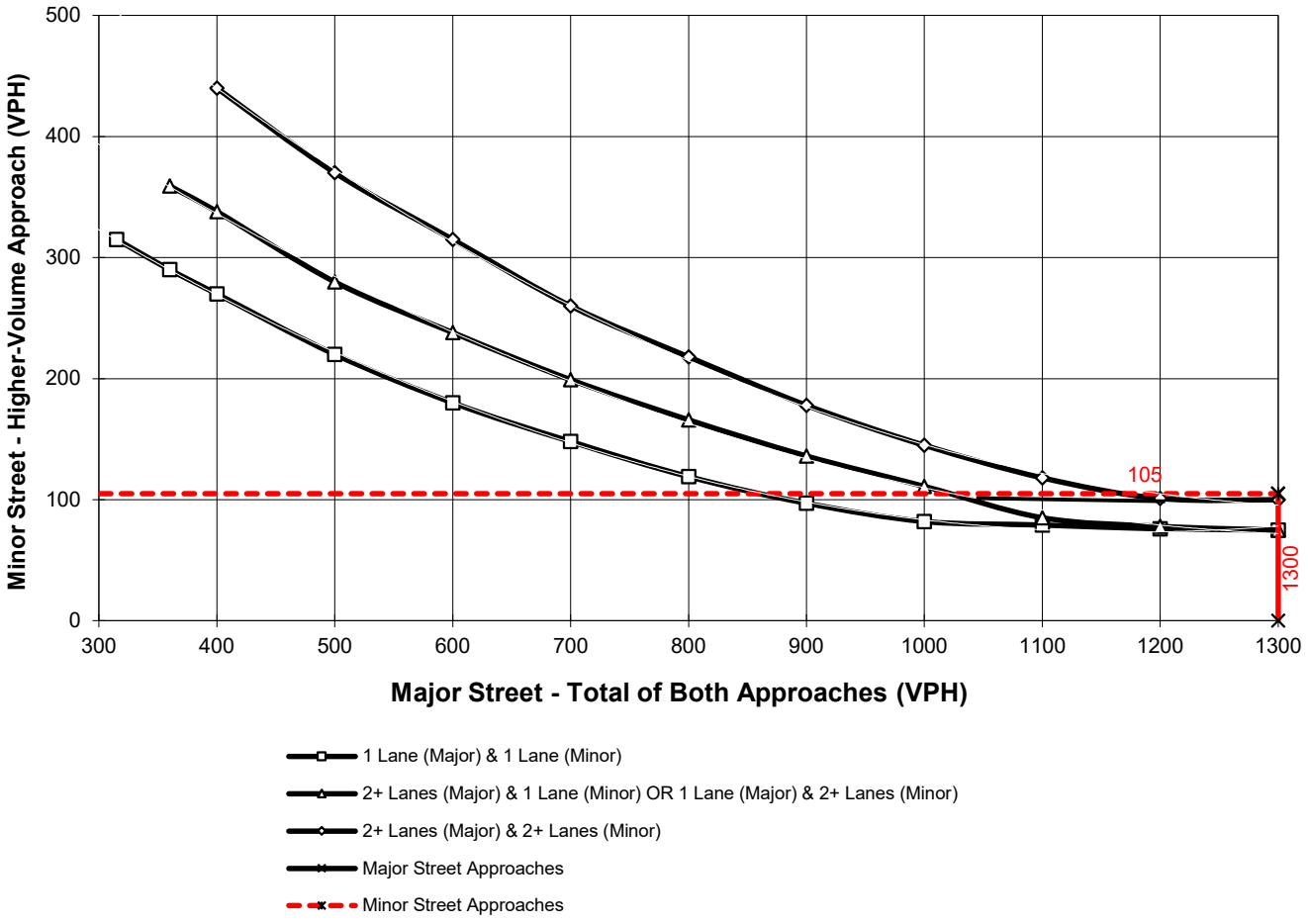
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing (2025) Conditions - Weekday PM Peak Hour**

Major Street Name = **Washington St.**
Total of Both Approaches (VPH) = **1635**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Driveway 4**
High Volume Approach (VPH) = **105**
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

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

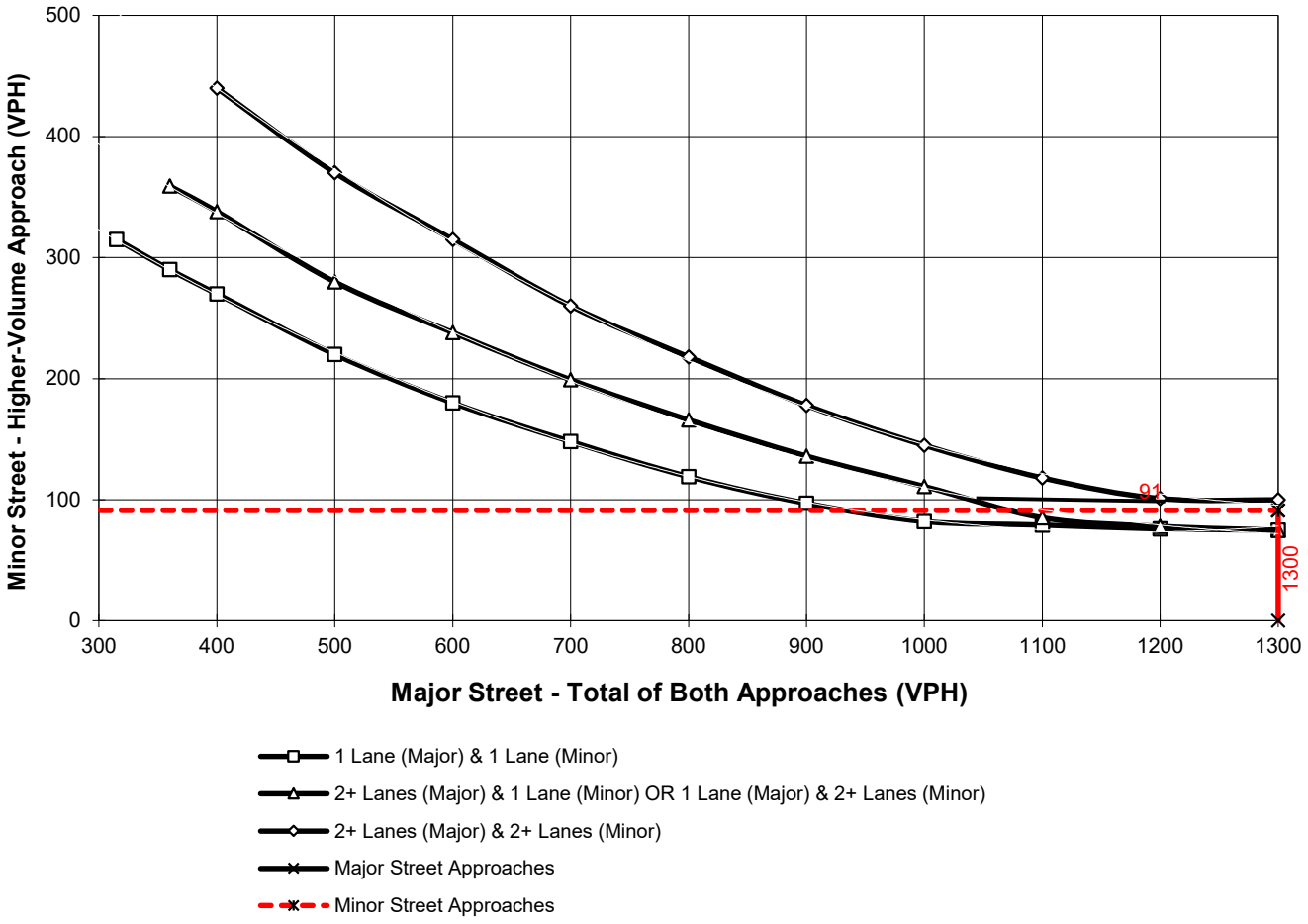
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing (2025) Conditions - Weekday PM Peak Hour**

Major Street Name = **Van Buren Bl.** Total of Both Approaches (VPH) = **3078**
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Gardener Av.** High Volume Approach (VPH) = **91**
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

APPENDIX 3.4:

EXISTING (2025) SIGNALIZED QUEUES

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Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	542	4	1454	952	171
v/c Ratio	0.60	0.02	0.73	0.54	0.11
Control Delay (s/veh)	22.2	31.5	12.1	12.1	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	22.2	31.5	12.1	12.1	0.3
Queue Length 50th (ft)	78	1	156	91	0
Queue Length 95th (ft)	163	11	336	256	7
Internal Link Dist (ft)	1275		961	1331	
Turn Bay Length (ft)	90	300			125
Base Capacity (vph)	2094	213	3517	3404	1558
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.26	0.02	0.41	0.28	0.11

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	44	1080	58	17	1315	24	184	160	134	124
v/c Ratio	0.35	0.59	0.07	0.13	0.79	0.03	0.57	0.45	0.37	0.31
Control Delay (s/veh)	44.7	16.2	0.1	39.6	24.0	0.0	28.8	25.8	22.1	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	44.7	16.2	0.1	39.6	24.0	0.0	28.8	25.8	22.1	11.5
Queue Length 50th (ft)	20	153	0	8	280	0	69	55	48	13
Queue Length 95th (ft)	#61	373	0	30	#548	0	115	107	87	52
Internal Link Dist (ft)		1223			1243			377		908
Turn Bay Length (ft)	200		80	170		165	100		85	
Base Capacity (vph)	126	1842	886	126	1663	813	323	671	363	692
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.59	0.07	0.13	0.79	0.03	0.57	0.24	0.37	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	114	1106	92	1120	519	91	515	126	330	263
v/c Ratio	0.74	0.79	0.68	0.81	0.65	0.44	0.69	0.28	0.79	0.26
Control Delay (s/veh)	77.6	33.9	75.2	35.9	16.2	58.1	44.2	5.7	61.2	22.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	77.6	33.9	75.2	35.9	16.2	58.1	44.2	5.7	61.2	22.4
Queue Length 50th (ft)	81	352	65	366	125	32	181	0	119	56
Queue Length 95th (ft)	#190	502	#155	519	281	64	238	36	#205	90
Internal Link Dist (ft)		1243		1243			790			160
Turn Bay Length (ft)	285		300		300	145		140	130	
Base Capacity (vph)	163	1466	146	1449	818	226	1102	592	447	1298
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.75	0.63	0.77	0.63	0.40	0.47	0.21	0.74	0.20

Intersection Summary

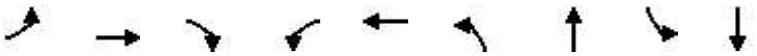
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	2	1394	63	11	1818	2	34	37
v/c Ratio	0.01	0.50	0.05	0.07	0.65	0.00	0.09	0.11
Control Delay (s/veh)	43.0	8.8	2.5	42.9	11.5	0.0	0.5	20.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	43.0	8.8	2.5	42.9	11.5	0.0	0.5	20.5
Queue Length 50th (ft)	1	133	0	5	216	0	0	9
Queue Length 95th (ft)	10	485	19	27	#840	0	2	37
Internal Link Dist (ft)		1222			1308		541	454
Turn Bay Length (ft)	295		130	305				
Base Capacity (vph)	148	2862	1293	148	2862	1279	823	855
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.49	0.05	0.07	0.64	0.00	0.04	0.04

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	22	1271	72	49	1677	52	53	10	9
v/c Ratio	0.20	0.57	0.07	0.37	0.72	0.32	0.16	0.09	0.04
Control Delay (s/veh)	50.4	15.4	3.2	52.7	16.9	47.4	9.3	48.9	19.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	50.4	15.4	3.2	52.7	16.9	47.4	9.3	48.9	19.6
Queue Length 50th (ft)	11	220	0	24	233	25	0	5	1
Queue Length 95th (ft)	46	550	22	#91	#911	82	30	27	13
Internal Link Dist (ft)		1565			2589		1030		346
Turn Bay Length (ft)	280		75	295		100		45	
Base Capacity (vph)	112	2310	1062	134	2331	200	829	110	739
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.55	0.07	0.37	0.72	0.26	0.06	0.09	0.01

Intersection Summary

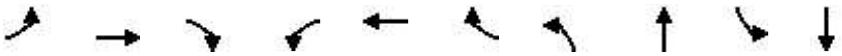
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	32	1058	216	130	1332	15	133	235	48	112	25
v/c Ratio	0.26	0.77	0.31	0.62	0.71	0.02	0.40	0.51	0.20	0.33	0.06
Control Delay (s/veh)	45.7	26.0	10.2	50.9	19.4	0.1	26.5	17.2	22.7	31.8	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	45.7	26.0	10.2	50.9	19.4	0.1	26.5	17.2	22.7	31.8	0.3
Queue Length 50th (ft)	15	217	29	60	197	0	51	43	17	50	0
Queue Length 95th (ft)	51	408	100	#180	#572	0	98	112	43	98	0
Internal Link Dist (ft)		2589			2614			512		890	
Turn Bay Length (ft)	295		100	420		160	60		70		50
Base Capacity (vph)	122	1728	833	229	2009	927	335	772	243	776	729
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.61	0.26	0.57	0.66	0.02	0.40	0.30	0.20	0.14	0.03

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	147	747	339	433	1031	194	439	735	77	697
v/c Ratio	0.80	0.71	0.44	0.84	0.84	0.29	0.87	0.66	0.60	0.88
Control Delay (s/veh)	81.9	40.5	14.6	63.5	42.7	6.2	66.9	34.0	72.5	55.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	81.9	40.5	14.6	63.5	42.7	6.2	66.9	34.0	72.5	55.1
Queue Length 50th (ft)	115	274	110	171	390	7	176	238	59	264
Queue Length 95th (ft)	#222	346	183	#246	480	58	#261	312	112	#367
Internal Link Dist (ft)		2614			2123			3887		2020
Turn Bay Length (ft)	400		300	355			186		80	
Base Capacity (vph)	199	1127	781	562	1302	689	538	1110	152	842
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.66	0.43	0.77	0.79	0.28	0.82	0.66	0.51	0.83

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	212	769	95	187	1373	481	189	570	175	376	188
v/c Ratio	0.70	0.70	0.12	0.75	0.75	0.58	0.76	0.67	0.52	0.53	0.34
Control Delay (s/veh)	57.2	34.4	1.7	61.8	30.9	14.8	61.9	35.8	48.1	36.4	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.2	34.4	1.7	61.8	30.9	14.8	61.9	35.8	48.1	36.4	12.3
Queue Length 50th (ft)	65	208	0	110	254	124	111	163	52	111	39
Queue Length 95th (ft)	#146	354	15	#275	410	285	#278	229	99	153	86
Internal Link Dist (ft)		2123			3107			1466		1079	
Turn Bay Length (ft)	165		200	150		180	210		200		150
Base Capacity (vph)	306	1150	819	249	1917	948	249	1440	630	1616	560
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.67	0.12	0.75	0.72	0.51	0.76	0.40	0.28	0.23	0.34

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	114	1000	277	1626	279	94	438	24	344
v/c Ratio	0.75	0.89	0.87	0.78	0.74	0.16	0.59	0.29	0.82
Control Delay (s/veh)	80.0	46.8	70.5	31.6	59.6	28.2	9.7	61.9	43.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	80.0	46.8	70.5	31.6	59.6	28.2	9.7	61.9	43.0
Queue Length 50th (ft)	79	348	189	356	97	45	36	17	158
Queue Length 95th (ft)	#196	#570	#392	502	#171	93	139	49	265
Internal Link Dist (ft)		3107		1942		1095			637
Turn Bay Length (ft)	400		185		115		125	125	
Base Capacity (vph)	157	1121	328	2098	415	712	829	83	602
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.89	0.84	0.78	0.67	0.13	0.53	0.29	0.57

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	262	10	1053	1395	487
v/c Ratio	0.38	0.06	0.48	0.70	0.31
Control Delay (s/veh)	23.3	34.6	6.7	12.2	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	23.3	34.6	6.7	12.2	0.6
Queue Length 50th (ft)	32	3	68	122	0
Queue Length 95th (ft)	109	24	197	426	10
Internal Link Dist (ft)	1275		961	1331	
Turn Bay Length (ft)	90	300			125
Base Capacity (vph)	1877	190	3408	3326	1557
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.14	0.05	0.31	0.42	0.31

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	34	1309	171	24	1143	51	64	24	77	88
v/c Ratio	0.21	0.63	0.17	0.15	0.55	0.05	0.23	0.06	0.22	0.21
Control Delay (s/veh)	38.3	17.8	5.8	37.6	16.2	0.1	22.8	16.9	19.6	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	38.3	17.8	5.8	37.6	16.2	0.1	22.8	16.9	19.6	14.7
Queue Length 50th (ft)	13	188	7	9	153	0	24	4	21	13
Queue Length 95th (ft)	50	#555	57	39	#446	0	47	23	55	51
Internal Link Dist (ft)		1223			1243			377		908
Turn Bay Length (ft)	200		80	170		165	100		85	
Base Capacity (vph)	160	2085	986	160	2085	975	274	846	347	864
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.63	0.17	0.15	0.55	0.05	0.23	0.03	0.22	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	138	1233	134	973	306	138	247	68	498	447
v/c Ratio	0.78	0.88	0.83	0.70	0.38	0.51	0.47	0.19	0.88	0.55
Control Delay (s/veh)	75.0	37.7	84.2	30.8	4.4	53.5	42.3	1.2	61.1	35.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	75.0	37.7	84.2	30.8	4.4	53.5	42.3	1.2	61.1	35.4
Queue Length 50th (ft)	87	368	86	266	0	44	80	0	161	131
Queue Length 95th (ft)	#232	#677	#236	451	62	88	116	0	#324	181
Internal Link Dist (ft)		1243		1243			790			158
Turn Bay Length (ft)	285		300		300	145		140	130	
Base Capacity (vph)	180	1408	162	1383	804	319	1143	608	564	1357
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.88	0.83	0.70	0.38	0.43	0.22	0.11	0.88	0.33

Intersection Summary

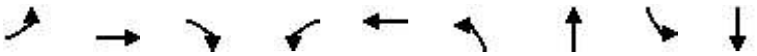
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	16	1678	99	14	1480	4	28	30
v/c Ratio	0.10	0.57	0.07	0.09	0.50	0.00	0.08	0.08
Control Delay (s/veh)	37.7	10.1	3.8	37.6	9.0	0.0	18.5	16.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	37.7	10.1	3.8	37.6	9.0	0.0	18.5	16.6
Queue Length 50th (ft)	5	0	0	4	0	0	5	4
Queue Length 95th (ft)	32	#733	36	29	#548	0	28	28
Internal Link Dist (ft)		1222			1308		541	454
Turn Bay Length (ft)	295		130	305				
Base Capacity (vph)	162	2942	1329	162	2942	1300	859	900
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.57	0.07	0.09	0.50	0.00	0.03	0.03

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	38	1561	128	30	1519	30	21	17	12
v/c Ratio	0.28	0.67	0.12	0.23	0.68	0.19	0.07	0.13	0.05
Control Delay (s/veh)	49.3	14.8	5.5	48.7	15.7	46.1	13.1	47.8	19.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.3	14.8	5.5	48.7	15.7	46.1	13.1	47.8	19.9
Queue Length 50th (ft)	16	81	2	12	168	12	0	7	1
Queue Length 95th (ft)	#77	#806	56	57	#774	56	19	38	16
Internal Link Dist (ft)		1565			2589		1030		346
Turn Bay Length (ft)	280		75	295		100		45	
Base Capacity (vph)	135	2727	1239	132	2697	166	979	132	968
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.57	0.10	0.23	0.56	0.18	0.02	0.13	0.01

Intersection Summary

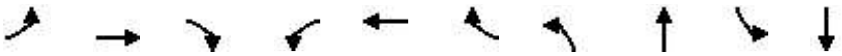
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	76	1358	130	132	1356	18	132	109	58	30	38
v/c Ratio	0.59	0.80	0.16	0.80	0.77	0.02	0.47	0.29	0.21	0.09	0.09
Control Delay (s/veh)	57.7	24.4	4.8	71.8	22.3	0.1	27.3	12.3	21.9	26.1	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.7	24.4	4.8	71.8	22.3	0.1	27.3	12.3	21.9	26.1	0.5
Queue Length 50th (ft)	35	289	2	62	277	0	49	12	21	13	0
Queue Length 95th (ft)	#128	#622	40	#206	#603	0	88	50	45	33	0
Internal Link Dist (ft)		2589			2614			512		890	
Turn Bay Length (ft)	295		100	420		160	60		70		50
Base Capacity (vph)	129	1698	822	165	1771	852	282	783	278	839	782
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.80	0.16	0.80	0.77	0.02	0.47	0.14	0.21	0.04	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	158	1214	170	219	1061	67	219	334	88	474
v/c Ratio	0.71	0.82	0.18	0.66	0.77	0.10	0.60	0.39	0.61	0.69
Control Delay (s/veh)	63.2	32.3	2.3	57.1	32.6	0.3	52.9	20.7	67.2	32.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	63.2	32.3	2.3	57.1	32.6	0.3	52.9	20.7	67.2	32.8
Queue Length 50th (ft)	103	356	0	74	314	0	74	58	58	111
Queue Length 95th (ft)	#221	554	31	#143	490	0	128	101	#146	172
Internal Link Dist (ft)		2614			2123			3887		2020
Turn Bay Length (ft)	400		300	355			186		80	
Base Capacity (vph)	267	1717	969	360	1554	765	454	1205	164	1068
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.71	0.18	0.61	0.68	0.09	0.48	0.28	0.54	0.44

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	306	897	114	114	947	251	110	352	244	524	224
v/c Ratio	0.67	0.76	0.13	0.61	0.61	0.30	0.60	0.46	0.60	0.63	0.31
Control Delay (s/veh)	48.7	33.8	3.7	57.8	30.2	3.4	57.9	32.3	47.6	35.6	13.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	48.7	33.8	3.7	57.8	30.2	3.4	57.9	32.3	47.6	35.6	13.4
Queue Length 50th (ft)	91	244	0	66	171	2	64	95	73	156	62
Queue Length 95th (ft)	#177	421	33	#169	284	49	#163	145	135	213	116
Internal Link Dist (ft)		2123			3107			1466		1079	
Turn Bay Length (ft)	165		200	150		180	210		200		150
Base Capacity (vph)	528	1396	885	223	1863	904	217	1543	559	1710	758
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.64	0.13	0.51	0.51	0.28	0.51	0.23	0.44	0.31	0.30

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	95	1292	329	1230	322	70	329	26	127
v/c Ratio	0.57	1.03	1.06	0.53	0.70	0.14	0.51	0.30	0.45
Control Delay (s/veh)	58.5	66.3	110.8	22.9	51.1	29.8	7.2	58.1	24.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	58.5	66.3	110.8	22.9	51.1	29.8	7.2	58.1	24.2
Queue Length 50th (ft)	57	413	~221	197	100	33	6	16	32
Queue Length 95th (ft)	128	#788	#509	358	172	73	76	51	88
Internal Link Dist (ft)		3107		1942		1095			637
Turn Bay Length (ft)	400		185		115		125	125	
Base Capacity (vph)	231	1253	309	2325	613	759	823	88	537
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	1.03	1.06	0.53	0.53	0.09	0.40	0.30	0.24

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

APPENDIX 3.5:

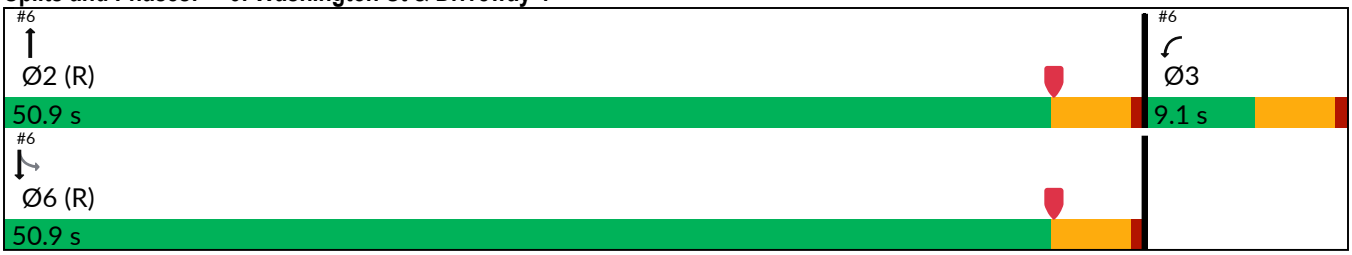
EXISTING (2025) INTERSECTION ANALYSIS WITH IMPROVEMENTS

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Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	29	1003	17	523
Future Volume (vph)	29	1003	17	523
Turn Type	Prot	NA	Perm	NA
Protected Phases	3	2		6
Permitted Phases			6	
Detector Phase	3	2	6	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	9.1	26.1	26.1	26.1
Total Split (s)	9.1	50.9	50.9	50.9
Total Split (%)	15.2%	84.8%	84.8%	84.8%
Yellow Time (s)	3.6	3.6	3.6	3.6
All-Red Time (s)	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0
Total Lost Time (s)	4.1	4.1		4.1
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	C-Max	C-Max	C-Max
Act Effct Green (s)	5.0	49.4		49.4
Actuated g/C Ratio	0.08	0.82		0.82
v/c Ratio	0.44	0.72		0.38
Control Delay (s/veh)	21.2	14.4		2.8
Queue Delay	0.0	0.1		0.0
Total Delay (s/veh)	21.2	14.5		2.8
LOS	C	B		A
Approach Delay (s/veh)	21.2	14.5		2.8
Approach LOS	C	B		A

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay (s/veh): 11.0	Intersection LOS: B
Intersection Capacity Utilization 68.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 6: Washington St & Driveway 4





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	29	50	1003	65	17	523
Future Volume (veh/h)	29	50	1003	65	17	523
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	52	1034	67	18	539
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	37	65	1392	90	79	1437
Arrive On Green	0.06	0.06	0.80	0.80	0.80	0.80
Sat Flow, veh/h	598	1036	1738	113	21	1794
Grp Volume(v), veh/h	83	0	0	1101	557	0
Grp Sat Flow(s),veh/h/ln	1654	0	0	1850	1815	0
Q Serve(g_s), s	3.0	0.0	0.0	17.6	0.0	0.0
Cycle Q Clear(g_c), s	3.0	0.0	0.0	17.6	5.1	0.0
Prop In Lane	0.36	0.63		0.06	0.03	
Lane Grp Cap(c), veh/h	103	0	0	1482	1516	0
V/C Ratio(X)	0.80	0.00	0.00	0.74	0.37	0.00
Avail Cap(c_a), veh/h	138	0	0	1482	1516	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	27.8	0.0	0.0	2.9	1.7	0.0
Incr Delay (d2), s/veh	21.6	0.0	0.0	3.4	0.7	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.0	2.6	0.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	49.3	0.0	0.0	6.3	2.4	0.0
LnGrp LOS	D			A	A	
Approach Vol, veh/h	83		1101			557
Approach Delay, s/veh	49.3		6.3			2.4
Approach LOS	D		A			A

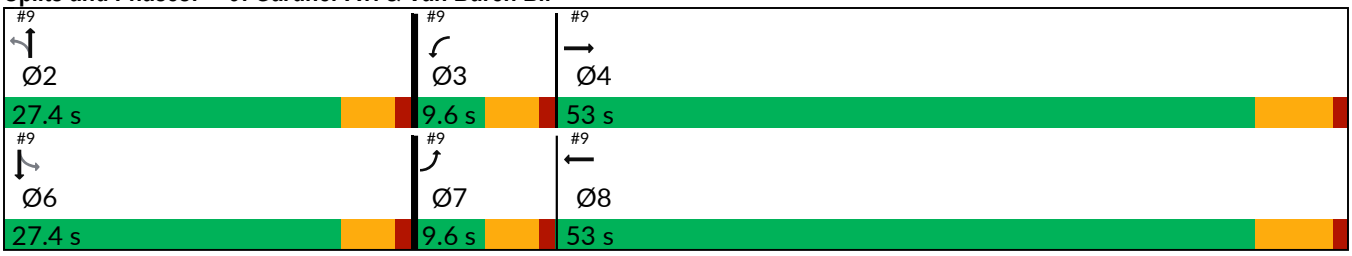
Timer - Assigned Phs	2				6	8
Phs Duration (G+Y+Rc), s	52.2				52.2	7.8
Change Period (Y+Rc), s	4.1				4.1	4.1
Max Green Setting (Gmax), s	46.8				46.8	5.0
Max Q Clear Time (g_c+I1), s	19.6				7.1	5.0
Green Ext Time (p_c), s	11.6				4.5	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	7.1
HCM 7th LOS	A

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	11	1342	28	1683	28	0	1	0
Future Volume (vph)	11	1342	28	1683	28	0	1	0
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	28.2	9.6	28.2	26.7	26.7	26.7	26.7
Total Split (s)	9.6	53.0	9.6	53.0	27.4	27.4	27.4	27.4
Total Split (%)	10.7%	58.9%	10.7%	58.9%	30.4%	30.4%	30.4%	30.4%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.7	3.7	3.7	3.7
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
Total Lost Time (s)	4.6	6.2	4.6	6.2		4.7		4.7
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.5	43.3	5.5	45.0		11.1		11.1
Actuated g/C Ratio	0.09	0.70	0.09	0.73		0.18		0.18
v/c Ratio	0.08	0.57	0.18	0.69		0.23		0.04
Control Delay (s/veh)	33.4	8.7	34.9	9.3		7.9		0.2
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay (s/veh)	33.4	8.7	34.9	9.3		7.9		0.2
LOS	C	A	C	A		A		A
Approach Delay (s/veh)		9.0		9.7		7.9		0.2
Approach LOS		A		A		A		A

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 61.5	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay (s/veh): 9.3	Intersection LOS: A
Intersection Capacity Utilization 67.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: Gardner Av. & Van Buren Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	1342	10	28	1683	4	28	0	49	1	0	13
Future Volume (veh/h)	11	1342	10	28	1683	4	28	0	49	1	0	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	12	1413	11	29	1772	4	29	0	52	1	0	14
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	27	2146	17	57	2221	5	125	23	122	67	9	181
Arrive On Green	0.02	0.59	0.59	0.03	0.61	0.61	0.12	0.00	0.12	0.12	0.00	0.12
Sat Flow, veh/h	1781	3614	28	1781	3637	8	375	185	1004	35	71	1484
Grp Volume(v), veh/h	12	695	729	29	865	911	81	0	0	15	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1865	1781	1777	1869	1564	0	0	1590	0	0
Q Serve(g_s), s	0.4	16.0	16.0	1.0	22.7	22.7	0.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.4	16.0	16.0	1.0	22.7	22.7	2.8	0.0	0.0	0.5	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.00	0.36		0.64	0.07		0.93
Lane Grp Cap(c), veh/h	27	1055	1108	57	1085	1141	270	0	0	256	0	0
V/C Ratio(X)	0.45	0.66	0.66	0.51	0.80	0.80	0.30	0.00	0.00	0.06	0.00	0.00
Avail Cap(c_a), veh/h	145	1354	1421	145	1354	1424	645	0	0	645	0	0
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	0.00	0.00
Uniform Delay (d), s/veh	30.0	8.3	8.3	29.3	9.1	9.1	24.9	0.0	0.0	23.9	0.0	0.0
Incr Delay (d2), s/veh	4.3	0.8	0.7	2.6	2.8	2.6	0.6	0.0	0.0	0.1	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	0.2	3.8	4.0	0.4	5.7	5.9	1.1	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.3	9.1	9.1	31.9	11.8	11.7	25.5	0.0	0.0	24.0	0.0	0.0
LnGrp LOS	C	A	A	C	B	B	C			C		
Approach Vol, veh/h		1436			1805			81			15	
Approach Delay, s/veh		9.3			12.1			25.5			24.0	
Approach LOS		A			B			C			C	

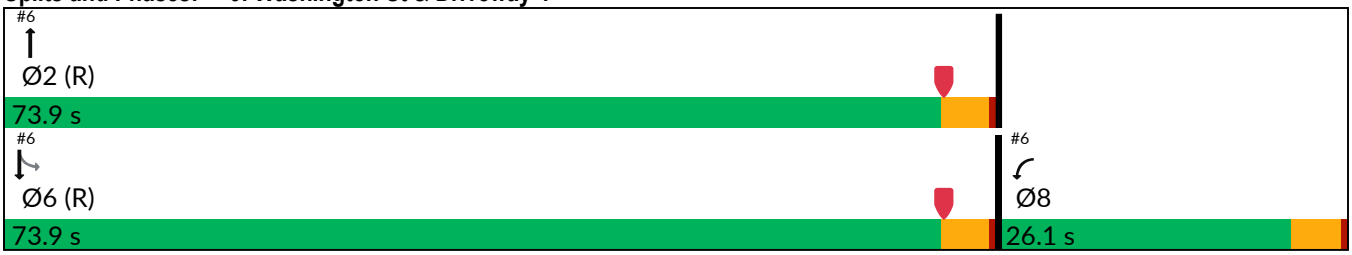
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.2	6.6	42.7		12.2	5.5	43.7				
Change Period (Y+Rc), s		4.7	4.6	6.2		4.7	4.6	6.2				
Max Green Setting (Gmax), s		22.7	5.0	46.8		22.7	5.0	46.8				
Max Q Clear Time (g_c+I1), s		4.8	3.0	18.0		2.5	2.4	24.7				
Green Ext Time (p_c), s		0.3	0.0	10.5		0.0	0.0	12.8				

Intersection Summary												
HCM 7th Control Delay, s/veh			11.3									
HCM 7th LOS			B									

Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	50	557	82	876
Future Volume (vph)	50	557	82	876
Turn Type	Prot	NA	Perm	NA
Protected Phases	8	2		6
Permitted Phases			6	
Detector Phase	8	2	6	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	26.1	26.1	26.1	26.1
Total Split (s)	26.1	73.9	73.9	73.9
Total Split (%)	26.1%	73.9%	73.9%	73.9%
Yellow Time (s)	3.6	3.6	3.6	3.6
All-Red Time (s)	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0
Total Lost Time (s)	4.1	4.1		4.1
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	C-Max	C-Max	C-Max
Act Effct Green (s)	11.1	80.7		80.7
Actuated g/C Ratio	0.11	0.81		0.81
v/c Ratio	0.50	0.51		0.79
Control Delay (s/veh)	30.4	5.3		13.1
Queue Delay	0.0	1.0		0.0
Total Delay (s/veh)	30.4	6.3		13.1
LOS	C	A		B
Approach Delay (s/veh)	30.4	6.3		13.1
Approach LOS	C	A		B

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay (s/veh): 11.5	Intersection LOS: B
Intersection Capacity Utilization 103.6%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 6: Washington St & Driveway 4





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	50	55	557	120	82	876
Future Volume (veh/h)	50	55	557	120	82	876
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	55	60	612	132	90	963
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	69	75	1239	267	133	1309
Arrive On Green	0.09	0.09	0.83	0.83	0.83	0.83
Sat Flow, veh/h	794	866	1491	322	113	1574
Grp Volume(v), veh/h	116	0	0	744	1053	0
Grp Sat Flow(s),veh/h/ln	1675	0	0	1812	1687	0
Q Serve(g_s), s	6.8	0.0	0.0	11.7	7.9	0.0
Cycle Q Clear(g_c), s	6.8	0.0	0.0	11.7	23.9	0.0
Prop In Lane	0.47	0.52		0.18	0.09	
Lane Grp Cap(c), veh/h	145	0	0	1507	1442	0
V/C Ratio(X)	0.80	0.00	0.00	0.49	0.73	0.00
Avail Cap(c_a), veh/h	368	0	0	1507	1442	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	44.8	0.0	0.0	2.4	3.3	0.0
Incr Delay (d2), s/veh	9.6	0.0	0.0	1.2	3.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	0.0	2.8	5.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	54.5	0.0	0.0	3.6	6.6	0.0
LnGrp LOS	D			A	A	
Approach Vol, veh/h	116		744			1053
Approach Delay, s/veh	54.5		3.6			6.6
Approach LOS	D		A			A

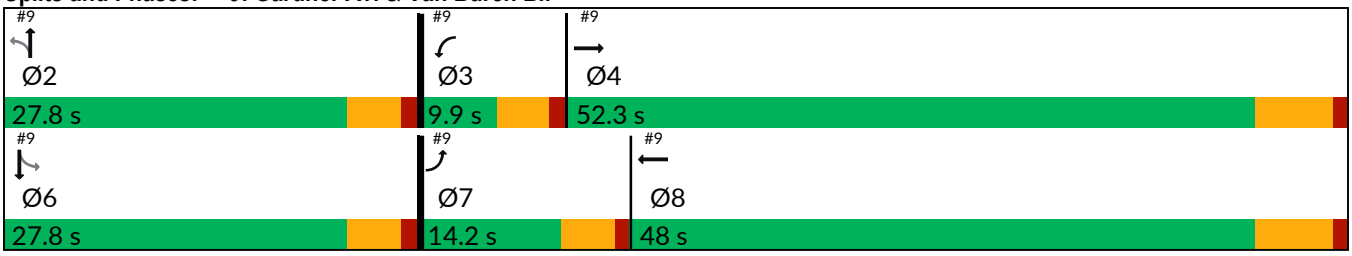
Timer - Assigned Phs	2				6	8
Phs Duration (G+Y+Rc), s	87.2				87.2	12.8
Change Period (Y+Rc), s	4.1				4.1	4.1
Max Green Setting (Gmax), s	69.8				69.8	22.0
Max Q Clear Time (g_c+I1), s	13.7				25.9	8.8
Green Ext Time (p_c), s	6.8				13.7	0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	8.3
HCM 7th LOS	A

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	17	1640	43	1415	42	0	3	0
Future Volume (vph)	17	1640	43	1415	42	0	3	0
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	14.1	28.2	9.6	28.2	26.7	26.7	26.7	26.7
Total Split (s)	14.2	52.3	9.9	48.0	27.8	27.8	27.8	27.8
Total Split (%)	15.8%	58.1%	11.0%	53.3%	30.9%	30.9%	30.9%	30.9%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.7	3.7	3.7	3.7
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
Total Lost Time (s)	4.6	6.2	4.6	6.2		4.7		4.7
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.1	46.3	5.8	49.3		11.3		11.3
Actuated g/C Ratio	0.10	0.76	0.10	0.81		0.19		0.19
v/c Ratio	0.10	0.66	0.27	0.54		0.18		0.07
Control Delay (s/veh)	34.5	10.9	37.8	6.5		4.5		0.4
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay (s/veh)	34.5	10.9	37.8	6.5		4.5		0.4
LOS	C	B	D	A		A		A
Approach Delay (s/veh)		11.1		7.5		4.5		0.4
Approach LOS		B		A		A		A

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 61	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay (s/veh): 9.2	Intersection LOS: A
Intersection Capacity Utilization 64.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: Gardner Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	1640	19	43	1415	11	42	0	14	3	0	21
Future Volume (veh/h)	17	1640	19	43	1415	11	42	0	14	3	0	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	1763	20	46	1522	12	45	0	15	3	0	23
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	38	2180	25	78	2270	18	201	14	38	72	11	144
Arrive On Green	0.02	0.61	0.61	0.04	0.63	0.63	0.10	0.00	0.10	0.10	0.00	0.10
Sat Flow, veh/h	1781	3598	41	1781	3613	28	976	136	371	77	104	1390
Grp Volume(v), veh/h	18	869	914	46	748	786	60	0	0	26	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1862	1781	1777	1864	1483	0	0	1571	0	0
Q Serve(g_s), s	0.6	23.7	23.8	1.6	17.0	17.0	1.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.6	23.7	23.8	1.6	17.0	17.0	2.2	0.0	0.0	0.9	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.02	0.75		0.25	0.12		0.88
Lane Grp Cap(c), veh/h	38	1076	1128	78	1116	1171	254	0	0	226	0	0
V/C Ratio(X)	0.47	0.81	0.81	0.59	0.67	0.67	0.24	0.00	0.00	0.11	0.00	0.00
Avail Cap(c_a), veh/h	272	1305	1368	150	1183	1242	633	0	0	634	0	0
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	0.00	0.00
Uniform Delay (d), s/veh	30.4	9.5	9.6	29.4	7.5	7.5	26.2	0.0	0.0	25.7	0.0	0.0
Incr Delay (d2), s/veh	3.3	3.2	3.1	2.6	1.4	1.3	0.5	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	0.3	6.2	6.5	0.7	3.9	4.1	0.8	0.0	0.0	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.7	12.8	12.7	32.0	8.9	8.8	26.6	0.0	0.0	25.9	0.0	0.0
LnGrp LOS	C	B	B	C	A	A	C			C		
Approach Vol, veh/h		1801			1580			60			26	
Approach Delay, s/veh		13.0			9.5			26.6			25.9	
Approach LOS		B			A			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.2	7.4	44.2		11.2	5.9	45.6				
Change Period (Y+Rc), s		4.7	4.6	6.2		4.7	4.6	6.2				
Max Green Setting (Gmax), s		23.1	5.3	46.1		23.1	9.6	41.8				
Max Q Clear Time (g_c+I1), s		4.2	3.6	25.8		2.9	2.6	19.0				
Green Ext Time (p_c), s		0.2	0.0	12.2		0.1	0.0	10.6				

Intersection Summary												
HCM 7th Control Delay, s/veh			11.7									
HCM 7th LOS			B									

APPENDIX 4.1:

POST PROCESSING WORKSHEETS

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Project:	Woodcrest Retail	Job #:	14164
Scenario:	Horizon Year (2045) Without Project	Analyst:	IA
		Date:	8/25/25

LOCATION: Van Buren Bl. & Mockingbird Canyon Rd.
FORECAST YEAR: 2045

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	4	5	1	25%	10	12	2	20%
	Through	1,367	1,502	135	10%	1,021	1,175	154	15%
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	NB Total	1,371	1,507	136	10%	1,031	1,187	156	15%
SOUTH BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	895	1,045	150	17%	1,353	1,452	99	7%
	Right	161	185	24	15%	472	560	88	19%
	SB Total	1,056	1,230	174	16%	1,825	2,012	187	10%
EAST BOUND	Left	498	608	110	22%	243	290	47	19%
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	11	15	4	36%	11	12	1	9%
	EB Total	509	623	114	22%	254	302	48	19%
WEST BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	WB Total	0	0	0	#DIV/0!	0	0	0	#DIV/0!
TOTAL ENTERING VOLUME		2,936	3,360	424	14%	3,110	3,501	391	13%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	1,230	2,012			
North Leg	Outbound	2,110	1,465			
North Leg	**TOTAL**	**3,340**	**3,477**	**7%**	**8%**	**45,507**
South Leg	Inbound	1,507	1,187			
South Leg	Outbound	1,060	1,464			
South Leg	**TOTAL**	**2,567**	**2,651**	**7%**	**8%**	**35,087**
East Leg	Inbound	0	0			
East Leg	Outbound	0	0			
East Leg	**TOTAL**	**0**	**0**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**
West Leg	Inbound	623	302			
West Leg	Outbound	190	572			
West Leg	**TOTAL**	**813**	**874**	**8%**	**9%**	**9,891**
OVERALL TOTAL		***6,720***	***7,002***	**#DIV/0!**	***#DIV/0!***	***#DIV/0!***

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Project:	Woodcrest Retail	Job #:	14164
Scenario:	Horizon Year (2045) Without Project	Analyst:	IA
		Date:	8/25/25

LOCATION: Washington St. & Van Buren Bl.
FORECAST YEAR: 2045

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	85	208	123	145%	135	182	47	35%
	Through	479	1,071	592	124%	242	306	64	26%
	Right	117	221	104	89%	67	73	6	9%
	NB Total	681	1,500	819	120%	444	561	117	26%
SOUTH BOUND	Left	307	309	2	1%	488	419	-69	-14%
	Through	166	207	41	25%	358	595	237	66%
	Right	79	103	24	30%	80	85	5	6%
	SB Total	552	619	67	12%	926	1,099	173	19%
EAST BOUND	Left	106	137	31	29%	135	173	38	28%
	Through	928	1,015	87	9%	1,168	1,289	121	10%
	Right	100	136	36	36%	40	86	46	115%
	EB Total	1,134	1,288	154	14%	1,343	1,548	205	15%
WEST BOUND	Left	86	91	5	6%	131	219	88	67%
	Through	1,042	1,153	111	11%	954	1,023	69	7%
	Right	483	488	5	1%	300	301	1	0%
	WB Total	1,611	1,732	121	8%	1,385	1,543	158	11%
TOTAL ENTERING VOLUME		3,978	5,139	1161	29%	4,098	4,751	653	16%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	619	1,099			
North Leg	Outbound	1,696	780			
North Leg	**TOTAL**	**2,315**	**1,879**	**9%**	**7%**	**25,185**
South Leg	Inbound	1,500	561			
South Leg	Outbound	434	900			
South Leg	**TOTAL**	**1,934**	**1,461**	**8%**	**6%**	**23,775**
East Leg	Inbound	1,732	1,543			
East Leg	Outbound	1,545	1,781			
East Leg	**TOTAL**	**3,277**	**3,324**	**7%**	**8%**	**43,744**
West Leg	Inbound	1,288	1,548			
West Leg	Outbound	1,464	1,290			
West Leg	**TOTAL**	**2,752**	**2,838**	**7%**	**7%**	**39,613**
OVERALL TOTAL		***10,278***	***9,502***	**8%**	***7%***	***132,317***

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Project:	Woodcrest Retail	Job #:	14164
Scenario:	Horizon Year (2045) Without Project	Analyst:	IA
		Date:	8/25/25

LOCATION: Wood Rd. & Van Buren Bl.
FORECAST YEAR: 2045

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	395	456	61	15%	212	253	41	19%
	Through	424	475	51	12%	180	249	69	38%
	Right	238	279	41	17%	144	139	-5	-3%
	NB Total	1,057	1,210	153	14%	536	641	105	20%
SOUTH BOUND	Left	69	101	32	46%	85	84	-1	-1%
	Through	456	563	107	23%	262	314	52	20%
	Right	171	246	75	44%	198	243	45	23%
	SB Total	696	910	214	31%	545	641	96	18%
EAST BOUND	Left	132	161	29	22%	153	222	69	45%
	Through	672	860	188	28%	1,178	1,187	9	1%
	Right	305	329	24	8%	165	202	37	22%
	EB Total	1,109	1,350	241	22%	1,496	1,611	115	8%
WEST BOUND	Left	390	348	-42	-11%	212	244	32	15%
	Through	928	965	37	4%	1,029	1,213	184	18%
	Right	175	177	2	1%	65	89	24	37%
	WB Total	1,493	1,490	-3	0%	1,306	1,546	240	18%
TOTAL ENTERING VOLUME		4,355	4,960	605	14%	3,883	4,439	556	14%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	910	641			
North Leg	Outbound	813	560			
North Leg	**TOTAL**	**1,723**	**1,201**	**8%**	**6%**	**20,788**
South Leg	Inbound	1,210	641			
South Leg	Outbound	1,240	760			
South Leg	**TOTAL**	**2,450**	**1,401**	**13%**	**7%**	**18,922**
East Leg	Inbound	1,490	1,546			
East Leg	Outbound	1,240	1,410			
East Leg	**TOTAL**	**2,730**	**2,956**	**7%**	**8%**	**37,405**
West Leg	Inbound	1,350	1,611			
West Leg	Outbound	1,667	1,709			
West Leg	**TOTAL**	**3,017**	**3,320**	**7%**	**8%**	**42,908**
OVERALL TOTAL		***9,920***	***8,878***	**8%**	***7%***	***120,023***

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Project:	Woodcrest Retail	Job #:	14164
Scenario:	Horizon Year (2045) Without Project	Analyst:	IA
		Date:	8/25/25

LOCATION: Trautwein Rd./Cole Av. & Van Buren Bl.
FORECAST YEAR: 2045

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	172	150	-22	-13%	109	125	16	15%
	Through	438	407	-31	-7%	303	318	15	5%
	Right	81	73	-8	-10%	46	62	16	35%
	NB Total	691	630	-61	-9%	458	505	47	10%
SOUTH BOUND	Left	159	158	-1	-1%	242	363	121	50%
	Through	342	388	46	13%	519	499	-20	-4%
	Right	171	164	-7	-4%	222	285	63	28%
	SB Total	672	710	38	6%	983	1,147	164	17%
EAST BOUND	Left	193	243	50	26%	303	270	-33	-11%
	Through	700	857	157	22%	888	1,015	127	14%
	Right	86	120	34	40%	113	83	-30	-27%
	EB Total	979	1,220	241	25%	1,304	1,368	64	5%
WEST BOUND	Left	170	225	55	32%	113	98	-15	-13%
	Through	1,249	1,400	151	12%	938	1,090	152	16%
	Right	438	524	86	20%	248	262	14	6%
	WB Total	1,857	2,149	292	16%	1,299	1,450	151	12%
TOTAL ENTERING VOLUME		4,199	4,709	510	12%	4,044	4,470	426	11%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	710	1,147			
North Leg	Outbound	1,174	850			
North Leg	**TOTAL**	**1,884**	**1,997**	**8%**	**8%**	**24,230**
South Leg	Inbound	630	505			
South Leg	Outbound	733	680			
South Leg	**TOTAL**	**1,363**	**1,185**	**10%**	**9%**	**13,169**
East Leg	Inbound	2,149	1,450			
East Leg	Outbound	1,088	1,440			
East Leg	**TOTAL**	**3,237**	**2,890**	**9%**	**8%**	**35,869**
West Leg	Inbound	1,220	1,368			
West Leg	Outbound	1,714	1,500			
West Leg	**TOTAL**	**2,934**	**2,868**	**8%**	**8%**	**35,475**
OVERALL TOTAL		***9,418***	***8,940***	**9%**	***8%***	***108,743***

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Project:	Woodcrest Retail	Job #:	14164
Scenario:	Horizon Year (2045) Without Project	Analyst:	IA
		Date:	8/25/25

LOCATION: Barton St. & Van Buren Bl.
FORECAST YEAR: 2045

INDIVIDUAL TURN VOLUME GROWTH REVIEW

		AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
APPROACH	TURNING MOVEMENT	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFF-ERENCE	% CHANGE
NORTH BOUND	Left	251	442	191	76%	303	402	99	33%
	Through	85	59	-26	-31%	66	35	-31	-47%
	Right	394	410	16	4%	309	341	32	10%
	NB Total	730	911	181	25%	678	778	100	15%
SOUTH BOUND	Left	22	9	-13	-59%	24	13	-11	-46%
	Through	83	65	-18	-22%	42	28	-14	-33%
	Right	227	151	-76	-33%	77	50	-27	-35%
	SB Total	332	225	-107	-32%	143	91	-52	-36%
EAST BOUND	Left	103	81	-22	-21%	89	49	-40	-45%
	Through	807	951	144	18%	1,024	1,186	162	16%
	Right	93	218	125	134%	191	267	76	40%
	EB Total	1,003	1,250	247	25%	1,304	1,502	198	15%
WEST BOUND	Left	249	297	48	19%	309	356	47	15%
	Through	1,440	1,457	17	1%	1,121	1,288	167	15%
	Right	23	9	-14	-61%	35	16	-19	-54%
	WB Total	1,712	1,763	51	3%	1,465	1,660	195	13%
TOTAL ENTERING VOLUME		3,777	4,149	372	10%	3,590	4,031	441	12%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	225	91			
North Leg	Outbound	149	100			
North Leg	**TOTAL**	**374**	**191**	**30%**	**15%**	**1,255**
South Leg	Inbound	911	778			
South Leg	Outbound	580	651			
South Leg	**TOTAL**	**1,491**	**1,429**	**2%**	**2%**	**61,280**
East Leg	Inbound	1,763	1,660			
East Leg	Outbound	1,370	1,540			
East Leg	**TOTAL**	**3,133**	**3,200**	**7%**	**7%**	**43,166**
West Leg	Inbound	1,250	1,502			
West Leg	Outbound	2,050	1,740			
West Leg	**TOTAL**	**3,300**	**3,242**	**7%**	**7%**	**47,568**
OVERALL TOTAL		***8,298***	***8,062***	**5%**	***5%***	***153,269***

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APPENDIX 5.1:

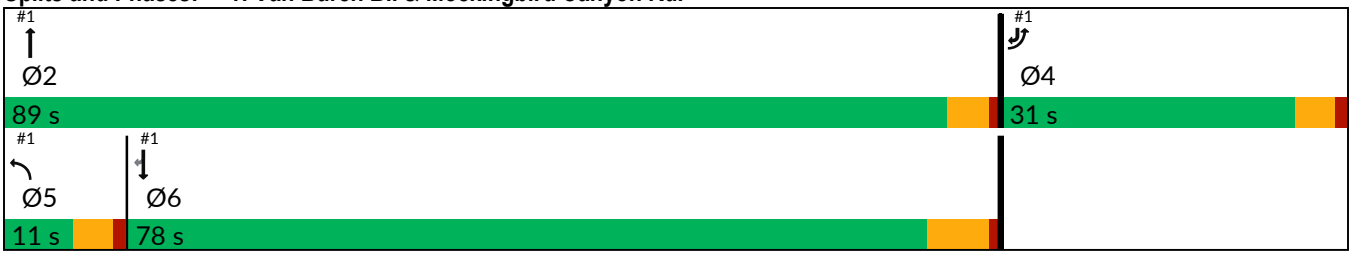
EAP (2027) INTERSECTION ANALYSIS

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Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	518	24	1442	958	168
Future Volume (vph)	518	24	1442	958	168
Turn Type	Prot	Prot	NA	NA	pm+ov
Protected Phases	4	5	2	6	4
Permitted Phases					6
Detector Phase	4	5	2	6	4
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	29.6	9.6	26.1	28.5	29.6
Total Split (s)	31.0	11.0	89.0	78.0	31.0
Total Split (%)	25.8%	9.2%	74.2%	65.0%	25.8%
Yellow Time (s)	3.6	3.6	3.6	5.5	3.6
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)	4.6	4.6	4.6	6.5	4.6
Lead/Lag		Lead		Lag	
Lead-Lag Optimize?		Yes		Yes	
Recall Mode	None	None	None	None	None
Act Effct Green (s)	15.9	5.8	36.1	30.6	56.8
Actuated g/C Ratio	0.26	0.09	0.58	0.50	0.92
v/c Ratio	0.67	0.16	0.74	0.58	0.12
Control Delay (s/veh)	25.8	34.6	12.3	14.3	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	25.8	34.6	12.3	14.3	0.5
LOS	C	C	B	B	A
Approach Delay (s/veh)	25.8		12.7	12.3	
Approach LOS	C		B	B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 61.8	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay (s/veh): 14.9	Intersection LOS: B
Intersection Capacity Utilization 63.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Van Buren Bl. & Mockingbird Canyon Rd.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	518	38	24	1442	958	168
Future Volume (veh/h)	518	38	24	1442	958	168
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	586	0	26	1534	1019	174
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	764	340	54	1995	1557	1035
Arrive On Green	0.21	0.00	0.03	0.56	0.44	0.44
Sat Flow, veh/h	3563	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	586	0	26	1534	1019	174
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1777	1777	1585
Q Serve(g_s), s	7.7	0.0	0.7	16.5	11.2	2.1
Cycle Q Clear(g_c), s	7.7	0.0	0.7	16.5	11.2	2.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	764	340	54	1995	1557	1035
V/C Ratio(X)	0.77	0.00	0.48	0.77	0.65	0.17
Avail Cap(c_a), veh/h	1899	845	230	6055	5130	2628
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	18.3	0.0	23.6	8.4	11.0	3.4
Incr Delay (d2), s/veh	0.6	0.0	2.4	0.2	0.5	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	2.5	0.0	0.3	2.8	2.8	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	18.9	0.0	26.1	8.6	11.4	3.4
LnGrp LOS	B		C	A	B	A
Approach Vol, veh/h	586			1560	1193	
Approach Delay, s/veh	18.9			8.9	10.3	
Approach LOS	B			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		34.3		15.2	6.1	28.2
Change Period (Y+Rc), s		* 6.5		4.6	4.6	6.5
Max Green Setting (Gmax), s		* 84		26.4	6.4	71.5
Max Q Clear Time (g_c+I1), s		18.5		9.7	2.7	13.2
Green Ext Time (p_c), s		8.3		1.0	0.0	8.5

Intersection Summary	
HCM 7th Control Delay, s/veh	11.2
HCM 7th LOS	B

Notes

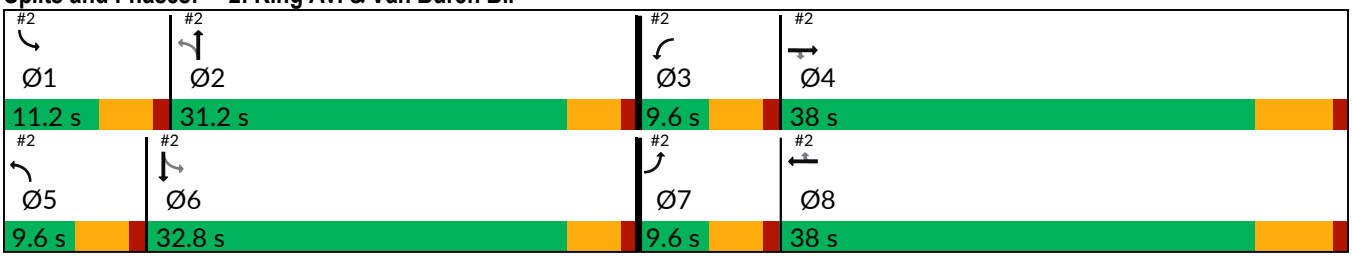
User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	41	1081	54	16	1277	22	171	92	124	29
Future Volume (vph)	41	1081	54	16	1277	22	171	92	124	29
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA
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	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.5	28.5	9.6	28.5	28.5	9.6	26.1	9.6	31.6
Total Split (s)	9.6	38.0	38.0	9.6	38.0	38.0	9.6	31.2	11.2	32.8
Total Split (%)	10.7%	42.2%	42.2%	10.7%	42.2%	42.2%	10.7%	34.7%	12.4%	36.4%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.2	36.5	36.5	5.2	32.8	32.8	17.3	13.5	18.6	14.7
Actuated g/C Ratio	0.07	0.51	0.51	0.07	0.46	0.46	0.24	0.19	0.26	0.21
v/c Ratio	0.36	0.67	0.07	0.14	0.88	0.03	0.59	0.46	0.38	0.31
Control Delay (s/veh)	44.7	18.3	0.1	39.4	29.0	0.1	29.0	25.7	21.7	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	44.7	18.3	0.1	39.4	29.0	0.1	29.0	25.7	21.7	11.3
LOS	D	B	A	D	C	A	C	C	C	B
Approach Delay (s/veh)		18.4			28.7			27.5		16.7
Approach LOS		B			C			C		B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 71.2	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay (s/veh): 23.6	Intersection LOS: C
Intersection Capacity Utilization 68.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 2: King Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	1081	54	16	1277	22	171	92	56	124	29	86
Future Volume (veh/h)	41	1081	54	16	1277	22	171	92	56	124	29	86
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	1215	45	18	1435	21	192	103	46	139	33	63
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	76	1656	739	38	1581	705	360	167	74	331	86	164
Arrive On Green	0.04	0.47	0.47	0.02	0.44	0.44	0.07	0.14	0.14	0.09	0.15	0.15
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1225	547	1781	565	1079
Grp Volume(v), veh/h	46	1215	45	18	1435	21	192	0	149	139	0	96
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	0	1772	1781	0	1644
Q Serve(g_s), s	1.8	19.2	1.1	0.7	26.1	0.5	5.0	0.0	5.5	4.5	0.0	3.6
Cycle Q Clear(g_c), s	1.8	19.2	1.1	0.7	26.1	0.5	5.0	0.0	5.5	4.5	0.0	3.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.31	1.00		0.66
Lane Grp Cap(c), veh/h	76	1656	739	38	1581	705	360	0	241	331	0	250
V/C Ratio(X)	0.61	0.73	0.06	0.48	0.91	0.03	0.53	0.00	0.62	0.42	0.00	0.38
Avail Cap(c_a), veh/h	129	1656	739	129	1631	728	360	0	680	344	0	669
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	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.6	15.0	10.2	33.5	17.9	10.8	25.0	0.0	28.2	22.9	0.0	26.5
Incr Delay (d2), s/veh	2.9	1.7	0.0	3.5	7.7	0.0	0.8	0.0	2.6	0.3	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	0.8	6.4	0.3	0.3	10.0	0.1	2.9	0.0	2.4	1.9	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.5	16.7	10.2	37.0	25.6	10.8	25.8	0.0	30.8	23.2	0.0	27.4
LnGrp LOS	D	B	B	D	C	B	C		C	C		C
Approach Vol, veh/h		1306			1474			341			235	
Approach Delay, s/veh		17.2			25.5			28.0			24.9	
Approach LOS		B			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	14.0	6.1	38.5	9.6	15.1	7.5	37.0
Change Period (Y+Rc), s	4.6	4.6	4.6	6.2	4.6	4.6	4.6	6.2
Max Green Setting (Gmax), s	6.6	26.6	5.0	31.8	5.0	28.2	5.0	31.8
Max Q Clear Time (g_c+I1), s	6.5	7.5	2.7	21.2	7.0	5.6	3.8	28.1
Green Ext Time (p_c), s	0.0	0.8	0.0	5.6	0.0	0.5	0.0	2.8

Intersection Summary	
HCM 7th Control Delay, s/veh	22.5
HCM 7th LOS	C

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1261	1283	39	0	32
Future Vol, veh/h	0	1261	1283	39	0	32
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	1371	1395	42	0	35

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	718
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	371
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	371
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	15.7
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	371
HCM Lane V/C Ratio	-	-	-	0.094
HCM Ctrl Dly (s/v)	-	-	-	15.7
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.3

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1261	1264	69	0	58
Future Vol, veh/h	0	1261	1264	69	0	58
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	1371	1374	75	0	63

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	724
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	368
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	368
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	16.8
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	368
HCM Lane V/C Ratio	-	-	-	0.171
HCM Ctrl Dly (s/v)	-	-	-	16.8
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.6

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	87	35	1106	517	72
Future Vol, veh/h	10	87	35	1106	517	72
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	11	95	38	1202	562	78

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1879	601	640	0	-	0
Stage 1	601	-	-	-	-	-
Stage 2	1278	-	-	-	-	-
Critical Hdwy	5.9	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	103	500	944	-	-	-
Stage 1	547	-	-	-	-	-
Stage 2	262	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	90	500	944	-	-	-
Mov Cap-2 Maneuver	90	-	-	-	-	-
Stage 1	481	-	-	-	-	-
Stage 2	262	-	-	-	-	-

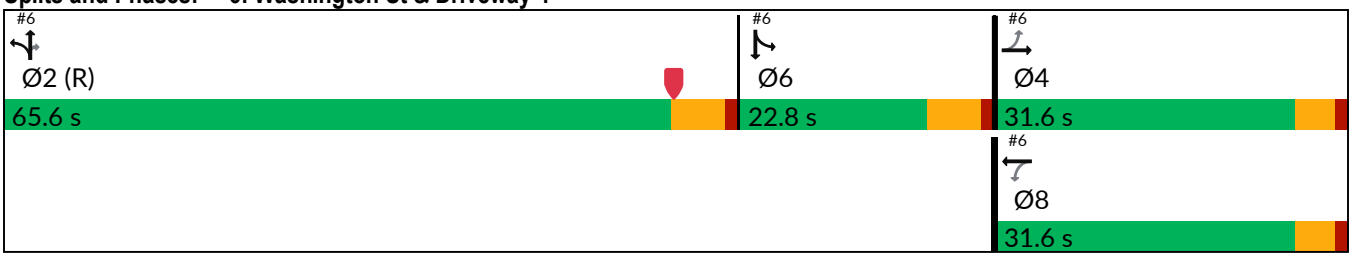
Approach	EB	NB	SB
HCM Ctrl Dly, s/v	20.23	0.28	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	55	-	341	-	-
HCM Lane V/C Ratio	0.04	-	0.309	-	-
HCM Ctrl Dly (s/v)	9	0	20.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.3	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Configurations								
Traffic Volume (vph)	10	0	30	0	140	1079	68	578
Future Volume (vph)	10	0	30	0	140	1079	68	578
Turn Type	Perm	NA	Perm	NA	Split	NA	Perm	NA
Protected Phases		4		8	2	2		6
Permitted Phases	4		8				2	
Detector Phase	4	4	8	8	2	2	2	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	31.6	31.6	31.6	31.6	22.8	22.8	22.8	22.8
Total Split (s)	31.6	31.6	31.6	31.6	65.6	65.6	65.6	22.8
Total Split (%)	26.3%	26.3%	26.3%	26.3%	54.7%	54.7%	54.7%	19.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	4.8	4.8	4.8
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
Total Lost Time (s)		4.6		4.6	5.8	5.8	5.8	5.8
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Min	Min	Min	Min	C-Max	C-Max	C-Max	None
Act Effct Green (s)		13.4		13.4	73.5	73.5	73.5	16.9
Actuated g/C Ratio		0.11		0.11	0.61	0.61	0.61	0.14
v/c Ratio		0.42		0.41	0.13	0.97	0.07	0.88
Control Delay (s/veh)		15.1		17.4	10.9	40.1	3.8	64.8
Queue Delay		0.0		0.0	0.0	40.7	0.0	0.0
Total Delay (s/veh)		15.1		17.4	10.9	80.8	3.8	64.8
LOS		B		B	B	F	A	E
Approach Delay (s/veh)		15.1		17.4		69.2		64.8
Approach LOS		B		B		E		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 63.6 (53%), Referenced to phase 2:NBTL, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay (s/veh): 63.0	Intersection LOS: E
Intersection Capacity Utilization 93.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 6: Washington St & Driveway 4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	101	30	0	52	140	1079	68	18	578	8
Future Volume (veh/h)	10	0	101	30	0	52	140	1079	68	18	578	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	10	0	104	31	0	54	144	1112	70	19	596	8
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	39	6	132	79	13	89	1143	1200	1017	22	693	9
Arrive On Green	0.09	0.00	0.09	0.09	0.00	0.09	1.00	1.00	1.00	0.13	0.13	0.13
Sat Flow, veh/h	76	65	1472	429	141	992	1781	1870	1585	165	5187	70
Grp Volume(v), veh/h	114	0	0	85	0	0	144	1112	70	214	195	214
Grp Sat Flow(s),veh/h/ln	1613	0	0	1562	0	0	1781	1870	1585	1862	1702	1858
Q Serve(g_s), s	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.5	13.5	13.5
Cycle Q Clear(g_c), s	8.2	0.0	0.0	6.1	0.0	0.0	0.0	0.0	0.0	13.5	13.5	13.5
Prop In Lane	0.09		0.91	0.36		0.64	1.00		1.00	0.09		0.04
Lane Grp Cap(c), veh/h	177	0	0	181	0	0	1143	1200	1017	249	228	248
V/C Ratio(X)	0.64	0.00	0.00	0.47	0.00	0.00	0.13	0.93	0.07	0.86	0.86	0.86
Avail Cap(c_a), veh/h	389	0	0	379	0	0	1143	1200	1017	264	241	263
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.5	0.0	0.0	52.4	0.0	0.0	0.0	0.0	0.0	50.9	50.9	50.9
Incr Delay (d2), s/veh	3.9	0.0	0.0	1.9	0.0	0.0	0.2	13.4	0.1	22.9	24.4	23.0
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	3.6	0.0	0.0	2.6	0.0	0.0	0.1	4.5	0.0	7.7	7.1	7.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	57.3	0.0	0.0	54.3	0.0	0.0	0.2	13.4	0.1	73.8	75.2	73.9
LnGrp LOS	E			D			A	B	A	E	E	E
Approach Vol, veh/h		114			85			1326			623	
Approach Delay, s/veh		57.3			54.3			11.3			74.3	
Approach LOS		E			D			B			E	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	82.8	15.4	21.8	15.4
Change Period (Y+Rc), s	5.8	4.6	5.8	4.6
Max Green Setting (Gmax), s	59.8	27.0	17.0	27.0
Max Q Clear Time (g_c+I1), s	2.0	10.2	15.5	8.1
Green Ext Time (p_c), s	13.6	0.5	0.5	0.4

Intersection Summary	
HCM 7th Control Delay, s/veh	33.7
HCM 7th LOS	C

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	10	0	1287	695	14
Future Vol, veh/h	0	10	0	1287	695	14
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	-	-	-	50
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	11	0	1399	755	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	378	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	530	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	530	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

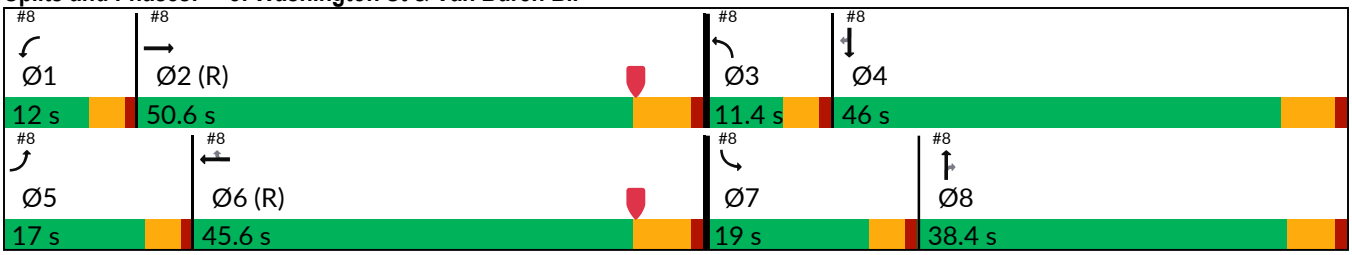
Approach	EB	NB	SB
HCM Ctrl Dly, s/v	11.94	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	530	-	-
HCM Lane V/C Ratio	-	0.021	-	-
HCM Ctrl Dly (s/v)	-	11.9	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	191	965	89	1152	571	88	525	122	420	193	92
Future Volume (vph)	191	965	89	1152	571	88	525	122	420	193	92
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.2	34.2	9.2	33.2	33.2	9.2	38.4	38.4	9.2	30.8	30.8
Total Split (s)	17.0	50.6	12.0	45.6	45.6	11.4	38.4	38.4	19.0	46.0	46.0
Total Split (%)	14.2%	42.2%	10.0%	38.0%	38.0%	9.5%	32.0%	32.0%	15.8%	38.3%	38.3%
Yellow Time (s)	3.2	5.2	3.2	5.2	5.2	3.2	4.4	4.4	3.2	4.8	4.8
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)	4.2	6.2	4.2	6.2	6.2	4.2	5.4	5.4	4.2	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	18.8	48.9	9.9	40.1	40.1	6.8	26.4	26.4	14.8	34.0	34.0
Actuated g/C Ratio	0.16	0.41	0.08	0.33	0.33	0.06	0.22	0.22	0.12	0.28	0.28
v/c Ratio	0.74	0.81	0.66	1.05	0.86	0.49	0.73	0.27	1.07	0.21	0.18
Control Delay (s/veh)	66.4	37.4	74.8	79.2	33.6	63.8	48.9	2.8	103.4	51.6	25.9
Queue Delay	0.0	0.0	0.0	0.0	31.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	66.4	37.4	74.8	79.2	64.6	63.8	48.9	2.8	103.4	51.6	25.9
LOS	E	D	E	E	E	E	D	A	F	D	C
Approach Delay (s/veh)		41.8		74.4			43.0			79.1	
Approach LOS		D		E			D			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay (s/veh): 60.9	Intersection LOS: E
Intersection Capacity Utilization 85.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 8: Washington St & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	191	965	104	89	1152	571	88	525	122	420	193	92
Future Volume (veh/h)	191	965	104	89	1152	571	88	525	122	420	193	92
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	205	1038	73	96	1239	412	95	565	68	452	208	41
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	190	1496	105	116	1432	637	145	700	312	426	989	441
Arrive On Green	0.11	0.44	0.44	0.07	0.40	0.40	0.04	0.20	0.20	0.12	0.28	0.28
Sat Flow, veh/h	1781	3364	237	1781	3554	1582	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	205	548	563	96	1239	412	95	565	68	452	208	41
Grp Sat Flow(s),veh/h/ln	1781	1777	1824	1781	1777	1582	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	12.8	29.7	29.7	6.4	38.4	25.2	3.2	18.2	4.3	14.8	5.4	2.3
Cycle Q Clear(g_c), s	12.8	29.7	29.7	6.4	38.4	25.2	3.2	18.2	4.3	14.8	5.4	2.3
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	190	790	811	116	1432	637	145	700	312	426	989	441
V/C Ratio(X)	1.08	0.69	0.69	0.83	0.87	0.65	0.65	0.81	0.22	1.06	0.21	0.09
Avail Cap(c_a), veh/h	190	790	811	116	1432	637	207	977	436	426	1190	531
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	53.6	26.8	26.8	55.4	32.8	28.9	56.6	46.0	40.4	52.6	33.2	32.1
Incr Delay (d2), s/veh	87.9	5.0	4.9	35.4	7.2	5.0	1.8	3.5	0.3	60.5	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	10.2	12.8	13.1	3.9	16.8	10.5	1.5	8.4	1.7	9.8	2.3	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	141.5	31.7	31.6	90.9	40.1	33.9	58.5	49.5	40.8	113.1	33.3	32.2
LnGrp LOS	F	C	C	F	D	C	E	D	D	F	C	C
Approach Vol, veh/h		1316			1747			728			701	
Approach Delay, s/veh		48.8			41.4			49.8			84.7	
Approach LOS		D			D			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	59.6	9.3	39.2	17.0	54.6	19.0	29.4
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	7.8	44.4	7.2	40.2	12.8	39.4	14.8	* 33
Max Q Clear Time (g_c+I1), s	8.4	31.7	5.2	7.4	14.8	40.4	16.8	20.2
Green Ext Time (p_c), s	0.0	6.9	0.0	1.3	0.0	0.0	0.0	3.4

Intersection Summary	
HCM 7th Control Delay, s/veh	51.7
HCM 7th LOS	D

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	33.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	1497	10	29	1886	4	29	0	51	1	0	14
Future Vol, veh/h	11	1497	10	29	1886	4	29	0	51	1	0	14
Conflicting Peds, #/hr	0	0	1	0	0	6	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	275	-	-	255	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	1576	11	31	1985	4	31	0	54	1	0	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1995	0	0	1587	0	0	2659	3662	794	2865	3665	1001
Stage 1	-	-	-	-	-	-	1605	1605	-	2054	2054	-
Stage 2	-	-	-	-	-	-	1054	2057	-	811	1610	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	284	-	-	410	-	-	~ 11	5	331	8	5	241
Stage 1	-	-	-	-	-	-	110	163	-	57	97	-
Stage 2	-	-	-	-	-	-	242	97	-	339	162	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	282	-	-	409	-	-	~ 9	4	331	6	4	240
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 9	4	-	6	4	-
Stage 1	-	-	-	-	-	-	105	156	-	52	89	-
Stage 2	-	-	-	-	-	-	210	89	-	273	155	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.13	0.22	$ 1465.62	80.07
HCM LOS			F	F

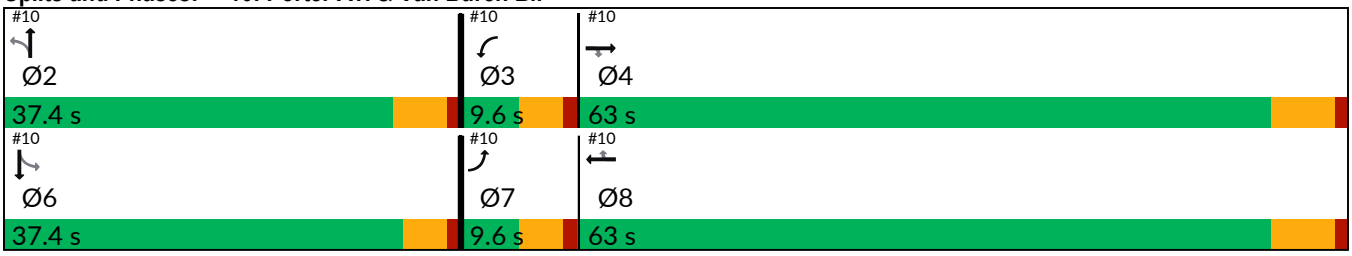
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	24	282	-	-	409	-	-	63
HCM Lane V/C Ratio	3.51	0.041	-	-	0.075	-	-	0.25
HCM Ctrl Dly (s/v)	$ 1465.6	18.3	-	-	14.5	-	-	80.1
HCM Lane LOS	F	C	-	-	B	-	-	F
HCM 95th %tile Q(veh)	10.5	0.1	-	-	0.2	-	-	0.9

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	6	1453	67	10	1900	2	20	0	14	7
Future Volume (vph)	6	1453	67	10	1900	2	20	0	14	7
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)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	27.7	27.7	9.6	27.7	27.7	36.9	36.9	35.6	35.6
Total Split (s)	9.6	63.0	63.0	9.6	63.0	63.0	37.4	37.4	37.4	37.4
Total Split (%)	8.7%	57.3%	57.3%	8.7%	57.3%	57.3%	34.0%	34.0%	34.0%	34.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	4.4	4.4	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2		5.4		4.6
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	None	None	None	None
Act Effct Green (s)	5.2	62.3	62.3	5.2	62.3	62.3		13.4		13.9
Actuated g/C Ratio	0.07	0.79	0.79	0.07	0.79	0.79		0.17		0.18
v/c Ratio	0.05	0.55	0.06	0.09	0.72	0.00		0.14		0.15
Control Delay (s/veh)	43.8	9.4	2.8	44.3	12.6	0.0		2.8		19.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay (s/veh)	43.8	9.4	2.8	44.3	12.6	0.0		2.8		19.3
LOS	D	A	A	D	B	A		A		B
Approach Delay (s/veh)		9.2			12.7			2.8		19.3
Approach LOS		A			B			A		B

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 78.4	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay (s/veh): 11.2	Intersection LOS: B
Intersection Capacity Utilization 70.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 10: Porter Av. & Van Buren Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1453	67	10	1900	2	20	0	21	14	7	21
Future Volume (veh/h)	6	1453	67	10	1900	2	20	0	21	14	7	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	6	1546	61	11	2021	2	21	0	13	15	7	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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	14	2412	1076	24	2433	1082	140	18	47	103	39	55
Arrive On Green	0.01	0.68	0.68	0.01	0.68	0.68	0.08	0.00	0.08	0.08	0.08	0.08
Sat Flow, veh/h	1781	3554	1585	1781	3554	1580	727	222	588	408	498	700
Grp Volume(v), veh/h	6	1546	61	11	2021	2	34	0	0	39	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1580	1537	0	0	1606	0	0
Q Serve(g_s), s	0.2	17.6	0.9	0.4	29.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	17.6	0.9	0.4	29.5	0.0	1.3	0.0	0.0	1.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.62		0.38	0.38		0.44
Lane Grp Cap(c), veh/h	14	2412	1076	24	2433	1082	204	0	0	197	0	0
V/C Ratio(X)	0.43	0.64	0.06	0.45	0.83	0.00	0.17	0.00	0.00	0.20	0.00	0.00
Avail Cap(c_a), veh/h	125	2844	1268	125	2844	1265	744	0	0	790	0	0
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	0.00	0.00
Uniform Delay (d), s/veh	35.1	6.5	3.8	34.7	8.2	3.5	30.7	0.0	0.0	30.8	0.0	0.0
Incr Delay (d2), s/veh	7.5	0.4	0.0	4.7	1.9	0.0	0.4	0.0	0.0	0.5	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	0.1	3.6	0.2	0.2	6.4	0.0	0.5	0.0	0.0	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.6	6.9	3.8	39.5	10.1	3.5	31.1	0.0	0.0	31.3	0.0	0.0
LnGrp LOS	D	A	A	D	B		C			C		
Approach Vol, veh/h		1613			2034			34			39	
Approach Delay, s/veh		6.9			10.3			31.1			31.3	
Approach LOS		A			B			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.0	5.6	54.4		11.0	5.2	54.8				
Change Period (Y+Rc), s		5.4	4.6	6.2		* 5.4	4.6	6.2				
Max Green Setting (Gmax), s		32.0	5.0	56.8		* 33	5.0	56.8				
Max Q Clear Time (g_c+I1), s		3.3	2.4	19.6		3.5	2.2	31.5				
Green Ext Time (p_c), s		0.1	0.0	14.7		0.2	0.0	17.1				

Intersection Summary	
HCM 7th Control Delay, s/veh	9.2
HCM 7th LOS	A

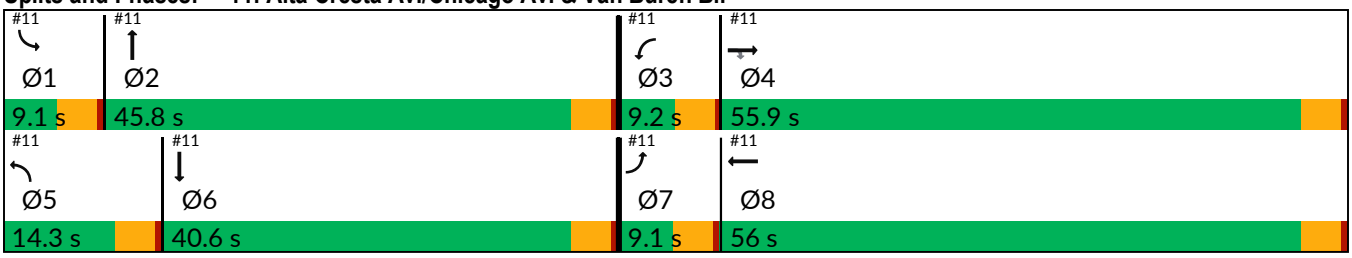
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	21	1310	80	48	1717	64	1	9	1
Future Volume (vph)	21	1310	80	48	1717	64	1	9	1
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.1	30.1	30.1	9.1	30.1	9.1	44.1	9.1	26.1
Total Split (s)	9.1	55.9	55.9	9.2	56.0	14.3	45.8	9.1	40.6
Total Split (%)	7.6%	46.6%	46.6%	7.7%	46.7%	11.9%	38.2%	7.6%	33.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	5.2	49.9	49.9	5.3	54.0	8.5	18.9	5.2	10.1
Actuated g/C Ratio	0.06	0.58	0.58	0.06	0.63	0.10	0.22	0.06	0.12
v/c Ratio	0.21	0.69	0.09	0.48	0.84	0.39	0.14	0.09	0.05
Control Delay (s/veh)	50.9	18.7	1.6	60.1	21.3	48.3	8.7	48.7	19.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	50.9	18.7	1.6	60.1	21.3	48.3	8.7	48.7	19.8
LOS	D	B	A	E	C	D	A	D	B
Approach Delay (s/veh)		18.2			22.3		30.7		35.0
Approach LOS		B			C		C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 85.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay (s/veh): 21.0	Intersection LOS: C
Intersection Capacity Utilization 65.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 11: Alta Cresta Av./Chicago Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	1310	80	48	1717	14	64	1	50	9	1	7
Future Volume (veh/h)	21	1310	80	48	1717	14	64	1	50	9	1	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	23	1409	70	52	1846	14	69	1	27	10	1	2
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	46	2128	949	81	2235	17	94	6	170	22	39	79
Arrive On Green	0.03	0.60	0.60	0.05	0.62	0.62	0.05	0.11	0.11	0.01	0.07	0.07
Sat Flow, veh/h	1781	3554	1585	1781	3614	27	1781	57	1537	1781	557	1113
Grp Volume(v), veh/h	23	1409	70	52	906	954	69	0	28	10	0	3
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1865	1781	0	1594	1781	0	1670
Q Serve(g_s), s	0.9	18.6	1.3	2.0	28.0	28.2	2.7	0.0	1.1	0.4	0.0	0.1
Cycle Q Clear(g_c), s	0.9	18.6	1.3	2.0	28.0	28.2	2.7	0.0	1.1	0.4	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.96	1.00		0.67
Lane Grp Cap(c), veh/h	46	2128	949	81	1099	1153	94	0	177	22	0	118
V/C Ratio(X)	0.50	0.66	0.07	0.64	0.82	0.83	0.74	0.00	0.16	0.45	0.00	0.03
Avail Cap(c_a), veh/h	126	2609	1164	129	1307	1372	257	0	942	126	0	864
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	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.9	9.4	5.9	33.1	10.5	10.5	32.9	0.0	28.4	34.6	0.0	30.5
Incr Delay (d2), s/veh	8.3	0.5	0.0	8.3	3.8	3.7	10.7	0.0	0.4	13.2	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	0.5	4.9	0.3	1.0	8.0	8.4	1.4	0.0	0.4	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.2	9.9	6.0	41.4	14.3	14.2	43.6	0.0	28.8	47.8	0.0	30.6
LnGrp LOS	D	A	A	D	B	B	D		C	D		C
Approach Vol, veh/h		1502			1912			97			13	
Approach Delay, s/veh		10.2			15.0			39.4			43.8	
Approach LOS		B			B			D			D	

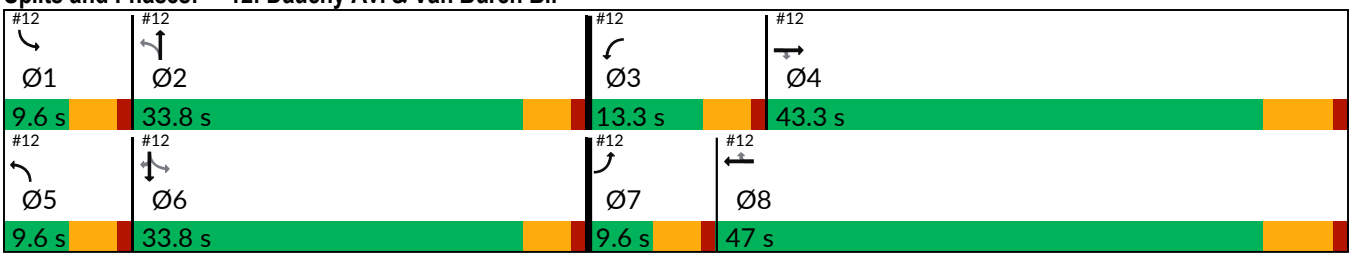
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.0	11.9	7.3	46.4	7.8	9.1	5.9	47.7
Change Period (Y+Rc), s	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Max Green Setting (Gmax), s	5.0	41.7	5.1	51.8	10.2	36.5	5.0	51.9
Max Q Clear Time (g_c+I1), s	2.4	3.1	4.0	20.6	4.7	2.1	2.9	30.2
Green Ext Time (p_c), s	0.0	0.1	0.0	12.1	0.1	0.0	0.0	13.5

Intersection Summary	
HCM 7th Control Delay, s/veh	13.7
HCM 7th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	40	1072	217	125	1355	15	141	61	46	107	38
Future Volume (vph)	40	1072	217	125	1355	15	141	61	46	107	38
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	28.2	28.2	9.6	28.2	28.2	9.6	26.6	9.6	33.6	33.6
Total Split (s)	9.6	43.3	43.3	13.3	47.0	47.0	9.6	33.8	9.6	33.8	33.8
Total Split (%)	9.6%	43.3%	43.3%	13.3%	47.0%	47.0%	9.6%	33.8%	9.6%	33.8%	33.8%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	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	None	None	None	None
Act Effct Green (s)	5.1	33.9	33.9	8.8	42.2	42.2	19.0	16.3	16.7	14.3	14.3
Actuated g/C Ratio	0.06	0.42	0.42	0.11	0.53	0.53	0.24	0.20	0.21	0.18	0.18
v/c Ratio	0.38	0.78	0.32	0.70	0.79	0.02	0.53	0.54	0.20	0.35	0.11
Control Delay (s/veh)	51.3	25.8	10.3	59.0	22.8	0.1	31.5	18.8	23.6	33.2	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	51.3	25.8	10.3	59.0	22.8	0.1	31.5	18.8	23.6	33.2	0.6
LOS	D	C	B	E	C	A	C	B	C	C	A
Approach Delay (s/veh)		24.0			25.6			23.7		24.4	
Approach LOS		C			C			C		C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 80.1	
Natural Cycle: 95	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay (s/veh): 24.7	Intersection LOS: C
Intersection Capacity Utilization 75.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 12: Dauchy Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1072	217	125	1355	15	141	61	163	46	107	38
Future Volume (veh/h)	40	1072	217	125	1355	15	141	61	163	46	107	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	1165	156	136	1473	9	153	66	123	50	116	27
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	71	1536	685	171	1736	757	313	92	172	235	250	208
Arrive On Green	0.04	0.43	0.43	0.10	0.49	0.49	0.07	0.16	0.16	0.04	0.13	0.13
Sat Flow, veh/h	1781	3554	1585	1781	3554	1549	1781	585	1090	1781	1870	1557
Grp Volume(v), veh/h	43	1165	156	136	1473	9	153	0	189	50	116	27
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1549	1781	0	1674	1781	1870	1557
Q Serve(g_s), s	1.8	20.5	4.6	5.5	26.8	0.2	5.0	0.0	7.9	1.8	4.2	1.1
Cycle Q Clear(g_c), s	1.8	20.5	4.6	5.5	26.8	0.2	5.0	0.0	7.9	1.8	4.2	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.65	1.00		1.00
Lane Grp Cap(c), veh/h	71	1536	685	171	1736	757	313	0	264	235	250	208
V/C Ratio(X)	0.61	0.76	0.23	0.80	0.85	0.01	0.49	0.00	0.72	0.21	0.46	0.13
Avail Cap(c_a), veh/h	121	1784	796	210	1962	855	313	0	662	279	739	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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.9	17.7	13.2	32.7	16.5	9.7	26.3	0.0	29.5	26.0	29.6	28.2
Incr Delay (d2), s/veh	3.1	1.7	0.2	12.8	3.4	0.0	0.4	0.0	3.6	0.2	1.3	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	0.8	7.2	1.4	2.8	9.3	0.1	2.3	0.0	3.4	0.7	2.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	38.0	19.4	13.4	45.5	19.9	9.7	26.8	0.0	33.1	26.2	30.9	28.5
LnGrp LOS	D	B	B	D	B	A	C		C	C	C	C
Approach Vol, veh/h		1364			1618			342			193	
Approach Delay, s/veh		19.3			22.0			30.3			29.3	
Approach LOS		B			C			C			C	

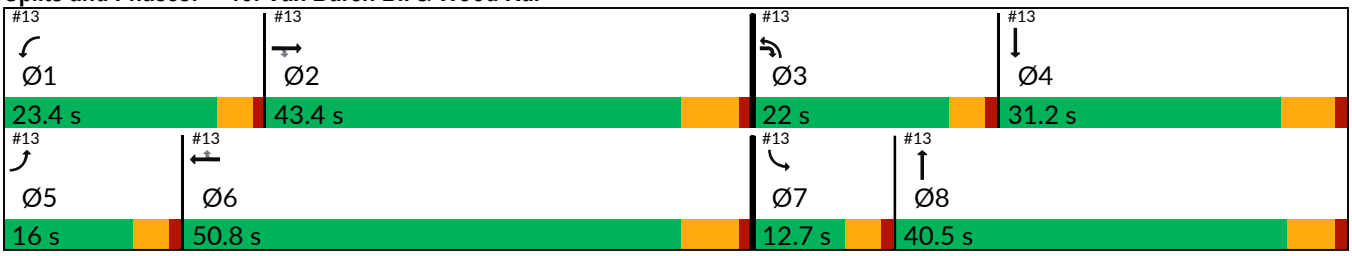
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	16.3	11.7	38.1	9.6	14.5	7.5	42.3
Change Period (Y+Rc), s	4.6	4.6	4.6	6.2	4.6	4.6	4.6	6.2
Max Green Setting (Gmax), s	5.0	29.2	8.7	37.1	5.0	29.2	5.0	40.8
Max Q Clear Time (g_c+I1), s	3.8	9.9	7.5	22.5	7.0	6.2	3.8	28.8
Green Ext Time (p_c), s	0.0	1.1	0.0	6.9	0.0	0.7	0.0	7.3

Intersection Summary	
HCM 7th Control Delay, s/veh	22.1
HCM 7th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	137	749	327	406	1033	182	425	441	72	474
Future Volume (vph)	137	749	327	406	1033	182	425	441	72	474
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6		3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	3	1	6	6	3	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.2	30.2	9.2	9.2	30.2	30.2	9.2	38.4	9.2	15.8
Total Split (s)	16.0	43.4	22.0	23.4	50.8	50.8	22.0	40.5	12.7	31.2
Total Split (%)	13.3%	36.2%	18.3%	19.5%	42.3%	42.3%	18.3%	33.8%	10.6%	26.0%
Yellow Time (s)	3.2	5.2	3.2	3.2	5.2	5.2	3.2	4.4	3.2	4.8
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)	4.2	6.2	4.2	4.2	6.2	6.2	4.2	5.4	4.2	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.5	36.8	56.4	18.1	43.4	43.4	17.5	37.6	7.9	25.4
Actuated g/C Ratio	0.10	0.31	0.48	0.15	0.37	0.37	0.15	0.32	0.07	0.21
v/c Ratio	0.88	0.76	0.46	0.86	0.89	0.30	0.93	0.70	0.68	0.96
Control Delay (s/veh)	96.9	42.1	15.0	66.0	44.6	6.6	75.8	36.0	82.0	67.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	96.9	42.1	15.0	66.0	44.6	6.6	75.8	36.0	82.0	67.3
LOS	F	D	B	E	D	A	E	D	F	E
Approach Delay (s/veh)		41.0			45.7			51.2		68.7
Approach LOS		D			D			D		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 118.3	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay (s/veh): 49.3	Intersection LOS: D
Intersection Capacity Utilization 84.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: Van Buren Bl. & Wood Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	137	749	327	406	1033	182	425	441	248	72	474	178
Future Volume (veh/h)	137	749	327	406	1033	182	425	441	248	72	474	178
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.93	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	152	832	180	451	1148	122	472	490	120	80	527	114
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	179	1134	733	510	1301	576	525	835	203	102	593	128
Arrive On Green	0.10	0.32	0.32	0.15	0.37	0.37	0.15	0.30	0.30	0.06	0.20	0.20
Sat Flow, veh/h	1781	3554	1542	3456	3554	1573	3456	2790	677	1781	2901	625
Grp Volume(v), veh/h	152	832	180	451	1148	122	472	311	299	80	322	319
Grp Sat Flow(s),veh/h/ln	1781	1777	1542	1728	1777	1573	1728	1777	1690	1781	1777	1748
Q Serve(g_s), s	9.7	24.0	8.1	14.7	34.8	6.1	15.5	17.1	17.4	5.1	20.3	20.5
Cycle Q Clear(g_c), s	9.7	24.0	8.1	14.7	34.8	6.1	15.5	17.1	17.4	5.1	20.3	20.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.40	1.00		0.36
Lane Grp Cap(c), veh/h	179	1134	733	510	1301	576	525	532	506	102	363	357
V/C Ratio(X)	0.85	0.73	0.25	0.88	0.88	0.21	0.90	0.58	0.59	0.79	0.89	0.89
Avail Cap(c_a), veh/h	182	1148	739	576	1376	609	534	541	515	131	392	385
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	34.9	18.2	48.1	34.2	25.1	48.0	34.3	34.4	53.6	44.5	44.6
Incr Delay (d2), s/veh	27.8	2.7	0.2	13.0	7.1	0.3	17.4	1.6	1.8	15.8	20.0	21.3
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	5.5	10.2	2.8	7.0	15.3	2.3	7.8	7.4	7.2	2.7	10.7	10.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	78.7	37.5	18.5	61.1	41.2	25.3	65.3	35.8	36.1	69.4	64.6	66.0
LnGrp LOS	E	D	B	E	D	C	E	D	D	E	E	E
Approach Vol, veh/h		1164			1721			1082			721	
Approach Delay, s/veh		40.0			45.3			48.8			65.7	
Approach LOS		D			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.2	43.0	21.7	29.3	15.8	48.4	10.8	40.3
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	19.2	37.2	17.8	25.4	11.8	44.6	8.5	* 35
Max Q Clear Time (g_c+I1), s	16.7	26.0	17.5	22.5	11.7	36.8	7.1	19.4
Green Ext Time (p_c), s	0.3	5.7	0.0	1.1	0.0	5.3	0.0	3.2

Intersection Summary	
HCM 7th Control Delay, s/veh	47.9
HCM 7th LOS	D

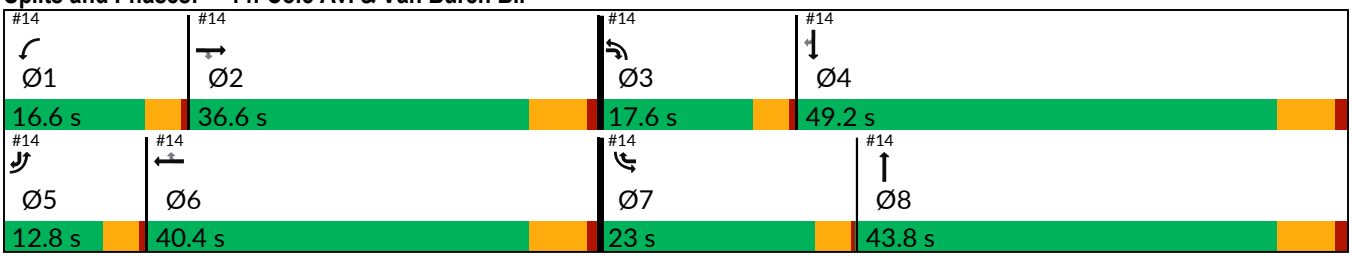
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	221	748	99	177	1326	456	193	456	165	356	205
Future Volume (vph)	221	748	99	177	1326	456	193	456	165	356	205
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8	7	4	5
Permitted Phases			2			6					4
Detector Phase	5	2	3	1	6	7	3	8	7	4	5
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0
Minimum Split (s)	9.1	36.2	9.1	9.1	36.2	9.1	9.1	42.2	9.1	49.2	9.1
Total Split (s)	12.8	36.6	17.6	16.6	40.4	23.0	17.6	43.8	23.0	49.2	12.8
Total Split (%)	10.7%	30.5%	14.7%	13.8%	33.7%	19.2%	14.7%	36.5%	19.2%	41.0%	10.7%
Yellow Time (s)	3.2	5.2	3.2	3.2	5.2	3.2	3.2	5.2	3.2	5.2	3.2
All-Red Time (s)	0.5	1.0	0.5	0.5	1.0	0.5	0.5	1.0	0.5	1.0	0.5
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)	3.7	6.2	3.7	3.7	6.2	3.7	3.7	6.2	3.7	6.2	3.7
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.2	30.6	47.1	13.0	34.5	46.5	14.0	23.8	9.5	19.3	31.0
Actuated g/C Ratio	0.09	0.32	0.49	0.13	0.36	0.48	0.14	0.25	0.10	0.20	0.32
v/c Ratio	0.75	0.74	0.13	0.82	0.81	0.62	0.83	0.69	0.54	0.55	0.40
Control Delay (s/veh)	59.6	35.6	2.4	70.1	33.7	17.3	68.8	36.5	48.7	37.2	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	59.6	35.6	2.4	70.1	33.7	17.3	68.8	36.5	48.7	37.2	14.2
LOS	E	D	A	E	C	B	E	D	D	D	B
Approach Delay (s/veh)		37.5			33.1			45.0		33.4	
Approach LOS		D			C			D		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 96.9	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay (s/veh): 36.1	Intersection LOS: D
Intersection Capacity Utilization 70.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 14: Cole Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	221	748	99	177	1326	456	193	456	84	165	356	205
Future Volume (veh/h)	221	748	99	177	1326	456	193	456	84	165	356	205
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	243	822	78	195	1457	360	212	501	88	181	391	169
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	319	1190	749	231	1900	701	248	693	121	262	591	406
Arrive On Green	0.09	0.33	0.33	0.13	0.37	0.37	0.14	0.23	0.23	0.08	0.17	0.17
Sat Flow, veh/h	3456	3554	1578	1781	5106	1560	1781	3016	527	3456	3554	1561
Grp Volume(v), veh/h	243	822	78	195	1457	360	212	294	295	181	391	169
Grp Sat Flow(s),veh/h/ln	1728	1777	1578	1781	1702	1560	1781	1777	1766	1728	1777	1561
Q Serve(g_s), s	5.9	17.2	2.4	9.2	21.6	14.3	10.0	13.2	13.3	4.4	8.9	7.7
Cycle Q Clear(g_c), s	5.9	17.2	2.4	9.2	21.6	14.3	10.0	13.2	13.3	4.4	8.9	7.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	319	1190	749	231	1900	701	248	408	406	262	591	406
V/C Ratio(X)	0.76	0.69	0.10	0.85	0.77	0.51	0.85	0.72	0.73	0.69	0.66	0.42
Avail Cap(c_a), veh/h	365	1255	778	267	2029	740	288	776	772	775	1775	926
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	38.1	24.8	12.5	36.6	23.7	17.0	36.2	30.6	30.7	38.8	33.6	26.5
Incr Delay (d2), s/veh	6.5	1.7	0.1	17.2	1.9	0.8	17.4	2.4	2.5	1.2	1.3	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	2.6	6.8	0.7	4.8	8.0	4.6	5.2	5.4	5.5	1.8	3.6	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.7	26.5	12.6	53.8	25.6	17.9	53.6	33.0	33.2	40.0	34.9	27.2
LnGrp LOS	D	C	B	D	C	B	D	C	C	D	C	C
Approach Vol, veh/h		1143			2012			801			741	
Approach Delay, s/veh		29.4			27.0			38.5			34.4	
Approach LOS		C			C			D			C	

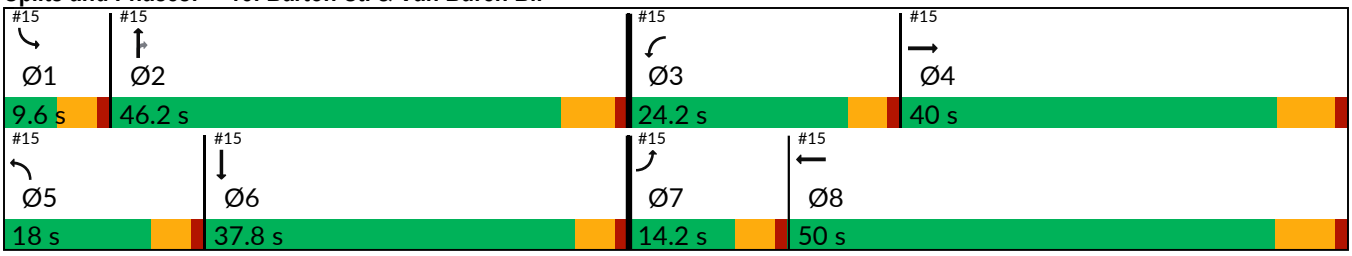
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.8	35.0	15.7	20.5	11.6	38.2	10.2	26.0
Change Period (Y+Rc), s	3.7	6.2	3.7	6.2	3.7	6.2	3.7	6.2
Max Green Setting (Gmax), s	12.9	30.4	13.9	43.0	9.1	34.2	19.3	37.6
Max Q Clear Time (g_c+I1), s	11.2	19.2	12.0	10.9	7.9	23.6	6.4	15.3
Green Ext Time (p_c), s	0.0	5.2	0.1	2.9	0.1	8.4	0.2	3.1

Intersection Summary	
HCM 7th Control Delay, s/veh	30.7
HCM 7th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	107	860	259	1525	261	88	410	23	86
Future Volume (vph)	107	860	259	1525	261	88	410	23	86
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)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.2	9.6	28.5	9.6	44.8	44.8	9.6	26.1
Total Split (s)	14.2	40.0	24.2	50.0	18.0	46.2	46.2	9.6	37.8
Total Split (%)	11.8%	33.3%	20.2%	41.7%	15.0%	38.5%	38.5%	8.0%	31.5%
Yellow Time (s)	3.6	5.2	3.6	5.5	3.6	4.8	4.8	3.6	3.6
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)	4.6	6.2	4.6	6.5	4.6	5.8	5.8	4.6	4.6
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	None	None	None	None
Act Effct Green (s)	9.3	34.0	19.7	44.1	12.2	32.4	32.4	5.0	22.2
Actuated g/C Ratio	0.09	0.31	0.18	0.41	0.11	0.30	0.30	0.05	0.20
v/c Ratio	0.78	0.97	0.89	0.83	0.75	0.18	0.63	0.32	0.84
Control Delay (s/veh)	83.5	57.8	74.9	34.5	60.5	29.5	11.8	64.0	45.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	83.5	57.8	74.9	34.5	60.5	29.5	11.8	64.0	45.6
LOS	F	E	E	C	E	C	B	E	D
Approach Delay (s/veh)		60.4		40.3		30.6			46.8
Approach LOS		E		D		C			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 108.3	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay (s/veh): 44.4	Intersection LOS: D
Intersection Capacity Utilization 84.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 15: Barton St. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	860	97	259	1525	24	261	88	410	23	86	236
Future Volume (veh/h)	107	860	97	259	1525	24	261	88	410	23	86	236
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	119	956	95	288	1694	15	290	98	288	26	96	189
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	146	1025	102	317	2139	19	355	520	441	45	111	219
Arrive On Green	0.08	0.31	0.31	0.18	0.41	0.41	0.10	0.28	0.28	0.03	0.20	0.20
Sat Flow, veh/h	1781	3264	324	1781	5219	46	3456	1870	1585	1781	556	1094
Grp Volume(v), veh/h	119	520	531	288	1105	604	290	98	288	26	0	285
Grp Sat Flow(s),veh/h/ln	1781	1777	1812	1781	1702	1861	1728	1870	1585	1781	0	1650
Q Serve(g_s), s	6.9	29.8	29.8	16.7	29.8	29.8	8.6	4.2	16.8	1.5	0.0	17.5
Cycle Q Clear(g_c), s	6.9	29.8	29.8	16.7	29.8	29.8	8.6	4.2	16.8	1.5	0.0	17.5
Prop In Lane	1.00		0.18	1.00		0.02	1.00		1.00	1.00		0.66
Lane Grp Cap(c), veh/h	146	558	569	317	1395	763	355	520	441	45	0	331
V/C Ratio(X)	0.81	0.93	0.93	0.91	0.79	0.79	0.82	0.19	0.65	0.58	0.00	0.86
Avail Cap(c_a), veh/h	163	572	583	332	1410	771	441	719	610	85	0	522
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	0.00	1.00
Uniform Delay (d), s/veh	47.4	34.9	34.9	42.3	27.1	27.1	46.2	28.9	33.5	50.6	0.0	40.6
Incr Delay (d2), s/veh	21.5	22.1	21.8	26.0	3.1	5.6	7.7	0.2	1.6	4.3	0.0	8.6
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	3.8	15.4	15.6	9.1	11.4	13.0	4.0	1.8	6.2	0.7	0.0	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	68.9	57.1	56.8	68.4	30.2	32.7	53.8	29.1	35.1	54.9	0.0	49.1
LnGrp LOS	E	E	E	E	C	C	D	C	D	D		D
Approach Vol, veh/h		1170			1997			676			311	
Approach Delay, s/veh		58.1			36.5			42.3			49.6	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	35.0	23.3	39.5	15.4	26.9	13.2	49.6
Change Period (Y+Rc), s	4.6	5.8	4.6	* 6.5	4.6	* 5.8	4.6	6.5
Max Green Setting (Gmax), s	5.0	40.4	19.6	* 34	13.4	* 33	9.6	43.5
Max Q Clear Time (g_c+I1), s	3.5	18.8	18.7	31.8	10.6	19.5	8.9	31.8
Green Ext Time (p_c), s	0.0	1.4	0.0	1.1	0.2	1.5	0.0	7.5

Intersection Summary	
HCM 7th Control Delay, s/veh	44.5
HCM 7th LOS	D

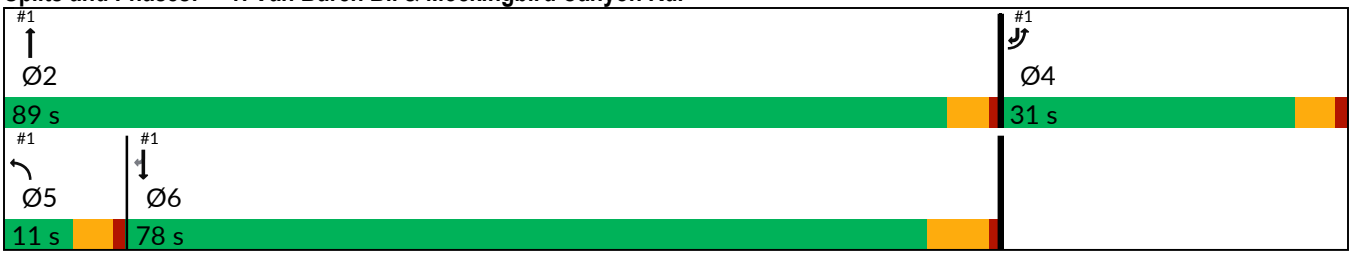
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	253	24	1076	1423	491
Future Volume (vph)	253	24	1076	1423	491
Turn Type	Prot	Prot	NA	NA	pm+ov
Protected Phases	4	5	2	6	4
Permitted Phases					6
Detector Phase	4	5	2	6	4
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	29.6	9.6	26.1	28.5	29.6
Total Split (s)	31.0	11.0	89.0	78.0	31.0
Total Split (%)	25.8%	9.2%	74.2%	65.0%	25.8%
Yellow Time (s)	3.6	3.6	3.6	5.5	3.6
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)	4.6	4.6	4.6	6.5	4.6
Lead/Lag		Lead		Lag	
Lead-Lag Optimize?		Yes		Yes	
Recall Mode	None	None	None	None	None
Act Effct Green (s)	12.5	6.3	43.6	38.2	62.1
Actuated g/C Ratio	0.19	0.09	0.65	0.57	0.93
v/c Ratio	0.45	0.15	0.48	0.72	0.34
Control Delay (s/veh)	28.8	41.6	6.4	13.8	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	28.8	41.6	6.4	13.8	0.7
LOS	C	D	A	B	A
Approach Delay (s/veh)	28.8		7.1	10.5	
Approach LOS	C		A	B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 66.6	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay (s/veh): 10.9	Intersection LOS: B
Intersection Capacity Utilization 56.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Van Buren Bl. & Mockingbird Canyon Rd.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	253	26	24	1076	1423	491
Future Volume (veh/h)	253	26	24	1076	1423	491
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	279	0	25	1109	1467	503
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	405	180	50	2510	2145	1137
Arrive On Green	0.11	0.00	0.03	0.71	0.60	0.60
Sat Flow, veh/h	3563	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	279	0	25	1109	1467	503
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1777	1777	1585
Q Serve(g_s), s	4.6	0.0	0.9	8.2	17.2	8.1
Cycle Q Clear(g_c), s	4.6	0.0	0.9	8.2	17.2	8.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	405	180	50	2510	2145	1137
V/C Ratio(X)	0.69	0.00	0.50	0.44	0.68	0.44
Avail Cap(c_a), veh/h	1525	678	185	4862	4119	2018
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	26.3	0.0	29.5	3.9	8.3	3.6
Incr Delay (d2), s/veh	0.8	0.0	2.8	0.0	0.4	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	1.7	0.0	0.4	0.8	3.6	2.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	27.1	0.0	32.3	3.9	8.6	3.9
LnGrp LOS	C		C	A	A	A
Approach Vol, veh/h	279			1134	1970	
Approach Delay, s/veh	27.1			4.5	7.4	
Approach LOS	C			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		50.1		11.6	6.3	43.7
Change Period (Y+Rc), s		* 6.5		4.6	4.6	6.5
Max Green Setting (Gmax), s		* 84		26.4	6.4	71.5
Max Q Clear Time (g_c+I1), s		10.2		6.6	2.9	19.2
Green Ext Time (p_c), s		4.9		0.4	0.0	18.0

Intersection Summary	
HCM 7th Control Delay, s/veh	8.1
HCM 7th LOS	A

Notes

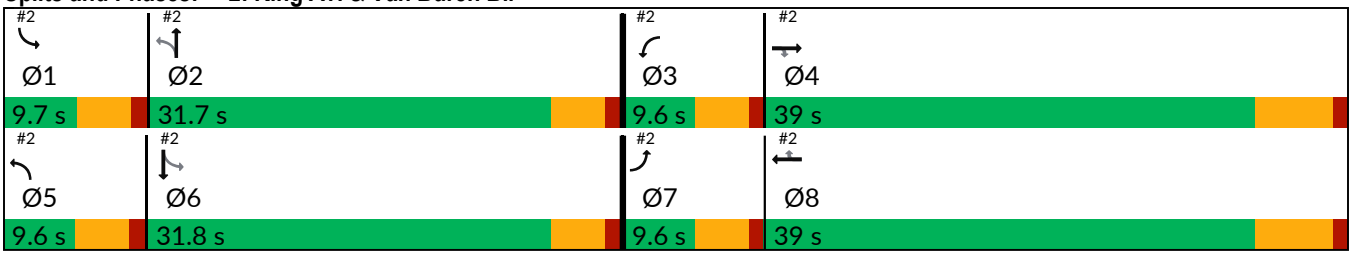
User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	34	1354	171	24	1182	51	63	11	77	38
Future Volume (vph)	34	1354	171	24	1182	51	63	11	77	38
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA
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	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.5	28.5	9.6	28.5	28.5	9.6	26.1	9.6	31.6
Total Split (s)	9.6	39.0	39.0	9.6	39.0	39.0	9.6	31.7	9.7	31.8
Total Split (%)	10.7%	43.3%	43.3%	10.7%	43.3%	43.3%	10.7%	35.2%	10.8%	35.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.4	37.5	37.5	5.4	37.5	37.5	11.0	13.2	15.2	13.3
Actuated g/C Ratio	0.08	0.59	0.59	0.08	0.59	0.59	0.17	0.21	0.24	0.21
v/c Ratio	0.23	0.68	0.18	0.17	0.59	0.05	0.25	0.07	0.24	0.23
Control Delay (s/veh)	38.9	18.9	6.0	38.0	17.0	0.1	23.1	16.9	19.8	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	38.9	18.9	6.0	38.0	17.0	0.1	23.1	16.9	19.8	14.7
LOS	D	B	A	D	B	A	C	B	B	B
Approach Delay (s/veh)		17.9			16.7			21.5		17.1
Approach LOS		B			B			C		B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 63.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay (s/veh): 17.5	Intersection LOS: B
Intersection Capacity Utilization 58.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 2: King Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	1354	171	24	1182	51	63	11	12	77	38	49
Future Volume (veh/h)	34	1354	171	24	1182	51	63	11	12	77	38	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	0.99		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	35	1410	136	25	1231	50	66	11	3	80	40	37
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	65	1680	749	50	1651	732	323	170	46	380	112	104
Arrive On Green	0.04	0.47	0.47	0.03	0.46	0.46	0.05	0.12	0.12	0.06	0.13	0.13
Sat Flow, veh/h	1781	3554	1585	1781	3554	1577	1781	1414	386	1781	892	825
Grp Volume(v), veh/h	35	1410	136	25	1231	50	66	0	14	80	0	77
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1577	1781	0	1799	1781	0	1716
Q Serve(g_s), s	1.2	21.8	3.1	0.9	17.8	1.1	2.0	0.0	0.4	2.4	0.0	2.6
Cycle Q Clear(g_c), s	1.2	21.8	3.1	0.9	17.8	1.1	2.0	0.0	0.4	2.4	0.0	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		0.48
Lane Grp Cap(c), veh/h	65	1680	749	50	1651	732	323	0	217	380	0	216
V/C Ratio(X)	0.54	0.84	0.18	0.50	0.75	0.07	0.20	0.00	0.06	0.21	0.00	0.36
Avail Cap(c_a), veh/h	142	1857	829	142	1857	824	368	0	777	418	0	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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.7	14.5	9.5	30.1	13.8	9.3	22.2	0.0	24.5	22.1	0.0	25.1
Incr Delay (d2), s/veh	2.6	3.3	0.1	2.8	1.5	0.0	0.1	0.0	0.1	0.1	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	0.5	7.1	0.8	0.4	5.6	0.3	0.8	0.0	0.2	1.0	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	32.3	17.8	9.7	32.9	15.3	9.3	22.3	0.0	24.6	22.2	0.0	26.1
LnGrp LOS	C	B	A	C	B	A	C		C	C		C
Approach Vol, veh/h		1581			1306			80			157	
Approach Delay, s/veh		17.4			15.4			22.7			24.1	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	12.2	6.4	35.9	8.0	12.5	6.9	35.3
Change Period (Y+Rc), s	4.6	4.6	4.6	6.2	4.6	4.6	4.6	6.2
Max Green Setting (Gmax), s	5.1	27.1	5.0	32.8	5.0	27.2	5.0	32.8
Max Q Clear Time (g_c+I1), s	4.4	2.4	2.9	23.8	4.0	4.6	3.2	19.8
Green Ext Time (p_c), s	0.0	0.0	0.0	5.9	0.0	0.4	0.0	6.5

Intersection Summary	
HCM 7th Control Delay, s/veh	17.0
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↱
Traffic Vol, veh/h	0	1443	1226	32	0	31
Future Vol, veh/h	0	1443	1226	32	0	31
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	1568	1333	35	0	34

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	684
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	391
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	391
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	15.07
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	391
HCM Lane V/C Ratio	-	-	-	0.086
HCM Ctrl Dly (s/v)	-	-	-	15.1
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.3

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1443	1212	49	0	46
Future Vol, veh/h	0	1443	1212	49	0	46
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	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1586	1332	54	0	51

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	693
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	386
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	386
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	15.73
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	386
HCM Lane V/C Ratio	-	-	-	0.131
HCM Ctrl Dly (s/v)	-	-	-	15.7
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.4

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	26	20	644	997	15
Future Vol, veh/h	7	26	20	644	997	15
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	8	28	22	700	1084	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1835	1092	1100	0	-	0
Stage 1	1092	-	-	-	-	-
Stage 2	743	-	-	-	-	-
Critical Hdwy	5.8	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	114	261	635	-	-	-
Stage 1	322	-	-	-	-	-
Stage 2	470	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	108	261	635	-	-	-
Mov Cap-2 Maneuver	108	-	-	-	-	-
Stage 1	304	-	-	-	-	-
Stage 2	470	-	-	-	-	-

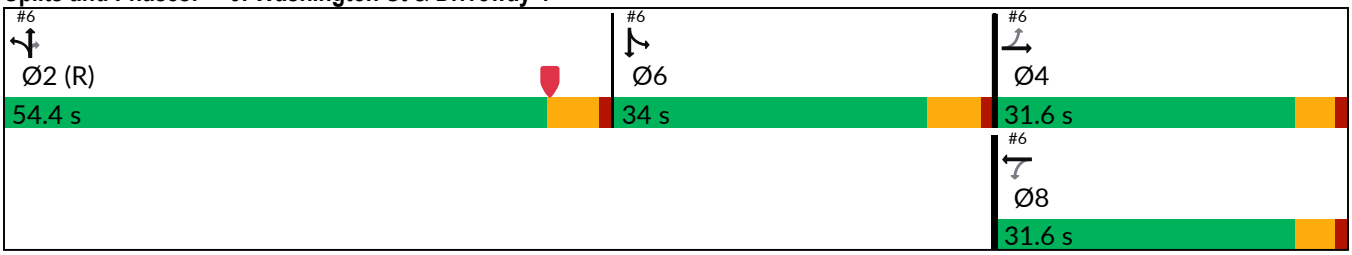
Approach	EB	NB	SB
HCM Ctrl Dly, s/v	26.8	0.33	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	54	-	201	-	-
HCM Lane V/C Ratio	0.034	-	0.179	-	-
HCM Ctrl Dly (s/v)	10.9	0	26.8	-	-
HCM Lane LOS	B	A	D	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Configurations								
Traffic Volume (vph)	27	0	52	0	100	580	125	901
Future Volume (vph)	27	0	52	0	100	580	125	901
Turn Type	Perm	NA	Perm	NA	Split	NA	Perm	NA
Protected Phases		4		8	2	2		6
Permitted Phases	4		8				2	
Detector Phase	4	4	8	8	2	2	2	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	31.6	31.6	31.6	31.6	22.8	22.8	22.8	22.8
Total Split (s)	31.6	31.6	31.6	31.6	54.4	54.4	54.4	34.0
Total Split (%)	26.3%	26.3%	26.3%	26.3%	45.3%	45.3%	45.3%	28.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	4.8	4.8	4.8
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
Total Lost Time (s)		4.6		4.6	5.8	5.8	5.8	5.8
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Min	Min	Min	Min	C-Max	C-Max	C-Max	None
Act Effct Green (s)		13.8		13.8	61.8	61.8	61.8	28.2
Actuated g/C Ratio		0.12		0.12	0.52	0.52	0.52	0.24
v/c Ratio		0.53		0.65	0.12	0.66	0.16	0.95
Control Delay (s/veh)		20.6		35.3	18.9	29.9	6.9	61.2
Queue Delay		0.0		0.0	0.0	3.0	0.0	0.0
Total Delay (s/veh)		20.6		35.3	18.9	32.8	6.9	61.2
LOS		C		D	B	C	A	E
Approach Delay (s/veh)		20.6		35.3		27.1		61.2
Approach LOS		C		D		C		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 48.6 (41%), Referenced to phase 2:NBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay (s/veh): 44.0	Intersection LOS: D
Intersection Capacity Utilization 76.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 6: Washington St & Driveway 4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	0	99	52	0	57	100	580	125	85	901	36
Future Volume (veh/h)	27	0	99	52	0	57	100	580	125	85	901	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	0	109	57	0	63	110	637	137	93	990	40
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	64	10	139	104	11	77	941	988	837	102	1088	44
Arrive On Green	0.11	0.00	0.11	0.11	0.00	0.11	1.00	1.00	1.00	0.23	0.23	0.23
Sat Flow, veh/h	260	95	1289	553	98	720	1781	1870	1585	446	4748	192
Grp Volume(v), veh/h	139	0	0	120	0	0	110	637	137	385	355	383
Grp Sat Flow(s),veh/h/ln	1644	0	0	1371	0	0	1781	1870	1585	1848	1702	1836
Q Serve(g_s), s	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	24.4	24.4	24.4
Cycle Q Clear(g_c), s	9.7	0.0	0.0	10.4	0.0	0.0	0.0	0.0	0.0	24.4	24.4	24.4
Prop In Lane	0.22		0.78	0.47		0.52	1.00		1.00	0.24		0.10
Lane Grp Cap(c), veh/h	213	0	0	192	0	0	941	988	837	423	390	421
V/C Ratio(X)	0.65	0.00	0.00	0.63	0.00	0.00	0.12	0.64	0.16	0.91	0.91	0.91
Avail Cap(c_a), veh/h	392	0	0	359	0	0	941	988	837	434	400	431
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.1	0.0	0.0	52.2	0.0	0.0	0.0	0.0	0.0	45.0	45.0	45.1
Incr Delay (d2), s/veh	3.3	0.0	0.0	3.3	0.0	0.0	0.3	3.2	0.4	22.7	24.0	22.8
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	4.3	0.0	0.0	3.7	0.0	0.0	0.1	0.9	0.1	13.4	12.5	13.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.5	0.0	0.0	55.6	0.0	0.0	0.3	3.2	0.4	67.7	69.0	67.9
LnGrp LOS	E			E			A	A	A	E	E	E
Approach Vol, veh/h		139			120			884			1123	
Approach Delay, s/veh		55.5			55.6			2.4			68.2	
Approach LOS		E			E			A			E	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	69.2	17.5	33.3	17.5
Change Period (Y+Rc), s	5.8	4.6	5.8	4.6
Max Green Setting (Gmax), s	48.6	27.0	28.2	27.0
Max Q Clear Time (g_c+I1), s	2.0	11.7	26.4	12.4
Green Ext Time (p_c), s	5.2	0.7	1.1	0.5

Intersection Summary	
HCM 7th Control Delay, s/veh	41.1
HCM 7th LOS	D

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	12	0	803	1040	13
Future Vol, veh/h	0	12	0	803	1040	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	-	-	-	50
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	13	0	873	1130	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	565	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	401	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	401	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

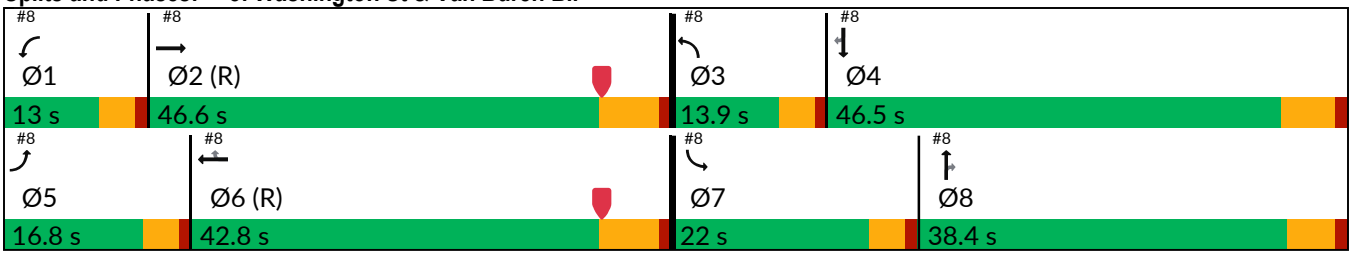
Approach	EB	NB	SB
HCM Ctrl Dly, s/v	14.28	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	401	-	-
HCM Lane V/C Ratio	-	0.033	-	-
HCM Ctrl Dly (s/v)	-	14.3	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	186	1215	136	1031	350	140	267	70	576	386	90
Future Volume (vph)	186	1215	136	1031	350	140	267	70	576	386	90
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.2	34.2	9.2	33.2	33.2	9.2	38.4	38.4	9.2	30.8	30.8
Total Split (s)	16.8	46.6	13.0	42.8	42.8	13.9	38.4	38.4	22.0	46.5	46.5
Total Split (%)	14.0%	38.8%	10.8%	35.7%	35.7%	11.6%	32.0%	32.0%	18.3%	38.8%	38.8%
Yellow Time (s)	3.2	5.2	3.2	5.2	5.2	3.2	4.4	4.4	3.2	4.8	4.8
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)	4.2	6.2	4.2	6.2	6.2	4.2	5.4	5.4	4.2	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	18.7	47.9	15.4	44.7	44.7	8.7	18.9	18.9	17.8	27.6	27.6
Actuated g/C Ratio	0.16	0.40	0.13	0.37	0.37	0.07	0.16	0.16	0.15	0.23	0.23
v/c Ratio	0.69	0.91	0.61	0.80	0.44	0.58	0.49	0.19	1.16	0.72	0.21
Control Delay (s/veh)	62.3	45.6	62.5	40.4	5.0	63.2	47.7	1.2	131.5	74.3	34.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	62.3	45.6	62.5	40.4	5.1	63.2	47.7	1.2	131.5	74.3	34.4
LOS	E	D	E	D	A	E	D	A	F	E	C
Approach Delay (s/veh)		47.8		34.2			45.5			102.2	
Approach LOS		D		C			D			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.16	
Intersection Signal Delay (s/veh): 55.7	Intersection LOS: E
Intersection Capacity Utilization 83.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 8: Washington St & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	186	1215	42	136	1031	350	140	267	70	576	386	90
Future Volume (veh/h)	186	1215	42	136	1031	350	140	267	70	576	386	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	190	1240	26	139	1052	261	143	272	34	588	394	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	187	1786	37	131	1671	744	198	378	169	513	473	313
Arrive On Green	0.10	0.50	0.50	0.07	0.47	0.47	0.06	0.11	0.11	0.15	0.20	0.20
Sat Flow, veh/h	1781	3558	75	1781	3554	1582	3456	3554	1585	3456	2394	1585
Grp Volume(v), veh/h	190	619	647	139	1052	261	143	272	34	588	394	48
Grp Sat Flow(s),veh/h/ln	1781	1777	1856	1781	1777	1582	1728	1777	1585	1728	1197	1585
Q Serve(g_s), s	12.6	32.0	32.0	8.8	26.7	12.6	4.9	8.9	2.4	17.8	19.0	3.0
Cycle Q Clear(g_c), s	12.6	32.0	32.0	8.8	26.7	12.6	4.9	8.9	2.4	17.8	19.0	3.0
Prop In Lane	1.00		0.04	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	187	892	931	131	1671	744	198	378	169	513	473	313
V/C Ratio(X)	1.02	0.69	0.69	1.06	0.63	0.35	0.72	0.72	0.20	1.15	0.83	0.15
Avail Cap(c_a), veh/h	187	892	931	131	1671	744	279	977	436	513	812	538
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	22.8	22.9	55.6	23.9	20.2	55.6	51.9	49.0	51.1	46.3	39.9
Incr Delay (d2), s/veh	70.0	4.4	4.3	96.9	1.8	1.3	2.4	2.6	0.6	87.0	3.9	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	9.1	13.3	13.8	7.3	10.8	5.0	2.2	4.1	1.0	13.7	5.7	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	123.7	27.3	27.1	152.5	25.7	21.5	58.0	54.5	49.5	138.1	50.2	40.1
LnGrp LOS	F	C	C	F	C	C	E	D	D	F	D	D
Approach Vol, veh/h		1456			1452			449			1030	
Approach Delay, s/veh		39.8			37.1			55.2			99.9	
Approach LOS		D			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	66.4	11.1	29.5	16.8	62.6	22.0	18.6
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	8.8	40.4	9.7	40.7	12.6	36.6	17.8	* 33
Max Q Clear Time (g_c+I1), s	10.8	34.0	6.9	21.0	14.6	28.7	19.8	10.9
Green Ext Time (p_c), s	0.0	4.5	0.1	2.3	0.0	5.4	0.0	1.9

Intersection Summary	
HCM 7th Control Delay, s/veh	54.6
HCM 7th LOS	D

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	78.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	1774	20	45	1549	11	44	0	15	3	0	22
Future Vol, veh/h	18	1774	20	45	1549	11	44	0	15	3	0	22
Conflicting Peds, #/hr	0	0	1	0	0	6	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	275	-	-	255	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	1908	22	48	1666	12	47	0	16	3	0	24

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1683	0	0	1930	0	0	2888	3738	966	2767	3743	845
Stage 1	-	-	-	-	-	-	1958	1958	-	1774	1774	-
Stage 2	-	-	-	-	-	-	930	1780	-	992	1969	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	376	-	-	301	-	-	~ 7	4	255	9	4	306
Stage 1	-	-	-	-	-	-	66	108	-	86	134	-
Stage 2	-	-	-	-	-	-	288	133	-	263	107	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	374	-	-	301	-	-	~ 5	3	254	7	3	305
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 5	3	-	7	3	-
Stage 1	-	-	-	-	-	-	62	103	-	72	112	-
Stage 2	-	-	-	-	-	-	223	111	-	234	101	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.15	0.54	$ 4595.7	150.42
HCM LOS			F	F

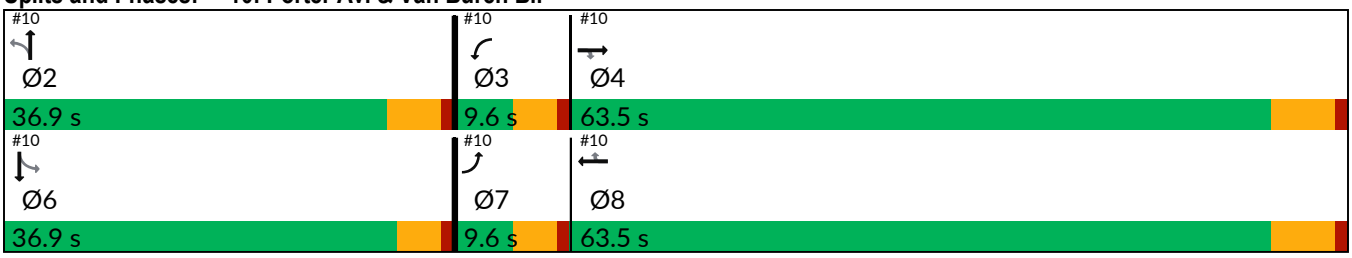
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	7	374	-	-	301	-	-	48
HCM Lane V/C Ratio	8.957	0.052	-	-	0.161	-	-	0.56
HCM Ctrl Dly (s/v)	$ 4595.7	15.2	-	-	19.2	-	-	150.4
HCM Lane LOS	F	C	-	-	C	-	-	F
HCM 95th %tile Q(veh)	9.5	0.2	-	-	0.6	-	-	2.1

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	19	1702	101	14	1516	4	19	3	11	3
Future Volume (vph)	19	1702	101	14	1516	4	19	3	11	3
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)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	27.7	27.7	9.6	27.7	27.7	36.9	36.9	35.6	35.6
Total Split (s)	9.6	63.5	63.5	9.6	63.5	63.5	36.9	36.9	36.9	36.9
Total Split (%)	8.7%	57.7%	57.7%	8.7%	57.7%	57.7%	33.5%	33.5%	33.5%	33.5%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	4.4	4.4	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2		5.4		4.6
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	None	None	None	None
Act Effct Green (s)	5.9	54.4	54.4	5.9	52.8	52.8		14.5		14.8
Actuated g/C Ratio	0.09	0.79	0.79	0.09	0.77	0.77		0.21		0.22
v/c Ratio	0.13	0.65	0.08	0.10	0.59	0.00		0.11		0.10
Control Delay (s/veh)	44.8	11.3	4.0	44.2	11.4	0.0		24.0		19.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay (s/veh)	44.8	11.3	4.0	44.2	11.4	0.0		24.0		19.1
LOS	D	B	A	D	B	A		C		B
Approach Delay (s/veh)		11.2			11.7			24.0		19.1
Approach LOS		B			B			C		B

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 68.6	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay (s/veh): 11.6	Intersection LOS: B
Intersection Capacity Utilization 65.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 10: Porter Av. & Van Buren Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	1702	101	14	1516	4	19	3	10	11	3	18
Future Volume (veh/h)	19	1702	101	14	1516	4	19	3	10	11	3	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	20	1811	94	15	1613	3	20	3	8	12	3	9
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	42	2353	1049	33	2335	1019	146	23	26	122	28	39
Arrive On Green	0.02	0.66	0.66	0.02	0.66	0.66	0.07	0.07	0.07	0.07	0.07	0.07
Sat Flow, veh/h	1781	3554	1585	1781	3554	1551	802	341	397	570	416	591
Grp Volume(v), veh/h	20	1811	94	15	1613	3	31	0	0	24	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1551	1539	0	0	1577	0	0
Q Serve(g_s), s	0.7	22.4	1.4	0.5	18.2	0.0	0.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.7	22.4	1.4	0.5	18.2	0.0	1.1	0.0	0.0	0.8	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.65		0.26	0.50		0.37
Lane Grp Cap(c), veh/h	42	2353	1049	33	2335	1019	195	0	0	189	0	0
V/C Ratio(X)	0.48	0.77	0.09	0.46	0.69	0.00	0.16	0.00	0.00	0.13	0.00	0.00
Avail Cap(c_a), veh/h	139	3185	1421	139	3185	1390	825	0	0	854	0	0
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	0.00	0.00
Uniform Delay (d), s/veh	30.8	7.4	3.9	31.1	6.9	3.8	28.4	0.0	0.0	28.3	0.0	0.0
Incr Delay (d2), s/veh	3.2	0.8	0.0	3.7	0.4	0.0	0.4	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	4.4	0.2	0.2	3.5	0.0	0.4	0.0	0.0	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.0	8.3	3.9	34.8	7.3	3.8	28.7	0.0	0.0	28.6	0.0	0.0
LnGrp LOS	C	A	A	C	A		C			C		
Approach Vol, veh/h		1925			1631			31			24	
Approach Delay, s/veh		8.3			7.5			28.7			28.6	
Approach LOS		A			A			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		9.6	5.8	48.5		9.6	6.1	48.2				
Change Period (Y+Rc), s		5.4	4.6	6.2		* 5.4	4.6	6.2				
Max Green Setting (Gmax), s		31.5	5.0	57.3		* 32	5.0	57.3				
Max Q Clear Time (g_c+I1), s		3.1	2.5	24.4		2.8	2.7	20.2				
Green Ext Time (p_c), s		0.1	0.0	17.9		0.1	0.0	15.4				

Intersection Summary	
HCM 7th Control Delay, s/veh	8.3
HCM 7th LOS	A

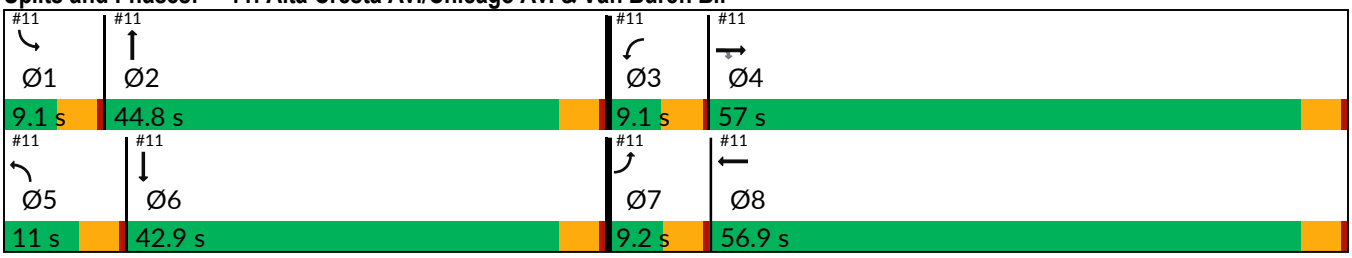
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	37	1580	132	29	1529	37	1	17	3
Future Volume (vph)	37	1580	132	29	1529	37	1	17	3
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.1	30.1	30.1	9.1	30.1	9.1	44.1	9.1	26.1
Total Split (s)	9.2	57.0	57.0	9.1	56.9	11.0	44.8	9.1	42.9
Total Split (%)	7.7%	47.5%	47.5%	7.6%	47.4%	9.2%	37.3%	7.6%	35.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	5.3	55.4	55.4	5.2	55.3	6.7	13.4	5.2	10.6
Actuated g/C Ratio	0.06	0.65	0.65	0.06	0.65	0.08	0.16	0.06	0.12
v/c Ratio	0.35	0.73	0.13	0.29	0.72	0.28	0.08	0.17	0.06
Control Delay (s/veh)	55.0	17.7	6.1	53.1	17.4	49.6	13.7	50.5	20.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	55.0	17.7	6.1	53.1	17.4	49.6	13.7	50.5	20.5
LOS	D	B	A	D	B	D	B	D	C
Approach Delay (s/veh)		17.6			18.1		36.7		38.5
Approach LOS		B			B		D		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 85.3	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay (s/veh): 18.3	Intersection LOS: B
Intersection Capacity Utilization 59.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 11: Alta Cresta Av./Chicago Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	1580	132	29	1529	18	37	1	20	17	3	8
Future Volume (veh/h)	37	1580	132	29	1529	18	37	1	20	17	3	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	39	1681	122	31	1627	19	39	1	10	18	3	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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	69	2154	961	58	2159	25	69	14	135	38	47	79
Arrive On Green	0.04	0.61	0.61	0.03	0.60	0.60	0.04	0.09	0.09	0.02	0.08	0.08
Sat Flow, veh/h	1781	3554	1585	1781	3597	42	1781	146	1461	1781	630	1051
Grp Volume(v), veh/h	39	1681	122	31	803	843	39	0	11	18	0	8
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1862	1781	0	1607	1781	0	1681
Q Serve(g_s), s	1.4	23.5	2.2	1.1	21.9	22.0	1.4	0.0	0.4	0.7	0.0	0.3
Cycle Q Clear(g_c), s	1.4	23.5	2.2	1.1	21.9	22.0	1.4	0.0	0.4	0.7	0.0	0.3
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.91	1.00		0.63
Lane Grp Cap(c), veh/h	69	2154	961	58	1067	1118	69	0	149	38	0	127
V/C Ratio(X)	0.57	0.78	0.13	0.53	0.75	0.75	0.57	0.00	0.07	0.47	0.00	0.06
Avail Cap(c_a), veh/h	137	2832	1263	134	1413	1481	185	0	985	134	0	983
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	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.4	9.8	5.6	31.6	9.7	9.7	31.4	0.0	27.5	32.1	0.0	28.5
Incr Delay (d2), s/veh	7.1	1.1	0.1	7.3	1.6	1.6	7.1	0.0	0.2	8.9	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	0.7	5.9	0.5	0.6	5.8	6.0	0.7	0.0	0.2	0.4	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	38.5	10.8	5.6	38.9	11.3	11.3	38.5	0.0	27.7	41.1	0.0	28.7
LnGrp LOS	D	B	A	D	B	B	D		C	D		C
Approach Vol, veh/h		1842			1677			50			26	
Approach Delay, s/veh		11.1			11.8			36.1			37.3	
Approach LOS		B			B			D			D	

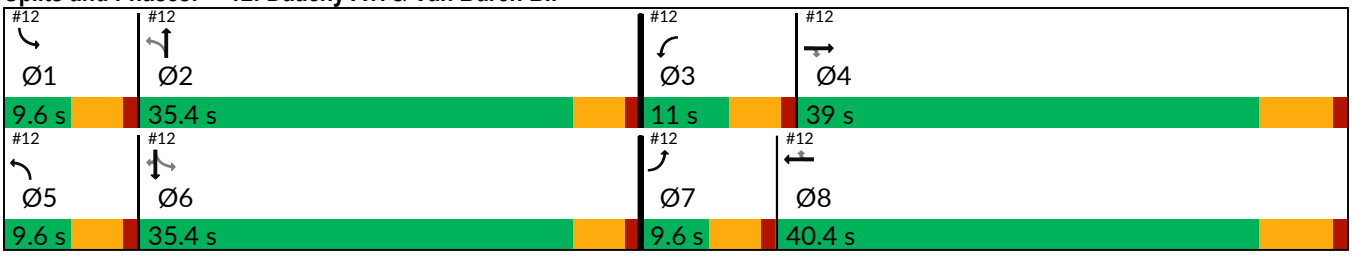
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	10.3	6.3	44.3	6.7	9.1	6.7	44.0
Change Period (Y+Rc), s	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Max Green Setting (Gmax), s	5.0	40.7	5.0	52.9	6.9	38.8	5.1	52.8
Max Q Clear Time (g_c+I1), s	2.7	2.4	3.1	25.5	3.4	2.3	3.4	24.0
Green Ext Time (p_c), s	0.0	0.0	0.0	14.8	0.0	0.0	0.0	13.2

Intersection Summary	
HCM 7th Control Delay, s/veh	11.9
HCM 7th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	81	1355	133	128	1358	18	136	27	56	29	44
Future Volume (vph)	81	1355	133	128	1358	18	136	27	56	29	44
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	28.2	28.2	9.6	28.2	28.2	9.6	26.6	9.6	33.6	33.6
Total Split (s)	9.6	39.0	39.0	11.0	40.4	40.4	9.6	35.4	9.6	35.4	35.4
Total Split (%)	10.1%	41.1%	41.1%	11.6%	42.5%	42.5%	10.1%	37.3%	10.1%	37.3%	37.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	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	None	None	None	None
Act Effct Green (s)	5.1	33.5	33.5	6.5	34.9	34.9	16.8	15.2	15.8	13.3	13.3
Actuated g/C Ratio	0.07	0.45	0.45	0.09	0.46	0.46	0.22	0.20	0.21	0.18	0.18
v/c Ratio	0.73	0.92	0.19	0.90	0.89	0.02	0.49	0.28	0.20	0.09	0.12
Control Delay (s/veh)	72.2	33.5	5.5	90.5	29.1	0.1	27.8	11.9	21.0	26.6	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	72.2	33.5	5.5	90.5	29.1	0.1	27.8	11.9	21.0	26.6	0.6
LOS	E	C	A	F	C	A	C	B	C	C	A
Approach Delay (s/veh)		33.1			34.0			20.9		15.3	
Approach LOS		C			C			C		B	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 75.1	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay (s/veh): 32.0	Intersection LOS: C
Intersection Capacity Utilization 71.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 12: Dauchy Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	1355	133	128	1358	18	136	27	78	56	29	44
Future Volume (veh/h)	81	1355	133	128	1358	18	136	27	78	56	29	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	87	1457	97	138	1460	10	146	29	53	60	31	23
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	111	1614	719	163	1717	765	340	70	127	287	180	150
Arrive On Green	0.06	0.45	0.45	0.09	0.48	0.48	0.07	0.12	0.12	0.05	0.10	0.10
Sat Flow, veh/h	1781	3554	1583	1781	3554	1583	1781	587	1073	1781	1870	1560
Grp Volume(v), veh/h	87	1457	97	138	1460	10	146	0	82	60	31	23
Grp Sat Flow(s),veh/h/ln	1781	1777	1583	1781	1777	1583	1781	0	1660	1781	1870	1560
Q Serve(g_s), s	3.4	26.5	2.5	5.3	25.2	0.2	5.0	0.0	3.2	2.1	1.1	0.9
Cycle Q Clear(g_c), s	3.4	26.5	2.5	5.3	25.2	0.2	5.0	0.0	3.2	2.1	1.1	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.65	1.00		1.00
Lane Grp Cap(c), veh/h	111	1614	719	163	1717	765	340	0	197	287	180	150
V/C Ratio(X)	0.78	0.90	0.13	0.85	0.85	0.01	0.43	0.00	0.42	0.21	0.17	0.15
Avail Cap(c_a), veh/h	128	1670	744	163	1741	776	340	0	732	326	825	688
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	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.3	17.6	11.1	31.2	15.8	9.4	26.4	0.0	28.5	26.4	29.0	28.9
Incr Delay (d2), s/veh	19.8	7.1	0.1	30.0	4.2	0.0	0.3	0.0	1.4	0.1	0.4	0.5
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	1.9	10.0	0.7	3.4	8.7	0.1	2.2	0.0	1.3	0.9	0.5	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	52.1	24.8	11.2	61.3	20.0	9.4	26.7	0.0	29.9	26.5	29.4	29.4
LnGrp LOS	D	C	B	E	C	A	C		C	C	C	C
Approach Vol, veh/h		1641			1608			228			114	
Approach Delay, s/veh		25.4			23.5			27.9			27.9	
Approach LOS		C			C			C			C	

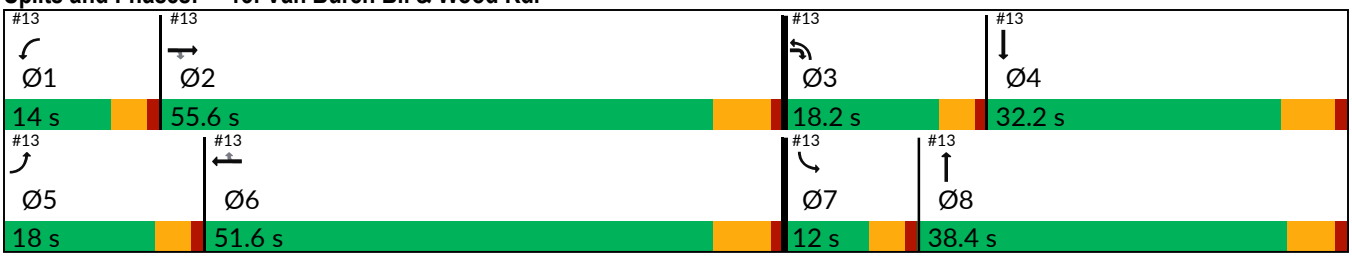
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	12.9	11.0	37.9	9.6	11.3	9.0	39.9
Change Period (Y+Rc), s	4.6	4.6	4.6	6.2	4.6	4.6	4.6	6.2
Max Green Setting (Gmax), s	5.0	30.8	6.4	32.8	5.0	30.8	5.0	34.2
Max Q Clear Time (g_c+I1), s	4.1	5.2	7.3	28.5	7.0	3.1	5.4	27.2
Green Ext Time (p_c), s	0.0	0.4	0.0	3.2	0.0	0.2	0.0	4.8

Intersection Summary	
HCM 7th Control Delay, s/veh	24.8
HCM 7th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	159	1260	179	221	1109	68	229	187	88	273
Future Volume (vph)	159	1260	179	221	1109	68	229	187	88	273
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6		3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	3	1	6	6	3	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.2	30.2	9.2	9.2	30.2	30.2	9.2	38.4	9.2	15.8
Total Split (s)	18.0	55.6	18.2	14.0	51.6	51.6	18.2	38.4	12.0	32.2
Total Split (%)	15.0%	46.3%	15.2%	11.7%	43.0%	43.0%	15.2%	32.0%	10.0%	26.8%
Yellow Time (s)	3.2	5.2	3.2	3.2	5.2	5.2	3.2	4.4	3.2	4.8
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)	4.2	6.2	4.2	4.2	6.2	6.2	4.2	5.4	4.2	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.7	45.5	58.9	9.6	42.3	42.3	11.4	21.7	7.7	17.6
Actuated g/C Ratio	0.12	0.43	0.56	0.09	0.40	0.40	0.11	0.21	0.07	0.17
v/c Ratio	0.77	0.85	0.20	0.73	0.80	0.10	0.63	0.44	0.71	0.73
Control Delay (s/veh)	70.5	33.7	3.1	63.1	33.8	0.3	54.8	21.3	79.8	36.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	70.5	33.7	3.1	63.1	33.8	0.3	54.8	21.3	79.8	36.1
LOS	E	C	A	E	C	A	D	C	E	D
Approach Delay (s/veh)		34.0			36.8			34.8		42.9
Approach LOS		C			D			C		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 104.8	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay (s/veh): 36.3	Intersection LOS: D
Intersection Capacity Utilization 88.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: Van Buren Bl. & Wood Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1260	179	221	1109	68	229	187	150	88	273	206
Future Volume (veh/h)	159	1260	179	221	1109	68	229	187	150	88	273	206
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.91	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	164	1299	107	228	1143	31	236	193	76	91	281	124
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	194	1516	801	289	1427	632	302	578	215	115	510	219
Arrive On Green	0.11	0.43	0.43	0.08	0.40	0.40	0.09	0.23	0.23	0.06	0.21	0.21
Sat Flow, veh/h	1781	3554	1553	3456	3554	1574	3456	2462	917	1781	2410	1035
Grp Volume(v), veh/h	164	1299	107	228	1143	31	236	136	133	91	205	200
Grp Sat Flow(s),veh/h/ln	1781	1777	1553	1728	1777	1574	1728	1777	1602	1781	1777	1668
Q Serve(g_s), s	9.7	35.3	3.8	6.9	30.4	1.3	7.2	6.8	7.4	5.4	11.0	11.5
Cycle Q Clear(g_c), s	9.7	35.3	3.8	6.9	30.4	1.3	7.2	6.8	7.4	5.4	11.0	11.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.57	1.00		0.62
Lane Grp Cap(c), veh/h	194	1516	801	289	1427	632	302	417	376	115	376	353
V/C Ratio(X)	0.85	0.86	0.13	0.79	0.80	0.05	0.78	0.33	0.35	0.79	0.55	0.57
Avail Cap(c_a), veh/h	230	1641	855	317	1508	668	452	548	494	130	438	412
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	46.8	27.7	13.6	48.1	28.2	19.5	47.8	33.9	34.2	49.3	37.6	37.8
Incr Delay (d2), s/veh	19.1	4.7	0.1	10.2	3.3	0.0	2.5	0.5	0.6	21.8	1.2	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	5.1	14.6	1.3	3.3	12.5	0.5	3.1	2.9	2.9	3.0	4.8	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	65.9	32.4	13.7	58.3	31.5	19.6	50.3	34.4	34.7	71.1	38.8	39.2
LnGrp LOS	E	C	B	E	C	B	D	C	C	E	D	D
Approach Vol, veh/h		1570			1402			505			496	
Approach Delay, s/veh		34.7			35.6			41.9			44.9	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	51.8	13.5	28.5	15.8	49.2	11.1	30.9
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	9.8	49.4	14.0	26.4	13.8	45.4	7.8	* 33
Max Q Clear Time (g_c+I1), s	8.9	37.3	9.2	13.5	11.7	32.4	7.4	9.4
Green Ext Time (p_c), s	0.0	8.3	0.2	1.8	0.0	7.7	0.0	1.4

Intersection Summary	
HCM 7th Control Delay, s/veh	37.2
HCM 7th LOS	D

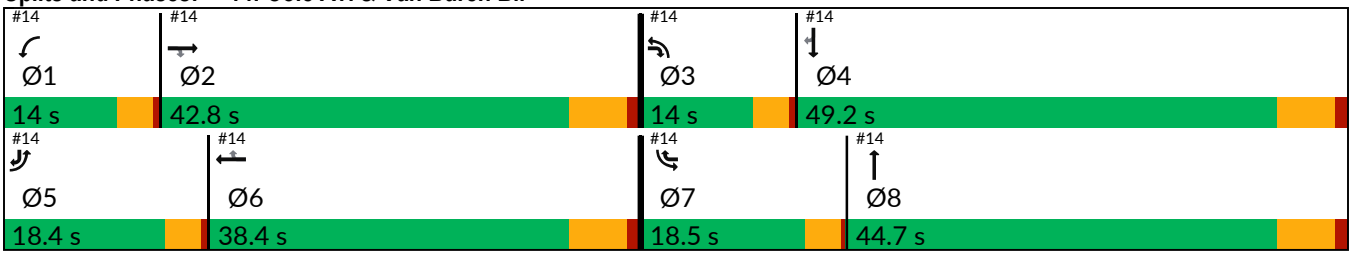
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	329	938	125	118	991	258	121	315	252	540	246
Future Volume (vph)	329	938	125	118	991	258	121	315	252	540	246
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8	7	4	5
Permitted Phases			2			6					4
Detector Phase	5	2	3	1	6	7	3	8	7	4	5
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0
Minimum Split (s)	9.1	36.2	9.1	9.1	36.2	9.1	9.1	42.2	9.1	49.2	9.1
Total Split (s)	18.4	42.8	14.0	14.0	38.4	18.5	14.0	44.7	18.5	49.2	18.4
Total Split (%)	15.3%	35.7%	11.7%	11.7%	32.0%	15.4%	11.7%	37.3%	15.4%	41.0%	15.3%
Yellow Time (s)	3.2	5.2	3.2	3.2	5.2	3.2	3.2	5.2	3.2	5.2	3.2
All-Red Time (s)	0.5	1.0	0.5	0.5	1.0	0.5	0.5	1.0	0.5	1.0	0.5
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)	3.7	6.2	3.7	3.7	6.2	3.7	3.7	6.2	3.7	6.2	3.7
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	13.0	32.2	44.6	9.8	29.0	42.8	9.9	20.9	11.3	22.4	37.9
Actuated g/C Ratio	0.14	0.34	0.47	0.10	0.31	0.45	0.10	0.22	0.12	0.24	0.40
v/c Ratio	0.70	0.79	0.16	0.65	0.64	0.31	0.66	0.47	0.62	0.65	0.37
Control Delay (s/veh)	49.8	34.7	3.5	62.0	31.7	4.0	62.5	33.2	48.9	36.6	14.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.8	34.7	3.5	62.0	31.7	4.0	62.5	33.2	48.9	36.6	14.4
LOS	D	C	A	E	C	A	E	C	D	D	B
Approach Delay (s/veh)		35.5			29.1			40.5		34.3	
Approach LOS		D			C			D		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 94.5	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay (s/veh): 33.7	Intersection LOS: C
Intersection Capacity Utilization 71.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 14: Cole Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	329	938	125	118	991	258	121	315	48	252	540	246
Future Volume (veh/h)	329	938	125	118	991	258	121	315	48	252	540	246
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	332	947	66	119	1001	153	122	318	39	255	545	141
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	423	1268	700	151	1629	656	154	661	80	346	785	539
Arrive On Green	0.12	0.36	0.36	0.08	0.32	0.32	0.09	0.21	0.21	0.10	0.22	0.22
Sat Flow, veh/h	3456	3554	1578	1781	5106	1559	1781	3184	387	3456	3554	1562
Grp Volume(v), veh/h	332	947	66	119	1001	153	122	176	181	255	545	141
Grp Sat Flow(s),veh/h/ln	1728	1777	1578	1781	1702	1559	1781	1777	1794	1728	1777	1562
Q Serve(g_s), s	7.4	18.4	1.9	5.2	13.1	5.0	5.3	6.9	7.0	5.7	11.1	5.1
Cycle Q Clear(g_c), s	7.4	18.4	1.9	5.2	13.1	5.0	5.3	6.9	7.0	5.7	11.1	5.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.22	1.00		1.00
Lane Grp Cap(c), veh/h	423	1268	700	151	1629	656	154	369	372	346	785	539
V/C Ratio(X)	0.78	0.75	0.09	0.79	0.61	0.23	0.79	0.48	0.49	0.74	0.69	0.26
Avail Cap(c_a), veh/h	644	1649	870	233	2085	795	233	868	876	649	1938	1046
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	33.6	22.2	12.7	35.4	22.7	14.8	35.3	27.5	27.5	34.5	28.3	18.7
Incr Delay (d2), s/veh	1.7	1.7	0.1	4.3	0.5	0.3	5.2	1.0	1.0	1.2	1.1	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	2.9	7.0	0.6	2.3	4.7	1.6	2.3	2.7	2.8	2.2	4.4	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.2	23.9	12.8	39.7	23.3	15.0	40.6	28.5	28.5	35.6	29.4	18.9
LnGrp LOS	D	C	B	D	C	B	D	C	C	D	C	B
Approach Vol, veh/h		1345			1273			479			941	
Approach Delay, s/veh		26.2			23.8			31.6			29.5	
Approach LOS		C			C			C			C	

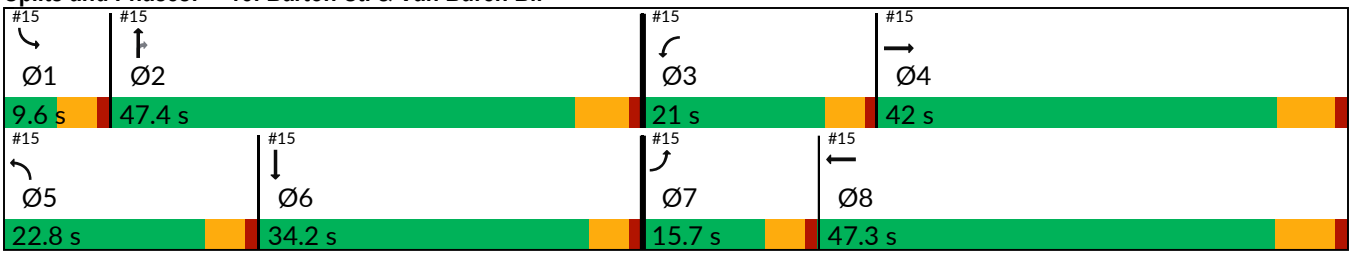
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.4	34.3	10.5	23.6	13.4	31.4	11.6	22.6
Change Period (Y+Rc), s	3.7	6.2	3.7	6.2	3.7	6.2	3.7	6.2
Max Green Setting (Gmax), s	10.3	36.6	10.3	43.0	14.7	32.2	14.8	38.5
Max Q Clear Time (g_c+I1), s	7.2	20.4	7.3	13.1	9.4	15.1	7.7	9.0
Green Ext Time (p_c), s	0.0	7.5	0.0	3.9	0.3	8.5	0.3	1.8

Intersection Summary	
HCM 7th Control Delay, s/veh	26.9
HCM 7th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	93	1079	321	1181	315	69	321	25	44
Future Volume (vph)	93	1079	321	1181	315	69	321	25	44
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)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.2	9.6	28.5	9.6	44.8	44.8	9.6	26.1
Total Split (s)	15.7	42.0	21.0	47.3	22.8	47.4	47.4	9.6	34.2
Total Split (%)	13.1%	35.0%	17.5%	39.4%	19.0%	39.5%	39.5%	8.0%	28.5%
Yellow Time (s)	3.6	5.2	3.6	5.5	3.6	4.8	4.8	3.6	3.6
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)	4.6	6.2	4.6	6.5	4.6	5.8	5.8	4.6	4.6
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	None	None	None	None
Act Effct Green (s)	9.2	36.1	16.5	43.1	13.7	24.8	24.8	5.0	13.2
Actuated g/C Ratio	0.09	0.36	0.17	0.43	0.14	0.25	0.25	0.05	0.13
v/c Ratio	0.61	1.08	1.16	0.59	0.71	0.16	0.56	0.30	0.47
Control Delay (s/veh)	61.2	80.4	143.0	24.5	50.5	30.9	9.9	58.2	24.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	61.2	80.4	143.0	24.5	50.5	30.9	9.9	58.2	24.9
LOS	E	F	F	C	D	C	A	E	C
Approach Delay (s/veh)		79.1		49.2		30.1			30.6
Approach LOS		E		D		C			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 99.7	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.16	
Intersection Signal Delay (s/veh): 55.8	Intersection LOS: E
Intersection Capacity Utilization 87.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 15: Barton St. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	1079	199	321	1181	36	315	69	321	25	44	80
Future Volume (veh/h)	93	1079	199	321	1181	36	315	69	321	25	44	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	99	1148	199	341	1256	28	335	73	191	27	47	50
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	126	1141	197	307	2458	55	413	370	309	48	87	92
Arrive On Green	0.07	0.38	0.38	0.17	0.48	0.48	0.12	0.20	0.20	0.03	0.11	0.11
Sat Flow, veh/h	1781	3030	523	1781	5136	114	3456	1870	1560	1781	823	875
Grp Volume(v), veh/h	99	671	676	341	832	452	335	73	191	27	0	97
Grp Sat Flow(s),veh/h/ln	1781	1777	1776	1781	1702	1846	1728	1870	1560	1781	0	1698
Q Serve(g_s), s	5.2	35.8	35.8	16.4	16.0	16.0	9.0	3.1	10.6	1.4	0.0	5.2
Cycle Q Clear(g_c), s	5.2	35.8	35.8	16.4	16.0	16.0	9.0	3.1	10.6	1.4	0.0	5.2
Prop In Lane	1.00		0.29	1.00		0.06	1.00		1.00	1.00		0.52
Lane Grp Cap(c), veh/h	126	669	669	307	1629	884	413	370	309	48	0	179
V/C Ratio(X)	0.79	1.00	1.01	1.11	0.51	0.51	0.81	0.20	0.62	0.57	0.00	0.54
Avail Cap(c_a), veh/h	208	669	669	307	1629	884	662	818	682	94	0	529
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	0.00	1.00
Uniform Delay (d), s/veh	43.5	29.6	29.6	39.3	17.1	17.1	40.8	31.8	34.8	45.7	0.0	40.4
Incr Delay (d2), s/veh	4.1	35.5	37.4	84.1	0.3	0.5	1.7	0.3	2.0	3.9	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	2.3	20.2	20.6	13.8	5.4	5.9	3.7	1.4	3.9	0.7	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.6	65.1	67.0	123.5	17.4	17.6	42.5	32.1	36.9	49.6	0.0	42.9
LnGrp LOS	D	E	F	F	B	B	D	C	D	D		D
Approach Vol, veh/h		1446			1625			599			124	
Approach Delay, s/veh		64.8			39.7			39.4			44.4	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	24.6	21.0	42.3	16.0	15.8	11.3	52.0
Change Period (Y+Rc), s	4.6	5.8	4.6	* 6.5	4.6	* 5.8	4.6	6.5
Max Green Setting (Gmax), s	5.0	41.6	16.4	* 36	18.2	* 30	11.1	40.8
Max Q Clear Time (g_c+I1), s	3.4	12.6	18.4	37.8	11.0	7.2	7.2	18.0
Green Ext Time (p_c), s	0.0	1.0	0.0	0.0	0.4	0.5	0.0	8.0

Intersection Summary	
HCM 7th Control Delay, s/veh	49.4
HCM 7th LOS	D

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

APPENDIX 5.2:

EAP (2027) SIGNAL WARRANTS

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Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	EAP (2027)
				CALC IA	DATE 08/28/25
Jurisdiction:	**County of Riverside**			CHK IA	DATE 08/28/25
Major Street:	**Washington St.**			Critical Approach Speed (Major)	30 mph
Minor Street:	**Driveway 3**			Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **20,670** vpd Minor Street Future ADT = **237** 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 / RURAL	Number of lanes for moving traffic on each approach: Major Street	Minor Street	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches) Urban	Rural	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only) Urban	Rural
CONDITION A - Minimum Vehicular Volume						
Satisfied / Not Satisfied XX						
XX	*1* **20,670**	*1* **237**	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						
Satisfied / Not Satisfied XX						
	1 **20,670**	*1* **237**	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						
Satisfied / Not Satisfied XX			2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more …..	**A** 10%	**B** 20%				

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 5.3:

EAP (2027) SIGNALIZED QUEUES

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Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	591	26	1534	1019	179
v/c Ratio	0.67	0.16	0.74	0.58	0.12
Control Delay (s/veh)	25.8	34.6	12.3	14.3	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	25.8	34.6	12.3	14.3	0.5
Queue Length 50th (ft)	98	9	189	110	0
Queue Length 95th (ft)	190	39	366	286	8
Internal Link Dist (ft)	1275		961	1331	
Turn Bay Length (ft)	90	300			125
Base Capacity (vph)	1552	194	3539	3430	1508
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.13	0.43	0.30	0.12

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	46	1215	61	18	1435	25	192	166	139	130
v/c Ratio	0.36	0.67	0.07	0.14	0.88	0.03	0.59	0.46	0.38	0.31
Control Delay (s/veh)	44.7	18.3	0.1	39.4	29.0	0.1	29.0	25.7	21.7	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	44.7	18.3	0.1	39.4	29.0	0.1	29.0	25.7	21.7	11.3
Queue Length 50th (ft)	21	185	0	8	326	0	70	57	49	13
Queue Length 95th (ft)	#65	#486	0	31	#627	0	118	110	88	53
Internal Link Dist (ft)		1223			755			377		908
Turn Bay Length (ft)	200		80	170		165	100		85	
Base Capacity (vph)	128	1812	874	128	1631	800	326	699	370	724
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.67	0.07	0.14	0.88	0.03	0.59	0.24	0.38	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	205	1150	96	1239	614	95	565	131	452	208	99
v/c Ratio	0.74	0.81	0.66	1.05	0.86	0.49	0.73	0.27	1.07	0.26	0.18
Control Delay (s/veh)	66.4	37.4	74.8	79.2	33.6	63.8	48.9	2.8	103.4	52.6	25.9
Queue Delay	0.0	0.0	0.0	0.0	31.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	66.4	37.4	74.8	79.2	64.6	63.8	48.9	2.8	103.4	52.6	25.9
Queue Length 50th (ft)	154	423	73	~567	268	38	219	0	~208	107	42
Queue Length 95th (ft)	#338	#548	#178	#705	#496	67	262	17	m#281	m133	m68
Internal Link Dist (ft)		123		1227			790			173	
Turn Bay Length (ft)	285		300		300	145		140	180		130
Base Capacity (vph)	276	1426	146	1181	713	205	973	567	423	961	626
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	129	0	12	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.81	0.66	1.05	1.05	0.46	0.59	0.23	1.07	0.22	0.16

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

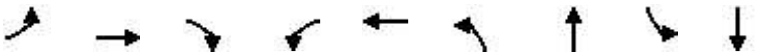
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	6	1546	71	11	2021	2	43	44
v/c Ratio	0.05	0.55	0.06	0.09	0.72	0.00	0.14	0.15
Control Delay (s/veh)	43.8	9.4	2.8	44.3	12.6	0.0	2.8	19.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	43.8	9.4	2.8	44.3	12.6	0.0	2.8	19.3
Queue Length 50th (ft)	3	159	0	5	274	0	0	10
Queue Length 95th (ft)	18	578	23	27	#997	0	9	39
Internal Link Dist (ft)		1222			1308		541	454
Turn Bay Length (ft)	295		130	305				
Base Capacity (vph)	117	2810	1271	117	2810	1256	651	684
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.55	0.06	0.09	0.72	0.00	0.07	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	23	1409	86	52	1861	69	55	10	9
v/c Ratio	0.21	0.69	0.09	0.48	0.84	0.39	0.14	0.09	0.05
Control Delay (s/veh)	50.9	18.7	1.6	60.1	21.3	48.3	8.7	48.7	19.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	50.9	18.7	1.6	60.1	21.3	48.3	8.7	48.7	19.8
Queue Length 50th (ft)	11	258	0	26	299	32	0	5	1
Queue Length 95th (ft)	47	#656	14	#108	#1069	101	30	27	13
Internal Link Dist (ft)		1565			2589		1030		346
Turn Bay Length (ft)	280		75	295		100		45	
Base Capacity (vph)	107	2222	1039	109	2223	218	829	107	718
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.63	0.08	0.48	0.84	0.32	0.07	0.09	0.01

Intersection Summary

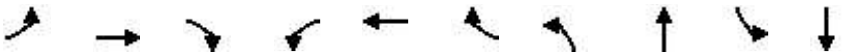
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	43	1165	236	136	1473	16	153	243	50	116	41
v/c Ratio	0.38	0.78	0.32	0.70	0.79	0.02	0.53	0.54	0.20	0.35	0.11
Control Delay (s/veh)	51.3	25.8	10.3	59.0	22.8	0.1	31.5	18.8	23.6	33.2	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	51.3	25.8	10.3	59.0	22.8	0.1	31.5	18.8	23.6	33.2	0.6
Queue Length 50th (ft)	22	250	35	70	328	0	65	52	20	57	0
Queue Length 95th (ft)	#71	#494	112	#201	#671	0	112	122	45	103	0
Internal Link Dist (ft)		2589			2614			512		890	
Turn Bay Length (ft)	295		100	420		160	60		70		50
Base Capacity (vph)	113	1685	815	197	1889	879	291	707	248	698	669
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.69	0.29	0.69	0.78	0.02	0.53	0.34	0.20	0.17	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	152	832	363	451	1148	202	472	766	80	725
v/c Ratio	0.88	0.76	0.46	0.86	0.89	0.30	0.93	0.70	0.68	0.96
Control Delay (s/veh)	96.9	42.1	15.0	66.0	44.6	6.6	75.8	36.0	82.0	67.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	96.9	42.1	15.0	66.0	44.6	6.6	75.8	36.0	82.0	67.3
Queue Length 50th (ft)	120	310	120	178	438	13	191	255	62	285
Queue Length 95th (ft)	#246	388	197	#256	535	64	#292	332	#135	#415
Internal Link Dist (ft)		2614			2123			3887		2020
Turn Bay Length (ft)	400		300	355			186		80	
Base Capacity (vph)	177	1119	788	558	1336	699	517	1098	127	759
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.74	0.46	0.81	0.86	0.29	0.91	0.70	0.63	0.96

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	243	822	109	195	1457	501	212	593	181	391	225
v/c Ratio	0.75	0.74	0.13	0.82	0.81	0.62	0.83	0.69	0.54	0.55	0.40
Control Delay (s/veh)	59.6	35.6	2.4	70.1	33.7	17.3	68.8	36.5	48.7	37.2	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	59.6	35.6	2.4	70.1	33.7	17.3	68.8	36.5	48.7	37.2	14.2
Queue Length 50th (ft)	75	230	0	117	284	149	126	171	54	115	55
Queue Length 95th (ft)	#167	#407	23	#295	#484	326	#313	238	102	160	110
Internal Link Dist (ft)		2123			3107			1466		1079	
Turn Bay Length (ft)	165		200	150		180	210		200		150
Base Capacity (vph)	324	1118	834	237	1808	956	255	1360	688	1582	567
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.74	0.13	0.82	0.81	0.52	0.83	0.44	0.26	0.25	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	119	1064	288	1721	290	98	456	26	358
v/c Ratio	0.78	0.97	0.89	0.83	0.75	0.18	0.63	0.32	0.84
Control Delay (s/veh)	83.5	57.8	74.9	34.5	60.5	29.5	11.8	64.0	45.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	83.5	57.8	74.9	34.5	60.5	29.5	11.8	64.0	45.6
Queue Length 50th (ft)	84	391	203	402	103	54	54	18	173
Queue Length 95th (ft)	#203	#627	#413	#579	#175	96	161	52	284
Internal Link Dist (ft)		3107		1942		1095			637
Turn Bay Length (ft)	400		185		115		125	125	
Base Capacity (vph)	157	1101	322	2068	427	699	817	82	584
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.97	0.89	0.83	0.68	0.14	0.56	0.32	0.61

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	288	25	1109	1467	506
v/c Ratio	0.45	0.15	0.48	0.72	0.34
Control Delay (s/veh)	28.8	41.6	6.4	13.8	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	28.8	41.6	6.4	13.8	0.7
Queue Length 50th (ft)	47	9	84	148	0
Queue Length 95th (ft)	126	46	211	470	10
Internal Link Dist (ft)	1275		961	1331	
Turn Bay Length (ft)	90	300			125
Base Capacity (vph)	1553	194	3378	3228	1549
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.19	0.13	0.33	0.45	0.33

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	35	1410	178	25	1231	53	66	24	80	91
v/c Ratio	0.23	0.68	0.18	0.17	0.59	0.05	0.25	0.07	0.24	0.23
Control Delay (s/veh)	38.9	18.9	6.0	38.0	17.0	0.1	23.1	16.9	19.8	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	38.9	18.9	6.0	38.0	17.0	0.1	23.1	16.9	19.8	14.7
Queue Length 50th (ft)	13	212	8	9	171	0	25	4	22	14
Queue Length 95th (ft)	51	#621	62	40	#503	0	49	23	57	52
Internal Link Dist (ft)		1223			755			377		908
Turn Bay Length (ft)	200		80	170		165	100		85	
Base Capacity (vph)	150	2085	986	150	2085	975	263	794	337	814
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.68	0.18	0.17	0.59	0.05	0.25	0.03	0.24	0.11

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	190	1283	139	1052	357	143	272	71	588	394	92
v/c Ratio	0.69	0.91	0.61	0.80	0.44	0.58	0.49	0.19	1.16	0.72	0.21
Control Delay (s/veh)	62.3	45.6	62.5	40.4	5.0	63.2	47.7	1.2	131.5	74.3	34.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	62.3	45.6	62.5	40.4	5.1	63.2	47.7	1.2	131.5	74.3	34.4
Queue Length 50th (ft)	141	493	103	386	0	56	105	0	~291	257	43
Queue Length 95th (ft)	#299	#736	#244	#577	70	91	129	0	m#332	m281	m55
Internal Link Dist (ft)		123		1227			790			173	
Turn Bay Length (ft)	285		300		300	145		140	180		130
Base Capacity (vph)	275	1407	227	1317	811	277	973	539	509	808	606
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	20	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.91	0.61	0.80	0.45	0.52	0.28	0.13	1.16	0.49	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

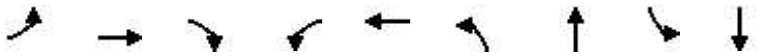
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	20	1811	107	15	1613	4	34	34
v/c Ratio	0.13	0.65	0.08	0.10	0.59	0.00	0.11	0.10
Control Delay (s/veh)	44.8	11.3	4.0	44.2	11.4	0.0	24.0	19.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	44.8	11.3	4.0	44.2	11.4	0.0	24.0	19.1
Queue Length 50th (ft)	9	215	4	7	171	0	10	6
Queue Length 95th (ft)	40	#834	41	34	624	0	37	32
Internal Link Dist (ft)		1222			1308		541	454
Turn Bay Length (ft)	295		130	305				
Base Capacity (vph)	152	2851	1288	152	2832	1252	778	858
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.64	0.08	0.10	0.57	0.00	0.04	0.04

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	39	1681	140	31	1646	39	22	18	12
v/c Ratio	0.35	0.73	0.13	0.29	0.72	0.28	0.08	0.17	0.06
Control Delay (s/veh)	55.0	17.7	6.1	53.1	17.4	49.6	13.7	50.5	20.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	55.0	17.7	6.1	53.1	17.4	49.6	13.7	50.5	20.5
Queue Length 50th (ft)	21	331	11	17	321	21	0	10	2
Queue Length 95th (ft)	#78	#909	64	58	#886	68	20	39	16
Internal Link Dist (ft)		1565			2589		1030		346
Turn Bay Length (ft)	280		75	295		100		45	
Base Capacity (vph)	110	2299	1058	108	2291	149	808	108	792
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.73	0.13	0.29	0.72	0.26	0.03	0.17	0.02

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	87	1457	143	138	1460	19	146	113	60	31	47
v/c Ratio	0.73	0.92	0.19	0.90	0.89	0.02	0.49	0.28	0.20	0.09	0.12
Control Delay (s/veh)	72.2	33.5	5.5	90.5	29.1	0.1	27.8	11.9	21.0	26.6	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	72.2	33.5	5.5	90.5	29.1	0.1	27.8	11.9	21.0	26.6	0.6
Queue Length 50th (ft)	41	325	5	65	313	0	55	12	21	13	0
Queue Length 95th (ft)	#147	#688	48	#216	#673	0	97	51	46	34	0
Internal Link Dist (ft)		2589			2614			512		890	
Turn Bay Length (ft)	295		100	420		160	60		70		50
Base Capacity (vph)	120	1577	772	153	1644	800	295	734	302	779	736
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.92	0.19	0.90	0.89	0.02	0.49	0.15	0.20	0.04	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	164	1299	185	228	1143	70	236	348	91	493
v/c Ratio	0.77	0.85	0.20	0.73	0.80	0.10	0.63	0.44	0.71	0.73
Control Delay (s/veh)	70.5	33.7	3.1	63.1	33.8	0.3	54.8	21.3	79.8	36.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	70.5	33.7	3.1	63.1	33.8	0.3	54.8	21.3	79.8	36.1
Queue Length 50th (ft)	113	405	7	82	358	0	83	62	64	125
Queue Length 95th (ft)	#244	#601	41	#158	525	0	136	104	#166	187
Internal Link Dist (ft)		2614			2123			3887		2020
Turn Bay Length (ft)	400		300	355			186		80	
Base Capacity (vph)	237	1698	965	326	1560	766	466	1128	134	952
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.77	0.19	0.70	0.73	0.09	0.51	0.31	0.68	0.52

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	332	947	126	119	1001	261	122	366	255	545	248
v/c Ratio	0.70	0.79	0.16	0.65	0.64	0.31	0.66	0.47	0.62	0.65	0.37
Control Delay (s/veh)	49.8	34.7	3.5	62.0	31.7	4.0	62.5	33.2	48.9	36.6	14.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.8	34.7	3.5	62.0	31.7	4.0	62.5	33.2	48.9	36.6	14.4
Queue Length 50th (ft)	100	260	0	71	186	6	73	101	77	164	72
Queue Length 95th (ft)	#192	#447	34	#190	308	57	#198	153	141	222	128
Internal Link Dist (ft)		2123			3107			1466		1079	
Turn Bay Length (ft)	165		200	150		180	210		200		150
Base Capacity (vph)	547	1405	821	198	1777	894	198	1455	551	1651	701
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.67	0.15	0.60	0.56	0.29	0.62	0.25	0.46	0.33	0.35

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	99	1360	341	1294	335	73	341	27	132
v/c Ratio	0.61	1.08	1.16	0.59	0.71	0.16	0.56	0.30	0.47
Control Delay (s/veh)	61.2	80.4	143.0	24.5	50.5	30.9	9.9	58.2	24.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	61.2	80.4	143.0	24.5	50.5	30.9	9.9	58.2	24.9
Queue Length 50th (ft)	59	~480	~246	213	103	39	24	16	35
Queue Length 95th (ft)	#140	#837	#535	373	176	75	100	52	93
Internal Link Dist (ft)		3107		1942		1095			637
Turn Bay Length (ft)	400		185		115		125	125	
Base Capacity (vph)	198	1263	293	2190	631	783	827	89	549
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	1.08	1.16	0.59	0.53	0.09	0.41	0.30	0.24

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

APPENDIX 5.4:

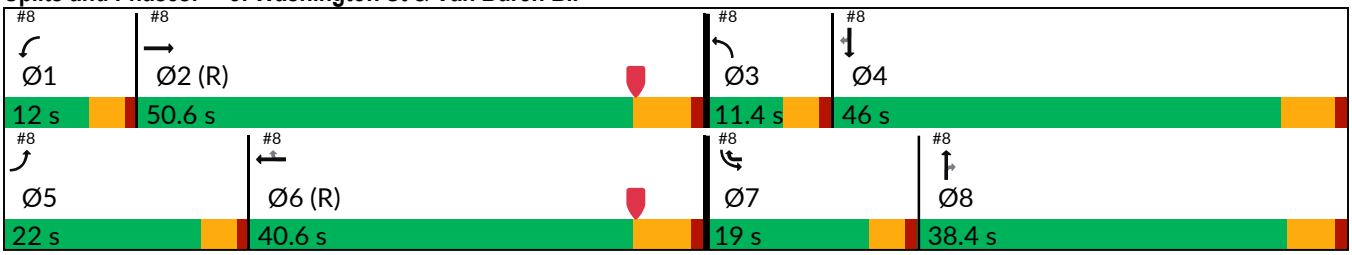
EAP (2027) INTERSECTION ANALYSIS WITH IMPROVEMENTS

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Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	191	965	89	1152	571	88	525	122	420	193	92
Future Volume (vph)	191	965	89	1152	571	88	525	122	420	193	92
Turn Type	Prot	NA	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	1	6	7	3	8		7	4	
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	7	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.2	34.2	9.2	33.2	9.2	9.2	38.4	38.4	9.2	30.8	30.8
Total Split (s)	22.0	50.6	12.0	40.6	19.0	11.4	38.4	38.4	19.0	46.0	46.0
Total Split (%)	18.3%	42.2%	10.0%	33.8%	15.8%	9.5%	32.0%	32.0%	15.8%	38.3%	38.3%
Yellow Time (s)	3.2	5.2	3.2	5.2	3.2	3.2	4.4	4.4	3.2	4.8	4.8
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)	4.2	6.2	4.2	6.2	4.2	4.2	5.4	5.4	4.2	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None	None	None	None
Act Effct Green (s)	17.3	48.9	9.9	41.5	58.3	6.8	26.4	26.4	14.8	34.0	34.0
Actuated g/C Ratio	0.14	0.41	0.08	0.35	0.49	0.06	0.22	0.22	0.12	0.28	0.28
v/c Ratio	0.80	0.81	0.66	1.01	0.75	0.49	0.73	0.27	1.07	0.26	0.18
Control Delay (s/veh)	72.8	37.4	74.8	68.5	26.7	63.8	48.9	2.8	103.4	52.6	25.9
Queue Delay	0.0	0.0	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	72.8	37.4	74.8	68.5	31.2	63.8	48.9	2.8	103.4	52.6	25.9
LOS	E	D	E	E	C	E	D	A	F	D	C
Approach Delay (s/veh)		42.8		57.0			43.0			79.4	
Approach LOS		D		E			D			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay (s/veh): 54.3	Intersection LOS: D
Intersection Capacity Utilization 85.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 8: Washington St & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	191	965	104	89	1152	571	88	525	122	420	193	92
Future Volume (veh/h)	191	965	104	89	1152	571	88	525	122	420	193	92
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	205	1038	73	96	1239	614	95	565	68	452	208	41
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	232	1496	105	116	1348	796	145	700	312	426	802	441
Arrive On Green	0.13	0.44	0.44	0.07	0.38	0.38	0.04	0.20	0.20	0.12	0.28	0.28
Sat Flow, veh/h	1781	3364	237	1781	3554	1581	3456	3554	1585	3456	2880	1585
Grp Volume(v), veh/h	205	548	563	96	1239	614	95	565	68	452	208	41
Grp Sat Flow(s),veh/h/ln	1781	1777	1824	1781	1777	1581	1728	1777	1585	1728	1440	1585
Q Serve(g_s), s	13.6	29.7	29.7	6.4	39.9	37.9	3.2	18.2	4.3	14.8	6.7	2.3
Cycle Q Clear(g_c), s	13.6	29.7	29.7	6.4	39.9	37.9	3.2	18.2	4.3	14.8	6.7	2.3
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	232	790	811	116	1348	796	145	700	312	426	802	441
V/C Ratio(X)	0.88	0.69	0.69	0.83	0.92	0.77	0.65	0.81	0.22	1.06	0.26	0.09
Avail Cap(c_a), veh/h	264	790	811	116	1348	796	207	977	436	426	965	531
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	0.57	0.57	0.57	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.3	26.8	26.8	55.4	35.5	24.2	56.6	46.0	40.4	52.6	33.7	32.1
Incr Delay (d2), s/veh	23.9	5.0	4.9	22.8	7.2	4.2	1.8	3.5	0.3	60.5	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	7.4	12.8	13.1	3.5	17.4	14.9	1.5	8.4	1.7	9.8	2.3	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	75.2	31.7	31.6	78.2	42.7	28.4	58.5	49.5	40.8	113.1	33.9	32.2
LnGrp LOS	E	C	C	E	D	C	E	D	D	F	C	C
Approach Vol, veh/h		1316			1949			728			701	
Approach Delay, s/veh		38.5			39.9			49.8			84.9	
Approach LOS		D			D			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	59.6	9.3	39.2	19.8	51.7	19.0	29.4
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	7.8	44.4	7.2	40.2	17.8	34.4	14.8	* 33
Max Q Clear Time (g_c+I1), s	8.4	31.7	5.2	8.7	15.6	41.9	16.8	20.2
Green Ext Time (p_c), s	0.0	6.9	0.0	1.3	0.1	0.0	0.0	3.4

Intersection Summary	
HCM 7th Control Delay, s/veh	47.8
HCM 7th LOS	D

Notes

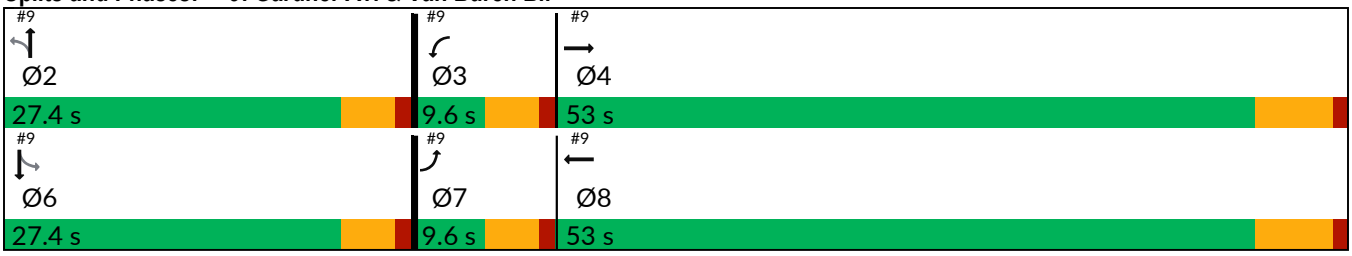
User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	11	1497	29	1886	29	0	1	0
Future Volume (vph)	11	1497	29	1886	29	0	1	0
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	28.2	9.6	28.2	26.7	26.7	26.7	26.7
Total Split (s)	9.6	53.0	9.6	53.0	27.4	27.4	27.4	27.4
Total Split (%)	10.7%	58.9%	10.7%	58.9%	30.4%	30.4%	30.4%	30.4%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.7	3.7	3.7	3.7
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
Total Lost Time (s)	4.6	6.2	4.6	6.2		4.7		4.7
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.1	49.3	5.1	51.0		10.2		10.2
Actuated g/C Ratio	0.07	0.72	0.07	0.74		0.15		0.15
v/c Ratio	0.09	0.62	0.24	0.76		0.28		0.05
Control Delay (s/veh)	35.1	9.2	38.0	11.1		9.2		0.3
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay (s/veh)	35.1	9.2	38.0	11.1		9.2		0.3
LOS	D	A	D	B		A		A
Approach Delay (s/veh)		9.4		11.5		9.2		0.3
Approach LOS		A		B		A		A

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 68.6	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay (s/veh): 10.5	Intersection LOS: B
Intersection Capacity Utilization 72.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: Gardner Av. & Van Buren Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	1497	10	29	1886	4	29	0	51	1	0	14
Future Volume (veh/h)	11	1497	10	29	1886	4	29	0	51	1	0	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	12	1576	11	31	1985	4	31	0	54	1	0	15
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	27	2237	16	58	2314	5	119	21	117	61	8	176
Arrive On Green	0.01	0.62	0.62	0.03	0.64	0.64	0.12	0.00	0.12	0.12	0.00	0.12
Sat Flow, veh/h	1781	3617	25	1781	3639	7	390	179	991	31	68	1491
Grp Volume(v), veh/h	12	774	813	31	969	1020	85	0	0	16	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1866	1781	1777	1869	1560	0	0	1590	0	0
Q Serve(g_s), s	0.4	19.8	19.8	1.2	29.3	29.4	0.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.4	19.8	19.8	1.2	29.3	29.4	3.3	0.0	0.0	0.6	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.00	0.36		0.64	0.06		0.94
Lane Grp Cap(c), veh/h	27	1099	1154	58	1130	1189	258	0	0	245	0	0
V/C Ratio(X)	0.45	0.70	0.70	0.53	0.86	0.86	0.33	0.00	0.00	0.07	0.00	0.00
Avail Cap(c_a), veh/h	133	1237	1299	133	1237	1302	589	0	0	589	0	0
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	0.00	0.00
Uniform Delay (d), s/veh	32.8	8.7	8.7	32.0	9.8	9.8	27.5	0.0	0.0	26.4	0.0	0.0
Incr Delay (d2), s/veh	4.4	1.6	1.5	2.8	5.8	5.6	0.7	0.0	0.0	0.1	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	0.2	5.1	5.3	0.5	8.2	8.6	1.3	0.0	0.0	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.2	10.3	10.2	34.8	15.6	15.4	28.3	0.0	0.0	26.5	0.0	0.0
LnGrp LOS	D	B	B	C	B	B	C			C		
Approach Vol, veh/h		1599			2020			85			16	
Approach Delay, s/veh		10.4			15.8			28.3			26.5	
Approach LOS		B			B			C			C	

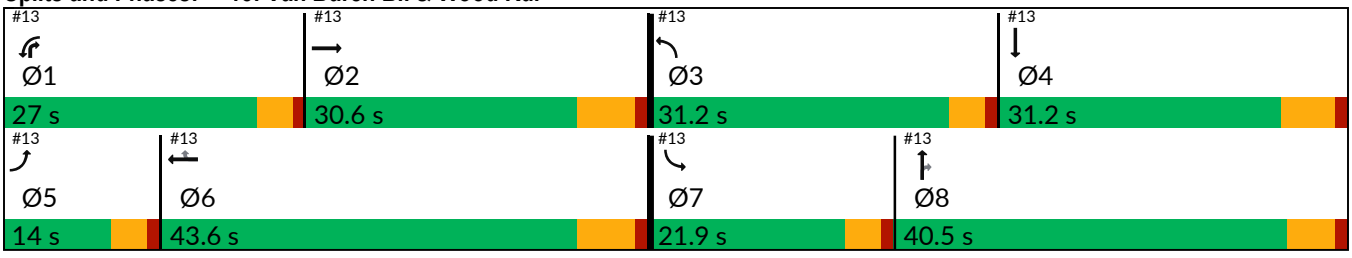
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.7	6.8	47.7		12.7	5.6	48.9				
Change Period (Y+Rc), s		4.7	4.6	6.2		4.7	4.6	6.2				
Max Green Setting (Gmax), s		22.7	5.0	46.8		22.7	5.0	46.8				
Max Q Clear Time (g_c+I1), s		5.3	3.2	21.8		2.6	2.4	31.4				
Green Ext Time (p_c), s		0.4	0.0	11.6		0.0	0.0	11.4				

Intersection Summary												
HCM 7th Control Delay, s/veh			13.8									
HCM 7th LOS			B									

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	137	749	406	1033	182	425	441	248	72	474
Future Volume (vph)	137	749	406	1033	182	425	441	248	72	474
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2	1	6		3	8	1	7	4
Permitted Phases					6			8		
Detector Phase	5	2	1	6	6	3	8	1	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.2	30.2	9.2	30.2	30.2	9.2	38.4	9.2	9.2	15.8
Total Split (s)	14.0	30.6	27.0	43.6	43.6	31.2	40.5	27.0	21.9	31.2
Total Split (%)	11.7%	25.5%	22.5%	36.3%	36.3%	26.0%	33.8%	22.5%	18.3%	26.0%
Yellow Time (s)	3.2	5.2	3.2	5.2	5.2	3.2	4.4	3.2	3.2	4.8
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)	4.2	6.2	4.2	6.2	6.2	4.2	5.4	4.2	4.2	5.8
Lead/Lag	Lead	Lag	Lead	Lag	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	None	None	None	None
Act Effct Green (s)	9.8	28.7	18.6	37.5	37.5	19.7	38.1	57.8	9.5	25.4
Actuated g/C Ratio	0.09	0.25	0.16	0.33	0.33	0.17	0.34	0.51	0.08	0.23
v/c Ratio	0.99	0.94	0.80	0.98	0.32	0.79	0.41	0.32	0.54	0.91
Control Delay (s/veh)	123.2	53.2	56.6	59.4	9.2	54.6	31.0	5.5	63.1	57.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	123.2	53.2	56.6	59.4	9.2	54.6	31.0	5.5	63.1	57.8
LOS	F	D	E	E	A	D	C	A	E	E
Approach Delay (s/veh)		61.1		53.1			34.3			58.3
Approach LOS		E		D			C			E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 112.8	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay (s/veh): 51.5	Intersection LOS: D
Intersection Capacity Utilization 84.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: Van Buren Bl. & Wood Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	137	749	327	406	1033	182	425	441	248	72	474	178
Future Volume (veh/h)	137	749	327	406	1033	182	425	441	248	72	474	178
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.93	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	152	832	180	451	1148	122	472	490	116	80	527	99
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	165	1213	260	524	1239	548	549	1093	695	103	615	115
Arrive On Green	0.09	0.29	0.29	0.15	0.35	0.35	0.16	0.31	0.31	0.06	0.21	0.21
Sat Flow, veh/h	1781	4182	898	3456	3554	1573	3456	3554	1480	1781	2981	557
Grp Volume(v), veh/h	152	676	336	451	1148	122	472	490	116	80	313	313
Grp Sat Flow(s),veh/h/ln	1781	1702	1676	1728	1777	1573	1728	1777	1480	1781	1777	1761
Q Serve(g_s), s	8.9	18.6	18.8	13.4	32.8	5.8	14.0	11.7	4.9	4.7	17.9	18.1
Cycle Q Clear(g_c), s	8.9	18.6	18.8	13.4	32.8	5.8	14.0	11.7	4.9	4.7	17.9	18.1
Prop In Lane	1.00		0.54	1.00		1.00	1.00		1.00	1.00		0.32
Lane Grp Cap(c), veh/h	165	987	486	524	1239	548	549	1093	695	103	367	363
V/C Ratio(X)	0.92	0.68	0.69	0.86	0.93	0.22	0.86	0.45	0.17	0.78	0.85	0.86
Avail Cap(c_a), veh/h	165	987	486	746	1259	557	884	1182	732	299	428	424
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	47.5	33.2	33.3	43.7	33.1	24.3	43.2	29.4	16.8	49.1	40.4	40.4
Incr Delay (d2), s/veh	46.3	2.2	4.6	5.3	11.8	0.3	2.7	0.3	0.1	4.7	13.8	14.6
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	5.9	7.5	7.8	5.9	15.0	2.1	6.0	4.9	1.6	2.2	9.0	9.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	93.8	35.4	37.9	49.0	44.9	24.6	46.0	29.6	16.9	53.8	54.2	55.1
LnGrp LOS	F	D	D	D	D	C	D	C	B	D	D	E
Approach Vol, veh/h		1164			1721			1078			706	
Approach Delay, s/veh		43.7			44.5			35.4			54.5	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.2	36.8	21.0	27.6	14.0	43.0	10.3	38.3
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	22.8	24.4	27.0	25.4	9.8	37.4	17.7	* 35
Max Q Clear Time (g_c+I1), s	15.4	20.8	16.0	20.1	10.9	34.8	6.7	13.7
Green Ext Time (p_c), s	0.6	2.3	0.7	1.7	0.0	2.0	0.1	3.4

Intersection Summary	
HCM 7th Control Delay, s/veh	43.7
HCM 7th LOS	D

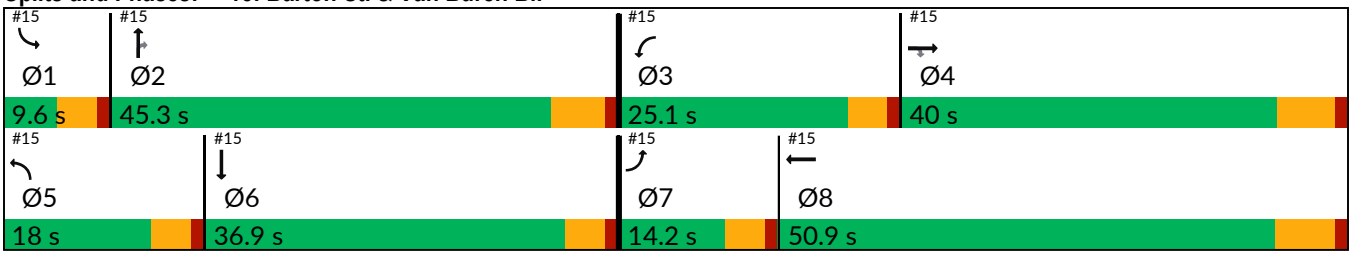
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	107	860	97	259	1525	261	88	410	23	86
Future Volume (vph)	107	860	97	259	1525	261	88	410	23	86
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	4	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.2	28.2	9.6	28.5	9.6	44.8	44.8	9.6	26.1
Total Split (s)	14.2	40.0	40.0	25.1	50.9	18.0	45.3	45.3	9.6	36.9
Total Split (%)	11.8%	33.3%	33.3%	20.9%	42.4%	15.0%	37.8%	37.8%	8.0%	30.8%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.5	3.6	4.8	4.8	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.5	4.6	5.8	5.8	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	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	None	None	None	None
Act Effct Green (s)	9.3	33.0	33.0	20.0	43.3	12.2	32.4	32.4	5.1	22.1
Actuated g/C Ratio	0.09	0.31	0.31	0.19	0.40	0.11	0.30	0.30	0.05	0.21
v/c Ratio	0.78	0.88	0.17	0.88	0.84	0.74	0.17	0.62	0.31	0.84
Control Delay (s/veh)	82.6	47.5	0.6	71.4	34.8	60.0	29.8	11.0	64.0	45.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	82.6	47.5	0.6	71.4	34.8	60.0	29.8	11.0	64.0	45.8
LOS	F	D	A	E	C	E	C	B	E	D
Approach Delay (s/veh)		46.7			40.1		30.0			47.0
Approach LOS		D			D		C			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 107.6	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay (s/veh): 40.5	Intersection LOS: D
Intersection Capacity Utilization 81.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 15: Barton St. & Van Buren Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	860	97	259	1525	24	261	88	410	23	86	236
Future Volume (veh/h)	107	860	97	259	1525	24	261	88	410	23	86	236
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	119	956	95	288	1694	15	290	98	288	26	96	189
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	147	1083	483	319	2094	19	358	522	442	46	112	220
Arrive On Green	0.08	0.30	0.30	0.18	0.40	0.40	0.10	0.28	0.28	0.03	0.20	0.20
Sat Flow, veh/h	1781	3554	1585	1781	5219	46	3456	1870	1585	1781	556	1094
Grp Volume(v), veh/h	119	956	95	288	1105	604	290	98	288	26	0	285
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1702	1861	1728	1870	1585	1781	0	1650
Q Serve(g_s), s	6.7	26.0	4.5	16.1	29.3	29.3	8.4	4.1	16.3	1.5	0.0	17.0
Cycle Q Clear(g_c), s	6.7	26.0	4.5	16.1	29.3	29.3	8.4	4.1	16.3	1.5	0.0	17.0
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.66
Lane Grp Cap(c), veh/h	147	1083	483	319	1366	747	358	522	442	46	0	332
V/C Ratio(X)	0.81	0.88	0.20	0.90	0.81	0.81	0.81	0.19	0.65	0.57	0.00	0.86
Avail Cap(c_a), veh/h	168	1181	527	359	1486	813	455	727	616	88	0	524
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	0.00	1.00
Uniform Delay (d), s/veh	45.9	33.6	26.1	40.9	27.0	27.0	44.6	27.9	32.3	49.0	0.0	39.2
Incr Delay (d2), s/veh	19.6	7.7	0.2	22.2	3.2	5.7	6.7	0.2	1.6	4.1	0.0	8.2
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	3.6	11.5	1.6	8.5	11.2	12.7	3.8	1.8	5.9	0.7	0.0	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	65.5	41.3	26.3	63.1	30.2	32.7	51.3	28.0	33.9	53.1	0.0	47.4
LnGrp LOS	E	D	C	E	C	C	D	C	C	D		D
Approach Vol, veh/h		1170			1997			676			311	
Approach Delay, s/veh		42.5			35.7			40.5			47.9	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	34.2	22.8	37.5	15.1	26.3	13.0	47.3
Change Period (Y+Rc), s	4.6	5.8	4.6	* 6.5	4.6	* 5.8	4.6	6.5
Max Green Setting (Gmax), s	5.0	39.5	20.5	* 34	13.4	* 32	9.6	44.4
Max Q Clear Time (g_c+I1), s	3.5	18.3	18.1	28.0	10.4	19.0	8.7	31.3
Green Ext Time (p_c), s	0.0	1.4	0.1	3.0	0.2	1.5	0.0	8.1

Intersection Summary	
HCM 7th Control Delay, s/veh	39.3
HCM 7th LOS	D

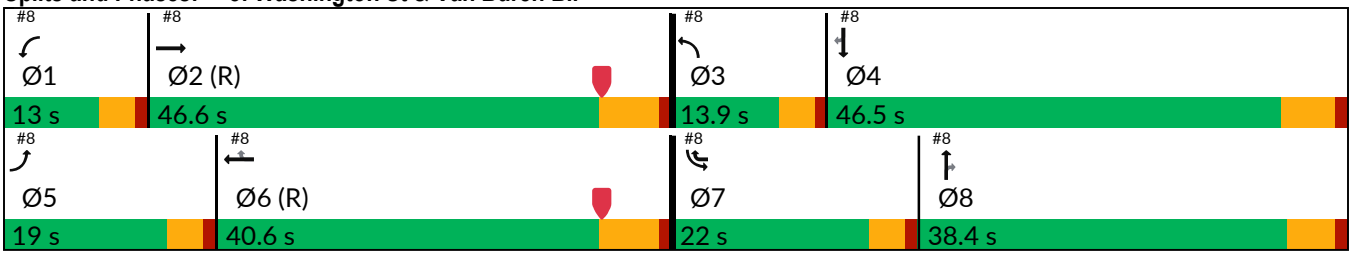
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	186	1215	136	1031	350	140	267	70	576	386	90
Future Volume (vph)	186	1215	136	1031	350	140	267	70	576	386	90
Turn Type	Prot	NA	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	1	6	7	3	8		7	4	
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	7	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.2	34.2	9.2	33.2	9.2	9.2	38.4	38.4	9.2	30.8	30.8
Total Split (s)	19.0	46.6	13.0	40.6	22.0	13.9	38.4	38.4	22.0	46.5	46.5
Total Split (%)	15.8%	38.8%	10.8%	33.8%	18.3%	11.6%	32.0%	32.0%	18.3%	38.8%	38.8%
Yellow Time (s)	3.2	5.2	3.2	5.2	3.2	3.2	4.4	4.4	3.2	4.8	4.8
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)	4.2	6.2	4.2	6.2	4.2	4.2	5.4	5.4	4.2	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None	None	None	None
Act Effct Green (s)	16.9	47.9	15.4	46.5	66.3	8.7	18.9	18.9	17.8	27.6	27.6
Actuated g/C Ratio	0.14	0.40	0.13	0.39	0.55	0.07	0.16	0.16	0.15	0.23	0.23
v/c Ratio	0.77	0.91	0.61	0.77	0.36	0.58	0.49	0.18	1.16	0.72	0.19
Control Delay (s/veh)	69.7	45.6	62.5	38.4	5.5	63.2	47.7	1.0	131.5	74.3	26.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	69.7	45.6	62.5	38.4	5.5	63.2	47.7	1.0	131.5	74.3	26.1
LOS	E	D	E	D	A	E	D	A	F	E	C
Approach Delay (s/veh)		48.8		33.0			45.4			101.5	
Approach LOS		D		C			D			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.16	
Intersection Signal Delay (s/veh): 55.4	Intersection LOS: E
Intersection Capacity Utilization 83.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 8: Washington St & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	186	1215	42	136	1031	350	140	267	70	576	386	90
Future Volume (veh/h)	186	1215	42	136	1031	350	140	267	70	576	386	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	190	1240	26	139	1052	261	143	272	34	588	394	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	216	1786	37	131	1613	953	198	378	169	513	473	313
Arrive On Green	0.12	0.50	0.50	0.07	0.45	0.45	0.06	0.11	0.11	0.15	0.20	0.20
Sat Flow, veh/h	1781	3558	75	1781	3554	1582	3456	3554	1585	3456	2394	1585
Grp Volume(v), veh/h	190	619	647	139	1052	261	143	272	34	588	394	48
Grp Sat Flow(s),veh/h/ln	1781	1777	1856	1781	1777	1582	1728	1777	1585	1728	1197	1585
Q Serve(g_s), s	12.6	32.0	32.0	8.8	27.6	9.4	4.9	8.9	2.4	17.8	19.0	3.0
Cycle Q Clear(g_c), s	12.6	32.0	32.0	8.8	27.6	9.4	4.9	8.9	2.4	17.8	19.0	3.0
Prop In Lane	1.00		0.04	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	216	892	931	131	1613	953	198	378	169	513	473	313
V/C Ratio(X)	0.88	0.69	0.69	1.06	0.65	0.27	0.72	0.72	0.20	1.15	0.83	0.15
Avail Cap(c_a), veh/h	220	892	931	131	1613	953	279	977	436	513	812	538
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.8	22.8	22.9	55.6	25.4	11.4	55.6	51.9	49.0	51.1	46.3	39.9
Incr Delay (d2), s/veh	29.4	4.4	4.3	88.0	1.6	0.6	2.4	2.6	0.6	87.0	3.9	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	7.2	13.3	13.8	7.0	11.1	3.5	2.2	4.1	1.0	13.7	5.7	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	81.3	27.3	27.1	143.6	27.1	11.9	58.0	54.5	49.5	138.1	50.2	40.1
LnGrp LOS	F	C	C	F	C	B	E	D	D	F	D	D
Approach Vol, veh/h		1456			1452			449			1030	
Approach Delay, s/veh		34.3			35.5			55.2			99.9	
Approach LOS		C			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	66.4	11.1	29.5	18.8	60.7	22.0	18.6
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	8.8	40.4	9.7	40.7	14.8	34.4	17.8	* 33
Max Q Clear Time (g_c+I1), s	10.8	34.0	6.9	21.0	14.6	29.6	19.8	10.9
Green Ext Time (p_c), s	0.0	4.5	0.1	2.3	0.0	3.5	0.0	1.9

Intersection Summary	
HCM 7th Control Delay, s/veh	52.2
HCM 7th LOS	D

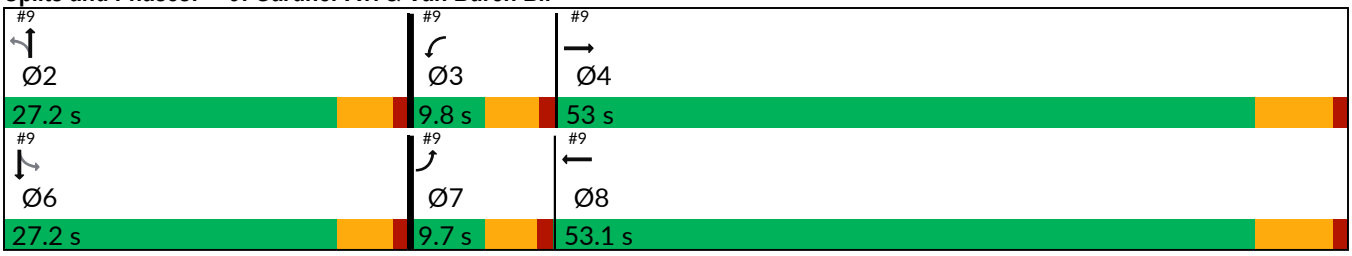
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	18	1774	45	1549	44	0	3	0
Future Volume (vph)	18	1774	45	1549	44	0	3	0
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	28.2	9.6	28.2	26.7	26.7	26.7	26.7
Total Split (s)	9.7	53.0	9.8	53.1	27.2	27.2	27.2	27.2
Total Split (%)	10.8%	58.9%	10.9%	59.0%	30.2%	30.2%	30.2%	30.2%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.7	3.7	3.7	3.7
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
Total Lost Time (s)	4.6	6.2	4.6	6.2		4.7		4.7
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.2	51.6	5.3	55.1		10.4		10.4
Actuated g/C Ratio	0.08	0.76	0.08	0.81		0.15		0.15
v/c Ratio	0.14	0.72	0.35	0.58		0.22		0.08
Control Delay (s/veh)	36.8	12.2	41.2	6.7		5.3		0.5
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay (s/veh)	36.8	12.2	41.2	6.7		5.3		0.5
LOS	D	B	D	A		A		A
Approach Delay (s/veh)		12.4		7.7		5.3		0.5
Approach LOS		B		A		A		A

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 67.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay (s/veh): 10.0	Intersection LOS: B
Intersection Capacity Utilization 68.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: Gardner Av. & Van Buren Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	1774	20	45	1549	11	44	0	15	3	0	22
Future Volume (veh/h)	18	1774	20	45	1549	11	44	0	15	3	0	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	19	1908	22	48	1666	12	47	0	16	3	0	24
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	40	2245	26	78	2335	17	194	13	39	67	11	145
Arrive On Green	0.02	0.62	0.62	0.04	0.65	0.65	0.10	0.00	0.10	0.10	0.00	0.10
Sat Flow, veh/h	1781	3598	41	1781	3616	26	979	130	377	73	104	1414
Grp Volume(v), veh/h	19	940	990	48	818	860	63	0	0	27	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1863	1781	1777	1866	1486	0	0	1591	0	0
Q Serve(g_s), s	0.7	28.6	28.8	1.8	20.4	20.5	1.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.7	28.6	28.8	1.8	20.4	20.5	2.5	0.0	0.0	1.0	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.01	0.75		0.25	0.11		0.89
Lane Grp Cap(c), veh/h	40	1109	1162	78	1147	1204	246	0	0	223	0	0
V/C Ratio(X)	0.48	0.85	0.85	0.61	0.71	0.71	0.26	0.00	0.00	0.12	0.00	0.00
Avail Cap(c_a), veh/h	135	1231	1291	137	1234	1296	576	0	0	583	0	0
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	0.00	0.00
Uniform Delay (d), s/veh	32.6	10.1	10.2	31.7	7.9	7.9	28.3	0.0	0.0	27.7	0.0	0.0
Incr Delay (d2), s/veh	3.3	5.3	5.2	2.9	1.8	1.7	0.5	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	0.3	8.2	8.6	0.8	4.9	5.1	1.0	0.0	0.0	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.0	15.4	15.4	34.6	9.7	9.6	28.8	0.0	0.0	27.9	0.0	0.0
LnGrp LOS	D	B	B	C	A	A	C			C		
Approach Vol, veh/h		1949			1726			63			27	
Approach Delay, s/veh		15.6			10.3			28.8			27.9	
Approach LOS		B			B			C			C	

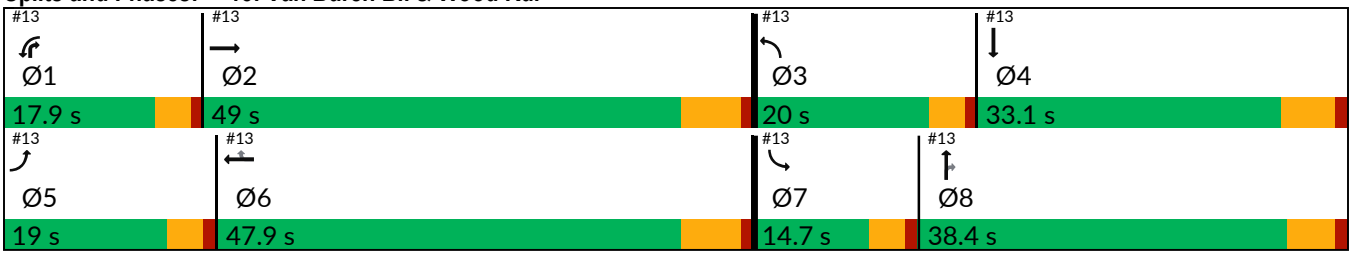
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.6	7.6	48.3		11.6	6.1	49.8				
Change Period (Y+Rc), s		4.7	4.6	6.2		4.7	4.6	6.2				
Max Green Setting (Gmax), s		22.5	5.2	46.8		22.5	5.1	46.9				
Max Q Clear Time (g_c+I1), s		4.5	3.8	30.8		3.0	2.7	22.5				
Green Ext Time (p_c), s		0.2	0.0	11.3		0.1	0.0	12.5				

Intersection Summary												
HCM 7th Control Delay, s/veh			13.5									
HCM 7th LOS			B									

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	159	1260	221	1109	68	229	187	150	88	273
Future Volume (vph)	159	1260	221	1109	68	229	187	150	88	273
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2	1	6		3	8	1	7	4
Permitted Phases					6			8		
Detector Phase	5	2	1	6	6	3	8	1	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.2	30.2	9.2	30.2	30.2	9.2	38.4	9.2	9.2	15.8
Total Split (s)	19.0	49.0	17.9	47.9	47.9	20.0	38.4	17.9	14.7	33.1
Total Split (%)	15.8%	40.8%	14.9%	39.9%	39.9%	16.7%	32.0%	14.9%	12.3%	27.6%
Yellow Time (s)	3.2	5.2	3.2	5.2	5.2	3.2	4.4	3.2	3.2	4.8
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)	4.2	6.2	4.2	6.2	6.2	4.2	5.4	4.2	4.2	5.8
Lead/Lag	Lead	Lag	Lead	Lag	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	None	None	None	None
Act Effct Green (s)	12.9	41.0	10.9	39.0	39.0	11.5	23.1	35.3	8.9	17.4
Actuated g/C Ratio	0.13	0.40	0.11	0.38	0.38	0.11	0.23	0.35	0.09	0.17
v/c Ratio	0.73	0.69	0.62	0.83	0.10	0.61	0.24	0.27	0.59	0.72
Control Delay (s/veh)	64.8	27.8	53.4	35.7	0.3	52.1	35.1	14.6	64.7	34.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	64.8	27.8	53.4	35.7	0.3	52.1	35.1	14.6	64.7	34.6
LOS	E	C	D	D	A	D	D	B	E	C
Approach Delay (s/veh)		31.5		36.8			36.5			39.3
Approach LOS		C		D			D			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 101.8	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay (s/veh): 35.1	Intersection LOS: D
Intersection Capacity Utilization 86.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: Van Buren Bl. & Wood Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1260	179	221	1109	68	229	187	150	88	273	206
Future Volume (veh/h)	159	1260	179	221	1109	68	229	187	150	88	273	206
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.92	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	164	1299	103	228	1143	31	236	193	93	91	281	109
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	196	2007	159	298	1365	592	308	865	490	116	550	208
Arrive On Green	0.11	0.40	0.40	0.09	0.38	0.38	0.09	0.24	0.24	0.07	0.22	0.22
Sat Flow, veh/h	1781	5019	398	3456	3628	1574	3456	3554	1452	1781	2512	950
Grp Volume(v), veh/h	164	939	463	228	1143	31	236	193	93	91	197	193
Grp Sat Flow(s),veh/h/ln	1781	1814	1788	1728	1814	1574	1728	1777	1452	1781	1777	1685
Q Serve(g_s), s	9.0	20.8	20.8	6.4	28.5	1.2	6.6	4.3	4.6	5.0	9.6	10.1
Cycle Q Clear(g_c), s	9.0	20.8	20.8	6.4	28.5	1.2	6.6	4.3	4.6	5.0	9.6	10.1
Prop In Lane	1.00		0.22	1.00		1.00	1.00		1.00	1.00		0.56
Lane Grp Cap(c), veh/h	196	1451	715	298	1365	592	308	865	490	116	389	369
V/C Ratio(X)	0.84	0.65	0.65	0.76	0.84	0.05	0.77	0.22	0.19	0.79	0.51	0.52
Avail Cap(c_a), veh/h	266	1564	771	477	1524	661	550	1181	620	188	489	463
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	43.3	24.1	24.1	44.4	28.2	19.7	44.2	30.1	23.8	45.7	34.0	34.2
Incr Delay (d2), s/veh	12.1	1.0	2.0	1.5	4.2	0.1	1.5	0.1	0.2	4.4	1.0	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	4.4	8.3	8.4	2.7	12.0	0.4	2.8	1.8	1.5	2.3	4.1	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.4	25.1	26.2	45.9	32.4	19.8	45.7	30.2	24.0	50.1	35.1	35.3
LnGrp LOS	E	C	C	D	C	B	D	C	C	D	D	D
Approach Vol, veh/h		1566			1402			522			481	
Approach Delay, s/veh		28.6			34.3			36.1			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	12.8	45.9	13.1	27.6	15.1	43.6	10.7	30.0
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	13.7	42.8	15.8	27.3	14.8	41.7	10.5	* 33
Max Q Clear Time (g_c+I1), s	8.4	22.8	8.6	12.1	11.0	30.5	7.0	6.6
Green Ext Time (p_c), s	0.2	11.6	0.2	1.9	0.1	6.9	0.0	1.5

Intersection Summary	
HCM 7th Control Delay, s/veh	32.7
HCM 7th LOS	C

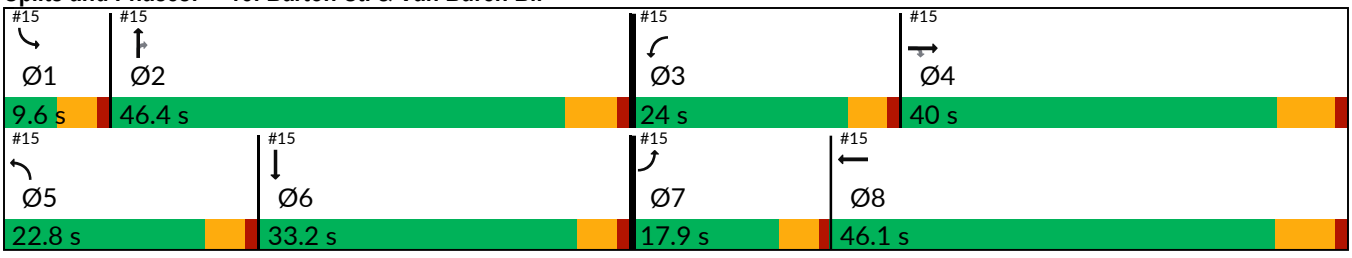
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	93	1079	199	321	1181	315	69	321	25	44
Future Volume (vph)	93	1079	199	321	1181	315	69	321	25	44
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4		3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	4	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.2	28.2	9.6	28.5	9.6	44.8	44.8	9.6	26.1
Total Split (s)	17.9	40.0	40.0	24.0	46.1	22.8	46.4	46.4	9.6	33.2
Total Split (%)	14.9%	33.3%	33.3%	20.0%	38.4%	19.0%	38.7%	38.7%	8.0%	27.7%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.5	3.6	4.8	4.8	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.5	4.6	5.8	5.8	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	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	None	None	None	None
Act Effct Green (s)	9.7	34.0	34.0	19.5	43.6	13.8	24.8	24.8	5.0	13.2
Actuated g/C Ratio	0.10	0.34	0.34	0.19	0.43	0.14	0.25	0.25	0.05	0.13
v/c Ratio	0.58	0.96	0.32	0.99	0.59	0.71	0.16	0.53	0.31	0.47
Control Delay (s/veh)	59.0	52.1	6.9	89.8	24.9	51.3	31.4	6.6	58.9	25.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	59.0	52.1	6.9	89.8	24.9	51.3	31.4	6.6	58.9	25.6
LOS	E	D	A	F	C	D	C	A	E	C
Approach Delay (s/veh)		46.0			38.4		29.0			31.2
Approach LOS		D			D		C			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 100.7	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay (s/veh): 39.1	Intersection LOS: D
Intersection Capacity Utilization 81.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 15: Barton St. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	1079	199	321	1181	36	315	69	321	25	44	80
Future Volume (veh/h)	93	1079	199	321	1181	36	315	69	321	25	44	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	99	1148	199	341	1256	28	335	73	191	27	47	50
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	126	1235	551	362	2466	55	413	369	308	48	86	92
Arrive On Green	0.07	0.35	0.35	0.20	0.48	0.48	0.12	0.20	0.20	0.03	0.10	0.10
Sat Flow, veh/h	1781	3554	1585	1781	5136	114	3456	1870	1560	1781	823	875
Grp Volume(v), veh/h	99	1148	199	341	832	452	335	73	191	27	0	97
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1702	1846	1728	1870	1560	1781	0	1698
Q Serve(g_s), s	5.2	29.7	8.9	18.0	16.1	16.1	9.0	3.1	10.7	1.4	0.0	5.2
Cycle Q Clear(g_c), s	5.2	29.7	8.9	18.0	16.1	16.1	9.0	3.1	10.7	1.4	0.0	5.2
Prop In Lane	1.00		1.00	1.00		0.06	1.00		1.00	1.00		0.52
Lane Grp Cap(c), veh/h	126	1235	551	362	1634	886	413	369	308	48	0	178
V/C Ratio(X)	0.79	0.93	0.36	0.94	0.51	0.51	0.81	0.20	0.62	0.57	0.00	0.55
Avail Cap(c_a), veh/h	248	1258	561	362	1634	886	659	795	663	93	0	509
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	0.00	1.00
Uniform Delay (d), s/veh	43.7	30.0	23.2	37.5	17.1	17.1	41.0	32.0	35.1	45.9	0.0	40.6
Incr Delay (d2), s/veh	4.1	12.0	0.4	32.3	0.3	0.5	1.8	0.3	2.0	3.9	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	2.3	13.5	3.1	10.5	5.5	6.0	3.8	1.4	3.9	0.7	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.7	42.0	23.6	69.8	17.3	17.6	42.8	32.3	37.1	49.8	0.0	43.2
LnGrp LOS	D	D	C	E	B	B	D	C	D	D		D
Approach Vol, veh/h		1446			1625			599			124	
Approach Delay, s/veh		39.9			28.4			39.7			44.6	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	24.6	24.0	39.7	16.0	15.8	11.3	52.3
Change Period (Y+Rc), s	4.6	5.8	4.6	* 6.5	4.6	* 5.8	4.6	6.5
Max Green Setting (Gmax), s	5.0	40.6	19.4	* 34	18.2	* 29	13.3	39.6
Max Q Clear Time (g_c+I1), s	3.4	12.7	20.0	31.7	11.0	7.2	7.2	18.1
Green Ext Time (p_c), s	0.0	1.0	0.0	1.5	0.4	0.5	0.0	7.8

Intersection Summary	
HCM 7th Control Delay, s/veh	35.1
HCM 7th LOS	D

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

APPENDIX 5.5:

EAP (2027) QUEUES WITH IMPROVEMENTS

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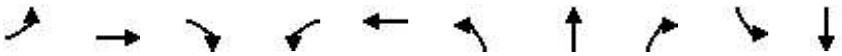
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	205	1150	96	1239	614	95	565	131	452	208	99
v/c Ratio	0.80	0.87	0.66	1.11	0.83	0.43	0.73	0.27	0.86	0.24	0.17
Control Delay (s/veh)	72.2	43.9	74.8	100.6	28.5	59.6	48.9	2.8	61.8	53.2	26.4
Queue Delay	0.0	0.0	0.0	0.0	30.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	72.2	43.9	74.8	100.6	58.6	59.6	48.9	2.8	61.8	53.2	26.4
Queue Length 50th (ft)	156	453	73	~608	213	37	219	0	193	106	42
Queue Length 95th (ft)	#254	#627	#178	#853	#488	65	262	17	m231	m133	m68
Internal Link Dist (ft)		123		1227			790			173	
Turn Bay Length (ft)	285		300		300	145		140	180		130
Base Capacity (vph)	296	1322	146	1118	738	337	973	567	555	969	630
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	151	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.87	0.66	1.11	1.05	0.28	0.58	0.23	0.81	0.21	0.16

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	119	956	108	288	1721	290	98	456	26	358
v/c Ratio	0.78	0.88	0.17	0.88	0.84	0.74	0.17	0.62	0.31	0.84
Control Delay (s/veh)	82.6	47.5	0.6	71.4	34.8	60.0	29.8	11.0	64.0	45.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	82.6	47.5	0.6	71.4	34.8	60.0	29.8	11.0	64.0	45.8
Queue Length 50th (ft)	85	343	0	204	403	104	54	48	19	175
Queue Length 95th (ft)	#203	#528	0	#403	#543	#175	97	153	52	288
Internal Link Dist (ft)		3107			1942		1095			637
Turn Bay Length (ft)	400			185		115		125	125	
Base Capacity (vph)	159	1124	634	341	2119	432	692	820	83	577
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.85	0.17	0.84	0.81	0.67	0.14	0.56	0.31	0.62

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	190	1283	139	1052	357	143	272	71	588	394	92
v/c Ratio	0.78	0.91	0.61	0.76	0.44	0.58	0.49	0.18	1.16	0.72	0.19
Control Delay (s/veh)	71.4	45.6	62.5	38.1	6.3	63.2	47.7	1.0	131.5	74.3	26.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	71.4	45.6	62.5	38.1	6.4	63.2	47.7	1.0	131.5	74.3	26.1
Queue Length 50th (ft)	145	493	103	370	10	56	105	0	~291	257	36
Queue Length 95th (ft)	224	#736	#244	#656	95	91	129	0	m#332	m281	m46
Internal Link Dist (ft)		123		1227			790			173	
Turn Bay Length (ft)	285		300		300	145		140	180		130
Base Capacity (vph)	283	1407	227	1380	820	277	973	567	509	808	632
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	23	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.91	0.61	0.76	0.45	0.52	0.28	0.13	1.16	0.49	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	99	1148	212	341	1294	335	73	341	27	132
v/c Ratio	0.58	0.96	0.32	0.99	0.59	0.71	0.16	0.53	0.31	0.47
Control Delay (s/veh)	59.0	52.1	6.9	89.8	24.9	51.3	31.4	6.6	58.9	25.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	59.0	52.1	6.9	89.8	24.9	51.3	31.4	6.6	58.9	25.6
Queue Length 50th (ft)	60	360	8	213	213	104	39	0	17	36
Queue Length 95th (ft)	132	#684	71	#506	384	177	76	66	53	94
Internal Link Dist (ft)		3107			1942		1095			637
Turn Bay Length (ft)	400			185		115		125	125	
Base Capacity (vph)	235	1196	662	343	2193	624	756	836	88	528
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.96	0.32	0.99	0.59	0.54	0.10	0.41	0.31	0.25

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

APPENDIX 6.1:

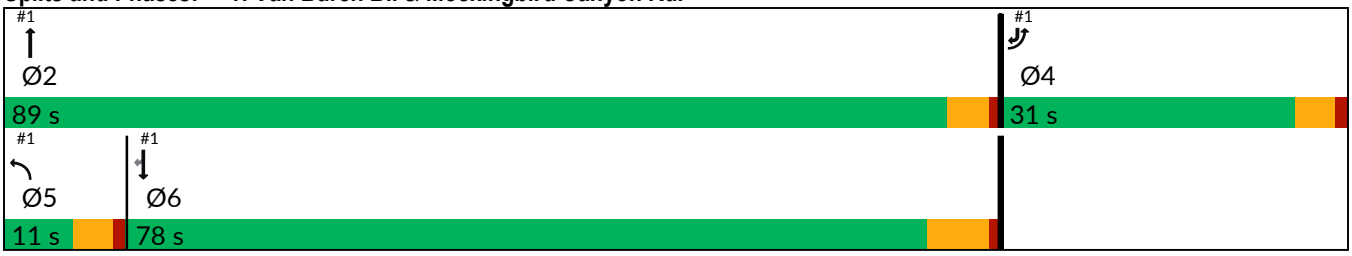
EAPC (2027) INTERSECTION ANALYSIS

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Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	520	45	1648	1216	169
Future Volume (vph)	520	45	1648	1216	169
Turn Type	Prot	Prot	NA	NA	pm+ov
Protected Phases	4	5	2	6	4
Permitted Phases					6
Detector Phase	4	5	2	6	4
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	29.6	9.6	26.1	28.5	29.6
Total Split (s)	31.0	11.0	89.0	78.0	31.0
Total Split (%)	25.8%	9.2%	74.2%	65.0%	25.8%
Yellow Time (s)	3.6	3.6	3.6	5.5	3.6
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)	4.6	4.6	4.6	6.5	4.6
Lead/Lag		Lead		Lag	
Lead-Lag Optimize?		Yes		Yes	
Recall Mode	None	None	None	None	None
Act Effct Green (s)	19.3	6.2	48.0	40.3	69.0
Actuated g/C Ratio	0.25	0.08	0.62	0.52	0.89
v/c Ratio	0.74	0.34	0.80	0.70	0.13
Control Delay (s/veh)	33.5	47.0	14.3	17.7	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	33.5	47.0	14.3	17.7	0.4
LOS	C	D	B	B	A
Approach Delay (s/veh)	33.5		15.1	15.5	
Approach LOS	C		B	B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 77.1	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay (s/veh): 18.3	Intersection LOS: B
Intersection Capacity Utilization 70.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Van Buren Bl. & Mockingbird Canyon Rd.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	520	75	45	1648	1216	169
Future Volume (veh/h)	520	75	45	1648	1216	169
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	626	0	48	1753	1294	175
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	761	339	79	2191	1782	1134
Arrive On Green	0.21	0.00	0.04	0.62	0.50	0.50
Sat Flow, veh/h	3563	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	626	0	48	1753	1294	175
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1777	1777	1585
Q Serve(g_s), s	10.9	0.0	1.7	24.4	18.6	2.3
Cycle Q Clear(g_c), s	10.9	0.0	1.7	24.4	18.6	2.3
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	761	339	79	2191	1782	1134
V/C Ratio(X)	0.82	0.00	0.61	0.80	0.73	0.15
Avail Cap(c_a), veh/h	1440	641	175	4592	3890	2074
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	24.5	0.0	30.6	9.5	12.8	3.0
Incr Delay (d2), s/veh	0.9	0.0	2.8	0.3	0.6	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	4.0	0.0	0.7	5.2	5.3	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	25.4	0.0	33.4	9.7	13.3	3.0
LnGrp LOS	C		C	A	B	A
Approach Vol, veh/h	626			1801	1469	
Approach Delay, s/veh	25.4			10.4	12.1	
Approach LOS	C			B	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		46.8		18.6	7.5	39.3
Change Period (Y+Rc), s		* 6.5		4.6	4.6	6.5
Max Green Setting (Gmax), s		* 84		26.4	6.4	71.5
Max Q Clear Time (g_c+I1), s		26.4		12.9	3.7	20.6
Green Ext Time (p_c), s		10.6		1.0	0.0	12.1

Intersection Summary						
HCM 7th Control Delay, s/veh			13.4			
HCM 7th LOS			B			

Notes

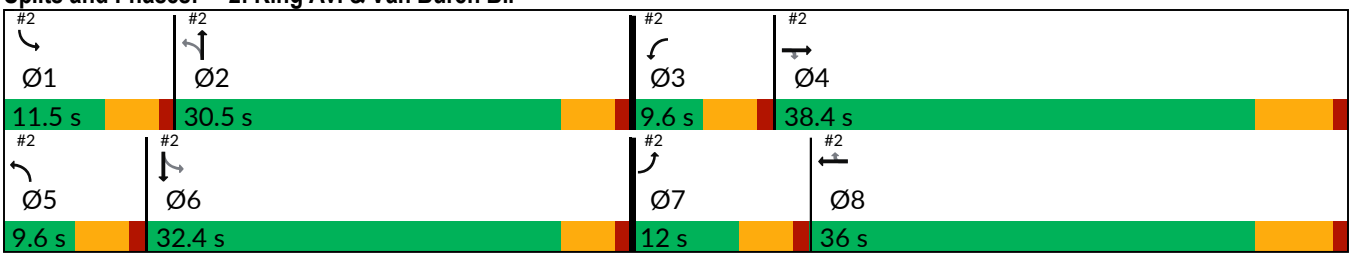
User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	179	1288	56	16	1444	22	184	133	124	43
Future Volume (vph)	179	1288	56	16	1444	22	184	133	124	43
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA
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	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.5	28.5	9.6	28.5	28.5	9.6	26.1	9.6	31.6
Total Split (s)	12.0	38.4	38.4	9.6	36.0	36.0	9.6	30.5	11.5	32.4
Total Split (%)	13.3%	42.7%	42.7%	10.7%	40.0%	40.0%	10.7%	33.9%	12.8%	36.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.4	40.3	40.3	5.0	29.9	29.9	19.8	14.8	23.2	16.5
Actuated g/C Ratio	0.09	0.51	0.51	0.06	0.38	0.38	0.25	0.19	0.29	0.21
v/c Ratio	1.21	0.80	0.07	0.16	1.21	0.04	0.60	0.60	0.46	0.34
Control Delay (s/veh)	173.1	22.9	0.2	41.0	127.1	0.1	29.8	33.0	24.0	12.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	173.1	22.9	0.2	41.0	127.1	0.1	29.8	33.0	24.0	12.2
LOS	F	C	A	D	F	A	C	C	C	B
Approach Delay (s/veh)		39.7			124.3			31.5		18.0
Approach LOS		D			F			C		B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 79	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.21	
Intersection Signal Delay (s/veh): 71.9	Intersection LOS: E
Intersection Capacity Utilization 87.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 2: King Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	1288	56	16	1444	22	184	133	56	124	43	86
Future Volume (veh/h)	179	1288	56	16	1444	22	184	133	56	124	43	86
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	201	1447	35	18	1622	21	207	149	32	139	48	50
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	180	1727	770	37	1443	644	348	198	43	299	126	131
Arrive On Green	0.10	0.49	0.49	0.02	0.41	0.41	0.07	0.13	0.13	0.09	0.15	0.15
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1492	320	1781	827	862
Grp Volume(v), veh/h	201	1447	35	18	1622	21	207	0	181	139	0	98
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	0	1813	1781	0	1689
Q Serve(g_s), s	7.4	25.9	0.9	0.7	29.8	0.6	5.0	0.0	7.1	4.8	0.0	3.8
Cycle Q Clear(g_c), s	7.4	25.9	0.9	0.7	29.8	0.6	5.0	0.0	7.1	4.8	0.0	3.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		0.51
Lane Grp Cap(c), veh/h	180	1727	770	37	1443	644	348	0	241	299	0	258
V/C Ratio(X)	1.12	0.84	0.05	0.48	1.12	0.03	0.59	0.00	0.75	0.47	0.00	0.38
Avail Cap(c_a), veh/h	180	1727	770	121	1443	644	348	0	640	310	0	640
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	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.0	16.4	9.9	35.5	21.8	13.1	27.5	0.0	30.7	24.6	0.0	28.0
Incr Delay (d2), s/veh	102.7	3.8	0.0	3.6	65.5	0.0	1.9	0.0	4.7	0.4	0.0	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	8.0	9.1	0.2	0.3	23.2	0.2	1.1	0.0	3.3	2.0	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	135.7	20.2	9.9	39.1	87.3	13.1	29.4	0.0	35.3	25.0	0.0	28.9
LnGrp LOS	F	C	A	D	F	B	C		D	C		C
Approach Vol, veh/h		1683			1661			388			237	
Approach Delay, s/veh		33.8			85.8			32.2			26.6	
Approach LOS		C			F			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	14.4	6.1	41.9	9.6	15.8	12.0	36.0
Change Period (Y+Rc), s	4.6	4.6	4.6	6.2	4.6	4.6	4.6	6.2
Max Green Setting (Gmax), s	6.9	25.9	5.0	32.2	5.0	27.8	7.4	29.8
Max Q Clear Time (g_c+I1), s	6.8	9.1	2.7	27.9	7.0	5.8	9.4	31.8
Green Ext Time (p_c), s	0.0	0.9	0.0	3.1	0.0	0.5	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	55.0
HCM 7th LOS	D

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1479	1454	39	0	32
Future Vol, veh/h	0	1479	1454	39	0	32
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	1608	1580	42	0	35

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	811
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	322
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	322
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	17.52
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	322
HCM Lane V/C Ratio	-	-	-	0.108
HCM Ctrl Dly (s/v)	-	-	-	17.5
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.4

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1479	1435	69	0	58
Future Vol, veh/h	0	1479	1435	69	0	58
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	1608	1560	75	0	63

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	817
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	319
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	319
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	19.02
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	319
HCM Lane V/C Ratio	-	-	-	0.197
HCM Ctrl Dly (s/v)	-	-	-	19
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.7

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	87	35	1169	602	72
Future Vol, veh/h	10	87	35	1169	602	72
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	11	95	38	1271	654	78

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2040	693	733	0	-	0
Stage 1	693	-	-	-	-	-
Stage 2	1347	-	-	-	-	-
Critical Hdwy	5.9	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	83	443	872	-	-	-
Stage 1	496	-	-	-	-	-
Stage 2	242	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	71	443	872	-	-	-
Mov Cap-2 Maneuver	71	-	-	-	-	-
Stage 1	422	-	-	-	-	-
Stage 2	242	-	-	-	-	-

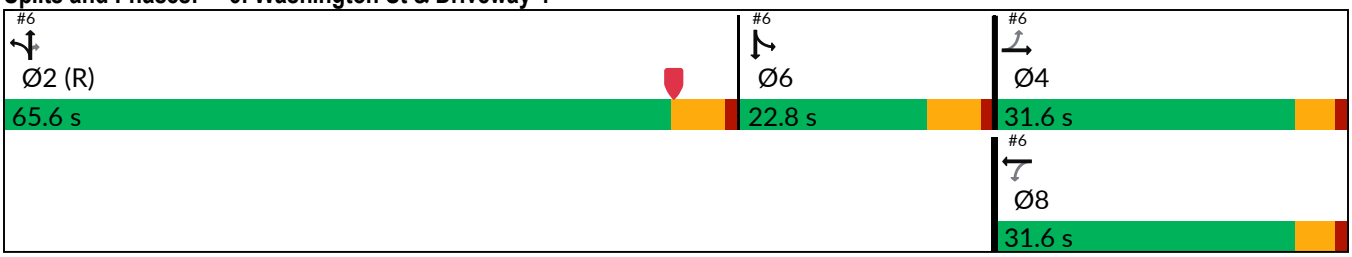
Approach	EB	NB	SB
HCM Ctrl Dly, s/v	24.58	0.27	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	52	-	288	-	-
HCM Lane V/C Ratio	0.044	-	0.366	-	-
HCM Ctrl Dly (s/v)	9.3	0	24.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.6	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Configurations								
Traffic Volume (vph)	10	0	30	0	140	1150	68	655
Future Volume (vph)	10	0	30	0	140	1150	68	655
Turn Type	Perm	NA	Perm	NA	Split	NA	Perm	NA
Protected Phases		4		8	2	2		6
Permitted Phases	4		8				2	
Detector Phase	4	4	8	8	2	2	2	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	31.6	31.6	31.6	31.6	22.8	22.8	22.8	22.8
Total Split (s)	31.6	31.6	31.6	31.6	65.6	65.6	65.6	22.8
Total Split (%)	26.3%	26.3%	26.3%	26.3%	54.7%	54.7%	54.7%	19.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	4.8	4.8	4.8
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
Total Lost Time (s)		4.6		4.6	5.8	5.8	5.8	5.8
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Min	Min	Min	Min	C-Max	C-Max	C-Max	None
Act Effct Green (s)		13.4		13.4	73.4	73.4	73.4	17.0
Actuated g/C Ratio		0.11		0.11	0.61	0.61	0.61	0.14
v/c Ratio		0.42		0.41	0.13	1.04	0.07	0.98
Control Delay (s/veh)		15.1		17.4	11.5	55.6	4.4	79.6
Queue Delay		0.0		0.0	0.0	23.6	0.0	0.0
Total Delay (s/veh)		15.1		17.4	11.5	79.2	4.4	79.6
LOS		B		B	B	E	A	E
Approach Delay (s/veh)		15.1		17.4		68.5		79.6
Approach LOS		B		B		E		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 63.6 (53%), Referenced to phase 2:NBTL, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay (s/veh): 67.4	Intersection LOS: E
Intersection Capacity Utilization 98.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 6: Washington St & Driveway 4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	101	30	0	52	140	1150	68	18	655	8
Future Volume (veh/h)	10	0	101	30	0	52	140	1150	68	18	655	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	10	0	104	31	0	54	144	1186	70	19	675	8
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	39	6	132	79	13	89	1129	1185	1004	21	739	9
Arrive On Green	0.09	0.00	0.09	0.09	0.00	0.09	1.00	1.00	1.00	0.14	0.14	0.14
Sat Flow, veh/h	76	65	1472	429	141	992	1781	1870	1585	147	5216	62
Grp Volume(v), veh/h	114	0	0	85	0	0	144	1186	70	241	220	241
Grp Sat Flow(s),veh/h/ln	1613	0	0	1562	0	0	1781	1870	1585	1863	1702	1859
Q Serve(g_s), s	2.1	0.0	0.0	0.0	0.0	0.0	0.0	76.0	0.0	15.3	15.3	15.3
Cycle Q Clear(g_c), s	8.2	0.0	0.0	6.1	0.0	0.0	0.0	76.0	0.0	15.3	15.3	15.3
Prop In Lane	0.09		0.91	0.36		0.64	1.00		1.00	0.08		0.03
Lane Grp Cap(c), veh/h	177	0	0	181	0	0	1129	1185	1004	264	241	263
V/C Ratio(X)	0.64	0.00	0.00	0.47	0.00	0.00	0.13	1.00	0.07	0.91	0.91	0.91
Avail Cap(c_a), veh/h	389	0	0	379	0	0	1129	1185	1004	264	241	263
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.5	0.0	0.0	52.4	0.0	0.0	0.0	0.0	0.0	50.8	50.8	50.8
Incr Delay (d2), s/veh	3.9	0.0	0.0	1.9	0.0	0.0	0.2	26.3	0.1	33.5	35.4	33.7
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	0.0	0.0	2.6	0.0	0.0	0.1	8.7	0.0	9.4	8.7	9.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	57.3	0.0	0.0	54.3	0.0	0.0	0.2	26.3	0.1	84.3	86.2	84.4
LnGrp LOS	E			D			A	C	A	F	F	F
Approach Vol, veh/h		114			85			1400			702	
Approach Delay, s/veh		57.3			54.3			22.3			84.9	
Approach LOS		E			D			C			F	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	81.8	15.4	22.8	15.4
Change Period (Y+Rc), s	5.8	4.6	5.8	4.6
Max Green Setting (Gmax), s	59.8	27.0	17.0	27.0
Max Q Clear Time (g_c+I1), s	78.0	10.2	17.3	8.1
Green Ext Time (p_c), s	0.0	0.5	0.0	0.4

Intersection Summary	
HCM 7th Control Delay, s/veh	44.3
HCM 7th LOS	D

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	10	0	1335	756	14
Future Vol, veh/h	0	10	0	1335	756	14
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	-	-	-	50
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	11	0	1451	822	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	411	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	504	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	504	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

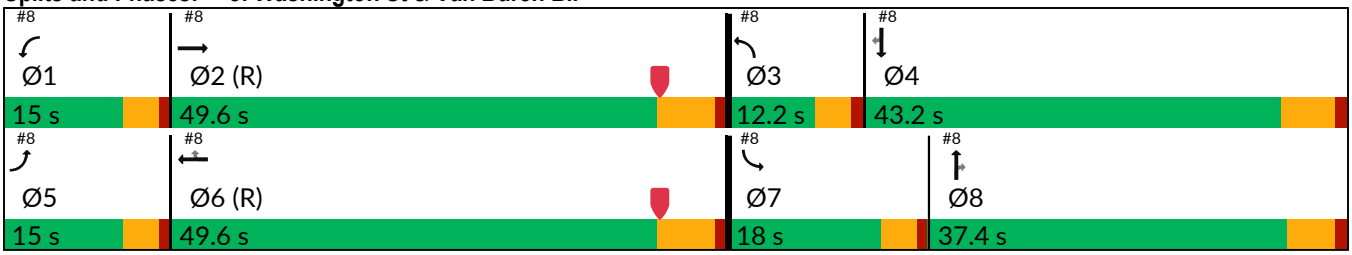
Approach	EB	NB	SB
HCM Ctrl Dly, s/v	12.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	504	-	-
HCM Lane V/C Ratio	-	0.022	-	-
HCM Ctrl Dly (s/v)	-	12.3	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	202	1269	190	1402	637	98	527	222	502	197	99
Future Volume (vph)	202	1269	190	1402	637	98	527	222	502	197	99
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.2	34.2	9.2	33.2	33.2	9.2	37.4	37.4	9.2	30.8	30.8
Total Split (s)	15.0	49.6	15.0	49.6	49.6	12.2	37.4	37.4	18.0	43.2	43.2
Total Split (%)	12.5%	41.3%	12.5%	41.3%	41.3%	10.2%	31.2%	31.2%	15.0%	36.0%	36.0%
Yellow Time (s)	3.2	5.2	3.2	5.2	5.2	3.2	4.4	4.4	3.2	4.8	4.8
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)	4.2	6.2	4.2	6.2	6.2	4.2	5.4	5.4	4.2	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	16.3	43.4	16.3	43.4	43.4	7.3	26.5	26.5	13.8	32.6	32.6
Actuated g/C Ratio	0.14	0.36	0.14	0.36	0.36	0.06	0.22	0.22	0.12	0.27	0.27
v/c Ratio	0.90	1.19	0.85	1.18	0.94	0.50	0.73	0.48	1.37	0.22	0.21
Control Delay (s/veh)	90.1	127.4	81.7	124.2	45.6	62.9	48.7	12.8	213.9	52.3	32.5
Queue Delay	0.0	0.0	0.0	0.0	44.9	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay (s/veh)	90.1	127.4	81.7	124.2	90.4	62.9	48.8	12.8	213.9	52.3	32.5
LOS	F	F	F	F	F	E	D	B	F	D	C
Approach Delay (s/veh)		122.7		111.0			41.0			151.6	
Approach LOS		F		F			D			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.37	
Intersection Signal Delay (s/veh): 109.5	Intersection LOS: F
Intersection Capacity Utilization 95.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 8: Washington St & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	1269	128	190	1402	637	98	527	222	502	197	99
Future Volume (veh/h)	202	1269	128	190	1402	637	98	527	222	502	197	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	217	1365	99	204	1508	483	105	567	176	540	212	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	160	1430	103	160	1514	674	157	707	315	397	954	426
Arrive On Green	0.09	0.43	0.43	0.09	0.43	0.43	0.05	0.20	0.20	0.12	0.27	0.27
Sat Flow, veh/h	1781	3357	243	1781	3554	1582	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	217	720	744	204	1508	483	105	567	176	540	212	48
Grp Sat Flow(s),veh/h/ln	1781	1777	1823	1781	1777	1582	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	10.8	46.9	47.5	10.8	50.8	30.3	3.6	18.2	12.0	13.8	5.6	2.7
Cycle Q Clear(g_c), s	10.8	46.9	47.5	10.8	50.8	30.3	3.6	18.2	12.0	13.8	5.6	2.7
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	160	757	777	160	1514	674	157	707	315	397	954	426
V/C Ratio(X)	1.35	0.95	0.96	1.27	1.00	0.72	0.67	0.80	0.56	1.36	0.22	0.11
Avail Cap(c_a), veh/h	160	757	777	160	1514	674	230	948	423	397	1108	494
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	54.6	33.2	33.4	54.6	34.3	28.5	56.4	45.8	43.3	53.1	34.1	33.1
Incr Delay (d2), s/veh	194.3	22.8	23.5	162.2	22.2	6.4	1.8	3.7	1.5	177.1	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	13.3	23.4	24.3	11.9	24.8	12.6	1.6	8.5	4.9	15.6	2.4	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	248.9	56.0	56.8	216.8	56.5	34.9	58.2	49.5	44.9	230.2	34.3	33.2
LnGrp LOS	F	E	E	F	E	C	E	D	D	F	C	C
Approach Vol, veh/h		1681			2195			848			800	
Approach Delay, s/veh		81.3			66.7			49.6			166.5	
Approach LOS		F			E			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	57.3	9.7	38.0	15.0	57.3	18.0	29.7
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	10.8	43.4	8.0	37.4	10.8	43.4	13.8	* 32
Max Q Clear Time (g_c+I1), s	12.8	49.5	5.6	7.6	12.8	52.8	15.8	20.2
Green Ext Time (p_c), s	0.0	0.0	0.0	1.4	0.0	0.0	0.0	3.6

Intersection Summary	
HCM 7th Control Delay, s/veh	82.9
HCM 7th LOS	F

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	429.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	1850	10	183	2189	4	29	0	51	1	0	14
Future Vol, veh/h	11	1850	10	183	2189	4	29	0	51	1	0	14
Conflicting Peds, #/hr	0	0	1	0	0	6	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	275	-	-	255	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	1947	11	193	2304	4	31	0	54	1	0	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2314	0	0	1959	0	0	3514	4676	980	3694	4680	1160
Stage 1	-	-	-	-	-	-	1977	1977	-	2698	2698	-
Stage 2	-	-	-	-	-	-	1537	2700	-	997	1982	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	213	-	-	294	-	-	~ 2	1	249	2	1	189
Stage 1	-	-	-	-	-	-	64	106	-	22	45	-
Stage 2	-	-	-	-	-	-	121	45	-	262	105	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	211	-	-	293	-	-	~ 1	0	249	~ 0	0	188
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 1	0	-	~ 0	0	-
Stage 1	-	-	-	-	-	-	60	100	-	7	15	-
Stage 2	-	-	-	-	-	-	38	15	-	194	100	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.14	2.92	$ 23240.95	
HCM LOS			F	-

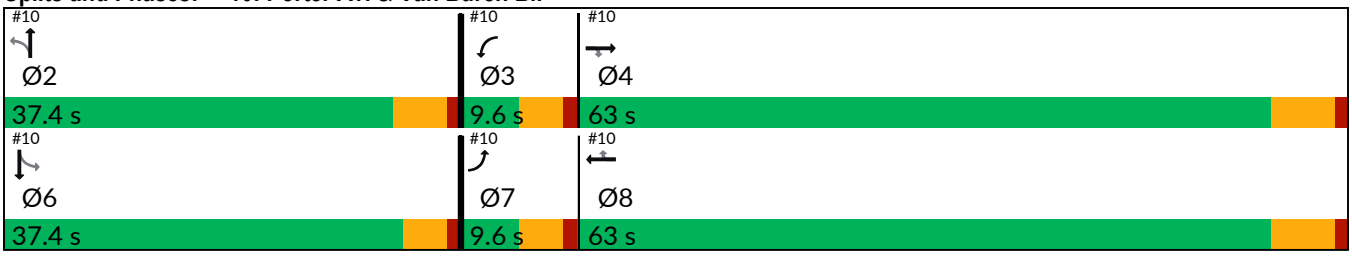
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	2	211	-	-	293	-	-	-
HCM Lane V/C Ratio	44.453	0.055	-	-	0.657	-	-	-
HCM Ctrl Dly (s/v)	$ 23240.9	23	-	-	38	-	-	-
HCM Lane LOS	F	C	-	-	E	-	-	-
HCM 95th %tile Q(veh)	12.8	0.2	-	-	4.3	-	-	-

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	6	1908	67	19	2256	11	20	0	31	7
Future Volume (vph)	6	1908	67	19	2256	11	20	0	31	7
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)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	27.7	27.7	9.6	27.7	27.7	36.9	36.9	35.6	35.6
Total Split (s)	9.6	63.0	63.0	9.6	63.0	63.0	37.4	37.4	37.4	37.4
Total Split (%)	8.7%	57.3%	57.3%	8.7%	57.3%	57.3%	34.0%	34.0%	34.0%	34.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	4.4	4.4	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2		5.4		4.6
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	None	None	None	None
Act Effct Green (s)	5.2	60.3	60.3	5.2	62.1	62.1		13.5		14.2
Actuated g/C Ratio	0.06	0.72	0.72	0.06	0.74	0.74		0.16		0.17
v/c Ratio	0.06	0.79	0.06	0.18	0.91	0.01		0.20		0.24
Control Delay (s/veh)	45.7	16.2	3.0	47.8	20.2	0.0		6.6		24.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay (s/veh)	45.7	16.2	3.0	47.8	20.2	0.0		6.6		24.4
LOS	D	B	A	D	C	A		A		C
Approach Delay (s/veh)		15.9			20.3			6.6		24.4
Approach LOS		B			C			A		C

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 83.4	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay (s/veh): 18.2	Intersection LOS: B
Intersection Capacity Utilization 80.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 10: Porter Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1908	67	19	2256	11	20	0	38	31	7	21
Future Volume (veh/h)	6	1908	67	19	2256	11	20	0	38	31	7	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	6	2030	61	20	2400	12	21	0	31	33	7	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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	14	2433	1085	40	2485	1105	101	20	86	137	36	44
Arrive On Green	0.01	0.68	0.68	0.02	0.70	0.70	0.09	0.00	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1781	3554	1585	1781	3554	1581	413	217	930	723	385	471
Grp Volume(v), veh/h	6	2030	61	20	2400	12	52	0	0	57	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1581	1560	0	0	1579	0	0
Q Serve(g_s), s	0.3	34.0	1.0	0.9	50.6	0.2	0.0	0.0	0.0	0.1	0.0	0.0
Cycle Q Clear(g_c), s	0.3	34.0	1.0	0.9	50.6	0.2	2.3	0.0	0.0	2.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.40		0.60	0.58		0.30
Lane Grp Cap(c), veh/h	14	2433	1085	40	2485	1105	207	0	0	217	0	0
V/C Ratio(X)	0.43	0.83	0.06	0.50	0.97	0.01	0.25	0.00	0.00	0.26	0.00	0.00
Avail Cap(c_a), veh/h	110	2496	1113	110	2496	1110	661	0	0	681	0	0
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	0.00	0.00
Uniform Delay (d), s/veh	39.9	9.4	4.2	39.1	11.3	3.7	34.3	0.0	0.0	34.4	0.0	0.0
Incr Delay (d2), s/veh	7.7	2.5	0.0	3.6	11.2	0.0	0.6	0.0	0.0	0.6	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	0.1	8.7	0.2	0.4	14.9	0.0	0.9	0.0	0.0	1.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.6	11.9	4.2	42.7	22.4	3.7	35.0	0.0	0.0	35.0	0.0	0.0
LnGrp LOS	D	B	A	D	C	A	C			D		
Approach Vol, veh/h		2097			2432			52			57	
Approach Delay, s/veh		11.8			22.5			35.0			35.0	
Approach LOS		B			C			C			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.9	6.4	61.6		12.9	5.2	62.7				
Change Period (Y+Rc), s		5.4	4.6	6.2		* 5.4	4.6	6.2				
Max Green Setting (Gmax), s		32.0	5.0	56.8		* 33	5.0	56.8				
Max Q Clear Time (g_c+I1), s		4.3	2.9	36.0		4.4	2.3	52.6				
Green Ext Time (p_c), s		0.2	0.0	15.1		0.3	0.0	3.9				

Intersection Summary	
HCM 7th Control Delay, s/veh	18.0
HCM 7th LOS	B

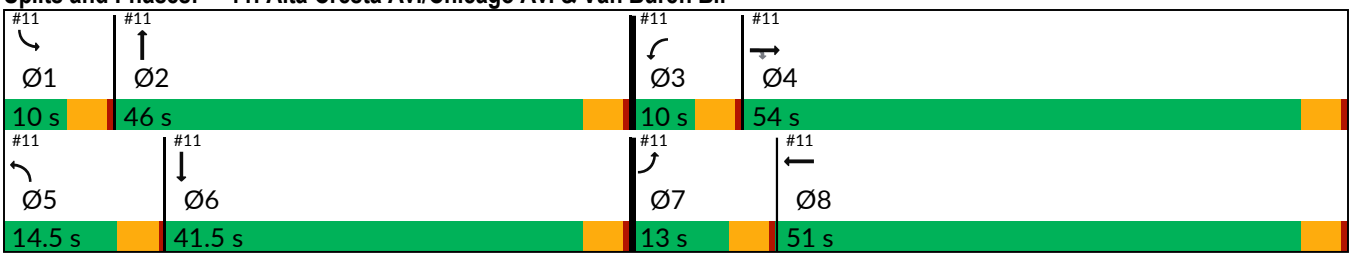
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	188	1579	81	100	2031	67	81	118	6
Future Volume (vph)	188	1579	81	100	2031	67	81	118	6
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.1	30.1	30.1	9.1	30.1	9.1	44.1	9.1	26.1
Total Split (s)	13.0	54.0	54.0	10.0	51.0	14.5	46.0	10.0	41.5
Total Split (%)	10.8%	45.0%	45.0%	8.3%	42.5%	12.1%	38.3%	8.3%	34.6%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	9.0	50.6	50.6	6.0	47.6	8.6	15.0	6.0	14.6
Actuated g/C Ratio	0.10	0.54	0.54	0.06	0.51	0.09	0.16	0.06	0.15
v/c Ratio	1.20	0.89	0.10	0.96	1.24	0.44	0.48	1.13	0.17
Control Delay (s/veh)	170.3	28.6	1.7	123.9	139.5	52.2	31.8	168.6	13.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	170.3	28.6	1.7	123.9	139.5	52.2	31.8	168.6	13.4
LOS	F	C	A	F	F	D	C	F	B
Approach Delay (s/veh)		41.8			138.7		38.6		124.7
Approach LOS		D			F		D		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 94.2	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.24	
Intersection Signal Delay (s/veh): 92.7	Intersection LOS: F
Intersection Capacity Utilization 95.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 11: Alta Cresta Av./Chicago Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	1579	81	100	2031	34	67	81	54	118	6	41
Future Volume (veh/h)	188	1579	81	100	2031	34	67	81	54	118	6	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	202	1698	71	108	2184	36	72	87	31	127	6	38
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	184	2054	916	122	1943	32	93	126	45	122	25	156
Arrive On Green	0.10	0.58	0.58	0.07	0.54	0.54	0.05	0.10	0.10	0.07	0.11	0.11
Sat Flow, veh/h	1781	3554	1585	1781	3576	59	1781	1317	469	1781	221	1398
Grp Volume(v), veh/h	202	1698	71	108	1082	1138	72	0	118	127	0	44
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1858	1781	0	1786	1781	0	1619
Q Serve(g_s), s	8.9	33.3	1.7	5.2	46.9	46.9	3.4	0.0	5.5	5.9	0.0	2.1
Cycle Q Clear(g_c), s	8.9	33.3	1.7	5.2	46.9	46.9	3.4	0.0	5.5	5.9	0.0	2.1
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.26	1.00		0.86
Lane Grp Cap(c), veh/h	184	2054	916	122	965	1009	93	0	170	122	0	180
V/C Ratio(X)	1.10	0.83	0.08	0.89	1.12	1.13	0.77	0.00	0.69	1.04	0.00	0.24
Avail Cap(c_a), veh/h	184	2054	916	122	965	1009	215	0	867	122	0	701
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	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.7	14.7	8.0	39.9	19.7	19.7	40.4	0.0	37.8	40.2	0.0	35.0
Incr Delay (d2), s/veh	95.7	2.9	0.0	48.8	68.0	70.4	12.6	0.0	5.0	93.6	0.0	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	8.5	11.1	0.5	3.8	33.4	35.6	1.8	0.0	2.6	5.7	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	134.4	17.7	8.1	88.7	87.8	90.1	53.0	0.0	42.8	133.9	0.0	35.7
LnGrp LOS	F	B	A	F	F	F	D		D	F		D
Approach Vol, veh/h		1971			2328			190			171	
Approach Delay, s/veh		29.3			88.9			46.7			108.6	
Approach LOS		C			F			D			F	

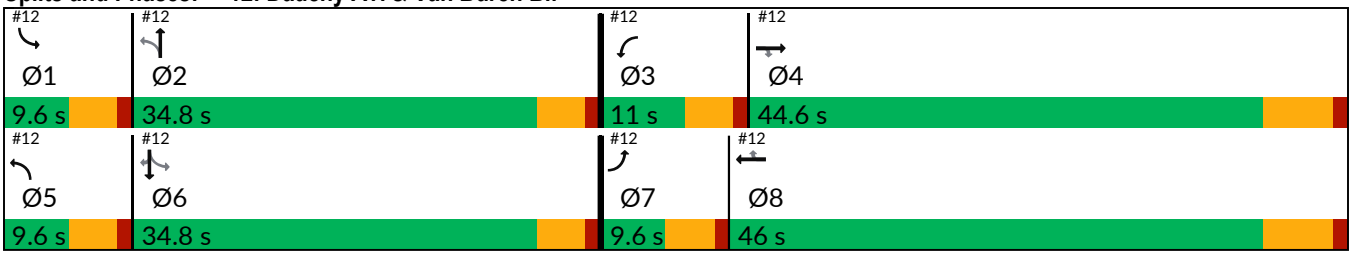
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	12.3	10.0	54.0	8.6	13.7	13.0	51.0
Change Period (Y+Rc), s	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Max Green Setting (Gmax), s	5.9	41.9	5.9	49.9	10.4	37.4	8.9	46.9
Max Q Clear Time (g_c+I1), s	7.9	7.5	7.2	35.3	5.4	4.1	10.9	48.9
Green Ext Time (p_c), s	0.0	0.7	0.0	9.8	0.1	0.2	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	62.7
HCM 7th LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	48	1447	250	125	1900	15	202	61	46	107	51
Future Volume (vph)	48	1447	250	125	1900	15	202	61	46	107	51
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	28.2	28.2	9.6	28.2	28.2	9.6	26.6	9.6	33.6	33.6
Total Split (s)	9.6	44.6	44.6	11.0	46.0	46.0	9.6	34.8	9.6	34.8	34.8
Total Split (%)	9.6%	44.6%	44.6%	11.0%	46.0%	46.0%	9.6%	34.8%	9.6%	34.8%	34.8%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	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	None	None	None	None
Act Effct Green (s)	5.1	38.9	38.9	6.5	42.6	42.6	19.0	16.2	16.9	14.2	14.2
Actuated g/C Ratio	0.06	0.47	0.47	0.08	0.52	0.52	0.23	0.20	0.20	0.17	0.17
v/c Ratio	0.48	0.94	0.34	0.99	1.13	0.02	0.77	0.56	0.21	0.36	0.15
Control Delay (s/veh)	56.7	35.8	10.5	116.1	91.2	0.1	46.5	18.8	23.7	33.4	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	56.7	35.8	10.5	116.1	91.2	0.1	46.5	18.8	23.7	33.4	0.8
LOS	E	D	B	F	F	A	D	B	C	C	A
Approach Delay (s/veh)		32.8			92.0			32.0		23.1	
Approach LOS		C			F			C		C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 82.6	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.13	
Intersection Signal Delay (s/veh): 59.6	Intersection LOS: E
Intersection Capacity Utilization 93.9%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 12: Dauchy Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	1447	250	125	1900	15	202	61	163	46	107	51
Future Volume (veh/h)	48	1447	250	125	1900	15	202	61	163	46	107	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	52	1573	192	136	2065	8	220	66	114	50	116	28
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	77	1694	756	144	1829	797	289	91	157	220	237	197
Arrive On Green	0.04	0.48	0.48	0.08	0.51	0.51	0.06	0.15	0.15	0.04	0.13	0.13
Sat Flow, veh/h	1781	3554	1585	1781	3554	1549	1781	616	1063	1781	1870	1556
Grp Volume(v), veh/h	52	1573	192	136	2065	8	220	0	180	50	116	28
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1549	1781	0	1679	1781	1870	1556
Q Serve(g_s), s	2.3	32.9	5.7	6.0	40.7	0.2	5.0	0.0	8.1	1.9	4.6	1.3
Cycle Q Clear(g_c), s	2.3	32.9	5.7	6.0	40.7	0.2	5.0	0.0	8.1	1.9	4.6	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.63	1.00		1.00
Lane Grp Cap(c), veh/h	77	1694	756	144	1829	797	289	0	248	220	237	197
V/C Ratio(X)	0.68	0.93	0.25	0.94	1.13	0.01	0.76	0.00	0.73	0.23	0.49	0.14
Avail Cap(c_a), veh/h	113	1724	769	144	1829	797	289	0	641	258	714	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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	19.4	12.3	36.2	19.2	9.4	32.1	0.0	32.2	28.4	32.2	30.7
Incr Delay (d2), s/veh	3.9	9.2	0.2	57.6	65.8	0.0	10.2	0.0	4.0	0.2	1.6	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	1.0	13.1	1.7	4.7	29.7	0.1	2.6	0.0	3.5	0.8	2.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.2	28.7	12.5	93.8	85.0	9.4	42.3	0.0	36.3	28.6	33.8	31.1
LnGrp LOS	D	C	B	F	F	A	D		D	C	C	C
Approach Vol, veh/h		1817			2209			400			194	
Approach Delay, s/veh		27.3			85.2			39.6			32.0	
Approach LOS		C			F			D			C	

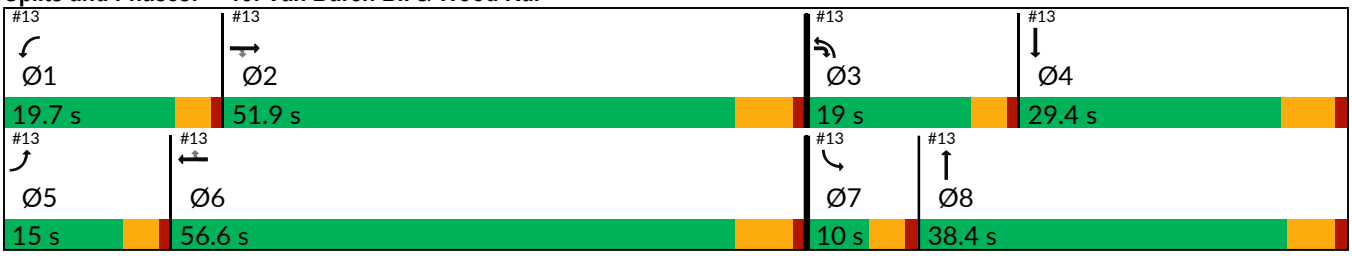
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	16.3	11.0	43.9	9.6	14.6	8.0	46.9
Change Period (Y+Rc), s	4.6	4.6	4.6	6.2	4.6	4.6	4.6	6.2
Max Green Setting (Gmax), s	5.0	30.2	6.4	38.4	5.0	30.2	5.0	39.8
Max Q Clear Time (g_c+I1), s	3.9	10.1	8.0	34.9	7.0	6.6	4.3	42.7
Green Ext Time (p_c), s	0.0	1.0	0.0	2.8	0.0	0.7	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	56.3
HCM 7th LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	173	1106	367	411	1505	187	473	441	77	474
Future Volume (vph)	173	1106	367	411	1505	187	473	441	77	474
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6		3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	3	1	6	6	3	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.2	30.2	9.2	9.2	30.2	30.2	9.2	38.4	9.2	15.8
Total Split (s)	15.0	51.9	19.0	19.7	56.6	56.6	19.0	38.4	10.0	29.4
Total Split (%)	12.5%	43.3%	15.8%	16.4%	47.2%	47.2%	15.8%	32.0%	8.3%	24.5%
Yellow Time (s)	3.2	5.2	3.2	3.2	5.2	5.2	3.2	4.4	3.2	4.8
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)	4.2	6.2	4.2	4.2	6.2	6.2	4.2	5.4	4.2	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.8	45.7	62.5	15.5	50.4	50.4	14.8	33.0	5.8	23.6
Actuated g/C Ratio	0.09	0.38	0.52	0.13	0.42	0.42	0.12	0.28	0.05	0.20
v/c Ratio	1.21	0.91	0.48	1.03	1.13	0.28	1.24	0.80	1.01	1.10
Control Delay (s/veh)	184.1	46.6	13.8	102.1	99.1	8.9	171.6	42.8	157.7	105.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	184.1	46.6	13.8	102.1	99.1	8.9	171.6	42.8	157.7	105.4
LOS	F	D	B	F	F	A	F	D	F	F
Approach Delay (s/veh)		53.7			91.7			95.0		110.6
Approach LOS		D			F			F		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.24	
Intersection Signal Delay (s/veh): 84.0	Intersection LOS: F
Intersection Capacity Utilization 101.9%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 13: Van Buren Bl. & Wood Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	173	1106	367	411	1505	187	473	441	253	77	474	223
Future Volume (veh/h)	173	1106	367	411	1505	187	473	441	253	77	474	223
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.92	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	192	1229	225	457	1672	128	526	490	125	86	527	164
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	160	1353	785	446	1493	661	426	749	189	86	523	162
Arrive On Green	0.09	0.38	0.38	0.13	0.42	0.42	0.12	0.27	0.27	0.05	0.20	0.20
Sat Flow, veh/h	1781	3554	1549	3456	3554	1575	3456	2758	697	1781	2662	824
Grp Volume(v), veh/h	192	1229	225	457	1672	128	526	314	301	86	351	340
Grp Sat Flow(s),veh/h/ln	1781	1777	1549	1728	1777	1575	1728	1777	1678	1781	1777	1709
Q Serve(g_s), s	10.8	39.3	10.1	15.5	50.4	6.2	14.8	18.8	19.1	5.8	23.6	23.6
Cycle Q Clear(g_c), s	10.8	39.3	10.1	15.5	50.4	6.2	14.8	18.8	19.1	5.8	23.6	23.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.42	1.00		0.48
Lane Grp Cap(c), veh/h	160	1353	785	446	1493	661	426	483	456	86	349	336
V/C Ratio(X)	1.20	0.91	0.29	1.02	1.12	0.19	1.23	0.65	0.66	1.00	1.00	1.01
Avail Cap(c_a), veh/h	160	1353	785	446	1493	661	426	489	461	86	349	336
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	54.6	35.2	17.3	52.3	34.8	22.0	52.6	38.7	38.8	57.1	48.2	48.2
Incr Delay (d2), s/veh	134.1	9.4	0.3	48.8	63.7	0.2	124.2	3.0	3.4	96.6	49.2	52.1
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	10.6	17.6	3.5	9.5	33.2	2.3	13.6	8.4	8.1	4.9	15.0	14.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	188.7	44.5	17.5	101.0	98.5	22.2	176.8	41.7	42.2	153.7	97.4	100.3
LnGrp LOS	F	D	B	F	F	C	F	D	D	F	F	F
Approach Vol, veh/h		1646			2257			1141			777	
Approach Delay, s/veh		57.6			94.7			104.1			104.9	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.7	51.9	19.0	29.4	15.0	56.6	10.0	38.4
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	15.5	45.7	14.8	23.6	10.8	50.4	5.8	* 33
Max Q Clear Time (g_c+I1), s	17.5	41.3	16.8	25.6	12.8	52.4	7.8	21.1
Green Ext Time (p_c), s	0.0	3.5	0.0	0.0	0.0	0.0	0.0	2.8

Intersection Summary	
HCM 7th Control Delay, s/veh	87.4
HCM 7th LOS	F

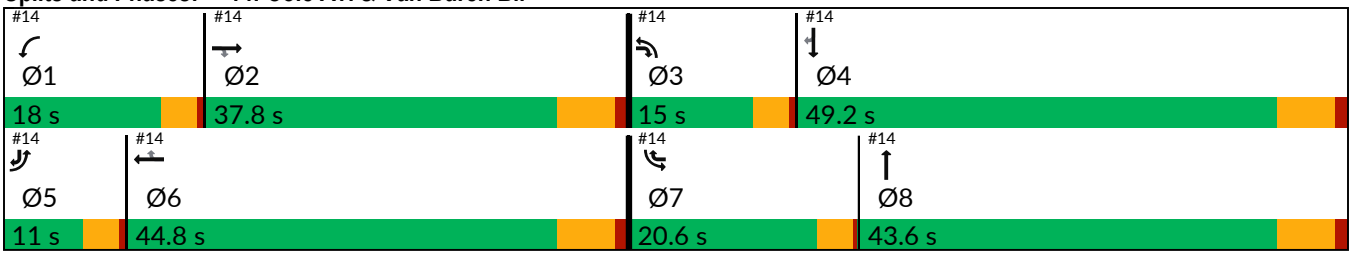
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	278	921	153	333	1516	479	262	456	207	356	274
Future Volume (vph)	278	921	153	333	1516	479	262	456	207	356	274
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8	7	4	5
Permitted Phases			2			6					4
Detector Phase	5	2	3	1	6	7	3	8	7	4	5
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0
Minimum Split (s)	9.1	36.2	9.1	9.1	36.2	9.1	9.1	42.2	9.1	49.2	9.1
Total Split (s)	11.0	37.8	15.0	18.0	44.8	20.6	15.0	43.6	20.6	49.2	11.0
Total Split (%)	9.2%	31.5%	12.5%	15.0%	37.3%	17.2%	12.5%	36.3%	17.2%	41.0%	9.2%
Yellow Time (s)	3.2	5.2	3.2	3.2	5.2	3.2	3.2	5.2	3.2	5.2	3.2
All-Red Time (s)	0.5	1.0	0.5	0.5	1.0	0.5	0.5	1.0	0.5	1.0	0.5
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)	3.7	6.2	3.7	3.7	6.2	3.7	3.7	6.2	3.7	6.2	3.7
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.4	31.9	45.8	14.4	38.9	52.6	11.4	23.6	11.1	23.4	33.2
Actuated g/C Ratio	0.07	0.32	0.45	0.14	0.39	0.52	0.11	0.23	0.11	0.23	0.33
v/c Ratio	1.18	0.86	0.21	1.45	0.85	0.61	1.45	0.74	0.60	0.48	0.52
Control Delay (s/veh)	157.4	42.7	3.7	258.0	34.9	15.8	261.7	40.3	50.9	34.6	19.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	157.4	42.7	3.7	258.0	34.9	15.8	261.7	40.3	50.9	34.6	19.0
LOS	F	D	A	F	C	B	F	D	D	C	B
Approach Delay (s/veh)		61.8			62.9			111.4		33.5	
Approach LOS		E			E			F		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 101	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.45	
Intersection Signal Delay (s/veh): 65.4	Intersection LOS: E
Intersection Capacity Utilization 85.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 14: Cole Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	278	921	153	333	1516	479	262	456	97	207	356	274
Future Volume (veh/h)	278	921	153	333	1516	479	262	456	97	207	356	274
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	305	1012	137	366	1666	385	288	501	60	227	391	166
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	289	1214	711	283	2054	768	224	663	79	307	607	395
Arrive On Green	0.08	0.32	0.32	0.16	0.60	0.40	0.13	0.21	0.21	0.09	0.17	0.17
Sat Flow, veh/h	3563	3741	1578	1781	5106	1561	1781	3191	381	3456	3554	1561
Grp Volume(v), veh/h	305	1012	137	366	1666	385	288	278	283	227	391	166
Grp Sat Flow(s),veh/h/ln	1781	1870	1578	1781	1702	1561	1781	1777	1795	1728	1777	1561
Q Serve(g_s), s	7.3	22.5	4.7	14.3	22.8	15.0	11.3	13.2	13.3	5.8	9.2	8.0
Cycle Q Clear(g_c), s	7.3	22.5	4.7	14.3	22.8	15.0	11.3	13.2	13.3	5.8	9.2	8.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	289	1214	711	283	2054	768	224	369	373	307	607	395
V/C Ratio(X)	1.06	0.83	0.19	1.29	0.81	0.50	1.29	0.75	0.76	0.74	0.64	0.42
Avail Cap(c_a), veh/h	289	1314	753	283	2191	810	224	739	746	649	1699	875
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.50	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	41.3	28.1	14.9	37.8	15.2	15.5	39.3	33.5	33.5	40.0	34.7	28.2
Incr Delay (d2), s/veh	68.1	4.8	0.2	155.4	2.4	0.7	158.6	3.1	3.2	1.3	1.1	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	5.8	9.9	1.5	18.0	5.7	4.7	14.5	5.6	5.7	2.4	3.8	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	109.5	32.9	15.1	193.3	17.6	16.2	197.9	36.6	36.7	41.3	35.9	28.9
LnGrp LOS	F	C	B	F	B	B	F	D	D	D	D	C
Approach Vol, veh/h		1454			2417			849			784	
Approach Delay, s/veh		47.3			44.0			91.4			36.0	
Approach LOS		D			D			F			D	

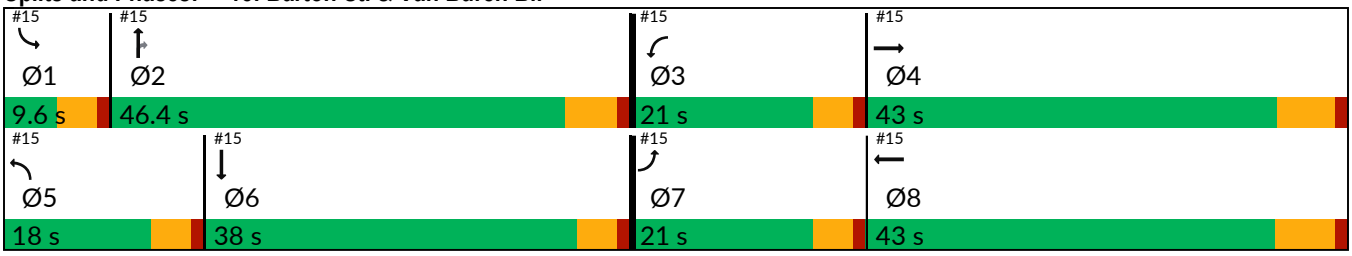
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	35.4	15.0	21.6	11.0	42.4	11.7	24.9
Change Period (Y+Rc), s	3.7	6.2	3.7	6.2	3.7	6.2	3.7	6.2
Max Green Setting (Gmax), s	14.3	31.6	11.3	43.0	7.3	38.6	16.9	37.4
Max Q Clear Time (g_c+I1), s	16.3	24.5	13.3	11.2	9.3	24.8	7.8	15.3
Green Ext Time (p_c), s	0.0	4.5	0.0	2.9	0.0	11.4	0.3	2.9

Intersection Summary	
HCM 7th Control Delay, s/veh	51.0
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	257	1004	259	1705	262	88	410	23	86
Future Volume (vph)	257	1004	259	1705	262	88	410	23	86
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)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.2	9.6	28.5	9.6	44.8	44.8	9.6	26.1
Total Split (s)	21.0	43.0	21.0	43.0	18.0	46.4	46.4	9.6	38.0
Total Split (%)	17.5%	35.8%	17.5%	35.8%	15.0%	38.7%	38.7%	8.0%	31.7%
Yellow Time (s)	3.6	5.2	3.6	5.5	3.6	4.8	4.8	3.6	3.6
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)	4.6	6.2	4.6	6.5	4.6	5.8	5.8	4.6	4.6
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	None	None	None	None
Act Effct Green (s)	16.5	37.0	16.5	36.7	12.2	32.4	32.4	5.0	22.2
Actuated g/C Ratio	0.15	0.34	0.15	0.34	0.11	0.30	0.30	0.05	0.21
v/c Ratio	1.06	1.00	1.07	1.04	0.75	0.18	0.63	0.32	0.84
Control Delay (s/veh)	117.1	62.0	119.1	69.7	60.5	29.4	11.9	63.9	45.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	117.1	62.0	119.1	69.7	60.5	29.4	11.9	63.9	45.4
LOS	F	E	F	E	E	C	B	E	D
Approach Delay (s/veh)		72.4		76.1		30.7			46.7
Approach LOS		E		E		C			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 108.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay (s/veh): 64.9	Intersection LOS: E
Intersection Capacity Utilization 91.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 15: Barton St. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	257	1004	99	259	1705	24	262	88	410	23	86	236
Future Volume (veh/h)	257	1004	99	259	1705	24	262	88	410	23	86	236
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	286	1116	57	288	1894	14	291	98	288	26	96	133
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	287	1247	64	287	1955	14	358	455	385	46	116	160
Arrive On Green	0.16	0.36	0.36	0.16	0.36	0.36	0.10	0.24	0.24	0.03	0.17	0.17
Sat Flow, veh/h	1781	3475	177	1781	5450	40	3456	1870	1585	1781	702	972
Grp Volume(v), veh/h	286	582	591	288	1261	647	291	98	288	26	0	229
Grp Sat Flow(s),veh/h/ln	1781	1814	1838	1781	1814	1862	1728	1870	1585	1781	0	1674
Q Serve(g_s), s	16.3	30.8	30.9	16.4	34.7	34.8	8.4	4.3	17.1	1.5	0.0	13.5
Cycle Q Clear(g_c), s	16.3	30.8	30.9	16.4	34.7	34.8	8.4	4.3	17.1	1.5	0.0	13.5
Prop In Lane	1.00		0.10	1.00		0.02	1.00		1.00	1.00		0.58
Lane Grp Cap(c), veh/h	287	651	660	287	1302	668	358	455	385	46	0	276
V/C Ratio(X)	1.00	0.89	0.90	1.00	0.97	0.97	0.81	0.22	0.75	0.57	0.00	0.83
Avail Cap(c_a), veh/h	287	656	665	287	1302	668	455	746	633	88	0	549
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	0.00	1.00
Uniform Delay (d), s/veh	42.6	30.8	30.8	42.7	32.1	32.1	44.6	30.8	35.6	49.0	0.0	41.1
Incr Delay (d2), s/veh	51.9	14.8	14.7	53.9	17.9	27.2	6.8	0.2	2.9	4.1	0.0	6.3
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	10.9	15.0	15.2	11.0	16.9	19.0	3.8	1.9	6.4	0.7	0.0	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	94.6	45.6	45.5	96.5	49.9	59.2	51.4	31.0	38.5	53.1	0.0	47.4
LnGrp LOS	F	D	D	F	D	E	D	C	D	D		D
Approach Vol, veh/h		1459			2196			677			255	
Approach Delay, s/veh		55.2			58.8			43.0			48.0	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	30.5	21.0	43.0	15.2	22.6	21.0	43.0
Change Period (Y+Rc), s	4.6	5.8	4.6	* 6.5	4.6	* 5.8	4.6	6.5
Max Green Setting (Gmax), s	5.0	40.6	16.4	* 37	13.4	* 33	16.4	36.5
Max Q Clear Time (g_c+I1), s	3.5	19.1	18.4	32.9	10.4	15.5	18.3	36.8
Green Ext Time (p_c), s	0.0	1.4	0.0	2.3	0.2	1.3	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	54.7
HCM 7th LOS	D

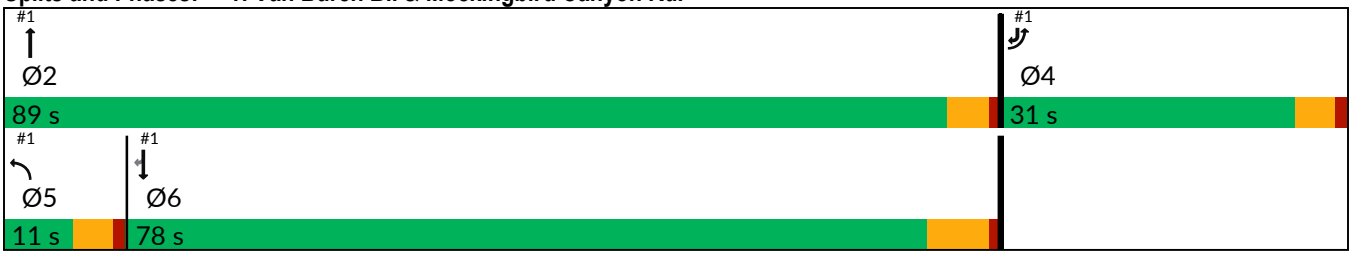
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	254	49	1274	1643	493
Future Volume (vph)	254	49	1274	1643	493
Turn Type	Prot	Prot	NA	NA	pm+ov
Protected Phases	4	5	2	6	4
Permitted Phases					6
Detector Phase	4	5	2	6	4
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	29.6	9.6	26.1	28.5	29.6
Total Split (s)	31.0	11.0	89.0	78.0	31.0
Total Split (%)	25.8%	9.2%	74.2%	65.0%	25.8%
Yellow Time (s)	3.6	3.6	3.6	5.5	3.6
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)	4.6	4.6	4.6	6.5	4.6
Lead/Lag		Lead		Lag	
Lead-Lag Optimize?		Yes		Yes	
Recall Mode	None	None	None	None	None
Act Effct Green (s)	13.9	6.5	59.4	49.2	71.9
Actuated g/C Ratio	0.17	0.08	0.71	0.59	0.86
v/c Ratio	0.54	0.37	0.52	0.81	0.36
Control Delay (s/veh)	36.8	53.6	6.4	18.0	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	36.8	53.6	6.4	18.0	1.3
LOS	D	D	A	B	A
Approach Delay (s/veh)	36.8		8.1	14.2	
Approach LOS	D		A	B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 83.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay (s/veh): 13.8	Intersection LOS: B
Intersection Capacity Utilization 63.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Van Buren Bl. & Mockingbird Canyon Rd.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	254	47	49	1274	1643	493
Future Volume (veh/h)	254	47	49	1274	1643	493
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	299	0	51	1313	1694	505
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	404	180	77	2632	2263	1189
Arrive On Green	0.11	0.00	0.04	0.74	0.64	0.64
Sat Flow, veh/h	3563	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	299	0	51	1313	1694	505
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1777	1777	1585
Q Serve(g_s), s	6.2	0.0	2.1	11.6	25.2	8.9
Cycle Q Clear(g_c), s	6.2	0.0	2.1	11.6	25.2	8.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	404	180	77	2632	2263	1189
V/C Ratio(X)	0.74	0.00	0.66	0.50	0.75	0.42
Avail Cap(c_a), veh/h	1237	550	150	3943	3341	1670
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	32.6	0.0	35.8	4.1	9.6	3.5
Incr Delay (d2), s/veh	1.0	0.0	3.6	0.1	0.5	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	2.5	0.0	0.9	1.6	6.1	2.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	33.6	0.0	39.4	4.1	10.1	3.7
LnGrp LOS	C		D	A	B	A
Approach Vol, veh/h	299			1364	2199	
Approach Delay, s/veh	33.6			5.4	8.6	
Approach LOS	C			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		62.8		13.2	7.9	54.9
Change Period (Y+Rc), s		* 6.5		4.6	4.6	6.5
Max Green Setting (Gmax), s		* 84		26.4	6.4	71.5
Max Q Clear Time (g_c+I1), s		13.6		8.2	4.1	27.2
Green Ext Time (p_c), s		6.4		0.5	0.0	21.3

Intersection Summary	
HCM 7th Control Delay, s/veh	9.4
HCM 7th LOS	A

Notes

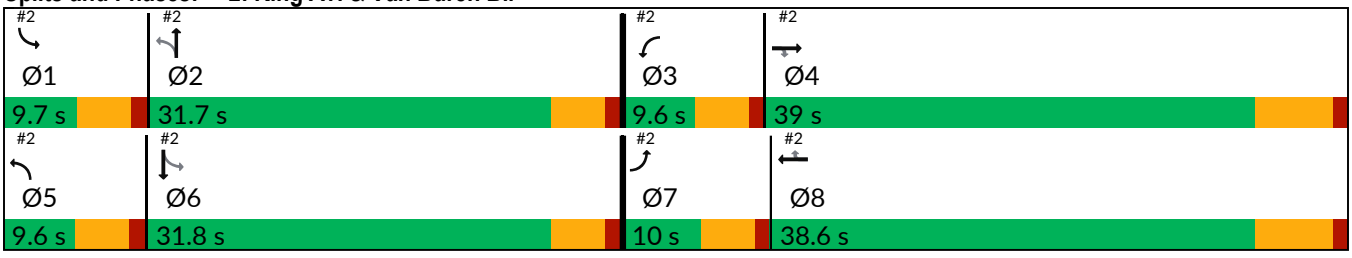
User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	109	1494	171	24	1322	51	64	11	77	38
Future Volume (vph)	109	1494	171	24	1322	51	64	11	77	38
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA
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	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.5	28.5	9.6	28.5	28.5	9.6	26.1	9.6	31.6
Total Split (s)	10.0	39.0	39.0	9.6	38.6	38.6	9.6	31.7	9.7	31.8
Total Split (%)	11.1%	43.3%	43.3%	10.7%	42.9%	42.9%	10.7%	35.2%	10.8%	35.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.6	42.6	42.6	5.2	33.7	33.7	11.4	13.1	17.2	13.1
Actuated g/C Ratio	0.08	0.60	0.60	0.07	0.47	0.47	0.16	0.18	0.24	0.18
v/c Ratio	0.82	0.74	0.18	0.19	0.82	0.07	0.28	0.07	0.23	0.26
Control Delay (s/veh)	80.4	21.0	5.8	39.9	25.5	0.2	25.8	17.0	20.9	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	80.4	21.0	5.8	39.9	25.5	0.2	25.8	17.0	20.9	15.6
LOS	F	C	A	D	C	A	C	B	C	B
Approach Delay (s/veh)		23.2			24.8			23.5		18.1
Approach LOS		C			C			C		B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 71.4	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay (s/veh): 23.6	Intersection LOS: C
Intersection Capacity Utilization 70.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 2: King Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	1494	171	24	1322	51	64	11	12	77	38	49
Future Volume (veh/h)	109	1494	171	24	1322	51	64	11	12	77	38	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	0.99		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	114	1556	136	25	1377	50	67	11	3	80	40	37
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	143	1777	792	49	1590	705	307	165	45	363	108	100
Arrive On Green	0.08	0.50	0.50	0.03	0.45	0.45	0.05	0.12	0.12	0.06	0.12	0.12
Sat Flow, veh/h	1781	3554	1585	1781	3554	1576	1781	1414	386	1781	891	825
Grp Volume(v), veh/h	114	1556	136	25	1377	50	67	0	14	80	0	77
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1576	1781	0	1799	1781	0	1716
Q Serve(g_s), s	4.2	26.2	3.2	0.9	23.5	1.2	2.2	0.0	0.5	2.6	0.0	2.8
Cycle Q Clear(g_c), s	4.2	26.2	3.2	0.9	23.5	1.2	2.2	0.0	0.5	2.6	0.0	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		0.48
Lane Grp Cap(c), veh/h	143	1777	792	49	1590	705	307	0	210	363	0	209
V/C Ratio(X)	0.80	0.88	0.17	0.51	0.87	0.07	0.22	0.00	0.07	0.22	0.00	0.37
Avail Cap(c_a), veh/h	143	1777	792	133	1713	760	345	0	726	396	0	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	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.4	14.9	9.2	32.2	16.8	10.6	24.1	0.0	26.4	24.0	0.0	27.1
Incr Delay (d2), s/veh	24.3	5.3	0.1	3.0	4.7	0.0	0.1	0.0	0.1	0.1	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	2.6	9.0	0.8	0.4	8.4	0.3	0.9	0.0	0.2	1.1	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.7	20.2	9.3	35.2	21.5	10.6	24.2	0.0	26.5	24.1	0.0	28.2
LnGrp LOS	D	C	A	D	C	B	C		C	C		C
Approach Vol, veh/h		1806			1452			81			157	
Approach Delay, s/veh		21.6			21.3			24.6			26.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	12.5	6.5	39.8	8.2	12.8	10.0	36.3
Change Period (Y+Rc), s	4.6	4.6	4.6	6.2	4.6	4.6	4.6	6.2
Max Green Setting (Gmax), s	5.1	27.1	5.0	32.8	5.0	27.2	5.4	32.4
Max Q Clear Time (g_c+I1), s	4.6	2.5	2.9	28.2	4.2	4.8	6.2	25.5
Green Ext Time (p_c), s	0.0	0.0	0.0	3.6	0.0	0.4	0.0	4.6

Intersection Summary	
HCM 7th Control Delay, s/veh	21.7
HCM 7th LOS	C

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↱
Traffic Vol, veh/h	0	1590	1378	32	0	31
Future Vol, veh/h	0	1590	1378	32	0	31
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	1728	1498	35	0	34

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	766
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	345
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	345
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	16.55
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	345
HCM Lane V/C Ratio	-	-	-	0.098
HCM Ctrl Dly (s/v)	-	-	-	16.6
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.3

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1590	1364	49	0	46
Future Vol, veh/h	0	1590	1364	49	0	46
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	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1747	1499	54	0	51

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	776
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	340
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	340
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	17.43
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	340
HCM Lane V/C Ratio	-	-	-	0.149
HCM Ctrl Dly (s/v)	-	-	-	17.4
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.5

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	26	20	692	1047	15
Future Vol, veh/h	7	26	20	692	1047	15
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	8	28	22	752	1138	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1942	1146	1154	0	-	0
Stage 1	1146	-	-	-	-	-
Stage 2	796	-	-	-	-	-
Critical Hdwy	5.8	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	100	243	605	-	-	-
Stage 1	303	-	-	-	-	-
Stage 2	444	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	94	243	605	-	-	-
Mov Cap-2 Maneuver	94	-	-	-	-	-
Stage 1	284	-	-	-	-	-
Stage 2	444	-	-	-	-	-

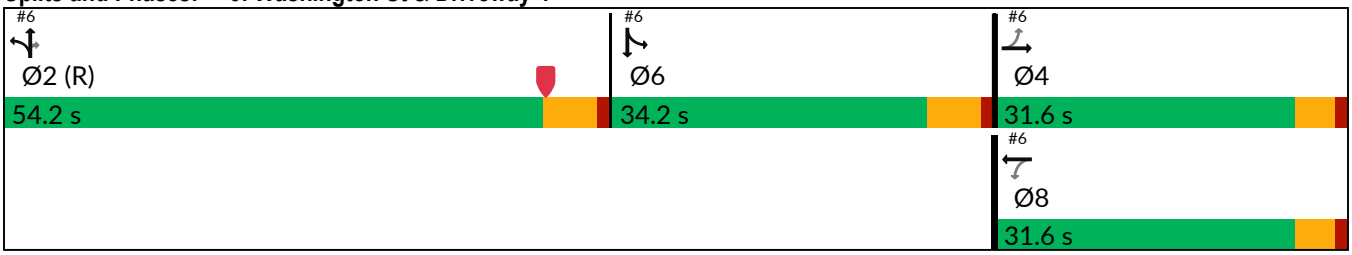
Approach	EB	NB	SB
HCM Ctrl Dly, s/v	29.65	0.31	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	51	-	182	-	-
HCM Lane V/C Ratio	0.036	-	0.198	-	-
HCM Ctrl Dly (s/v)	11.2	0	29.7	-	-
HCM Lane LOS	B	A	D	-	-
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Configurations								
Traffic Volume (vph)	27	0	52	0	100	629	125	950
Future Volume (vph)	27	0	52	0	100	629	125	950
Turn Type	Perm	NA	Perm	NA	Split	NA	Perm	NA
Protected Phases		4		8	2	2		6
Permitted Phases	4		8				2	
Detector Phase	4	4	8	8	2	2	2	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	31.6	31.6	31.6	31.6	22.8	22.8	22.8	22.8
Total Split (s)	31.6	31.6	31.6	31.6	54.2	54.2	54.2	34.2
Total Split (%)	26.3%	26.3%	26.3%	26.3%	45.2%	45.2%	45.2%	28.5%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	4.8	4.8	4.8
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
Total Lost Time (s)		4.6		4.6	5.8	5.8	5.8	5.8
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Min	Min	Min	Min	C-Max	C-Max	C-Max	None
Act Effct Green (s)		13.8		13.8	61.6	61.6	61.6	28.4
Actuated g/C Ratio		0.12		0.12	0.51	0.51	0.51	0.24
v/c Ratio		0.53		0.65	0.12	0.72	0.16	0.98
Control Delay (s/veh)		20.6		35.3	18.9	34.9	7.6	68.3
Queue Delay		0.0		0.0	0.0	9.4	0.0	0.0
Total Delay (s/veh)		20.6		35.3	18.9	44.4	7.6	68.3
LOS		C		D	B	D	A	E
Approach Delay (s/veh)		20.6		35.3		36.0		68.3
Approach LOS		C		D		D		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 48.6 (41%), Referenced to phase 2:NBTL, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay (s/veh): 51.1	Intersection LOS: D
Intersection Capacity Utilization 80.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 6: Washington St & Driveway 4





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	0	99	52	0	57	100	629	125	85	950	36
Future Volume (veh/h)	27	0	99	52	0	57	100	629	125	85	950	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	0	109	57	0	63	110	691	137	93	1044	40
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	64	10	139	104	11	77	931	978	829	100	1122	43
Arrive On Green	0.11	0.00	0.11	0.11	0.00	0.11	1.00	1.00	1.00	0.23	0.23	0.23
Sat Flow, veh/h	260	95	1289	553	98	720	1781	1870	1585	426	4780	183
Grp Volume(v), veh/h	139	0	0	120	0	0	110	691	137	404	372	401
Grp Sat Flow(s),veh/h/ln	1644	0	0	1371	0	0	1781	1870	1585	1849	1702	1837
Q Serve(g_s), s	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	25.7	25.7	25.7
Cycle Q Clear(g_c), s	9.7	0.0	0.0	10.4	0.0	0.0	0.0	0.0	0.0	25.7	25.7	25.7
Prop In Lane	0.22		0.78	0.47		0.52	1.00		1.00	0.23		0.10
Lane Grp Cap(c), veh/h	213	0	0	192	0	0	931	978	829	434	399	431
V/C Ratio(X)	0.65	0.00	0.00	0.63	0.00	0.00	0.12	0.71	0.17	0.93	0.93	0.93
Avail Cap(c_a), veh/h	392	0	0	359	0	0	931	978	829	438	403	435
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.1	0.0	0.0	52.2	0.0	0.0	0.0	0.0	0.0	45.0	45.0	45.0
Incr Delay (d2), s/veh	3.3	0.0	0.0	3.3	0.0	0.0	0.3	4.3	0.4	26.5	28.0	26.7
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	4.3	0.0	0.0	3.7	0.0	0.0	0.1	1.2	0.1	14.6	13.5	14.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.5	0.0	0.0	55.6	0.0	0.0	0.3	4.3	0.4	71.5	73.0	71.7
LnGrp LOS	E			E			A	A	A	E	E	E
Approach Vol, veh/h		139			120			938			1177	
Approach Delay, s/veh		55.5			55.6			3.3			72.0	
Approach LOS		E			E			A			E	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		68.5		17.5		34.0		17.5				
Change Period (Y+Rc), s		5.8		4.6		5.8		4.6				
Max Green Setting (Gmax), s		48.4		27.0		28.4		27.0				
Max Q Clear Time (g_c+I1), s		2.0		11.7		27.7		12.4				
Green Ext Time (p_c), s		5.8		0.7		0.5		0.5				

Intersection Summary												
HCM 7th Control Delay, s/veh			43.0									
HCM 7th LOS			D									

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	12	0	840	1078	13
Future Vol, veh/h	0	12	0	840	1078	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	-	-	-	50
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	13	0	913	1172	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	586	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	389	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	389	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

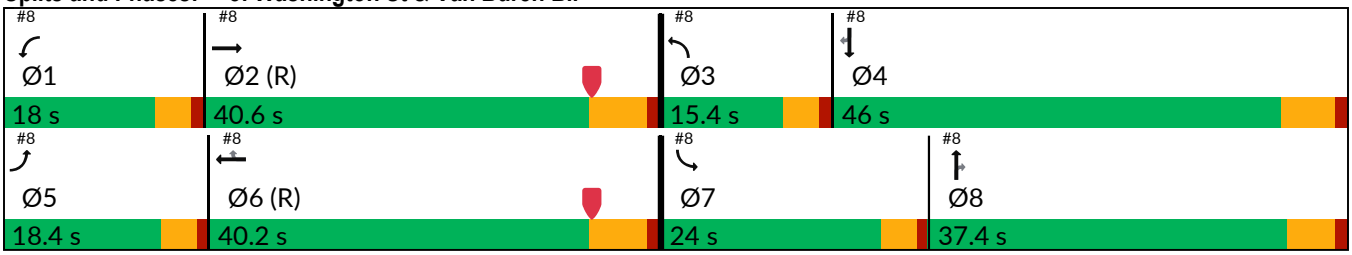
Approach	EB	NB	SB
HCM Ctrl Dly, s/v	14.58	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	389	-	-
HCM Lane V/C Ratio	-	0.034	-	-
HCM Ctrl Dly (s/v)	-	14.6	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	199	1427	215	1223	394	174	274	151	628	388	107
Future Volume (vph)	199	1427	215	1223	394	174	274	151	628	388	107
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.2	34.2	9.2	33.2	33.2	9.2	37.4	37.4	9.2	30.8	30.8
Total Split (s)	18.4	40.6	18.0	40.2	40.2	15.4	37.4	37.4	24.0	46.0	46.0
Total Split (%)	15.3%	33.8%	15.0%	33.5%	33.5%	12.8%	31.2%	31.2%	20.0%	38.3%	38.3%
Yellow Time (s)	3.2	5.2	3.2	5.2	5.2	3.2	4.4	4.4	3.2	4.8	4.8
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)	4.2	6.2	4.2	6.2	6.2	4.2	5.4	5.4	4.2	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	18.6	41.2	21.3	43.9	43.9	9.9	17.7	17.7	19.8	27.1	27.1
Actuated g/C Ratio	0.16	0.34	0.18	0.37	0.37	0.08	0.15	0.15	0.17	0.23	0.23
v/c Ratio	0.74	1.25	0.70	0.96	0.51	0.63	0.54	0.42	1.13	0.50	0.25
Control Delay (s/veh)	65.5	156.0	59.8	55.8	9.0	63.3	50.1	9.6	121.5	68.9	37.6
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	65.5	156.0	59.8	55.8	9.2	63.3	50.1	9.6	121.5	68.9	37.6
LOS	E	F	E	E	A	E	D	A	F	E	D
Approach Delay (s/veh)		145.3		46.3			43.7			95.3	
Approach LOS		F		D			D			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.25	
Intersection Signal Delay (s/veh): 88.4	Intersection LOS: F
Intersection Capacity Utilization 96.2%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 8: Washington St & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	199	1427	60	215	1223	394	174	274	151	628	388	107
Future Volume (veh/h)	199	1427	60	215	1223	394	174	274	151	628	388	107
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	203	1456	44	219	1248	306	178	280	117	641	396	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	211	1545	47	205	1548	689	235	395	176	570	740	330
Arrive On Green	0.12	0.44	0.44	0.12	0.44	0.44	0.07	0.11	0.11	0.16	0.21	0.21
Sat Flow, veh/h	1781	3520	106	1781	3554	1582	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	203	734	766	219	1248	306	178	280	117	641	396	59
Grp Sat Flow(s),veh/h/ln	1781	1777	1850	1781	1777	1582	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	13.6	47.4	47.6	13.8	36.7	16.2	6.1	9.1	8.5	19.8	11.9	3.7
Cycle Q Clear(g_c), s	13.6	47.4	47.6	13.8	36.7	16.2	6.1	9.1	8.5	19.8	11.9	3.7
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	211	780	812	205	1548	689	235	395	176	570	740	330
V/C Ratio(X)	0.96	0.94	0.94	1.07	0.81	0.44	0.76	0.71	0.66	1.12	0.54	0.18
Avail Cap(c_a), veh/h	211	780	812	205	1548	689	323	948	423	570	1190	531
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	52.6	32.2	32.3	53.1	29.5	23.7	55.0	51.5	51.2	50.1	42.3	39.1
Incr Delay (d2), s/veh	51.0	20.7	20.6	82.4	4.6	2.1	4.1	2.4	4.2	76.7	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	8.9	23.1	24.2	10.6	15.5	6.5	2.8	4.2	3.6	14.3	5.1	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	103.6	52.9	52.8	135.5	34.1	25.8	59.0	53.8	55.4	126.8	42.9	39.3
LnGrp LOS	F	D	D	F	C	C	E	D	E	F	D	D
Approach Vol, veh/h		1703			1773			575			1096	
Approach Delay, s/veh		58.9			45.2			55.8			91.8	
Approach LOS		E			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	58.9	12.3	30.8	18.4	58.5	24.0	19.1
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	13.8	34.4	11.2	40.2	14.2	34.0	19.8	* 32
Max Q Clear Time (g_c+I1), s	15.8	49.6	8.1	13.9	15.6	38.7	21.8	11.1
Green Ext Time (p_c), s	0.0	0.0	0.1	2.6	0.0	0.0	0.0	2.2

Intersection Summary	
HCM 7th Control Delay, s/veh	60.8
HCM 7th LOS	E

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	268.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	2030	20	90	1792	11	44	0	15	3	0	22
Future Vol, veh/h	18	2030	20	90	1792	11	44	0	15	3	0	22
Conflicting Peds, #/hr	0	0	1	0	0	6	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	275	-	-	255	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	2183	22	97	1927	12	47	0	16	3	0	24

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1945	0	0	2205	0	0	3390	4372	1103	3262	4376	975
Stage 1	-	-	-	-	-	-	2233	2233	-	2132	2132	-
Stage 2	-	-	-	-	-	-	1157	2138	-	1130	2244	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	297	-	-	235	-	-	~ 3	2	206	4	2	251
Stage 1	-	-	-	-	-	-	~ 44	78	-	51	88	-
Stage 2	-	-	-	-	-	-	209	88	-	217	77	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	296	-	-	235	-	-	~ 1	1	206	~ 2	1	249
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 1	1	-	~ 2	1	-
Stage 1	-	-	-	-	-	-	~ 41	73	-	30	52	-
Stage 2	-	-	-	-	-	-	111	51	-	187	72	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.16	1.46	$ 17958.54	$ 932.15
HCM LOS			F	F

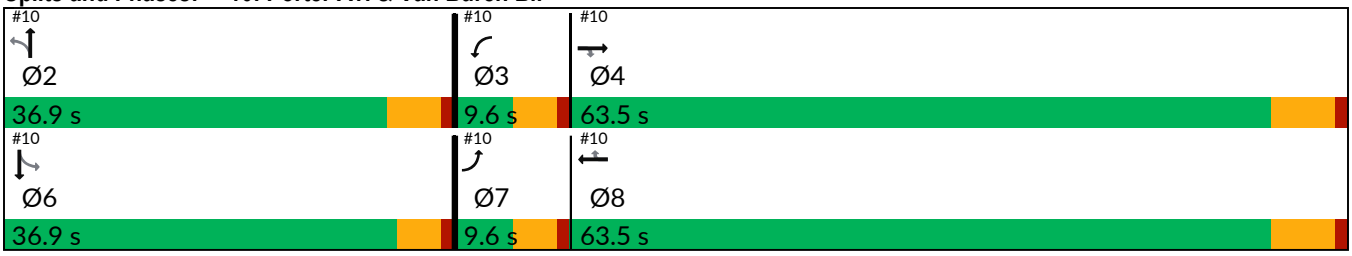
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	2	296	-	-	235	-	-	15
HCM Lane V/C Ratio	32.922	0.065	-	-	0.412	-	-	1.843
HCM Ctrl Dly (s/v)	$ 17958.5	18	-	-	30.7	-	-	$ 932.1
HCM Lane LOS	F	C	-	-	D	-	-	F
HCM 95th %tile Q(veh)	10.1	0.2	-	-	1.9	-	-	4

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	19	1980	101	18	1782	8	19	3	15	3
Future Volume (vph)	19	1980	101	18	1782	8	19	3	15	3
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)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	27.7	27.7	9.6	27.7	27.7	36.9	36.9	35.6	35.6
Total Split (s)	9.6	63.5	63.5	9.6	63.5	63.5	36.9	36.9	36.9	36.9
Total Split (%)	8.7%	57.7%	57.7%	8.7%	57.7%	57.7%	33.5%	33.5%	33.5%	33.5%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	4.4	4.4	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2		5.4		4.6
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	None	None	None	None
Act Effct Green (s)	5.2	63.0	63.0	5.2	63.0	63.0		13.5		14.0
Actuated g/C Ratio	0.06	0.78	0.78	0.06	0.78	0.78		0.17		0.17
v/c Ratio	0.18	0.76	0.09	0.17	0.69	0.01		0.15		0.14
Control Delay (s/veh)	47.7	14.9	4.2	47.5	13.0	0.0		23.7		20.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay (s/veh)	47.7	14.9	4.2	47.5	13.0	0.0		23.7		20.7
LOS	D	B	A	D	B	A		C		C
Approach Delay (s/veh)		14.7			13.3			23.7		20.7
Approach LOS		B			B			C		C

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 80.8	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay (s/veh): 14.2	Intersection LOS: B
Intersection Capacity Utilization 72.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 10: Porter Av. & Van Buren Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	1980	101	18	1782	8	19	3	13	15	3	18
Future Volume (veh/h)	19	1980	101	18	1782	8	19	3	13	15	3	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	20	2106	94	19	1896	8	20	3	11	16	3	9
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	41	2463	1099	39	2460	1074	123	24	34	119	29	34
Arrive On Green	0.02	0.69	0.69	0.02	0.69	0.69	0.07	0.07	0.07	0.07	0.07	0.07
Sat Flow, veh/h	1781	3554	1585	1781	3554	1551	688	360	501	641	426	505
Grp Volume(v), veh/h	20	2106	94	19	1896	8	34	0	0	28	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1551	1550	0	0	1572	0	0
Q Serve(g_s), s	0.8	33.3	1.4	0.8	26.3	0.1	0.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.8	33.3	1.4	0.8	26.3	0.1	1.4	0.0	0.0	1.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.59		0.32	0.57		0.32
Lane Grp Cap(c), veh/h	41	2463	1099	39	2460	1074	182	0	0	182	0	0
V/C Ratio(X)	0.49	0.85	0.09	0.49	0.77	0.01	0.19	0.00	0.00	0.15	0.00	0.00
Avail Cap(c_a), veh/h	119	2731	1218	119	2731	1192	709	0	0	729	0	0
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	0.00	0.00
Uniform Delay (d), s/veh	36.0	8.6	3.7	36.1	7.6	3.6	33.0	0.0	0.0	32.9	0.0	0.0
Incr Delay (d2), s/veh	3.4	2.7	0.0	3.5	1.3	0.0	0.5	0.0	0.0	0.4	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	0.4	7.5	0.3	0.4	5.7	0.0	0.6	0.0	0.0	0.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	39.4	11.3	3.8	39.6	8.8	3.6	33.5	0.0	0.0	33.3	0.0	0.0
LnGrp LOS	D	B	A	D	A	A	C			C		
Approach Vol, veh/h		2220			1923			34			28	
Approach Delay, s/veh		11.2			9.1			33.5			33.3	
Approach LOS		B			A			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		10.5	6.2	57.9		10.5	6.3	57.8				
Change Period (Y+Rc), s		5.4	4.6	6.2		* 5.4	4.6	6.2				
Max Green Setting (Gmax), s		31.5	5.0	57.3		* 32	5.0	57.3				
Max Q Clear Time (g_c+I1), s		3.4	2.8	35.3		3.1	2.8	28.3				
Green Ext Time (p_c), s		0.1	0.0	16.4		0.1	0.0	17.3				

Intersection Summary		
HCM 7th Control Delay, s/veh		10.6
HCM 7th LOS		B

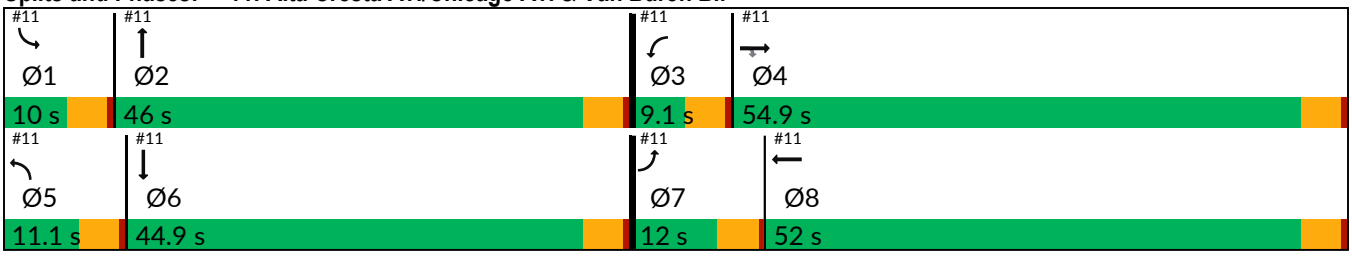
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	146	1741	135	69	1761	39	42	92	7
Future Volume (vph)	146	1741	135	69	1761	39	42	92	7
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.1	30.1	30.1	9.1	30.1	9.1	44.1	9.1	26.1
Total Split (s)	12.0	54.9	54.9	9.1	52.0	11.1	46.0	10.0	44.9
Total Split (%)	10.0%	45.8%	45.8%	7.6%	43.3%	9.3%	38.3%	8.3%	37.4%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	8.0	51.7	51.7	5.1	48.8	6.7	12.3	6.0	16.0
Actuated g/C Ratio	0.09	0.56	0.56	0.06	0.53	0.07	0.13	0.07	0.17
v/c Ratio	1.00	0.93	0.16	0.75	1.05	0.32	0.27	0.85	0.13
Control Delay (s/veh)	118.4	29.8	6.6	87.5	59.0	51.1	25.8	97.1	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	118.4	29.8	6.6	87.5	59.0	51.1	25.8	97.1	14.1
LOS	F	C	A	F	E	D	C	F	B
Approach Delay (s/veh)		34.7			60.0		35.2		73.0
Approach LOS		C			E		D		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 91.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay (s/veh): 47.5	Intersection LOS: D
Intersection Capacity Utilization 81.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 11: Alta Cresta Av./Chicago Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	1741	135	69	1761	84	39	42	23	92	7	31
Future Volume (veh/h)	146	1741	135	69	1761	84	39	42	23	92	7	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	155	1852	126	73	1873	89	41	45	13	98	7	29
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	170	2196	980	94	1984	93	66	84	24	125	30	123
Arrive On Green	0.10	0.62	0.62	0.05	0.57	0.57	0.04	0.06	0.06	0.07	0.09	0.09
Sat Flow, veh/h	1781	3554	1585	1781	3451	162	1781	1395	403	1781	318	1316
Grp Volume(v), veh/h	155	1852	126	73	956	1006	41	0	58	98	0	36
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1837	1781	0	1798	1781	0	1634
Q Serve(g_s), s	7.1	34.3	2.7	3.3	40.8	42.5	1.9	0.0	2.6	4.5	0.0	1.7
Cycle Q Clear(g_c), s	7.1	34.3	2.7	3.3	40.8	42.5	1.9	0.0	2.6	4.5	0.0	1.7
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.22	1.00		0.81
Lane Grp Cap(c), veh/h	170	2196	980	94	1022	1056	66	0	109	125	0	153
V/C Ratio(X)	0.91	0.84	0.13	0.78	0.94	0.95	0.62	0.00	0.53	0.79	0.00	0.24
Avail Cap(c_a), veh/h	170	2196	980	108	1031	1066	151	0	913	127	0	807
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	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.0	12.6	6.5	38.6	16.1	16.5	39.2	0.0	37.6	37.8	0.0	34.7
Incr Delay (d2), s/veh	43.8	3.2	0.1	26.4	15.0	17.3	9.3	0.0	4.0	26.4	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	4.9	10.6	0.7	2.1	16.6	18.3	1.0	0.0	1.3	2.9	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	80.7	15.8	6.6	65.1	31.1	33.7	48.5	0.0	41.6	64.2	0.0	35.4
LnGrp LOS	F	B	A	E	C	C	D		D	E		D
Approach Vol, veh/h		2133			2035			99			134	
Approach Delay, s/veh		19.9			33.6			44.5			56.5	
Approach LOS		B			C			D			E	

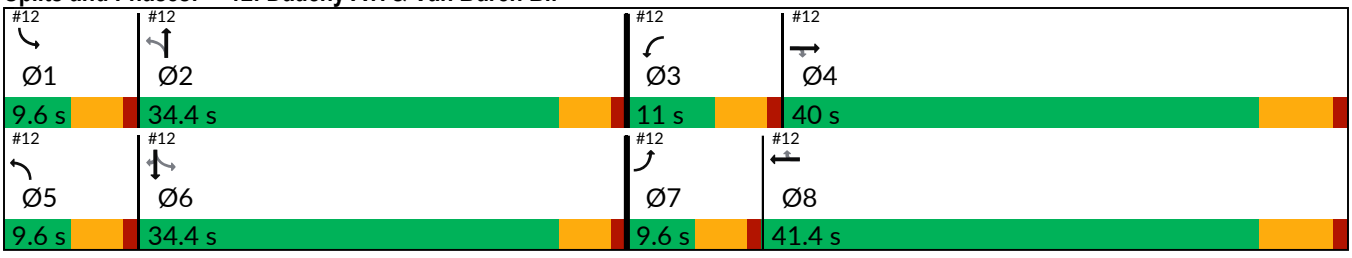
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	9.1	8.4	55.1	7.1	11.8	12.0	51.6
Change Period (Y+Rc), s	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Max Green Setting (Gmax), s	5.9	41.9	5.0	50.8	7.0	40.8	7.9	47.9
Max Q Clear Time (g_c+I1), s	6.5	4.6	5.3	36.3	3.9	3.7	9.1	44.5
Green Ext Time (p_c), s	0.0	0.3	0.0	10.6	0.0	0.2	0.0	3.0

Intersection Summary			
HCM 7th Control Delay, s/veh		27.9	
HCM 7th LOS		C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	89	1639	150	128	1636	18	153	27	56	29	51
Future Volume (vph)	89	1639	150	128	1636	18	153	27	56	29	51
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	28.2	28.2	9.6	28.2	28.2	9.6	26.6	9.6	33.6	33.6
Total Split (s)	9.6	40.0	40.0	11.0	41.4	41.4	9.6	34.4	9.6	34.4	34.4
Total Split (%)	10.1%	42.1%	42.1%	11.6%	43.6%	43.6%	10.1%	36.2%	10.1%	36.2%	36.2%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	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	None	None	None	None
Act Effct Green (s)	5.1	34.5	34.5	6.5	35.9	35.9	16.8	15.2	15.9	13.3	13.3
Actuated g/C Ratio	0.07	0.45	0.45	0.09	0.47	0.47	0.22	0.20	0.21	0.17	0.17
v/c Ratio	0.81	1.10	0.21	0.91	1.05	0.02	0.57	0.29	0.20	0.10	0.14
Control Delay (s/veh)	85.7	78.9	6.2	94.0	61.3	0.1	30.9	12.1	21.5	27.0	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	85.7	78.9	6.2	94.0	61.3	0.1	30.9	12.1	21.5	27.0	0.8
LOS	F	E	A	F	E	A	C	B	C	C	A
Approach Delay (s/veh)		73.5			63.0			23.3		14.9	
Approach LOS		E			E			C		B	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 76.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.10	
Intersection Signal Delay (s/veh): 63.7	Intersection LOS: E
Intersection Capacity Utilization 80.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 12: Dauchy Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	1639	150	128	1636	18	153	27	78	56	29	51
Future Volume (veh/h)	89	1639	150	128	1636	18	153	27	78	56	29	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	96	1762	115	138	1759	10	165	29	53	60	31	31
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	123	1655	738	157	1724	768	337	72	131	286	190	158
Arrive On Green	0.07	0.47	0.47	0.09	0.49	0.49	0.07	0.12	0.12	0.05	0.10	0.10
Sat Flow, veh/h	1781	3554	1583	1781	3554	1583	1781	587	1073	1781	1870	1560
Grp Volume(v), veh/h	96	1762	115	138	1759	10	165	0	82	60	31	31
Grp Sat Flow(s),veh/h/ln	1781	1777	1583	1781	1777	1583	1781	0	1660	1781	1870	1560
Q Serve(g_s), s	3.8	33.8	3.0	5.6	35.2	0.2	5.0	0.0	3.3	2.2	1.1	1.3
Cycle Q Clear(g_c), s	3.8	33.8	3.0	5.6	35.2	0.2	5.0	0.0	3.3	2.2	1.1	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.65	1.00		1.00
Lane Grp Cap(c), veh/h	123	1655	738	157	1724	768	337	0	202	286	190	158
V/C Ratio(X)	0.78	1.06	0.16	0.88	1.02	0.01	0.49	0.00	0.41	0.21	0.16	0.20
Avail Cap(c_a), veh/h	123	1655	738	157	1724	768	337	0	682	322	768	641
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	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.2	19.4	11.2	32.7	18.7	9.7	27.8	0.0	29.4	27.2	29.8	29.9
Incr Delay (d2), s/veh	25.1	41.5	0.1	37.9	26.9	0.0	0.4	0.0	1.3	0.1	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	2.4	20.4	0.9	3.8	17.5	0.1	2.6	0.0	1.4	0.9	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.3	60.9	11.3	70.6	45.6	9.7	28.2	0.0	30.7	27.3	30.2	30.5
LnGrp LOS	E	F	B	E	F	A	C		C	C	C	C
Approach Vol, veh/h		1973			1907			247			122	
Approach Delay, s/veh		57.9			47.2			29.0			28.8	
Approach LOS		E			D			C			C	

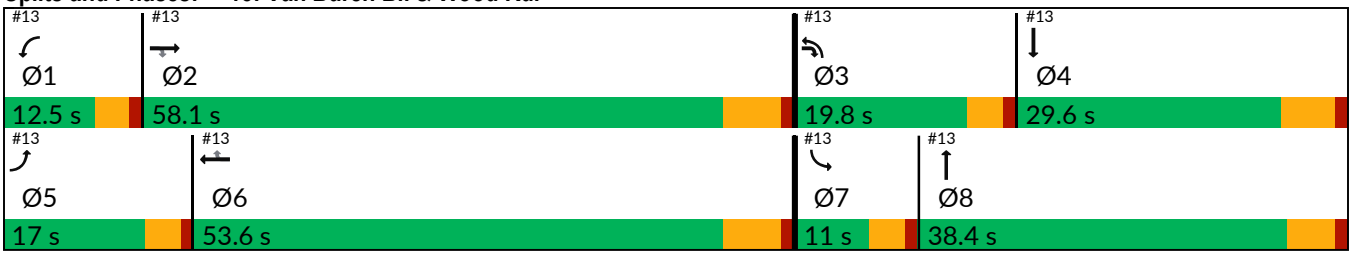
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	13.4	11.0	40.0	9.6	12.0	9.6	41.4
Change Period (Y+Rc), s	4.6	4.6	4.6	6.2	4.6	4.6	4.6	6.2
Max Green Setting (Gmax), s	5.0	29.8	6.4	33.8	5.0	29.8	5.0	35.2
Max Q Clear Time (g_c+I1), s	4.2	5.3	7.6	35.8	7.0	3.3	5.8	37.2
Green Ext Time (p_c), s	0.0	0.4	0.0	0.0	0.0	0.2	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	50.6
HCM 7th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	184	1527	209	224	1389	71	264	187	92	273
Future Volume (vph)	184	1527	209	224	1389	71	264	187	92	273
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6		3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	3	1	6	6	3	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.2	30.2	9.2	9.2	30.2	30.2	9.2	38.4	9.2	15.8
Total Split (s)	17.0	58.1	19.8	12.5	53.6	53.6	19.8	38.4	11.0	29.6
Total Split (%)	14.2%	48.4%	16.5%	10.4%	44.7%	44.7%	16.5%	32.0%	9.2%	24.7%
Yellow Time (s)	3.2	5.2	3.2	3.2	5.2	5.2	3.2	4.4	3.2	4.8
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)	4.2	6.2	4.2	4.2	6.2	6.2	4.2	5.4	4.2	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.8	52.1	66.9	8.3	47.6	47.6	12.8	24.6	6.8	18.2
Actuated g/C Ratio	0.11	0.47	0.60	0.07	0.43	0.43	0.11	0.22	0.06	0.16
v/c Ratio	0.94	0.96	0.22	0.91	0.95	0.10	0.69	0.43	0.89	0.79
Control Delay (s/veh)	100.1	44.1	4.5	89.5	46.7	0.3	58.1	21.0	114.3	40.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	100.1	44.1	4.5	89.5	46.7	0.3	58.1	21.0	114.3	40.6
LOS	F	D	A	F	D	A	E	C	F	D
Approach Delay (s/veh)		45.2			50.5			37.2		52.0
Approach LOS		D			D			D		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 111.9	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay (s/veh): 46.9	Intersection LOS: D
Intersection Capacity Utilization 96.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 13: Van Buren Bl. & Wood Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	1527	209	224	1389	71	264	187	154	92	273	235
Future Volume (veh/h)	184	1527	209	224	1389	71	264	187	154	92	273	235
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.91	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	190	1574	137	231	1432	34	272	193	80	95	281	154
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	202	1628	866	254	1486	659	335	552	216	107	426	227
Arrive On Green	0.11	0.46	0.46	0.07	0.42	0.42	0.10	0.23	0.23	0.06	0.19	0.19
Sat Flow, veh/h	1781	3554	1555	3456	3554	1575	3456	2421	946	1781	2230	1185
Grp Volume(v), veh/h	190	1574	137	231	1432	34	272	139	134	95	222	213
Grp Sat Flow(s),veh/h/ln	1781	1777	1555	1728	1777	1575	1728	1777	1590	1781	1777	1638
Q Serve(g_s), s	12.0	48.7	4.9	7.5	44.4	1.5	8.7	7.4	8.1	6.0	13.1	13.7
Cycle Q Clear(g_c), s	12.0	48.7	4.9	7.5	44.4	1.5	8.7	7.4	8.1	6.0	13.1	13.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.60	1.00		0.72
Lane Grp Cap(c), veh/h	202	1628	866	254	1486	659	335	405	362	107	340	313
V/C Ratio(X)	0.94	0.97	0.16	0.91	0.96	0.05	0.81	0.34	0.37	0.89	0.65	0.68
Avail Cap(c_a), veh/h	202	1631	867	254	1490	660	477	519	464	107	374	345
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	49.8	29.8	12.3	52.0	32.0	19.6	50.0	36.5	36.8	52.7	42.3	42.5
Incr Delay (d2), s/veh	46.6	15.2	0.1	33.1	15.5	0.0	4.6	0.5	0.6	51.7	3.6	4.7
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	7.7	22.1	1.6	4.3	20.6	0.5	3.9	3.2	3.1	4.2	5.9	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	96.3	45.0	12.4	85.1	47.6	19.6	54.7	37.0	37.4	104.5	45.8	47.2
LnGrp LOS	F	D	B	F	D	B	D	D	D	F	D	D
Approach Vol, veh/h		1901			1697			545			530	
Approach Delay, s/veh		47.8			52.1			45.9			56.9	
Approach LOS		D			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	58.0	15.2	27.4	17.0	53.5	11.0	31.6
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	8.3	51.9	15.6	23.8	12.8	47.4	6.8	* 33
Max Q Clear Time (g_c+I1), s	9.5	50.7	10.7	15.7	14.0	46.4	8.0	10.1
Green Ext Time (p_c), s	0.0	1.1	0.2	1.5	0.0	0.9	0.0	1.5

Intersection Summary	
HCM 7th Control Delay, s/veh	50.2
HCM 7th LOS	D

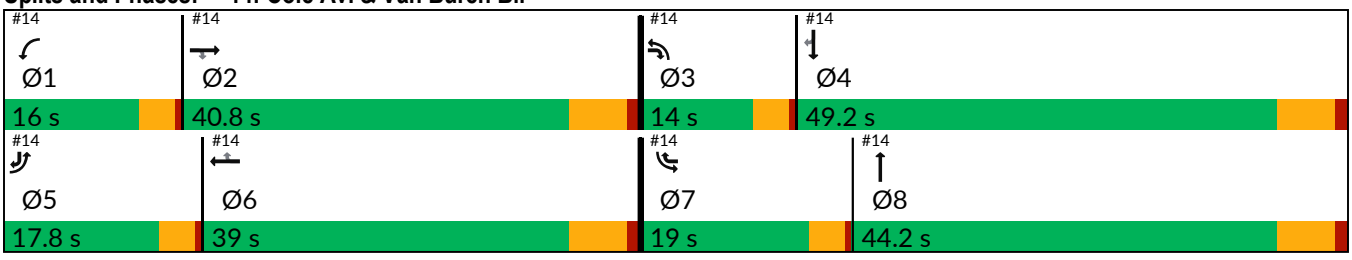
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	372	1066	165	196	1138	274	164	315	266	540	294
Future Volume (vph)	372	1066	165	196	1138	274	164	315	266	540	294
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8	7	4	5
Permitted Phases			2			6					4
Detector Phase	5	2	3	1	6	7	3	8	7	4	5
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0
Minimum Split (s)	9.1	36.2	9.1	9.1	36.2	9.1	9.1	42.2	9.1	49.2	9.1
Total Split (s)	17.8	40.8	14.0	16.0	39.0	19.0	14.0	44.2	19.0	49.2	17.8
Total Split (%)	14.8%	34.0%	11.7%	13.3%	32.5%	15.8%	11.7%	36.8%	15.8%	41.0%	14.8%
Yellow Time (s)	3.2	5.2	3.2	3.2	5.2	3.2	3.2	5.2	3.2	5.2	3.2
All-Red Time (s)	0.5	1.0	0.5	0.5	1.0	0.5	0.5	1.0	0.5	1.0	0.5
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)	3.7	6.2	3.7	3.7	6.2	3.7	3.7	6.2	3.7	6.2	3.7
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	13.9	34.9	47.8	12.4	33.4	47.6	10.4	21.4	11.7	22.8	39.2
Actuated g/C Ratio	0.14	0.35	0.48	0.12	0.33	0.47	0.10	0.21	0.12	0.23	0.39
v/c Ratio	0.79	0.88	0.20	0.91	0.68	0.32	0.91	0.49	0.67	0.68	0.46
Control Delay (s/veh)	56.2	41.3	5.5	87.0	32.6	4.8	93.3	35.3	52.1	39.4	17.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	56.2	41.3	5.5	87.0	32.6	4.8	93.3	35.3	52.1	39.4	17.3
LOS	E	D	A	F	C	A	F	D	D	D	B
Approach Delay (s/veh)		41.1			34.5			53.2		36.6	
Approach LOS		D			C			D		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 100.4	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay (s/veh): 39.2	Intersection LOS: D
Intersection Capacity Utilization 81.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 14: Cole Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	372	1066	165	196	1138	274	164	315	52	266	540	294
Future Volume (veh/h)	372	1066	165	196	1138	274	164	315	52	266	540	294
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	376	1077	107	198	1149	169	166	318	44	269	545	190
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	446	1226	716	230	1761	696	192	686	94	344	748	533
Arrive On Green	0.13	0.35	0.35	0.13	0.34	0.34	0.11	0.22	0.22	0.10	0.21	0.21
Sat Flow, veh/h	3456	3554	1578	1781	5106	1560	1781	3133	429	3456	3554	1562
Grp Volume(v), veh/h	376	1077	107	198	1149	169	166	179	183	269	545	190
Grp Sat Flow(s),veh/h/ln	1728	1777	1578	1781	1702	1560	1781	1777	1786	1728	1777	1562
Q Serve(g_s), s	10.1	27.2	3.8	10.4	18.1	6.4	8.7	8.3	8.5	7.3	13.6	8.7
Cycle Q Clear(g_c), s	10.1	27.2	3.8	10.4	18.1	6.4	8.7	8.3	8.5	7.3	13.6	8.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.24	1.00		1.00
Lane Grp Cap(c), veh/h	446	1226	716	230	1761	696	192	389	391	344	748	533
V/C Ratio(X)	0.84	0.88	0.15	0.86	0.65	0.24	0.86	0.46	0.47	0.78	0.73	0.36
Avail Cap(c_a), veh/h	511	1289	743	230	1761	696	192	708	711	554	1602	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	40.6	29.4	15.3	40.7	26.4	16.5	41.9	32.4	32.4	41.9	35.1	23.7
Incr Delay (d2), s/veh	9.8	7.2	0.1	25.8	1.0	0.3	29.8	0.8	0.9	1.5	1.4	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	4.7	11.7	1.3	5.9	6.9	2.1	5.2	3.5	3.5	3.0	5.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	50.4	36.6	15.4	66.6	27.4	16.8	71.7	33.2	33.3	43.4	36.5	24.1
LnGrp LOS	D	D	B	E	C	B	E	C	C	D	D	C
Approach Vol, veh/h		1560			1516			528			1004	
Approach Delay, s/veh		38.5			31.3			45.3			36.0	
Approach LOS		D			C			D			D	

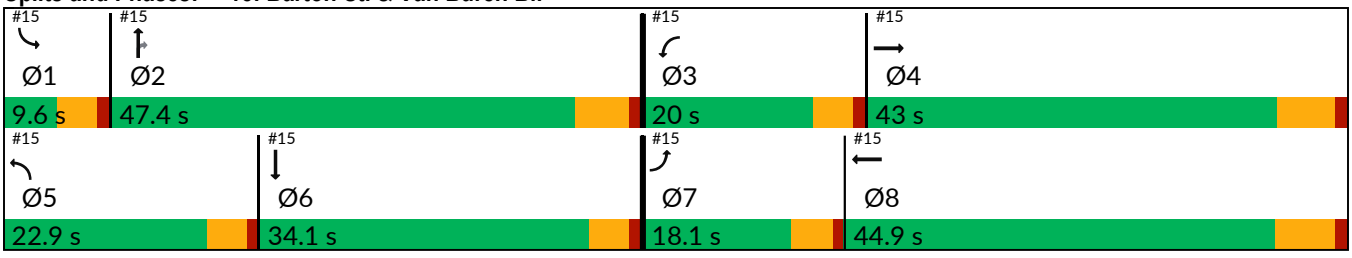
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	39.1	14.0	26.3	16.0	39.1	13.2	27.1
Change Period (Y+Rc), s	3.7	6.2	3.7	6.2	3.7	6.2	3.7	6.2
Max Green Setting (Gmax), s	12.3	34.6	10.3	43.0	14.1	32.8	15.3	38.0
Max Q Clear Time (g_c+I1), s	12.4	29.2	10.7	15.6	12.1	20.1	9.3	10.5
Green Ext Time (p_c), s	0.0	3.8	0.0	4.0	0.2	7.8	0.3	1.8

Intersection Summary	
HCM 7th Control Delay, s/veh	36.4
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	166	1187	321	1294	317	69	321	25	44
Future Volume (vph)	166	1187	321	1294	317	69	321	25	44
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)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.2	9.6	28.5	9.6	44.8	44.8	9.6	26.1
Total Split (s)	18.1	43.0	20.0	44.9	22.9	47.4	47.4	9.6	34.1
Total Split (%)	15.1%	35.8%	16.7%	37.4%	19.1%	39.5%	39.5%	8.0%	28.4%
Yellow Time (s)	3.6	5.2	3.6	5.5	3.6	4.8	4.8	3.6	3.6
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)	4.6	6.2	4.6	6.5	4.6	5.8	5.8	4.6	4.6
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	None	None	None	None
Act Effct Green (s)	13.0	37.1	15.5	39.2	13.8	24.8	24.8	5.0	13.2
Actuated g/C Ratio	0.13	0.37	0.16	0.39	0.14	0.25	0.25	0.05	0.13
v/c Ratio	0.77	1.14	1.24	0.71	0.71	0.16	0.55	0.30	0.47
Control Delay (s/veh)	65.3	102.7	172.3	29.2	50.5	30.9	8.5	58.2	25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	65.3	102.7	172.3	29.2	50.5	30.9	8.5	58.2	25.0
LOS	E	F	F	C	D	C	A	E	C
Approach Delay (s/veh)		98.7		57.0		29.5			30.6
Approach LOS		F		E		C			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 99.7	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.24	
Intersection Signal Delay (s/veh): 67.2	Intersection LOS: E
Intersection Capacity Utilization 91.0%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 15: Barton St. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	166	1187	200	321	1294	36	317	69	321	25	44	80
Future Volume (veh/h)	166	1187	200	321	1294	36	317	69	321	25	44	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	177	1263	159	341	1377	28	337	73	191	27	47	40
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	210	1229	154	288	2218	45	415	371	309	48	97	83
Arrive On Green	0.12	0.39	0.39	0.16	0.43	0.43	0.12	0.20	0.20	0.03	0.11	0.11
Sat Flow, veh/h	1781	3177	398	1781	5148	105	3456	1870	1560	1781	927	789
Grp Volume(v), veh/h	177	704	718	341	911	494	337	73	191	27	0	87
Grp Sat Flow(s),veh/h/ln	1781	1777	1799	1781	1702	1848	1728	1870	1560	1781	0	1715
Q Serve(g_s), s	9.3	36.8	36.8	15.4	19.8	19.8	9.0	3.1	10.6	1.4	0.0	4.5
Cycle Q Clear(g_c), s	9.3	36.8	36.8	15.4	19.8	19.8	9.0	3.1	10.6	1.4	0.0	4.5
Prop In Lane	1.00		0.22	1.00		0.06	1.00		1.00	1.00		0.46
Lane Grp Cap(c), veh/h	210	687	696	288	1467	797	415	371	309	48	0	180
V/C Ratio(X)	0.84	1.02	1.03	1.18	0.62	0.62	0.81	0.20	0.62	0.57	0.00	0.48
Avail Cap(c_a), veh/h	253	687	696	288	1467	797	665	818	682	94	0	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)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.1	29.2	29.2	39.9	21.0	21.0	40.8	31.8	34.8	45.7	0.0	40.1
Incr Delay (d2), s/veh	16.8	40.5	42.7	111.8	0.8	1.5	1.7	0.3	2.0	3.9	0.0	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	4.8	21.7	22.3	15.2	7.0	7.8	3.8	1.4	3.9	0.7	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	57.9	69.7	71.8	151.7	21.8	22.5	42.5	32.1	36.8	49.6	0.0	42.1
LnGrp LOS	E	F	F	F	C	C	D	C	D	D		D
Approach Vol, veh/h		1599			1746			601			114	
Approach Delay, s/veh		69.3			47.4			39.4			43.9	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	24.7	20.0	43.3	16.0	15.8	15.8	47.5
Change Period (Y+Rc), s	4.6	5.8	4.6	* 6.5	4.6	* 5.8	4.6	6.5
Max Green Setting (Gmax), s	5.0	41.6	15.4	* 37	18.3	* 30	13.5	38.4
Max Q Clear Time (g_c+I1), s	3.4	12.6	17.4	38.8	11.0	6.5	11.3	21.8
Green Ext Time (p_c), s	0.0	1.0	0.0	0.0	0.4	0.4	0.0	7.7

Intersection Summary	
HCM 7th Control Delay, s/veh	54.8
HCM 7th LOS	D

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

APPENDIX 6.2:

EAPC (2027) SIGNAL WARRANTS

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Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	EAPC (2027)
				CALC IA	DATE 08/28/25
Jurisdiction: **County of Riverside**				CHK IA	DATE 08/28/25
Major Street: **Washington St.**				Critical Approach Speed (Major)	30 mph
Minor Street: **Driveway 3**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **21,714** vpd Minor Street Future ADT = **237** 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 / RURAL	Minimum Requirements EADT			
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)	
Satisfied / Not Satisfied: XX	Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach: Major Street / Minor Street				
1 **21,714** / 1 **237**	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)	
Satisfied / Not Satisfied: XX	Urban	Rural	Urban	Rural
Number of lanes for moving traffic on each approach: Major Street / Minor Street				
1 **21,714** / 1 **237**	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				
Satisfied / Not Satisfied: XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. A: 10% B: 20%				

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 6.3:

EAPC (2027) SIGNALIZED QUEUES

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Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	633	48	1753	1294	180
v/c Ratio	0.74	0.34	0.80	0.70	0.13
Control Delay (s/veh)	33.5	47.0	14.3	17.7	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	33.5	47.0	14.3	17.7	0.4
Queue Length 50th (ft)	154	24	293	270	0
Queue Length 95th (ft)	252	69	477	402	7
Internal Link Dist (ft)	1275		961	1331	
Turn Bay Length (ft)	90	300			125
Base Capacity (vph)	1243	156	3393	3113	1472
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.51	0.31	0.52	0.42	0.12

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	201	1447	63	18	1622	25	207	212	139	145
v/c Ratio	1.21	0.80	0.07	0.16	1.21	0.04	0.60	0.60	0.46	0.34
Control Delay (s/veh)	173.1	22.9	0.2	41.0	127.1	0.1	29.8	33.0	24.0	12.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	173.1	22.9	0.2	41.0	127.1	0.1	29.8	33.0	24.0	12.2
Queue Length 50th (ft)	~121	270	0	9	~514	0	77	86	50	20
Queue Length 95th (ft)	#286	#635	0	31	#776	0	128	149	88	63
Internal Link Dist (ft)		1223			755			377		908
Turn Bay Length (ft)	200		80	170		165	100		85	
Base Capacity (vph)	166	1805	872	112	1341	681	344	602	307	648
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.21	0.80	0.07	0.16	1.21	0.04	0.60	0.35	0.45	0.22

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	217	1503	204	1508	685	105	567	239	540	212	106
v/c Ratio	0.90	1.19	0.85	1.18	0.94	0.50	0.73	0.48	1.37	0.27	0.21
Control Delay (s/veh)	90.1	127.4	81.7	124.2	45.6	62.9	48.7	12.8	213.9	53.4	32.5
Queue Delay	0.0	0.0	0.0	0.0	44.9	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay (s/veh)	90.1	127.4	81.7	124.2	90.4	62.9	48.8	12.8	213.9	53.4	32.5
Queue Length 50th (ft)	171	~750	160	~748	365	41	218	32	~297	110	56
Queue Length 95th (ft)	#385	#893	#361	#889	#629	72	267	101	m#333	m124	m71
Internal Link Dist (ft)		123		1227			790			173	
Turn Bay Length (ft)	285		300		300	145		140	180		130
Base Capacity (vph)	240	1266	240	1279	729	228	943	560	394	894	566
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	149	0	17	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.90	1.19	0.85	1.18	1.18	0.46	0.61	0.43	1.37	0.24	0.19

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

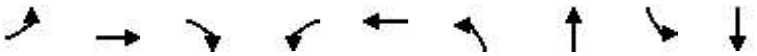
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	6	2030	71	20	2400	12	61	62
v/c Ratio	0.06	0.79	0.06	0.18	0.91	0.01	0.20	0.24
Control Delay (s/veh)	45.7	16.2	3.0	47.8	20.2	0.0	6.6	24.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	45.7	16.2	3.0	47.8	20.2	0.0	6.6	24.4
Queue Length 50th (ft)	3	276	0	10	433	0	0	18
Queue Length 95th (ft)	18	#1004	23	40	#1291	0	24	54
Internal Link Dist (ft)		1222			1308		541	454
Turn Bay Length (ft)	295		130	305				
Base Capacity (vph)	109	2559	1163	109	2636	1183	644	600
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.79	0.06	0.18	0.91	0.01	0.09	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	202	1698	87	108	2221	72	145	127	50
v/c Ratio	1.20	0.89	0.10	0.96	1.24	0.44	0.48	1.13	0.17
Control Delay (s/veh)	170.3	28.6	1.7	123.9	139.5	52.2	31.8	168.6	13.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	170.3	28.6	1.7	123.9	139.5	52.2	31.8	168.6	13.4
Queue Length 50th (ft)	~137	405	0	63	~824	39	62	~83	3
Queue Length 95th (ft)	#373	#947	15	#222	#1440	104	114	#261	33
Internal Link Dist (ft)		1565			2589		1030		346
Turn Bay Length (ft)	280		75	295		100		45	
Base Capacity (vph)	169	1902	907	112	1784	198	807	112	677
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.20	0.89	0.10	0.96	1.24	0.36	0.18	1.13	0.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

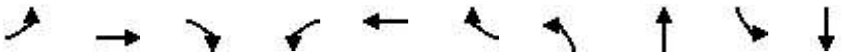


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	52	1573	272	136	2065	16	220	243	50	116	55
v/c Ratio	0.48	0.94	0.34	0.99	1.13	0.02	0.77	0.56	0.21	0.36	0.15
Control Delay (s/veh)	56.7	35.8	10.5	116.1	91.2	0.1	46.5	18.8	23.7	33.4	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	56.7	35.8	10.5	116.1	91.2	0.1	46.5	18.8	23.7	33.4	0.8
Queue Length 50th (ft)	26	381	44	71	~677	0	96	51	20	56	0
Queue Length 95th (ft)	#90	#762	133	#227	#1092	0	155	119	44	102	0
Internal Link Dist (ft)		2589			2614			512		890	
Turn Bay Length (ft)	295		100	420		160	60		70		50
Base Capacity (vph)	108	1665	807	138	1823	852	284	701	235	689	662
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.94	0.34	0.99	1.13	0.02	0.77	0.35	0.21	0.17	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	192	1229	408	457	1672	208	526	771	86	775
v/c Ratio	1.21	0.91	0.48	1.03	1.13	0.28	1.24	0.80	1.01	1.10
Control Delay (s/veh)	184.1	46.6	13.8	102.1	99.1	8.9	171.6	42.8	157.7	105.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	184.1	46.6	13.8	102.1	99.1	8.9	171.6	42.8	157.7	105.4
Queue Length 50th (ft)	~184	477	132	~198	~800	32	~265	264	~69	~343
Queue Length 95th (ft)	#336	#617	209	#306	#942	84	#378	343	#181	#473
Internal Link Dist (ft)		2614			2123			3887		2020
Turn Bay Length (ft)	400		300	355			186		80	
Base Capacity (vph)	159	1347	845	443	1486	737	423	962	85	706
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.21	0.91	0.48	1.03	1.13	0.28	1.24	0.80	1.01	1.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	305	1012	168	366	1666	526	288	608	227	391	301
v/c Ratio	1.18	0.86	0.21	1.45	0.85	0.61	1.45	0.74	0.60	0.48	0.52
Control Delay (s/veh)	157.4	42.7	3.7	258.0	34.9	15.8	261.7	40.3	50.9	34.6	19.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	157.4	42.7	3.7	258.0	34.9	15.8	261.7	40.3	50.9	34.6	19.0
Queue Length 50th (ft)	~118	304	0	~323	352	160	~254	186	73	115	98
Queue Length 95th (ft)	#246	#536	41	#605	#584	333	#502	260	126	158	169
Internal Link Dist (ft)		2123			3107			1466		1079	
Turn Bay Length (ft)	165		200	150		180	210		200		150
Base Capacity (vph)	258	1175	806	252	1959	951	199	1297	579	1519	580
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.18	0.86	0.21	1.45	0.85	0.55	1.45	0.47	0.39	0.26	0.52

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	286	1226	288	1921	291	98	456	26	358
v/c Ratio	1.06	1.00	1.07	1.04	0.75	0.18	0.63	0.32	0.84
Control Delay (s/veh)	117.1	62.0	119.1	69.7	60.5	29.4	11.9	63.9	45.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	117.1	62.0	119.1	69.7	60.5	29.4	11.9	63.9	45.4
Queue Length 50th (ft)	~227	~456	~230	~517	103	54	56	18	172
Queue Length 95th (ft)	#447	#707	#452	#713	#176	96	163	52	283
Internal Link Dist (ft)		3107		1942		1095			637
Turn Bay Length (ft)	400		185		115		125	125	
Base Capacity (vph)	270	1228	270	1839	428	704	819	82	588
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.06	1.00	1.07	1.04	0.68	0.14	0.56	0.32	0.61

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	310	51	1313	1694	508
v/c Ratio	0.54	0.37	0.52	0.81	0.36
Control Delay (s/veh)	36.8	53.6	6.4	18.0	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	36.8	53.6	6.4	18.0	1.3
Queue Length 50th (ft)	76	27	123	348	15
Queue Length 95th (ft)	147	#91	265	598	28
Internal Link Dist (ft)	1275		961	1331	
Turn Bay Length (ft)	90	300			125
Base Capacity (vph)	1197	150	3258	2953	1535
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.26	0.34	0.40	0.57	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	114	1556	178	25	1377	53	67	24	80	91
v/c Ratio	0.82	0.74	0.18	0.19	0.82	0.07	0.28	0.07	0.23	0.26
Control Delay (s/veh)	80.4	21.0	5.8	39.9	25.5	0.2	25.8	17.0	20.9	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	80.4	21.0	5.8	39.9	25.5	0.2	25.8	17.0	20.9	15.6
Queue Length 50th (ft)	53	252	8	11	287	0	30	5	28	16
Queue Length 95th (ft)	#181	#716	62	40	#604	0	49	23	57	52
Internal Link Dist (ft)		1223			755			377		908
Turn Bay Length (ft)	200		80	170		165	100		85	
Base Capacity (vph)	139	2109	996	129	1671	807	242	683	342	706
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.74	0.18	0.19	0.82	0.07	0.28	0.04	0.23	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	203	1517	219	1248	402	178	280	154	641	396	109
v/c Ratio	0.74	1.25	0.70	0.96	0.51	0.63	0.54	0.42	1.13	0.50	0.25
Control Delay (s/veh)	65.5	156.0	59.8	55.8	9.0	63.3	50.1	9.6	122.0	68.8	37.5
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	65.5	156.0	59.8	55.8	9.2	63.3	50.1	9.6	122.0	68.8	37.5
Queue Length 50th (ft)	151	~773	161	496	35	70	112	0	~311	173	57
Queue Length 95th (ft)	#317	#1022	#352	#782	142	108	132	52	m#348	m186	m68
Internal Link Dist (ft)		123		1227			790			173	
Turn Bay Length (ft)	285		300		300	145		140	180		130
Base Capacity (vph)	274	1209	314	1295	788	320	943	535	566	1185	602
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	52	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	1.25	0.70	0.96	0.55	0.56	0.30	0.29	1.13	0.33	0.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

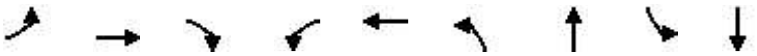
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	20	2106	107	19	1896	9	37	38
v/c Ratio	0.18	0.76	0.09	0.17	0.69	0.01	0.15	0.14
Control Delay (s/veh)	47.7	14.9	4.2	47.5	13.0	0.0	23.7	20.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	47.7	14.9	4.2	47.5	13.0	0.0	23.7	20.7
Queue Length 50th (ft)	10	301	4	9	237	0	10	8
Queue Length 95th (ft)	40	#1065	41	39	#901	0	38	36
Internal Link Dist (ft)		1222			1308		541	454
Turn Bay Length (ft)	295		130	305				
Base Capacity (vph)	114	2758	1249	114	2758	1221	591	638
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.76	0.09	0.17	0.69	0.01	0.06	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	155	1852	144	73	1962	41	69	98	40
v/c Ratio	1.00	0.93	0.16	0.75	1.05	0.32	0.27	0.85	0.13
Control Delay (s/veh)	118.4	29.8	6.6	87.5	59.0	51.1	25.8	97.1	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	118.4	29.8	6.6	87.5	59.0	51.1	25.8	97.1	14.1
Queue Length 50th (ft)	86	417	13	40	524	22	24	54	4
Queue Length 95th (ft)	#293	#1066	68	#159	#1208	70	57	#201	29
Internal Link Dist (ft)		1565			2589		1030		346
Turn Bay Length (ft)	280		75	295		100		45	
Base Capacity (vph)	155	1993	928	97	1866	137	833	115	756
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.00	0.93	0.16	0.75	1.05	0.30	0.08	0.85	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	96	1762	161	138	1759	19	165	113	60	31	55
v/c Ratio	0.81	1.10	0.21	0.91	1.05	0.02	0.57	0.29	0.20	0.10	0.14
Control Delay (s/veh)	85.7	78.9	6.2	94.0	61.3	0.1	30.9	12.1	21.5	27.0	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	85.7	78.9	6.2	94.0	61.3	0.1	30.9	12.1	21.5	27.0	0.8
Queue Length 50th (ft)	46	~511	9	66	~492	0	64	12	22	13	0
Queue Length 95th (ft)	#164	#894	58	#218	#875	0	110	52	47	34	0
Internal Link Dist (ft)		2589			2614			512		890	
Turn Bay Length (ft)	295		100	420		160	60		70		50
Base Capacity (vph)	118	1602	782	151	1669	810	292	705	299	744	709
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	1.10	0.21	0.91	1.05	0.02	0.57	0.16	0.20	0.04	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	190	1574	215	231	1432	73	272	352	95	523
v/c Ratio	0.94	0.96	0.22	0.91	0.95	0.10	0.69	0.43	0.89	0.79
Control Delay (s/veh)	100.1	44.1	4.5	89.5	46.7	0.3	58.1	21.0	114.3	40.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	100.1	44.1	4.5	89.5	46.7	0.3	58.1	21.0	114.3	40.6
Queue Length 50th (ft)	140	572	23	88	525	0	100	61	70	138
Queue Length 95th (ft)	#309	#838	59	#179	#773	0	152	105	#188	205
Internal Link Dist (ft)		2614			2123			3887		2020
Turn Bay Length (ft)	400		300	355			186		80	
Base Capacity (vph)	202	1647	1001	255	1504	766	480	1054	107	821
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.96	0.21	0.91	0.95	0.10	0.57	0.33	0.89	0.64

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	376	1077	167	198	1149	277	166	371	269	545	297
v/c Ratio	0.79	0.88	0.20	0.91	0.68	0.32	0.91	0.49	0.67	0.68	0.46
Control Delay (s/veh)	56.2	41.3	5.5	87.0	32.6	4.8	93.3	35.3	52.1	39.4	17.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	56.2	41.3	5.5	87.0	32.6	4.8	93.3	35.3	52.1	39.4	17.3
Queue Length 50th (ft)	118	323	10	124	223	15	104	106	84	170	100
Queue Length 95th (ft)	#242	#608	58	#323	361	74	#286	155	148	222	163
Internal Link Dist (ft)		2123			3107			1466		1079	
Turn Bay Length (ft)	165		200	150		180	210		200		150
Base Capacity (vph)	486	1229	818	218	1690	909	183	1328	527	1527	656
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.88	0.20	0.91	0.68	0.30	0.91	0.28	0.51	0.36	0.45

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	177	1476	341	1415	337	73	341	27	132
v/c Ratio	0.77	1.14	1.24	0.71	0.71	0.16	0.55	0.30	0.47
Control Delay (s/veh)	65.3	102.7	172.3	29.2	50.5	30.9	8.5	58.2	25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	65.3	102.7	172.3	29.2	50.5	30.9	8.5	58.2	25.0
Queue Length 50th (ft)	106	~549	~258	260	103	39	15	16	35
Queue Length 95th (ft)	#266	#925	#547	433	177	75	86	52	93
Internal Link Dist (ft)		3107		1942		1095			637
Turn Bay Length (ft)	400		185		115		125	125	
Base Capacity (vph)	241	1296	275	1993	635	783	837	89	548
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	1.14	1.24	0.71	0.53	0.09	0.41	0.30	0.24

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

APPENDIX 6.4:

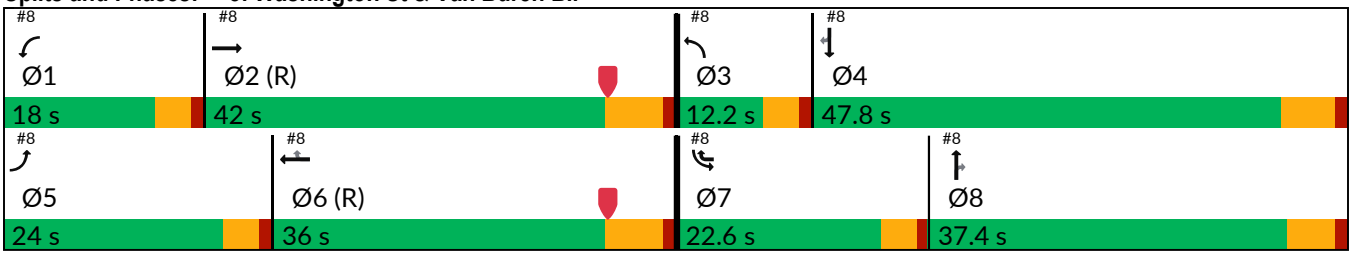
EAPC (2027) INTERSECTION ANALYSIS WITH IMPROVEMENTS

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Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	202	1269	190	1402	637	98	527	222	502	197	99
Future Volume (vph)	202	1269	190	1402	637	98	527	222	502	197	99
Turn Type	Prot	NA	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	1	6	7	3	8		7	4	
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	7	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.2	34.2	9.2	33.2	9.2	9.2	37.4	37.4	9.2	30.8	30.8
Total Split (s)	24.0	42.0	18.0	36.0	22.6	12.2	37.4	37.4	22.6	47.8	47.8
Total Split (%)	20.0%	35.0%	15.0%	30.0%	18.8%	10.2%	31.2%	31.2%	18.8%	39.8%	39.8%
Yellow Time (s)	3.2	5.2	3.2	5.2	3.2	3.2	4.4	4.4	3.2	4.8	4.8
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)	4.2	6.2	4.2	6.2	4.2	4.2	5.4	5.4	4.2	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None	None	None	None
Act Effct Green (s)	18.1	38.0	17.9	37.8	58.2	7.3	25.7	25.7	18.4	36.3	36.3
Actuated g/C Ratio	0.15	0.32	0.15	0.32	0.49	0.06	0.21	0.21	0.15	0.30	0.30
v/c Ratio	0.82	0.94	0.77	0.94	0.83	0.50	0.75	0.47	1.03	0.24	0.18
Control Delay (s/veh)	72.4	52.6	69.7	53.3	32.4	62.9	50.3	9.7	86.2	52.7	27.1
Queue Delay	0.0	0.0	0.0	0.0	25.6	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	72.4	52.6	69.7	53.3	58.1	62.9	50.3	9.7	86.2	52.7	27.1
LOS	E	D	E	D	E	E	D	A	F	D	C
Approach Delay (s/veh)		55.1		56.1			41.1			70.6	
Approach LOS		E		E			D			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay (s/veh): 55.6	Intersection LOS: E
Intersection Capacity Utilization 83.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 8: Washington St & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	1269	128	190	1402	637	98	527	222	502	197	99
Future Volume (veh/h)	202	1269	128	190	1402	637	98	527	222	502	197	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	217	1365	99	204	1508	483	105	567	176	540	212	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	244	1776	129	205	1756	787	157	695	310	530	875	481
Arrive On Green	0.14	0.37	0.37	0.12	0.34	0.34	0.05	0.20	0.20	0.15	0.30	0.30
Sat Flow, veh/h	1781	4853	352	1781	5106	1581	3456	3554	1585	3456	2880	1585
Grp Volume(v), veh/h	217	957	507	204	1508	483	105	567	176	540	212	48
Grp Sat Flow(s),veh/h/ln	1781	1702	1801	1781	1702	1581	1728	1777	1585	1728	1440	1585
Q Serve(g_s), s	14.4	29.8	29.8	13.7	33.0	26.5	3.6	18.3	12.1	18.4	6.6	2.6
Cycle Q Clear(g_c), s	14.4	29.8	29.8	13.7	33.0	26.5	3.6	18.3	12.1	18.4	6.6	2.6
Prop In Lane	1.00		0.20	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	244	1246	659	205	1756	787	157	695	310	530	875	481
V/C Ratio(X)	0.89	0.77	0.77	1.00	0.86	0.61	0.67	0.82	0.57	1.02	0.24	0.10
Avail Cap(c_a), veh/h	294	1246	659	205	1756	787	230	948	423	530	1008	555
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	50.9	33.6	33.6	53.1	36.7	21.8	56.4	46.2	43.7	50.8	31.4	30.0
Incr Delay (d2), s/veh	21.4	4.6	8.4	61.6	5.7	3.6	1.8	4.0	1.6	44.0	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	7.6	12.3	13.8	9.4	13.8	10.0	1.6	8.2	4.7	11.0	2.3	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	72.3	38.2	41.9	114.7	42.4	25.4	58.2	50.2	45.3	94.8	31.6	30.1
LnGrp LOS	E	D	D	F	D	C	E	D	D	F	C	C
Approach Vol, veh/h		1681			2195			848			800	
Approach Delay, s/veh		43.7			45.4			50.2			74.2	
Approach LOS		D			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	50.1	9.7	42.2	20.6	47.5	22.6	29.3
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	13.8	35.8	8.0	42.0	19.8	29.8	18.4	* 32
Max Q Clear Time (g_c+I1), s	15.7	31.8	5.6	8.6	16.4	35.0	20.4	20.3
Green Ext Time (p_c), s	0.0	3.2	0.0	1.4	0.1	0.0	0.0	3.2

Intersection Summary	
HCM 7th Control Delay, s/veh	49.8
HCM 7th LOS	D

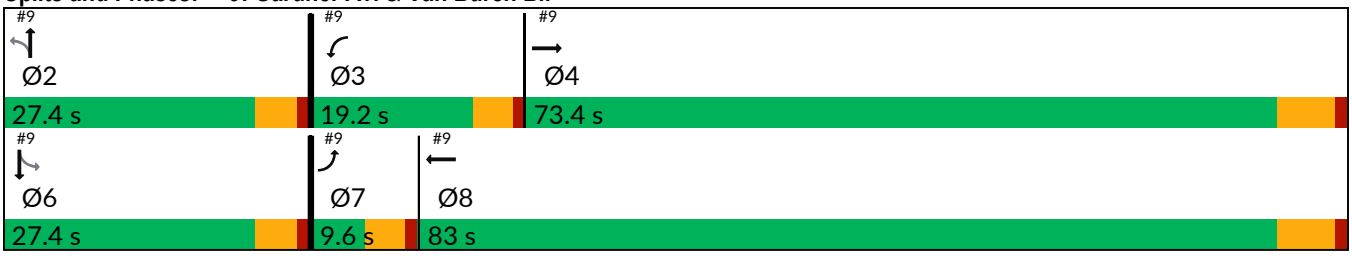
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	11	1850	183	2189	29	0	1	0
Future Volume (vph)	11	1850	183	2189	29	0	1	0
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	28.2	9.6	28.2	26.7	26.7	26.7	26.7
Total Split (s)	9.6	73.4	19.2	83.0	27.4	27.4	27.4	27.4
Total Split (%)	8.0%	61.2%	16.0%	69.2%	22.8%	22.8%	22.8%	22.8%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.7	3.7	3.7	3.7
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
Total Lost Time (s)	4.6	6.2	4.6	6.2		4.7		4.7
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.1	65.3	14.1	83.9		10.2		10.2
Actuated g/C Ratio	0.05	0.64	0.14	0.83		0.10		0.10
v/c Ratio	0.14	0.86	0.79	0.79		0.34		0.06
Control Delay (s/veh)	52.7	20.7	67.5	9.9		8.1		0.5
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay (s/veh)	52.7	20.7	67.5	9.9		8.1		0.5
LOS	D	C	E	A		A		A
Approach Delay (s/veh)		20.9		14.3		8.1		0.5
Approach LOS		C		B		A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 101.5	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay (s/veh): 17.0	Intersection LOS: B
Intersection Capacity Utilization 89.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 9: Gardner Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	1850	10	183	2189	4	29	0	51	1	0	14
Future Volume (veh/h)	11	1850	10	183	2189	4	29	0	51	1	0	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	12	1947	11	193	2304	4	31	0	54	1	0	15
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	25	2241	13	226	2661	5	90	14	92	43	6	139
Arrive On Green	0.01	0.62	0.62	0.13	0.73	0.73	0.09	0.00	0.09	0.09	0.00	0.09
Sat Flow, veh/h	1781	3623	20	1781	3640	6	417	149	986	30	69	1491
Grp Volume(v), veh/h	12	954	1004	193	1124	1184	85	0	0	16	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1867	1781	1777	1869	1552	0	0	1590	0	0
Q Serve(g_s), s	0.6	42.5	42.7	10.2	44.5	44.6	2.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.6	42.5	42.7	10.2	44.5	44.6	4.9	0.0	0.0	0.9	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.00	0.36		0.64	0.06		0.94
Lane Grp Cap(c), veh/h	25	1099	1155	226	1299	1367	196	0	0	188	0	0
V/C Ratio(X)	0.47	0.87	0.87	0.85	0.87	0.87	0.43	0.00	0.00	0.09	0.00	0.00
Avail Cap(c_a), veh/h	93	1243	1306	271	1420	1494	412	0	0	412	0	0
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	0.00	0.00
Uniform Delay (d), s/veh	47.0	15.1	15.1	41.1	9.5	9.5	41.7	0.0	0.0	39.9	0.0	0.0
Incr Delay (d2), s/veh	5.0	6.2	6.0	17.4	5.5	5.3	1.5	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	0.3	15.1	15.8	5.3	12.4	13.0	2.0	0.0	0.0	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	52.0	21.3	21.1	58.5	15.0	14.8	43.2	0.0	0.0	40.1	0.0	0.0
LnGrp LOS	D	C	C	E	B	B	D			D		
Approach Vol, veh/h		1970			2501			85			16	
Approach Delay, s/veh		21.4			18.2			43.2			40.1	
Approach LOS		C			B			D			D	

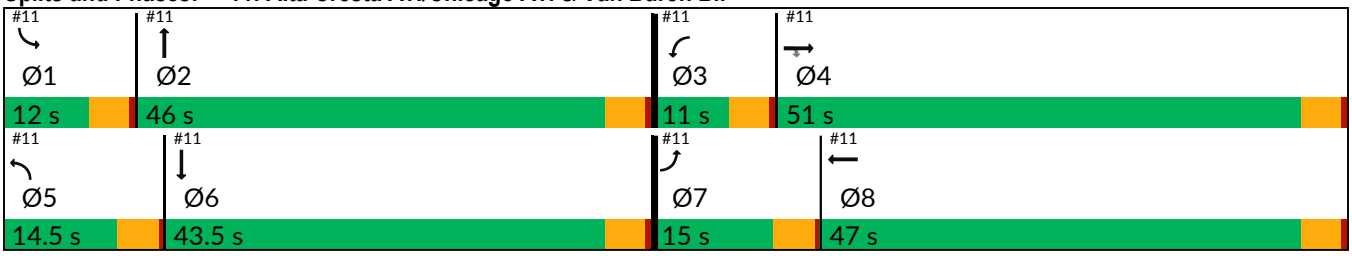
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		13.7	16.8	65.6		13.7	6.0	76.4				
Change Period (Y+Rc), s		4.7	4.6	6.2		4.7	4.6	6.2				
Max Green Setting (Gmax), s		22.7	14.6	67.2		22.7	5.0	76.8				
Max Q Clear Time (g_c+I1), s		6.9	12.2	44.7		2.9	2.6	46.6				
Green Ext Time (p_c), s		0.3	0.1	14.8		0.0	0.0	22.7				

Intersection Summary	
HCM 7th Control Delay, s/veh	20.1
HCM 7th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	188	1579	81	100	2031	67	81	118	6
Future Volume (vph)	188	1579	81	100	2031	67	81	118	6
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.1	30.1	30.1	9.1	30.1	9.1	44.1	9.1	26.1
Total Split (s)	15.0	51.0	51.0	11.0	47.0	14.5	46.0	12.0	43.5
Total Split (%)	12.5%	42.5%	42.5%	9.2%	39.2%	12.1%	38.3%	10.0%	36.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	11.1	47.6	47.6	7.0	43.5	8.6	15.0	8.0	16.6
Actuated g/C Ratio	0.12	0.51	0.51	0.07	0.46	0.09	0.16	0.08	0.18
v/c Ratio	0.98	0.95	0.10	0.82	0.95	0.44	0.48	0.85	0.16
Control Delay (s/veh)	100.7	36.5	4.8	89.0	35.6	52.2	31.8	87.4	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	100.7	36.5	4.8	89.0	35.6	52.2	31.8	87.4	12.5
LOS	F	D	A	F	D	D	C	F	B
Approach Delay (s/veh)		41.7			38.1		38.6		66.2
Approach LOS		D			D		D		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 94.2	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay (s/veh): 40.7	Intersection LOS: D
Intersection Capacity Utilization 78.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 11: Alta Cresta Av./Chicago Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	1579	81	100	2031	34	67	81	54	118	6	41
Future Volume (veh/h)	188	1579	81	100	2031	34	67	81	54	118	6	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	202	1698	71	108	2184	36	72	87	31	127	6	38
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	231	1930	861	137	2535	42	93	127	45	158	29	186
Arrive On Green	0.13	0.54	0.54	0.08	0.49	0.49	0.05	0.10	0.10	0.09	0.13	0.13
Sat Flow, veh/h	1781	3554	1585	1781	5172	85	1781	1317	469	1781	221	1398
Grp Volume(v), veh/h	202	1698	71	108	1436	784	72	0	118	127	0	44
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1702	1853	1781	0	1786	1781	0	1619
Q Serve(g_s), s	9.4	35.1	1.8	5.0	31.3	31.4	3.4	0.0	5.4	5.9	0.0	2.0
Cycle Q Clear(g_c), s	9.4	35.1	1.8	5.0	31.3	31.4	3.4	0.0	5.4	5.9	0.0	2.0
Prop In Lane	1.00		1.00	1.00		0.05	1.00		0.26	1.00		0.86
Lane Grp Cap(c), veh/h	231	1930	861	137	1669	908	93	0	172	158	0	215
V/C Ratio(X)	0.87	0.88	0.08	0.79	0.86	0.86	0.77	0.00	0.69	0.80	0.00	0.20
Avail Cap(c_a), veh/h	231	1982	884	146	1737	945	220	0	890	167	0	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	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.9	16.8	9.2	38.2	18.9	18.9	39.3	0.0	36.8	37.6	0.0	32.5
Incr Delay (d2), s/veh	28.9	4.9	0.0	23.5	4.5	8.1	12.6	0.0	4.8	22.8	0.0	0.5
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	5.6	12.5	0.5	2.9	11.1	13.1	1.8	0.0	2.6	3.5	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	64.8	21.7	9.2	61.7	23.4	27.0	51.9	0.0	41.6	60.4	0.0	33.0
LnGrp LOS	E	C	A	E	C	C	D		D	E		C
Approach Vol, veh/h		1971			2328			190			171	
Approach Delay, s/veh		25.6			26.4			45.5			53.3	
Approach LOS		C			C			D			D	

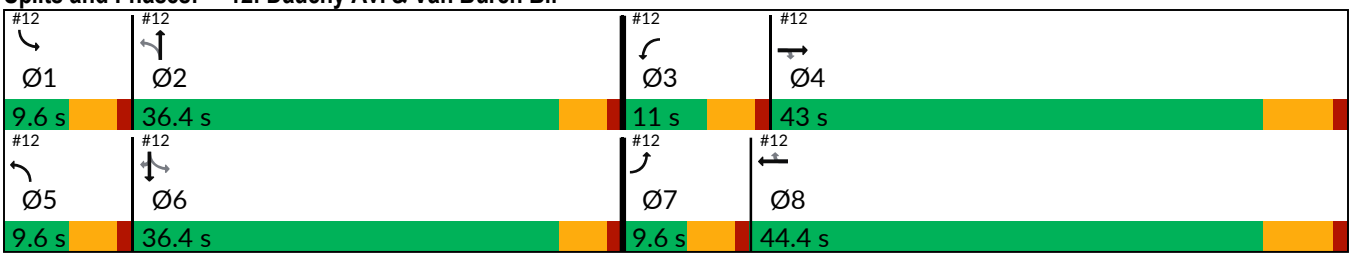
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.6	12.2	10.5	49.8	8.5	15.3	15.0	45.3
Change Period (Y+Rc), s	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Max Green Setting (Gmax), s	7.9	41.9	6.9	46.9	10.4	39.4	10.9	42.9
Max Q Clear Time (g_c+I1), s	7.9	7.4	7.0	37.1	5.4	4.0	11.4	33.4
Green Ext Time (p_c), s	0.0	0.7	0.0	7.1	0.1	0.2	0.0	7.8

Intersection Summary	
HCM 7th Control Delay, s/veh	27.8
HCM 7th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	48	1447	250	125	1900	15	202	61	46	107	51
Future Volume (vph)	48	1447	250	125	1900	15	202	61	46	107	51
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	28.2	28.2	9.6	28.2	28.2	9.6	26.6	9.6	33.6	33.6
Total Split (s)	9.6	43.0	43.0	11.0	44.4	44.4	9.6	36.4	9.6	36.4	36.4
Total Split (%)	9.6%	43.0%	43.0%	11.0%	44.4%	44.4%	9.6%	36.4%	9.6%	36.4%	36.4%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	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	None	None	None	None
Act Effct Green (s)	5.1	37.3	37.3	6.5	40.9	40.9	18.9	16.0	16.7	14.0	14.0
Actuated g/C Ratio	0.06	0.46	0.46	0.08	0.51	0.51	0.23	0.20	0.21	0.17	0.17
v/c Ratio	0.47	0.96	0.34	0.96	0.80	0.02	0.76	0.55	0.21	0.36	0.14
Control Delay (s/veh)	54.9	39.2	10.6	109.0	22.7	0.1	43.9	17.8	22.9	32.6	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	54.9	39.2	10.6	109.0	22.7	0.1	43.9	17.8	22.9	32.6	0.8
LOS	D	D	B	F	C	A	D	B	C	C	A
Approach Delay (s/veh)		35.6			27.8			30.2		22.5	
Approach LOS		D			C			C		C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 80.8	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay (s/veh): 30.9	Intersection LOS: C
Intersection Capacity Utilization 84.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 12: Dauchy Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	1447	250	125	1900	15	202	61	163	46	107	51
Future Volume (veh/h)	48	1447	250	125	1900	15	202	61	163	46	107	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	52	1573	192	136	2065	8	220	66	114	50	116	28
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	77	1665	743	146	2591	786	294	92	159	226	240	199
Arrive On Green	0.04	0.47	0.47	0.08	0.51	0.51	0.06	0.15	0.15	0.04	0.13	0.13
Sat Flow, veh/h	1781	3554	1585	1781	5106	1549	1781	616	1063	1781	1870	1556
Grp Volume(v), veh/h	52	1573	192	136	2065	8	220	0	180	50	116	28
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1702	1549	1781	0	1679	1781	1870	1556
Q Serve(g_s), s	2.2	32.9	5.7	5.9	26.0	0.2	5.0	0.0	7.9	1.9	4.5	1.2
Cycle Q Clear(g_c), s	2.2	32.9	5.7	5.9	26.0	0.2	5.0	0.0	7.9	1.9	4.5	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.63	1.00		1.00
Lane Grp Cap(c), veh/h	77	1665	743	146	2591	786	294	0	252	226	240	199
V/C Ratio(X)	0.67	0.94	0.26	0.93	0.80	0.01	0.75	0.00	0.71	0.22	0.48	0.14
Avail Cap(c_a), veh/h	114	1680	749	146	2591	786	294	0	686	264	764	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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.7	19.7	12.5	35.5	15.9	9.5	31.4	0.0	31.5	27.8	31.5	30.1
Incr Delay (d2), s/veh	3.8	11.4	0.2	52.7	1.8	0.0	9.0	0.0	3.8	0.2	1.5	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	1.0	13.5	1.7	4.5	8.4	0.1	2.4	0.0	3.4	0.8	2.1	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.5	31.1	12.7	88.2	17.7	9.5	40.3	0.0	35.3	28.0	33.1	30.5
LnGrp LOS	D	C	B	F	B	A	D		D	C	C	C
Approach Vol, veh/h		1817			2209			400			194	
Approach Delay, s/veh		29.4			22.0			38.1			31.4	
Approach LOS		C			C			D			C	

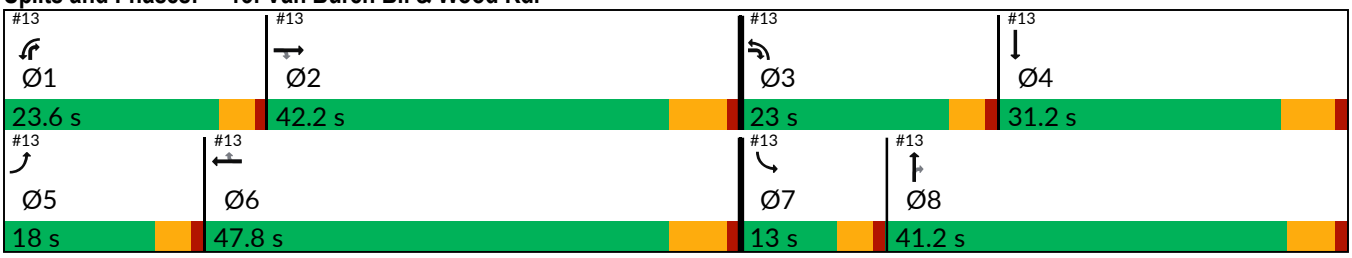
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	16.3	11.0	42.7	9.6	14.6	8.0	45.7
Change Period (Y+Rc), s	4.6	4.6	4.6	6.2	4.6	4.6	4.6	6.2
Max Green Setting (Gmax), s	5.0	31.8	6.4	36.8	5.0	31.8	5.0	38.2
Max Q Clear Time (g_c+I1), s	3.9	9.9	7.9	34.9	7.0	6.5	4.2	28.0
Green Ext Time (p_c), s	0.0	1.1	0.0	1.6	0.0	0.7	0.0	8.1

Intersection Summary	
HCM 7th Control Delay, s/veh	26.7
HCM 7th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	173	1106	367	411	1505	187	473	441	253	77	474
Future Volume (vph)	173	1106	367	411	1505	187	473	441	253	77	474
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2	3	1	6		3	8	1	7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	3	1	6	6	3	8	1	7	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.2	30.2	9.2	9.2	30.2	30.2	9.2	38.4	9.2	9.2	15.8
Total Split (s)	18.0	42.2	23.0	23.6	47.8	47.8	23.0	41.2	23.6	13.0	31.2
Total Split (%)	15.0%	35.2%	19.2%	19.7%	39.8%	39.8%	19.2%	34.3%	19.7%	10.8%	26.0%
Yellow Time (s)	3.2	5.2	3.2	3.2	5.2	5.2	3.2	4.4	3.2	3.2	4.8
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)	4.2	6.2	4.2	4.2	6.2	6.2	4.2	5.4	4.2	4.2	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	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	None	None	None	None
Act Effct Green (s)	13.8	37.0	57.8	18.4	41.6	41.6	18.8	36.3	56.0	8.3	25.4
Actuated g/C Ratio	0.12	0.31	0.48	0.15	0.35	0.35	0.16	0.30	0.47	0.07	0.21
v/c Ratio	0.95	0.78	0.52	0.87	0.95	0.32	0.98	0.46	0.38	0.71	1.03
Control Delay (s/veh)	103.7	42.4	16.6	66.9	50.8	7.9	84.7	35.7	15.3	84.4	82.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	103.7	42.4	16.6	66.9	50.8	7.9	84.7	35.7	15.3	84.4	82.4
LOS	F	D	B	E	D	A	F	D	B	F	F
Approach Delay (s/veh)		43.1			50.1			51.2			82.6
Approach LOS		D			D			D			F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.03	
Intersection Signal Delay (s/veh): 52.7	Intersection LOS: D
Intersection Capacity Utilization 89.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: Van Buren Bl. & Wood Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	173	1106	367	411	1505	187	473	441	253	77	474	223
Future Volume (veh/h)	173	1106	367	411	1505	187	473	441	253	77	474	223
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.93	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	192	1229	225	457	1672	128	526	490	125	86	527	164
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	205	1597	731	512	1767	544	542	1095	691	108	564	175
Arrive On Green	0.12	0.31	0.31	0.15	0.35	0.35	0.16	0.31	0.31	0.06	0.21	0.21
Sat Flow, veh/h	1781	5106	1541	3456	5106	1573	3456	3554	1480	1781	2662	824
Grp Volume(v), veh/h	192	1229	225	457	1672	128	526	490	125	86	351	340
Grp Sat Flow(s),veh/h/ln	1781	1702	1541	1728	1702	1573	1728	1777	1480	1781	1777	1709
Q Serve(g_s), s	12.8	26.1	10.9	15.6	38.2	6.9	18.1	13.3	6.0	5.7	23.3	23.5
Cycle Q Clear(g_c), s	12.8	26.1	10.9	15.6	38.2	6.9	18.1	13.3	6.0	5.7	23.3	23.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	205	1597	731	512	1767	544	542	1095	691	108	376	362
V/C Ratio(X)	0.94	0.77	0.31	0.89	0.95	0.24	0.97	0.45	0.18	0.80	0.93	0.94
Avail Cap(c_a), veh/h	205	1597	731	559	1772	546	542	1095	691	131	376	362
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	52.6	37.3	19.7	50.1	38.1	27.9	50.3	33.3	19.4	55.6	46.4	46.5
Incr Delay (d2), s/veh	44.6	2.5	0.3	14.8	11.3	0.3	31.0	0.3	0.1	19.7	29.7	32.0
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	8.1	10.7	3.8	7.5	16.8	2.6	10.0	5.6	2.0	3.1	13.1	12.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	97.2	39.8	20.1	64.9	49.4	28.2	81.3	33.6	19.5	75.3	76.1	78.4
LnGrp LOS	F	D	C	E	D	C	F	C	B	E	E	E
Approach Vol, veh/h		1646			2257			1141			777	
Approach Delay, s/veh		43.8			51.4			54.0			77.0	
Approach LOS		D			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	43.7	23.0	31.2	18.0	47.7	11.5	42.7
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	19.4	36.0	18.8	25.4	13.8	41.6	8.8	* 36
Max Q Clear Time (g_c+I1), s	17.6	28.1	20.1	25.5	14.8	40.2	7.7	15.3
Green Ext Time (p_c), s	0.2	5.8	0.0	0.0	0.0	1.3	0.0	3.4

Intersection Summary	
HCM 7th Control Delay, s/veh	53.2
HCM 7th LOS	D

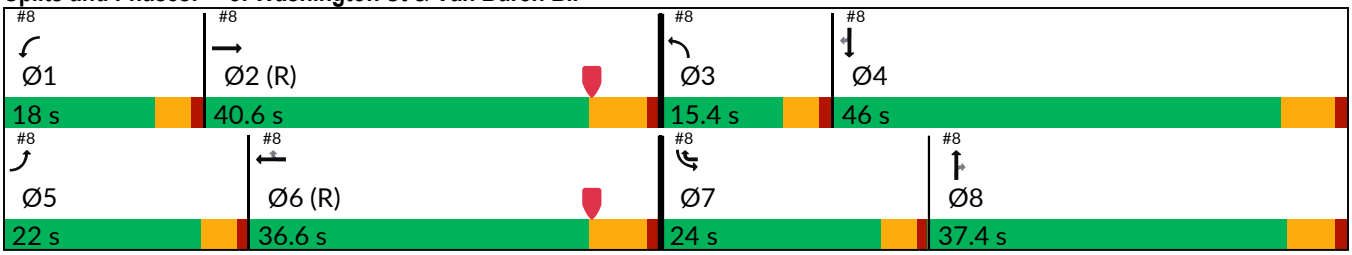
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	199	1427	215	1223	394	174	274	151	628	388	107
Future Volume (vph)	199	1427	215	1223	394	174	274	151	628	388	107
Turn Type	Prot	NA	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	1	6	7	3	8		7	4	
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	7	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.2	34.2	9.2	33.2	9.2	9.2	37.4	37.4	9.2	30.8	30.8
Total Split (s)	22.0	40.6	18.0	36.6	24.0	15.4	37.4	37.4	24.0	46.0	46.0
Total Split (%)	18.3%	33.8%	15.0%	30.5%	20.0%	12.8%	31.2%	31.2%	20.0%	38.3%	38.3%
Yellow Time (s)	3.2	5.2	3.2	5.2	3.2	3.2	4.4	4.4	3.2	4.8	4.8
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)	4.2	6.2	4.2	6.2	4.2	4.2	5.4	5.4	4.2	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None	None	None	None
Act Effct Green (s)	17.2	40.2	21.3	44.3	66.1	9.9	18.7	18.7	19.8	28.2	28.2
Actuated g/C Ratio	0.14	0.34	0.18	0.37	0.55	0.08	0.16	0.16	0.17	0.24	0.24
v/c Ratio	0.80	0.90	0.70	0.66	0.41	0.63	0.51	0.41	1.13	0.71	0.24
Control Delay (s/veh)	72.8	46.5	59.8	35.6	7.4	63.3	48.3	9.1	122.0	74.6	38.4
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	72.8	46.5	59.8	35.6	7.5	63.3	48.3	9.1	122.0	74.6	38.4
LOS	E	D	E	D	A	E	D	A	F	E	D
Approach Delay (s/veh)		49.6		32.4			42.8			97.7	
Approach LOS		D		C			D			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.13	
Intersection Signal Delay (s/veh): 53.1	Intersection LOS: D
Intersection Capacity Utilization 83.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 8: Washington St & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	199	1427	60	215	1223	394	174	274	151	628	388	107
Future Volume (veh/h)	199	1427	60	215	1223	394	174	274	151	628	388	107
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	203	1456	44	219	1248	306	178	280	117	641	396	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	230	2247	68	205	2182	937	234	386	172	570	493	326
Arrive On Green	0.13	0.44	0.44	0.12	0.43	0.43	0.07	0.11	0.11	0.16	0.21	0.21
Sat Flow, veh/h	1781	5090	154	1781	5106	1582	3456	3554	1585	3456	2394	1585
Grp Volume(v), veh/h	203	974	526	219	1248	306	178	280	117	641	396	59
Grp Sat Flow(s),veh/h/ln	1781	1702	1840	1781	1702	1582	1728	1777	1585	1728	1197	1585
Q Serve(g_s), s	13.4	26.9	26.9	13.8	22.2	11.7	6.1	9.1	8.5	19.8	18.9	3.7
Cycle Q Clear(g_c), s	13.4	26.9	26.9	13.8	22.2	11.7	6.1	9.1	8.5	19.8	18.9	3.7
Prop In Lane	1.00		0.08	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	230	1502	812	205	2182	937	234	386	172	570	493	326
V/C Ratio(X)	0.88	0.65	0.65	1.07	0.57	0.33	0.76	0.73	0.68	1.12	0.80	0.18
Avail Cap(c_a), veh/h	264	1502	812	205	2182	937	323	948	423	570	802	531
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	26.2	26.2	53.1	26.0	12.4	55.0	51.7	51.5	50.1	45.3	39.3
Incr Delay (d2), s/veh	23.4	2.2	4.0	82.4	1.1	0.9	4.1	2.6	4.6	76.7	3.1	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	7.3	10.6	11.8	10.6	8.7	4.0	2.7	4.1	3.5	14.3	5.6	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	74.8	28.4	30.2	135.5	27.1	13.3	59.1	54.3	56.1	126.8	48.5	39.6
LnGrp LOS	E	C	C	F	C	B	E	D	E	F	D	D
Approach Vol, veh/h		1703			1773			575			1096	
Approach Delay, s/veh		34.5			38.1			56.2			93.8	
Approach LOS		C			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	59.2	12.3	30.5	19.7	57.5	24.0	18.8
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	13.8	34.4	11.2	40.2	17.8	30.4	19.8	* 32
Max Q Clear Time (g_c+I1), s	15.8	28.9	8.1	20.9	15.4	24.2	21.8	11.1
Green Ext Time (p_c), s	0.0	4.4	0.1	2.4	0.1	4.8	0.0	1.9

Intersection Summary	
HCM 7th Control Delay, s/veh	50.8
HCM 7th LOS	D

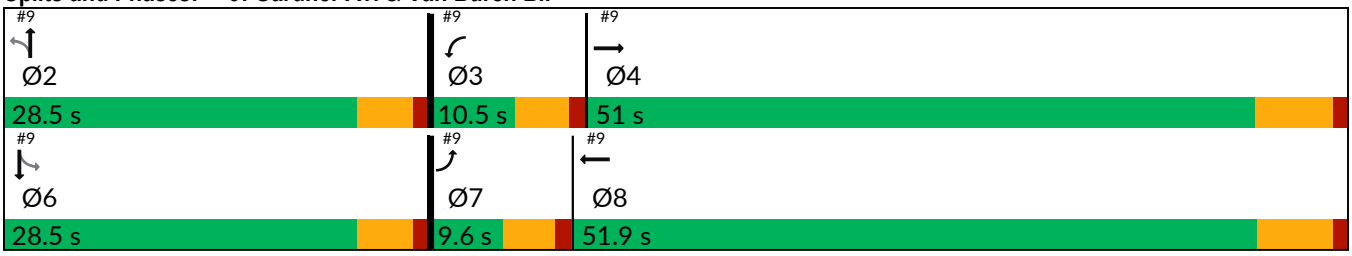
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	18	2030	90	1792	44	0	3	0
Future Volume (vph)	18	2030	90	1792	44	0	3	0
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	28.2	10.5	28.0	26.7	26.7	26.7	26.7
Total Split (s)	9.6	51.0	10.5	51.9	28.5	28.5	28.5	28.5
Total Split (%)	10.7%	56.7%	11.7%	57.7%	31.7%	31.7%	31.7%	31.7%
Yellow Time (s)	3.6	5.2	3.6	5.0	3.7	3.7	3.7	3.7
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
Total Lost Time (s)	4.6	6.2	4.6	6.0		4.7		4.7
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.0	45.2	5.9	55.5		10.1		10.1
Actuated g/C Ratio	0.07	0.62	0.08	0.76		0.14		0.14
v/c Ratio	0.16	1.01	0.68	0.72		0.23		0.09
Control Delay (s/veh)	36.8	39.8	59.9	10.1		5.5		0.6
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay (s/veh)	36.8	39.8	59.9	10.1		5.5		0.6
LOS	D	D	E	B		A		A
Approach Delay (s/veh)		39.8		12.5		5.5		0.6
Approach LOS		D		B		A		A

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 73.3	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay (s/veh): 26.3	Intersection LOS: C
Intersection Capacity Utilization 84.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 9: Gardner Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	2030	20	90	1792	11	44	0	15	3	0	22
Future Volume (veh/h)	18	2030	20	90	1792	11	44	0	15	3	0	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	19	2183	22	97	1927	12	47	0	16	3	0	24
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	39	2226	22	124	2409	15	184	12	37	62	10	140
Arrive On Green	0.02	0.62	0.62	0.07	0.67	0.67	0.10	0.00	0.10	0.10	0.00	0.10
Sat Flow, veh/h	1781	3604	36	1781	3621	23	985	125	378	72	105	1415
Grp Volume(v), veh/h	19	1074	1131	97	945	994	63	0	0	27	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1864	1781	1777	1866	1489	0	0	1591	0	0
Q Serve(g_s), s	0.8	42.4	42.8	3.9	27.6	27.7	1.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.8	42.4	42.8	3.9	27.6	27.7	2.7	0.0	0.0	1.1	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.01	0.75		0.25	0.11		0.89
Lane Grp Cap(c), veh/h	39	1097	1151	124	1182	1242	234	0	0	213	0	0
V/C Ratio(X)	0.49	0.98	0.98	0.78	0.80	0.80	0.27	0.00	0.00	0.13	0.00	0.00
Avail Cap(c_a), veh/h	123	1097	1151	145	1182	1242	562	0	0	570	0	0
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	0.00	0.00
Uniform Delay (d), s/veh	35.1	13.4	13.5	33.2	8.7	8.7	30.6	0.0	0.0	29.9	0.0	0.0
Incr Delay (d2), s/veh	3.5	22.1	22.3	17.3	4.0	3.8	0.6	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	17.4	18.4	2.1	7.3	7.6	1.1	0.0	0.0	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	38.5	35.5	35.8	50.5	12.7	12.5	31.2	0.0	0.0	30.2	0.0	0.0
LnGrp LOS	D	D	D	D	B	B	C			C		
Approach Vol, veh/h		2224			2036			63			27	
Approach Delay, s/veh		35.7			14.4			31.2			30.2	
Approach LOS		D			B			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.9	9.7	51.0		11.9	6.2	54.5				
Change Period (Y+Rc), s		4.7	4.6	6.2		4.7	4.6	* 6.2				
Max Green Setting (Gmax), s		23.8	5.9	44.8		23.8	5.0	* 46				
Max Q Clear Time (g_c+I1), s		4.7	5.9	44.8		3.1	2.8	29.7				
Green Ext Time (p_c), s		0.2	0.0	0.0		0.1	0.0	11.5				

Intersection Summary	
HCM 7th Control Delay, s/veh	25.6
HCM 7th LOS	C

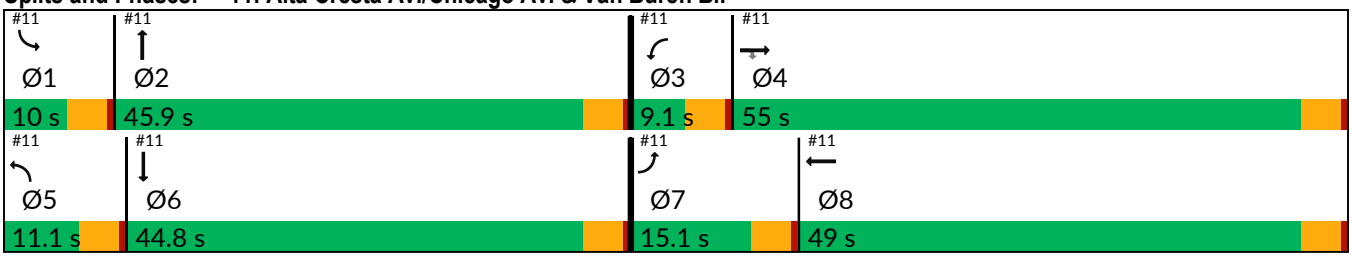
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	146	1741	135	69	1761	39	42	92	7
Future Volume (vph)	146	1741	135	69	1761	39	42	92	7
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.1	30.1	30.1	9.1	30.1	9.1	44.1	9.1	26.1
Total Split (s)	15.1	55.0	55.0	9.1	49.0	11.1	45.9	10.0	44.8
Total Split (%)	12.6%	45.8%	45.8%	7.6%	40.8%	9.3%	38.3%	8.3%	37.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	11.2	51.8	51.8	5.1	45.7	6.7	12.3	6.0	16.0
Actuated g/C Ratio	0.12	0.56	0.56	0.06	0.50	0.07	0.13	0.07	0.17
v/c Ratio	0.72	0.93	0.16	0.75	0.78	0.32	0.27	0.85	0.13
Control Delay (s/veh)	60.9	29.7	6.6	87.5	23.6	51.1	25.8	97.1	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	60.9	29.7	6.6	87.5	23.6	51.1	25.8	97.1	14.2
LOS	E	C	A	F	C	D	C	F	B
Approach Delay (s/veh)		30.4			25.9		35.3		73.1
Approach LOS		C			C		D		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 91.9	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay (s/veh): 29.8	Intersection LOS: C
Intersection Capacity Utilization 74.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 11: Alta Cresta Av./Chicago Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	1741	135	69	1761	84	39	42	23	92	7	31
Future Volume (veh/h)	146	1741	135	69	1761	84	39	42	23	92	7	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	155	1852	126	73	1873	89	41	45	13	98	7	29
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	192	2138	954	94	2726	129	67	90	26	125	31	127
Arrive On Green	0.11	0.60	0.60	0.05	0.55	0.55	0.04	0.06	0.06	0.07	0.10	0.10
Sat Flow, veh/h	1781	3554	1585	1781	4989	237	1781	1395	403	1781	318	1316
Grp Volume(v), veh/h	155	1852	126	73	1277	685	41	0	58	98	0	36
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1702	1822	1781	0	1798	1781	0	1634
Q Serve(g_s), s	6.6	33.7	2.7	3.1	21.1	21.2	1.8	0.0	2.4	4.2	0.0	1.6
Cycle Q Clear(g_c), s	6.6	33.7	2.7	3.1	21.1	21.2	1.8	0.0	2.4	4.2	0.0	1.6
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.22	1.00		0.81
Lane Grp Cap(c), veh/h	192	2138	954	94	1860	995	67	0	116	125	0	158
V/C Ratio(X)	0.81	0.87	0.13	0.78	0.69	0.69	0.61	0.00	0.50	0.78	0.00	0.23
Avail Cap(c_a), veh/h	252	2330	1039	115	1968	1054	161	0	968	135	0	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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.8	12.9	6.7	36.3	12.8	12.8	36.8	0.0	35.1	35.5	0.0	32.4
Incr Delay (d2), s/veh	13.4	3.5	0.1	23.7	0.9	1.8	8.6	0.0	3.3	23.7	0.0	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	3.3	10.3	0.7	1.9	6.4	7.1	0.9	0.0	1.2	2.6	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.2	16.4	6.8	60.0	13.7	14.6	45.4	0.0	38.4	59.2	0.0	33.1
LnGrp LOS	D	B	A	E	B	B	D		D	E		C
Approach Vol, veh/h		2133			2035			99			134	
Approach Delay, s/veh		18.0			15.7			41.3			52.2	
Approach LOS		B			B			D			D	

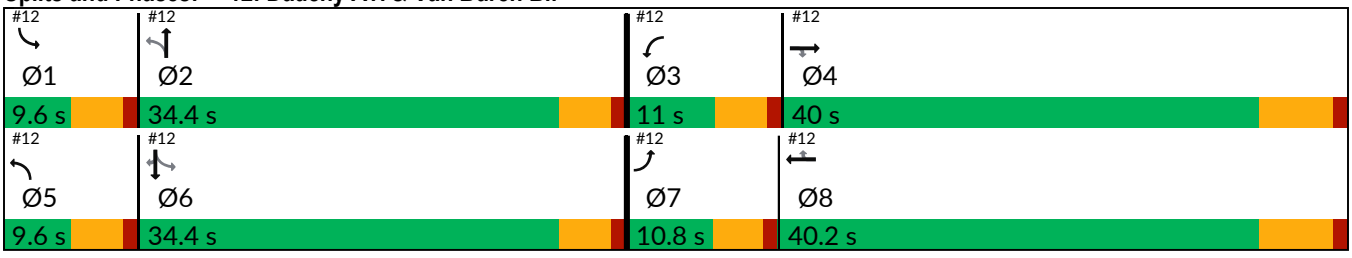
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	9.1	8.2	50.8	7.0	11.6	12.5	46.5
Change Period (Y+Rc), s	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Max Green Setting (Gmax), s	5.9	41.8	5.0	50.9	7.0	40.7	11.0	44.9
Max Q Clear Time (g_c+I1), s	6.2	4.4	5.1	35.7	3.8	3.6	8.6	23.2
Green Ext Time (p_c), s	0.0	0.3	0.0	11.0	0.0	0.2	0.1	13.4

Intersection Summary	
HCM 7th Control Delay, s/veh	18.5
HCM 7th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	89	1639	150	128	1636	18	153	27	56	29	51
Future Volume (vph)	89	1639	150	128	1636	18	153	27	56	29	51
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	28.2	28.2	9.6	28.2	28.2	9.6	26.6	9.6	33.6	33.6
Total Split (s)	10.8	40.0	40.0	11.0	40.2	40.2	9.6	34.4	9.6	34.4	34.4
Total Split (%)	11.4%	42.1%	42.1%	11.6%	42.3%	42.3%	10.1%	36.2%	10.1%	36.2%	36.2%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	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	None	None	None	None
Act Effct Green (s)	6.3	34.5	34.5	6.5	34.7	34.7	16.8	15.2	15.9	13.3	13.3
Actuated g/C Ratio	0.08	0.45	0.45	0.09	0.46	0.46	0.22	0.20	0.21	0.17	0.17
v/c Ratio	0.66	1.10	0.21	0.91	0.76	0.02	0.57	0.29	0.20	0.10	0.14
Control Delay (s/veh)	60.2	78.9	6.2	94.0	22.2	0.1	30.9	12.1	21.5	27.0	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	60.2	78.9	6.2	94.0	22.2	0.1	30.9	12.1	21.5	27.0	0.8
LOS	E	E	A	F	C	A	C	B	C	C	A
Approach Delay (s/veh)		72.2			27.2			23.3		14.9	
Approach LOS		E			C			C		B	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 76.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.10	
Intersection Signal Delay (s/veh): 47.4	Intersection LOS: D
Intersection Capacity Utilization 80.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 12: Dauchy Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	1639	150	128	1636	18	153	27	78	56	29	51
Future Volume (veh/h)	89	1639	150	128	1636	18	153	27	78	56	29	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	96	1762	115	138	1759	10	165	29	53	60	31	31
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	123	1655	738	157	2477	768	337	72	131	286	190	158
Arrive On Green	0.07	0.47	0.47	0.09	0.49	0.49	0.07	0.12	0.12	0.05	0.10	0.10
Sat Flow, veh/h	1781	3554	1583	1781	5106	1583	1781	587	1073	1781	1870	1560
Grp Volume(v), veh/h	96	1762	115	138	1759	10	165	0	82	60	31	31
Grp Sat Flow(s),veh/h/ln	1781	1777	1583	1781	1702	1583	1781	0	1660	1781	1870	1560
Q Serve(g_s), s	3.8	33.8	3.0	5.6	19.6	0.2	5.0	0.0	3.3	2.2	1.1	1.3
Cycle Q Clear(g_c), s	3.8	33.8	3.0	5.6	19.6	0.2	5.0	0.0	3.3	2.2	1.1	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.65	1.00		1.00
Lane Grp Cap(c), veh/h	123	1655	738	157	2477	768	337	0	202	286	190	158
V/C Ratio(X)	0.78	1.06	0.16	0.88	0.71	0.01	0.49	0.00	0.41	0.21	0.16	0.20
Avail Cap(c_a), veh/h	152	1655	738	157	2477	768	337	0	682	322	768	641
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	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.2	19.4	11.2	32.7	14.7	9.7	27.8	0.0	29.4	27.2	29.8	29.9
Incr Delay (d2), s/veh	14.6	41.5	0.1	37.9	1.0	0.0	0.4	0.0	1.3	0.1	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	2.0	20.4	0.9	3.8	6.1	0.1	2.6	0.0	1.4	0.9	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.8	60.9	11.3	70.6	15.6	9.7	28.2	0.0	30.7	27.3	30.2	30.5
LnGrp LOS	D	F	B	E	B	A	C		C	C	C	C
Approach Vol, veh/h		1973			1907			247			122	
Approach Delay, s/veh		57.4			19.6			29.0			28.8	
Approach LOS		E			B			C			C	

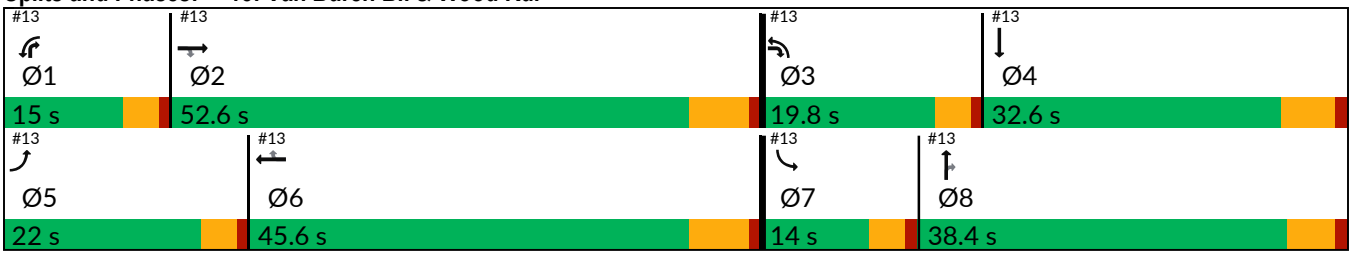
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	13.4	11.0	40.0	9.6	12.0	9.6	41.4
Change Period (Y+Rc), s	4.6	4.6	4.6	6.2	4.6	4.6	4.6	6.2
Max Green Setting (Gmax), s	5.0	29.8	6.4	33.8	5.0	29.8	6.2	34.0
Max Q Clear Time (g_c+I1), s	4.2	5.3	7.6	35.8	7.0	3.3	5.8	21.6
Green Ext Time (p_c), s	0.0	0.4	0.0	0.0	0.0	0.2	0.0	8.5

Intersection Summary	
HCM 7th Control Delay, s/veh	37.9
HCM 7th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	184	1527	209	224	1389	71	264	187	154	92	273
Future Volume (vph)	184	1527	209	224	1389	71	264	187	154	92	273
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2	3	1	6		3	8	1	7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	3	1	6	6	3	8	1	7	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.2	30.2	9.2	9.2	30.2	30.2	9.2	38.4	9.2	9.2	15.8
Total Split (s)	22.0	52.6	19.8	15.0	45.6	45.6	19.8	38.4	15.0	14.0	32.6
Total Split (%)	18.3%	43.8%	16.5%	12.5%	38.0%	38.0%	16.5%	32.0%	12.5%	11.7%	27.2%
Yellow Time (s)	3.2	5.2	3.2	3.2	5.2	5.2	3.2	4.4	3.2	3.2	4.8
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)	4.2	6.2	4.2	4.2	6.2	6.2	4.2	5.4	4.2	4.2	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	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	None	None	None	None
Act Effct Green (s)	14.8	43.2	57.8	10.1	38.6	38.6	12.5	22.1	33.4	8.8	18.0
Actuated g/C Ratio	0.14	0.41	0.55	0.10	0.37	0.37	0.12	0.21	0.32	0.08	0.17
v/c Ratio	0.76	0.75	0.23	0.70	0.76	0.11	0.67	0.26	0.29	0.64	0.75
Control Delay (s/veh)	65.0	29.7	4.0	59.8	33.7	0.3	54.2	35.7	10.5	69.8	35.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	65.0	29.7	4.0	59.8	33.7	0.3	54.2	35.7	10.5	69.8	35.2
LOS	E	C	A	E	C	A	D	D	B	E	D
Approach Delay (s/veh)		30.3			35.8			37.4			40.6
Approach LOS		C			D			D			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 104.6	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay (s/veh): 34.4	Intersection LOS: C
Intersection Capacity Utilization 84.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: Van Buren Bl. & Wood Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	1527	209	224	1389	71	264	187	154	92	273	235
Future Volume (veh/h)	184	1527	209	224	1389	71	264	187	154	92	273	235
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.91	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	190	1574	137	231	1432	34	272	193	80	95	281	154
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	222	2079	789	297	1881	580	342	850	483	120	463	246
Arrive On Green	0.12	0.41	0.41	0.09	0.37	0.37	0.10	0.24	0.24	0.07	0.21	0.21
Sat Flow, veh/h	1781	5106	1551	3456	5106	1573	3456	3554	1450	1781	2230	1185
Grp Volume(v), veh/h	190	1574	137	231	1432	34	272	193	80	95	222	213
Grp Sat Flow(s),veh/h/ln	1781	1702	1551	1728	1702	1573	1728	1777	1450	1781	1777	1638
Q Serve(g_s), s	10.6	26.9	4.9	6.7	25.1	1.4	7.8	4.5	4.0	5.4	11.5	12.1
Cycle Q Clear(g_c), s	10.6	26.9	4.9	6.7	25.1	1.4	7.8	4.5	4.0	5.4	11.5	12.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.72
Lane Grp Cap(c), veh/h	222	2079	789	297	1881	580	342	850	483	120	369	340
V/C Ratio(X)	0.86	0.76	0.17	0.78	0.76	0.06	0.79	0.23	0.17	0.79	0.60	0.63
Avail Cap(c_a), veh/h	311	2325	864	366	1975	608	529	1151	606	171	467	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	43.7	25.9	13.6	45.6	28.2	20.8	44.9	31.2	24.6	46.8	36.5	36.8
Incr Delay (d2), s/veh	11.6	1.5	0.1	6.4	1.9	0.1	2.1	0.1	0.2	9.3	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	5.2	10.2	1.6	3.0	9.7	0.5	3.4	1.9	1.4	2.6	5.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.3	27.4	13.8	52.0	30.1	20.8	47.0	31.3	24.7	56.1	38.1	38.6
LnGrp LOS	E	C	B	D	C	C	D	C	C	E	D	D
Approach Vol, veh/h		1901			1697			545			530	
Approach Delay, s/veh		29.2			32.9			38.2			41.6	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.9	47.7	14.3	27.0	16.9	43.7	11.1	30.2
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	10.8	46.4	15.6	26.8	17.8	39.4	9.8	* 33
Max Q Clear Time (g_c+I1), s	8.7	28.9	9.8	14.1	12.6	27.1	7.4	6.5
Green Ext Time (p_c), s	0.1	12.6	0.3	2.0	0.1	8.6	0.0	1.4

Intersection Summary	
HCM 7th Control Delay, s/veh	33.0
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

APPENDIX 6.5:

EAPC (2027) SIGNALIZED QUEUES WITH IMPROVEMENTS

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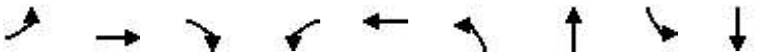
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	217	1503	204	1508	685	105	567	239	540	212	106
v/c Ratio	0.81	0.92	0.79	0.93	0.94	0.50	0.75	0.47	1.05	0.25	0.18
Control Delay (s/veh)	72.1	50.1	71.2	51.9	43.8	62.9	50.3	9.7	92.7	52.8	27.1
Queue Delay	0.0	0.0	0.0	0.0	44.8	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	72.1	50.1	71.2	51.9	88.6	62.9	50.3	9.7	92.7	52.8	27.1
Queue Length 50th (ft)	165	~434	152	428	316	41	220	14	~245	109	50
Queue Length 95th (ft)	#265	#550	#317	#631	#630	72	267	79	m#280	m124	m66
Internal Link Dist (ft)		123		569			790			173	
Turn Bay Length (ft)	285		300		300	145		140	180		130
Base Capacity (vph)	309	1625	259	1618	728	228	943	581	514	994	642
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	155	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.92	0.79	0.93	1.20	0.46	0.60	0.41	1.05	0.21	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	202	1698	87	108	2221	72	145	127	50
v/c Ratio	0.98	0.95	0.10	0.82	0.95	0.44	0.48	0.85	0.16
Control Delay (s/veh)	100.7	36.5	4.8	89.0	35.6	52.2	31.8	87.4	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	100.7	36.5	4.8	89.0	35.6	52.2	31.8	87.4	12.5
Queue Length 50th (ft)	116	441	1	62	412	39	62	73	3
Queue Length 95th (ft)	#349	#985	34	#210	#867	104	114	#237	32
Internal Link Dist (ft)		1565			2589		1030		346
Turn Bay Length (ft)	280		75	295		100		45	
Base Capacity (vph)	207	1787	841	131	2345	198	807	150	711
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.95	0.10	0.82	0.95	0.36	0.18	0.85	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	52	1573	272	136	2065	16	220	243	50	116	55
v/c Ratio	0.47	0.96	0.34	0.96	0.80	0.02	0.76	0.55	0.21	0.36	0.14
Control Delay (s/veh)	54.9	39.2	10.6	109.0	22.7	0.1	43.9	17.8	22.9	32.6	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	54.9	39.2	10.6	109.0	22.7	0.1	43.9	17.8	22.9	32.6	0.8
Queue Length 50th (ft)	26	378	43	69	310	0	93	47	19	54	0
Queue Length 95th (ft)	#88	#764	134	#223	#611	0	151	114	43	99	0
Internal Link Dist (ft)		2589			2614			512		890	
Turn Bay Length (ft)	295		100	420		160	60		70		50
Base Capacity (vph)	111	1631	793	141	2576	840	290	746	239	742	703
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.96	0.34	0.96	0.80	0.02	0.76	0.33	0.21	0.16	0.08

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



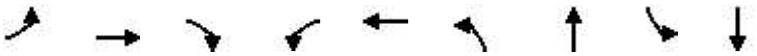
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	203	1517	219	1248	402	178	280	154	641	396	109
v/c Ratio	0.80	0.90	0.70	0.67	0.48	0.63	0.51	0.39	1.13	0.71	0.23
Control Delay (s/veh)	72.0	46.5	59.8	35.8	5.7	63.3	48.3	5.8	122.0	74.6	30.1
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	72.0	46.5	59.8	35.8	5.8	63.3	48.3	5.8	122.0	74.6	30.1
Queue Length 50th (ft)	155	409	161	292	0	70	110	0	~311	258	49
Queue Length 95th (ft)	236	#573	#352	#497	88	108	132	34	m#348	m278	m59
Internal Link Dist (ft)		123		575			790			173	
Turn Bay Length (ft)	285		300		300	145		140	180		130
Base Capacity (vph)	306	1694	314	1874	835	320	943	555	566	798	626
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	48	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.90	0.70	0.67	0.51	0.56	0.30	0.28	1.13	0.50	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	155	1852	144	73	1962	41	69	98	40
v/c Ratio	0.72	0.93	0.16	0.75	0.78	0.32	0.27	0.85	0.13
Control Delay (s/veh)	60.9	29.7	6.6	87.5	23.6	51.1	25.8	97.1	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	60.9	29.7	6.6	87.5	23.6	51.1	25.8	97.1	14.2
Queue Length 50th (ft)	82	417	13	40	288	22	24	54	4
Queue Length 95th (ft)	#256	#1066	68	#159	#690	70	57	#201	29
Internal Link Dist (ft)		1565			2589		1030		346
Turn Bay Length (ft)	280		75	295		100		45	
Base Capacity (vph)	215	1995	929	97	2512	137	830	115	753
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.93	0.16	0.75	0.78	0.30	0.08	0.85	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	96	1762	161	138	1759	19	165	113	60	31	55
v/c Ratio	0.66	1.10	0.21	0.91	0.76	0.02	0.57	0.29	0.20	0.10	0.14
Control Delay (s/veh)	60.2	78.9	6.2	94.0	22.2	0.1	30.9	12.1	21.5	27.0	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	60.2	78.9	6.2	94.0	22.2	0.1	30.9	12.1	21.5	27.0	0.8
Queue Length 50th (ft)	45	~511	9	66	244	0	64	12	22	13	0
Queue Length 95th (ft)	#150	#894	58	#218	#489	0	110	52	47	34	0
Internal Link Dist (ft)		2589			2614			512		890	
Turn Bay Length (ft)	295		100	420		160	60		70		50
Base Capacity (vph)	146	1602	782	151	2317	787	292	705	299	744	709
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	1.10	0.21	0.91	0.76	0.02	0.57	0.16	0.20	0.04	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

APPENDIX 7.1:

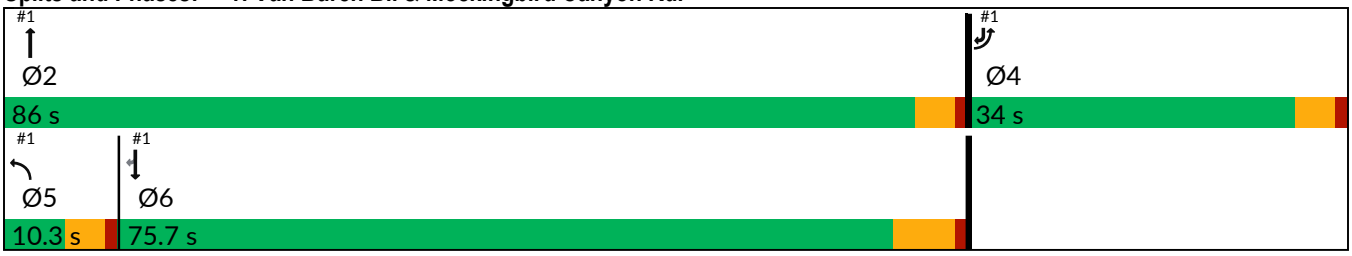
HY (2045) WITHOUT PROJECT INTERSECTION ANALYSIS

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Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	616	21	1909	1326	215
Future Volume (vph)	616	21	1909	1326	215
Turn Type	Prot	Prot	NA	NA	pm+ov
Protected Phases	4	5	2	6	4
Permitted Phases					6
Detector Phase	4	5	2	6	4
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	29.6	9.6	26.1	28.5	29.6
Total Split (s)	34.0	10.3	86.0	75.7	34.0
Total Split (%)	28.3%	8.6%	71.7%	63.1%	28.3%
Yellow Time (s)	3.6	3.6	3.6	5.5	3.6
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)	4.6	4.6	4.6	6.5	4.6
Lead/Lag		Lead		Lag	
Lead-Lag Optimize?		Yes		Yes	
Recall Mode	None	None	None	None	None
Act Effct Green (s)	23.7	5.6	62.5	57.2	91.0
Actuated g/C Ratio	0.25	0.06	0.65	0.60	0.95
v/c Ratio	0.82	0.21	0.88	0.67	0.15
Control Delay (s/veh)	44.8	56.5	19.4	16.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	44.8	56.5	19.4	16.0	0.3
LOS	D	E	B	B	A
Approach Delay (s/veh)	44.8		19.8	13.8	
Approach LOS	D		B	B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 95.9	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay (s/veh): 21.5	Intersection LOS: C
Intersection Capacity Utilization 79.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: Van Buren Bl. & Mockingbird Canyon Rd.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	616	39	21	1909	1326	215
Future Volume (veh/h)	616	39	21	1909	1326	215
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	691	0	22	2031	1411	224
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	794	353	42	2304	2030	1259
Arrive On Green	0.22	0.00	0.02	0.65	0.57	0.57
Sat Flow, veh/h	3563	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	691	0	22	2031	1411	224
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1777	1777	1585
Q Serve(g_s), s	16.1	0.0	1.1	40.4	24.3	2.9
Cycle Q Clear(g_c), s	16.1	0.0	1.1	40.4	24.3	2.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	794	353	42	2304	2030	1259
V/C Ratio(X)	0.87	0.00	0.52	0.88	0.70	0.18
Avail Cap(c_a), veh/h	1215	541	118	3357	2854	1626
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	32.3	0.0	41.6	12.4	13.1	2.1
Incr Delay (d2), s/veh	3.0	0.0	3.6	1.5	0.4	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	6.6	0.0	0.5	10.9	7.4	1.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	35.3	0.0	45.2	14.0	13.6	2.2
LnGrp LOS	D		D	B	B	A
Approach Vol, veh/h	691			2053	1635	
Approach Delay, s/veh	35.3			14.3	12.0	
Approach LOS	D			B	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		62.4		23.8	6.6	55.7
Change Period (Y+Rc), s		* 6.5		4.6	4.6	6.5
Max Green Setting (Gmax), s		* 81		29.4	5.7	69.2
Max Q Clear Time (g_c+I1), s		42.4		18.1	3.1	26.3
Green Ext Time (p_c), s		13.5		1.1	0.0	13.8

Intersection Summary		
HCM 7th Control Delay, s/veh	16.8	
HCM 7th LOS	B	

Notes

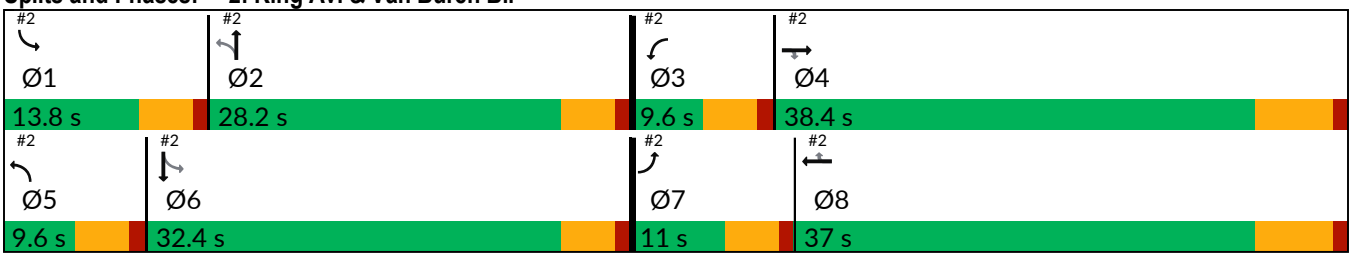
User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	183	1506	62	21	1886	30	201	142	156	46
Future Volume (vph)	183	1506	62	21	1886	30	201	142	156	46
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA
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	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.5	28.5	9.6	28.5	28.5	9.6	26.1	9.6	31.6
Total Split (s)	11.0	38.4	38.4	9.6	37.0	37.0	9.6	28.2	13.8	32.4
Total Split (%)	12.2%	42.7%	42.7%	10.7%	41.1%	41.1%	10.7%	31.3%	15.3%	36.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.4	38.4	38.4	5.0	30.9	30.9	20.4	15.4	27.5	18.9
Actuated g/C Ratio	0.08	0.47	0.47	0.06	0.38	0.38	0.25	0.19	0.34	0.23
v/c Ratio	1.48	1.01	0.09	0.22	1.58	0.05	0.66	0.67	0.55	0.34
Control Delay (s/veh)	281.6	50.8	0.6	43.7	286.8	0.1	33.2	36.9	25.6	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	281.6	50.8	0.6	43.7	286.8	0.1	33.2	36.9	25.6	11.6
LOS	F	D	A	D	F	A	C	D	C	B
Approach Delay (s/veh)		73.2			279.7			35.1		18.9
Approach LOS		E			F			D		B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 81.4	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.58	
Intersection Signal Delay (s/veh): 156.8	Intersection LOS: F
Intersection Capacity Utilization 101.3%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 2: King Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	183	1506	62	21	1886	30	201	142	71	156	46	95
Future Volume (veh/h)	183	1506	62	21	1886	30	201	142	71	156	46	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	206	1692	54	24	2119	30	226	160	63	175	52	73
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	147	1614	720	46	1413	630	374	202	79	321	137	192
Arrive On Green	0.08	0.45	0.45	0.03	0.40	0.40	0.06	0.16	0.16	0.10	0.20	0.20
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1277	503	1781	694	975
Grp Volume(v), veh/h	206	1692	54	24	2119	30	226	0	223	175	0	125
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	0	1780	1781	0	1669
Q Serve(g_s), s	6.4	35.2	1.5	1.0	30.8	0.9	5.0	0.0	9.3	6.2	0.0	5.0
Cycle Q Clear(g_c), s	6.4	35.2	1.5	1.0	30.8	0.9	5.0	0.0	9.3	6.2	0.0	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.28	1.00		0.58
Lane Grp Cap(c), veh/h	147	1614	720	46	1413	630	374	0	281	321	0	329
V/C Ratio(X)	1.40	1.05	0.08	0.52	1.50	0.05	0.60	0.00	0.79	0.55	0.00	0.38
Avail Cap(c_a), veh/h	147	1614	720	115	1413	630	374	0	542	348	0	599
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	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.5	21.1	11.9	37.2	23.3	14.3	28.0	0.0	31.4	23.8	0.0	27.0
Incr Delay (d2), s/veh	215.6	36.3	0.0	3.3	228.7	0.0	2.0	0.0	5.0	0.6	0.0	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	11.4	19.9	0.5	0.5	55.6	0.3	1.6	0.0	4.3	2.6	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	251.2	57.4	12.0	40.5	252.0	14.4	30.0	0.0	36.4	24.4	0.0	27.7
LnGrp LOS	F	F	B	D	F	B	C		D	C		C
Approach Vol, veh/h		1952			2173			449			300	
Approach Delay, s/veh		76.6			246.4			33.2			25.8	
Approach LOS		E			F			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.6	16.8	6.6	41.4	9.6	19.9	11.0	37.0
Change Period (Y+Rc), s	4.6	4.6	4.6	6.2	4.6	4.6	4.6	6.2
Max Green Setting (Gmax), s	9.2	23.6	5.0	32.2	5.0	27.8	6.4	30.8
Max Q Clear Time (g_c+I1), s	8.2	11.3	3.0	37.2	7.0	7.0	8.4	32.8
Green Ext Time (p_c), s	0.0	1.0	0.0	0.0	0.0	0.7	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	145.2
HCM 7th LOS	F

Intersection	
Int Delay, s/veh	8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	37	57	1219	109	19	734
Future Vol, veh/h	37	57	1219	109	19	734
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	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	59	1257	112	20	757

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2109	1313	0	0	1369	0
Stage 1	1313	-	-	-	-	-
Stage 2	796	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	56	194	-	-	501	-
Stage 1	252	-	-	-	-	-
Stage 2	444	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	52	194	-	-	501	-
Mov Cap-2 Maneuver	52	-	-	-	-	-
Stage 1	235	-	-	-	-	-
Stage 2	444	-	-	-	-	-

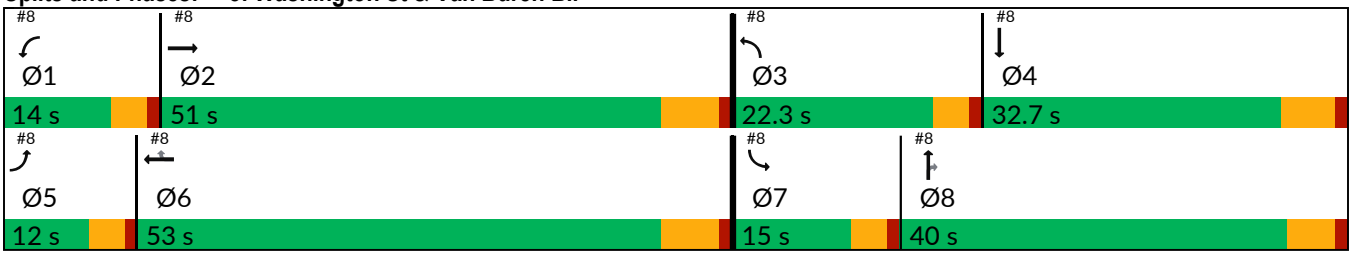
Approach	WB	NB	SB
HCM Ctrl Dly, s/v	183.73	0	0.31
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	94	501	-
HCM Lane V/C Ratio	-	-	1.031	0.039	-
HCM Ctrl Dly (s/v)	-	-	183.7	12.5	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q(veh)	-	-	6.2	0.1	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	138	1395	187	1505	847	307	1066	317	433	213
Future Volume (vph)	138	1395	187	1505	847	307	1066	317	433	213
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	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.2	34.2	9.2	33.2	33.2	9.2	38.4	38.4	9.2	30.8
Total Split (s)	12.0	51.0	14.0	53.0	53.0	22.3	40.0	40.0	15.0	32.7
Total Split (%)	10.0%	42.5%	11.7%	44.2%	44.2%	18.6%	33.3%	33.3%	12.5%	27.3%
Yellow Time (s)	3.2	5.2	3.2	5.2	5.2	3.2	4.4	4.4	3.2	4.8
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)	4.2	6.2	4.2	6.2	6.2	4.2	5.4	5.4	4.2	5.8
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	None	None	None	None
Act Effct Green (s)	7.8	44.8	9.8	46.8	46.8	15.4	34.6	34.6	10.8	29.6
Actuated g/C Ratio	0.07	0.37	0.08	0.39	0.39	0.13	0.29	0.29	0.09	0.25
v/c Ratio	1.29	1.32	1.40	1.17	1.18	0.75	1.12	0.62	1.51	0.41
Control Delay (s/veh)	223.9	180.2	255.2	119.8	121.5	61.4	108.3	27.0	284.2	30.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	223.9	180.2	255.2	119.8	121.5	61.4	108.3	27.0	284.2	30.1
LOS	F	F	F	F	F	E	F	C	F	C
Approach Delay (s/veh)		183.7		130.3			84.5			172.9
Approach LOS		F		F			F			F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.51	
Intersection Signal Delay (s/veh): 137.4	Intersection LOS: F
Intersection Capacity Utilization 113.8%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 8: Washington St & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	1395	200	187	1505	847	307	1066	317	433	213	125
Future Volume (veh/h)	138	1395	200	187	1505	847	307	1066	317	433	213	125
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	148	1500	176	201	1618	709	330	1146	278	466	229	76
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	115	1192	138	145	1381	615	390	1021	456	310	697	225
Arrive On Green	0.06	0.37	0.37	0.08	0.39	0.39	0.11	0.29	0.29	0.09	0.26	0.26
Sat Flow, veh/h	1781	3203	372	1781	3554	1581	3456	3554	1585	3456	2640	853
Grp Volume(v), veh/h	148	825	851	201	1618	709	330	1146	278	466	152	153
Grp Sat Flow(s),veh/h/ln	1781	1777	1798	1781	1777	1581	1728	1777	1585	1728	1777	1717
Q Serve(g_s), s	7.8	44.8	44.8	9.8	46.8	46.8	11.3	34.6	18.2	10.8	8.3	8.7
Cycle Q Clear(g_c), s	7.8	44.8	44.8	9.8	46.8	46.8	11.3	34.6	18.2	10.8	8.3	8.7
Prop In Lane	1.00		0.21	1.00		1.00	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	115	661	669	145	1381	615	390	1021	456	310	469	453
V/C Ratio(X)	1.28	1.25	1.27	1.39	1.17	1.15	0.85	1.12	0.61	1.50	0.32	0.34
Avail Cap(c_a), veh/h	115	661	669	145	1381	615	520	1021	456	310	469	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	56.3	37.8	37.8	55.3	36.8	36.8	52.4	42.9	37.1	54.8	35.6	35.8
Incr Delay (d2), s/veh	177.8	123.6	134.3	210.6	85.2	86.6	7.5	68.1	2.4	242.7	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	9.1	40.8	43.3	12.7	35.2	32.6	5.3	24.8	7.4	15.1	3.7	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	234.1	161.4	172.1	265.9	122.0	123.4	59.9	111.0	39.4	297.5	36.0	36.2
LnGrp LOS	F	F	F	F	F	F	E	F	D	F	D	D
Approach Vol, veh/h		1824			2528			1754			771	
Approach Delay, s/veh		172.3			133.8			90.0			194.1	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	51.0	17.8	37.6	12.0	53.0	15.0	40.4
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	9.8	44.8	18.1	26.9	7.8	46.8	10.8	* 35
Max Q Clear Time (g_c+I1), s	11.8	46.8	13.3	10.7	9.8	48.8	12.8	36.6
Green Ext Time (p_c), s	0.0	0.0	0.3	1.6	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	139.6
HCM 7th LOS	F

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	662

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	1889	11	186	2229	5	32	0	56	1	0	15
Future Vol, veh/h	13	1889	11	186	2229	5	32	0	56	1	0	15
Conflicting Peds, #/hr	0	0	1	0	0	6	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	275	-	-	255	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	1988	12	196	2346	5	34	0	59	1	0	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2358	0	0	2001	0	0	3587	4772	1001	3768	4775	1182
Stage 1	-	-	-	-	-	-	2023	2023	-	2747	2747	-
Stage 2	-	-	-	-	-	-	1565	2749	-	1022	2028	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	204	-	-	283	-	-	~ 2	1	241	1	1	182
Stage 1	-	-	-	-	-	-	60	100	-	20	42	-
Stage 2	-	-	-	-	-	-	116	42	-	253	100	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	203	-	-	282	-	-	~ 1	0	241	~ 0	0	181
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 1	0	-	~ 0	0	-
Stage 1	-	-	-	-	-	-	55	94	-	6	13	-
Stage 2	-	-	-	-	-	-	~ 33	13	-	178	93	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.16	3.24	$ 33286.47	
HCM LOS			F	-

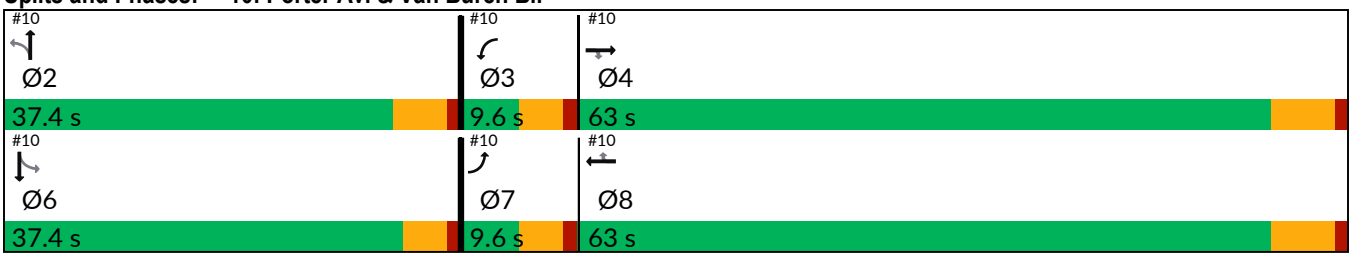
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1	203	-	-	282	-	-	-
HCM Lane V/C Ratio	64.209	0.067	-	-	0.693	-	-	-
HCM Ctrl Dly (s/v)	$ 33286.5	24	-	-	42.2	-	-	-
HCM Lane LOS	F	C	-	-	E	-	-	-
HCM 95th %tile Q(veh)	13.9	0.2	-	-	4.7	-	-	-

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	2	1954	68	20	2312	11	14	0	32	8
Future Volume (vph)	2	1954	68	20	2312	11	14	0	32	8
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)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	27.7	27.7	9.6	27.7	27.7	36.9	36.9	35.6	35.6
Total Split (s)	9.6	63.0	63.0	9.6	63.0	63.0	37.4	37.4	37.4	37.4
Total Split (%)	8.7%	57.3%	57.3%	8.7%	57.3%	57.3%	34.0%	34.0%	34.0%	34.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	4.4	4.4	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2		5.4		4.6
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	None	None	None	None
Act Effct Green (s)	5.2	60.3	60.3	5.2	62.1	62.1		13.5		14.0
Actuated g/C Ratio	0.06	0.72	0.72	0.06	0.75	0.75		0.16		0.17
v/c Ratio	0.02	0.81	0.06	0.19	0.93	0.01		0.19		0.24
Control Delay (s/veh)	45.0	16.8	3.1	47.9	21.9	0.0		5.9		26.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay (s/veh)	45.0	16.8	3.1	47.9	21.9	0.0		5.9		26.0
LOS	D	B	A	D	C	A		A		C
Approach Delay (s/veh)		16.3			22.0			5.9		26.0
Approach LOS		B			C			A		C

Intersection Summary		
Cycle Length: 110		
Actuated Cycle Length: 83.2		
Natural Cycle: 120		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.93		
Intersection Signal Delay (s/veh): 19.3	Intersection LOS: B	
Intersection Capacity Utilization 81.9%	ICU Level of Service D	
Analysis Period (min) 15		

Splits and Phases: 10: Porter Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	1954	68	20	2312	11	14	0	40	32	8	17
Future Volume (veh/h)	2	1954	68	20	2312	11	14	0	40	32	8	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	2079	62	21	2460	12	15	0	34	34	9	13
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	5	2430	1084	41	2503	1113	85	18	100	143	40	34
Arrive On Green	0.00	0.68	0.68	0.02	0.70	0.70	0.09	0.00	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1781	3554	1585	1781	3554	1581	289	193	1091	774	438	367
Grp Volume(v), veh/h	2	2079	62	21	2460	12	49	0	0	56	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1581	1573	0	0	1579	0	0
Q Serve(g_s), s	0.1	35.9	1.0	0.9	53.6	0.2	0.0	0.0	0.0	0.2	0.0	0.0
Cycle Q Clear(g_c), s	0.1	35.9	1.0	0.9	53.6	0.2	2.2	0.0	0.0	2.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.31		0.69	0.61		0.23
Lane Grp Cap(c), veh/h	5	2430	1084	41	2503	1113	203	0	0	217	0	0
V/C Ratio(X)	0.41	0.86	0.06	0.51	0.98	0.01	0.24	0.00	0.00	0.26	0.00	0.00
Avail Cap(c_a), veh/h	111	2505	1117	111	2505	1114	666	0	0	684	0	0
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	0.00	0.00
Uniform Delay (d), s/veh	40.1	9.7	4.2	38.9	11.5	3.6	34.2	0.0	0.0	34.3	0.0	0.0
Incr Delay (d2), s/veh	19.6	3.1	0.0	3.5	14.2	0.0	0.6	0.0	0.0	0.6	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	0.1	9.3	0.2	0.4	16.3	0.0	0.9	0.0	0.0	1.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	59.7	12.8	4.2	42.4	25.6	3.6	34.8	0.0	0.0	34.9	0.0	0.0
LnGrp LOS	E	B	A	D	C	A	C			C		
Approach Vol, veh/h		2143			2493			49			56	
Approach Delay, s/veh		12.6			25.7			34.8			34.9	
Approach LOS		B			C			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.8	6.5	61.3		12.8	4.8	63.0				
Change Period (Y+Rc), s		5.4	4.6	6.2		* 5.4	4.6	6.2				
Max Green Setting (Gmax), s		32.0	5.0	56.8		* 33	5.0	56.8				
Max Q Clear Time (g_c+I1), s		4.2	2.9	37.9		4.4	2.1	55.6				
Green Ext Time (p_c), s		0.2	0.0	14.3		0.2	0.0	1.1				

Intersection Summary	
HCM 7th Control Delay, s/veh	20.0
HCM 7th LOS	B

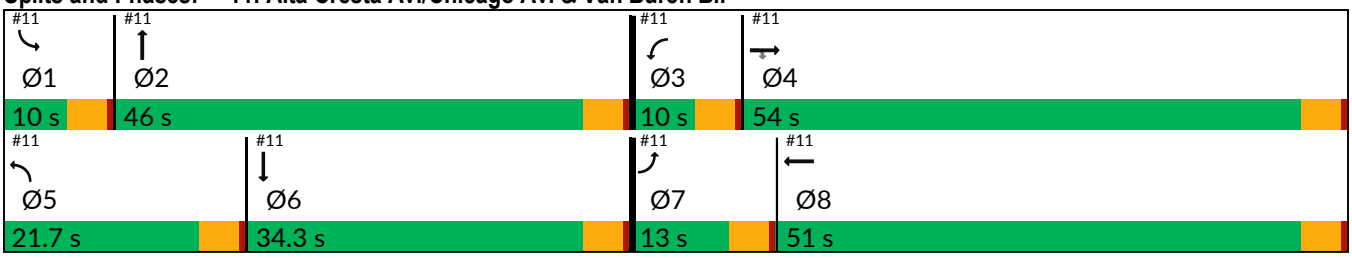
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	195	1683	113	105	2171	129	82	118	6
Future Volume (vph)	195	1683	113	105	2171	129	82	118	6
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.1	30.1	30.1	9.1	30.1	9.1	44.1	9.1	26.1
Total Split (s)	13.0	54.0	54.0	10.0	51.0	21.7	46.0	10.0	34.3
Total Split (%)	10.8%	45.0%	45.0%	8.3%	42.5%	18.1%	38.3%	8.3%	28.6%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	9.0	50.5	50.5	6.0	47.4	12.4	18.1	6.0	11.6
Actuated g/C Ratio	0.09	0.52	0.52	0.06	0.49	0.13	0.19	0.06	0.12
v/c Ratio	1.29	0.98	0.14	1.05	1.37	0.62	0.69	1.18	0.21
Control Delay (s/veh)	204.5	42.5	3.7	146.5	196.3	53.5	32.1	183.4	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	204.5	42.5	3.7	146.5	196.3	53.5	32.1	183.4	15.7
LOS	F	D	A	F	F	D	C	F	B
Approach Delay (s/veh)		56.1			194.1		39.4		137.4
Approach LOS		E			F		D		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 97.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.37	
Intersection Signal Delay (s/veh): 123.3	Intersection LOS: F
Intersection Capacity Utilization 106.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 11: Alta Cresta Av./Chicago Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	1683	113	105	2171	32	129	82	168	118	6	39
Future Volume (veh/h)	195	1683	113	105	2171	32	129	82	168	118	6	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	210	1810	106	113	2334	33	139	88	154	127	6	36
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	167	1869	834	111	1773	25	173	108	189	111	33	197
Arrive On Green	0.09	0.53	0.53	0.06	0.49	0.49	0.10	0.18	0.18	0.06	0.14	0.14
Sat Flow, veh/h	1781	3554	1585	1781	3586	51	1781	610	1068	1781	231	1389
Grp Volume(v), veh/h	210	1810	106	113	1153	1214	139	0	242	127	0	42
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1860	1781	0	1678	1781	0	1620
Q Serve(g_s), s	8.9	46.7	3.2	5.9	46.9	46.9	7.3	0.0	13.2	5.9	0.0	2.2
Cycle Q Clear(g_c), s	8.9	46.7	3.2	5.9	46.9	46.9	7.3	0.0	13.2	5.9	0.0	2.2
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.64	1.00		0.86
Lane Grp Cap(c), veh/h	167	1869	834	111	878	919	173	0	297	111	0	230
V/C Ratio(X)	1.26	0.97	0.13	1.02	1.31	1.32	0.80	0.00	0.82	1.15	0.00	0.18
Avail Cap(c_a), veh/h	167	1869	834	111	878	919	330	0	741	111	0	516
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	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.0	21.7	11.4	44.5	24.0	24.0	41.9	0.0	37.6	44.5	0.0	35.9
Incr Delay (d2), s/veh	154.9	14.1	0.1	91.0	149.0	151.8	8.4	0.0	5.4	130.3	0.0	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	10.9	19.7	1.0	5.3	52.9	56.1	3.6	0.0	5.8	6.6	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	197.9	35.8	11.5	135.5	173.0	175.8	50.3	0.0	43.0	174.8	0.0	36.2
LnGrp LOS	F	D	B	F	F	F	D		D	F		D
Approach Vol, veh/h		2126			2480			381			169	
Approach Delay, s/veh		50.6			172.7			45.7			140.4	
Approach LOS		D			F			D			F	

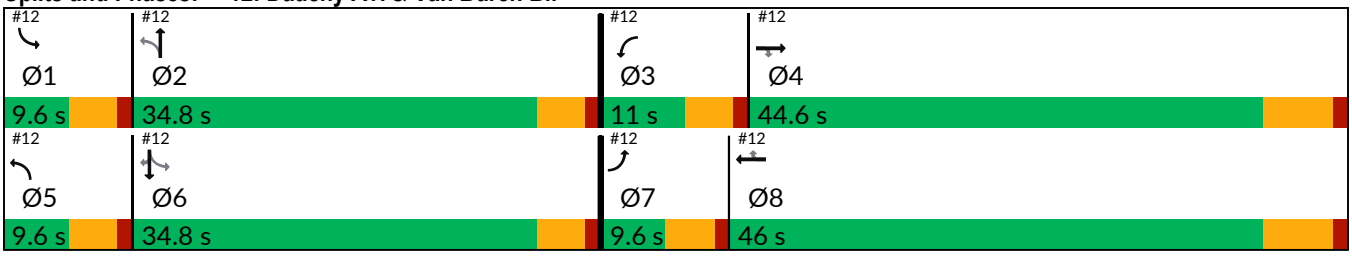
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	20.9	10.0	54.0	13.3	17.6	13.0	51.0
Change Period (Y+Rc), s	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Max Green Setting (Gmax), s	5.9	41.9	5.9	49.9	17.6	30.2	8.9	46.9
Max Q Clear Time (g_c+I1), s	7.9	15.2	7.9	48.7	9.3	4.2	10.9	48.9
Green Ext Time (p_c), s	0.0	1.6	0.0	1.1	0.2	0.2	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	111.9
HCM 7th LOS	F

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	41	1489	261	137	1947	16	201	68	50	118	39
Future Volume (vph)	41	1489	261	137	1947	16	201	68	50	118	39
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	28.2	28.2	9.6	28.2	28.2	9.6	26.6	9.6	33.6	33.6
Total Split (s)	9.6	44.6	44.6	11.0	46.0	46.0	9.6	34.8	9.6	34.8	34.8
Total Split (%)	9.6%	44.6%	44.6%	11.0%	46.0%	46.0%	9.6%	34.8%	9.6%	34.8%	34.8%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	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	None	None	None	None
Act Effct Green (s)	5.0	38.7	38.7	6.4	44.2	44.2	21.9	19.0	20.0	14.9	14.9
Actuated g/C Ratio	0.06	0.45	0.45	0.08	0.52	0.52	0.26	0.22	0.23	0.17	0.17
v/c Ratio	0.43	1.01	0.36	1.12	1.15	0.02	0.69	0.57	0.23	0.39	0.11
Control Delay (s/veh)	54.8	49.6	11.2	154.1	99.3	0.1	38.9	19.8	23.8	33.9	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	54.8	49.6	11.2	154.1	99.3	0.1	38.9	19.8	23.8	33.9	0.6
LOS	D	D	B	F	F	A	D	B	C	C	A
Approach Delay (s/veh)		44.1			102.1			28.3		25.2	
Approach LOS		D			F			C		C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 85.2	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.15	
Intersection Signal Delay (s/veh): 68.5	Intersection LOS: E
Intersection Capacity Utilization 95.1%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 12: Dauchy Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	1489	261	137	1947	16	201	68	180	50	118	39
Future Volume (veh/h)	41	1489	261	137	1947	16	201	68	180	50	118	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	45	1618	204	149	2116	10	218	74	142	54	128	28
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	70	1672	746	140	1811	790	298	93	179	210	270	225
Arrive On Green	0.04	0.47	0.47	0.08	0.51	0.51	0.06	0.16	0.16	0.04	0.14	0.14
Sat Flow, veh/h	1781	3554	1585	1781	3554	1549	1781	573	1099	1781	1870	1557
Grp Volume(v), veh/h	45	1618	204	149	2116	10	218	0	216	54	128	28
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1549	1781	0	1672	1781	1870	1557
Q Serve(g_s), s	2.0	36.1	6.4	6.4	41.6	0.3	5.0	0.0	10.1	2.1	5.1	1.3
Cycle Q Clear(g_c), s	2.0	36.1	6.4	6.4	41.6	0.3	5.0	0.0	10.1	2.1	5.1	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.66	1.00		1.00
Lane Grp Cap(c), veh/h	70	1672	746	140	1811	790	298	0	272	210	270	225
V/C Ratio(X)	0.64	0.97	0.27	1.07	1.17	0.01	0.73	0.00	0.79	0.26	0.47	0.12
Avail Cap(c_a), veh/h	109	1673	746	140	1811	790	298	0	619	242	693	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)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.6	21.0	13.1	37.6	20.0	9.9	32.1	0.0	32.8	28.2	32.0	30.4
Incr Delay (d2), s/veh	3.7	15.1	0.2	94.8	82.1	0.0	7.9	0.0	5.2	0.2	1.3	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	15.7	2.0	6.3	34.2	0.1	2.4	0.0	4.4	0.9	2.4	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.3	36.1	13.3	132.4	102.1	9.9	39.9	0.0	38.1	28.5	33.3	30.6
LnGrp LOS	D	D	B	F	F	A	D		D	C	C	C
Approach Vol, veh/h		1867			2275			434			210	
Approach Delay, s/veh		33.7			103.6			39.0			31.7	
Approach LOS		C			F			D			C	

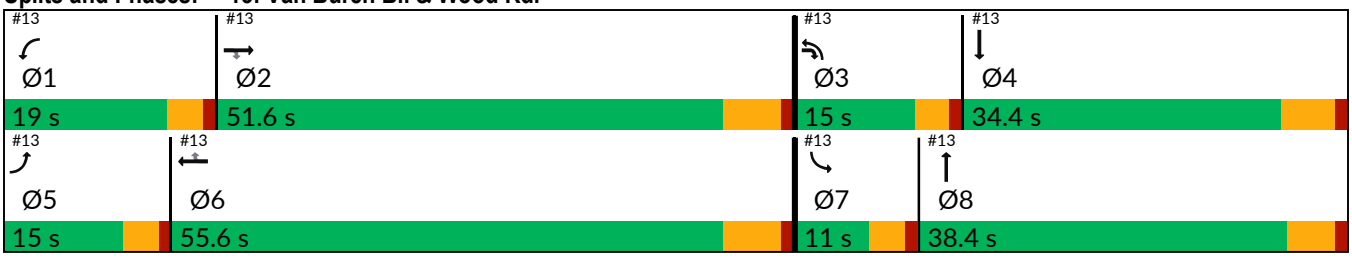
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	17.9	11.0	44.6	9.6	16.4	7.8	47.8
Change Period (Y+Rc), s	4.6	4.6	4.6	6.2	4.6	4.6	4.6	6.2
Max Green Setting (Gmax), s	5.0	30.2	6.4	38.4	5.0	30.2	5.0	39.8
Max Q Clear Time (g_c+I1), s	4.1	12.1	8.4	38.1	7.0	7.1	4.0	43.6
Green Ext Time (p_c), s	0.0	1.2	0.0	0.3	0.0	0.8	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	67.3
HCM 7th LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	199	1142	688	550	1563	296	369	505	109	559
Future Volume (vph)	199	1142	688	550	1563	296	369	505	109	559
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6		3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	3	1	6	6	3	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.2	30.2	9.2	9.2	30.2	30.2	9.2	38.4	9.2	15.8
Total Split (s)	15.0	51.6	15.0	19.0	55.6	55.6	15.0	38.4	11.0	34.4
Total Split (%)	12.5%	43.0%	12.5%	15.8%	46.3%	46.3%	12.5%	32.0%	9.2%	28.7%
Yellow Time (s)	3.2	5.2	3.2	3.2	5.2	5.2	3.2	4.4	3.2	4.8
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)	4.2	6.2	4.2	4.2	6.2	6.2	4.2	5.4	4.2	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.8	45.4	58.2	14.8	49.4	49.4	10.8	33.0	6.8	28.6
Actuated g/C Ratio	0.09	0.38	0.49	0.12	0.41	0.41	0.09	0.28	0.06	0.24
v/c Ratio	1.39	0.95	0.99	1.44	1.19	0.43	1.33	1.07	1.21	1.13
Control Delay (s/veh)	249.7	51.6	55.7	251.0	126.8	11.7	211.7	83.3	204.3	111.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	249.7	51.6	55.7	251.0	126.8	11.7	211.7	83.3	204.3	111.9
LOS	F	D	E	F	F	B	F	F	F	F
Approach Delay (s/veh)		72.4			141.0			118.6		122.1
Approach LOS		E			F			F		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.44	
Intersection Signal Delay (s/veh): 113.2	Intersection LOS: F
Intersection Capacity Utilization 108.2%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 13: Van Buren Bl. & Wood Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	199	1142	688	550	1563	296	369	505	467	109	559	317
Future Volume (veh/h)	199	1142	688	550	1563	296	369	505	467	109	559	317
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.93	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	221	1269	581	611	1737	249	410	561	363	121	621	268
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	160	1340	726	425	1458	646	310	548	354	101	580	250
Arrive On Green	0.09	0.38	0.38	0.12	0.41	0.41	0.09	0.27	0.27	0.06	0.24	0.24
Sat Flow, veh/h	1781	3554	1548	3456	3554	1575	3456	1999	1293	1781	2406	1038
Grp Volume(v), veh/h	221	1269	581	611	1737	249	410	499	425	121	458	431
Grp Sat Flow(s),veh/h/ln	1781	1777	1548	1728	1777	1575	1728	1777	1515	1781	1777	1668
Q Serve(g_s), s	10.8	41.7	38.6	14.8	49.4	13.3	10.8	33.0	33.0	6.8	29.0	29.0
Cycle Q Clear(g_c), s	10.8	41.7	38.6	14.8	49.4	13.3	10.8	33.0	33.0	6.8	29.0	29.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.85	1.00		0.62
Lane Grp Cap(c), veh/h	160	1340	726	425	1458	646	310	487	415	101	428	402
V/C Ratio(X)	1.38	0.95	0.80	1.44	1.19	0.39	1.32	1.02	1.02	1.20	1.07	1.07
Avail Cap(c_a), veh/h	160	1340	726	425	1458	646	310	487	415	101	428	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	54.8	36.3	27.4	52.8	35.5	24.9	54.8	43.7	43.7	56.8	45.7	45.7
Incr Delay (d2), s/veh	206.4	14.0	6.7	210.3	93.2	0.5	166.0	47.0	50.5	154.1	63.8	65.4
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	13.8	19.4	14.8	18.6	38.6	4.9	11.8	20.4	17.8	7.3	20.0	19.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	261.2	50.3	34.1	263.1	128.7	25.4	220.8	90.7	94.2	210.9	109.5	111.1
LnGrp LOS	F	D	C	F	F	C	F	F	F	F	F	F
Approach Vol, veh/h		2071			2597			1334			1010	
Approach Delay, s/veh		68.3			150.4			131.8			122.3	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	51.6	15.0	34.8	15.0	55.6	11.0	38.8
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	14.8	45.4	10.8	28.6	10.8	49.4	6.8	* 33
Max Q Clear Time (g_c+I1), s	16.8	43.7	12.8	31.0	12.8	51.4	8.8	35.0
Green Ext Time (p_c), s	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	118.6
HCM 7th LOS	F

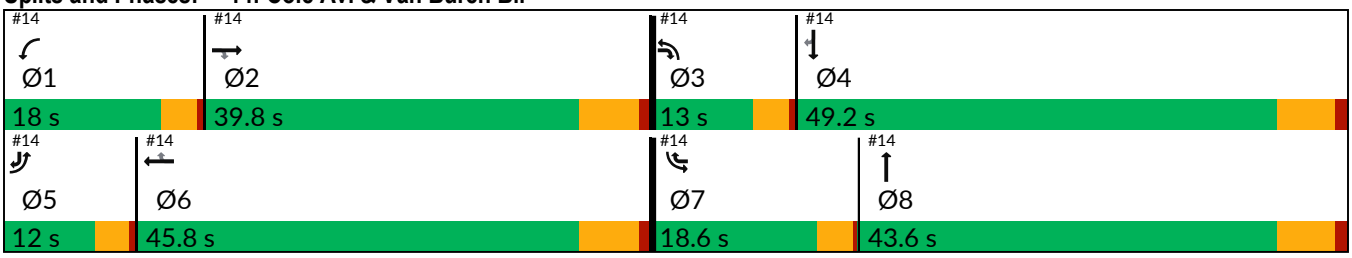
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	304	953	208	326	1672	653	197	534	201	355	387
Future Volume (vph)	304	953	208	326	1672	653	197	534	201	355	387
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8	7	4	5
Permitted Phases			2			6					4
Detector Phase	5	2	3	1	6	7	3	8	7	4	5
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0
Minimum Split (s)	9.1	36.2	9.1	9.1	36.2	9.1	9.1	42.2	9.1	49.2	9.1
Total Split (s)	12.0	39.8	13.0	18.0	45.8	18.6	13.0	43.6	18.6	49.2	12.0
Total Split (%)	10.0%	33.2%	10.8%	15.0%	38.2%	15.5%	10.8%	36.3%	15.5%	41.0%	10.0%
Yellow Time (s)	3.2	5.2	3.2	3.2	5.2	3.2	3.2	5.2	3.2	5.2	3.2
All-Red Time (s)	0.5	1.0	0.5	0.5	1.0	0.5	0.5	1.0	0.5	1.0	0.5
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)	3.7	6.2	3.7	3.7	6.2	3.7	3.7	6.2	3.7	6.2	3.7
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.3	33.8	45.6	14.4	39.8	55.7	9.3	26.5	13.4	30.5	41.4
Actuated g/C Ratio	0.08	0.31	0.42	0.13	0.37	0.52	0.09	0.25	0.12	0.28	0.38
v/c Ratio	1.22	0.90	0.29	1.52	0.89	0.85	1.41	0.77	0.50	0.37	0.64
Control Delay (s/veh)	171.4	47.9	4.7	289.8	39.6	30.6	256.9	43.0	49.4	31.4	23.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	171.4	47.9	4.7	289.8	39.6	30.6	256.9	43.0	49.4	31.4	23.1
LOS	F	D	A	F	D	C	F	D	D	C	C
Approach Delay (s/veh)		67.4			68.1			93.4		31.8	
Approach LOS		E			E			F		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 107.9	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.52	
Intersection Signal Delay (s/veh): 65.7	Intersection LOS: E
Intersection Capacity Utilization 85.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 14: Cole Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	304	953	208	326	1672	653	197	534	104	201	355	387
Future Volume (veh/h)	304	953	208	326	1672	653	197	534	104	201	355	387
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	334	1047	198	358	1837	577	216	587	110	221	390	315
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	297	1245	673	256	2206	745	167	738	138	295	863	493
Arrive On Green	0.08	0.33	0.33	0.14	0.59	0.39	0.09	0.24	0.24	0.08	0.23	0.23
Sat Flow, veh/h	3563	3741	1578	1781	5611	1560	1781	3057	571	3563	3741	1562
Grp Volume(v), veh/h	334	1047	198	358	1837	577	216	358	339	221	390	315
Grp Sat Flow(s),veh/h/ln	1781	1870	1578	1781	1870	1560	1781	1870	1758	1781	1870	1562
Q Serve(g_s), s	8.3	25.8	8.2	14.3	26.2	30.6	9.3	17.9	18.0	6.0	8.9	17.2
Cycle Q Clear(g_c), s	8.3	25.8	8.2	14.3	26.2	30.6	9.3	17.9	18.0	6.0	8.9	17.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	297	1245	673	256	2206	745	167	452	425	295	863	493
V/C Ratio(X)	1.12	0.84	0.29	1.40	0.83	0.77	1.30	0.79	0.80	0.75	0.45	0.64
Avail Cap(c_a), veh/h	297	1264	681	256	2235	753	167	704	661	534	1618	808
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.50	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	45.6	30.7	18.7	42.6	17.8	21.7	45.1	35.4	35.4	44.6	32.8	29.3
Incr Delay (d2), s/veh	89.6	5.4	0.3	200.8	2.9	5.4	170.4	3.4	3.8	1.5	0.4	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	7.2	11.6	2.8	20.2	7.5	10.9	11.8	8.0	7.6	2.6	3.8	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	135.1	36.1	19.0	243.4	20.7	27.0	215.5	38.8	39.2	46.1	33.2	30.7
LnGrp LOS	F	D	B	F	C	C	F	D	D	D	C	C
Approach Vol, veh/h		1579			2772			913			926	
Approach Delay, s/veh		54.9			50.8			80.7			35.4	
Approach LOS		D			D			F			D	

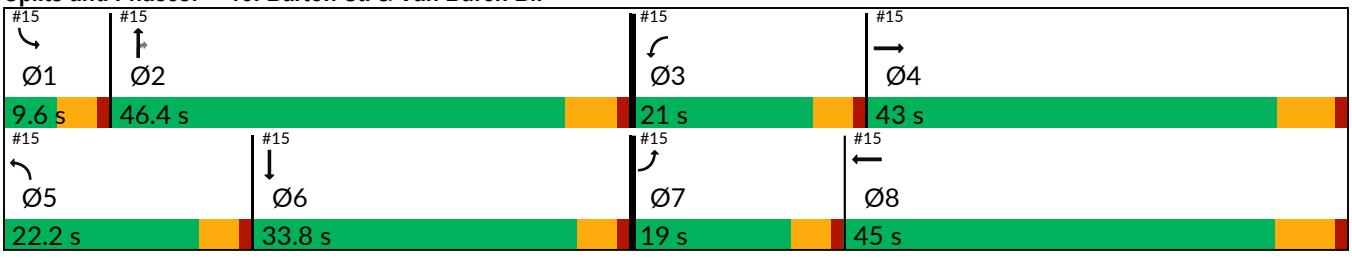
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	39.3	13.0	29.1	12.0	45.3	11.9	30.2
Change Period (Y+Rc), s	3.7	6.2	3.7	6.2	3.7	6.2	3.7	6.2
Max Green Setting (Gmax), s	14.3	33.6	9.3	43.0	8.3	39.6	14.9	37.4
Max Q Clear Time (g_c+I1), s	16.3	27.8	11.3	19.2	10.3	32.6	8.0	20.0
Green Ext Time (p_c), s	0.0	4.0	0.0	3.3	0.0	6.5	0.2	3.5

Intersection Summary	
HCM 7th Control Delay, s/veh	54.0
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	268	1068	297	1828	442	97	451	25	95
Future Volume (vph)	268	1068	297	1828	442	97	451	25	95
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)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.2	9.6	28.5	9.6	44.8	44.8	9.6	26.1
Total Split (s)	19.0	43.0	21.0	45.0	22.2	46.4	46.4	9.6	33.8
Total Split (%)	15.8%	35.8%	17.5%	37.5%	18.5%	38.7%	38.7%	8.0%	28.2%
Yellow Time (s)	3.6	5.2	3.6	5.5	3.6	4.8	4.8	3.6	3.6
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)	4.6	6.2	4.6	6.5	4.6	5.8	5.8	4.6	4.6
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	None	None	None	None
Act Effct Green (s)	14.4	36.9	16.4	38.6	17.6	40.5	40.5	5.0	25.1
Actuated g/C Ratio	0.12	0.32	0.14	0.33	0.15	0.35	0.35	0.04	0.22
v/c Ratio	1.35	1.26	1.32	1.15	0.94	0.17	0.66	0.37	0.90
Control Delay (s/veh)	226.8	159.0	209.5	108.7	77.0	27.9	15.6	69.5	56.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	226.8	159.0	209.5	108.7	77.0	27.9	15.6	69.5	56.1
LOS	F	F	F	F	E	C	B	E	E
Approach Delay (s/veh)		170.7		122.6		44.2			57.0
Approach LOS		F		F		D			E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 116	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.35	
Intersection Signal Delay (s/veh): 117.1	Intersection LOS: F
Intersection Capacity Utilization 103.2%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 15: Barton St. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	268	1068	218	297	1828	26	442	97	451	25	95	260
Future Volume (veh/h)	268	1068	218	297	1828	26	442	97	451	25	95	260
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	298	1187	131	330	2031	17	491	108	333	28	106	160
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	227	1062	117	259	1870	16	538	585	496	46	122	183
Arrive On Green	0.13	0.33	0.33	0.15	0.34	0.34	0.16	0.31	0.31	0.03	0.18	0.18
Sat Flow, veh/h	1781	3261	359	1781	5444	46	3456	1870	1585	1781	665	1003
Grp Volume(v), veh/h	298	659	659	330	1353	695	491	108	333	28	0	266
Grp Sat Flow(s),veh/h/ln	1781	1814	1806	1781	1814	1861	1728	1870	1585	1781	0	1668
Q Serve(g_s), s	14.4	36.8	36.8	16.4	38.8	38.8	15.8	4.8	20.6	1.8	0.0	17.5
Cycle Q Clear(g_c), s	14.4	36.8	36.8	16.4	38.8	38.8	15.8	4.8	20.6	1.8	0.0	17.5
Prop In Lane	1.00		0.20	1.00		0.02	1.00		1.00	1.00		0.60
Lane Grp Cap(c), veh/h	227	591	588	259	1246	639	538	585	496	46	0	305
V/C Ratio(X)	1.31	1.12	1.12	1.28	1.09	1.09	0.91	0.18	0.67	0.61	0.00	0.87
Avail Cap(c_a), veh/h	227	591	588	259	1246	639	538	672	570	79	0	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	0.00	1.00
Uniform Delay (d), s/veh	49.3	38.1	38.1	48.3	37.1	37.1	46.9	28.3	33.8	54.4	0.0	44.9
Incr Delay (d2), s/veh	168.3	72.8	74.6	150.7	52.1	61.4	19.4	0.2	2.5	4.7	0.0	13.1
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	16.8	27.2	27.3	17.7	24.8	27.0	8.0	2.1	7.8	0.9	0.0	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	217.6	110.9	112.7	199.0	89.2	98.5	66.4	28.5	36.3	59.2	0.0	58.0
LnGrp LOS	F	F	F	F	F	F	E	C	D	E		E
Approach Vol, veh/h		1616			2378			932			294	
Approach Delay, s/veh		131.3			107.2			51.2			58.1	
Approach LOS		F			F			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	41.1	21.0	43.3	22.2	26.5	19.0	45.3
Change Period (Y+Rc), s	4.6	5.8	4.6	* 6.5	4.6	* 5.8	4.6	6.5
Max Green Setting (Gmax), s	5.0	40.6	16.4	* 37	17.6	* 29	14.4	38.5
Max Q Clear Time (g_c+I1), s	3.8	22.6	18.4	38.8	17.8	19.5	16.4	40.8
Green Ext Time (p_c), s	0.0	1.5	0.0	0.0	0.0	1.1	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	101.9
HCM 7th LOS	F

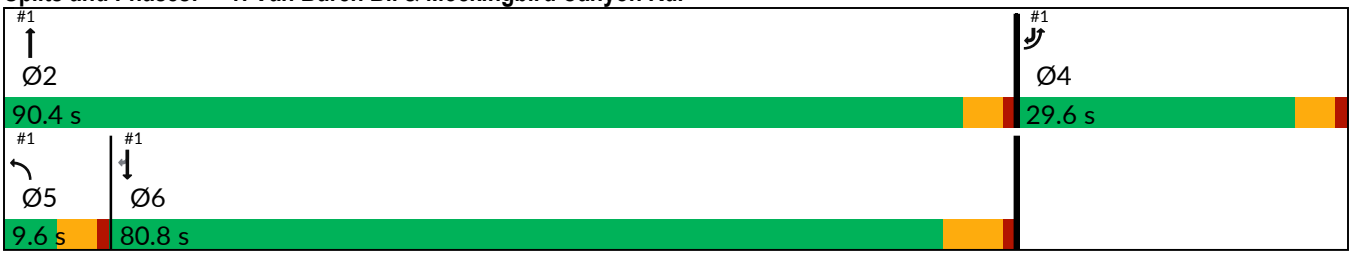
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	234	15	1411	1986	568
Future Volume (vph)	234	15	1411	1986	568
Turn Type	Prot	Prot	NA	NA	pm+ov
Protected Phases	4	5	2	6	4
Permitted Phases					6
Detector Phase	4	5	2	6	4
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	29.6	9.6	26.1	28.5	29.6
Total Split (s)	29.6	9.6	90.4	80.8	29.6
Total Split (%)	24.7%	8.0%	75.3%	67.3%	24.7%
Yellow Time (s)	3.6	3.6	3.6	5.5	3.6
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)	4.6	4.6	4.6	6.5	4.6
Lead/Lag		Lead		Lag	
Lead-Lag Optimize?		Yes		Yes	
Recall Mode	None	None	None	None	None
Act Effct Green (s)	13.3	5.4	65.0	60.0	83.7
Actuated g/C Ratio	0.15	0.06	0.74	0.68	0.95
v/c Ratio	0.50	0.14	0.56	0.85	0.38
Control Delay (s/veh)	39.7	53.3	6.3	16.8	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	39.7	53.3	6.3	16.8	0.8
LOS	D	D	A	B	A
Approach Delay (s/veh)	39.7		6.8	13.2	
Approach LOS	D		A	B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 88.1	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay (s/veh): 12.6	Intersection LOS: B
Intersection Capacity Utilization 71.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Van Buren Bl. & Mockingbird Canyon Rd.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	234	18	15	1411	1986	568
Future Volume (veh/h)	234	18	15	1411	1986	568
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	256	0	15	1455	2047	578
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	344	153	31	2763	2516	1276
Arrive On Green	0.10	0.00	0.02	0.78	0.71	0.71
Sat Flow, veh/h	3563	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	256	0	15	1455	2047	578
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1777	1777	1585
Q Serve(g_s), s	6.2	0.0	0.7	13.6	35.0	9.9
Cycle Q Clear(g_c), s	6.2	0.0	0.7	13.6	35.0	9.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	344	153	31	2763	2516	1276
V/C Ratio(X)	0.74	0.00	0.48	0.53	0.81	0.45
Avail Cap(c_a), veh/h	1009	449	101	3454	2991	1487
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	38.8	0.0	43.0	3.7	8.9	2.6
Incr Delay (d2), s/veh	1.2	0.0	4.3	0.1	1.5	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	2.6	0.0	0.3	1.8	8.1	2.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	40.0	0.0	47.2	3.8	10.4	2.9
LnGrp LOS	D		D	A	B	A
Approach Vol, veh/h	256			1470	2625	
Approach Delay, s/veh	40.0			4.2	8.8	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		75.1		13.1	6.1	69.0
Change Period (Y+Rc), s		* 6.5		4.6	4.6	6.5
Max Green Setting (Gmax), s		* 86		25.0	5.0	74.3
Max Q Clear Time (g_c+I1), s		15.6		8.2	2.7	37.0
Green Ext Time (p_c), s		7.6		0.4	0.0	25.5

Intersection Summary	
HCM 7th Control Delay, s/veh	9.1
HCM 7th LOS	A

Notes

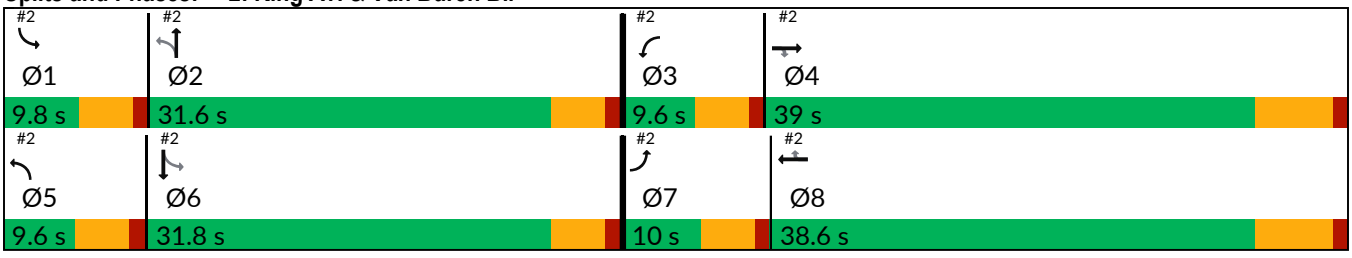
User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	113	1702	188	29	1545	63	71	13	86	42
Future Volume (vph)	113	1702	188	29	1545	63	71	13	86	42
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA
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	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.5	28.5	9.6	28.5	28.5	9.6	26.1	9.6	31.6
Total Split (s)	10.0	39.0	39.0	9.6	38.6	38.6	9.6	31.6	9.8	31.8
Total Split (%)	11.1%	43.3%	43.3%	10.7%	42.9%	42.9%	10.7%	35.1%	10.9%	35.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.6	42.5	42.5	5.2	33.7	33.7	11.4	13.1	17.3	13.2
Actuated g/C Ratio	0.08	0.60	0.60	0.07	0.47	0.47	0.16	0.18	0.24	0.18
v/c Ratio	0.85	0.84	0.20	0.23	0.96	0.08	0.31	0.09	0.26	0.28
Control Delay (s/veh)	85.5	24.8	6.4	40.8	38.2	0.3	26.5	17.1	21.4	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	85.5	24.8	6.4	40.8	38.2	0.3	26.5	17.1	21.4	15.8
LOS	F	C	A	D	D	A	C	B	C	B
Approach Delay (s/veh)		26.5			36.8			23.8		18.5
Approach LOS		C			D			C		B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 71.4	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay (s/veh): 30.4	Intersection LOS: C
Intersection Capacity Utilization 76.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 2: King Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	113	1702	188	29	1545	63	71	13	14	86	42	54
Future Volume (veh/h)	113	1702	188	29	1545	63	71	13	14	86	42	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	0.99		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	118	1773	154	30	1609	63	74	14	6	90	44	42
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	137	1798	802	56	1638	726	300	147	63	359	108	103
Arrive On Green	0.08	0.51	0.51	0.03	0.46	0.46	0.05	0.12	0.12	0.06	0.12	0.12
Sat Flow, veh/h	1781	3554	1585	1781	3554	1576	1781	1240	532	1781	877	837
Grp Volume(v), veh/h	118	1773	154	30	1609	63	74	0	20	90	0	86
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1576	1781	0	1772	1781	0	1713
Q Serve(g_s), s	4.6	34.6	3.7	1.2	31.4	1.6	2.5	0.0	0.7	3.1	0.0	3.3
Cycle Q Clear(g_c), s	4.6	34.6	3.7	1.2	31.4	1.6	2.5	0.0	0.7	3.1	0.0	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.30	1.00		0.49
Lane Grp Cap(c), veh/h	137	1798	802	56	1638	726	300	0	209	359	0	212
V/C Ratio(X)	0.86	0.99	0.19	0.53	0.98	0.09	0.25	0.00	0.10	0.25	0.00	0.41
Avail Cap(c_a), veh/h	137	1798	802	127	1638	726	330	0	680	384	0	663
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	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.1	17.1	9.5	33.5	18.7	10.6	25.2	0.0	27.6	25.0	0.0	28.4
Incr Delay (d2), s/veh	38.2	17.9	0.1	2.9	18.2	0.1	0.2	0.0	0.2	0.1	0.0	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	3.2	14.9	1.0	0.5	14.1	0.5	1.0	0.0	0.3	1.3	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	70.2	35.0	9.6	36.4	36.9	10.7	25.3	0.0	27.8	25.2	0.0	29.7
LnGrp LOS	E	D	A	D	D	B	C		C	C		C
Approach Vol, veh/h		2045			1702			94			176	
Approach Delay, s/veh		35.1			35.9			25.9			27.4	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	12.9	6.8	41.8	8.4	13.3	10.0	38.6
Change Period (Y+Rc), s	4.6	4.6	4.6	6.2	4.6	4.6	4.6	6.2
Max Green Setting (Gmax), s	5.2	27.0	5.0	32.8	5.0	27.2	5.4	32.4
Max Q Clear Time (g_c+I1), s	5.1	2.7	3.2	36.6	4.5	5.3	6.6	33.4
Green Ext Time (p_c), s	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	34.9
HCM 7th LOS	C

Intersection	
Int Delay, s/veh	41.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	57	63	686	137	94	1052
Future Vol, veh/h	57	63	686	137	94	1052
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	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	63	69	754	151	103	1156

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2192	829	0	0	904	0
Stage 1	829	-	-	-	-	-
Stage 2	1363	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	~ 50	370	-	-	752	-
Stage 1	429	-	-	-	-	-
Stage 2	238	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 31	370	-	-	752	-
Mov Cap-2 Maneuver	~ 31	-	-	-	-	-
Stage 1	264	-	-	-	-	-
Stage 2	238	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	$ 712.24	0	0.87
HCM LOS	F		

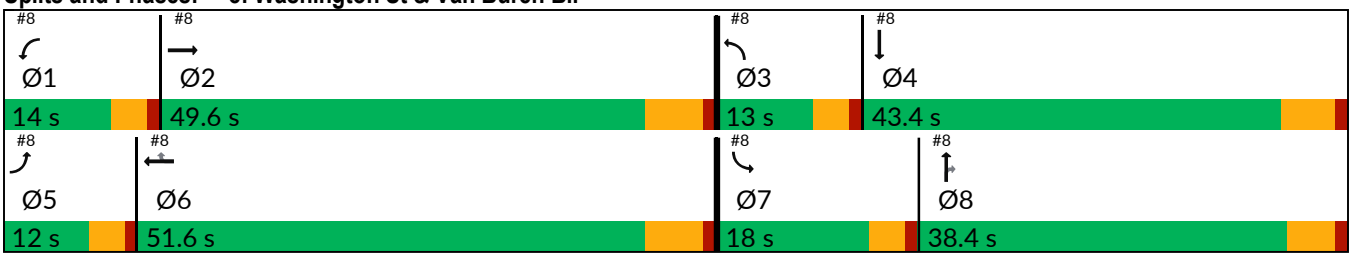
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	59	148	-
HCM Lane V/C Ratio	-	-	2.227	0.137	-
HCM Ctrl Dly (s/v)	-	-	$ 712.2	10.5	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	12.9	0.5	-

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

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	146	1530	213	1315	492	132	263	217	657	577
Future Volume (vph)	146	1530	213	1315	492	132	263	217	657	577
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	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.2	34.2	9.2	33.2	33.2	9.2	38.4	38.4	9.2	30.8
Total Split (s)	12.0	49.6	14.0	51.6	51.6	13.0	38.4	38.4	18.0	43.4
Total Split (%)	10.0%	41.3%	11.7%	43.0%	43.0%	10.8%	32.0%	32.0%	15.0%	36.2%
Yellow Time (s)	3.2	5.2	3.2	5.2	5.2	3.2	4.4	4.4	3.2	4.8
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)	4.2	6.2	4.2	6.2	6.2	4.2	5.4	5.4	4.2	5.8
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	None	None	None	None
Act Effct Green (s)	7.8	43.5	9.8	45.5	45.5	8.0	25.6	25.6	13.8	31.1
Actuated g/C Ratio	0.07	0.39	0.09	0.40	0.40	0.07	0.23	0.23	0.12	0.28
v/c Ratio	1.22	1.25	1.41	0.94	0.57	0.56	0.33	0.47	1.60	0.81
Control Delay (s/veh)	196.2	149.4	258.2	47.0	8.0	61.2	37.1	16.6	311.6	43.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	196.2	149.4	258.2	47.0	8.0	61.2	37.1	16.6	311.6	43.5
LOS	F	F	F	D	A	E	D	B	F	D
Approach Delay (s/veh)		153.2		59.7			35.1			167.1
Approach LOS		F		E			D			F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 112.9	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.60	
Intersection Signal Delay (s/veh): 112.0	Intersection LOS: F
Intersection Capacity Utilization 102.4%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 8: Washington St & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	1530	125	213	1315	492	132	263	217	657	577	191
Future Volume (veh/h)	146	1530	125	213	1315	492	132	263	217	657	577	191
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	149	1561	111	217	1342	406	135	268	184	670	589	145
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	130	1369	97	164	1511	674	195	644	287	447	718	176
Arrive On Green	0.07	0.41	0.41	0.09	0.43	0.43	0.06	0.18	0.18	0.13	0.25	0.25
Sat Flow, veh/h	1781	3366	238	1781	3554	1584	3456	3554	1582	3456	2826	694
Grp Volume(v), veh/h	149	819	853	217	1342	406	135	268	184	670	370	364
Grp Sat Flow(s),veh/h/ln	1781	1777	1828	1781	1777	1584	1728	1777	1582	1728	1777	1744
Q Serve(g_s), s	7.8	43.4	43.4	9.8	37.2	21.1	4.1	7.1	11.5	13.8	20.9	21.0
Cycle Q Clear(g_c), s	7.8	43.4	43.4	9.8	37.2	21.1	4.1	7.1	11.5	13.8	20.9	21.0
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		0.40
Lane Grp Cap(c), veh/h	130	722	743	164	1511	674	195	644	287	447	451	443
V/C Ratio(X)	1.14	1.13	1.15	1.33	0.89	0.60	0.69	0.42	0.64	1.50	0.82	0.82
Avail Cap(c_a), veh/h	130	722	743	164	1511	674	285	1098	489	447	626	614
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	49.5	31.7	31.7	48.5	28.3	23.7	49.4	38.7	40.5	46.5	37.5	37.5
Incr Delay (d2), s/veh	123.1	76.9	81.8	183.1	7.0	1.8	1.6	0.4	2.4	236.5	6.0	6.3
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	7.8	32.2	34.2	12.5	15.8	8.2	1.8	3.2	4.7	20.6	9.7	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	172.6	108.6	113.5	231.6	35.3	25.5	51.1	39.1	42.9	282.9	43.5	43.9
LnGrp LOS	F	F	F	F	D	C	D	D	D	F	D	D
Approach Vol, veh/h		1821			1965			587			1404	
Approach Delay, s/veh		116.1			55.0			43.0			157.9	
Approach LOS		F			D			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	49.6	10.2	32.9	12.0	51.6	18.0	25.2
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	9.8	43.4	8.8	37.6	7.8	45.4	13.8	* 33
Max Q Clear Time (g_c+I1), s	11.8	45.4	6.1	23.0	9.8	39.2	15.8	13.5
Green Ext Time (p_c), s	0.0	0.0	0.1	4.1	0.0	5.1	0.0	2.3

Intersection Summary	
HCM 7th Control Delay, s/veh	98.0
HCM 7th LOS	F

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	463.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	2133	22	94	1862	13	48	0	16	3	0	24
Future Vol, veh/h	19	2133	22	94	1862	13	48	0	16	3	0	24
Conflicting Peds, #/hr	0	0	0	0	0	2	0	0	2	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	275	-	-	255	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	2294	24	101	2002	14	52	0	17	3	0	26

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2018	0	0	2317	0	0	3549	4567	1161	3403	4571	1010
Stage 1	-	-	-	-	-	-	2346	2346	-	2213	2213	-
Stage 2	-	-	-	-	-	-	1203	2220	-	1190	2358	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	278	-	-	212	-	-	~ 2	1	189	~ 3	1	238
Stage 1	-	-	-	-	-	-	~ 37	68	-	45	80	-
Stage 2	-	-	-	-	-	-	196	80	-	199	67	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	278	-	-	212	-	-	~ 1	1	188	~ 1	1	237
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 1	1	-	~ 1	1	-
Stage 1	-	-	-	-	-	-	~ 34	63	-	23	42	-
Stage 2	-	-	-	-	-	-	91	42	-	167	62	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.17	1.74	$ 29969.93	$ 1467.03
HCM LOS			F	F

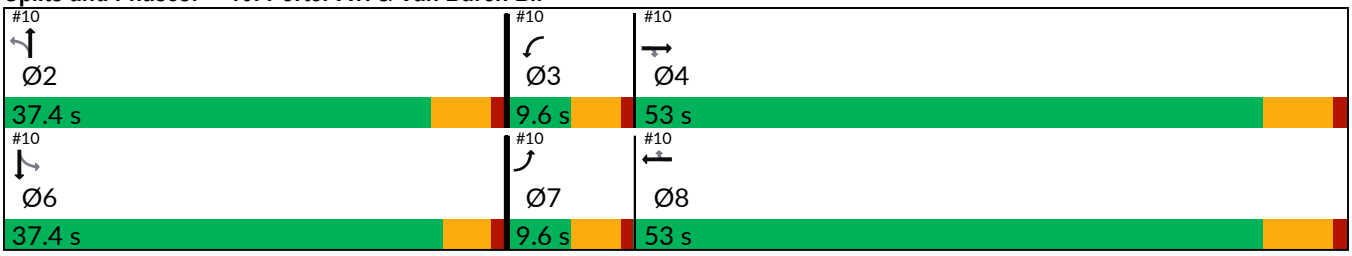
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1	278	-	-	212	-	-	11
HCM Lane V/C Ratio	55.263	0.074	-	-	0.476	-	-	2.702
HCM Ctrl Dly (s/v)	$ 29969.9	19	-	-	36.5	-	-	$ 1467
HCM Lane LOS	F	C	-	-	E	-	-	F
HCM 95th %tile Q(veh)	10.8	0.2	-	-	2.3	-	-	4.6

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	17	2083	106	19	1858	9	15	3	17	3
Future Volume (vph)	17	2083	106	19	1858	9	15	3	17	3
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)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	27.7	27.7	9.6	27.7	27.7	36.9	36.9	35.6	35.6
Total Split (s)	9.6	53.0	53.0	9.6	53.0	53.0	37.4	37.4	37.4	37.4
Total Split (%)	9.6%	53.0%	53.0%	9.6%	53.0%	53.0%	37.4%	37.4%	37.4%	37.4%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	4.4	4.4	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2		5.4		4.6
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	None	None	None	None
Act Effct Green (s)	5.3	52.8	52.8	5.3	54.6	54.6		13.6		14.0
Actuated g/C Ratio	0.08	0.75	0.75	0.08	0.78	0.78		0.19		0.20
v/c Ratio	0.14	0.83	0.09	0.15	0.72	0.01		0.12		0.12
Control Delay (s/veh)	41.5	18.6	4.7	41.7	13.4	0.0		19.2		18.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay (s/veh)	41.5	18.6	4.7	41.7	13.4	0.0		19.2		18.5
LOS	D	B	A	D	B	A		B		B
Approach Delay (s/veh)		18.1			13.6			19.2		18.5
Approach LOS		B			B			B		B

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 70.3	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay (s/veh): 16.0	Intersection LOS: B
Intersection Capacity Utilization 75.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 10: Porter Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	2083	106	19	1858	9	15	3	14	17	3	16
Future Volume (veh/h)	17	2083	106	19	1858	9	15	3	14	17	3	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	2216	100	20	1977	9	16	3	10	18	3	7
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	38	2402	1071	41	2409	1052	124	22	34	137	23	24
Arrive On Green	0.02	0.68	0.68	0.02	0.68	0.68	0.06	0.06	0.06	0.06	0.06	0.06
Sat Flow, veh/h	1781	3554	1585	1781	3554	1551	678	349	540	807	365	391
Grp Volume(v), veh/h	18	2216	100	20	1977	9	29	0	0	28	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1551	1567	0	0	1563	0	0
Q Serve(g_s), s	0.7	36.4	1.5	0.8	27.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.7	36.4	1.5	0.8	27.4	0.1	1.1	0.0	0.0	1.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.55		0.34	0.64		0.25
Lane Grp Cap(c), veh/h	38	2402	1071	41	2409	1052	180	0	0	184	0	0
V/C Ratio(X)	0.48	0.92	0.09	0.49	0.82	0.01	0.16	0.00	0.00	0.15	0.00	0.00
Avail Cap(c_a), veh/h	131	2453	1094	131	2453	1071	795	0	0	810	0	0
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	0.00	0.00
Uniform Delay (d), s/veh	32.8	9.5	3.8	32.7	7.9	3.5	30.3	0.0	0.0	30.3	0.0	0.0
Incr Delay (d2), s/veh	3.4	6.4	0.0	3.3	2.3	0.0	0.4	0.0	0.0	0.4	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	0.3	9.0	0.3	0.3	5.9	0.0	0.4	0.0	0.0	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.2	15.9	3.8	36.0	10.2	3.5	30.7	0.0	0.0	30.7	0.0	0.0
LnGrp LOS	D	B	A	D	B	A	C			C		
Approach Vol, veh/h		2334			2006			29			28	
Approach Delay, s/veh		15.5			10.5			30.7			30.7	
Approach LOS		B			B			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		9.6	6.2	52.0		9.6	6.0	52.2				
Change Period (Y+Rc), s		5.4	4.6	6.2		* 5.4	4.6	6.2				
Max Green Setting (Gmax), s		32.0	5.0	46.8		* 33	5.0	46.8				
Max Q Clear Time (g_c+I1), s		3.1	2.8	38.4		3.0	2.7	29.4				
Green Ext Time (p_c), s		0.1	0.0	7.4		0.1	0.0	12.7				

Intersection Summary	
HCM 7th Control Delay, s/veh	13.4
HCM 7th LOS	B

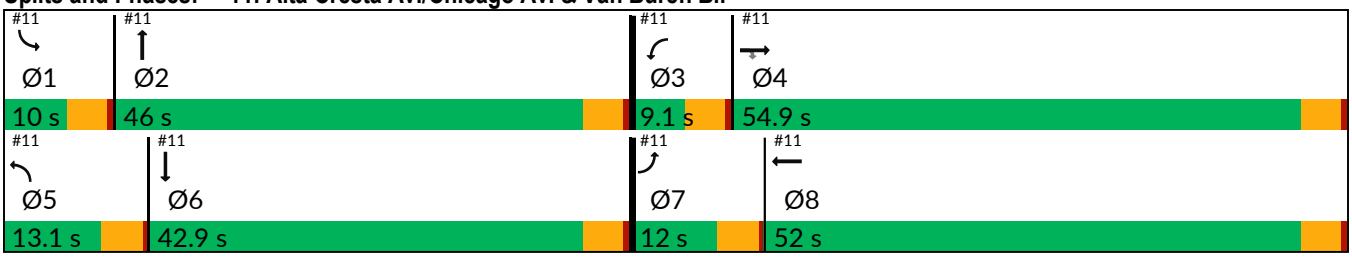
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	141	2029	152	70	1852	48	42	94	4
Future Volume (vph)	141	2029	152	70	1852	48	42	94	4
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.1	30.1	30.1	9.1	30.1	9.1	44.1	9.1	26.1
Total Split (s)	12.0	54.9	54.9	9.1	52.0	13.1	46.0	10.0	42.9
Total Split (%)	10.0%	45.8%	45.8%	7.6%	43.3%	10.9%	38.3%	8.3%	35.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	8.0	51.7	51.7	5.1	48.7	7.6	12.5	6.0	15.3
Actuated g/C Ratio	0.09	0.56	0.56	0.06	0.53	0.08	0.14	0.07	0.17
v/c Ratio	0.97	1.09	0.17	0.76	1.11	0.35	0.26	0.87	0.12
Control Delay (s/veh)	110.7	69.8	7.3	89.4	80.5	49.8	26.1	100.8	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	110.7	69.8	7.3	89.4	80.5	49.8	26.1	100.8	14.1
LOS	F	E	A	F	F	D	C	F	B
Approach Delay (s/veh)		68.2			80.8		36.4		78.8
Approach LOS		E			F		D		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 91.9	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay (s/veh): 73.2	Intersection LOS: E
Intersection Capacity Utilization 84.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 11: Alta Cresta Av./Chicago Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	141	2029	152	70	1852	89	48	42	21	94	4	28
Future Volume (veh/h)	141	2029	152	70	1852	89	48	42	21	94	4	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	150	2159	144	74	1970	95	51	45	11	100	4	26
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	169	2197	980	95	1988	95	74	87	21	126	19	123
Arrive On Green	0.10	0.62	0.62	0.05	0.58	0.58	0.04	0.06	0.06	0.07	0.09	0.09
Sat Flow, veh/h	1781	3554	1585	1781	3449	165	1781	1452	355	1781	212	1375
Grp Volume(v), veh/h	150	2159	144	74	1006	1059	51	0	56	100	0	30
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1837	1781	0	1806	1781	0	1586
Q Serve(g_s), s	6.9	49.1	3.2	3.4	45.9	47.9	2.3	0.0	2.5	4.6	0.0	1.5
Cycle Q Clear(g_c), s	6.9	49.1	3.2	3.4	45.9	47.9	2.3	0.0	2.5	4.6	0.0	1.5
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.20	1.00		0.87
Lane Grp Cap(c), veh/h	169	2197	980	95	1024	1059	74	0	109	126	0	142
V/C Ratio(X)	0.89	0.98	0.15	0.78	0.98	1.00	0.69	0.00	0.52	0.79	0.00	0.21
Avail Cap(c_a), veh/h	169	2197	980	107	1024	1059	193	0	911	126	0	741
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	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.2	15.4	6.7	38.9	17.2	17.6	39.3	0.0	37.9	38.0	0.0	35.1
Incr Delay (d2), s/veh	38.6	15.3	0.1	27.1	23.8	27.7	10.7	0.0	3.7	27.9	0.0	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	4.6	18.5	0.8	2.1	20.6	23.1	1.2	0.0	1.2	3.0	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	75.8	30.7	6.7	65.9	41.0	45.3	50.0	0.0	41.6	65.9	0.0	35.8
LnGrp LOS	E	C	A	E	D	D	D		D	E		D
Approach Vol, veh/h		2453			2139			107			130	
Approach Delay, s/veh		32.1			44.0			45.6			58.9	
Approach LOS		C			D			D			E	

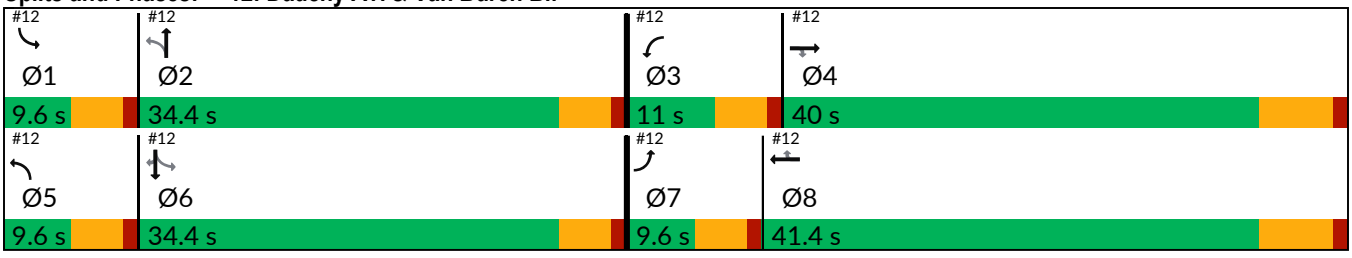
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	9.1	8.5	55.5	7.6	11.5	12.0	52.0
Change Period (Y+Rc), s	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Max Green Setting (Gmax), s	5.9	41.9	5.0	50.8	9.0	38.8	7.9	47.9
Max Q Clear Time (g_c+I1), s	6.6	4.5	5.4	51.1	4.3	3.5	8.9	49.9
Green Ext Time (p_c), s	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	38.4
HCM 7th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	89	1729	155	141	1721	19	158	30	62	32	47
Future Volume (vph)	89	1729	155	141	1721	19	158	30	62	32	47
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	28.2	28.2	9.6	28.2	28.2	9.6	26.6	9.6	33.6	33.6
Total Split (s)	9.6	40.0	40.0	11.0	41.4	41.4	9.6	34.4	9.6	34.4	34.4
Total Split (%)	10.1%	42.1%	42.1%	11.6%	43.6%	43.6%	10.1%	36.2%	10.1%	36.2%	36.2%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	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	None	None	None	None
Act Effct Green (s)	5.1	34.5	34.5	6.5	35.9	35.9	15.9	13.3	15.9	13.3	13.3
Actuated g/C Ratio	0.07	0.45	0.45	0.09	0.47	0.47	0.21	0.17	0.21	0.17	0.17
v/c Ratio	0.81	1.16	0.21	1.01	1.11	0.02	0.58	0.34	0.23	0.10	0.13
Control Delay (s/veh)	85.7	103.4	6.4	116.0	81.7	0.1	31.6	12.6	21.9	27.2	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	85.7	103.4	6.4	116.0	81.7	0.1	31.6	12.6	21.9	27.2	0.7
LOS	F	F	A	F	F	A	C	B	C	C	A
Approach Delay (s/veh)		94.9			83.5			23.6		16.0	
Approach LOS		F			F			C		B	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 76.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.16	
Intersection Signal Delay (s/veh): 82.7	Intersection LOS: F
Intersection Capacity Utilization 83.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 12: Dauchy Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	1729	155	141	1721	19	158	30	86	62	32	47
Future Volume (veh/h)	89	1729	155	141	1721	19	158	30	86	62	32	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	96	1859	121	152	1851	11	170	32	61	67	34	27
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	123	1657	738	157	1725	769	335	68	129	276	188	157
Arrive On Green	0.07	0.47	0.47	0.09	0.49	0.49	0.07	0.12	0.12	0.05	0.10	0.10
Sat Flow, veh/h	1781	3554	1583	1781	3554	1583	1781	570	1087	1781	1870	1560
Grp Volume(v), veh/h	96	1859	121	152	1851	11	170	0	93	67	34	27
Grp Sat Flow(s),veh/h/ln	1781	1777	1583	1781	1777	1583	1781	0	1657	1781	1870	1560
Q Serve(g_s), s	3.8	33.8	3.2	6.2	35.2	0.3	5.0	0.0	3.8	2.4	1.2	1.1
Cycle Q Clear(g_c), s	3.8	33.8	3.2	6.2	35.2	0.3	5.0	0.0	3.8	2.4	1.2	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.66	1.00		1.00
Lane Grp Cap(c), veh/h	123	1657	738	157	1725	769	335	0	196	276	188	157
V/C Ratio(X)	0.78	1.12	0.16	0.97	1.07	0.01	0.51	0.00	0.47	0.24	0.18	0.17
Avail Cap(c_a), veh/h	123	1657	738	157	1725	769	335	0	681	308	769	641
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	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.2	19.3	11.2	32.9	18.6	9.7	27.9	0.0	29.8	27.1	29.9	29.8
Incr Delay (d2), s/veh	25.0	63.5	0.1	61.3	44.1	0.0	0.5	0.0	1.8	0.2	0.5	0.5
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	2.4	25.4	0.9	5.1	21.6	0.1	2.8	0.0	1.6	1.0	0.6	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.2	82.9	11.3	94.2	62.8	9.7	28.5	0.0	31.6	27.3	30.3	30.3
LnGrp LOS	E	F	B	F	F	A	C		C	C	C	C
Approach Vol, veh/h		2076			2014			263			128	
Approach Delay, s/veh		77.6			64.9			29.6			28.8	
Approach LOS		E			E			C			C	

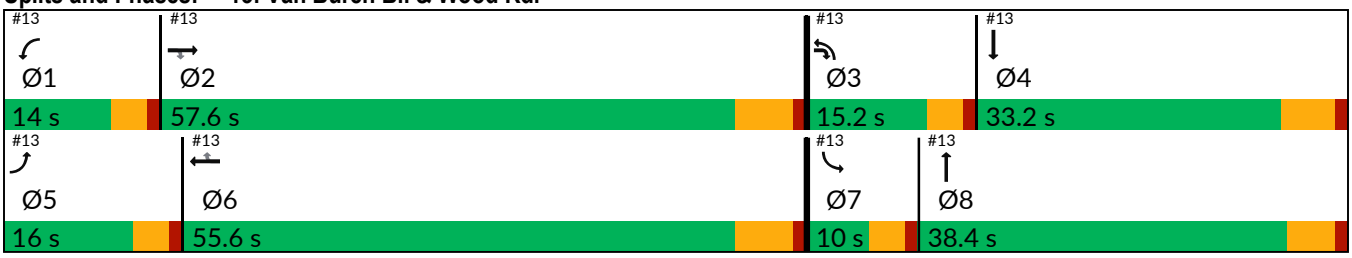
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	13.2	11.0	40.0	9.6	11.9	9.6	41.4
Change Period (Y+Rc), s	4.6	4.6	4.6	6.2	4.6	4.6	4.6	6.2
Max Green Setting (Gmax), s	5.0	29.8	6.4	33.8	5.0	29.8	5.0	35.2
Max Q Clear Time (g_c+I1), s	4.4	5.8	8.2	35.8	7.0	3.2	5.8	37.2
Green Ext Time (p_c), s	0.0	0.5	0.0	0.0	0.0	0.2	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	67.7
HCM 7th LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	197	1647	399	318	1515	159	257	288	82	344
Future Volume (vph)	197	1647	399	318	1515	159	257	288	82	344
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6		3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	3	1	6	6	3	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.2	30.2	9.2	9.2	30.2	30.2	9.2	38.4	9.2	15.8
Total Split (s)	16.0	57.6	15.2	14.0	55.6	55.6	15.2	38.4	10.0	33.2
Total Split (%)	13.3%	48.0%	12.7%	11.7%	46.3%	46.3%	12.7%	32.0%	8.3%	27.7%
Yellow Time (s)	3.2	5.2	3.2	3.2	5.2	5.2	3.2	4.4	3.2	4.8
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)	4.2	6.2	4.2	4.2	6.2	6.2	4.2	5.4	4.2	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.8	51.4	64.2	9.8	49.4	49.4	10.8	31.0	5.8	25.6
Actuated g/C Ratio	0.10	0.44	0.54	0.08	0.42	0.42	0.09	0.26	0.05	0.22
v/c Ratio	1.15	1.10	0.46	1.15	1.05	0.22	0.85	0.60	0.99	0.89
Control Delay (s/veh)	161.1	89.0	12.2	149.0	73.5	6.1	77.1	28.7	149.6	48.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	161.1	89.0	12.2	149.0	73.5	6.1	77.1	28.7	149.6	48.5
LOS	F	F	B	F	E	A	E	C	F	D
Approach Delay (s/veh)		81.7			80.2			43.7		58.8
Approach LOS		F			F			D		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 118.1	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.15	
Intersection Signal Delay (s/veh): 72.7	Intersection LOS: E
Intersection Capacity Utilization 100.6%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 13: Van Buren Bl. & Wood Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	1647	399	318	1515	159	257	288	282	82	344	377
Future Volume (veh/h)	197	1647	399	318	1515	159	257	288	282	82	344	377
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	203	1698	333	328	1562	125	265	297	212	85	355	301
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	178	1544	831	286	1484	658	319	522	362	87	398	332
Arrive On Green	0.10	0.43	0.43	0.08	0.42	0.42	0.09	0.26	0.26	0.05	0.22	0.22
Sat Flow, veh/h	1781	3554	1576	3456	3554	1576	3456	1996	1383	1781	1826	1523
Grp Volume(v), veh/h	203	1698	333	328	1562	125	265	263	246	85	345	311
Grp Sat Flow(s),veh/h/ln	1781	1777	1576	1728	1777	1576	1728	1777	1602	1781	1777	1573
Q Serve(g_s), s	11.8	51.4	15.0	9.8	49.4	5.9	8.9	15.2	15.8	5.6	22.3	22.8
Cycle Q Clear(g_c), s	11.8	51.4	15.0	9.8	49.4	5.9	8.9	15.2	15.8	5.6	22.3	22.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.86	1.00		0.97
Lane Grp Cap(c), veh/h	178	1544	831	286	1484	658	319	464	419	87	388	343
V/C Ratio(X)	1.14	1.10	0.40	1.15	1.05	0.19	0.83	0.57	0.59	0.97	0.89	0.91
Avail Cap(c_a), veh/h	178	1544	831	286	1484	658	321	496	447	87	411	364
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	33.5	16.8	54.3	34.5	21.8	52.8	37.9	38.1	56.2	44.9	45.1
Incr Delay (d2), s/veh	111.1	55.4	0.4	98.6	38.7	0.2	15.6	1.3	1.8	86.9	20.1	24.7
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	10.6	32.1	5.3	8.0	27.5	2.2	4.5	6.6	6.3	4.6	11.7	11.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	164.4	88.9	17.2	152.9	73.1	22.0	68.4	39.2	39.9	143.1	65.0	69.7
LnGrp LOS	F	F	B	F	F	C	E	D	D	F	E	E
Approach Vol, veh/h		2234			2015			774			741	
Approach Delay, s/veh		85.1			82.9			49.4			76.0	
Approach LOS		F			F			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	57.6	15.1	31.6	16.0	55.6	10.0	36.7
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	9.8	51.4	11.0	27.4	11.8	49.4	5.8	* 33
Max Q Clear Time (g_c+I1), s	11.8	53.4	10.9	24.8	13.8	51.4	7.6	17.8
Green Ext Time (p_c), s	0.0	0.0	0.0	1.0	0.0	0.0	0.0	2.6

Intersection Summary	
HCM 7th Control Delay, s/veh	78.4
HCM 7th LOS	E

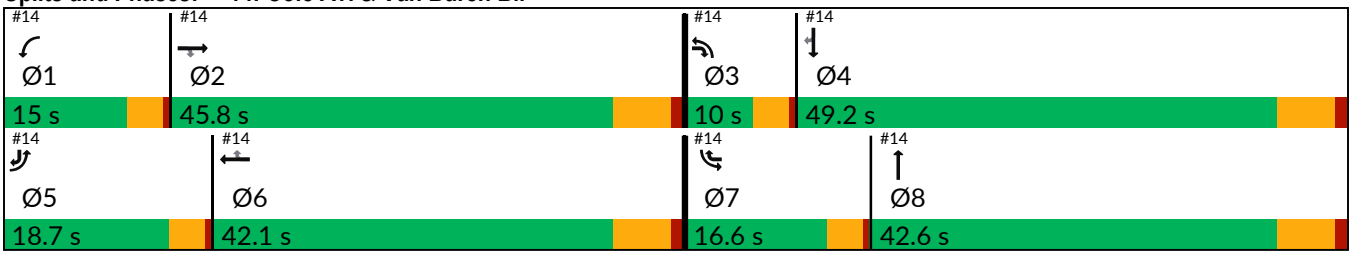
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	418	1240	253	212	1330	492	106	345	342	582	378
Future Volume (vph)	418	1240	253	212	1330	492	106	345	342	582	378
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8	7	4	5
Permitted Phases			2			6					4
Detector Phase	5	2	3	1	6	7	3	8	7	4	5
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0
Minimum Split (s)	9.1	36.2	9.1	9.1	36.2	9.1	9.1	42.2	9.1	49.2	9.1
Total Split (s)	18.7	45.8	10.0	15.0	42.1	16.6	10.0	42.6	16.6	49.2	18.7
Total Split (%)	15.6%	38.2%	8.3%	12.5%	35.1%	13.8%	8.3%	35.5%	13.8%	41.0%	15.6%
Yellow Time (s)	3.2	5.2	3.2	3.2	5.2	3.2	3.2	5.2	3.2	5.2	3.2
All-Red Time (s)	0.5	1.0	0.5	0.5	1.0	0.5	0.5	1.0	0.5	1.0	0.5
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)	3.7	6.2	3.7	3.7	6.2	3.7	3.7	6.2	3.7	6.2	3.7
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	15.1	39.9	52.4	11.4	36.1	51.5	6.3	18.7	12.8	25.2	46.5
Actuated g/C Ratio	0.15	0.39	0.51	0.11	0.35	0.50	0.06	0.18	0.12	0.25	0.45
v/c Ratio	0.84	0.91	0.30	1.10	0.75	0.57	0.98	0.61	0.81	0.68	0.51
Control Delay (s/veh)	59.3	42.0	10.4	136.4	33.6	13.7	133.5	41.0	60.1	38.8	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	59.3	42.0	10.4	136.4	33.6	13.7	133.5	41.0	60.1	38.8	18.6
LOS	E	D	B	F	C	B	F	D	E	D	B
Approach Delay (s/veh)		41.6			39.5			60.9		38.5	
Approach LOS		D			D			E		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 102.7	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.10	
Intersection Signal Delay (s/veh): 41.8	Intersection LOS: D
Intersection Capacity Utilization 89.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 14: Cole Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	418	1240	253	212	1330	492	106	345	44	342	582	378
Future Volume (veh/h)	418	1240	253	212	1330	492	106	345	44	342	582	378
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	422	1253	196	214	1343	389	107	348	35	345	588	275
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	486	1380	716	202	1842	756	113	590	59	410	841	598
Arrive On Green	0.14	0.39	0.39	0.11	0.36	0.36	0.06	0.18	0.18	0.12	0.24	0.24
Sat Flow, veh/h	3456	3554	1585	1781	5106	1575	1781	3257	325	3456	3554	1585
Grp Volume(v), veh/h	422	1253	196	214	1343	389	107	189	194	345	588	275
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1702	1575	1781	1777	1805	1728	1777	1585
Q Serve(g_s), s	11.9	33.2	7.7	11.3	22.7	17.0	6.0	9.7	9.8	9.7	15.1	13.0
Cycle Q Clear(g_c), s	11.9	33.2	7.7	11.3	22.7	17.0	6.0	9.7	9.8	9.7	15.1	13.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	486	1380	716	202	1842	756	113	322	327	410	841	598
V/C Ratio(X)	0.87	0.91	0.27	1.06	0.73	0.51	0.95	0.59	0.59	0.84	0.70	0.46
Avail Cap(c_a), veh/h	520	1412	730	202	1842	756	113	649	659	447	1533	907
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	41.9	28.8	17.1	44.2	27.6	17.9	46.5	37.4	37.5	43.0	34.8	23.4
Incr Delay (d2), s/veh	13.0	9.0	0.3	80.0	1.6	0.8	68.4	1.7	1.7	11.6	1.1	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	5.7	14.4	2.6	9.2	8.7	5.7	4.7	4.1	4.3	4.6	6.2	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.9	37.8	17.4	124.2	29.2	18.8	115.0	39.1	39.2	54.6	35.9	23.9
LnGrp LOS	D	D	B	F	C	B	F	D	D	D	D	C
Approach Vol, veh/h		1871			1946			490			1208	
Approach Delay, s/veh		39.5			37.6			55.7			38.5	
Approach LOS		D			D			E			D	

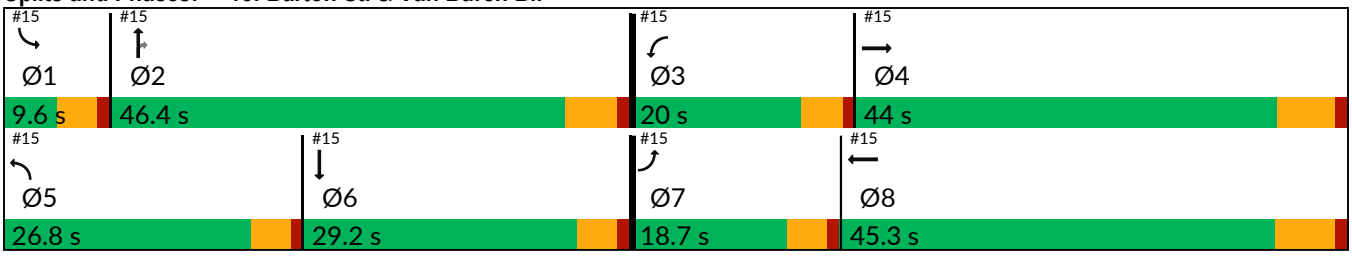
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	44.9	10.0	29.8	17.7	42.2	15.5	24.2
Change Period (Y+Rc), s	3.7	6.2	3.7	6.2	3.7	6.2	3.7	6.2
Max Green Setting (Gmax), s	11.3	39.6	6.3	43.0	15.0	35.9	12.9	36.4
Max Q Clear Time (g_c+I1), s	13.3	35.2	8.0	17.1	13.9	24.7	11.7	11.8
Green Ext Time (p_c), s	0.0	3.5	0.0	4.6	0.1	8.5	0.1	1.9

Intersection Summary	
HCM 7th Control Delay, s/veh	40.0
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	175	1280	356	1396	402	76	354	27	48
Future Volume (vph)	175	1280	356	1396	402	76	354	27	48
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)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.2	9.6	28.5	9.6	44.8	44.8	9.6	26.1
Total Split (s)	18.7	44.0	20.0	45.3	26.8	46.4	46.4	9.6	29.2
Total Split (%)	15.6%	36.7%	16.7%	37.8%	22.3%	38.7%	38.7%	8.0%	24.3%
Yellow Time (s)	3.6	5.2	3.6	5.5	3.6	4.8	4.8	3.6	3.6
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)	4.6	6.2	4.6	6.5	4.6	5.8	5.8	4.6	4.6
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	None	None	None	None
Act Effct Green (s)	13.7	38.0	15.5	39.5	16.8	27.6	27.6	5.0	12.9
Actuated g/C Ratio	0.13	0.37	0.15	0.38	0.16	0.27	0.27	0.05	0.12
v/c Ratio	0.80	1.28	1.43	0.79	0.77	0.16	0.58	0.34	0.54
Control Delay (s/veh)	69.5	163.8	248.2	32.9	51.5	30.7	10.7	61.6	30.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	69.5	163.8	248.2	32.9	51.5	30.7	10.7	61.6	30.5
LOS	E	F	F	C	D	C	B	E	C
Approach Delay (s/veh)		154.3		75.7		32.2			35.7
Approach LOS		F		E		C			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 103.3	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.43	
Intersection Signal Delay (s/veh): 96.2	Intersection LOS: F
Intersection Capacity Utilization 100.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 15: Barton St. & Van Buren Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	175	1280	267	356	1396	40	402	76	354	27	48	88
Future Volume (veh/h)	175	1280	267	356	1396	40	402	76	354	27	48	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	186	1362	271	379	1485	33	428	81	217	29	51	59
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	218	1128	221	276	2126	47	506	411	342	49	79	91
Arrive On Green	0.12	0.38	0.38	0.16	0.41	0.41	0.15	0.22	0.22	0.03	0.10	0.10
Sat Flow, veh/h	1781	2962	580	1781	5136	114	3456	1870	1560	1781	784	907
Grp Volume(v), veh/h	186	808	825	379	984	534	428	81	217	29	0	110
Grp Sat Flow(s),veh/h/ln	1781	1777	1766	1781	1702	1846	1728	1870	1560	1781	0	1692
Q Serve(g_s), s	10.2	37.8	37.8	15.4	23.7	23.7	12.0	3.5	12.5	1.6	0.0	6.2
Cycle Q Clear(g_c), s	10.2	37.8	37.8	15.4	23.7	23.7	12.0	3.5	12.5	1.6	0.0	6.2
Prop In Lane	1.00		0.33	1.00		0.06	1.00		1.00	1.00		0.54
Lane Grp Cap(c), veh/h	218	677	673	276	1409	764	506	411	342	49	0	170
V/C Ratio(X)	0.85	1.19	1.23	1.37	0.70	0.70	0.85	0.20	0.63	0.59	0.00	0.65
Avail Cap(c_a), veh/h	253	677	673	276	1409	764	773	765	638	90	0	419
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	0.00	1.00
Uniform Delay (d), s/veh	42.7	30.7	30.7	41.9	24.0	24.0	41.3	31.6	35.1	47.7	0.0	42.9
Incr Delay (d2), s/veh	19.2	101.5	114.5	188.3	1.5	2.8	3.3	0.2	1.9	4.1	0.0	4.0
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	5.4	33.6	35.8	20.8	8.7	9.7	5.1	1.5	4.6	0.8	0.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.9	132.2	145.2	230.2	25.5	26.8	44.6	31.8	37.1	51.7	0.0	47.0
LnGrp LOS	E	F	F	F	C	C	D	C	D	D		D
Approach Vol, veh/h		1819			1897			726			139	
Approach Delay, s/veh		130.9			66.8			40.9			48.0	
Approach LOS		F			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	27.6	20.0	44.3	19.1	15.8	16.7	47.6
Change Period (Y+Rc), s	4.6	5.8	4.6	* 6.5	4.6	* 5.8	4.6	6.5
Max Green Setting (Gmax), s	5.0	40.6	15.4	* 38	22.2	* 25	14.1	38.8
Max Q Clear Time (g_c+I1), s	3.6	14.5	17.4	39.8	14.0	8.2	12.2	25.7
Green Ext Time (p_c), s	0.0	1.1	0.0	0.0	0.6	0.5	0.0	7.2

Intersection Summary		
HCM 7th Control Delay, s/veh		87.6
HCM 7th LOS		F

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

APPENDIX 7.2:

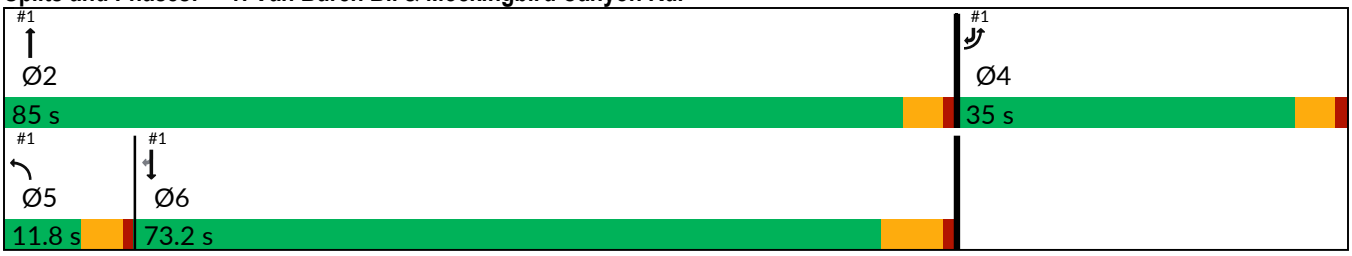
HY (2045) WITH PROJECT INTERSECTION ANALYSIS

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Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	616	41	1929	1353	215
Future Volume (vph)	616	41	1929	1353	215
Turn Type	Prot	Prot	NA	NA	pm+ov
Protected Phases	4	5	2	6	4
Permitted Phases					6
Detector Phase	4	5	2	6	4
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	29.6	9.6	26.1	28.5	29.6
Total Split (s)	35.0	11.8	85.0	73.2	35.0
Total Split (%)	29.2%	9.8%	70.8%	61.0%	29.2%
Yellow Time (s)	3.6	3.6	3.6	5.5	3.6
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)	4.6	4.6	4.6	6.5	4.6
Lead/Lag		Lead		Lag	
Lead-Lag Optimize?		Yes		Yes	
Recall Mode	None	None	None	None	None
Act Effct Green (s)	24.9	6.6	64.6	56.4	90.7
Actuated g/C Ratio	0.25	0.07	0.65	0.57	0.91
v/c Ratio	0.84	0.38	0.89	0.71	0.16
Control Delay (s/veh)	46.4	60.9	20.6	19.4	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	46.4	60.9	20.6	19.4	0.4
LOS	D	E	C	B	A
Approach Delay (s/veh)	46.4		21.5	16.8	
Approach LOS	D		C	B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 99.2	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay (s/veh): 23.8	Intersection LOS: C
Intersection Capacity Utilization 80.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: Van Buren Bl. & Mockingbird Canyon Rd.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	616	66	41	1929	1353	215
Future Volume (veh/h)	616	66	41	1929	1353	215
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	703	0	44	2052	1439	212
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	803	357	66	2311	1996	1247
Arrive On Green	0.23	0.00	0.04	0.65	0.56	0.56
Sat Flow, veh/h	3563	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	703	0	44	2052	1439	212
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1777	1777	1585
Q Serve(g_s), s	17.0	0.0	2.2	42.6	26.6	2.9
Cycle Q Clear(g_c), s	17.0	0.0	2.2	42.6	26.6	2.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	803	357	66	2311	1996	1247
V/C Ratio(X)	0.88	0.00	0.66	0.89	0.72	0.17
Avail Cap(c_a), veh/h	1214	540	144	3202	2656	1542
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	33.4	0.0	42.4	12.9	14.4	2.3
Incr Delay (d2), s/veh	3.4	0.0	4.2	2.0	0.7	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	7.0	0.0	1.0	12.0	8.5	1.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	36.7	0.0	46.6	14.9	15.1	2.4
LnGrp LOS	D		D	B	B	A
Approach Vol, veh/h	703			2096	1651	
Approach Delay, s/veh	36.7			15.6	13.4	
Approach LOS	D			B	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		64.5		24.7	7.9	56.6
Change Period (Y+Rc), s		* 6.5		4.6	4.6	6.5
Max Green Setting (Gmax), s		* 80		30.4	7.2	66.7
Max Q Clear Time (g_c+I1), s		44.6		19.0	4.2	28.6
Green Ext Time (p_c), s		13.4		1.1	0.0	13.7

Intersection Summary	
HCM 7th Control Delay, s/veh	18.1
HCM 7th LOS	B

Notes

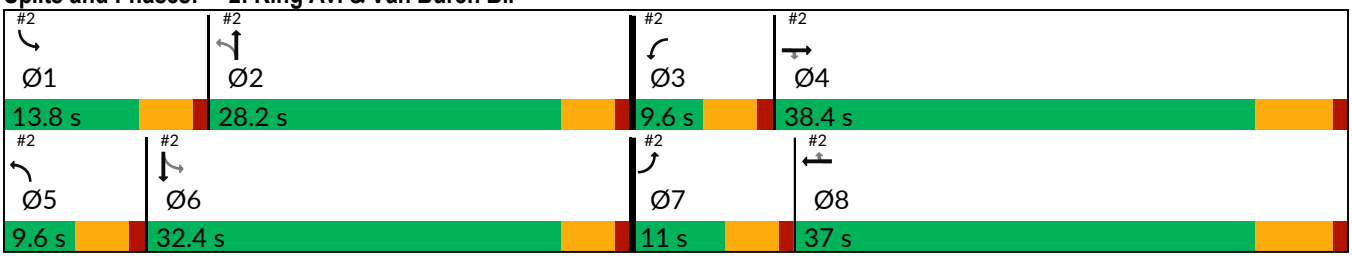
User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	183	1587	62	21	1946	30	201	142	156	46
Future Volume (vph)	183	1587	62	21	1946	30	201	142	156	46
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA
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	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.5	28.5	9.6	28.5	28.5	9.6	26.1	9.6	31.6
Total Split (s)	11.0	38.4	38.4	9.6	37.0	37.0	9.6	28.2	13.8	32.4
Total Split (%)	12.2%	42.7%	42.7%	10.7%	41.1%	41.1%	10.7%	31.3%	15.3%	36.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.4	38.4	38.4	5.0	30.9	30.9	20.4	15.4	27.5	18.9
Actuated g/C Ratio	0.08	0.47	0.47	0.06	0.38	0.38	0.25	0.19	0.34	0.23
v/c Ratio	1.48	1.07	0.09	0.22	1.63	0.05	0.66	0.67	0.55	0.34
Control Delay (s/veh)	281.6	67.7	0.6	43.7	309.1	0.1	33.2	36.9	25.6	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	281.6	67.7	0.6	43.7	309.1	0.1	33.2	36.9	25.6	11.6
LOS	F	E	A	D	F	A	C	D	C	B
Approach Delay (s/veh)		86.8			301.6			35.1		18.9
Approach LOS		F			F			D		B

Intersection Summary		
Cycle Length: 90		
Actuated Cycle Length: 81.4		
Natural Cycle: 120		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 1.63		
Intersection Signal Delay (s/veh): 172.1	Intersection LOS: F	
Intersection Capacity Utilization 102.9%	ICU Level of Service G	
Analysis Period (min) 15		

Splits and Phases: 2: King Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	183	1587	62	21	1946	30	201	142	71	156	46	95
Future Volume (veh/h)	183	1587	62	21	1946	30	201	142	71	156	46	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	206	1783	42	24	2187	30	226	160	49	175	52	60
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	149	1632	728	46	1428	637	376	205	63	323	147	170
Arrive On Green	0.08	0.46	0.46	0.03	0.40	0.40	0.07	0.15	0.15	0.10	0.19	0.19
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1781	1374	421	1781	782	902
Grp Volume(v), veh/h	206	1783	42	24	2187	30	226	0	209	175	0	112
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	0	1795	1781	0	1683
Q Serve(g_s), s	6.4	35.2	1.1	1.0	30.8	0.9	5.0	0.0	8.6	6.2	0.0	4.4
Cycle Q Clear(g_c), s	6.4	35.2	1.1	1.0	30.8	0.9	5.0	0.0	8.6	6.2	0.0	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.23	1.00		0.54
Lane Grp Cap(c), veh/h	149	1632	728	46	1428	637	376	0	267	323	0	317
V/C Ratio(X)	1.38	1.09	0.06	0.52	1.53	0.05	0.60	0.00	0.78	0.54	0.00	0.35
Avail Cap(c_a), veh/h	149	1632	728	116	1428	637	376	0	553	351	0	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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.1	20.7	11.5	36.8	22.9	14.0	28.0	0.0	31.4	24.0	0.0	27.0
Incr Delay (d2), s/veh	209.1	51.9	0.0	3.3	242.6	0.0	1.9	0.0	5.0	0.5	0.0	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	11.2	23.5	0.3	0.5	58.8	0.3	1.5	0.0	4.0	2.6	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	244.2	72.7	11.5	40.1	265.5	14.0	29.9	0.0	36.4	24.5	0.0	27.7
LnGrp LOS	F	F	B	D	F	B	C		D	C		C
Approach Vol, veh/h		2031			2241			435			287	
Approach Delay, s/veh		88.8			259.7			33.0			25.7	
Approach LOS		F			F			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.6	16.0	6.6	41.4	9.6	19.0	11.0	37.0
Change Period (Y+Rc), s	4.6	4.6	4.6	6.2	4.6	4.6	4.6	6.2
Max Green Setting (Gmax), s	9.2	23.6	5.0	32.2	5.0	27.8	6.4	30.8
Max Q Clear Time (g_c+I1), s	8.2	10.6	3.0	37.2	7.0	6.4	8.4	32.8
Green Ext Time (p_c), s	0.0	1.0	0.0	0.0	0.0	0.6	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	157.0
HCM 7th LOS	F

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1597	1579	39	0	32
Future Vol, veh/h	0	1597	1579	39	0	32
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	1736	1716	42	0	35

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	879
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	291
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	291
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	19.07
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	291
HCM Lane V/C Ratio	-	-	-	0.12
HCM Ctrl Dly (s/v)	-	-	-	19.1
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.4

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1597	1683	69	0	58
Future Vol, veh/h	0	1597	1683	69	0	58
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	1736	1829	75	0	63

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	952
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	260
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	260
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	23.23
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	260
HCM Lane V/C Ratio	-	-	-	0.243
HCM Ctrl Dly (s/v)	-	-	-	23.2
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.9

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	87	35	1278	658	72
Future Vol, veh/h	10	87	35	1278	658	72
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	11	95	38	1389	715	78

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2220	754	793	0	-	0
Stage 1	754	-	-	-	-	-
Stage 2	1465	-	-	-	-	-
Critical Hdwy	5.4	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	90	409	828	-	-	-
Stage 1	465	-	-	-	-	-
Stage 2	212	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	72	409	828	-	-	-
Mov Cap-2 Maneuver	72	-	-	-	-	-
Stage 1	371	-	-	-	-	-
Stage 2	212	-	-	-	-	-

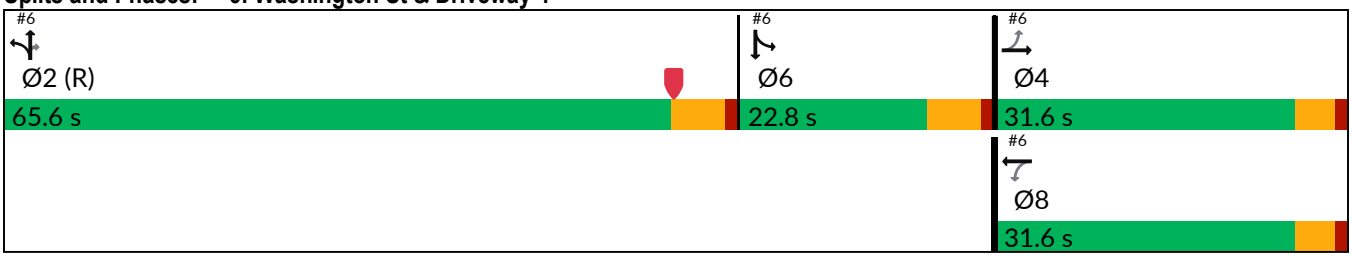
Approach	EB	NB	SB
HCM Ctrl Dly, s/v	25.96	0.25	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	48	-	275	-	-
HCM Lane V/C Ratio	0.046	-	0.383	-	-
HCM Ctrl Dly (s/v)	9.6	0	26	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.1	-	1.7	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Configurations								
Traffic Volume (vph)	10	0	37	0	140	1254	109	768
Future Volume (vph)	10	0	37	0	140	1254	109	768
Turn Type	Perm	NA	Perm	NA	Split	NA	Perm	NA
Protected Phases		4		8	2	2		6
Permitted Phases	4		8				2	
Detector Phase	4	4	8	8	2	2	2	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	31.6	31.6	31.6	31.6	22.8	22.8	22.8	22.8
Total Split (s)	31.6	31.6	31.6	31.6	65.6	65.6	65.6	22.8
Total Split (%)	26.3%	26.3%	26.3%	26.3%	54.7%	54.7%	54.7%	19.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	4.8	4.8	4.8
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
Total Lost Time (s)		4.6		4.6	5.8	5.8	5.8	5.8
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Min	Min	Min	Min	C-Max	C-Max	C-Max	None
Act Effct Green (s)		13.4		13.4	73.4	73.4	73.4	17.0
Actuated g/C Ratio		0.11		0.11	0.61	0.61	0.61	0.14
v/c Ratio		0.39		0.46	0.13	1.14	0.10	1.04
Control Delay (s/veh)		14.1		21.3	7.7	85.1	3.1	91.5
Queue Delay		0.0		0.0	0.0	1.8	0.0	0.0
Total Delay (s/veh)		14.1		21.3	7.7	86.9	3.1	91.5
LOS		B		C	A	F	A	F
Approach Delay (s/veh)		14.1		21.3		73.5		91.5
Approach LOS		B		C		E		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay (s/veh): 74.6	Intersection LOS: E
Intersection Capacity Utilization 107.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 6: Washington St & Driveway 4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	101	37	0	57	140	1254	109	19	768	8
Future Volume (veh/h)	10	0	101	37	0	57	140	1254	109	19	768	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	10	0	104	38	0	59	144	1293	112	20	792	8
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	40	6	130	83	10	80	1135	1192	1010	19	765	8
Arrive On Green	0.13	0.00	0.17	0.13	0.00	0.17	1.00	1.00	1.00	0.21	0.28	0.21
Sat Flow, veh/h	81	64	1507	482	116	928	1781	1870	1585	136	5403	55
Grp Volume(v), veh/h	114	0	0	97	0	0	144	1293	112	273	274	273
Grp Sat Flow(s),veh/h/ln	1652	0	0	1526	0	0	1781	1870	1585	1864	1870	1861
Q Serve(g_s), s	0.7	0.0	0.0	0.0	0.0	0.0	0.0	76.5	0.0	17.0	17.0	17.0
Cycle Q Clear(g_c), s	7.8	0.0	0.0	7.1	0.0	0.0	0.0	76.5	0.0	17.0	17.0	17.0
Prop In Lane	0.09		0.91	0.39		0.61	1.00		1.00	0.07		0.03
Lane Grp Cap(c), veh/h	175	0	0	173	0	0	1135	1192	1010	264	265	264
V/C Ratio(X)	0.65	0.00	0.00	0.56	0.00	0.00	0.13	1.09	0.11	1.03	1.03	1.04
Avail Cap(c_a), veh/h	392	0	0	375	0	0	1135	1192	1010	264	265	264
HCM Platoon Ratio	1.50	2.00	2.00	1.50	2.00	2.00	2.00	2.00	2.00	1.50	2.00	1.50
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.9	0.0	0.0	49.2	0.0	0.0	0.0	0.0	0.0	43.3	43.0	43.1
Incr Delay (d2), s/veh	4.0	0.0	0.0	2.8	0.0	0.0	0.2	52.4	0.2	64.7	64.4	64.8
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	3.3	0.0	0.0	2.8	0.0	0.0	0.1	17.3	0.1	11.1	11.0	11.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	52.9	0.0	0.0	52.0	0.0	0.0	0.2	52.4	0.2	108.0	107.4	108.0
LnGrp LOS	D			D			A	F	A	F	F	F
Approach Vol, veh/h		114			97			1549			820	
Approach Delay, s/veh		52.9			52.0			43.7			107.8	
Approach LOS		D			D			D			F	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	82.3	14.9	22.8	14.9
Change Period (Y+Rc), s	5.8	4.6	5.8	4.6
Max Green Setting (Gmax), s	59.8	27.0	17.0	27.0
Max Q Clear Time (g_c+I1), s	78.5	9.8	19.0	9.1
Green Ext Time (p_c), s	0.0	0.5	0.0	0.4

Intersection Summary	
HCM 7th Control Delay, s/veh	64.8
HCM 7th LOS	E

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	10	0	1504	892	14
Future Vol, veh/h	0	10	0	1504	892	14
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	-	-	-	50
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	11	0	1635	970	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	485	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	452	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	452	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

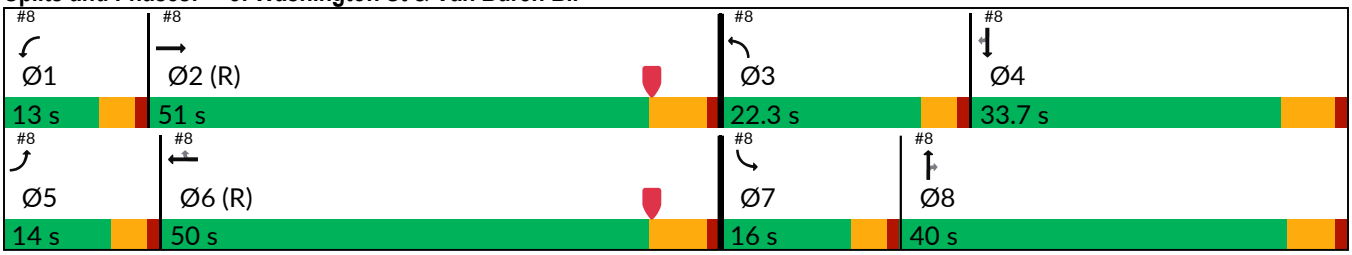
Approach	EB	NB	SB
HCM Ctrl Dly, s/v	13.16	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	452	-	-
HCM Lane V/C Ratio	-	0.024	-	-
HCM Ctrl Dly (s/v)	-	13.2	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	219	1395	187	1573	915	307	1093	317	534	233	135
Future Volume (vph)	219	1395	187	1573	915	307	1093	317	534	233	135
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.2	34.2	9.2	33.2	33.2	9.2	38.4	38.4	9.2	30.8	30.8
Total Split (s)	14.0	51.0	13.0	50.0	50.0	22.3	40.0	40.0	16.0	33.7	33.7
Total Split (%)	11.7%	42.5%	10.8%	41.7%	41.7%	18.6%	33.3%	33.3%	13.3%	28.1%	28.1%
Yellow Time (s)	3.2	5.2	3.2	5.2	5.2	3.2	4.4	4.4	3.2	4.8	4.8
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)	4.2	6.2	4.2	6.2	6.2	4.2	5.4	5.4	4.2	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	9.8	44.8	8.8	43.8	43.8	15.4	34.6	34.6	11.8	30.6	30.6
Actuated g/C Ratio	0.08	0.37	0.07	0.37	0.37	0.13	0.29	0.29	0.10	0.26	0.26
v/c Ratio	1.63	1.32	1.56	1.31	1.33	0.75	1.15	0.60	1.70	0.28	0.28
Control Delay (s/veh)	348.6	180.2	322.1	178.1	182.8	61.4	118.9	24.9	361.9	14.4	7.7
Queue Delay	8.8	0.0	0.0	0.0	0.4	0.0	1.5	0.0	0.0	0.0	0.0
Total Delay (s/veh)	357.3	180.2	322.1	178.1	183.2	61.4	120.4	24.9	361.9	14.4	7.7
LOS	F	F	F	F	F	E	F	C	F	B	A
Approach Delay (s/veh)		201.6		189.9			92.2			219.0	
Approach LOS		F		F			F			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.70	
Intersection Signal Delay (s/veh): 173.0	Intersection LOS: F
Intersection Capacity Utilization 117.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 8: Washington St & Van Buren Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	219	1395	200	187	1573	915	307	1093	317	534	233	135
Future Volume (veh/h)	219	1395	200	187	1573	915	307	1093	317	534	233	135
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	235	1500	107	201	1691	500	330	1175	325	574	251	145
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	145	1625	115	131	1688	751	387	1025	457	340	976	435
Arrive On Green	0.12	0.97	0.72	0.11	0.95	0.71	0.17	0.58	0.43	0.15	0.55	0.55
Sat Flow, veh/h	1781	3362	238	1781	3554	1582	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	235	789	818	201	1691	500	330	1175	325	574	251	145
Grp Sat Flow(s),veh/h/ln	1781	1777	1824	1781	1777	1582	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	9.8	15.8	26.5	8.8	57.0	20.7	11.1	34.6	20.2	11.8	4.5	6.1
Cycle Q Clear(g_c), s	9.8	15.8	26.5	8.8	57.0	20.7	11.1	34.6	20.2	11.8	4.5	6.1
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	145	859	881	131	1688	751	387	1025	457	340	976	435
V/C Ratio(X)	1.62	0.92	0.93	1.54	1.00	0.67	0.85	1.15	0.71	1.69	0.26	0.33
Avail Cap(c_a), veh/h	145	859	881	131	1688	751	521	1025	457	340	976	435
HCM Platoon Ratio	1.50	2.00	1.50	1.50	2.00	1.50	1.50	2.00	1.50	1.50	2.00	2.00
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	52.6	1.3	2.9	53.4	3.0	12.0	48.9	25.4	30.0	51.1	20.6	21.0
Incr Delay (d2), s/veh	306.3	16.3	17.2	276.9	22.3	4.6	7.8	77.7	5.1	322.6	0.1	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	16.4	4.6	5.7	13.7	6.4	6.3	5.0	21.7	7.6	19.9	1.7	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	359.0	17.6	20.1	330.3	25.3	16.7	56.7	103.1	35.1	373.8	20.8	21.4
LnGrp LOS	F	B	C	F	C	B	E	F	D	F	C	C
Approach Vol, veh/h		1842			2392			1830			970	
Approach Delay, s/veh		62.3			49.1			82.7			229.8	
Approach LOS		E			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	64.6	17.7	38.7	14.0	63.6	16.0	40.4
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	8.8	44.8	18.1	27.9	9.8	43.8	11.8	* 35
Max Q Clear Time (g_c+I1), s	10.8	28.5	13.1	8.1	11.8	59.0	13.8	36.6
Green Ext Time (p_c), s	0.0	11.9	0.3	1.8	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	86.2
HCM 7th LOS	F

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	1990	11	186	2364	5	32	0	56	1	0	15
Future Vol, veh/h	13	1990	11	186	2364	5	32	0	56	1	0	15
Conflicting Peds, #/hr	0	0	1	0	0	6	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	275	-	-	255	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	2095	12	196	2488	5	34	0	59	1	0	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2500	0	0	2107	0	0	3765	5020	1054	3963	5023	1253
Stage 1	-	-	-	-	-	-	2129	2129	-	2889	2889	-
Stage 2	-	-	-	-	-	-	1636	2891	-	1075	2135	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	179	-	-	257	-	-	~ 1	1	222	~ 1	1	163
Stage 1	-	-	-	-	-	-	51	89	-	16	35	-
Stage 2	-	-	-	-	-	-	105	35	-	235	88	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	178	-	-	257	-	-	~ 0	0	222	~ 0	0	162
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 0	0	-	~ 0	0	-
Stage 1	-	-	-	-	-	-	47	82	-	4	8	-
Stage 2	-	-	-	-	-	-	~ 22	8	-	159	81	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.17	3.88		
HCM LOS			-	-

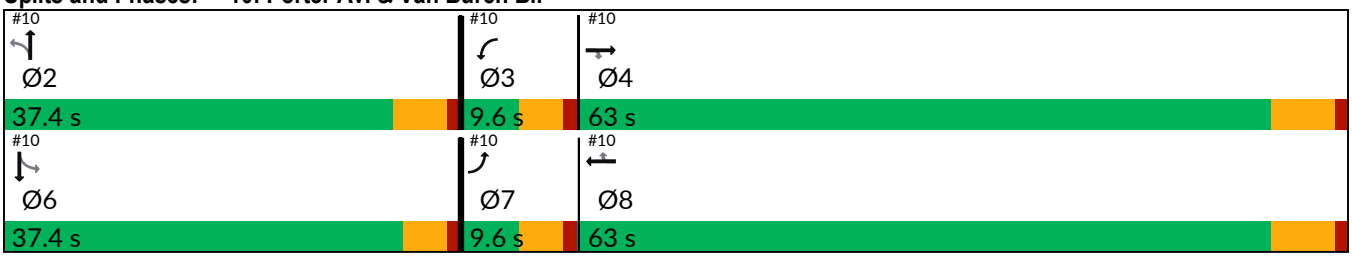
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	178	-	-	257	-	-	-
HCM Lane V/C Ratio	-	0.077	-	-	0.763	-	-	-
HCM Ctrl Dly (s/v)	-	26.8	-	-	53.3	-	-	-
HCM Lane LOS	-	D	-	-	F	-	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-	5.6	-	-	-

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	6	2044	74	20	2434	11	22	0	32	8
Future Volume (vph)	6	2044	74	20	2434	11	22	0	32	8
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)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	27.7	27.7	9.6	27.7	27.7	36.9	36.9	35.6	35.6
Total Split (s)	9.6	63.0	63.0	9.6	63.0	63.0	37.4	37.4	37.4	37.4
Total Split (%)	8.7%	57.3%	57.3%	8.7%	57.3%	57.3%	34.0%	34.0%	34.0%	34.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	4.4	4.4	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2		5.4		4.6
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	None	None	None	None
Act Effct Green (s)	5.2	60.3	60.3	5.2	62.1	62.1		13.5		14.2
Actuated g/C Ratio	0.06	0.72	0.72	0.06	0.74	0.74		0.16		0.17
v/c Ratio	0.06	0.85	0.07	0.19	0.98	0.01		0.21		0.25
Control Delay (s/veh)	45.7	18.4	3.4	48.0	29.5	0.0		7.7		24.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay (s/veh)	45.7	18.4	3.4	48.0	29.5	0.0		7.7		24.7
LOS	D	B	A	D	C	A		A		C
Approach Delay (s/veh)		18.0			29.5			7.7		24.7
Approach LOS		B			C			A		C

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 83.4	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay (s/veh): 24.0	Intersection LOS: C
Intersection Capacity Utilization 85.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 10: Porter Av. & Van Buren Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	2044	74	20	2434	11	22	0	40	32	8	22
Future Volume (veh/h)	6	2044	74	20	2434	11	22	0	40	32	8	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	6	2174	69	21	2589	12	23	0	34	34	9	18
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	14	2425	1082	41	2480	1103	102	20	89	135	41	45
Arrive On Green	0.01	0.68	0.68	0.02	0.70	0.70	0.10	0.00	0.10	0.10	0.10	0.10
Sat Flow, veh/h	1781	3554	1585	1781	3554	1581	422	210	933	692	429	469
Grp Volume(v), veh/h	6	2174	69	21	2589	12	57	0	0	61	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1581	1564	0	0	1590	0	0
Q Serve(g_s), s	0.3	40.7	1.2	0.9	56.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	40.7	1.2	0.9	56.8	0.2	2.6	0.0	0.0	2.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.40		0.60	0.56		0.30
Lane Grp Cap(c), veh/h	14	2425	1082	41	2480	1103	211	0	0	220	0	0
V/C Ratio(X)	0.43	0.90	0.06	0.51	1.04	0.01	0.27	0.00	0.00	0.28	0.00	0.00
Avail Cap(c_a), veh/h	109	2480	1106	109	2480	1103	657	0	0	679	0	0
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	0.00	0.00
Uniform Delay (d), s/veh	40.2	10.6	4.3	39.3	12.3	3.7	34.5	0.0	0.0	34.5	0.0	0.0
Incr Delay (d2), s/veh	7.7	4.7	0.0	3.5	30.8	0.0	0.7	0.0	0.0	0.7	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	0.1	11.1	0.3	0.4	23.1	0.0	1.0	0.0	0.0	1.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.9	15.3	4.3	42.8	43.1	3.7	35.2	0.0	0.0	35.2	0.0	0.0
LnGrp LOS	D	B	A	D	F	A	D			D		
Approach Vol, veh/h		2249			2622			57			61	
Approach Delay, s/veh		15.0			42.9			35.2			35.2	
Approach LOS		B			D			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		13.2	6.5	61.7		13.2	5.2	63.0				
Change Period (Y+Rc), s		5.4	4.6	6.2		* 5.4	4.6	6.2				
Max Green Setting (Gmax), s		32.0	5.0	56.8		* 33	5.0	56.8				
Max Q Clear Time (g_c+I1), s		4.6	2.9	42.7		4.6	2.3	58.8				
Green Ext Time (p_c), s		0.2	0.0	11.6		0.3	0.0	0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	30.2
HCM 7th LOS	C

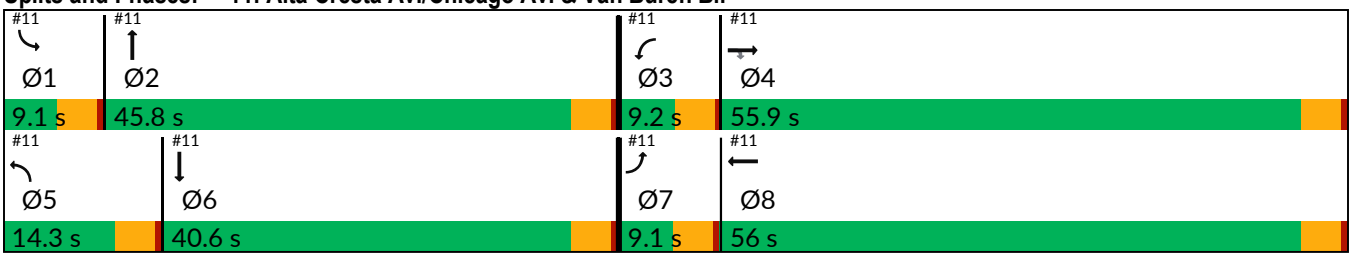
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	195	1763	123	105	2279	143	82	118	6
Future Volume (vph)	195	1763	123	105	2279	143	82	118	6
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.1	30.1	30.1	9.1	30.1	9.1	44.1	9.1	26.1
Total Split (s)	9.1	55.9	55.9	9.2	56.0	14.3	45.8	9.1	40.6
Total Split (%)	7.6%	46.6%	46.6%	7.7%	46.7%	11.9%	38.2%	7.6%	33.8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	5.1	52.4	52.4	5.2	52.5	10.3	18.8	5.1	13.5
Actuated g/C Ratio	0.05	0.54	0.54	0.05	0.54	0.11	0.19	0.05	0.14
v/c Ratio	2.31	1.00	0.15	1.22	1.31	0.83	0.68	1.40	0.19
Control Delay (s/veh)	644.9	45.7	4.1	205.0	168.7	78.8	32.0	268.6	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	644.9	45.7	4.1	205.0	168.7	78.8	32.0	268.6	13.8
LOS	F	D	A	F	F	E	C	F	B
Approach Delay (s/veh)		99.4			170.2		49.0		198.7
Approach LOS		F			F		D		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 97.9	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.31	
Intersection Signal Delay (s/veh): 132.6	Intersection LOS: F
Intersection Capacity Utilization 109.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 11: Alta Cresta Av./Chicago Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	1763	123	105	2279	32	143	82	168	118	6	39
Future Volume (veh/h)	195	1763	123	105	2279	32	143	82	168	118	6	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	210	1896	116	113	2451	33	154	88	154	127	6	36
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	94	1935	863	96	1958	26	185	108	189	94	29	174
Arrive On Green	0.05	0.54	0.54	0.05	0.55	0.55	0.10	0.18	0.18	0.05	0.13	0.13
Sat Flow, veh/h	1781	3554	1585	1781	3589	48	1781	610	1068	1781	231	1389
Grp Volume(v), veh/h	210	1896	116	113	1210	1274	154	0	242	127	0	42
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1860	1781	0	1678	1781	0	1620
Q Serve(g_s), s	5.0	49.5	3.4	5.1	51.9	51.9	8.1	0.0	13.2	5.0	0.0	2.2
Cycle Q Clear(g_c), s	5.0	49.5	3.4	5.1	51.9	51.9	8.1	0.0	13.2	5.0	0.0	2.2
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.64	1.00		0.86
Lane Grp Cap(c), veh/h	94	1935	863	96	970	1015	185	0	297	94	0	203
V/C Ratio(X)	2.24	0.98	0.13	1.18	1.25	1.25	0.83	0.00	0.82	1.36	0.00	0.21
Avail Cap(c_a), veh/h	94	1935	863	96	970	1015	191	0	736	94	0	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)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.1	21.1	10.6	45.0	21.6	21.6	41.8	0.0	37.7	45.1	0.0	37.4
Incr Delay (d2), s/veh	592.0	15.9	0.1	149.5	120.3	122.8	25.0	0.0	5.4	214.9	0.0	0.5
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	17.5	21.0	1.0	6.1	50.0	53.0	4.8	0.0	5.8	7.8	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	637.0	37.0	10.7	194.5	142.0	144.4	66.8	0.0	43.1	260.0	0.0	37.9
LnGrp LOS	F	D	B	F	F	F	E		D	F		D
Approach Vol, veh/h		2222			2597			396			169	
Approach Delay, s/veh		92.3			145.5			52.3			204.8	
Approach LOS		F			F			D			F	

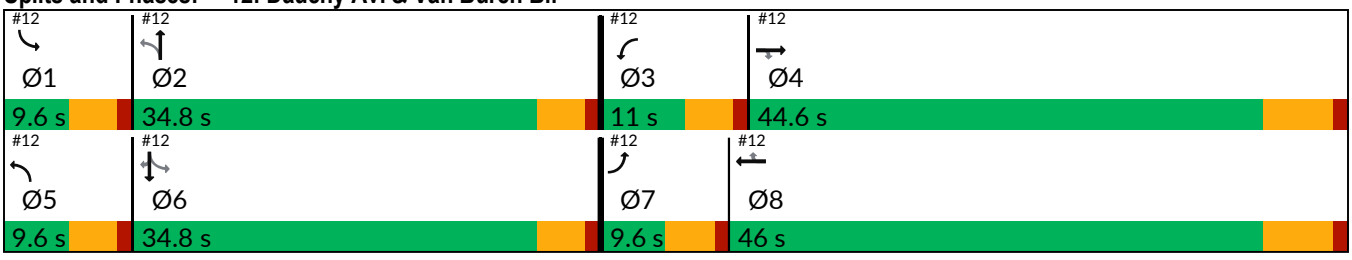
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	20.9	9.2	55.9	14.0	16.0	9.1	56.0
Change Period (Y+Rc), s	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Max Green Setting (Gmax), s	5.0	41.7	5.1	51.8	10.2	36.5	5.0	51.9
Max Q Clear Time (g_c+I1), s	7.0	15.2	7.1	51.5	10.1	4.2	7.0	53.9
Green Ext Time (p_c), s	0.0	1.6	0.0	0.2	0.0	0.2	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	118.5
HCM 7th LOS	F

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	51	1549	271	137	2028	16	215	68	50	118	53
Future Volume (vph)	51	1549	271	137	2028	16	215	68	50	118	53
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	28.2	28.2	9.6	28.2	28.2	9.6	26.6	9.6	33.6	33.6
Total Split (s)	9.6	44.6	44.6	11.0	46.0	46.0	9.6	34.8	9.6	34.8	34.8
Total Split (%)	9.6%	44.6%	44.6%	11.0%	46.0%	46.0%	9.6%	34.8%	9.6%	34.8%	34.8%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	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	None	None	None	None
Act Effct Green (s)	5.0	38.7	38.7	6.4	42.1	42.1	21.9	19.0	20.0	14.9	14.9
Actuated g/C Ratio	0.06	0.45	0.45	0.08	0.49	0.49	0.26	0.22	0.23	0.17	0.17
v/c Ratio	0.53	1.05	0.38	1.12	1.26	0.02	0.74	0.57	0.23	0.39	0.15
Control Delay (s/veh)	60.8	61.6	11.6	154.1	145.6	0.1	42.3	19.8	23.7	33.9	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	60.8	61.6	11.6	154.1	145.6	0.1	42.3	19.8	23.7	33.9	0.8
LOS	E	E	B	F	F	A	D	B	C	C	A
Approach Delay (s/veh)		54.3			145.1			30.2		23.6	
Approach LOS		D			F			C		C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 85.2	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.26	
Intersection Signal Delay (s/veh): 92.3	Intersection LOS: F
Intersection Capacity Utilization 98.2%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 12: Dauchy Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	1549	271	137	2028	16	215	68	180	50	118	53
Future Volume (veh/h)	51	1549	271	137	2028	16	215	68	180	50	118	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	55	1684	215	149	2204	9	234	74	98	54	128	32
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	79	1707	761	143	1835	800	278	106	141	228	237	197
Arrive On Green	0.04	0.48	0.48	0.08	0.52	0.52	0.06	0.15	0.15	0.04	0.13	0.13
Sat Flow, veh/h	1781	3554	1585	1781	3554	1549	1781	730	967	1781	1870	1556
Grp Volume(v), veh/h	55	1684	215	149	2204	9	234	0	172	54	128	32
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1549	1781	0	1696	1781	1870	1556
Q Serve(g_s), s	2.4	37.4	6.5	6.4	41.3	0.2	5.0	0.0	7.7	2.1	5.1	1.5
Cycle Q Clear(g_c), s	2.4	37.4	6.5	6.4	41.3	0.2	5.0	0.0	7.7	2.1	5.1	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.57	1.00		1.00
Lane Grp Cap(c), veh/h	79	1707	761	143	1835	800	278	0	247	228	237	197
V/C Ratio(X)	0.70	0.99	0.28	1.04	1.20	0.01	0.84	0.00	0.70	0.24	0.54	0.16
Avail Cap(c_a), veh/h	111	1707	761	143	1835	800	278	0	641	261	707	588
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	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.7	20.5	12.5	36.8	19.3	9.4	33.1	0.0	32.5	28.6	32.7	31.1
Incr Delay (d2), s/veh	4.2	18.6	0.2	87.8	96.1	0.0	19.1	0.0	3.5	0.2	1.9	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	1.1	16.8	2.0	6.1	37.7	0.1	3.6	0.0	3.4	0.9	2.4	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.9	39.1	12.7	124.6	115.4	9.4	52.2	0.0	36.0	28.8	34.6	31.5
LnGrp LOS	D	D	B	F	F	A	D		D	C	C	C
Approach Vol, veh/h		1954			2362			406			214	
Approach Delay, s/veh		36.3			115.6			45.3			32.7	
Approach LOS		D			F			D			C	

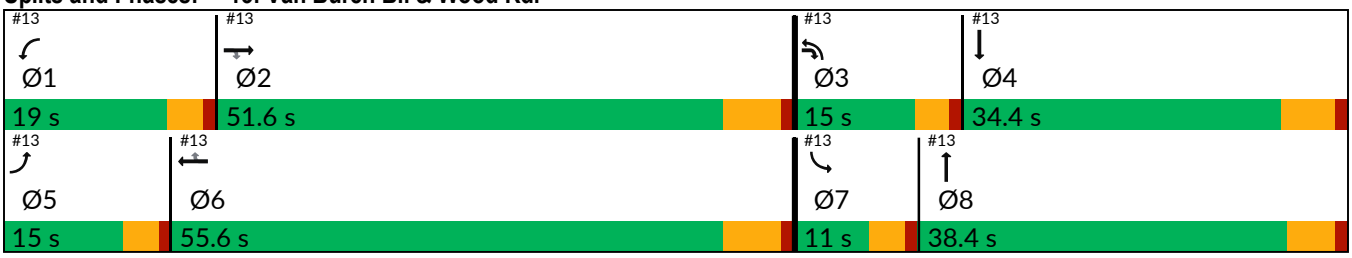
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	16.3	11.0	44.6	9.6	14.7	8.1	47.5
Change Period (Y+Rc), s	4.6	4.6	4.6	6.2	4.6	4.6	4.6	6.2
Max Green Setting (Gmax), s	5.0	30.2	6.4	38.4	5.0	30.2	5.0	39.8
Max Q Clear Time (g_c+I1), s	4.1	9.7	8.4	39.4	7.0	7.1	4.4	43.3
Green Ext Time (p_c), s	0.0	1.0	0.0	0.0	0.0	0.8	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	74.8
HCM 7th LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	199	1192	698	550	1631	296	383	505	109	559
Future Volume (vph)	199	1192	698	550	1631	296	383	505	109	559
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6		3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	3	1	6	6	3	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.2	30.2	9.2	9.2	30.2	30.2	9.2	38.4	9.2	15.8
Total Split (s)	15.0	51.6	15.0	19.0	55.6	55.6	15.0	38.4	11.0	34.4
Total Split (%)	12.5%	43.0%	12.5%	15.8%	46.3%	46.3%	12.5%	32.0%	9.2%	28.7%
Yellow Time (s)	3.2	5.2	3.2	3.2	5.2	5.2	3.2	4.4	3.2	4.8
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)	4.2	6.2	4.2	4.2	6.2	6.2	4.2	5.4	4.2	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.8	45.4	58.2	14.8	49.4	49.4	10.8	33.0	6.8	28.6
Actuated g/C Ratio	0.09	0.38	0.49	0.12	0.41	0.41	0.09	0.28	0.06	0.24
v/c Ratio	1.39	0.99	1.00	1.44	1.24	0.44	1.38	1.07	1.21	1.13
Control Delay (s/veh)	249.7	59.6	59.7	251.0	148.2	11.8	231.9	83.3	204.3	111.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	249.7	59.6	59.7	251.0	148.2	11.8	231.9	83.3	204.3	111.9
LOS	F	E	E	F	F	B	F	F	F	F
Approach Delay (s/veh)		77.7			154.7			125.4		122.1
Approach LOS		E			F			F		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.44	
Intersection Signal Delay (s/veh): 121.0	Intersection LOS: F
Intersection Capacity Utilization 110.1%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 13: Van Buren Bl. & Wood Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	199	1192	698	550	1631	296	383	505	467	109	559	317
Future Volume (veh/h)	199	1192	698	550	1631	296	383	505	467	109	559	317
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.93	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	221	1324	593	611	1812	249	426	561	363	121	621	268
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	160	1340	726	425	1458	646	310	548	354	101	580	250
Arrive On Green	0.09	0.38	0.38	0.12	0.41	0.41	0.09	0.27	0.27	0.06	0.24	0.24
Sat Flow, veh/h	1781	3554	1548	3456	3554	1575	3456	1999	1293	1781	2406	1038
Grp Volume(v), veh/h	221	1324	593	611	1812	249	426	499	425	121	458	431
Grp Sat Flow(s),veh/h/ln	1781	1777	1548	1728	1777	1575	1728	1777	1515	1781	1777	1668
Q Serve(g_s), s	10.8	44.5	39.8	14.8	49.4	13.3	10.8	33.0	33.0	6.8	29.0	29.0
Cycle Q Clear(g_c), s	10.8	44.5	39.8	14.8	49.4	13.3	10.8	33.0	33.0	6.8	29.0	29.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.85	1.00		0.62
Lane Grp Cap(c), veh/h	160	1340	726	425	1458	646	310	487	415	101	428	402
V/C Ratio(X)	1.38	0.99	0.82	1.44	1.24	0.39	1.37	1.02	1.02	1.20	1.07	1.07
Avail Cap(c_a), veh/h	160	1340	726	425	1458	646	310	487	415	101	428	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	54.8	37.2	27.7	52.8	35.5	24.9	54.8	43.7	43.7	56.8	45.7	45.7
Incr Delay (d2), s/veh	206.4	21.7	7.6	210.3	115.2	0.5	187.6	47.0	50.5	154.1	63.8	65.4
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	13.8	22.0	15.4	18.6	43.0	4.9	12.7	20.4	17.8	7.3	20.0	19.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	261.2	58.9	35.3	263.1	150.7	25.4	242.4	90.7	94.2	210.9	109.5	111.1
LnGrp LOS	F	E	D	F	F	C	F	F	F	F	F	F
Approach Vol, veh/h		2138			2672			1350			1010	
Approach Delay, s/veh		73.3			164.7			139.7			122.3	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	51.6	15.0	34.8	15.0	55.6	11.0	38.8
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	14.8	45.4	10.8	28.6	10.8	49.4	6.8	* 33
Max Q Clear Time (g_c+I1), s	16.8	46.5	12.8	31.0	12.8	51.4	8.8	35.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	126.8
HCM 7th LOS	F

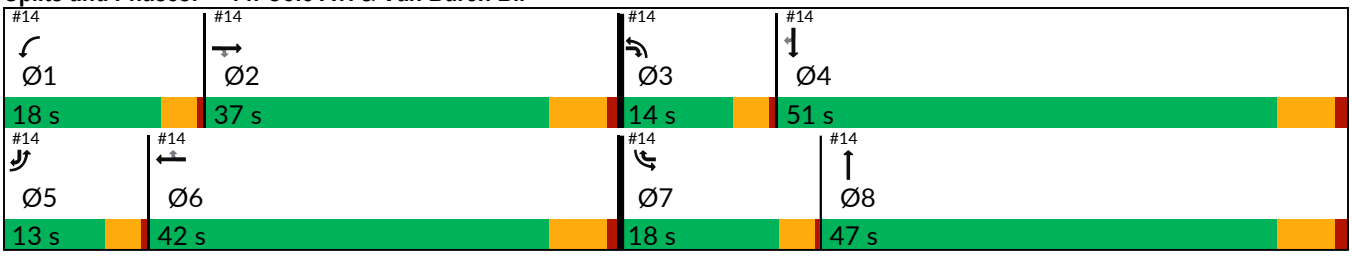
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	324	973	218	326	1699	653	211	534	201	355	414
Future Volume (vph)	324	973	218	326	1699	653	211	534	201	355	414
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8	7	4	5
Permitted Phases			2			6					4
Detector Phase	5	2	3	1	6	7	3	8	7	4	5
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0
Minimum Split (s)	9.1	36.2	9.1	9.1	36.2	9.1	9.1	42.2	9.1	49.2	9.1
Total Split (s)	13.0	37.0	14.0	18.0	42.0	18.0	14.0	47.0	18.0	51.0	13.0
Total Split (%)	10.8%	30.8%	11.7%	15.0%	35.0%	15.0%	11.7%	39.2%	15.0%	42.5%	10.8%
Yellow Time (s)	3.2	5.2	3.2	3.2	5.2	3.2	3.2	5.2	3.2	5.2	3.2
All-Red Time (s)	0.5	1.0	0.5	0.5	1.0	0.5	0.5	1.0	0.5	1.0	0.5
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)	3.7	6.2	3.7	3.7	6.2	3.7	3.7	6.2	3.7	6.2	3.7
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.3	30.9	43.8	14.4	35.9	52.8	10.3	26.1	14.4	30.1	42.0
Actuated g/C Ratio	0.09	0.29	0.41	0.14	0.34	0.50	0.10	0.25	0.14	0.29	0.40
v/c Ratio	1.14	0.98	0.31	1.49	0.98	0.87	1.34	0.77	0.46	0.37	0.67
Control Delay (s/veh)	138.7	61.3	4.5	276.4	52.3	32.2	226.0	41.6	46.7	30.7	23.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	138.7	61.3	4.5	276.4	52.3	32.2	226.0	41.6	46.7	30.7	23.1
LOS	F	E	A	F	D	C	F	D	D	C	C
Approach Delay (s/veh)		69.6			74.7			87.4		30.8	
Approach LOS		E			E			F		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 105.6	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.49	
Intersection Signal Delay (s/veh): 68.1	Intersection LOS: E
Intersection Capacity Utilization 86.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 14: Cole Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	324	973	218	326	1699	653	211	534	104	201	355	414
Future Volume (veh/h)	324	973	218	326	1699	653	211	534	104	201	355	414
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	356	1069	209	358	1867	388	232	587	67	221	390	334
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	336	1159	654	258	2024	694	186	861	98	295	897	524
Arrive On Green	0.09	0.46	0.31	0.14	0.54	0.36	0.10	0.26	0.26	0.08	0.24	0.24
Sat Flow, veh/h	3563	3741	1577	1781	5611	1560	1781	3292	375	3563	3741	1563
Grp Volume(v), veh/h	356	1069	209	358	1867	388	232	333	321	221	390	334
Grp Sat Flow(s),veh/h/ln	1781	1870	1577	1781	1870	1560	1781	1870	1797	1781	1870	1563
Q Serve(g_s), s	9.3	26.4	8.8	14.3	30.1	18.2	10.3	15.8	15.8	6.0	8.7	17.9
Cycle Q Clear(g_c), s	9.3	26.4	8.8	14.3	30.1	18.2	10.3	15.8	15.8	6.0	8.7	17.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	336	1159	654	258	2024	694	186	489	470	295	897	524
V/C Ratio(X)	1.06	0.92	0.32	1.39	0.92	0.56	1.25	0.68	0.68	0.75	0.43	0.64
Avail Cap(c_a), veh/h	336	1168	658	258	2037	697	186	774	743	517	1699	859
HCM Platoon Ratio	1.00	1.50	1.00	1.00	1.50	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	44.7	25.3	19.5	42.2	21.4	20.3	44.2	32.7	32.7	44.2	31.8	27.8
Incr Delay (d2), s/veh	65.7	12.1	0.4	195.9	7.7	1.3	147.9	1.7	1.8	1.4	0.3	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	7.0	10.3	3.0	20.0	10.0	6.2	12.0	6.9	6.7	2.6	3.7	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	110.4	37.3	19.9	238.1	29.1	21.6	192.1	34.4	34.5	45.7	32.1	29.1
LnGrp LOS	F	D	B	F	C	C	F	C	C	D	C	C
Approach Vol, veh/h		1634			2613			886			945	
Approach Delay, s/veh		51.0			56.6			75.7			34.2	
Approach LOS		D			E			E			C	

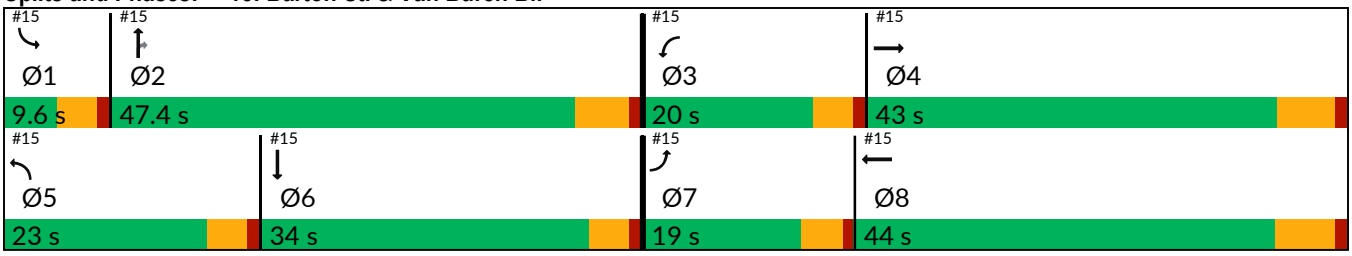
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	36.8	14.0	29.9	13.0	41.8	11.9	32.0
Change Period (Y+Rc), s	3.7	6.2	3.7	6.2	3.7	6.2	3.7	6.2
Max Green Setting (Gmax), s	14.3	30.8	10.3	44.8	9.3	35.8	14.3	40.8
Max Q Clear Time (g_c+I1), s	16.3	28.4	12.3	19.9	11.3	32.1	8.0	17.8
Green Ext Time (p_c), s	0.0	1.8	0.0	3.5	0.0	3.5	0.2	3.5

Intersection Summary	
HCM 7th Control Delay, s/veh	54.4
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	268	1088	297	1855	442	97	451	25	95
Future Volume (vph)	268	1088	297	1855	442	97	451	25	95
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)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.2	9.6	28.5	9.6	44.8	44.8	9.6	26.1
Total Split (s)	19.0	43.0	20.0	44.0	23.0	47.4	47.4	9.6	34.0
Total Split (%)	15.8%	35.8%	16.7%	36.7%	19.2%	39.5%	39.5%	8.0%	28.3%
Yellow Time (s)	3.6	5.2	3.6	5.5	3.6	4.8	4.8	3.6	3.6
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)	4.6	6.2	4.6	6.5	4.6	5.8	5.8	4.6	4.6
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	None	None	None	None
Act Effct Green (s)	14.4	36.9	15.4	37.6	18.0	40.9	40.9	5.0	25.1
Actuated g/C Ratio	0.12	0.32	0.13	0.33	0.16	0.35	0.35	0.04	0.22
v/c Ratio	1.35	1.27	1.40	1.19	0.92	0.16	0.65	0.37	0.90
Control Delay (s/veh)	223.7	164.0	240.4	125.6	71.8	27.3	15.1	69.3	55.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	223.7	164.0	240.4	125.6	71.8	27.3	15.1	69.3	55.4
LOS	F	F	F	F	E	C	B	E	E
Approach Delay (s/veh)		174.2		141.3		41.6			56.3
Approach LOS		F		F		D			E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 115.5	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.40	
Intersection Signal Delay (s/veh): 125.8	Intersection LOS: F
Intersection Capacity Utilization 103.7%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 15: Barton St. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	268	1088	218	297	1855	26	442	97	451	25	95	260
Future Volume (veh/h)	268	1088	218	297	1855	26	442	97	451	25	95	260
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	298	1209	178	330	2061	16	491	108	333	28	106	160
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	229	1033	151	245	1840	14	547	590	500	46	122	184
Arrive On Green	0.13	0.33	0.33	0.14	0.34	0.34	0.16	0.32	0.32	0.03	0.18	0.18
Sat Flow, veh/h	1781	3141	460	1781	5448	42	3456	1870	1585	1781	665	1003
Grp Volume(v), veh/h	298	696	691	330	1372	705	491	108	333	28	0	266
Grp Sat Flow(s),veh/h/ln	1781	1814	1787	1781	1814	1862	1728	1870	1585	1781	0	1668
Q Serve(g_s), s	14.4	36.8	36.8	15.4	37.8	37.8	15.6	4.7	20.4	1.7	0.0	17.3
Cycle Q Clear(g_c), s	14.4	36.8	36.8	15.4	37.8	37.8	15.6	4.7	20.4	1.7	0.0	17.3
Prop In Lane	1.00		0.26	1.00		0.02	1.00		1.00	1.00		0.60
Lane Grp Cap(c), veh/h	229	597	588	245	1225	629	547	590	500	46	0	306
V/C Ratio(X)	1.30	1.17	1.18	1.35	1.12	1.12	0.90	0.18	0.67	0.61	0.00	0.87
Avail Cap(c_a), veh/h	229	597	588	245	1225	629	568	695	589	80	0	438
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	0.00	1.00
Uniform Delay (d), s/veh	48.8	37.6	37.6	48.3	37.1	37.1	46.2	27.8	33.2	53.9	0.0	44.4
Incr Delay (d2), s/veh	163.3	92.1	96.1	180.5	65.3	73.9	16.1	0.1	2.2	4.7	0.0	12.5
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	16.5	30.4	30.6	18.8	26.4	28.6	7.7	2.1	7.6	0.8	0.0	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	212.0	129.7	133.6	228.8	102.3	111.0	62.3	28.0	35.4	58.6	0.0	56.9
LnGrp LOS	F	F	F	F	F	F	E	C	D	E		E
Approach Vol, veh/h		1685			2407			932			294	
Approach Delay, s/veh		145.9			122.2			48.7			57.1	
Approach LOS		F			F			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	41.1	20.0	43.3	22.3	26.3	19.0	44.3
Change Period (Y+Rc), s	4.6	5.8	4.6	* 6.5	4.6	* 5.8	4.6	6.5
Max Green Setting (Gmax), s	5.0	41.6	15.4	* 37	18.4	* 29	14.4	37.5
Max Q Clear Time (g_c+I1), s	3.7	22.4	17.4	38.8	17.6	19.3	16.4	39.8
Green Ext Time (p_c), s	0.0	1.6	0.0	0.0	0.1	1.2	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	113.2
HCM 7th LOS	F

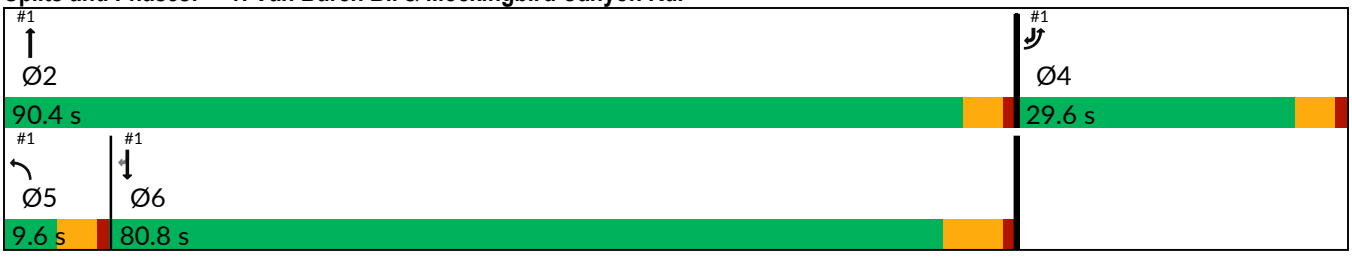
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	234	29	1425	2001	568
Future Volume (vph)	234	29	1425	2001	568
Turn Type	Prot	Prot	NA	NA	pm+ov
Protected Phases	4	5	2	6	4
Permitted Phases					6
Detector Phase	4	5	2	6	4
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	29.6	9.6	26.1	28.5	29.6
Total Split (s)	29.6	9.6	90.4	80.8	29.6
Total Split (%)	24.7%	8.0%	75.3%	67.3%	24.7%
Yellow Time (s)	3.6	3.6	3.6	5.5	3.6
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)	4.6	4.6	4.6	6.5	4.6
Lead/Lag		Lead		Lag	
Lead-Lag Optimize?		Yes		Yes	
Recall Mode	None	None	None	None	None
Act Effct Green (s)	13.8	5.4	70.3	63.5	86.9
Actuated g/C Ratio	0.15	0.06	0.75	0.68	0.92
v/c Ratio	0.54	0.30	0.55	0.86	0.39
Control Delay (s/veh)	42.4	59.8	6.2	18.4	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	42.4	59.8	6.2	18.4	1.1
LOS	D	E	A	B	A
Approach Delay (s/veh)	42.4		7.3	14.6	
Approach LOS	D		A	B	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 94	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay (s/veh): 13.8	Intersection LOS: B
Intersection Capacity Utilization 72.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Van Buren Bl. & Mockingbird Canyon Rd.





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	234	33	29	1425	2001	568
Future Volume (veh/h)	234	33	29	1425	2001	568
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	265	0	30	1469	2063	583
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	351	156	52	2773	2492	1267
Arrive On Green	0.10	0.00	0.03	0.78	0.70	0.70
Sat Flow, veh/h	3563	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	265	0	30	1469	2063	583
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1777	1777	1585
Q Serve(g_s), s	6.6	0.0	1.5	14.2	37.9	10.7
Cycle Q Clear(g_c), s	6.6	0.0	1.5	14.2	37.9	10.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	351	156	52	2773	2492	1267
V/C Ratio(X)	0.76	0.00	0.58	0.53	0.83	0.46
Avail Cap(c_a), veh/h	972	432	97	3328	2882	1441
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	40.2	0.0	43.9	3.8	9.8	2.9
Incr Delay (d2), s/veh	1.3	0.0	3.7	0.1	1.9	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	2.8	0.0	0.7	2.0	9.5	3.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	41.5	0.0	47.7	3.8	11.6	3.2
LnGrp LOS	D		D	A	B	A
Approach Vol, veh/h	265			1499	2646	
Approach Delay, s/veh	41.5			4.7	9.8	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		78.0		13.6	7.3	70.7
Change Period (Y+Rc), s		* 6.5		4.6	4.6	6.5
Max Green Setting (Gmax), s		* 86		25.0	5.0	74.3
Max Q Clear Time (g_c+I1), s		16.2		8.6	3.5	39.9
Green Ext Time (p_c), s		7.7		0.4	0.0	24.3

Intersection Summary	
HCM 7th Control Delay, s/veh	10.0
HCM 7th LOS	A

Notes

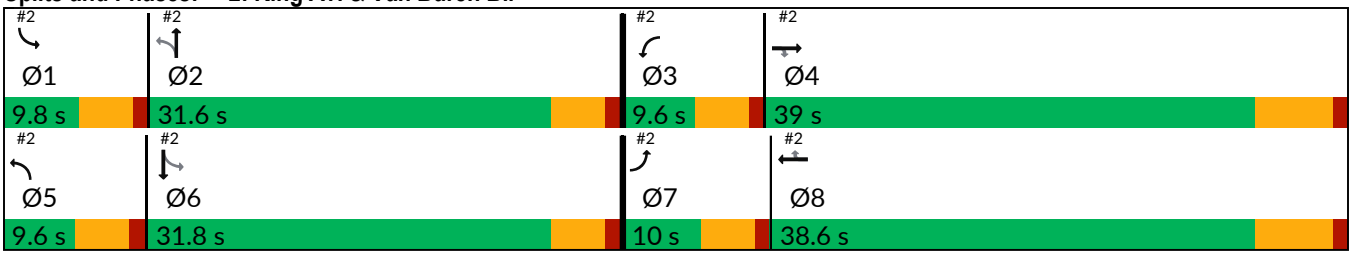
User approved volume balancing among the lanes for turning movement.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	113	1748	188	29	1586	63	71	13	86	42
Future Volume (vph)	113	1748	188	29	1586	63	71	13	86	42
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA
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	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.5	28.5	9.6	28.5	28.5	9.6	26.1	9.6	31.6
Total Split (s)	10.0	39.0	39.0	9.6	38.6	38.6	9.6	31.6	9.8	31.8
Total Split (%)	11.1%	43.3%	43.3%	10.7%	42.9%	42.9%	10.7%	35.1%	10.9%	35.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.6	42.5	42.5	5.2	33.7	33.7	11.4	13.1	17.3	13.2
Actuated g/C Ratio	0.08	0.60	0.60	0.07	0.47	0.47	0.16	0.18	0.24	0.18
v/c Ratio	0.85	0.86	0.20	0.23	0.99	0.08	0.31	0.09	0.26	0.28
Control Delay (s/veh)	85.5	26.0	6.4	40.8	43.5	0.3	26.5	17.1	21.4	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	85.5	26.0	6.4	40.8	43.5	0.3	26.5	17.1	21.4	15.8
LOS	F	C	A	D	D	A	C	B	C	B
Approach Delay (s/veh)		27.5			41.8			23.8		18.5
Approach LOS		C			D			C		B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 71.4	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay (s/veh): 33.0	Intersection LOS: C
Intersection Capacity Utilization 77.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 2: King Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	113	1748	188	29	1586	63	71	13	14	86	42	54
Future Volume (veh/h)	113	1748	188	29	1586	63	71	13	14	86	42	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	0.99		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	118	1821	154	30	1652	63	74	14	6	90	44	42
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	137	1798	802	56	1638	726	300	147	63	359	108	103
Arrive On Green	0.08	0.51	0.51	0.03	0.46	0.46	0.05	0.12	0.12	0.06	0.12	0.12
Sat Flow, veh/h	1781	3554	1585	1781	3554	1576	1781	1240	532	1781	877	837
Grp Volume(v), veh/h	118	1821	154	30	1652	63	74	0	20	90	0	86
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1576	1781	0	1772	1781	0	1713
Q Serve(g_s), s	4.6	35.6	3.7	1.2	32.4	1.6	2.5	0.0	0.7	3.1	0.0	3.3
Cycle Q Clear(g_c), s	4.6	35.6	3.7	1.2	32.4	1.6	2.5	0.0	0.7	3.1	0.0	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.30	1.00		0.49
Lane Grp Cap(c), veh/h	137	1798	802	56	1638	726	300	0	209	359	0	212
V/C Ratio(X)	0.86	1.01	0.19	0.53	1.01	0.09	0.25	0.00	0.10	0.25	0.00	0.41
Avail Cap(c_a), veh/h	137	1798	802	127	1638	726	330	0	680	384	0	663
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	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.1	17.4	9.5	33.5	19.0	10.6	25.2	0.0	27.6	25.0	0.0	28.4
Incr Delay (d2), s/veh	38.2	24.4	0.1	2.9	24.4	0.1	0.2	0.0	0.2	0.1	0.0	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	3.2	16.8	1.0	0.5	15.8	0.5	1.0	0.0	0.3	1.3	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	70.2	41.7	9.6	36.4	43.4	10.7	25.3	0.0	27.8	25.2	0.0	29.7
LnGrp LOS	E	F	A	D	F	B	C		C	C		C
Approach Vol, veh/h		2093			1745			94			176	
Approach Delay, s/veh		41.0			42.1			25.9			27.4	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	12.9	6.8	41.8	8.4	13.3	10.0	38.6
Change Period (Y+Rc), s	4.6	4.6	4.6	6.2	4.6	4.6	4.6	6.2
Max Green Setting (Gmax), s	5.2	27.0	5.0	32.8	5.0	27.2	5.4	32.4
Max Q Clear Time (g_c+I1), s	5.1	2.7	3.2	37.6	4.5	5.3	6.6	34.4
Green Ext Time (p_c), s	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	40.5
HCM 7th LOS	D

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↱
Traffic Vol, veh/h	0	1730	1500	32	0	31
Future Vol, veh/h	0	1730	1500	32	0	31
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	1880	1630	35	0	34

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	833
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	312
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	312
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	17.93
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	312
HCM Lane V/C Ratio	-	-	-	0.108
HCM Ctrl Dly (s/v)	-	-	-	17.9
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.4

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1730	1541	49	0	46
Future Vol, veh/h	0	1730	1541	49	0	46
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	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1901	1693	54	0	51

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	874
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	293
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	293
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	19.83
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	293
HCM Lane V/C Ratio	-	-	-	0.172
HCM Ctrl Dly (s/v)	-	-	-	19.8
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.6

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	26	20	755	1146	15
Future Vol, veh/h	7	26	20	755	1146	15
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	8	28	22	821	1246	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2118	1254	1262	0	-	0
Stage 1	1254	-	-	-	-	-
Stage 2	864	-	-	-	-	-
Critical Hdwy	5.5	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	95	210	551	-	-	-
Stage 1	269	-	-	-	-	-
Stage 2	413	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	88	210	551	-	-	-
Mov Cap-2 Maneuver	88	-	-	-	-	-
Stage 1	249	-	-	-	-	-
Stage 2	413	-	-	-	-	-

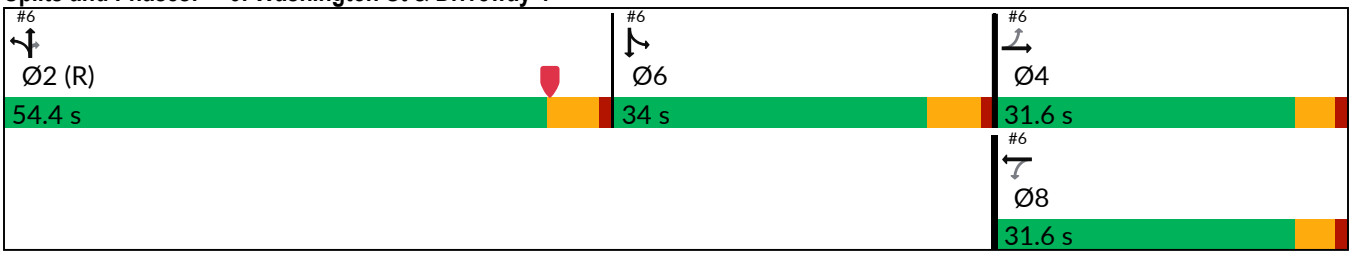
Approach	EB	NB	SB
HCM Ctrl Dly, s/v	33.33	0.3	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	46	-	162	-	-
HCM Lane V/C Ratio	0.039	-	0.221	-	-
HCM Ctrl Dly (s/v)	11.8	0	33.3	-	-
HCM Lane LOS	B	A	D	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Configurations								
Traffic Volume (vph)	27	0	57	0	100	686	137	1042
Future Volume (vph)	27	0	57	0	100	686	137	1042
Turn Type	Perm	NA	Perm	NA	Split	NA	Perm	NA
Protected Phases		4		8	2	2		6
Permitted Phases	4		8				2	
Detector Phase	4	4	8	8	2	2	2	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	31.6	31.6	31.6	31.6	22.8	22.8	22.8	22.8
Total Split (s)	31.6	31.6	31.6	31.6	54.4	54.4	54.4	34.0
Total Split (%)	26.3%	26.3%	26.3%	26.3%	45.3%	45.3%	45.3%	28.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	4.8	4.8	4.8
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
Total Lost Time (s)		4.6		4.6	5.8	5.8	5.8	5.8
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Min	Min	Min	Min	C-Max	C-Max	C-Max	None
Act Effct Green (s)		14.2		14.2	61.4	61.4	61.4	28.2
Actuated g/C Ratio		0.12		0.12	0.51	0.51	0.51	0.24
v/c Ratio		0.52		0.69	0.12	0.79	0.17	1.09
Control Delay (s/veh)		20.2		40.4	18.2	34.0	7.5	95.6
Queue Delay		0.0		0.0	0.0	17.2	0.0	0.0
Total Delay (s/veh)		20.2		40.4	18.2	51.2	7.5	95.6
LOS		C		D	B	D	A	F
Approach Delay (s/veh)		20.2		40.4		41.1		95.6
Approach LOS		C		D		D		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 48.6 (41%), Referenced to phase 2:NBTL, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.09	
Intersection Signal Delay (s/veh): 67.2	Intersection LOS: E
Intersection Capacity Utilization 86.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 6: Washington St & Driveway 4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	0	99	57	0	63	100	686	137	94	1042	36
Future Volume (veh/h)	27	0	99	57	0	63	100	686	137	94	1042	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	0	109	63	0	69	110	754	151	103	1145	40
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	66	12	149	110	10	84	915	961	814	101	1126	39
Arrive On Green	0.12	0.00	0.12	0.12	0.00	0.12	1.00	1.00	1.00	0.23	0.23	0.23
Sat Flow, veh/h	254	99	1282	565	90	718	1781	1870	1585	431	4793	167
Grp Volume(v), veh/h	139	0	0	132	0	0	110	754	151	442	407	440
Grp Sat Flow(s),veh/h/ln	1635	0	0	1373	0	0	1781	1870	1585	1849	1702	1840
Q Serve(g_s), s	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	28.2	28.2	28.2
Cycle Q Clear(g_c), s	9.7	0.0	0.0	11.4	0.0	0.0	0.0	0.0	0.0	28.2	28.2	28.2
Prop In Lane	0.22		0.78	0.48		0.52	1.00		1.00	0.23		0.09
Lane Grp Cap(c), veh/h	227	0	0	204	0	0	915	961	814	434	400	432
V/C Ratio(X)	0.61	0.00	0.00	0.65	0.00	0.00	0.12	0.78	0.19	1.02	1.02	1.02
Avail Cap(c_a), veh/h	392	0	0	359	0	0	915	961	814	434	400	432
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.2	0.0	0.0	51.7	0.0	0.0	0.0	0.0	0.0	45.9	45.9	45.9
Incr Delay (d2), s/veh	2.7	0.0	0.0	3.4	0.0	0.0	0.3	6.4	0.5	47.5	49.2	47.6
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	0.0	0.0	4.1	0.0	0.0	0.1	1.7	0.1	18.2	16.9	18.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	53.8	0.0	0.0	55.2	0.0	0.0	0.3	6.4	0.5	93.4	95.1	93.5
LnGrp LOS	D			E			A	A	A	F	F	F
Approach Vol, veh/h		139			132			1015			1288	
Approach Delay, s/veh		53.8			55.2			4.9			94.0	
Approach LOS		D			E			A			F	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		67.4		18.6		34.0		18.6				
Change Period (Y+Rc), s		5.8		4.6		5.8		4.6				
Max Green Setting (Gmax), s		48.6		27.0		28.2		27.0				
Max Q Clear Time (g_c+I1), s		2.0		11.7		30.2		13.4				
Green Ext Time (p_c), s		6.7		0.7		0.0		0.6				

Intersection Summary												
HCM 7th Control Delay, s/veh			54.7									
HCM 7th LOS			D									

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	12	0	923	1186	13
Future Vol, veh/h	0	12	0	923	1186	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	-	-	-	50
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	13	0	1003	1289	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	645	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	356	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	356	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

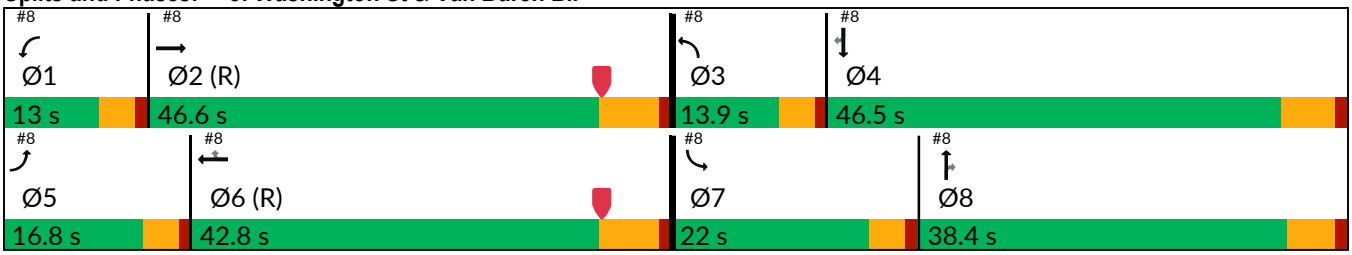
Approach	EB	NB	SB
HCM Ctrl Dly, s/v	15.5	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	356	-	-
HCM Lane V/C Ratio	-	0.037	-	-
HCM Ctrl Dly (s/v)	-	15.5	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	192	1530	213	1353	530	132	278	217	725	591	198
Future Volume (vph)	192	1530	213	1353	530	132	278	217	725	591	198
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.2	34.2	9.2	33.2	33.2	9.2	38.4	38.4	9.2	30.8	30.8
Total Split (s)	16.8	46.6	13.0	42.8	42.8	13.9	38.4	38.4	22.0	46.5	46.5
Total Split (%)	14.0%	38.8%	10.8%	35.7%	35.7%	11.6%	32.0%	32.0%	18.3%	38.8%	38.8%
Yellow Time (s)	3.2	5.2	3.2	5.2	5.2	3.2	4.4	4.4	3.2	4.8	4.8
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)	4.2	6.2	4.2	6.2	6.2	4.2	5.4	5.4	4.2	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	19.5	40.4	21.9	42.8	42.8	8.6	19.9	19.9	17.8	28.8	28.8
Actuated g/C Ratio	0.16	0.34	0.18	0.36	0.36	0.07	0.17	0.17	0.15	0.24	0.24
v/c Ratio	0.68	1.43	0.67	1.10	0.65	0.55	0.48	0.55	1.45	0.71	0.39
Control Delay (s/veh)	60.9	229.9	58.8	92.8	12.1	62.5	46.8	17.5	249.8	68.1	34.6
Queue Delay	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	60.9	229.9	58.8	92.8	12.6	62.5	46.8	17.5	249.8	68.1	34.6
LOS	E	F	E	F	B	E	D	B	F	E	C
Approach Delay (s/veh)		212.3		69.1			40.0			150.7	
Approach LOS		F		E			D			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.45	
Intersection Signal Delay (s/veh): 129.9	Intersection LOS: F
Intersection Capacity Utilization 103.8%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 8: Washington St & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	192	1530	125	213	1353	530	132	278	217	725	591	198
Future Volume (veh/h)	192	1530	125	213	1353	530	132	278	217	725	591	198
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	196	1561	111	217	1381	445	135	284	184	740	603	152
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	187	1547	109	131	1523	678	190	527	235	513	858	383
Arrive On Green	0.10	0.46	0.46	0.07	0.43	0.43	0.05	0.15	0.15	0.15	0.24	0.24
Sat Flow, veh/h	1781	3363	238	1781	3554	1582	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	196	820	852	217	1381	445	135	284	184	740	603	152
Grp Sat Flow(s),veh/h/ln	1781	1777	1824	1781	1777	1582	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	12.6	55.2	55.2	8.8	43.6	26.9	4.6	8.9	13.4	17.8	18.6	9.7
Cycle Q Clear(g_c), s	12.6	55.2	55.2	8.8	43.6	26.9	4.6	8.9	13.4	17.8	18.6	9.7
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	187	818	839	131	1523	678	190	527	235	513	858	383
V/C Ratio(X)	1.05	1.00	1.02	1.66	0.91	0.66	0.71	0.54	0.78	1.44	0.70	0.40
Avail Cap(c_a), veh/h	187	818	839	131	1523	678	279	977	436	513	1205	538
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	32.4	32.4	55.6	32.1	27.3	55.8	47.3	49.2	51.1	41.6	38.2
Incr Delay (d2), s/veh	79.0	32.1	35.0	328.9	9.4	4.9	1.8	0.9	5.7	210.5	1.1	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	9.5	28.8	30.2	15.8	19.2	11.1	2.1	4.0	5.7	22.4	8.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	132.7	64.5	67.4	384.5	41.5	32.2	57.6	48.2	54.9	261.6	42.6	38.8
LnGrp LOS	F	E	F	F	D	C	E	D	D	F	D	D
Approach Vol, veh/h		1868			2043			603			1495	
Approach Delay, s/veh		73.0			75.9			52.3			150.6	
Approach LOS		E			E			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	61.4	10.8	34.8	16.8	57.6	22.0	23.6
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	8.8	40.4	9.7	40.7	12.6	36.6	17.8	* 33
Max Q Clear Time (g_c+I1), s	10.8	57.2	6.6	20.6	14.6	45.6	19.8	15.4
Green Ext Time (p_c), s	0.0	0.0	0.1	4.1	0.0	0.0	0.0	2.4

Intersection Summary	
HCM 7th Control Delay, s/veh	91.2
HCM 7th LOS	F

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	605.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	2201	22	94	1939	13	48	0	16	3	0	24
Future Vol, veh/h	19	2201	22	94	1939	13	48	0	16	3	0	24
Conflicting Peds, #/hr	0	0	1	0	0	6	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	275	-	-	255	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	2367	24	101	2085	14	52	0	17	3	0	26

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2105	0	0	2391	0	0	3665	4727	1196	3524	4732	1055
Stage 1	-	-	-	-	-	-	2420	2420	-	2300	2300	-
Stage 2	-	-	-	-	-	-	1245	2307	-	1224	2432	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	257	-	-	198	-	-	~ 2	1	178	~ 2	1	222
Stage 1	-	-	-	-	-	-	~ 33	63	-	39	72	-
Stage 2	-	-	-	-	-	-	184	72	-	190	62	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	256	-	-	198	-	-	~ 1	0	178	~ 1	0	220
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 1	0	-	~ 1	0	-
Stage 1	-	-	-	-	-	-	~ 30	58	-	19	35	-
Stage 2	-	-	-	-	-	-	80	35	-	158	57	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.17	1.87	$ 40475.71	$ 2090.69
HCM LOS			F	F

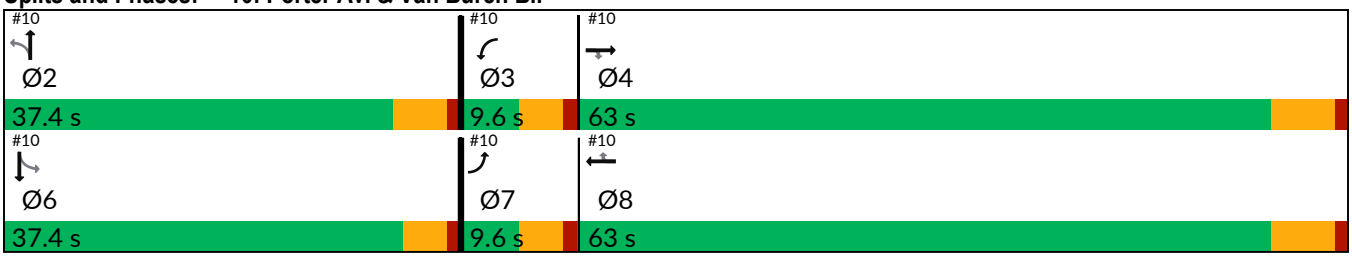
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1	256	-	-	198	-	-	8
HCM Lane V/C Ratio	74.377	0.08	-	-	0.51	-	-	3.633
HCM Ctrl Dly (s/v)	$ 40475.7	20.3	-	-	40.7	-	-	$ 2090.7
HCM Lane LOS	F	C	-	-	E	-	-	F
HCM 95th %tile Q(veh)	10.9	0.3	-	-	2.6	-	-	4.9

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	20	2144	110	19	1927	9	20	3	17	3
Future Volume (vph)	20	2144	110	19	1927	9	20	3	17	3
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)	5.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	27.7	27.7	9.6	27.7	27.7	36.9	36.9	35.6	35.6
Total Split (s)	9.6	63.0	63.0	9.6	63.0	63.0	37.4	37.4	37.4	37.4
Total Split (%)	8.7%	57.3%	57.3%	8.7%	57.3%	57.3%	34.0%	34.0%	34.0%	34.0%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	4.4	4.4	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2		5.4		4.6
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	None	None	None	None
Act Effct Green (s)	5.2	62.5	62.5	5.2	62.5	62.5		13.5		14.0
Actuated g/C Ratio	0.06	0.78	0.78	0.06	0.78	0.78		0.17		0.17
v/c Ratio	0.18	0.83	0.09	0.17	0.74	0.01		0.15		0.15
Control Delay (s/veh)	47.5	17.2	4.5	47.4	14.4	0.0		23.5		20.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay (s/veh)	47.5	17.2	4.5	47.4	14.4	0.0		23.5		20.7
LOS	D	B	A	D	B	A		C		C
Approach Delay (s/veh)		16.8			14.7			23.5		20.7
Approach LOS		B			B			C		C

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 80.3	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay (s/veh): 16.0	Intersection LOS: B
Intersection Capacity Utilization 77.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 10: Porter Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	2144	110	19	1927	9	20	3	14	17	3	19
Future Volume (veh/h)	20	2144	110	19	1927	9	20	3	14	17	3	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	2281	104	20	2050	9	21	3	12	18	3	10
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	42	2494	1112	40	2490	1087	120	25	36	119	28	35
Arrive On Green	0.02	0.70	0.70	0.02	0.70	0.70	0.07	0.07	0.07	0.07	0.07	0.07
Sat Flow, veh/h	1781	3554	1585	1781	3554	1551	677	359	518	666	399	507
Grp Volume(v), veh/h	21	2281	104	20	2050	9	36	0	0	31	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1551	1554	0	0	1572	0	0
Q Serve(g_s), s	0.9	41.9	1.6	0.9	32.0	0.1	0.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.9	41.9	1.6	0.9	32.0	0.1	1.6	0.0	0.0	1.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.58		0.33	0.58		0.32
Lane Grp Cap(c), veh/h	42	2494	1112	40	2490	1087	180	0	0	181	0	0
V/C Ratio(X)	0.50	0.91	0.09	0.50	0.82	0.01	0.20	0.00	0.00	0.17	0.00	0.00
Avail Cap(c_a), veh/h	114	2573	1148	114	2573	1123	684	0	0	701	0	0
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	0.00	0.00
Uniform Delay (d), s/veh	37.9	9.7	3.7	37.9	8.3	3.5	34.7	0.0	0.0	34.6	0.0	0.0
Incr Delay (d2), s/veh	3.5	5.6	0.0	3.5	2.2	0.0	0.5	0.0	0.0	0.4	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	0.4	10.6	0.3	0.4	7.4	0.0	0.6	0.0	0.0	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.3	15.3	3.8	41.4	10.5	3.5	35.2	0.0	0.0	35.0	0.0	0.0
LnGrp LOS	D	B	A	D	B	A	D			D		
Approach Vol, veh/h		2406			2079			36			31	
Approach Delay, s/veh		15.0			10.8			35.2			35.0	
Approach LOS		B			B			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		10.8	6.4	61.2		10.8	6.4	61.2				
Change Period (Y+Rc), s		5.4	4.6	6.2		* 5.4	4.6	6.2				
Max Green Setting (Gmax), s		32.0	5.0	56.8		* 33	5.0	56.8				
Max Q Clear Time (g_c+I1), s		3.6	2.9	43.9		3.3	2.9	34.0				
Green Ext Time (p_c), s		0.1	0.0	11.1		0.1	0.0	16.1				

Intersection Summary	
HCM 7th Control Delay, s/veh	13.4
HCM 7th LOS	B

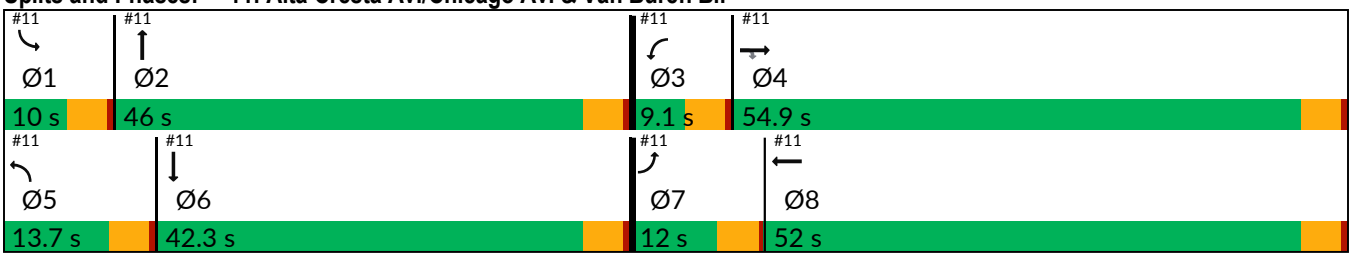
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	141	2083	159	70	1913	56	42	94	4
Future Volume (vph)	141	2083	159	70	1913	56	42	94	4
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.1	30.1	30.1	9.1	30.1	9.1	44.1	9.1	26.1
Total Split (s)	12.0	54.9	54.9	9.1	52.0	13.7	46.0	10.0	42.3
Total Split (%)	10.0%	45.8%	45.8%	7.6%	43.3%	11.4%	38.3%	8.3%	35.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	8.0	51.7	51.7	5.1	48.7	8.1	12.8	6.0	12.9
Actuated g/C Ratio	0.09	0.56	0.56	0.06	0.53	0.09	0.14	0.07	0.14
v/c Ratio	0.97	1.12	0.18	0.76	1.15	0.39	0.25	0.87	0.14
Control Delay (s/veh)	112.0	82.8	7.5	89.8	96.3	50.4	25.9	101.4	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	112.0	82.8	7.5	89.8	96.3	50.4	25.9	101.4	14.6
LOS	F	F	A	F	F	D	C	F	B
Approach Delay (s/veh)		79.5			96.1		37.5		79.3
Approach LOS		E			F		D		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 92.2	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.15	
Intersection Signal Delay (s/veh): 85.7	Intersection LOS: F
Intersection Capacity Utilization 85.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 11: Alta Cresta Av./Chicago Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	141	2083	159	70	1913	89	56	42	21	94	4	28
Future Volume (veh/h)	141	2083	159	70	1913	89	56	42	21	94	4	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	150	2216	151	74	2035	95	60	45	11	100	4	26
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	169	2197	980	95	1991	92	80	87	21	126	19	121
Arrive On Green	0.10	0.62	0.62	0.05	0.58	0.58	0.05	0.06	0.06	0.07	0.09	0.09
Sat Flow, veh/h	1781	3554	1585	1781	3455	160	1781	1452	355	1781	216	1402
Grp Volume(v), veh/h	150	2216	151	74	1038	1092	60	0	56	100	0	30
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1838	1781	0	1806	1781	0	1618
Q Serve(g_s), s	6.9	51.4	3.3	3.4	47.9	47.9	2.8	0.0	2.5	4.6	0.0	1.4
Cycle Q Clear(g_c), s	6.9	51.4	3.3	3.4	47.9	47.9	2.8	0.0	2.5	4.6	0.0	1.4
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.20	1.00		0.87
Lane Grp Cap(c), veh/h	169	2197	980	95	1024	1059	80	0	109	126	0	139
V/C Ratio(X)	0.89	1.01	0.15	0.78	1.01	1.03	0.75	0.00	0.52	0.79	0.00	0.22
Avail Cap(c_a), veh/h	169	2197	980	107	1024	1059	206	0	911	126	0	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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.2	15.9	6.7	38.9	17.6	17.6	39.2	0.0	37.9	38.0	0.0	35.4
Incr Delay (d2), s/veh	38.6	21.4	0.1	27.1	31.4	36.0	12.8	0.0	3.7	27.9	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	4.6	21.0	0.9	2.1	23.4	25.5	1.5	0.0	1.2	3.0	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	75.8	37.2	6.8	65.9	49.0	53.6	52.0	0.0	41.6	65.9	0.0	36.1
LnGrp LOS	E	F	A	E	F	F	D		D	E		D
Approach Vol, veh/h		2517			2204			116			130	
Approach Delay, s/veh		37.7			51.8			47.0			59.0	
Approach LOS		D			D			D			E	

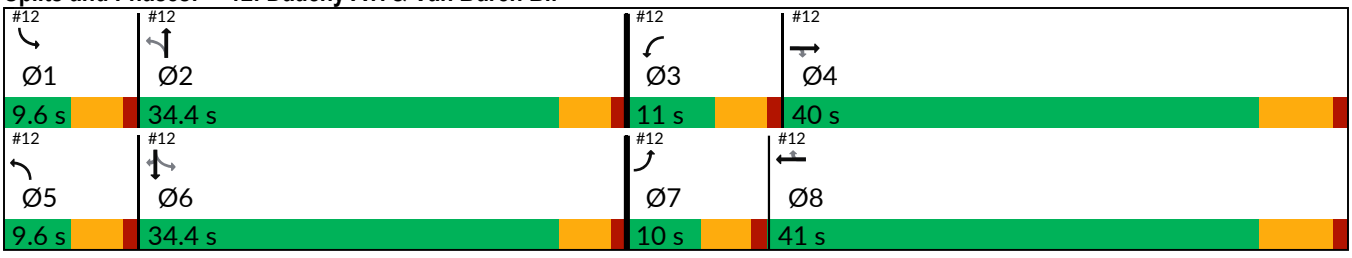
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	9.1	8.5	55.5	7.8	11.3	12.0	52.0
Change Period (Y+Rc), s	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Max Green Setting (Gmax), s	5.9	41.9	5.0	50.8	9.6	38.2	7.9	47.9
Max Q Clear Time (g_c+I1), s	6.6	4.5	5.4	53.4	4.8	3.4	8.9	49.9
Green Ext Time (p_c), s	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	44.7
HCM 7th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	96	1770	162	141	1767	19	166	30	62	32	55
Future Volume (vph)	96	1770	162	141	1767	19	166	30	62	32	55
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	28.2	28.2	9.6	28.2	28.2	9.6	26.6	9.6	33.6	33.6
Total Split (s)	10.0	40.0	40.0	11.0	41.0	41.0	9.6	34.4	9.6	34.4	34.4
Total Split (%)	10.5%	42.1%	42.1%	11.6%	43.2%	43.2%	10.1%	36.2%	10.1%	36.2%	36.2%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	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	None	None	None	None
Act Effct Green (s)	5.5	34.5	34.5	6.5	35.5	35.5	15.9	13.3	15.9	13.3	13.3
Actuated g/C Ratio	0.07	0.45	0.45	0.09	0.47	0.47	0.21	0.17	0.21	0.17	0.17
v/c Ratio	0.80	1.19	0.22	1.01	1.15	0.02	0.61	0.34	0.23	0.10	0.15
Control Delay (s/veh)	81.4	114.8	6.8	116.0	99.2	0.1	32.8	12.6	21.9	27.2	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	81.4	114.8	6.8	116.0	99.2	0.1	32.8	12.6	21.9	27.2	0.8
LOS	F	F	A	F	F	A	C	B	C	C	A
Approach Delay (s/veh)		104.6			99.5			24.5		15.2	
Approach LOS		F			F			C		B	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 76.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.19	
Intersection Signal Delay (s/veh): 94.2	Intersection LOS: F
Intersection Capacity Utilization 85.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 12: Dauchy Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	1770	162	141	1767	19	166	30	86	62	32	55
Future Volume (veh/h)	96	1770	162	141	1767	19	166	30	86	62	32	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	103	1903	128	152	1900	11	178	32	61	67	34	35
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	131	1647	734	156	1696	756	340	71	135	283	199	166
Arrive On Green	0.07	0.46	0.46	0.09	0.48	0.48	0.07	0.12	0.12	0.05	0.11	0.11
Sat Flow, veh/h	1781	3554	1583	1781	3554	1583	1781	570	1087	1781	1870	1560
Grp Volume(v), veh/h	103	1903	128	152	1900	11	178	0	93	67	34	35
Grp Sat Flow(s),veh/h/ln	1781	1777	1583	1781	1777	1583	1781	0	1657	1781	1870	1560
Q Serve(g_s), s	4.1	33.8	3.4	6.2	34.8	0.3	5.0	0.0	3.8	2.4	1.2	1.5
Cycle Q Clear(g_c), s	4.1	33.8	3.4	6.2	34.8	0.3	5.0	0.0	3.8	2.4	1.2	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.66	1.00		1.00
Lane Grp Cap(c), veh/h	131	1647	734	156	1696	756	340	0	205	283	199	166
V/C Ratio(X)	0.78	1.16	0.17	0.97	1.12	0.01	0.52	0.00	0.45	0.24	0.17	0.21
Avail Cap(c_a), veh/h	132	1647	734	156	1696	756	340	0	677	314	764	637
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	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.2	19.6	11.4	33.2	19.1	10.0	28.0	0.0	29.7	27.0	29.7	29.8
Incr Delay (d2), s/veh	23.8	77.4	0.1	63.3	62.7	0.0	0.7	0.0	1.6	0.2	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	28.6	1.0	5.2	25.8	0.1	2.9	0.0	1.6	1.0	0.6	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	57.0	97.0	11.5	96.5	81.7	10.0	28.7	0.0	31.2	27.1	30.1	30.4
LnGrp LOS	E	F	B	F	F	B	C		C	C	C	C
Approach Vol, veh/h		2134			2063			271			136	
Approach Delay, s/veh		90.0			82.4			29.6			28.7	
Approach LOS		F			F			C			C	

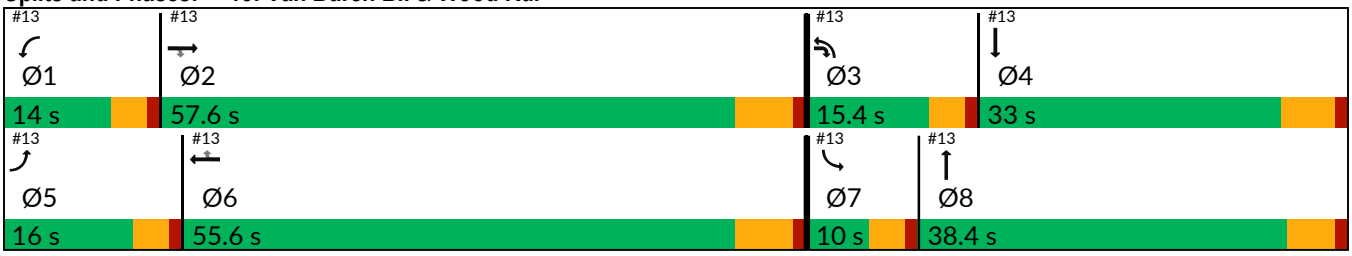
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	13.6	11.0	40.0	9.6	12.4	10.0	41.0
Change Period (Y+Rc), s	4.6	4.6	4.6	6.2	4.6	4.6	4.6	6.2
Max Green Setting (Gmax), s	5.0	29.8	6.4	33.8	5.0	29.8	5.4	34.8
Max Q Clear Time (g_c+I1), s	4.4	5.8	8.2	35.8	7.0	3.5	6.1	36.8
Green Ext Time (p_c), s	0.0	0.5	0.0	0.0	0.0	0.2	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	81.2
HCM 7th LOS	F

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	197	1681	406	318	1553	159	265	288	82	344
Future Volume (vph)	197	1681	406	318	1553	159	265	288	82	344
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	5	2	3	1	6		3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	3	1	6	6	3	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.2	30.2	9.2	9.2	30.2	30.2	9.2	38.4	9.2	15.8
Total Split (s)	16.0	57.6	15.4	14.0	55.6	55.6	15.4	38.4	10.0	33.0
Total Split (%)	13.3%	48.0%	12.8%	11.7%	46.3%	46.3%	12.8%	32.0%	8.3%	27.5%
Yellow Time (s)	3.2	5.2	3.2	3.2	5.2	5.2	3.2	4.4	3.2	4.8
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)	4.2	6.2	4.2	4.2	6.2	6.2	4.2	5.4	4.2	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.8	51.4	64.4	9.8	49.4	49.4	11.0	31.2	5.8	25.6
Actuated g/C Ratio	0.10	0.43	0.54	0.08	0.42	0.42	0.09	0.26	0.05	0.22
v/c Ratio	1.15	1.13	0.48	1.15	1.08	0.22	0.86	0.61	0.99	0.89
Control Delay (s/veh)	161.1	98.2	12.7	149.6	83.0	6.1	77.6	29.1	149.7	49.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	161.1	98.2	12.7	149.6	83.0	6.1	77.6	29.1	149.7	49.1
LOS	F	F	B	F	F	A	E	C	F	D
Approach Delay (s/veh)		88.4			87.4			44.5		59.4
Approach LOS		F			F			D		E

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 118.2	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.15	
Intersection Signal Delay (s/veh): 78.0	Intersection LOS: E
Intersection Capacity Utilization 103.4%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 13: Van Buren Bl. & Wood Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	1681	406	318	1553	159	265	288	282	82	344	377
Future Volume (veh/h)	197	1681	406	318	1553	159	265	288	282	82	344	377
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.92	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	203	1733	341	328	1601	125	273	297	212	85	355	301
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	177	1540	823	286	1480	656	326	511	350	87	397	331
Arrive On Green	0.10	0.43	0.43	0.08	0.42	0.42	0.09	0.26	0.26	0.05	0.22	0.22
Sat Flow, veh/h	1781	3554	1553	3456	3554	1575	3456	1945	1331	1781	1826	1523
Grp Volume(v), veh/h	203	1733	341	328	1601	125	273	270	239	85	345	311
Grp Sat Flow(s),veh/h/ln	1781	1777	1553	1728	1777	1575	1728	1777	1499	1781	1777	1573
Q Serve(g_s), s	11.8	51.4	15.7	9.8	49.4	6.0	9.2	15.7	16.6	5.7	22.4	22.9
Cycle Q Clear(g_c), s	11.8	51.4	15.7	9.8	49.4	6.0	9.2	15.7	16.6	5.7	22.4	22.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.89	1.00		0.97
Lane Grp Cap(c), veh/h	177	1540	823	286	1480	656	326	467	394	87	386	342
V/C Ratio(X)	1.15	1.13	0.41	1.15	1.08	0.19	0.84	0.58	0.61	0.98	0.89	0.91
Avail Cap(c_a), veh/h	177	1540	823	286	1480	656	326	494	417	87	408	361
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	33.6	16.9	54.4	34.6	21.9	52.8	38.0	38.3	56.3	45.1	45.3
Incr Delay (d2), s/veh	112.1	65.3	0.5	99.5	48.8	0.2	16.2	1.5	2.3	87.7	20.8	25.4
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	10.6	34.2	5.4	8.1	29.6	2.2	4.7	6.9	6.2	4.6	11.8	11.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	165.5	98.9	17.4	153.9	83.4	22.1	69.0	39.5	40.6	144.1	65.8	70.7
LnGrp LOS	F	F	B	F	F	C	E	D	D	F	E	E
Approach Vol, veh/h		2277			2054			782			741	
Approach Delay, s/veh		92.6			90.9			50.1			76.8	
Approach LOS		F			F			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	57.6	15.4	31.6	16.0	55.6	10.0	37.0
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	9.8	51.4	11.2	27.2	11.8	49.4	5.8	* 33
Max Q Clear Time (g_c+I1), s	11.8	53.4	11.2	24.9	13.8	51.4	7.7	18.6
Green Ext Time (p_c), s	0.0	0.0	0.0	0.9	0.0	0.0	0.0	2.6

Intersection Summary	
HCM 7th Control Delay, s/veh	84.4
HCM 7th LOS	F

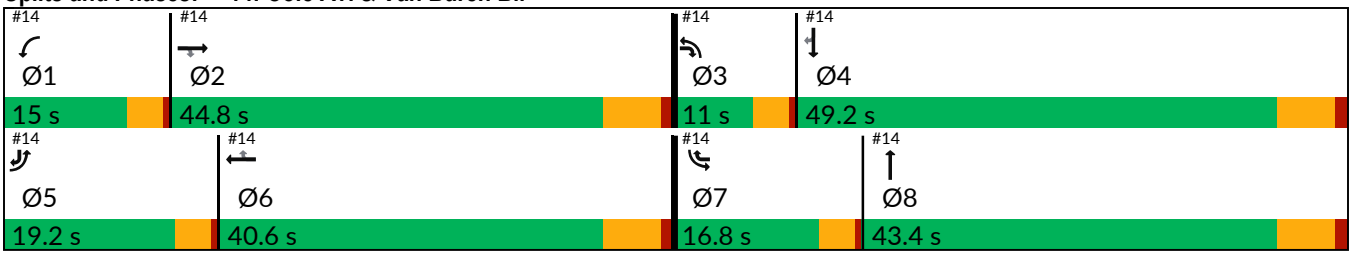
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	432	1254	260	212	1345	492	114	345	342	582	393
Future Volume (vph)	432	1254	260	212	1345	492	114	345	342	582	393
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8	7	4	5
Permitted Phases			2			6					4
Detector Phase	5	2	3	1	6	7	3	8	7	4	5
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	5.0	10.0	5.0	10.0	5.0
Minimum Split (s)	9.1	36.2	9.1	9.1	36.2	9.1	9.1	42.2	9.1	49.2	9.1
Total Split (s)	19.2	44.8	11.0	15.0	40.6	16.8	11.0	43.4	16.8	49.2	19.2
Total Split (%)	16.0%	37.3%	9.2%	12.5%	33.8%	14.0%	9.2%	36.2%	14.0%	41.0%	16.0%
Yellow Time (s)	3.2	5.2	3.2	3.2	5.2	3.2	3.2	5.2	3.2	5.2	3.2
All-Red Time (s)	0.5	1.0	0.5	0.5	1.0	0.5	0.5	1.0	0.5	1.0	0.5
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)	3.7	6.2	3.7	3.7	6.2	3.7	3.7	6.2	3.7	6.2	3.7
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	15.6	38.9	48.7	11.4	34.6	50.1	7.3	18.9	12.9	24.5	42.6
Actuated g/C Ratio	0.15	0.38	0.48	0.11	0.34	0.49	0.07	0.19	0.13	0.24	0.42
v/c Ratio	0.83	0.94	0.33	1.09	0.79	0.57	0.91	0.60	0.79	0.69	0.57
Control Delay (s/veh)	57.8	45.8	10.6	133.5	35.5	13.5	107.2	40.2	58.7	39.4	19.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.8	45.8	10.6	133.5	35.5	13.5	107.2	40.2	58.7	39.4	19.8
LOS	E	D	B	F	D	B	F	D	E	D	B
Approach Delay (s/veh)		43.7			40.3			55.4		38.6	
Approach LOS		D			D			E		D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 102	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.09	
Intersection Signal Delay (s/veh): 42.4	Intersection LOS: D
Intersection Capacity Utilization 86.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 14: Cole Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	432	1254	260	212	1345	492	114	345	44	342	582	393
Future Volume (veh/h)	432	1254	260	212	1345	492	114	345	44	342	582	393
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	436	1267	219	214	1359	409	115	348	36	345	588	311
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	501	1367	724	203	1805	740	131	593	61	411	810	586
Arrive On Green	0.15	0.38	0.38	0.11	0.35	0.35	0.07	0.18	0.18	0.12	0.23	0.23
Sat Flow, veh/h	3456	3554	1579	1781	5106	1560	1781	3248	334	3456	3554	1562
Grp Volume(v), veh/h	436	1267	219	214	1359	409	115	189	195	345	588	311
Grp Sat Flow(s),veh/h/ln	1728	1777	1579	1781	1702	1560	1781	1777	1804	1728	1777	1562
Q Serve(g_s), s	12.2	33.8	8.6	11.3	23.2	18.6	6.3	9.7	9.8	9.7	15.2	15.4
Cycle Q Clear(g_c), s	12.2	33.8	8.6	11.3	23.2	18.6	6.3	9.7	9.8	9.7	15.2	15.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	501	1367	724	203	1805	740	131	325	330	411	810	586
V/C Ratio(X)	0.87	0.93	0.30	1.05	0.75	0.55	0.88	0.58	0.59	0.84	0.73	0.53
Avail Cap(c_a), veh/h	540	1384	732	203	1805	740	131	667	677	457	1542	908
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	41.5	29.2	16.9	43.9	28.2	18.7	45.5	37.1	37.1	42.7	35.4	24.3
Incr Delay (d2), s/veh	12.7	11.1	0.3	78.0	2.0	1.1	42.6	1.7	1.7	10.9	1.3	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	5.8	15.1	2.9	9.1	9.0	6.2	4.2	4.1	4.2	4.5	6.3	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.2	40.2	17.2	122.0	30.2	19.8	88.1	38.7	38.8	53.6	36.6	25.1
LnGrp LOS	D	D	B	F	C	B	F	D	D	D	D	C
Approach Vol, veh/h		1922			1982			499			1244	
Approach Delay, s/veh		40.8			38.0			50.1			38.5	
Approach LOS		D			D			D			D	

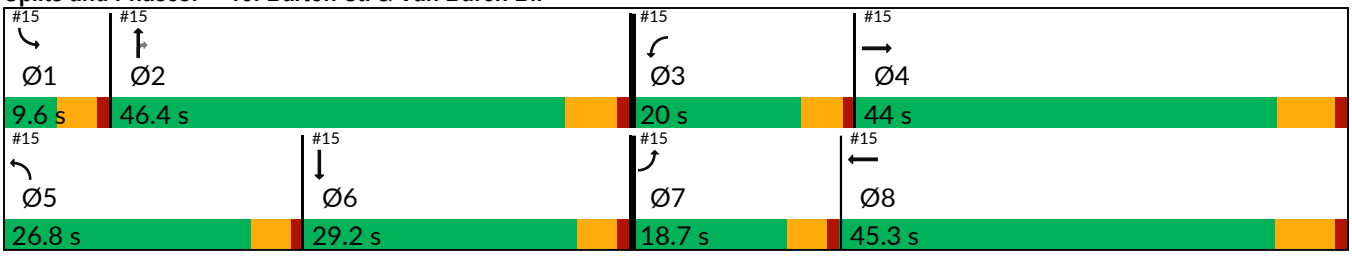
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	44.3	11.0	28.8	18.1	41.2	15.5	24.3
Change Period (Y+Rc), s	3.7	6.2	3.7	6.2	3.7	6.2	3.7	6.2
Max Green Setting (Gmax), s	11.3	38.6	7.3	43.0	15.5	34.4	13.1	37.2
Max Q Clear Time (g_c+I1), s	13.3	35.8	8.3	17.4	14.2	25.2	11.7	11.8
Green Ext Time (p_c), s	0.0	2.3	0.0	4.8	0.1	7.3	0.1	1.9

Intersection Summary	
HCM 7th Control Delay, s/veh	40.1
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	175	1294	356	1411	402	76	354	27	48
Future Volume (vph)	175	1294	356	1411	402	76	354	27	48
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)	5.0	10.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.2	9.6	28.5	9.6	44.8	44.8	9.6	26.1
Total Split (s)	18.7	44.0	20.0	45.3	26.8	46.4	46.4	9.6	29.2
Total Split (%)	15.6%	36.7%	16.7%	37.8%	22.3%	38.7%	38.7%	8.0%	24.3%
Yellow Time (s)	3.6	5.2	3.6	5.5	3.6	4.8	4.8	3.6	3.6
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)	4.6	6.2	4.6	6.5	4.6	5.8	5.8	4.6	4.6
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	None	None	None	None
Act Effct Green (s)	13.7	38.0	15.5	39.5	16.8	27.6	27.6	5.0	12.9
Actuated g/C Ratio	0.13	0.37	0.15	0.38	0.16	0.27	0.27	0.05	0.12
v/c Ratio	0.80	1.30	1.43	0.80	0.77	0.16	0.58	0.34	0.54
Control Delay (s/veh)	69.5	168.8	248.2	33.2	51.5	30.7	10.7	61.6	30.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	69.5	168.8	248.2	33.2	51.5	30.7	10.7	61.6	30.5
LOS	E	F	F	C	D	C	B	E	C
Approach Delay (s/veh)		158.8		75.6		32.2			35.7
Approach LOS		F		E		C			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 103.3	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.43	
Intersection Signal Delay (s/veh): 98.0	Intersection LOS: F
Intersection Capacity Utilization 100.5%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 15: Barton St. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	175	1294	267	356	1411	40	402	76	354	27	48	88
Future Volume (veh/h)	175	1294	267	356	1411	40	402	76	354	27	48	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	186	1377	260	379	1501	33	428	81	217	29	51	46
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	218	1139	212	276	2126	47	506	411	342	49	91	82
Arrive On Green	0.12	0.38	0.38	0.16	0.41	0.41	0.15	0.22	0.22	0.03	0.10	0.10
Sat Flow, veh/h	1781	2991	556	1781	5138	113	3456	1870	1560	1781	899	811
Grp Volume(v), veh/h	186	810	827	379	994	540	428	81	217	29	0	97
Grp Sat Flow(s),veh/h/ln	1781	1777	1770	1781	1702	1847	1728	1870	1560	1781	0	1711
Q Serve(g_s), s	10.2	37.8	37.8	15.4	24.0	24.0	12.0	3.5	12.5	1.6	0.0	5.4
Cycle Q Clear(g_c), s	10.2	37.8	37.8	15.4	24.0	24.0	12.0	3.5	12.5	1.6	0.0	5.4
Prop In Lane	1.00		0.31	1.00		0.06	1.00		1.00	1.00		0.47
Lane Grp Cap(c), veh/h	218	677	674	276	1409	764	506	411	342	49	0	172
V/C Ratio(X)	0.85	1.20	1.23	1.37	0.71	0.71	0.85	0.20	0.63	0.59	0.00	0.56
Avail Cap(c_a), veh/h	253	677	674	276	1409	764	773	765	638	90	0	424
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	0.00	1.00
Uniform Delay (d), s/veh	42.7	30.7	30.7	41.9	24.1	24.1	41.3	31.6	35.1	47.7	0.0	42.5
Incr Delay (d2), s/veh	19.2	102.3	114.9	188.3	1.6	3.0	3.3	0.2	1.9	4.1	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	5.4	33.8	36.0	20.8	8.8	9.9	5.1	1.5	4.6	0.8	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.9	133.0	145.6	230.2	25.7	27.1	44.6	31.8	37.1	51.7	0.0	45.4
LnGrp LOS	E	F	F	F	C	C	D	C	D	D		D
Approach Vol, veh/h		1823			1913			726			126	
Approach Delay, s/veh		131.5			66.6			40.9			46.9	
Approach LOS		F			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	27.6	20.0	44.3	19.1	15.8	16.7	47.6
Change Period (Y+Rc), s	4.6	5.8	4.6	* 6.5	4.6	* 5.8	4.6	6.5
Max Green Setting (Gmax), s	5.0	40.6	15.4	* 38	22.2	* 25	14.1	38.8
Max Q Clear Time (g_c+I1), s	3.6	14.5	17.4	39.8	14.0	7.4	12.2	26.0
Green Ext Time (p_c), s	0.0	1.1	0.0	0.0	0.6	0.4	0.0	7.2

Intersection Summary	
HCM 7th Control Delay, s/veh	87.8
HCM 7th LOS	F

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

APPENDIX 7.3:

HY (2045) WITH PROJECT SIGNAL WARRANTS

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Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	EAPC (2027)
				CALC IA	DATE 08/28/25
Jurisdiction: **County of Riverside**				CHK IA	DATE 08/28/25
Major Street: **Washington St.**				Critical Approach Speed (Major)	30 mph
Minor Street: **Driveway 3**				Critical Approach Speed (Minor)	25 mph

Major Street Approach Lanes = **1** lane Minor Street Approach Lanes = **1** lane

Major Street Future ADT = **23,727** vpd Minor Street Future ADT = **237** 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 / RURAL	Minimum Requirements EADT: Vehicles Per Day on Major Street (Total of Both Approaches)		Minimum Requirements EADT: Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
XX	Urban	Rural	Urban	Rural
CONDITION A - Minimum Vehicular Volume				
Satisfied / Not Satisfied XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 **23,727** / 1 **237**	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				
Satisfied / Not Satisfied XX				
Number of lanes for moving traffic on each approach				
Major Street / Minor Street				
1 **23,727** / 1 **237**	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				
Satisfied / Not Satisfied XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more ….. A 10% B 20%				

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 7.4:

HY (2045) WITHOUT PROJECT SIGNALIZED QUEUES

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Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	696	22	2031	1411	229
v/c Ratio	0.82	0.21	0.88	0.67	0.15
Control Delay (s/veh)	44.8	56.5	19.4	16.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	44.8	56.5	19.4	16.0	0.3
Queue Length 50th (ft)	213	14	492	258	0
Queue Length 95th (ft)	341	46	698	472	7
Internal Link Dist (ft)	1275		961	1331	
Turn Bay Length (ft)	90	300			125
Base Capacity (vph)	1109	111	2972	2632	1514
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.63	0.20	0.68	0.54	0.15

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	206	1692	70	24	2119	34	226	240	175	159
v/c Ratio	1.48	1.01	0.09	0.22	1.58	0.05	0.66	0.67	0.55	0.34
Control Delay (s/veh)	281.6	50.8	0.6	43.7	286.8	0.1	33.2	36.9	25.6	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	281.6	50.8	0.6	43.7	286.8	0.1	33.2	36.9	25.6	11.6
Queue Length 50th (ft)	~149	404	0	12	~833	0	85	104	64	21
Queue Length 95th (ft)	#305	#791	3	38	#1078	0	139	175	109	66
Internal Link Dist (ft)		1223			1243			377		908
Turn Bay Length (ft)	200		80	170		165	100		85	
Base Capacity (vph)	139	1668	815	109	1344	682	340	534	331	637
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.48	1.01	0.09	0.22	1.58	0.05	0.66	0.45	0.53	0.25

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	148	1715	201	1618	911	330	1146	341	466	363
v/c Ratio	1.29	1.32	1.40	1.17	1.18	0.75	1.12	0.62	1.51	0.41
Control Delay (s/veh)	223.9	180.2	255.2	119.8	121.5	61.4	108.3	27.0	284.2	30.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	223.9	180.2	255.2	119.8	121.5	61.4	108.3	27.0	284.2	30.1
Queue Length 50th (ft)	~148	~918	~211	~800	~735	130	~547	138	~262	93
Queue Length 95th (ft)	#286	#1062	#366	#941	#992	178	#685	243	#371	145
Internal Link Dist (ft)		1243		1243			790			160
Turn Bay Length (ft)	285		300		300	145		140	130	
Base Capacity (vph)	115	1303	144	1380	769	517	1020	553	308	894
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.29	1.32	1.40	1.17	1.18	0.64	1.12	0.62	1.51	0.41

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

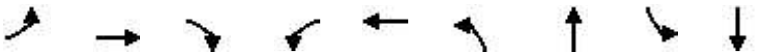
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	2	2079	72	21	2460	12	58	61
v/c Ratio	0.02	0.81	0.06	0.19	0.93	0.01	0.19	0.24
Control Delay (s/veh)	45.0	16.8	3.1	47.9	21.9	0.0	5.9	26.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	45.0	16.8	3.1	47.9	21.9	0.0	5.9	26.0
Queue Length 50th (ft)	1	292	0	10	468	0	0	19
Queue Length 95th (ft)	10	#1043	23	42	#1337	0	21	56
Internal Link Dist (ft)		1222			1308		541	454
Turn Bay Length (ft)	295		130	305				
Base Capacity (vph)	109	2564	1166	109	2641	1185	648	598
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.81	0.06	0.19	0.93	0.01	0.09	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	210	1810	122	113	2368	139	269	127	48
v/c Ratio	1.29	0.98	0.14	1.05	1.37	0.62	0.69	1.18	0.21
Control Delay (s/veh)	204.5	42.5	3.7	146.5	196.3	53.5	32.1	183.4	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	204.5	42.5	3.7	146.5	196.3	53.5	32.1	183.4	15.7
Queue Length 50th (ft)	~159	517	0	~70	~994	80	101	~90	3
Queue Length 95th (ft)	#389	#1041	36	#233	#1565	168	179	#261	36
Internal Link Dist (ft)		1565			2589		1030		346
Turn Bay Length (ft)	280		75	295		100		45	
Base Capacity (vph)	163	1839	881	108	1725	324	784	108	538
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.29	0.98	0.14	1.05	1.37	0.43	0.34	1.18	0.09

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	45	1618	284	149	2116	17	218	270	54	128	42
v/c Ratio	0.43	1.01	0.36	1.12	1.15	0.02	0.69	0.57	0.23	0.39	0.11
Control Delay (s/veh)	54.8	49.6	11.2	154.1	99.3	0.1	38.9	19.8	23.8	33.9	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	54.8	49.6	11.2	154.1	99.3	0.1	38.9	19.8	23.8	33.9	0.6
Queue Length 50th (ft)	23	418	50	~88	~731	0	95	65	21	62	0
Queue Length 95th (ft)	#75	#794	142	#249	#1129	0	155	142	47	110	0
Internal Link Dist (ft)		2589			2614			512		890	
Turn Bay Length (ft)	295		100	420		160	60		70		50
Base Capacity (vph)	104	1605	782	133	1834	857	314	680	233	665	643
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	1.01	0.36	1.12	1.15	0.02	0.69	0.40	0.23	0.19	0.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	221	1269	764	611	1737	329	410	1080	121	973
v/c Ratio	1.39	0.95	0.99	1.44	1.19	0.43	1.33	1.07	1.21	1.13
Control Delay (s/veh)	249.7	51.6	55.7	251.0	126.8	11.7	211.7	83.3	204.3	111.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	249.7	51.6	55.7	251.0	126.8	11.7	211.7	83.3	204.3	111.9
Queue Length 50th (ft)	~232	504	488	~337	~869	68	~215	~434	~116	~440
Queue Length 95th (ft)	#394	#656	#716	#455	#1011	147	#319	#573	#242	#576
Internal Link Dist (ft)		2614			2123			3887		2020
Turn Bay Length (ft)	400		300	355			186		80	
Base Capacity (vph)	159	1338	773	423	1456	757	308	1010	100	860
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.39	0.95	0.99	1.44	1.19	0.43	1.33	1.07	1.21	1.13

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	334	1047	229	358	1837	718	216	701	221	390	425
v/c Ratio	1.27	0.96	0.29	1.54	0.99	0.86	1.43	0.79	0.52	0.38	0.64
Control Delay (s/veh)	191.0	56.6	4.7	296.1	54.1	31.4	264.0	44.1	50.4	31.5	22.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	191.0	56.6	4.7	296.1	54.1	31.4	264.0	44.1	50.4	31.5	22.7
Queue Length 50th (ft)	~156	385	7	~360	473	353	~209	240	76	115	174
Queue Length 95th (ft)	#273	#596	57	#596	#678	#569	#394	308	125	157	272
Internal Link Dist (ft)		2123			3107			1466		1079	
Turn Bay Length (ft)	165		200	150		180	210		200		150
Base Capacity (vph)	262	1095	781	233	1855	849	151	1220	452	1402	669
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.27	0.96	0.29	1.54	0.99	0.85	1.43	0.57	0.49	0.28	0.64

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	298	1429	330	2060	491	108	501	28	395
v/c Ratio	1.35	1.26	1.32	1.15	0.94	0.17	0.66	0.37	0.90
Control Delay (s/veh)	226.8	159.0	209.5	108.7	77.0	27.9	15.6	69.5	56.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	226.8	159.0	209.5	108.7	77.0	27.9	15.6	69.5	56.1
Queue Length 50th (ft)	~310	~732	~338	~663	198	59	114	22	220
Queue Length 95th (ft)	#496	#883	#531	#765	#312	104	243	54	#384
Internal Link Dist (ft)		3107		1942		1095			637
Turn Bay Length (ft)	400		185		115		125	125	
Base Capacity (vph)	220	1133	250	1799	521	664	773	76	494
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.35	1.26	1.32	1.15	0.94	0.16	0.65	0.37	0.80

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	260	15	1455	2047	586
v/c Ratio	0.50	0.14	0.56	0.85	0.38
Control Delay (s/veh)	39.7	53.3	6.3	16.8	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	39.7	53.3	6.3	16.8	0.8
Queue Length 50th (ft)	64	8	135	300	0
Queue Length 95th (ft)	129	36	313	#889	9
Internal Link Dist (ft)	1275		961	1331	
Turn Bay Length (ft)	90	300			125
Base Capacity (vph)	1044	107	3187	2979	1554
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.25	0.14	0.46	0.69	0.38

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	118	1773	196	30	1609	66	74	29	90	100
v/c Ratio	0.85	0.84	0.20	0.23	0.96	0.08	0.31	0.09	0.26	0.28
Control Delay (s/veh)	85.5	24.8	6.4	40.8	38.2	0.3	26.5	17.1	21.4	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	85.5	24.8	6.4	40.8	38.2	0.3	26.5	17.1	21.4	15.8
Queue Length 50th (ft)	55	323	12	13	~392	0	34	6	32	18
Queue Length 95th (ft)	#188	#857	72	45	#755	2	54	26	63	55
Internal Link Dist (ft)		1223			1243			377		908
Turn Bay Length (ft)	200		80	170		165	100		85	
Base Capacity (vph)	139	2109	996	129	1671	807	241	684	343	708
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.84	0.20	0.23	0.96	0.08	0.31	0.04	0.26	0.14

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	149	1689	217	1342	502	135	268	221	670	784
v/c Ratio	1.22	1.25	1.41	0.94	0.57	0.56	0.33	0.47	1.60	0.81
Control Delay (s/veh)	196.2	149.4	258.2	47.0	8.0	61.2	37.1	16.6	311.6	43.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	196.2	149.4	258.2	47.0	8.0	61.2	37.1	16.6	311.6	43.5
Queue Length 50th (ft)	~139	~849	~222	511	41	51	87	46	~374	273
Queue Length 95th (ft)	#287	#1055	#398	#720	147	88	125	119	#519	347
Internal Link Dist (ft)		1243		1243			790			158
Turn Bay Length (ft)	285		300		300	145		140	130	
Base Capacity (vph)	122	1354	154	1427	885	268	1037	565	420	1163
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.22	1.25	1.41	0.94	0.57	0.50	0.26	0.39	1.60	0.67

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

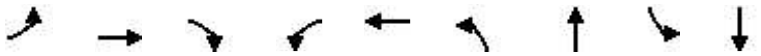
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	18	2216	113	20	1977	10	34	38
v/c Ratio	0.14	0.83	0.09	0.15	0.72	0.01	0.12	0.12
Control Delay (s/veh)	41.5	18.6	4.7	41.7	13.4	0.0	19.2	18.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	41.5	18.6	4.7	41.7	13.4	0.0	19.2	18.5
Queue Length 50th (ft)	7	344	4	8	260	0	7	8
Queue Length 95th (ft)	35	#1114	42	37	#945	0	31	33
Internal Link Dist (ft)		1222			1308		541	454
Turn Bay Length (ft)	295		130	305				
Base Capacity (vph)	133	2659	1208	133	2746	1218	708	745
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.83	0.09	0.15	0.72	0.01	0.05	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	150	2159	162	74	2065	51	67	100	34
v/c Ratio	0.97	1.09	0.17	0.76	1.11	0.35	0.26	0.87	0.12
Control Delay (s/veh)	110.7	69.8	7.3	89.4	80.5	49.8	26.1	100.8	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	110.7	69.8	7.3	89.4	80.5	49.8	26.1	100.8	14.1
Queue Length 50th (ft)	83	~674	16	41	~657	27	23	55	2
Queue Length 95th (ft)	#283	#1324	81	#160	#1296	80	57	#206	26
Internal Link Dist (ft)		1565			2589		1030		346
Turn Bay Length (ft)	280		75	295		100		45	
Base Capacity (vph)	154	1989	927	97	1863	176	833	115	703
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	1.09	0.17	0.76	1.11	0.29	0.08	0.87	0.05

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	96	1859	167	152	1851	20	170	124	67	34	51
v/c Ratio	0.81	1.16	0.21	1.01	1.11	0.02	0.58	0.34	0.23	0.10	0.13
Control Delay (s/veh)	85.7	103.4	6.4	116.0	81.7	0.1	31.6	12.6	21.9	27.2	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	85.7	103.4	6.4	116.0	81.7	0.1	31.6	12.6	21.9	27.2	0.7
Queue Length 50th (ft)	46	~562	11	~75	~541	0	66	14	24	15	0
Queue Length 95th (ft)	#164	#960	61	#241	#937	0	113	55	51	37	0
Internal Link Dist (ft)		2589			2614			512		890	
Turn Bay Length (ft)	295		100	420		160	60		70		50
Base Capacity (vph)	118	1602	782	151	1669	810	291	710	297	744	709
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	1.16	0.21	1.01	1.11	0.02	0.58	0.17	0.23	0.05	0.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	203	1698	411	328	1562	164	265	588	85	744
v/c Ratio	1.15	1.10	0.46	1.15	1.05	0.22	0.85	0.60	0.99	0.89
Control Delay (s/veh)	161.1	89.0	12.2	149.0	73.5	6.1	77.1	28.7	149.6	48.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	161.1	89.0	12.2	149.0	73.5	6.1	77.1	28.7	149.6	48.5
Queue Length 50th (ft)	~190	~810	127	~158	~718	11	107	145	68	235
Queue Length 95th (ft)	#346	#951	201	#254	#860	55	#180	206	#177	#335
Internal Link Dist (ft)		2614			2123			3887		2020
Turn Bay Length (ft)	400		300	355			186		80	
Base Capacity (vph)	177	1540	902	285	1481	736	319	1038	86	882
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.15	1.10	0.46	1.15	1.05	0.22	0.83	0.57	0.99	0.84

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	422	1253	256	214	1343	497	107	392	345	588	382
v/c Ratio	0.84	0.91	0.30	1.10	0.75	0.57	0.98	0.61	0.81	0.68	0.51
Control Delay (s/veh)	59.3	42.0	10.4	136.4	33.6	13.7	133.5	41.0	60.1	38.8	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	59.3	42.0	10.4	136.4	33.6	13.7	133.5	41.0	60.1	38.8	18.6
Queue Length 50th (ft)	137	390	48	~154	272	118	70	123	112	185	144
Queue Length 95th (ft)	#278	#712	136	#371	430	298	#218	169	#232	241	222
Internal Link Dist (ft)		2123			3107			1466		1079	
Turn Bay Length (ft)	165		200	150		180	210		200		150
Base Capacity (vph)	504	1373	860	195	1788	877	109	1247	434	1491	751
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.91	0.30	1.10	0.75	0.57	0.98	0.31	0.79	0.39	0.51

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	186	1646	379	1528	428	81	377	29	145
v/c Ratio	0.80	1.28	1.43	0.79	0.77	0.16	0.58	0.34	0.54
Control Delay (s/veh)	69.5	163.8	248.2	32.9	51.5	30.7	10.7	61.6	30.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	69.5	163.8	248.2	32.9	51.5	30.7	10.7	61.6	30.5
Queue Length 50th (ft)	117	~704	~329	310	137	44	35	19	46
Queue Length 95th (ft)	#280	#1071	#622	#510	216	83	122	55	113
Internal Link Dist (ft)		3107		1942		1095			637
Turn Bay Length (ft)	400		185		115		125	125	
Base Capacity (vph)	242	1281	265	1939	741	736	805	86	452
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	1.28	1.43	0.79	0.58	0.11	0.47	0.34	0.32

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

APPENDIX 7.5:

HY (2045) WITH PROJECT SIGNALIZED QUEUES

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Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	725	44	2052	1439	229
v/c Ratio	0.84	0.38	0.89	0.71	0.16
Control Delay (s/veh)	46.4	60.9	20.6	19.4	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	46.4	60.9	20.6	19.4	0.4
Queue Length 50th (ft)	236	29	540	391	0
Queue Length 95th (ft)	#352	75	738	515	8
Internal Link Dist (ft)	1275		961	1331	
Turn Bay Length (ft)	90	300			125
Base Capacity (vph)	1106	135	2863	2496	1476
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.66	0.33	0.72	0.58	0.16

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	206	1783	70	24	2187	34	226	240	175	159
v/c Ratio	1.48	1.07	0.09	0.22	1.63	0.05	0.66	0.67	0.55	0.34
Control Delay (s/veh)	281.6	67.7	0.6	43.7	309.1	0.1	33.2	36.9	25.6	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	281.6	67.7	0.6	43.7	309.1	0.1	33.2	36.9	25.6	11.6
Queue Length 50th (ft)	~149	449	0	12	~872	0	85	104	64	21
Queue Length 95th (ft)	#305	#848	3	38	#1121	0	139	175	109	66
Internal Link Dist (ft)		1223			755			377		908
Turn Bay Length (ft)	200		80	170		165	100		85	
Base Capacity (vph)	139	1668	815	109	1344	682	340	534	331	637
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.48	1.07	0.09	0.22	1.63	0.05	0.66	0.45	0.53	0.25

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	235	1715	201	1691	984	330	1175	341	574	251	145
v/c Ratio	1.63	1.32	1.56	1.31	1.33	0.75	1.15	0.60	1.70	0.28	0.28
Control Delay (s/veh)	348.6	180.2	322.1	178.1	182.8	61.4	118.9	24.9	361.9	14.4	7.7
Queue Delay	8.8	0.0	0.0	0.0	0.4	0.0	1.5	0.0	0.0	0.0	0.0
Total Delay (s/veh)	357.3	180.2	322.1	178.1	183.2	61.4	120.4	24.9	361.9	14.4	7.7
Queue Length 50th (ft)	~267	~918	~223	~901	~872	130	~573	127	~306	86	61
Queue Length 95th (ft)	#432	#1062	#378	#1043	#1132	178	#711	230	m#317	m107	m94
Internal Link Dist (ft)		123		1227			790			173	
Turn Bay Length (ft)	285		300		300	145		140	180		130
Base Capacity (vph)	144	1303	129	1291	740	517	1020	564	337	902	511
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	48	0	0	0	49	0	246	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	2.45	1.32	1.56	1.31	1.42	0.64	1.52	0.60	1.70	0.28	0.28

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

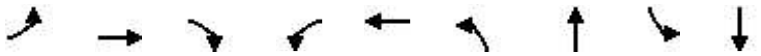


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	6	2174	79	21	2589	12	66	66
v/c Ratio	0.06	0.85	0.07	0.19	0.98	0.01	0.21	0.25
Control Delay (s/veh)	45.7	18.4	3.4	48.0	29.5	0.0	7.7	24.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	45.7	18.4	3.4	48.0	29.5	0.0	7.7	24.7
Queue Length 50th (ft)	3	328	1	10	~581	0	0	19
Queue Length 95th (ft)	18	#1117	27	42	#1436	0	27	57
Internal Link Dist (ft)		1222			1308		541	454
Turn Bay Length (ft)	295		130	305				
Base Capacity (vph)	109	2559	1163	109	2636	1183	647	602
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.85	0.07	0.19	0.98	0.01	0.10	0.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	210	1896	132	113	2485	154	269	127	48
v/c Ratio	2.31	1.00	0.15	1.22	1.31	0.83	0.68	1.40	0.19
Control Delay (s/veh)	644.9	45.7	4.1	205.0	168.7	78.8	32.0	268.6	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	644.9	45.7	4.1	205.0	168.7	78.8	32.0	268.6	13.8
Queue Length 50th (ft)	~207	547	3	~82	~1015	92	103	~101	3
Queue Length 95th (ft)	#437	#1093	41	#242	#1602	#264	182	#272	33
Internal Link Dist (ft)		1565			2589		1030		346
Turn Bay Length (ft)	280		75	295		100		45	
Base Capacity (vph)	91	1892	903	93	1892	186	773	91	636
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	2.31	1.00	0.15	1.22	1.31	0.83	0.35	1.40	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	55	1684	295	149	2204	17	234	270	54	128	58
v/c Ratio	0.53	1.05	0.38	1.12	1.26	0.02	0.74	0.57	0.23	0.39	0.15
Control Delay (s/veh)	60.8	61.6	11.6	154.1	145.6	0.1	42.3	19.8	23.7	33.9	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	60.8	61.6	11.6	154.1	145.6	0.1	42.3	19.8	23.7	33.9	0.8
Queue Length 50th (ft)	29	~467	53	~88	~783	0	103	65	21	62	0
Queue Length 95th (ft)	#95	#841	151	#249	#1190	0	165	142	47	110	0
Internal Link Dist (ft)		2589			2614			512		890	
Turn Bay Length (ft)	295		100	420		160	60		70		50
Base Capacity (vph)	104	1605	782	133	1749	823	315	680	235	665	643
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	1.05	0.38	1.12	1.26	0.02	0.74	0.40	0.23	0.19	0.09

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	221	1324	776	611	1812	329	426	1080	121	973
v/c Ratio	1.39	0.99	1.00	1.44	1.24	0.44	1.38	1.07	1.21	1.13
Control Delay (s/veh)	249.7	59.6	59.7	251.0	148.2	11.8	231.9	83.3	204.3	111.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	249.7	59.6	59.7	251.0	148.2	11.8	231.9	83.3	204.3	111.9
Queue Length 50th (ft)	~232	538	~508	~337	~933	68	~229	~434	~116	~440
Queue Length 95th (ft)	#394	#704	#736	#455	#1075	148	#334	#573	#242	#576
Internal Link Dist (ft)		2614			2123			3887		2020
Turn Bay Length (ft)	400		300	355			186		80	
Base Capacity (vph)	159	1338	773	423	1456	756	308	1010	100	860
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.39	0.99	1.00	1.44	1.24	0.44	1.38	1.07	1.21	1.13

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	356	1069	240	358	1867	718	232	701	221	390	455
v/c Ratio	1.31	0.95	0.31	1.52	1.02	0.86	1.37	0.79	0.50	0.39	0.69
Control Delay (s/veh)	203.2	55.2	5.3	291.0	63.0	32.0	239.5	43.7	49.3	31.7	24.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	203.2	55.2	5.3	291.0	63.0	32.0	239.5	43.7	49.3	31.7	24.8
Queue Length 50th (ft)	~161	367	11	~354	~515	355	~217	235	75	115	195
Queue Length 95th (ft)	#283	#580	64	#597	#714	#557	#414	311	124	157	301
Internal Link Dist (ft)		2123			3107			1466		1079	
Turn Bay Length (ft)	165		200	150		180	210		200		150
Base Capacity (vph)	272	1127	786	235	1822	859	169	1216	500	1412	662
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.31	0.95	0.31	1.52	1.02	0.84	1.37	0.58	0.44	0.28	0.69

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	298	1451	330	2090	491	108	501	28	395
v/c Ratio	1.35	1.27	1.40	1.19	0.92	0.16	0.65	0.37	0.90
Control Delay (s/veh)	223.7	164.0	240.4	125.6	71.8	27.3	15.1	69.3	55.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	223.7	164.0	240.4	125.6	71.8	27.3	15.1	69.3	55.4
Queue Length 50th (ft)	~309	~747	~349	~690	196	59	112	22	220
Queue Length 95th (ft)	#496	#902	#543	#796	#303	103	240	54	#382
Internal Link Dist (ft)		3107		1942		1095			637
Turn Bay Length (ft)	400		185		115		125	125	
Base Capacity (vph)	221	1139	236	1761	548	683	786	76	500
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.35	1.27	1.40	1.19	0.90	0.16	0.64	0.37	0.79

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	275	30	1469	2063	586
v/c Ratio	0.54	0.30	0.55	0.86	0.39
Control Delay (s/veh)	42.4	59.8	6.2	18.4	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	42.4	59.8	6.2	18.4	1.1
Queue Length 50th (ft)	92	21	148	504	10
Queue Length 95th (ft)	134	57	317	#921	21
Internal Link Dist (ft)	1275		961	1331	
Turn Bay Length (ft)	90	300			125
Base Capacity (vph)	978	101	3041	2823	1544
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.28	0.30	0.48	0.73	0.38

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	118	1821	196	30	1652	66	74	29	90	100
v/c Ratio	0.85	0.86	0.20	0.23	0.99	0.08	0.31	0.09	0.26	0.28
Control Delay (s/veh)	85.5	26.0	6.4	40.8	43.5	0.3	26.5	17.1	21.4	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	85.5	26.0	6.4	40.8	43.5	0.3	26.5	17.1	21.4	15.8
Queue Length 50th (ft)	55	340	12	13	~442	0	34	6	32	18
Queue Length 95th (ft)	#188	#887	72	45	#784	2	54	26	63	55
Internal Link Dist (ft)		1223			755			377		908
Turn Bay Length (ft)	200		80	170		165	100		85	
Base Capacity (vph)	139	2109	996	129	1671	807	241	684	343	708
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.86	0.20	0.23	0.99	0.08	0.31	0.04	0.26	0.14

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	196	1689	217	1381	541	135	284	221	740	603	202
v/c Ratio	0.68	1.43	0.67	1.10	0.65	0.55	0.48	0.55	1.45	0.71	0.39
Control Delay (s/veh)	60.9	229.9	58.8	92.8	12.1	62.5	46.8	17.5	249.8	68.1	34.6
Queue Delay	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	60.9	229.9	58.8	92.8	12.6	62.5	46.8	17.5	249.8	68.1	34.6
Queue Length 50th (ft)	145	~951	160	~657	68	53	108	40	~422	261	99
Queue Length 95th (ft)	#311	#1094	#398	#865	216	87	134	104	m#420	m257	m107
Internal Link Dist (ft)		123		1227			790			173	
Turn Bay Length (ft)	285		300		300	145		140	180		130
Base Capacity (vph)	287	1182	322	1261	830	277	973	554	509	1200	655
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	62	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	1.43	0.67	1.10	0.70	0.49	0.29	0.40	1.45	0.50	0.31

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

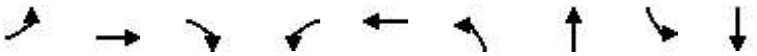
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	21	2281	117	20	2050	10	39	41
v/c Ratio	0.18	0.83	0.09	0.17	0.74	0.01	0.15	0.15
Control Delay (s/veh)	47.5	17.2	4.5	47.4	14.4	0.0	23.5	20.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	47.5	17.2	4.5	47.4	14.4	0.0	23.5	20.7
Queue Length 50th (ft)	10	373	5	10	282	0	11	9
Queue Length 95th (ft)	42	#1200	45	40	#1020	0	39	38
Internal Link Dist (ft)		1222			1308		541	454
Turn Bay Length (ft)	295		130	305				
Base Capacity (vph)	115	2754	1247	115	2754	1219	603	647
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.83	0.09	0.17	0.74	0.01	0.06	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	150	2216	169	74	2130	60	67	100	34
v/c Ratio	0.97	1.12	0.18	0.76	1.15	0.39	0.25	0.87	0.14
Control Delay (s/veh)	112.0	82.8	7.5	89.8	96.3	50.4	25.9	101.4	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	112.0	82.8	7.5	89.8	96.3	50.4	25.9	101.4	14.6
Queue Length 50th (ft)	84	~716	18	41	~706	32	23	56	2
Queue Length 95th (ft)	#283	#1372	85	#160	#1351	91	57	#206	26
Internal Link Dist (ft)		1565			2589		1030		346
Turn Bay Length (ft)	280		75	295		100		45	
Base Capacity (vph)	154	1982	924	97	1857	187	830	115	698
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	1.12	0.18	0.76	1.15	0.32	0.08	0.87	0.05

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

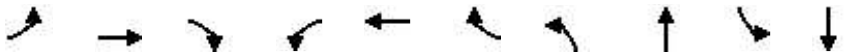


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	103	1903	174	152	1900	20	178	124	67	34	59
v/c Ratio	0.80	1.19	0.22	1.01	1.15	0.02	0.61	0.34	0.23	0.10	0.15
Control Delay (s/veh)	81.4	114.8	6.8	116.0	99.2	0.1	32.8	12.6	21.9	27.2	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	81.4	114.8	6.8	116.0	99.2	0.1	32.8	12.6	21.9	27.2	0.8
Queue Length 50th (ft)	49	~586	13	~75	~572	0	69	14	24	15	0
Queue Length 95th (ft)	#171	#990	65	#241	#975	0	118	55	51	37	0
Internal Link Dist (ft)		2589			2614			512		890	
Turn Bay Length (ft)	295		100	420		160	60		70		50
Base Capacity (vph)	128	1602	782	151	1650	802	291	710	297	744	709
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	1.19	0.22	1.01	1.15	0.02	0.61	0.17	0.23	0.05	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	203	1733	419	328	1601	164	273	588	85	744
v/c Ratio	1.15	1.13	0.48	1.15	1.08	0.22	0.86	0.61	0.99	0.89
Control Delay (s/veh)	161.1	98.2	12.7	149.6	83.0	6.1	77.6	29.1	149.7	49.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	161.1	98.2	12.7	149.6	83.0	6.1	77.6	29.1	149.7	49.1
Queue Length 50th (ft)	~190	~840	131	~158	~752	11	110	147	68	236
Queue Length 95th (ft)	#346	#981	207	#254	#894	55	#185	209	#177	#338
Internal Link Dist (ft)		2614			2123			3887		2020
Turn Bay Length (ft)	400		300	355			186		80	
Base Capacity (vph)	177	1539	881	284	1479	734	325	1008	86	875
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.15	1.13	0.48	1.15	1.08	0.22	0.84	0.58	0.99	0.85

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	436	1267	263	214	1359	497	115	392	345	588	397
v/c Ratio	0.83	0.94	0.33	1.09	0.79	0.57	0.91	0.60	0.79	0.69	0.57
Control Delay (s/veh)	57.8	45.8	10.6	133.5	35.5	13.5	107.2	40.2	58.7	39.4	19.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.8	45.8	10.6	133.5	35.5	13.5	107.2	40.2	58.7	39.4	19.8
Queue Length 50th (ft)	141	401	50	~152	282	113	75	122	111	185	152
Queue Length 95th (ft)	#283	#729	140	#368	#467	289	#221	167	#227	241	232
Internal Link Dist (ft)		2123			3107			1466		1079	
Turn Bay Length (ft)	165		200	150		180	210		200		150
Base Capacity (vph)	524	1348	809	197	1726	869	127	1282	443	1501	692
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.94	0.33	1.09	0.79	0.57	0.91	0.31	0.78	0.39	0.57

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	186	1661	379	1544	428	81	377	29	145
v/c Ratio	0.80	1.30	1.43	0.80	0.77	0.16	0.58	0.34	0.54
Control Delay (s/veh)	69.5	168.8	248.2	33.2	51.5	30.7	10.7	61.6	30.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	69.5	168.8	248.2	33.2	51.5	30.7	10.7	61.6	30.5
Queue Length 50th (ft)	117	~715	~329	316	137	44	35	19	46
Queue Length 95th (ft)	#280	#1084	#622	#519	216	83	122	55	113
Internal Link Dist (ft)		3107		1942		1095			637
Turn Bay Length (ft)	400		185		115		125	125	
Base Capacity (vph)	242	1281	265	1939	741	736	805	86	452
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	1.30	1.43	0.80	0.58	0.11	0.47	0.34	0.32

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

APPENDIX 7.6:

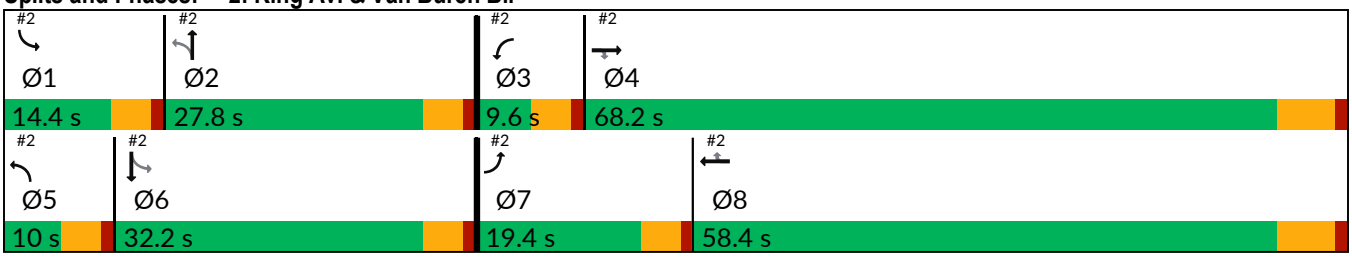
HY (2045) WITH PROJECT INTERSECTION ANALYSIS WITH IMPROVEMENTS

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	183	1587	62	21	1946	30	201	142	156	46
Future Volume (vph)	183	1587	62	21	1946	30	201	142	156	46
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA
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	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.5	28.5	9.6	28.5	28.5	9.6	26.1	9.6	31.6
Total Split (s)	19.4	68.2	68.2	9.6	58.4	58.4	10.0	27.8	14.4	32.2
Total Split (%)	16.2%	56.8%	56.8%	8.0%	48.7%	48.7%	8.3%	23.2%	12.0%	26.8%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	14.7	66.0	66.0	5.0	52.3	52.3	24.2	18.8	32.5	22.9
Actuated g/C Ratio	0.13	0.57	0.57	0.04	0.45	0.45	0.21	0.16	0.28	0.20
v/c Ratio	0.92	0.88	0.07	0.32	0.95	0.04	0.82	0.79	0.77	0.41
Control Delay (s/veh)	92.3	29.6	1.4	66.3	41.3	0.1	62.4	61.4	56.0	23.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	92.3	29.6	1.4	66.3	41.3	0.1	62.4	61.4	56.0	23.1
LOS	F	C	A	E	D	A	E	E	E	C
Approach Delay (s/veh)		34.9			40.9			61.9		40.4
Approach LOS		C			D			E		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 115.4	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay (s/veh): 40.4	Intersection LOS: D
Intersection Capacity Utilization 87.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 2: King Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	183	1587	62	21	1946	30	201	142	71	156	46	95
Future Volume (veh/h)	183	1587	62	21	1946	30	201	142	71	156	46	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	206	1783	42	24	2187	30	226	160	49	175	52	60
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	234	2029	905	42	2364	734	302	189	58	250	139	160
Arrive On Green	0.13	0.57	0.57	0.02	0.46	0.46	0.05	0.14	0.14	0.09	0.18	0.18
Sat Flow, veh/h	1781	3554	1585	1781	5106	1585	1781	1374	421	1781	781	902
Grp Volume(v), veh/h	206	1783	42	24	2187	30	226	0	209	175	0	112
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1702	1585	1781	0	1795	1781	0	1683
Q Serve(g_s), s	12.6	48.1	1.3	1.5	44.8	1.2	5.4	0.0	12.7	9.2	0.0	6.5
Cycle Q Clear(g_c), s	12.6	48.1	1.3	1.5	44.8	1.2	5.4	0.0	12.7	9.2	0.0	6.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.23	1.00		0.54
Lane Grp Cap(c), veh/h	234	2029	905	42	2364	734	302	0	248	250	0	299
V/C Ratio(X)	0.88	0.88	0.05	0.57	0.93	0.04	0.75	0.00	0.84	0.70	0.00	0.38
Avail Cap(c_a), veh/h	237	2029	905	80	2394	743	302	0	374	250	0	417
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	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.5	20.6	10.5	53.8	28.1	16.4	44.4	0.0	46.8	36.6	0.0	40.3
Incr Delay (d2), s/veh	28.2	4.8	0.0	4.5	6.8	0.0	8.9	0.0	10.6	7.2	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	7.2	18.3	0.4	0.7	17.8	0.4	4.3	0.0	6.4	4.5	0.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	75.7	25.4	10.6	58.3	34.8	16.4	53.3	0.0	57.4	43.7	0.0	41.1
LnGrp LOS	E	C	B	E	C	B	D		E	D		D
Approach Vol, veh/h		2031			2241			435			287	
Approach Delay, s/veh		30.2			34.8			55.3			42.7	
Approach LOS		C			C			E			D	

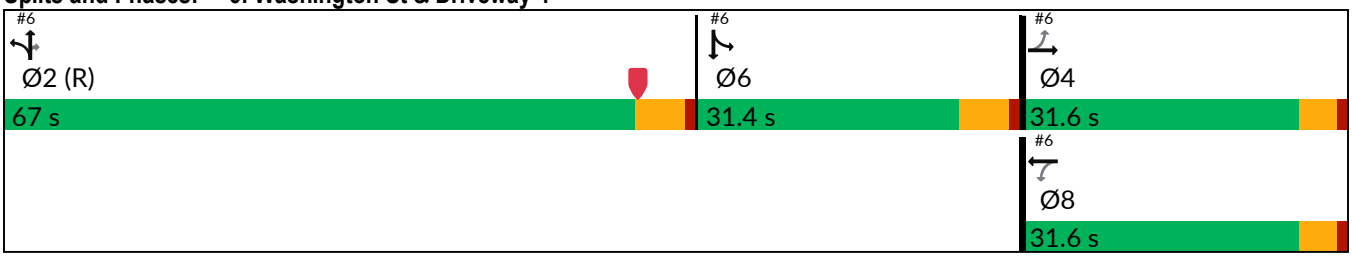
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.4	20.0	7.2	69.8	10.0	24.4	19.2	57.7
Change Period (Y+Rc), s	4.6	4.6	4.6	6.2	4.6	4.6	4.6	6.2
Max Green Setting (Gmax), s	9.8	23.2	5.0	62.0	5.4	27.6	14.8	52.2
Max Q Clear Time (g_c+I1), s	11.2	14.7	3.5	50.1	7.4	8.5	14.6	46.8
Green Ext Time (p_c), s	0.0	0.7	0.0	8.7	0.0	0.5	0.0	4.8

Intersection Summary	
HCM 7th Control Delay, s/veh	35.2
HCM 7th LOS	D

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Configurations								
Traffic Volume (vph)	10	0	37	0	140	1254	109	768
Future Volume (vph)	10	0	37	0	140	1254	109	768
Turn Type	Perm	NA	Perm	NA	Split	NA	Perm	NA
Protected Phases		4		8	2	2		6
Permitted Phases	4		8				2	
Detector Phase	4	4	8	8	2	2	2	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	31.6	31.6	31.6	31.6	22.8	22.8	22.8	22.8
Total Split (s)	31.6	31.6	31.6	31.6	67.0	67.0	67.0	31.4
Total Split (%)	24.3%	24.3%	24.3%	24.3%	51.5%	51.5%	51.5%	24.2%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	4.8	4.8	4.8
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
Total Lost Time (s)		4.6		4.6	5.8	5.8	5.8	5.8
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Min	Min	Min	Min	C-Max	C-Max	C-Max	None
Act Effct Green (s)		13.4		13.4	76.3	76.3	76.3	24.1
Actuated g/C Ratio		0.10		0.10	0.59	0.59	0.59	0.19
v/c Ratio		0.41		0.53	0.13	1.18	0.10	0.79
Control Delay (s/veh)		15.4		28.0	11.9	111.0	5.4	56.5
Queue Delay		0.0		0.0	0.0	1.6	0.0	0.0
Total Delay (s/veh)		15.4		28.0	11.9	112.5	5.4	56.5
LOS		B		C	B	F	A	E
Approach Delay (s/veh)		15.4		28.0		95.4		56.5
Approach LOS		B		C		F		E

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.18	
Intersection Signal Delay (s/veh): 77.0	Intersection LOS: E
Intersection Capacity Utilization 107.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 6: Washington St & Driveway 4





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	101	37	0	57	140	1254	109	19	768	8
Future Volume (veh/h)	10	0	101	37	0	57	140	1254	109	19	768	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	10	0	104	38	0	59	144	1293	112	20	792	8
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	37	5	128	78	9	76	1107	1163	985	23	917	9
Arrive On Green	0.13	0.00	0.17	0.13	0.00	0.17	1.00	1.00	1.00	0.25	0.34	0.25
Sat Flow, veh/h	83	64	1522	472	110	904	1781	1870	1585	136	5403	55
Grp Volume(v), veh/h	114	0	0	97	0	0	144	1293	112	273	274	273
Grp Sat Flow(s),veh/h/ln	1668	0	0	1486	0	0	1781	1870	1585	1864	1870	1861
Q Serve(g_s), s	0.3	0.0	0.0	0.0	0.0	0.0	0.0	80.8	0.0	17.8	17.8	17.8
Cycle Q Clear(g_c), s	8.4	0.0	0.0	8.1	0.0	0.0	0.0	80.8	0.0	17.8	17.8	17.8
Prop In Lane	0.09		0.91	0.39		0.61	1.00		1.00	0.07		0.03
Lane Grp Cap(c), veh/h	170	0	0	163	0	0	1107	1163	985	316	317	316
V/C Ratio(X)	0.67	0.00	0.00	0.59	0.00	0.00	0.13	1.11	0.11	0.86	0.86	0.86
Avail Cap(c_a), veh/h	363	0	0	343	0	0	1107	1163	985	367	368	366
HCM Platoon Ratio	1.50	2.00	2.00	1.50	2.00	2.00	2.00	2.00	2.00	1.50	2.00	1.50
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.4	0.0	0.0	53.8	0.0	0.0	0.0	0.0	0.0	41.9	41.5	41.7
Incr Delay (d2), s/veh	4.5	0.0	0.0	3.4	0.0	0.0	0.2	62.7	0.2	17.0	16.8	17.0
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	3.6	0.0	0.0	3.1	0.0	0.0	0.1	20.3	0.1	8.1	8.0	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	57.9	0.0	0.0	57.3	0.0	0.0	0.2	62.7	0.2	58.9	58.4	58.7
LnGrp LOS	E			E			A	F	A	E	E	E
Approach Vol, veh/h		114			97			1549			820	
Approach Delay, s/veh		57.9			57.3			52.4			58.7	
Approach LOS		E			E			D			E	

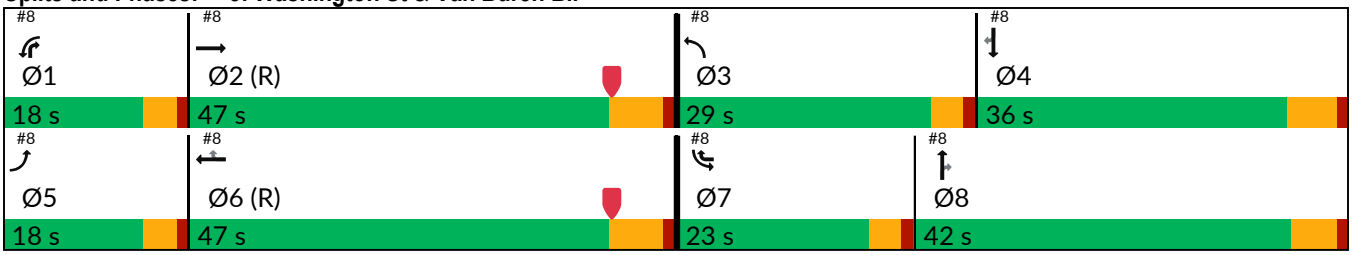
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		86.6		15.5		27.9		15.5				
Change Period (Y+Rc), s		5.8		4.6		5.8		4.6				
Max Green Setting (Gmax), s		61.2		27.0		25.6		27.0				
Max Q Clear Time (g_c+I1), s		82.8		10.4		19.8		10.1				
Green Ext Time (p_c), s		0.0		0.5		2.2		0.4				

Intersection Summary												
HCM 7th Control Delay, s/veh			54.8									
HCM 7th LOS			D									

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	219	1395	187	1573	915	307	1093	317	534	233	135
Future Volume (vph)	219	1395	187	1573	915	307	1093	317	534	233	135
Turn Type	Prot	NA	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	5	2	1	6	7	3	8	1	7	4	
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	6 7	3	8	1	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	5.0	10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	9.2	34.2	9.2	33.2	9.2	9.2	38.4	9.2	9.2	30.8	30.8
Total Split (s)	18.0	47.0	18.0	47.0	23.0	29.0	42.0	18.0	23.0	36.0	36.0
Total Split (%)	13.8%	36.2%	13.8%	36.2%	17.7%	22.3%	32.3%	13.8%	17.7%	27.7%	27.7%
Yellow Time (s)	3.2	5.2	3.2	5.2	3.2	3.2	4.4	3.2	3.2	4.8	4.8
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)	4.2	6.2	4.2	6.2	4.2	4.2	5.4	4.2	4.2	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None	None	None	None
Act Effct Green (s)	13.8	40.8	13.8	40.8	61.6	15.9	36.6	55.8	18.8	39.1	39.1
Actuated g/C Ratio	0.11	0.31	0.11	0.31	0.47	0.12	0.28	0.43	0.14	0.30	0.30
v/c Ratio	1.19	0.97	1.02	0.96	1.06	0.73	1.12	0.41	1.07	0.22	0.22
Control Delay (s/veh)	174.6	58.7	126.2	58.6	74.5	64.4	110.3	22.4	97.5	13.7	6.3
Queue Delay	5.6	0.0	0.0	0.0	10.0	0.0	2.4	0.0	0.0	0.0	0.0
Total Delay (s/veh)	180.2	58.7	126.2	58.6	84.5	64.4	112.7	22.4	97.5	13.7	6.3
LOS	F	E	F	E	F	E	F	C	F	B	A
Approach Delay (s/veh)		73.3		72.2			87.3			62.2	
Approach LOS		E		E			F			E	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.19	
Intersection Signal Delay (s/veh): 74.9	Intersection LOS: E
Intersection Capacity Utilization 110.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 8: Washington St & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	219	1395	200	187	1573	915	307	1093	317	534	233	135
Future Volume (veh/h)	219	1395	200	187	1573	915	307	1093	317	534	233	135
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	235	1500	59	201	1691	500	330	1175	325	574	251	145
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	189	2227	88	189	2331	887	388	1053	615	515	1187	503
Arrive On Green	0.16	0.83	0.62	0.16	0.83	0.62	0.16	0.56	0.42	0.22	0.63	0.63
Sat Flow, veh/h	1781	5362	211	1781	5611	1583	3563	3741	1585	3563	3741	1585
Grp Volume(v), veh/h	235	1046	513	201	1691	500	330	1175	325	574	251	145
Grp Sat Flow(s),veh/h/ln	1781	1870	1832	1781	1870	1583	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	13.8	14.0	15.4	13.8	16.7	22.1	11.7	36.6	19.0	18.8	3.7	5.3
Cycle Q Clear(g_c), s	13.8	14.0	15.4	13.8	16.7	22.1	11.7	36.6	19.0	18.8	3.7	5.3
Prop In Lane	1.00		0.12	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	189	1554	761	189	2331	887	388	1053	615	515	1187	503
V/C Ratio(X)	1.24	0.67	0.67	1.06	0.73	0.56	0.85	1.12	0.53	1.11	0.21	0.29
Avail Cap(c_a), veh/h	189	1554	761	189	2331	887	680	1053	615	515	1187	503
HCM Platoon Ratio	1.50	2.00	1.50	1.50	2.00	1.50	1.50	2.00	1.50	1.50	2.00	2.00
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	7.6	8.8	54.7	7.8	11.3	53.3	28.4	24.3	50.9	16.9	17.2
Incr Delay (d2), s/veh	145.8	2.4	4.7	83.1	2.0	2.6	2.1	65.2	0.9	74.8	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	13.3	3.4	4.2	10.0	3.5	5.6	5.0	20.0	6.0	12.9	1.5	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	200.4	10.0	13.6	137.8	9.9	13.8	55.4	93.6	25.1	125.7	17.0	17.5
LnGrp LOS	F	A	B	F	A	B	E	F	C	F	B	B
Approach Vol, veh/h		1794			2392			1830			970	
Approach Delay, s/veh		35.9			21.4			74.6			81.4	
Approach LOS		D			C			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	60.6	18.4	47.0	18.0	60.6	23.0	42.4
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	13.8	40.8	24.8	30.2	13.8	40.8	18.8	* 37
Max Q Clear Time (g_c+I1), s	15.8	17.4	13.7	7.3	15.8	24.1	20.8	38.6
Green Ext Time (p_c), s	0.0	14.3	0.5	1.9	0.0	13.8	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	47.4
HCM 7th LOS	D

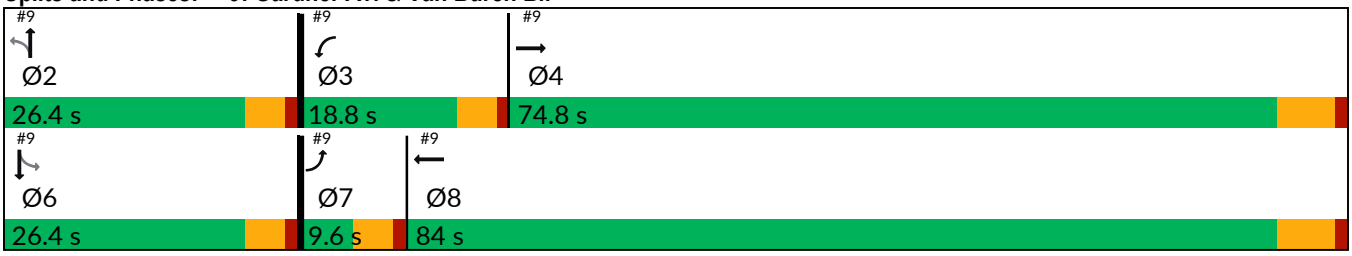
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	13	1990	186	2364	32	0	1	0
Future Volume (vph)	13	1990	186	2364	32	0	1	0
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	27.7	9.6	27.7	26.2	26.2	26.2	26.2
Total Split (s)	9.6	74.8	18.8	84.0	26.4	26.4	26.4	26.4
Total Split (%)	8.0%	62.3%	15.7%	70.0%	22.0%	22.0%	22.0%	22.0%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.7	3.7	3.7	3.7
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
Total Lost Time (s)	4.6	6.2	4.6	6.2		4.7		4.7
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.0	68.6	14.1	83.5		10.0		10.0
Actuated g/C Ratio	0.05	0.63	0.13	0.77		0.09		0.09
v/c Ratio	0.17	0.94	0.85	0.91		0.39		0.07
Control Delay (s/veh)	54.7	28.0	77.7	17.6		10.6		0.5
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay (s/veh)	54.7	28.0	77.7	17.6		10.6		0.5
LOS	D	C	E	B		B		A
Approach Delay (s/veh)		28.2		22.0		10.6		0.5
Approach LOS		C		C		B		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 108.2	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay (s/veh): 24.4	Intersection LOS: C
Intersection Capacity Utilization 94.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 9: Gardner Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	1990	11	186	2364	5	32	0	56	1	0	15
Future Volume (veh/h)	13	1990	11	186	2364	5	32	0	56	1	0	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	14	2095	12	196	2488	5	34	0	59	1	0	16
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	29	2294	13	226	2708	5	87	12	88	39	6	135
Arrive On Green	0.02	0.63	0.63	0.13	0.74	0.74	0.09	0.00	0.09	0.09	0.00	0.09
Sat Flow, veh/h	1781	3623	21	1781	3639	7	434	131	981	28	66	1497
Grp Volume(v), veh/h	14	1026	1081	196	1215	1278	93	0	0	17	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1867	1781	1777	1869	1547	0	0	1590	0	0
Q Serve(g_s), s	0.8	51.9	52.2	11.2	57.2	57.3	4.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.8	51.9	52.2	11.2	57.2	57.3	5.9	0.0	0.0	1.0	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.00	0.37		0.63	0.06		0.94
Lane Grp Cap(c), veh/h	29	1125	1182	226	1323	1391	187	0	0	180	0	0
V/C Ratio(X)	0.49	0.91	0.91	0.87	0.92	0.92	0.50	0.00	0.00	0.09	0.00	0.00
Avail Cap(c_a), veh/h	86	1177	1237	244	1335	1405	367	0	0	368	0	0
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	0.00	0.00
Uniform Delay (d), s/veh	50.5	16.5	16.5	44.3	10.7	10.7	45.5	0.0	0.0	43.3	0.0	0.0
Incr Delay (d2), s/veh	4.8	10.5	10.3	23.5	10.3	9.9	2.1	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	0.4	19.7	20.7	6.2	17.5	18.3	2.4	0.0	0.0	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.3	27.0	26.8	67.8	21.0	20.6	47.6	0.0	0.0	43.6	0.0	0.0
LnGrp LOS	E	C	C	E	C	C	D			D		
Approach Vol, veh/h		2121			2689			93			17	
Approach Delay, s/veh		27.1			24.2			47.6			43.6	
Approach LOS		C			C			D			D	

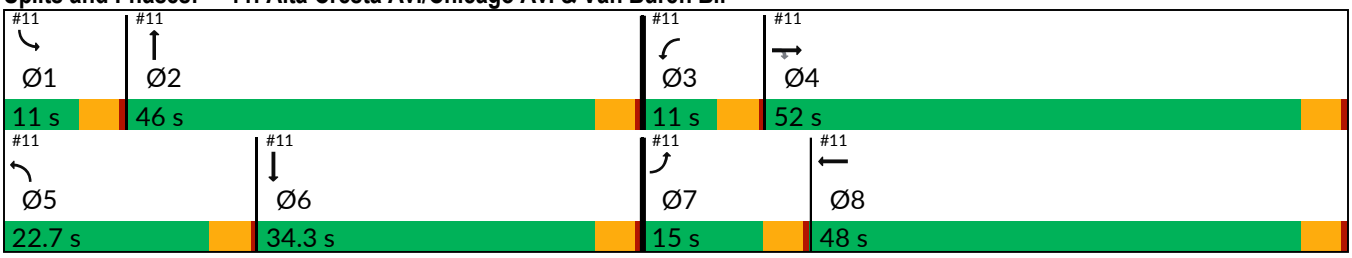
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		14.0	17.8	71.8		14.0	6.3	83.3				
Change Period (Y+Rc), s		4.7	4.6	6.2		4.7	4.6	6.2				
Max Green Setting (Gmax), s		21.7	14.2	68.6		21.7	5.0	77.8				
Max Q Clear Time (g_c+I1), s		7.9	13.2	54.2		3.0	2.8	59.3				
Green Ext Time (p_c), s		0.4	0.0	11.4		0.0	0.0	16.3				

Intersection Summary	
HCM 7th Control Delay, s/veh	26.0
HCM 7th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	195	1763	123	105	2279	143	82	118	6
Future Volume (vph)	195	1763	123	105	2279	143	82	118	6
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.1	30.1	30.1	9.1	30.1	9.1	44.1	9.1	26.1
Total Split (s)	15.0	52.0	52.0	11.0	48.0	22.7	46.0	11.0	34.3
Total Split (%)	12.5%	43.3%	43.3%	9.2%	40.0%	18.9%	38.3%	9.2%	28.6%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	11.0	48.4	48.4	7.0	44.4	13.2	18.1	7.0	11.9
Actuated g/C Ratio	0.11	0.50	0.50	0.07	0.46	0.14	0.19	0.07	0.12
v/c Ratio	1.05	1.07	0.16	0.89	1.07	0.64	0.69	1.00	0.20
Control Delay (s/veh)	121.0	70.2	4.6	103.6	68.3	53.9	32.1	129.4	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	121.0	70.2	4.6	103.6	68.3	53.9	32.1	129.4	15.6
LOS	F	E	A	F	E	D	C	F	B
Approach Delay (s/veh)		71.1			69.8		40.0		98.2
Approach LOS		E			E		D		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 97.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay (s/veh): 68.9	Intersection LOS: E
Intersection Capacity Utilization 90.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 11: Alta Cresta Av./Chicago Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	1763	123	105	2279	32	143	82	168	118	6	39
Future Volume (veh/h)	195	1763	123	105	2279	32	143	82	168	118	6	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	210	1896	116	113	2451	17	154	88	116	127	6	36
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	211	1848	824	133	2493	17	190	111	147	133	28	167
Arrive On Green	0.12	0.52	0.52	0.07	0.48	0.48	0.11	0.15	0.15	0.07	0.12	0.12
Sat Flow, veh/h	1781	3554	1585	1781	5231	36	1781	732	965	1781	231	1389
Grp Volume(v), veh/h	210	1896	116	113	1594	874	154	0	204	127	0	42
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1702	1863	1781	0	1697	1781	0	1620
Q Serve(g_s), s	10.9	47.9	3.5	5.8	42.5	42.6	7.8	0.0	10.7	6.5	0.0	2.2
Cycle Q Clear(g_c), s	10.9	47.9	3.5	5.8	42.5	42.6	7.8	0.0	10.7	6.5	0.0	2.2
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.57	1.00		0.86
Lane Grp Cap(c), veh/h	211	1848	824	133	1622	888	190	0	258	133	0	195
V/C Ratio(X)	1.00	1.03	0.14	0.85	0.98	0.98	0.81	0.00	0.79	0.95	0.00	0.22
Avail Cap(c_a), veh/h	211	1848	824	133	1622	888	360	0	772	133	0	531
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	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.6	22.1	11.5	42.1	23.7	23.8	40.2	0.0	37.6	42.4	0.0	36.6
Incr Delay (d2), s/veh	60.9	27.9	0.1	36.9	18.3	26.3	7.9	0.0	5.4	63.1	0.0	0.5
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	8.0	23.5	1.1	3.8	18.5	22.3	3.8	0.0	4.8	5.2	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	101.5	50.0	11.5	79.0	42.0	50.1	48.2	0.0	43.0	105.5	0.0	37.1
LnGrp LOS	F	F	B	E	D	D	D		D	F		D
Approach Vol, veh/h		2222			2581			358			169	
Approach Delay, s/veh		52.9			46.4			45.2			88.5	
Approach LOS		D			D			D			F	

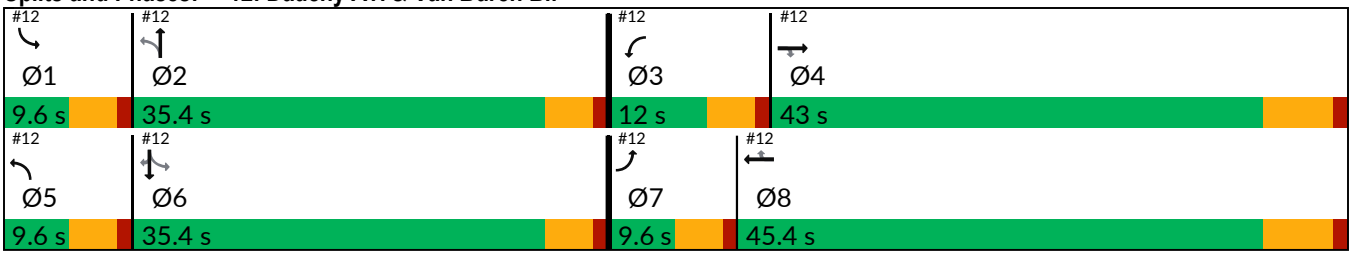
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	18.1	11.0	52.0	13.9	15.2	15.0	48.0
Change Period (Y+Rc), s	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Max Green Setting (Gmax), s	6.9	41.9	6.9	47.9	18.6	30.2	10.9	43.9
Max Q Clear Time (g_c+I1), s	8.5	12.7	7.8	49.9	9.8	4.2	12.9	44.6
Green Ext Time (p_c), s	0.0	1.3	0.0	0.0	0.3	0.2	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	50.3
HCM 7th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	51	1549	271	137	2028	16	215	68	50	118	53
Future Volume (vph)	51	1549	271	137	2028	16	215	68	50	118	53
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	28.2	28.2	9.6	28.2	28.2	9.6	26.6	9.6	33.6	33.6
Total Split (s)	9.6	43.0	43.0	12.0	45.4	45.4	9.6	35.4	9.6	35.4	35.4
Total Split (%)	9.6%	43.0%	43.0%	12.0%	45.4%	45.4%	9.6%	35.4%	9.6%	35.4%	35.4%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	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	None	None	None	None
Act Effct Green (s)	5.0	37.0	37.0	7.4	41.5	41.5	21.9	19.0	19.9	14.9	14.9
Actuated g/C Ratio	0.06	0.44	0.44	0.09	0.49	0.49	0.26	0.22	0.24	0.18	0.18
v/c Ratio	0.52	1.09	0.39	0.96	0.88	0.02	0.74	0.56	0.23	0.39	0.15
Control Delay (s/veh)	60.0	75.5	12.2	104.5	26.8	0.1	41.4	19.5	23.4	33.5	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	60.0	75.5	12.2	104.5	26.8	0.1	41.4	19.5	23.4	33.5	0.8
LOS	E	E	B	F	C	A	D	B	C	C	A
Approach Delay (s/veh)		65.9			31.5			29.7		23.3	
Approach LOS		E			C			C		C	

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 84.5	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.09	
Intersection Signal Delay (s/veh): 44.5	Intersection LOS: D
Intersection Capacity Utilization 88.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 12: Dauchy Av. & Van Buren Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	1549	271	137	2028	16	215	68	180	50	118	53
Future Volume (veh/h)	51	1549	271	137	2028	16	215	68	180	50	118	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	55	1684	215	149	2204	9	234	74	98	54	128	32
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	79	1648	735	166	2619	795	281	107	142	230	239	199
Arrive On Green	0.04	0.46	0.46	0.09	0.51	0.51	0.06	0.15	0.15	0.04	0.13	0.13
Sat Flow, veh/h	1781	3554	1585	1781	5106	1549	1781	730	967	1781	1870	1556
Grp Volume(v), veh/h	55	1684	215	149	2204	9	234	0	172	54	128	32
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1702	1549	1781	0	1696	1781	1870	1556
Q Serve(g_s), s	2.4	36.8	6.7	6.6	29.4	0.2	5.0	0.0	7.6	2.1	5.1	1.5
Cycle Q Clear(g_c), s	2.4	36.8	6.7	6.6	29.4	0.2	5.0	0.0	7.6	2.1	5.1	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.57	1.00		1.00
Lane Grp Cap(c), veh/h	79	1648	735	166	2619	795	281	0	249	230	239	199
V/C Ratio(X)	0.70	1.02	0.29	0.90	0.84	0.01	0.83	0.00	0.69	0.23	0.54	0.16
Avail Cap(c_a), veh/h	112	1648	735	166	2619	795	281	0	659	264	726	604
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	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.4	21.3	13.2	35.6	16.6	9.5	32.8	0.0	32.1	28.3	32.4	30.8
Incr Delay (d2), s/veh	4.1	27.8	0.2	40.7	2.6	0.0	17.9	0.0	3.4	0.2	1.9	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	1.1	18.7	2.0	4.5	9.6	0.1	3.5	0.0	3.3	0.9	2.4	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.5	49.1	13.4	76.2	19.2	9.5	50.7	0.0	35.5	28.5	34.3	31.2
LnGrp LOS	D	F	B	E	B	A	D		D	C	C	C
Approach Vol, veh/h		1954			2362			406			214	
Approach Delay, s/veh		44.9			22.8			44.3			32.3	
Approach LOS		D			C			D			C	

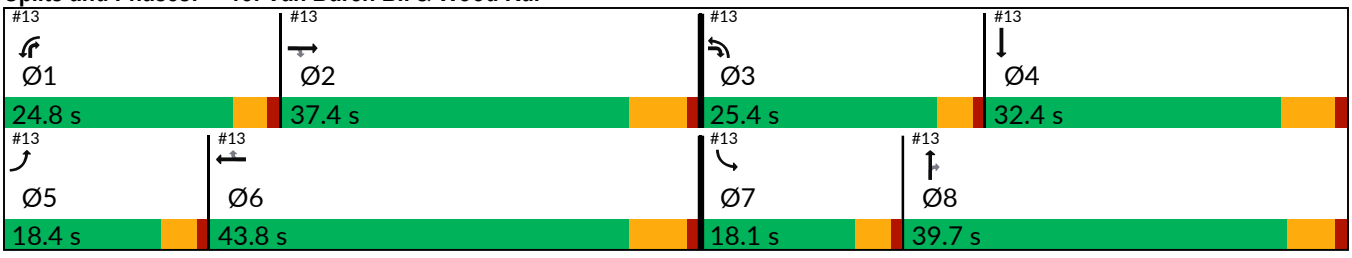
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	16.3	12.0	43.0	9.6	14.7	8.1	46.9
Change Period (Y+Rc), s	4.6	4.6	4.6	6.2	4.6	4.6	4.6	6.2
Max Green Setting (Gmax), s	5.0	30.8	7.4	36.8	5.0	30.8	5.0	39.2
Max Q Clear Time (g_c+I1), s	4.1	9.6	8.6	38.8	7.0	7.1	4.4	31.4
Green Ext Time (p_c), s	0.0	1.0	0.0	0.0	0.0	0.8	0.0	6.7

Intersection Summary	
HCM 7th Control Delay, s/veh	33.7
HCM 7th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	199	1192	698	550	1631	296	383	505	467	109	559
Future Volume (vph)	199	1192	698	550	1631	296	383	505	467	109	559
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2	3	1	6		3	8	1	7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	3	1	6	6	3	8	1	7	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.2	30.2	9.2	9.2	30.2	30.2	9.2	38.4	9.2	9.2	15.8
Total Split (s)	18.4	37.4	25.4	24.8	43.8	43.8	25.4	39.7	24.8	18.1	32.4
Total Split (%)	15.3%	31.2%	21.2%	20.7%	36.5%	36.5%	21.2%	33.1%	20.7%	15.1%	27.0%
Yellow Time (s)	3.2	5.2	3.2	3.2	5.2	5.2	3.2	4.4	3.2	3.2	4.8
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)	4.2	6.2	4.2	4.2	6.2	6.2	4.2	5.4	4.2	4.2	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	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	None	None	None	None
Act Effct Green (s)	14.2	31.2	54.4	20.6	37.6	37.6	21.2	36.6	58.4	11.6	26.6
Actuated g/C Ratio	0.12	0.26	0.45	0.17	0.31	0.31	0.18	0.31	0.49	0.10	0.22
v/c Ratio	1.06	0.91	1.03	1.01	1.04	0.49	0.68	0.49	0.67	0.71	1.14
Control Delay (s/veh)	128.9	53.5	67.6	87.8	71.7	10.2	52.5	36.4	22.6	74.0	114.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	128.9	53.5	67.6	87.8	71.7	10.2	52.5	36.4	22.6	74.0	114.5
LOS	F	D	E	F	E	B	D	D	C	E	F
Approach Delay (s/veh)		65.4			68.0			36.2			110.0
Approach LOS		E			E			D			F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.14	
Intersection Signal Delay (s/veh): 67.0	Intersection LOS: E
Intersection Capacity Utilization 99.0%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 13: Van Buren Bl. & Wood Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	199	1192	698	550	1631	296	383	505	467	109	559	317
Future Volume (veh/h)	199	1192	698	550	1631	296	383	505	467	109	559	317
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.93	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	221	1324	593	611	1812	249	426	561	363	121	621	185
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	221	1526	637	640	1840	515	493	1076	708	148	640	190
Arrive On Green	0.12	0.27	0.27	0.18	0.49	0.33	0.14	0.29	0.29	0.08	0.23	0.23
Sat Flow, veh/h	1781	5611	1534	3563	5611	1572	3563	3741	1473	1781	2760	821
Grp Volume(v), veh/h	221	1324	593	611	1812	249	426	561	363	121	421	385
Grp Sat Flow(s),veh/h/ln	1781	1870	1534	1781	1870	1572	1781	1870	1473	1781	1870	1710
Q Serve(g_s), s	14.2	25.8	31.2	19.5	36.5	14.5	13.4	14.4	20.0	7.7	25.6	25.6
Cycle Q Clear(g_c), s	14.2	25.8	31.2	19.5	36.5	14.5	13.4	14.4	20.0	7.7	25.6	25.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	221	1526	637	640	1840	515	493	1076	708	148	434	397
V/C Ratio(X)	1.00	0.87	0.93	0.95	0.98	0.48	0.86	0.52	0.51	0.82	0.97	0.97
Avail Cap(c_a), veh/h	221	1526	637	640	1840	515	659	1119	725	216	434	397
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.50	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	39.8	32.4	46.6	28.9	30.8	48.3	34.2	21.6	51.7	43.6	43.7
Incr Delay (d2), s/veh	61.1	5.7	20.7	24.6	17.5	1.0	7.2	0.4	0.6	9.5	35.2	37.7
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	9.8	12.0	18.6	10.4	15.3	5.5	6.3	6.5	6.7	3.7	15.7	14.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	111.4	45.5	53.1	71.2	46.4	31.8	55.6	34.6	22.2	61.2	78.8	81.4
LnGrp LOS	F	D	D	E	D	C	E	C	C	E	E	F
Approach Vol, veh/h		2138			2672			1350			927	
Approach Delay, s/veh		54.4			50.7			37.9			77.6	
Approach LOS		D			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.8	37.4	20.1	32.4	18.4	43.8	13.7	38.8
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	20.6	31.2	21.2	26.6	14.2	37.6	13.9	* 34
Max Q Clear Time (g_c+I1), s	21.5	33.2	15.4	27.6	16.2	38.5	9.7	22.0
Green Ext Time (p_c), s	0.0	0.0	0.5	0.0	0.0	0.0	0.0	4.0

Intersection Summary	
HCM 7th Control Delay, s/veh	52.9
HCM 7th LOS	D

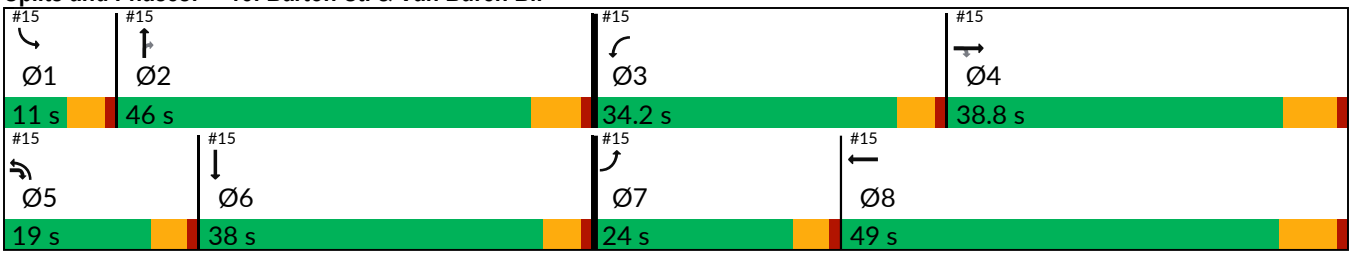
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	268	1088	218	297	1855	442	97	451	25	95
Future Volume (vph)	268	1088	218	297	1855	442	97	451	25	95
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	5	3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	5	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.2	9.6	9.6	28.5	9.6	44.8	44.8	9.6	26.1
Total Split (s)	24.0	38.8	19.0	34.2	49.0	19.0	46.0	46.0	11.0	38.0
Total Split (%)	18.5%	29.8%	14.6%	26.3%	37.7%	14.6%	35.4%	35.4%	8.5%	29.2%
Yellow Time (s)	3.6	5.2	3.6	3.6	5.5	3.6	4.8	4.8	3.6	3.6
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)	4.6	6.2	4.6	4.6	6.5	4.6	5.8	5.8	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lead	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	None	None	None	None
Act Effct Green (s)	19.4	36.5	57.1	25.9	42.6	14.4	38.9	38.9	5.9	27.4
Actuated g/C Ratio	0.16	0.29	0.46	0.21	0.34	0.12	0.31	0.31	0.05	0.22
v/c Ratio	1.08	0.74	0.28	0.90	1.09	1.19	0.19	0.61	0.34	0.90
Control Delay (s/veh)	125.6	44.4	3.8	75.0	89.7	155.9	33.2	7.2	70.2	58.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	125.6	44.4	3.8	75.0	89.7	155.9	33.2	7.2	70.2	58.0
LOS	F	D	A	E	F	F	C	A	E	E
Approach Delay (s/veh)		52.6			87.7		76.1			58.8
Approach LOS		D			F		E			E

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 124.2	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.19	
Intersection Signal Delay (s/veh): 72.5	Intersection LOS: E
Intersection Capacity Utilization 101.8%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 15: Barton St. & Van Buren Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	268	1088	218	297	1855	26	442	97	451	25	95	260
Future Volume (veh/h)	268	1088	218	297	1855	26	442	97	451	25	95	260
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	298	1209	178	330	2061	15	491	108	333	28	106	145
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	292	1808	704	358	1997	15	433	505	428	45	123	168
Arrive On Green	0.25	0.48	0.32	0.20	0.54	0.36	0.18	0.27	0.27	0.04	0.17	0.17
Sat Flow, veh/h	1781	5611	1585	1781	5562	40	3563	1870	1585	1781	707	968
Grp Volume(v), veh/h	298	1209	178	330	1386	690	491	108	333	28	0	251
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1862	1781	1870	1585	1781	0	1675
Q Serve(g_s), s	19.4	19.5	8.3	21.5	42.5	42.5	14.4	5.3	23.0	1.8	0.0	17.2
Cycle Q Clear(g_c), s	19.4	19.5	8.3	21.5	42.5	42.5	14.4	5.3	23.0	1.8	0.0	17.2
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.58
Lane Grp Cap(c), veh/h	292	1808	704	358	1343	669	433	505	428	45	0	291
V/C Ratio(X)	1.02	0.67	0.25	0.92	1.03	1.03	1.13	0.21	0.78	0.62	0.00	0.86
Avail Cap(c_a), veh/h	292	1808	704	445	1343	669	433	635	538	96	0	473
HCM Platoon Ratio	1.50	1.50	1.00	1.00	1.50	1.00	1.50	1.00	1.00	1.50	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	0.00	1.00
Uniform Delay (d), s/veh	44.6	25.8	20.6	46.4	27.3	27.5	48.4	33.5	39.9	56.4	0.0	47.5
Incr Delay (d2), s/veh	58.1	1.0	0.2	20.0	33.1	43.4	84.7	0.2	5.6	5.0	0.0	9.0
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	12.1	7.0	2.9	11.0	19.5	21.5	10.9	2.4	9.1	0.9	0.0	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	102.7	26.7	20.8	66.4	60.4	71.0	133.1	33.7	45.5	61.4	0.0	56.5
LnGrp LOS	F	C	C	E	F	F	F	C	D	E		E
Approach Vol, veh/h		1685			2406			932			279	
Approach Delay, s/veh		39.5			64.2			90.3			57.0	
Approach LOS		D			E			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	37.8	28.4	44.6	19.0	26.4	24.0	49.0
Change Period (Y+Rc), s	4.6	5.8	4.6	* 6.5	4.6	* 5.8	4.6	6.5
Max Green Setting (Gmax), s	6.4	40.2	29.6	* 33	14.4	* 33	19.4	42.5
Max Q Clear Time (g_c+I1), s	3.8	25.0	23.5	21.5	16.4	19.2	21.4	44.5
Green Ext Time (p_c), s	0.0	1.5	0.3	6.0	0.0	1.3	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	60.6
HCM 7th LOS	E

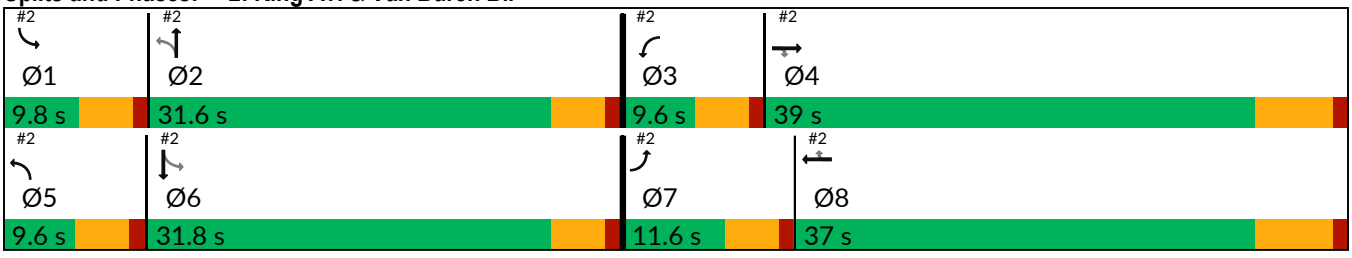
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	113	1748	188	29	1586	63	71	13	86	42
Future Volume (vph)	113	1748	188	29	1586	63	71	13	86	42
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA
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	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.5	28.5	9.6	28.5	28.5	9.6	26.1	9.6	31.6
Total Split (s)	11.6	39.0	39.0	9.6	37.0	37.0	9.6	31.6	9.8	31.8
Total Split (%)	12.9%	43.3%	43.3%	10.7%	41.1%	41.1%	10.7%	35.1%	10.9%	35.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.5	41.4	41.4	5.4	30.0	30.0	11.5	13.4	17.2	13.5
Actuated g/C Ratio	0.11	0.60	0.60	0.08	0.43	0.43	0.17	0.19	0.25	0.19
v/c Ratio	0.61	0.86	0.20	0.22	0.75	0.09	0.30	0.08	0.26	0.27
Control Delay (s/veh)	51.7	26.1	6.5	40.2	22.4	0.3	26.2	17.0	21.3	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	51.7	26.1	6.5	40.2	22.4	0.3	26.2	17.0	21.3	15.6
LOS	D	C	A	D	C	A	C	B	C	B
Approach Delay (s/veh)		25.7			21.8			23.6		18.3
Approach LOS		C			C			C		B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 69.5	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay (s/veh): 23.7	Intersection LOS: C
Intersection Capacity Utilization 77.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 2: King Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	113	1748	188	29	1586	63	71	13	14	86	42	54
Future Volume (veh/h)	113	1748	188	29	1586	63	71	13	14	86	42	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	0.99		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	118	1821	154	30	1652	63	74	14	6	90	44	42
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	150	1734	773	57	2224	686	312	151	65	370	111	106
Arrive On Green	0.08	0.49	0.49	0.03	0.44	0.44	0.06	0.12	0.12	0.06	0.13	0.13
Sat Flow, veh/h	1781	3554	1585	1781	5106	1576	1781	1240	532	1781	877	837
Grp Volume(v), veh/h	118	1821	154	30	1652	63	74	0	20	90	0	86
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1702	1576	1781	0	1772	1781	0	1714
Q Serve(g_s), s	4.4	32.8	3.7	1.1	18.1	1.6	2.4	0.0	0.7	2.9	0.0	3.1
Cycle Q Clear(g_c), s	4.4	32.8	3.7	1.1	18.1	1.6	2.4	0.0	0.7	2.9	0.0	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.30	1.00		0.49
Lane Grp Cap(c), veh/h	150	1734	773	57	2224	686	312	0	216	370	0	217
V/C Ratio(X)	0.79	1.05	0.20	0.53	0.74	0.09	0.24	0.00	0.09	0.24	0.00	0.40
Avail Cap(c_a), veh/h	186	1734	773	133	2340	722	345	0	712	400	0	693
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	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.2	17.2	9.8	32.0	15.8	11.2	23.8	0.0	26.2	23.7	0.0	27.0
Incr Delay (d2), s/veh	12.8	36.1	0.1	2.8	1.2	0.1	0.1	0.0	0.2	0.1	0.0	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	2.2	18.5	1.0	0.5	5.7	0.5	1.0	0.0	0.3	1.2	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	43.0	53.3	9.9	34.8	17.1	11.2	23.9	0.0	26.4	23.8	0.0	28.1
LnGrp LOS	D	F	A	C	B	B	C		C	C		C
Approach Vol, veh/h		2093			1745			94			176	
Approach Delay, s/veh		49.6			17.2			24.4			25.9	
Approach LOS		D			B			C			C	

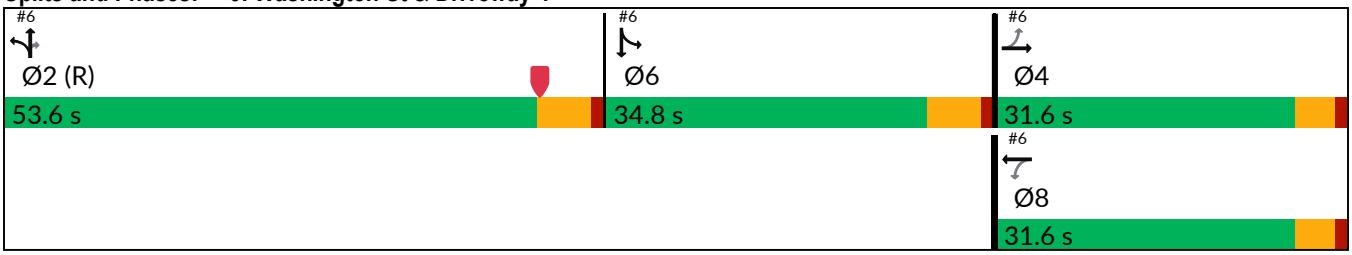
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	12.8	6.7	39.0	8.3	13.1	10.3	35.5
Change Period (Y+Rc), s	4.6	4.6	4.6	6.2	4.6	4.6	4.6	6.2
Max Green Setting (Gmax), s	5.2	27.0	5.0	32.8	5.0	27.2	7.0	30.8
Max Q Clear Time (g_c+I1), s	4.9	2.7	3.1	34.8	4.4	5.1	6.4	20.1
Green Ext Time (p_c), s	0.0	0.1	0.0	0.0	0.0	0.4	0.0	7.3

Intersection Summary	
HCM 7th Control Delay, s/veh	34.2
HCM 7th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Configurations								
Traffic Volume (vph)	27	0	57	0	100	686	137	1042
Future Volume (vph)	27	0	57	0	100	686	137	1042
Turn Type	Perm	NA	Perm	NA	Split	NA	Perm	NA
Protected Phases		4		8	2	2		6
Permitted Phases	4		8				2	
Detector Phase	4	4	8	8	2	2	2	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	31.6	31.6	31.6	31.6	27.8	27.8	27.8	27.8
Total Split (s)	31.6	31.6	31.6	31.6	53.6	53.6	53.6	34.8
Total Split (%)	26.3%	26.3%	26.3%	26.3%	44.7%	44.7%	44.7%	29.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	4.8	4.8	4.8	4.8
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
Total Lost Time (s)		4.6		4.6	5.8	5.8	5.8	5.8
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	Min	Min	Min	Min	C-Max	C-Max	C-Max	None
Act Effct Green (s)		14.2		14.2	60.6	60.6	60.6	29.0
Actuated g/C Ratio		0.12		0.12	0.51	0.51	0.51	0.24
v/c Ratio		0.52		0.69	0.12	0.80	0.18	1.05
Control Delay (s/veh)		20.2		40.4	18.6	39.1	8.0	85.3
Queue Delay		0.0		0.0	0.0	5.9	0.0	0.0
Total Delay (s/veh)		20.2		40.4	18.6	45.0	8.0	85.3
LOS		C		D	B	D	A	F
Approach Delay (s/veh)		20.2		40.4		36.6		85.3
Approach LOS		C		D		D		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 48.6 (41%), Referenced to phase 2:NBTL, Start of Yellow	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay (s/veh): 60.3	Intersection LOS: E
Intersection Capacity Utilization 86.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 6: Washington St & Driveway 4





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	0	99	57	0	63	100	686	137	94	1042	36
Future Volume (veh/h)	27	0	99	57	0	63	100	686	137	94	1042	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	0	109	63	0	69	110	754	151	103	1145	40
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	66	12	149	110	10	84	903	948	804	104	1158	40
Arrive On Green	0.12	0.00	0.12	0.12	0.00	0.12	1.00	1.00	1.00	0.24	0.24	0.24
Sat Flow, veh/h	254	99	1282	565	90	718	1781	1870	1585	431	4793	167
Grp Volume(v), veh/h	139	0	0	132	0	0	110	754	151	442	407	440
Grp Sat Flow(s),veh/h/ln	1635	0	0	1373	0	0	1781	1870	1585	1849	1702	1840
Q Serve(g_s), s	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	28.6	28.6	28.6
Cycle Q Clear(g_c), s	9.7	0.0	0.0	11.4	0.0	0.0	0.0	0.0	0.0	28.6	28.6	28.6
Prop In Lane	0.22		0.78	0.48		0.52	1.00		1.00	0.23		0.09
Lane Grp Cap(c), veh/h	227	0	0	204	0	0	903	948	804	447	411	445
V/C Ratio(X)	0.61	0.00	0.00	0.65	0.00	0.00	0.12	0.80	0.19	0.99	0.99	0.99
Avail Cap(c_a), veh/h	392	0	0	359	0	0	903	948	804	447	411	445
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.2	0.0	0.0	51.7	0.0	0.0	0.0	0.0	0.0	45.3	45.3	45.3
Incr Delay (d2), s/veh	2.7	0.0	0.0	3.4	0.0	0.0	0.3	6.9	0.5	39.5	41.2	39.6
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	0.0	0.0	4.1	0.0	0.0	0.1	1.8	0.1	17.5	16.3	17.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	53.8	0.0	0.0	55.2	0.0	0.0	0.3	6.9	0.5	84.8	86.5	84.9
LnGrp LOS	D			E			A	A	A	F	F	F
Approach Vol, veh/h		139			132			1015			1288	
Approach Delay, s/veh		53.8			55.2			5.2			85.4	
Approach LOS		D			E			A			F	

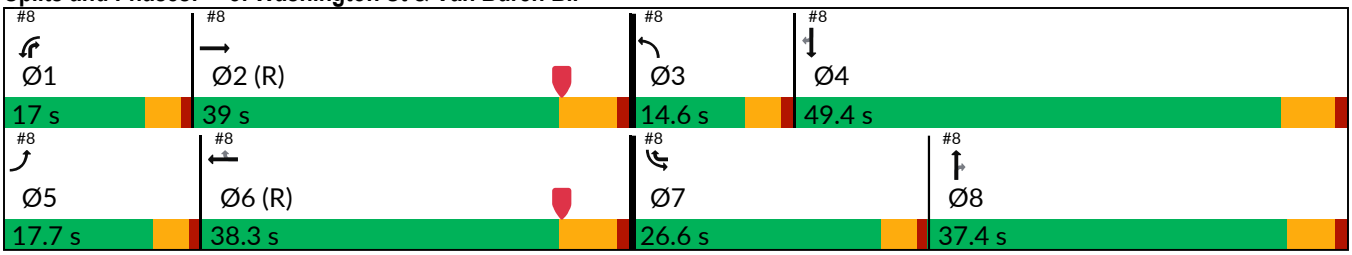
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		66.6		18.6		34.8		18.6				
Change Period (Y+Rc), s		5.8		4.6		5.8		4.6				
Max Green Setting (Gmax), s		47.8		27.0		29.0		27.0				
Max Q Clear Time (g_c+I1), s		2.0		11.7		30.6		13.4				
Green Ext Time (p_c), s		6.6		0.7		0.0		0.6				

Intersection Summary												
HCM 7th Control Delay, s/veh			50.5									
HCM 7th LOS			D									

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	192	1530	213	1353	530	132	278	217	725	591	198
Future Volume (vph)	192	1530	213	1353	530	132	278	217	725	591	198
Turn Type	Prot	NA	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	5	2	1	6	7	3	8	1	7	4	
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	7	3	8	1	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	5.0	10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	9.2	34.2	9.2	33.2	9.2	9.2	37.4	9.2	9.2	30.8	30.8
Total Split (s)	17.7	39.0	17.0	38.3	26.6	14.6	37.4	17.0	26.6	49.4	49.4
Total Split (%)	14.8%	32.5%	14.2%	31.9%	22.2%	12.2%	31.2%	14.2%	22.2%	41.2%	41.2%
Yellow Time (s)	3.2	5.2	3.2	5.2	3.2	3.2	4.4	3.2	3.2	4.8	4.8
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)	4.2	6.2	4.2	6.2	4.2	4.2	5.4	4.2	4.2	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None	None	None	None
Act Effct Green (s)	16.9	39.8	20.5	43.4	67.8	8.5	17.3	43.2	22.4	30.8	30.8
Actuated g/C Ratio	0.14	0.33	0.17	0.36	0.57	0.07	0.14	0.36	0.19	0.26	0.26
v/c Ratio	0.75	0.91	0.68	0.68	0.47	0.51	0.53	0.30	1.06	0.63	0.32
Control Delay (s/veh)	67.5	46.8	59.4	35.9	9.7	60.3	50.0	14.4	100.8	62.8	26.0
Queue Delay	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	67.5	46.8	59.4	35.9	10.0	60.3	50.0	14.4	100.8	62.8	26.0
LOS	E	D	E	D	B	E	D	B	F	E	C
Approach Delay (s/veh)		48.9		31.7			39.9			76.2	
Approach LOS		D		C			D			E	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay (s/veh): 48.8	Intersection LOS: D
Intersection Capacity Utilization 89.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 8: Washington St & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	192	1530	125	213	1353	530	132	278	217	725	591	198
Future Volume (veh/h)	192	1530	125	213	1353	530	132	278	217	725	591	198
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	196	1561	111	217	1381	445	135	284	184	740	603	152
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	200	2084	148	190	2229	924	192	500	381	665	997	422
Arrive On Green	0.11	0.40	0.40	0.11	0.40	0.40	0.05	0.13	0.13	0.19	0.27	0.27
Sat Flow, veh/h	1781	5172	368	1781	5611	1581	3563	3741	1585	3563	3741	1585
Grp Volume(v), veh/h	196	1129	543	217	1381	445	135	284	184	740	603	152
Grp Sat Flow(s),veh/h/ln	1781	1870	1798	1781	1870	1581	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	13.2	31.0	31.0	12.8	23.6	19.6	4.5	8.5	12.0	22.4	16.9	9.3
Cycle Q Clear(g_c), s	13.2	31.0	31.0	12.8	23.6	19.6	4.5	8.5	12.0	22.4	16.9	9.3
Prop In Lane	1.00		0.20	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	200	1508	725	190	2229	924	192	500	381	665	997	422
V/C Ratio(X)	0.98	0.75	0.75	1.14	0.62	0.48	0.70	0.57	0.48	1.11	0.61	0.36
Avail Cap(c_a), veh/h	200	1508	725	190	2229	924	309	998	592	665	1359	576
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	53.1	30.6	30.6	53.6	28.9	14.5	55.8	48.7	39.2	48.8	38.5	35.7
Incr Delay (d2), s/veh	56.9	3.5	7.0	108.7	1.3	1.8	1.8	1.0	1.0	70.1	0.6	0.5
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	8.8	13.8	13.9	11.3	10.2	6.8	2.0	4.0	4.6	16.1	7.6	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	110.0	34.1	37.6	162.3	30.2	16.3	57.6	49.8	40.1	118.9	39.1	36.2
LnGrp LOS	F	C	D	F	C	B	E	D	D	F	D	D
Approach Vol, veh/h		1868			2043			603			1495	
Approach Delay, s/veh		43.1			41.2			48.6			78.3	
Approach LOS		D			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	54.6	10.7	37.8	17.7	53.9	26.6	21.8
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	12.8	32.8	10.4	43.6	13.5	32.1	22.4	* 32
Max Q Clear Time (g_c+I1), s	14.8	33.0	6.5	18.9	15.2	25.6	24.4	14.0
Green Ext Time (p_c), s	0.0	0.0	0.1	4.3	0.0	5.4	0.0	2.1

Intersection Summary	
HCM 7th Control Delay, s/veh	51.8
HCM 7th LOS	D

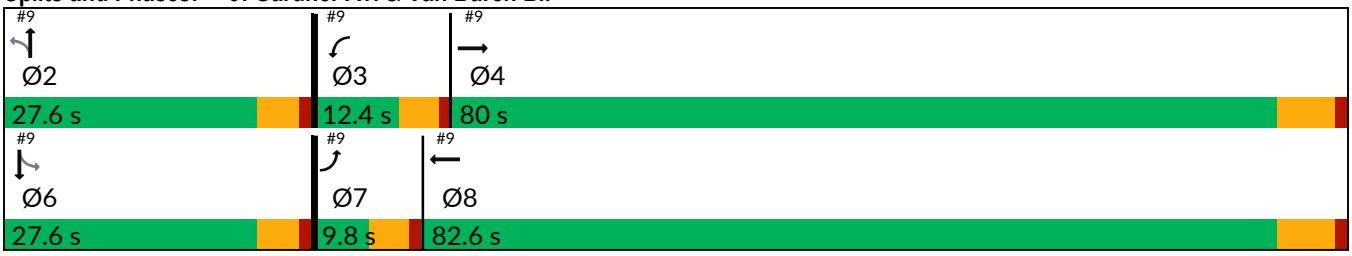
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	19	2201	94	1939	48	0	3	0
Future Volume (vph)	19	2201	94	1939	48	0	3	0
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	28.2	9.6	28.2	26.7	26.7	26.7	26.7
Total Split (s)	9.8	80.0	12.4	82.6	27.6	27.6	27.6	27.6
Total Split (%)	8.2%	66.7%	10.3%	68.8%	23.0%	23.0%	23.0%	23.0%
Yellow Time (s)	3.6	5.2	3.6	5.2	3.7	3.7	3.7	3.7
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
Total Lost Time (s)	4.6	6.2	4.6	6.2		4.7		4.7
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.1	74.1	7.8	84.1		10.0		10.0
Actuated g/C Ratio	0.05	0.71	0.07	0.81		0.10		0.10
v/c Ratio	0.23	0.95	0.77	0.74		0.35		0.13
Control Delay (s/veh)	55.7	25.3	83.4	9.5		16.1		1.3
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay (s/veh)	55.7	25.3	83.4	9.5		16.1		1.3
LOS	E	C	F	A		B		A
Approach Delay (s/veh)		25.6		12.8		16.1		1.3
Approach LOS		C		B		B		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 104.2	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay (s/veh): 19.3	Intersection LOS: B
Intersection Capacity Utilization 90.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 9: Gardner Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	2201	22	94	1939	13	48	0	16	3	0	24
Future Volume (veh/h)	19	2201	22	94	1939	13	48	0	16	3	0	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	20	2367	24	101	2085	14	52	0	17	3	0	26
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	38	2513	25	126	2704	18	146	8	31	44	8	118
Arrive On Green	0.02	0.70	0.70	0.07	0.75	0.75	0.08	0.00	0.08	0.08	0.00	0.08
Sat Flow, veh/h	1781	3604	36	1781	3618	24	1032	102	371	65	100	1427
Grp Volume(v), veh/h	20	1165	1226	101	1023	1076	69	0	0	29	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1864	1781	1777	1866	1504	0	0	1592	0	0
Q Serve(g_s), s	1.2	60.0	60.7	5.8	35.7	35.9	2.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.2	60.0	60.7	5.8	35.7	35.9	4.4	0.0	0.0	1.8	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.01	0.75		0.25	0.10		0.90
Lane Grp Cap(c), veh/h	38	1239	1300	126	1328	1394	185	0	0	170	0	0
V/C Ratio(X)	0.53	0.94	0.94	0.80	0.77	0.77	0.37	0.00	0.00	0.17	0.00	0.00
Avail Cap(c_a), veh/h	89	1259	1320	133	1328	1394	381	0	0	384	0	0
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	0.00	0.00
Uniform Delay (d), s/veh	50.5	13.9	14.0	47.7	7.8	7.9	45.7	0.0	0.0	44.6	0.0	0.0
Incr Delay (d2), s/veh	4.3	13.5	13.4	24.6	2.8	2.7	1.2	0.0	0.0	0.5	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	0.5	21.5	22.7	3.3	9.6	10.1	1.8	0.0	0.0	0.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.8	27.3	27.4	72.2	10.7	10.6	46.9	0.0	0.0	45.1	0.0	0.0
LnGrp LOS	D	C	C	E	B	B	D			D		
Approach Vol, veh/h		2411			2200			69			29	
Approach Delay, s/veh		27.6			13.5			46.9			45.1	
Approach LOS		C			B			D			D	

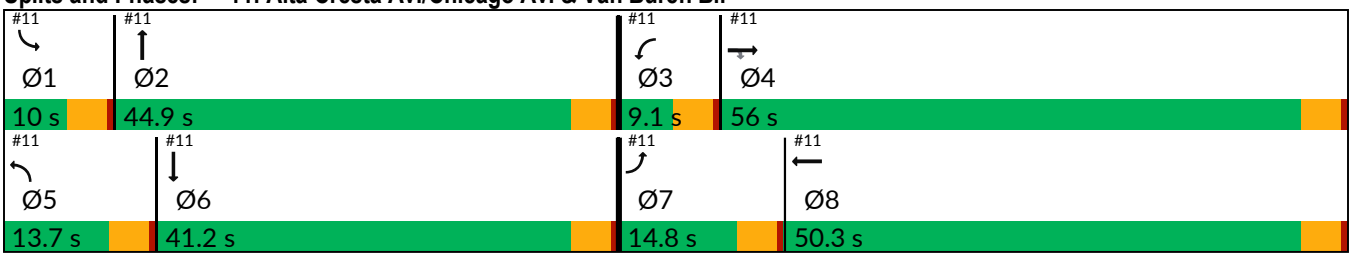
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		13.3	12.0	78.8		13.3	6.8	84.0				
Change Period (Y+Rc), s		4.7	4.6	6.2		4.7	4.6	6.2				
Max Green Setting (Gmax), s		22.9	7.8	73.8		22.9	5.2	76.4				
Max Q Clear Time (g_c+I1), s		6.4	7.8	62.7		3.8	3.2	37.9				
Green Ext Time (p_c), s		0.3	0.0	10.0		0.1	0.0	23.1				

Intersection Summary	
HCM 7th Control Delay, s/veh	21.4
HCM 7th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	141	2083	159	70	1913	56	42	94	4
Future Volume (vph)	141	2083	159	70	1913	56	42	94	4
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.1	30.1	30.1	9.1	30.1	9.1	44.1	9.1	26.1
Total Split (s)	14.8	56.0	56.0	9.1	50.3	13.7	44.9	10.0	41.2
Total Split (%)	12.3%	46.7%	46.7%	7.6%	41.9%	11.4%	37.4%	8.3%	34.3%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	10.9	52.7	52.7	5.1	47.0	8.1	12.8	6.0	12.9
Actuated g/C Ratio	0.12	0.56	0.56	0.05	0.50	0.09	0.14	0.06	0.14
v/c Ratio	0.73	1.11	0.18	0.77	0.84	0.39	0.26	0.88	0.14
Control Delay (s/veh)	63.3	78.7	7.4	92.2	25.5	51.1	26.3	104.8	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	63.3	78.7	7.4	92.2	25.5	51.1	26.3	104.8	14.7
LOS	E	E	A	F	C	D	C	F	B
Approach Delay (s/veh)		73.1			27.7		38.0		81.9
Approach LOS		E			C		D		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 93.3	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay (s/veh): 52.4	Intersection LOS: D
Intersection Capacity Utilization 83.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 11: Alta Cresta Av./Chicago Av. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	141	2083	159	70	1913	89	56	42	21	94	4	28
Future Volume (veh/h)	141	2083	159	70	1913	89	56	42	21	94	4	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	150	2216	151	74	2035	95	60	45	11	100	4	26
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	185	2205	983	95	2846	132	80	87	21	126	18	120
Arrive On Green	0.10	0.62	0.62	0.05	0.57	0.57	0.04	0.06	0.06	0.07	0.09	0.09
Sat Flow, veh/h	1781	3554	1585	1781	4995	232	1781	1452	355	1781	216	1402
Grp Volume(v), veh/h	150	2216	151	74	1385	745	60	0	56	100	0	30
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1702	1823	1781	0	1806	1781	0	1618
Q Serve(g_s), s	6.9	51.9	3.3	3.4	24.7	24.9	2.8	0.0	2.5	4.6	0.0	1.4
Cycle Q Clear(g_c), s	6.9	51.9	3.3	3.4	24.7	24.9	2.8	0.0	2.5	4.6	0.0	1.4
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.20	1.00		0.87
Lane Grp Cap(c), veh/h	185	2205	983	95	1940	1039	80	0	108	126	0	138
V/C Ratio(X)	0.81	1.01	0.15	0.78	0.71	0.72	0.75	0.00	0.52	0.80	0.00	0.22
Avail Cap(c_a), veh/h	228	2205	983	106	1940	1039	204	0	881	126	0	718
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	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.7	15.9	6.7	39.1	13.0	13.1	39.5	0.0	38.2	38.3	0.0	35.7
Incr Delay (d2), s/veh	16.3	20.4	0.1	27.4	1.3	2.4	13.0	0.0	3.8	28.9	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	3.6	20.9	0.9	2.1	7.6	8.5	1.5	0.0	1.2	3.0	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	53.0	36.3	6.7	66.5	14.3	15.5	52.5	0.0	42.0	67.2	0.0	36.4
LnGrp LOS	D	F	A	E	B	B	D		D	E		D
Approach Vol, veh/h		2517			2204			116			130	
Approach Delay, s/veh		35.5			16.5			47.4			60.1	
Approach LOS		D			B			D			E	

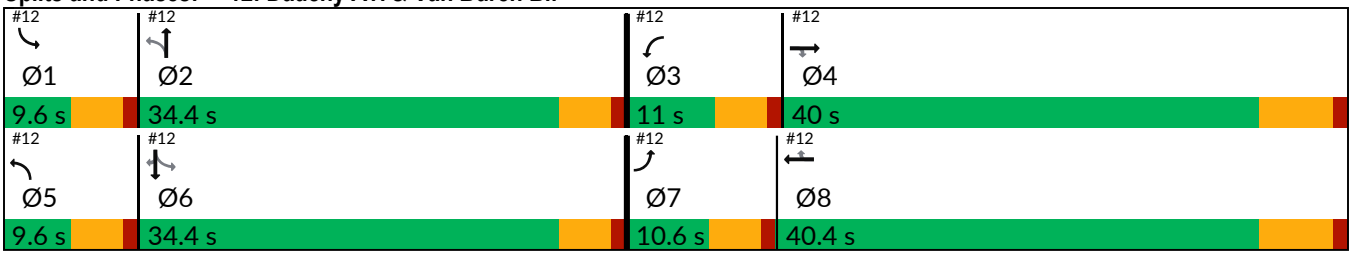
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	9.1	8.6	56.0	7.9	11.2	12.8	51.8
Change Period (Y+Rc), s	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Max Green Setting (Gmax), s	5.9	40.8	5.0	51.9	9.6	37.1	10.7	46.2
Max Q Clear Time (g_c+I1), s	6.6	4.5	5.4	53.9	4.8	3.4	8.9	26.9
Green Ext Time (p_c), s	0.0	0.3	0.0	0.0	0.0	0.1	0.1	13.5

Intersection Summary	
HCM 7th Control Delay, s/veh	28.0
HCM 7th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	96	1770	162	141	1767	19	166	30	62	32	55
Future Volume (vph)	96	1770	162	141	1767	19	166	30	62	32	55
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8	2		6		6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	28.2	28.2	9.6	28.2	28.2	9.6	26.6	9.6	33.6	33.6
Total Split (s)	10.6	40.0	40.0	11.0	40.4	40.4	9.6	34.4	9.6	34.4	34.4
Total Split (%)	11.2%	42.1%	42.1%	11.6%	42.5%	42.5%	10.1%	36.2%	10.1%	36.2%	36.2%
Yellow Time (s)	3.6	5.2	5.2	3.6	5.2	5.2	3.6	3.6	3.6	3.6	3.6
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)	4.6	6.2	6.2	4.6	6.2	6.2	4.6	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	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	None	None	None	None
Act Effct Green (s)	6.1	34.5	34.5	6.5	34.9	34.9	15.9	13.3	15.9	13.3	13.3
Actuated g/C Ratio	0.08	0.45	0.45	0.09	0.46	0.46	0.21	0.17	0.21	0.17	0.17
v/c Ratio	0.73	1.19	0.22	1.01	0.82	0.03	0.61	0.34	0.23	0.10	0.15
Control Delay (s/veh)	67.3	114.8	6.8	116.0	23.8	0.1	32.8	12.6	21.9	27.2	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	67.3	114.8	6.8	116.0	23.8	0.1	32.8	12.6	21.9	27.2	0.8
LOS	E	F	A	F	C	A	C	B	C	C	A
Approach Delay (s/veh)		104.0			30.3			24.5		15.2	
Approach LOS		F			C			C		B	

Intersection Summary	
Cycle Length: 95	
Actuated Cycle Length: 76.1	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.19	
Intersection Signal Delay (s/veh): 63.5	Intersection LOS: E
Intersection Capacity Utilization 85.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 12: Dauchy Av. & Van Buren Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	1770	162	141	1767	19	166	30	86	62	32	55
Future Volume (veh/h)	96	1770	162	141	1767	19	166	30	86	62	32	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	103	1903	128	152	1900	11	178	32	61	67	34	35
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	131	1647	734	156	2437	756	340	71	135	283	199	166
Arrive On Green	0.07	0.46	0.46	0.09	0.48	0.48	0.07	0.12	0.12	0.05	0.11	0.11
Sat Flow, veh/h	1781	3554	1583	1781	5106	1583	1781	570	1087	1781	1870	1560
Grp Volume(v), veh/h	103	1903	128	152	1900	11	178	0	93	67	34	35
Grp Sat Flow(s),veh/h/ln	1781	1777	1583	1781	1702	1583	1781	0	1657	1781	1870	1560
Q Serve(g_s), s	4.1	33.8	3.4	6.2	22.6	0.3	5.0	0.0	3.8	2.4	1.2	1.5
Cycle Q Clear(g_c), s	4.1	33.8	3.4	6.2	22.6	0.3	5.0	0.0	3.8	2.4	1.2	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.66	1.00		1.00
Lane Grp Cap(c), veh/h	131	1647	734	156	2437	756	340	0	205	283	199	166
V/C Ratio(X)	0.78	1.16	0.17	0.97	0.78	0.01	0.52	0.00	0.45	0.24	0.17	0.21
Avail Cap(c_a), veh/h	147	1647	734	156	2437	756	340	0	677	314	764	637
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	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.2	19.6	11.4	33.2	15.9	10.0	28.0	0.0	29.7	27.0	29.7	29.8
Incr Delay (d2), s/veh	18.8	77.4	0.1	63.3	1.7	0.0	0.7	0.0	1.6	0.2	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	2.3	28.6	1.0	5.2	7.2	0.1	2.9	0.0	1.6	1.0	0.6	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	52.0	97.0	11.5	96.5	17.6	10.0	28.7	0.0	31.2	27.1	30.1	30.4
LnGrp LOS	D	F	B	F	B	B	C		C	C	C	C
Approach Vol, veh/h		2134			2063			271			136	
Approach Delay, s/veh		89.7			23.3			29.6			28.7	
Approach LOS		F			C			C			C	

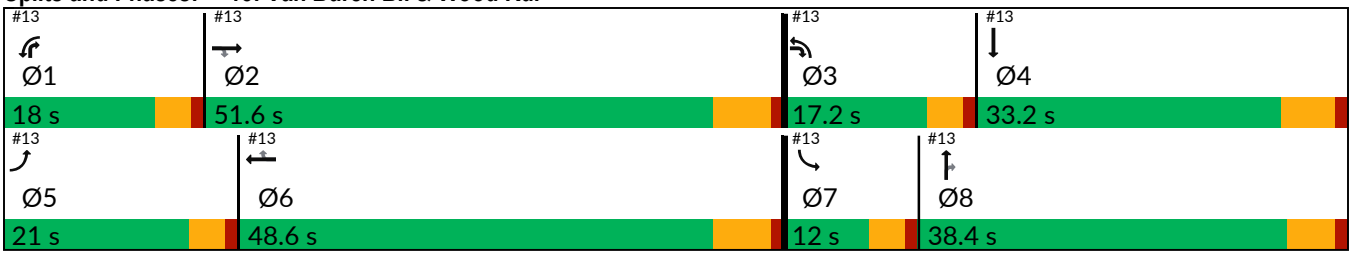
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	13.6	11.0	40.0	9.6	12.4	10.0	41.0
Change Period (Y+Rc), s	4.6	4.6	4.6	6.2	4.6	4.6	4.6	6.2
Max Green Setting (Gmax), s	5.0	29.8	6.4	33.8	5.0	29.8	6.0	34.2
Max Q Clear Time (g_c+I1), s	4.4	5.8	8.2	35.8	7.0	3.5	6.1	24.6
Green Ext Time (p_c), s	0.0	0.5	0.0	0.0	0.0	0.2	0.0	7.3

Intersection Summary	
HCM 7th Control Delay, s/veh	54.6
HCM 7th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	197	1681	406	318	1553	159	265	288	282	82	344
Future Volume (vph)	197	1681	406	318	1553	159	265	288	282	82	344
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA
Protected Phases	5	2	3	1	6		3	8	1	7	4
Permitted Phases			2			6			8		
Detector Phase	5	2	3	1	6	6	3	8	1	7	4
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0
Minimum Split (s)	9.2	30.2	9.2	9.2	30.2	30.2	9.2	38.4	9.2	9.2	15.8
Total Split (s)	21.0	51.6	17.2	18.0	48.6	48.6	17.2	38.4	18.0	12.0	33.2
Total Split (%)	17.5%	43.0%	14.3%	15.0%	40.5%	40.5%	14.3%	32.0%	15.0%	10.0%	27.7%
Yellow Time (s)	3.2	5.2	3.2	3.2	5.2	5.2	3.2	4.4	3.2	3.2	4.8
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)	4.2	6.2	4.2	4.2	6.2	6.2	4.2	5.4	4.2	4.2	5.8
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	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	None	None	None	None
Act Effct Green (s)	15.6	45.1	59.2	13.2	42.8	42.8	12.0	29.5	44.0	7.5	24.6
Actuated g/C Ratio	0.14	0.39	0.51	0.11	0.37	0.37	0.10	0.26	0.38	0.06	0.21
v/c Ratio	0.85	0.87	0.50	0.83	0.85	0.25	0.76	0.33	0.47	0.74	0.87
Control Delay (s/veh)	80.4	39.1	14.7	69.6	39.5	7.1	65.7	35.9	20.9	89.5	42.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	80.4	39.1	14.7	69.6	39.5	7.1	65.7	35.9	20.9	89.5	42.8
LOS	F	D	B	E	D	A	E	D	C	F	D
Approach Delay (s/veh)		38.3			41.7			40.3			47.6
Approach LOS		D			D			D			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 115.5	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay (s/veh): 41.0	Intersection LOS: D
Intersection Capacity Utilization 88.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 13: Van Buren Bl. & Wood Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	1681	406	318	1553	159	265	288	282	82	344	377
Future Volume (veh/h)	197	1681	406	318	1553	159	265	288	282	82	344	377
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.92	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	203	1733	341	328	1601	125	273	297	212	85	355	301
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	231	1999	759	386	1905	587	332	914	552	107	404	337
Arrive On Green	0.13	0.39	0.39	0.11	0.37	0.37	0.10	0.26	0.26	0.06	0.22	0.22
Sat Flow, veh/h	1781	5106	1550	3456	5106	1574	3456	3554	1459	1781	1826	1523
Grp Volume(v), veh/h	203	1733	341	328	1601	125	273	297	212	85	345	311
Grp Sat Flow(s),veh/h/ln	1781	1702	1550	1728	1702	1574	1728	1777	1459	1781	1777	1573
Q Serve(g_s), s	12.7	35.5	16.4	10.6	32.5	6.1	8.8	7.7	12.2	5.3	21.3	21.8
Cycle Q Clear(g_c), s	12.7	35.5	16.4	10.6	32.5	6.1	8.8	7.7	12.2	5.3	21.3	21.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.97
Lane Grp Cap(c), veh/h	231	1999	759	386	1905	587	332	914	552	107	393	348
V/C Ratio(X)	0.88	0.87	0.45	0.85	0.84	0.21	0.82	0.33	0.38	0.79	0.88	0.89
Avail Cap(c_a), veh/h	263	2041	772	420	1906	587	395	1032	601	122	429	379
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	48.5	31.8	19.1	49.5	32.5	24.2	50.4	34.2	26.5	52.7	42.8	42.9
Incr Delay (d2), s/veh	22.8	4.3	0.6	13.3	3.7	0.3	9.6	0.2	0.4	22.5	17.4	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	6.9	14.3	5.7	5.1	13.1	2.3	4.2	3.3	4.2	3.0	11.0	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	71.4	36.2	19.7	62.8	36.2	24.5	59.9	34.4	26.9	75.2	60.2	64.4
LnGrp LOS	E	D	B	E	D	C	E	C	C	E	E	E
Approach Vol, veh/h		2277			2054			782			741	
Approach Delay, s/veh		36.9			39.7			41.3			63.7	
Approach LOS		D			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.9	50.7	15.1	30.9	18.9	48.6	11.0	35.0
Change Period (Y+Rc), s	4.2	6.2	4.2	5.8	4.2	6.2	4.2	* 5.8
Max Green Setting (Gmax), s	13.8	45.4	13.0	27.4	16.8	42.4	7.8	* 33
Max Q Clear Time (g_c+I1), s	12.6	37.5	10.8	23.8	14.7	34.5	7.3	14.2
Green Ext Time (p_c), s	0.1	6.9	0.1	1.3	0.1	6.5	0.0	2.4

Intersection Summary	
HCM 7th Control Delay, s/veh	41.8
HCM 7th LOS	D

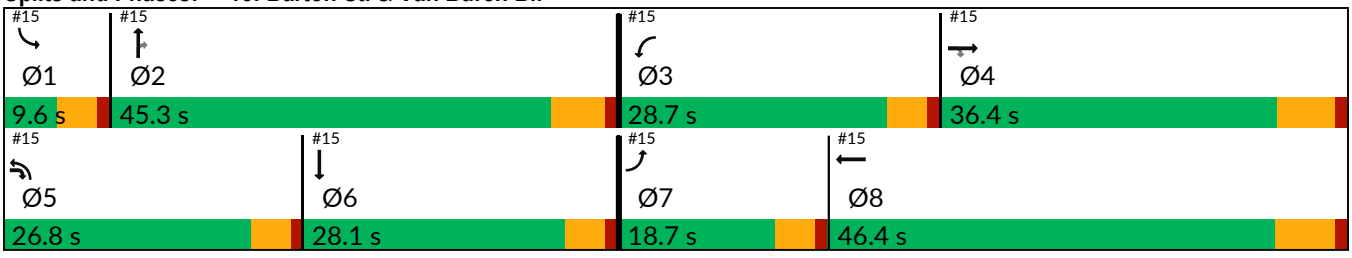
Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	175	1294	267	356	1411	402	76	354	27	48
Future Volume (vph)	175	1294	267	356	1411	402	76	354	27	48
Turn Type	Prot	NA	pm+ov	Prot	NA	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	5	3	8	5	2		1	6
Permitted Phases			4					2		
Detector Phase	7	4	5	3	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.2	9.6	9.6	28.5	9.6	44.8	44.8	9.6	26.1
Total Split (s)	18.7	36.4	26.8	28.7	46.4	26.8	45.3	45.3	9.6	28.1
Total Split (%)	15.6%	30.3%	22.3%	23.9%	38.7%	22.3%	37.8%	37.8%	8.0%	23.4%
Yellow Time (s)	3.6	5.2	3.6	3.6	5.5	3.6	4.8	4.8	3.6	3.6
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)	4.6	6.2	4.6	4.6	6.5	4.6	5.8	5.8	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lead	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	None	None	None	None
Act Effct Green (s)	13.7	30.4	53.6	24.2	40.7	17.0	27.7	27.7	5.0	12.9
Actuated g/C Ratio	0.13	0.29	0.51	0.23	0.39	0.16	0.26	0.26	0.05	0.12
v/c Ratio	0.81	0.93	0.30	0.92	0.78	0.77	0.16	0.55	0.34	0.55
Control Delay (s/veh)	71.4	49.3	2.7	70.4	32.7	52.3	31.2	6.3	62.6	31.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	71.4	49.3	2.7	70.4	32.7	52.3	31.2	6.3	62.6	31.3
LOS	E	D	A	E	C	D	C	A	E	C
Approach Delay (s/veh)		44.4			40.2		30.8			36.5
Approach LOS		D			D		C			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 104.6	
Natural Cycle: 115	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay (s/veh): 39.9	Intersection LOS: D
Intersection Capacity Utilization 81.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 15: Barton St. & Van Buren Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	175	1294	267	356	1411	40	402	76	354	27	48	88
Future Volume (veh/h)	175	1294	267	356	1411	40	402	76	354	27	48	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	186	1377	260	379	1501	33	428	81	217	29	51	46
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	218	1539	711	409	2101	46	507	414	345	50	92	83
Arrive On Green	0.12	0.30	0.30	0.23	0.41	0.41	0.15	0.22	0.22	0.03	0.10	0.10
Sat Flow, veh/h	1781	5106	1585	1781	5138	113	3456	1870	1560	1781	899	811
Grp Volume(v), veh/h	186	1377	260	379	994	540	428	81	217	29	0	97
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1847	1728	1870	1560	1781	0	1711
Q Serve(g_s), s	10.0	25.2	10.6	20.4	23.9	23.9	11.8	3.5	12.3	1.6	0.0	5.3
Cycle Q Clear(g_c), s	10.0	25.2	10.6	20.4	23.9	23.9	11.8	3.5	12.3	1.6	0.0	5.3
Prop In Lane	1.00		1.00	1.00		0.06	1.00		1.00	1.00		0.47
Lane Grp Cap(c), veh/h	218	1539	711	409	1392	755	507	414	345	50	0	175
V/C Ratio(X)	0.85	0.89	0.37	0.93	0.71	0.71	0.84	0.20	0.63	0.58	0.00	0.55
Avail Cap(c_a), veh/h	257	1576	722	439	1392	755	784	755	630	91	0	411
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	0.00	1.00
Uniform Delay (d), s/veh	42.1	32.7	17.8	36.9	24.2	24.2	40.7	31.0	34.5	47.0	0.0	41.8
Incr Delay (d2), s/veh	18.4	6.9	0.3	23.9	1.8	3.2	3.0	0.2	1.9	4.0	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	5.3	10.5	3.5	10.9	8.8	9.9	5.0	1.5	4.5	0.8	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	60.5	39.6	18.1	60.8	25.9	27.4	43.7	31.3	36.4	51.0	0.0	44.6
LnGrp LOS	E	D	B	E	C	C	D	C	D	D		D
Approach Vol, veh/h		1823			1913			726			126	
Approach Delay, s/veh		38.7			33.2			40.1			46.0	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	27.4	27.1	36.0	19.0	15.8	16.6	46.5
Change Period (Y+Rc), s	4.6	5.8	4.6	* 6.5	4.6	* 5.8	4.6	6.5
Max Green Setting (Gmax), s	5.0	39.5	24.1	* 30	22.2	* 24	14.1	39.9
Max Q Clear Time (g_c+I1), s	3.6	14.3	22.4	27.2	13.8	7.3	12.0	25.9
Green Ext Time (p_c), s	0.0	1.1	0.1	2.3	0.6	0.4	0.1	7.6

Intersection Summary	
HCM 7th Control Delay, s/veh	36.8
HCM 7th LOS	D

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

APPENDIX 7.7:

HY (2045) WITH PROJECT SIGNALIZED QUEUES WITH IMPROVEMENTS

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	206	1783	70	24	2187	34	226	240	175	159
v/c Ratio	1.48	1.07	0.09	0.22	1.63	0.05	0.66	0.67	0.55	0.34
Control Delay (s/veh)	281.6	67.7	0.6	43.7	309.1	0.1	33.2	36.9	25.6	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	281.6	67.7	0.6	43.7	309.1	0.1	33.2	36.9	25.6	11.6
Queue Length 50th (ft)	~149	449	0	12	~872	0	85	104	64	21
Queue Length 95th (ft)	#305	#848	3	38	#1121	0	139	175	109	66
Internal Link Dist (ft)		1223			755			377		908
Turn Bay Length (ft)	200		80	170		165	100		85	
Base Capacity (vph)	139	1668	815	109	1344	682	340	534	331	637
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.48	1.07	0.09	0.22	1.63	0.05	0.66	0.45	0.53	0.25

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



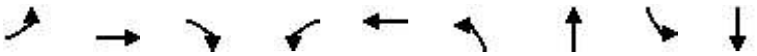
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	235	1715	201	1691	984	330	1175	341	574	251	145
v/c Ratio	0.81	1.03	0.95	1.20	1.19	0.75	1.08	0.38	1.06	0.21	0.21
Control Delay (s/veh)	73.5	74.9	106.8	138.9	129.3	66.4	96.1	18.1	93.1	12.8	5.8
Queue Delay	2.9	0.0	0.0	0.0	0.1	0.0	9.6	0.0	0.0	0.0	0.0
Total Delay (s/veh)	76.4	74.9	106.8	138.9	129.5	66.4	105.8	18.1	93.1	12.8	5.8
Queue Length 50th (ft)	196	~519	174	~589	~726	138	~562	134	~141	75	52
Queue Length 95th (ft)	279	#610	#331	#744	#1050	186	#695	212	#350	m107	m86
Internal Link Dist (ft)		123		578			790			173	
Turn Bay Length (ft)	285		350		300	145		140	180		130
Base Capacity (vph)	369	1662	212	1409	824	512	1085	886	544	1178	688
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	62	0	0	0	15	0	417	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	1.03	0.95	1.20	1.22	0.64	1.76	0.38	1.06	0.21	0.21

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	210	1896	132	113	2485	154	269	127	48
v/c Ratio	1.05	1.07	0.16	0.89	1.07	0.64	0.69	1.00	0.20
Control Delay (s/veh)	121.0	70.2	4.6	103.6	68.3	53.9	32.1	129.4	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	121.0	70.2	4.6	103.6	68.3	53.9	32.1	129.4	15.6
Queue Length 50th (ft)	~131	~657	3	69	~599	89	101	78	3
Queue Length 95th (ft)	#365	#1139	43	#221	#1010	183	179	#249	36
Internal Link Dist (ft)		1565			2589		1030		346
Turn Bay Length (ft)	280		75	295		100		45	
Base Capacity (vph)	200	1765	850	127	2321	342	784	127	538
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.05	1.07	0.16	0.89	1.07	0.45	0.34	1.00	0.09

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	55	1684	295	149	2204	17	234	270	54	128	58
v/c Ratio	0.52	1.09	0.39	0.96	0.88	0.02	0.74	0.56	0.23	0.39	0.15
Control Delay (s/veh)	60.0	75.5	12.2	104.5	26.8	0.1	41.4	19.5	23.4	33.5	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	60.0	75.5	12.2	104.5	26.8	0.1	41.4	19.5	23.4	33.5	0.8
Queue Length 50th (ft)	28	~509	54	78	364	0	102	64	21	61	0
Queue Length 95th (ft)	#94	#854	153	#236	#677	0	163	140	46	110	0
Internal Link Dist (ft)		2589			2614			512		890	
Turn Bay Length (ft)	295		100	420		160	60		70		50
Base Capacity (vph)	105	1550	760	156	2496	818	317	696	237	683	657
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	1.09	0.39	0.96	0.88	0.02	0.74	0.39	0.23	0.19	0.09

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	221	1324	776	611	1812	329	426	561	519	121	973
v/c Ratio	1.06	0.91	1.03	1.01	1.04	0.49	0.68	0.49	0.67	0.71	1.14
Control Delay (s/veh)	128.9	53.5	67.6	87.8	71.7	10.2	52.5	36.4	22.6	74.0	114.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	128.9	53.5	67.6	87.8	71.7	10.2	52.5	36.4	22.6	74.0	114.5
Queue Length 50th (ft)	~190	338	~545	~245	~511	38	158	182	232	93	~415
Queue Length 95th (ft)	#353	#415	#616	#366	#600	121	213	241	358	158	#545
Internal Link Dist (ft)		2614			2123			3887			2020
Turn Bay Length (ft)	400		300	355			186		50	80	
Base Capacity (vph)	209	1452	754	607	1750	669	625	1135	777	205	855
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.06	0.91	1.03	1.01	1.04	0.49	0.68	0.49	0.67	0.59	1.14

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

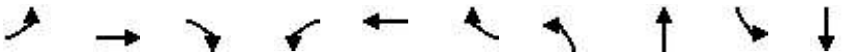


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	298	1209	242	330	2090	491	108	501	28	395
v/c Ratio	1.08	0.74	0.28	0.90	1.09	1.19	0.19	0.61	0.34	0.90
Control Delay (s/veh)	125.6	44.4	3.8	75.0	89.7	155.9	33.2	7.2	70.2	58.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	125.6	44.4	3.8	75.0	89.7	155.9	33.2	7.2	70.2	58.0
Queue Length 50th (ft)	~279	313	0	262	~662	~249	68	12	23	241
Queue Length 95th (ft)	#480	386	52	#421	#789	#372	116	108	58	#395
Internal Link Dist (ft)		3107			1942		1095			637
Turn Bay Length (ft)	400			185		115		125	125	
Base Capacity (vph)	277	1640	858	422	1913	411	610	841	91	517
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.08	0.74	0.28	0.78	1.09	1.19	0.18	0.60	0.31	0.76

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	118	1821	196	30	1652	66	74	29	90	100
v/c Ratio	0.61	0.86	0.20	0.22	0.75	0.09	0.30	0.08	0.26	0.27
Control Delay (s/veh)	51.7	26.1	6.5	40.2	22.4	0.3	26.2	17.0	21.3	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	51.7	26.1	6.5	40.2	22.4	0.3	26.2	17.0	21.3	15.6
Queue Length 50th (ft)	53	340	12	13	227	0	34	6	32	18
Queue Length 95th (ft)	#168	#887	72	45	#442	2	54	26	63	55
Internal Link Dist (ft)		1223			755			377		908
Turn Bay Length (ft)	200		80	170		165	100		85	
Base Capacity (vph)	193	2109	996	137	2441	819	250	730	352	754
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.86	0.20	0.22	0.68	0.08	0.30	0.04	0.26	0.13

Intersection Summary

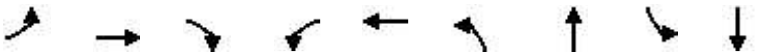
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	196	1689	217	1381	541	135	284	221	740	603	202
v/c Ratio	0.79	0.88	0.68	0.65	0.46	0.54	0.52	0.29	1.15	0.65	0.33
Control Delay (s/veh)	72.0	43.6	59.4	34.1	9.2	62.4	49.6	10.1	128.6	63.7	26.7
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	72.0	43.6	59.4	34.1	9.4	62.4	49.6	10.1	128.6	63.7	26.7
Queue Length 50th (ft)	150	404	159	286	98	52	107	41	268	214	72
Queue Length 95th (ft)	231	#572	#353	#482	257	85	127	88	m236	m180	m61
Internal Link Dist (ft)		123		575			790			173	
Turn Bay Length (ft)	285		350		300	145		140	180		130
Base Capacity (vph)	293	1924	318	2125	1168	273	993	766	645	1353	801
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	135	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.88	0.68	0.65	0.52	0.49	0.29	0.29	1.15	0.45	0.25

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	150	2216	169	74	2130	60	67	100	34
v/c Ratio	0.73	1.11	0.18	0.77	0.84	0.39	0.26	0.88	0.14
Control Delay (s/veh)	63.3	78.7	7.4	92.2	25.5	51.1	26.3	104.8	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	63.3	78.7	7.4	92.2	25.5	51.1	26.3	104.8	14.7
Queue Length 50th (ft)	82	~720	18	42	332	32	24	56	2
Queue Length 95th (ft)	#253	#1375	85	#162	#783	92	58	#207	27
Internal Link Dist (ft)		1565			2589		1030		346
Turn Bay Length (ft)	280		75	295		100		45	
Base Capacity (vph)	206	2000	931	96	2542	185	799	113	671
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	1.11	0.18	0.77	0.84	0.32	0.08	0.88	0.05

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	103	1903	174	152	1900	20	178	124	67	34	59
v/c Ratio	0.73	1.19	0.22	1.01	0.82	0.03	0.61	0.34	0.23	0.10	0.15
Control Delay (s/veh)	67.3	114.8	6.8	116.0	23.8	0.1	32.8	12.6	21.9	27.2	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	67.3	114.8	6.8	116.0	23.8	0.1	32.8	12.6	21.9	27.2	0.8
Queue Length 50th (ft)	49	~586	13	~75	274	0	69	14	24	15	0
Queue Length 95th (ft)	#164	#990	65	#241	#553	0	118	55	51	37	0
Internal Link Dist (ft)		2589			2614			512		890	
Turn Bay Length (ft)	295		100	420		160	60		70		50
Base Capacity (vph)	142	1602	782	151	2330	791	291	710	297	744	709
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	1.19	0.22	1.01	0.82	0.03	0.61	0.17	0.23	0.05	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	203	1733	419	328	1601	164	273	297	291	85	744
v/c Ratio	0.85	0.87	0.50	0.83	0.85	0.25	0.76	0.33	0.47	0.74	0.87
Control Delay (s/veh)	80.4	39.1	14.7	69.6	39.5	7.1	65.7	35.9	20.9	89.5	42.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	80.4	39.1	14.7	69.6	39.5	7.1	65.7	35.9	20.9	89.5	42.8
Queue Length 50th (ft)	157	465	145	132	432	11	108	97	116	67	215
Queue Length 95th (ft)	#285	536	228	#206	501	59	#163	138	191	#153	294
Internal Link Dist (ft)		2614			2123			3887			2020
Turn Bay Length (ft)	400		300	355			186		50	80	
Base Capacity (vph)	258	2006	844	411	1885	669	387	1015	621	120	934
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.86	0.50	0.80	0.85	0.25	0.71	0.29	0.47	0.71	0.80

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	186	1377	284	379	1544	428	81	377	29	145
v/c Ratio	0.81	0.93	0.30	0.92	0.78	0.77	0.16	0.55	0.34	0.55
Control Delay (s/veh)	71.4	49.3	2.7	70.4	32.7	52.3	31.2	6.3	62.6	31.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	71.4	49.3	2.7	70.4	32.7	52.3	31.2	6.3	62.6	31.3
Queue Length 50th (ft)	119	318	0	243	317	139	45	0	19	48
Queue Length 95th (ft)	#283	#536	45	#524	#497	219	83	69	56	115
Internal Link Dist (ft)		3107			1942		1095			637
Turn Bay Length (ft)	400			185		115		125	125	
Base Capacity (vph)	239	1476	1015	410	1969	732	707	826	85	430
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.93	0.28	0.92	0.78	0.58	0.11	0.46	0.34	0.34

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.