MEMORANDUM

November 16, 2021

Re: Hooks Street Design Traffic
Four-lane Analysis Technical Memorandum
Lake County, Florida
Project № 19142.1, v1.1

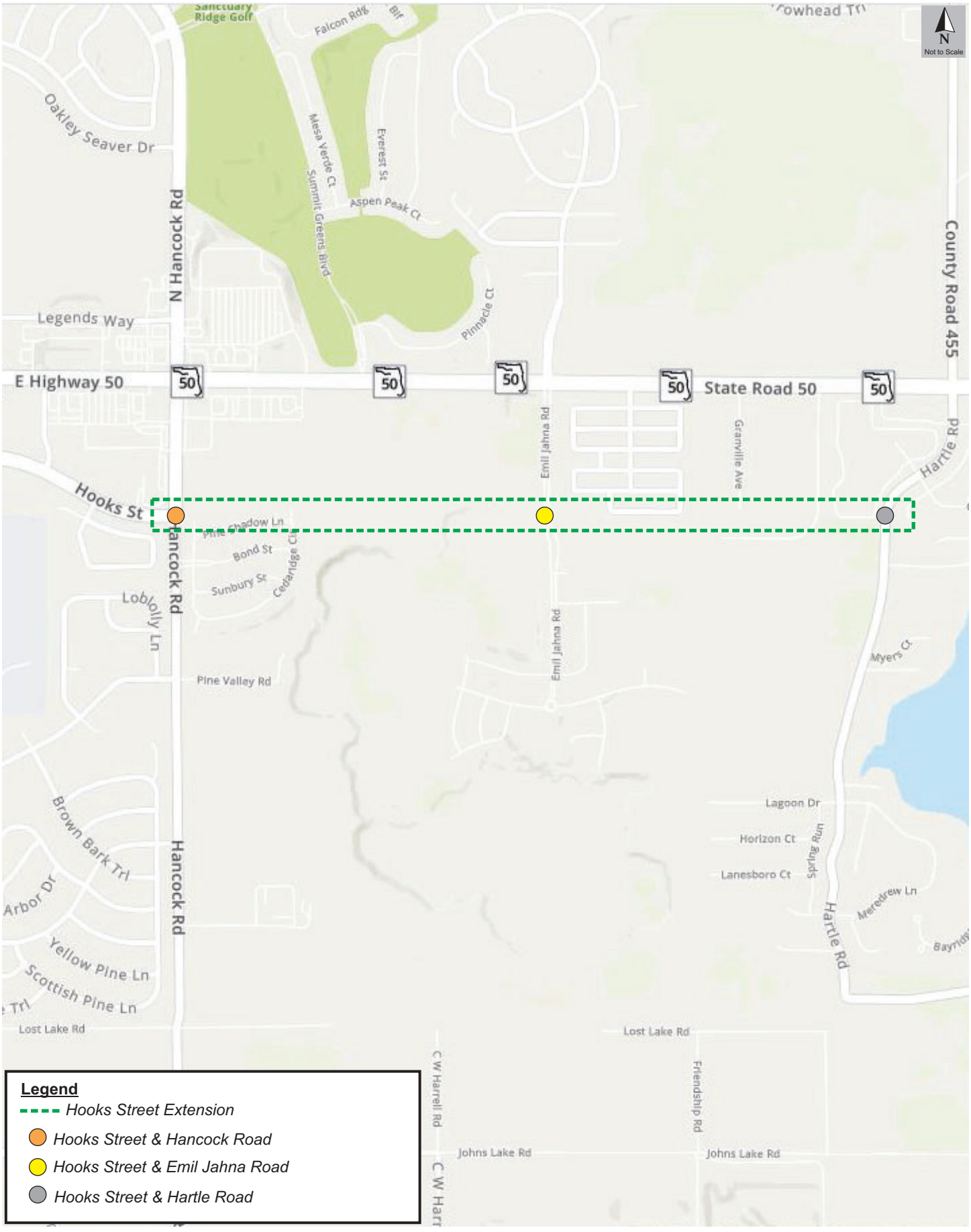
1. INTRODUCTION

Traffic and Mobility Consultants (TMC) performed a Design Traffic Technical Memorandum (DTTM) for Hooks Street Phase I design project for approximately 1.4 miles, from Hancock Road to Hartle Road, in Lake County (See **Figure 1** for Project Location Map). The DTTM report was completed and submitted to Lake County in January 2021. The results of the study showed that the Hooks Street Extension will be able to handle the projected design year 2045 traffic projections as a two-lane divided roadway with a 40-mph posted speed limit.

The DTTM documented the AM and PM peak hour traffic projections at the intersections along the Hooks Street corridor for the forecasted opening year (2025), interim year (2035) and design year (2045). The design traffic volumes were used to establish the basic design requirements for the roadway typical section and each intersection geometry. Using the design traffic volumes, TMC performed an operational analysis of each major intersection and established the minimum required lane geometry needed to adequately serve the projected turning movements at the following study intersections:

- Hooks Street and Hancock Road (Signal)
- Hooks Street and Emil Jahna Road (Signal & Roundabout)
- Hooks Street and Hartle Road (Signal)

After the project was reviewed by Lake County, it was requested to analyze the study corridor of Hooks Street Extension as a four-lane divided roadway and design the study intersections with the four-lane cross-section in mind. Accordingly, this technical memorandum was prepared to analyze the study intersections and establish the minimum required lane geometry with Hooks Street as four-lanes. The following section of this memorandum documents the calculations of the projected turning movement volumes with Hooks Street as four-lanes and summarizes the results of the intersection operational analyses, along with required signal timing data for each study intersection.



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Project Location Map

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Figure 1

2. TURNING VOLUMES PROJECTIONS

2.1 Travel Demand Model

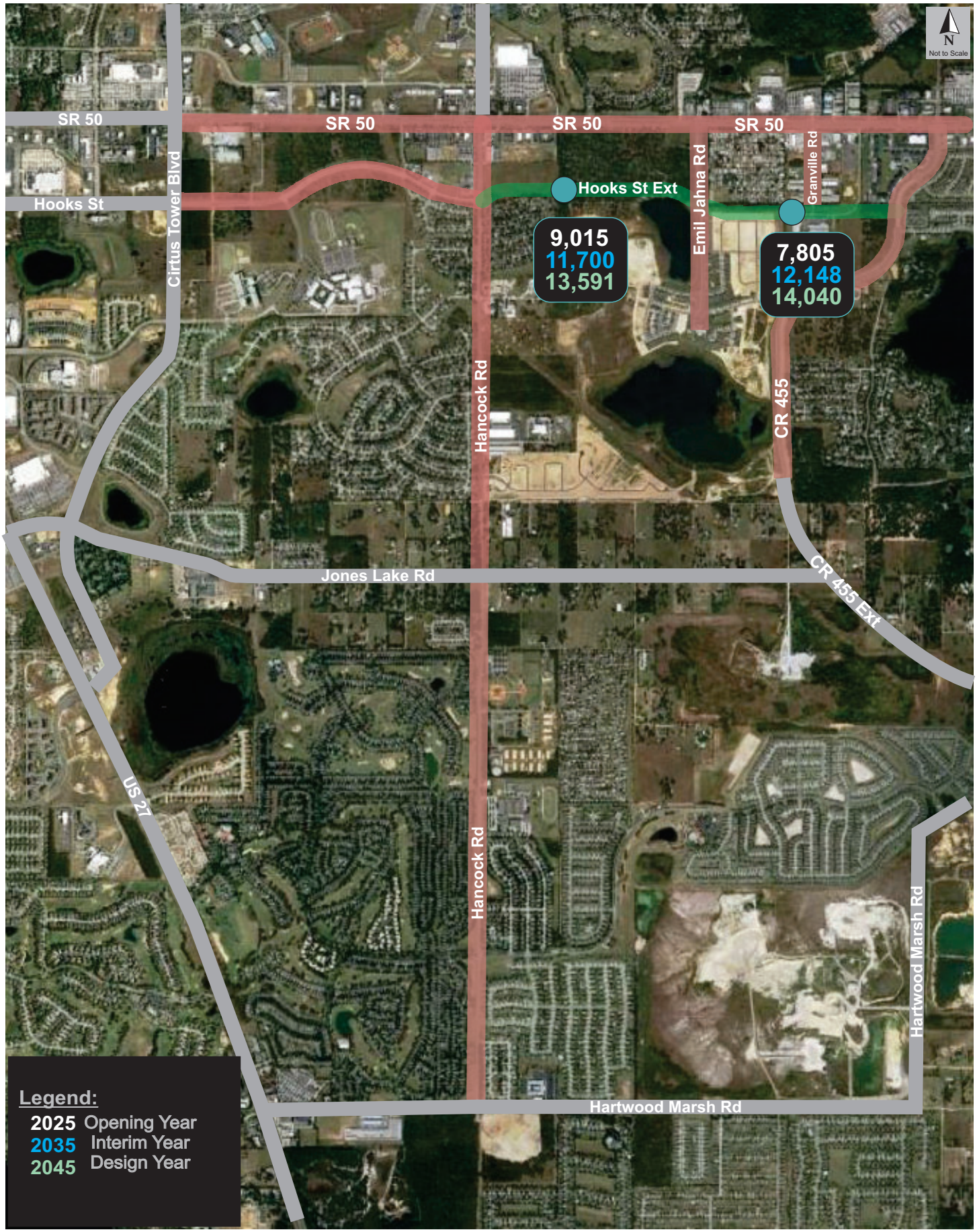
For this technical memorandum, the same Central Florida Regional Planning Model (CFRPM) used to develop traffic projections along the Hooks Street Extension corridor for the opening year, interim year and design year was used to determine the projected daily traffic with Hooks Street corridor as four-lane divided roadway with 40 mph speed limit. Accordingly, the model network was modified, and the model run was performed for the design year 2045 and the daily traffic volumes were calculated for the opening year 2025 and interim year 2035. The resulting daily traffic projections are presented in **Figure 2**.

2.2 Future Intersection Directional Design Hour Volumes

The future opening year 2025, interim 2035 and design year 2045 AADT along with the recommended design traffic characteristics were used to develop the proposed directional design hour volumes (DDHVs) for both the AM and PM peak design hours at the study intersections.

The future year DDHVs for the intersections were developed by balancing inflow and outflow AADTs and calculating DDHVs based on the recommended K and D factors of the intersecting roadways. Intersection DDHVs were balanced and adjusted to obtain reasonable inflows and outflows between upstream and downstream intersections. Engineering judgment was also applied to ensure reasonable growth was achieved for all turning movements between the opening year 2025, interim 2035 and design year 2045 projections.

The future year AM and PM design hour volumes for the Hooks Street Extension study intersections are shown in **Figure 3**, **Figure 4** and **Figure 5** for the opening year 2025, interim year 2035 and design year 2045, respectively.



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Projected AADT

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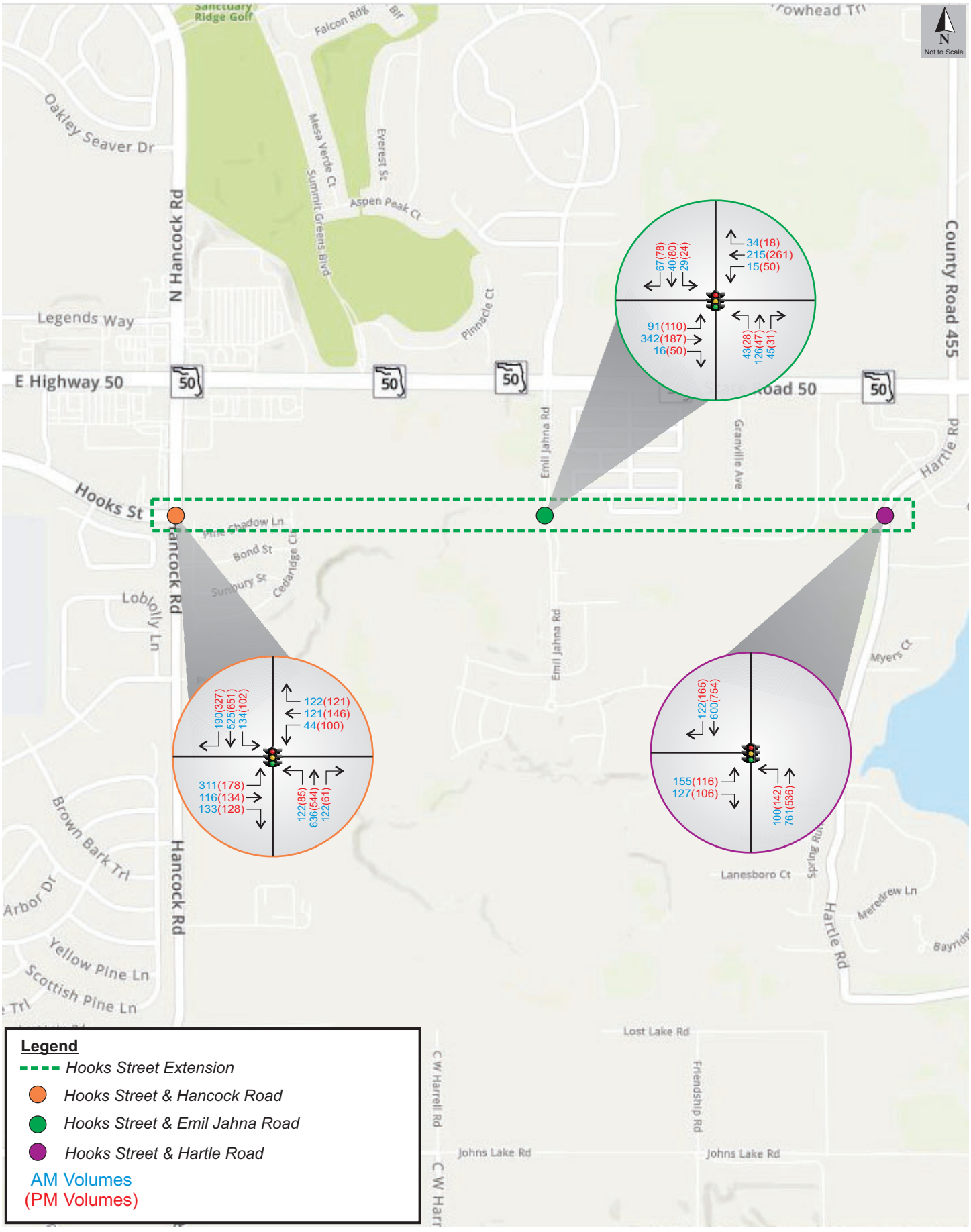
Figure 2



2025 AM and PM Intersection Volumes

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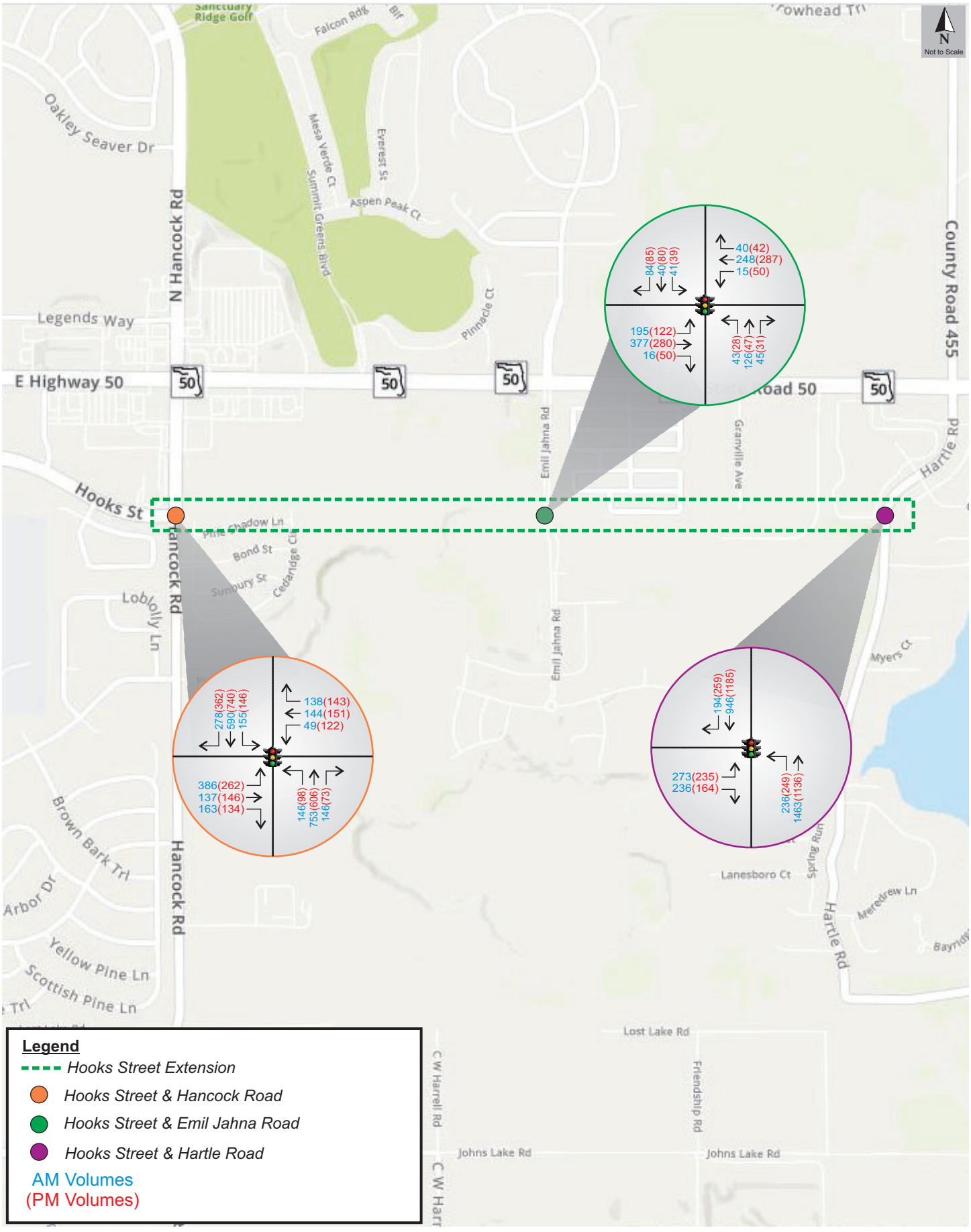
Figure 3



2035 AM and PM Intersection Volumes

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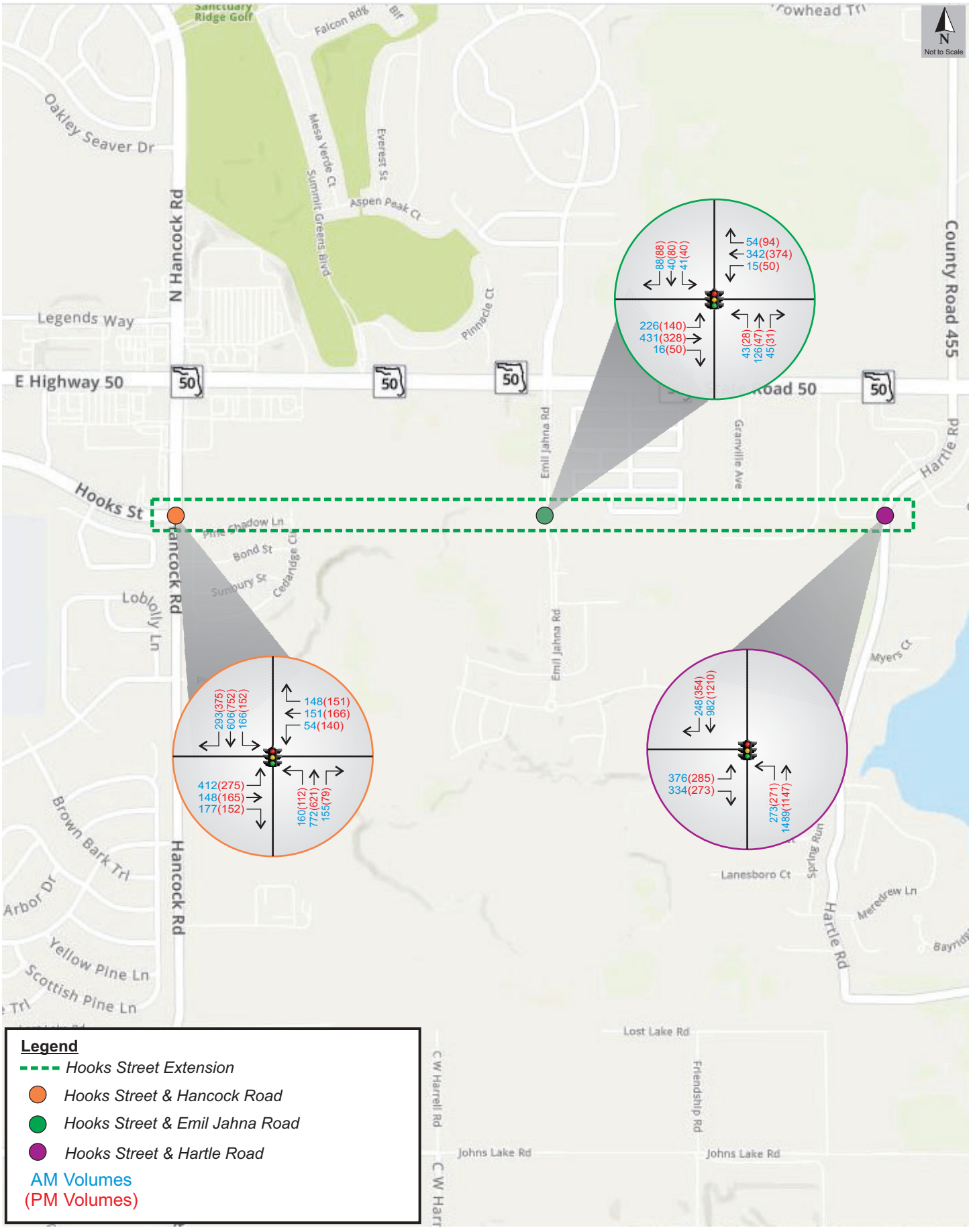
Figure 4



2045 AM and PM Intersection Volumes

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Figure 5

2.3 Intersection Analysis

Intersection capacity analysis was performed to determine the projected level of service (LOS) and delays for the proposed intersection geometry and control in opening year 2025, interim year 2035, and design year 2045 conditions. The analysis was conducted using *Synchro* software and the methods of the *Highway Capacity Manual (HCM), 6th Edition* based on the forecasted turning movement volumes. Based on the projected design year 2045 turning volumes, the proposed intersections geometries for the design year 2045 were established and are illustrated in **Figure 6**.

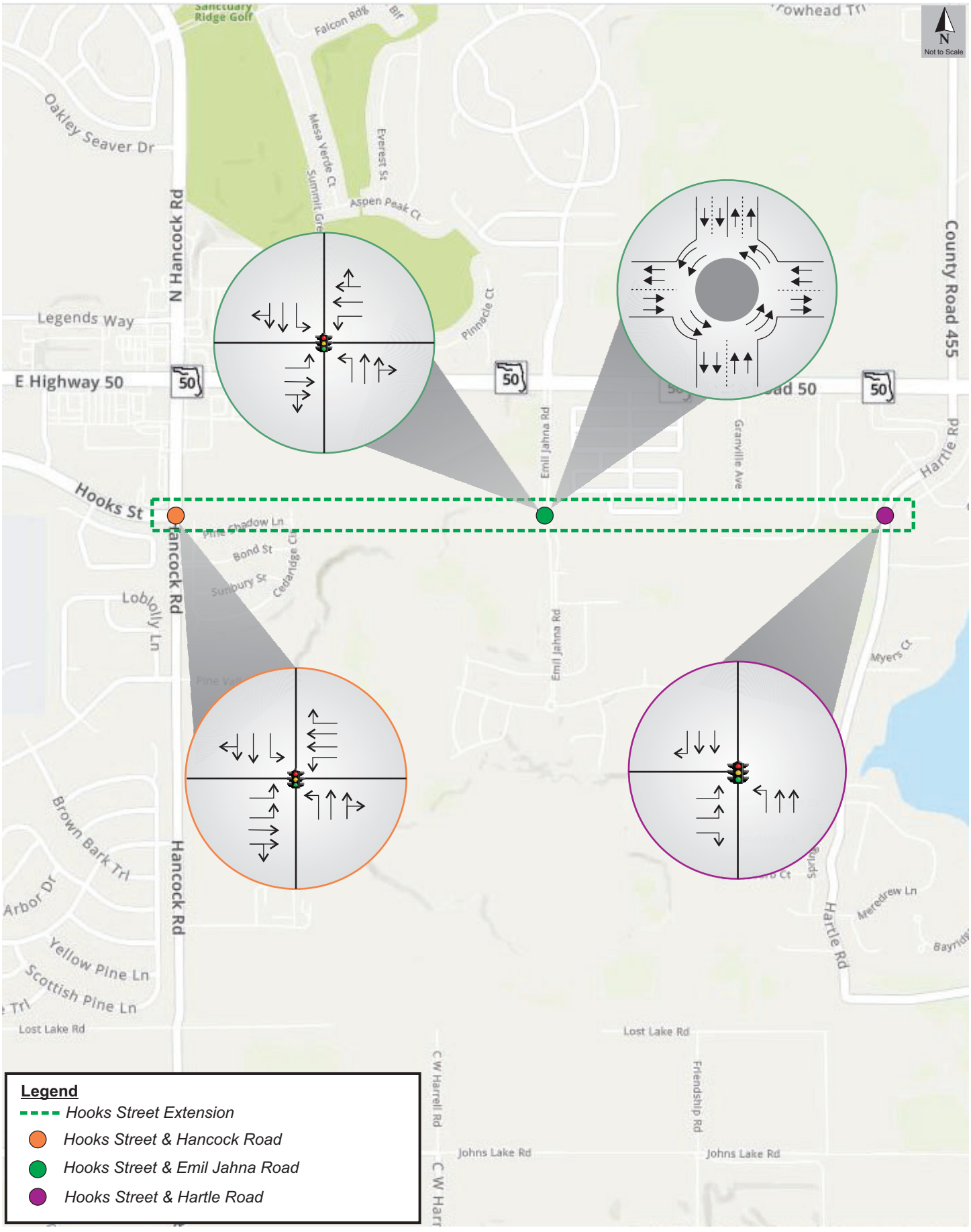
The results of the future year intersection analyses for the opening year 2025, interim 2035 and design year 2045 are summarized in **Table 1, Table 2,** and **Table** 3, respectively. The relevant *Synchro* outputs are provided in the **Attachments**.

Table 1
2025 Hooks Street Extension Intersection Future Operational LOS

Intersection	Traffic Control	Scenario	EB		WB		NB		SB		Overall	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Hooks St Ext & Hancock Rd	Signal	AM	42.4	D	38.6	D	29.3	C	23.8	C	31.4	C
		PM	37.4	D	40.0	D	21.7	C	26.7	C	29.1	C
Hooks St Ext & Emil Jahna Rd	Roundabout	AM	4.6	A	4.8	A	5.7	A	4.2	A	--	--
		PM	4.5	A	4.7	A	4.3	A	4.8	A	--	--
Hooks St Ext & Emil Jahna Rd	Signal	AM	23.1	C	25.1	C	12.0	B	11.8	B	19.9	B
		PM	23.7	C	23.3	C	10.8	B	11.0	B	19.7	B
Hooks St Ext & Hartle Rd	Signal	AM	25.2	C	--	--	4.8	A	8.8	A	9.4	A
		PM	26.6	C	--	--	4.2	A	9.0	A	9.3	A

Average delay is in seconds

As shown in **Table 1**, during the opening year 2025 conditions, all intersections are projected to operate at an overall LOS D or better. Hooks Street Extension and Emil Jahna Road intersection is projected to have a better LOS as a roundabout than a signal-controlled intersection.



Intersection Geometry
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Figure 6

Table 2
2035 Hooks Street Extension Intersection Future Operational LOS

Intersection	Traffic Control	Scenario	EB		WB		NB		SB		Overall	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Hooks St Ext & Hancock Rd	Signal	AM	42.4	D	38.8	D	45.8	D	33.7	C	40.3	D
		PM	42.7	D	41.7	D	28.0	C	39.5	D	37.4	D
Hooks St Ext & Emil Jahna Rd	Roundabout	AM	5.2	A	5.6	A	6.8	A	4.5	A	--	--
		PM	5.1	A	4.9	A	4.9	A	5.0	A	--	--
Hooks St Ext & Emil Jahna Rd	Signal	AM	24.0	C	25.6	C	13.0	B	13.0	B	21.1	C
		PM	24.2	C	24.5	C	12.3	B	12.6	B	21.1	C
Hooks St Ext & Hartle Rd	Signal	AM	27.3	C	--	--	11.3	B	16.0	B	15.4	B
		PM	26.1	C	--	--	9.1	A	16.0	B	14.3	B

Average delay is in seconds

As shown in **Table 2**, during the interim year 2035 conditions, all intersections are projected to operate at an overall LOS D or better. Hooks Street Extension and Emil Jahna Road intersection is projected to have a better LOS as a roundabout than a signal-controlled intersection.

Table 3
2045 Hooks Street Extension Intersection Future Operational LOS

Intersection	Traffic Control	Scenario	EB		WB		NB		SB		Overall	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Hooks St Ext & Hancock Rd	Signal	AM	48.5	D	45.4	D	42.1	D	35.5	D	41.7	D
		PM	34.5	C	35.1	D	24.8	C	32.5	C	31.3	C
Hooks St Ext & Emil Jahna Rd	Roundabout	AM	5.6	A	6.5	A	7.5	A	5.0	A	--	--
		PM	5.4	A	5.8	A	5.2	A	5.6	A	--	--
Hooks St Ext & Emil Jahna Rd	Signal	AM	25.4	C	26.8	C	15.2	B	15.1	B	23.1	C
		PM	24.7	C	24.3	C	14.9	B	15.3	B	22.3	C
Hooks St Ext & Hartle Rd	Signal	AM	34.4	C	--	--	16.2	B	22.1	C	21.6	C
		PM	38.6	D	--	--	14.9	B	23.8	C	22.6	C

Average delay is in seconds

As shown in **Table 3**, during the design year 2045 conditions, all intersections are projected to operate at an overall LOS D or better. Hooks Street Extension and Emil Jahna Road intersection is projected to have a better LOS as a roundabout than a signal-controlled intersection.

3. RECOMMENDED INTERSECTION TURN LANE LENGTHS

Table 4 presents the recommended lengths of turn lane for the design year 2045 conditions which were estimated based on the projected 95% queue lengths and the *FDOT Design Manual (FDM) Exhibit 212-1*, included in **Attachments.**

Table 4
Intersection Turn Lane Length

Intersection	Traffic Control	App	Turn Lane	FDM Decel Distance	Design (2045 PM)		Recommended 2045 Lengths
					# Cars in Queue	95% ile Queue Length*	
Hancock Rd & Hooks Street	Signal	EB	Dual-Left	155'	10.3	260'	415'
		WB	Left	155'	4.8	120'	275'
			Right	155'	6.8	170'	325'
		NB	Left	245'	4.5	110'	355'
		SB	Left	245'	5.0	130'	375'
Hooks St Extension & Emil Jahna Rd	Signal	EB	Left	155'	5.9	150'	305'
		WB	Left	155'	1.0	30'	185'
		NB	Left	145'	0.9	20'	165'
		SB	Left	145'	0.9	20'	165'
Hooks St Ext & Hartle Rd	Signal	EB	Left	155'	4.8	120'	275'
		NB	Left	155'	8.1	200'	355'
		SB	Right	155'	9.2	230'	385'

** Queue Length = No. of Cars in Queue x 25 feet for Standard Car Length*

Attachments

HCM 6th Signalized Intersection Summary
1: Hancock Rd & Hooks St

2025 AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	311	116	133	44	121	122	122	636	122	134	525	190
Future Volume (veh/h)	311	116	133	44	121	122	122	636	122	134	525	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	331	123	141	47	129	130	130	677	130	143	559	202
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	383	371	331	72	403	180	334	962	185	304	945	341
Arrive On Green	0.11	0.21	0.21	0.04	0.11	0.11	0.06	0.32	0.32	0.07	0.37	0.37
Sat Flow, veh/h	3456	1777	1585	1781	3554	1585	1781	2974	571	1781	2559	922
Grp Volume(v), veh/h	331	123	141	47	129	130	130	404	403	143	388	373
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	1781	1777	1768	1781	1777	1704
Q Serve(g_s), s	7.6	4.8	6.3	2.1	2.7	6.4	3.9	16.2	16.2	4.3	14.3	14.4
Cycle Q Clear(g_c), s	7.6	4.8	6.3	2.1	2.7	6.4	3.9	16.2	16.2	4.3	14.3	14.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.32	1.00		0.54
Lane Grp Cap(c), veh/h	383	371	331	72	403	180	334	575	572	304	656	630
V/C Ratio(X)	0.86	0.33	0.43	0.66	0.32	0.72	0.39	0.70	0.70	0.47	0.59	0.59
Avail Cap(c_a), veh/h	383	503	449	132	788	351	334	575	572	311	656	630
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.5	27.3	27.9	38.4	33.1	34.8	17.4	24.0	24.1	18.1	20.6	20.7
Incr Delay (d2), s/veh	18.1	0.5	0.9	9.7	0.5	5.4	0.7	7.0	7.1	1.1	3.9	4.1
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(95%),veh/ln	7.2	3.5	4.1	2.0	2.1	4.7	2.7	11.7	11.6	3.0	10.0	9.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.6	27.8	28.8	48.1	33.6	40.2	18.1	31.1	31.2	19.2	24.5	24.7
LnGrp LOS	D	C	C	D	C	D	B	C	C	B	C	C
Approach Vol, veh/h		595			306			937			904	
Approach Delay, s/veh		42.4			38.6			29.3			23.8	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	37.6	17.0	15.6	14.7	33.9	9.3	23.3
Change Period (Y+Rc), s	6.0	* 7.6	8.0	6.4	* 8.7	* 7.6	6.0	6.4
Max Green Setting (Gmax), s	5.0	* 30	9.0	18.0	* 6.3	* 26	6.0	23.0
Max Q Clear Time (g_c+I1), s	5.9	16.4	9.6	8.4	6.3	18.2	4.1	8.3
Green Ext Time (p_c), s	0.0	3.7	0.0	0.8	0.0	2.9	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	31.4
HCM 6th LOS	C

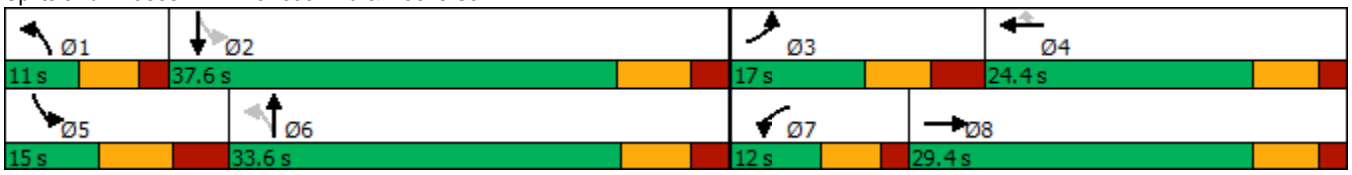
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBTL	EBL	WBT	SBL	NBTL	WBL	EBT
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	11	37.6	17	24.4	15	33.6	12	29.4
Maximum Split (%)	12.2%	41.8%	18.9%	27.1%	16.7%	37.3%	13.3%	32.7%
Minimum Split (s)	11	25.6	13	24.4	13.7	25.4	11	24.4
Yellow Time (s)	4	4.9	4.4	4.4	4.9	4.8	4	4.4
All-Red Time (s)	2	2.7	3.6	2	3.8	2.6	2	2
Minimum Initial (s)	5	15	5	8	5	15	5	8
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		7		7		7		7
Flash Dont Walk (s)		11		11		11		11
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	11	48.6	65.6	0	15	48.6	60.6
End Time (s)	11	48.6	65.6	0	15	48.6	60.6	0
Yield/Force Off (s)	5	41	57.6	83.6	6.3	41.2	54.6	83.6
Yield/Force Off 170(s)	5	30	57.6	72.6	6.3	30.2	54.6	72.6
Local Start Time (s)	75	86	33.6	50.6	75	0	33.6	45.6
Local Yield (s)	80	26	42.6	68.6	81.3	26.2	39.6	68.6
Local Yield 170(s)	80	15	42.6	57.6	81.3	15.2	39.6	57.6

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	90

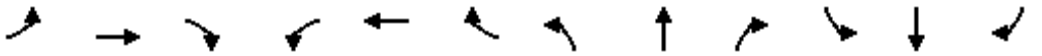
Splits and Phases: 1: Hancock Rd & Hooks St



Intersection	
Intersection Delay, s/veh	4.7
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	488	287	233	148
Demand Flow Rate, veh/h	497	293	238	151
Vehicles Circulating, veh/h	93	289	513	303
Vehicles Exiting, veh/h	361	462	77	279
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.5	4.6	5.5	4.1
Approach LOS	A	A	A	A

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	LT	TR	LT	TR	LT	TR
RT Channelized								
Lane Util	0.471	0.529	0.471	0.529	0.471	0.529	0.470	0.530
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	234	263	138	155	112	126	71	80
Cap Entry Lane, veh/h	1239	1312	1035	1111	842	918	1021	1098
Entry HV Adj Factor	0.979	0.983	0.979	0.982	0.979	0.981	0.981	0.981
Flow Entry, veh/h	229	258	135	152	110	124	70	79
Cap Entry, veh/h	1214	1289	1013	1091	824	901	1002	1077
V/C Ratio	0.189	0.200	0.133	0.140	0.133	0.137	0.070	0.073
Control Delay, s/veh	4.6	4.5	4.8	4.5	5.7	5.3	4.2	4.0
LOS	A	A	A	A	A	A	A	A
95th %tile Queue, veh	1	1	0	0	0	0	0	0



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	342	16	15	215	34	43	126	45	29	40	67
Future Volume (veh/h)	91	342	16	15	215	34	43	126	45	29	40	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	372	17	16	234	37	47	137	49	32	43	73
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	303	588	27	229	396	62	573	980	337	539	671	599
Arrive On Green	0.17	0.17	0.17	0.13	0.13	0.13	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1781	3461	158	1781	3080	480	1276	2594	892	1198	1777	1585
Grp Volume(v), veh/h	99	190	199	16	134	137	47	92	94	32	43	73
Grp Sat Flow(s),veh/h/ln	1781	1777	1842	1781	1777	1784	1276	1777	1710	1198	1777	1585
Q Serve(g_s), s	2.7	5.5	5.6	0.4	3.9	4.0	1.4	1.9	2.0	1.0	0.9	1.7
Cycle Q Clear(g_c), s	2.7	5.5	5.6	0.4	3.9	4.0	3.1	1.9	2.0	3.0	0.9	1.7
Prop In Lane	1.00		0.09	1.00		0.27	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	303	302	313	229	228	229	573	671	646	539	671	599
V/C Ratio(X)	0.33	0.63	0.63	0.07	0.58	0.60	0.08	0.14	0.15	0.06	0.06	0.12
Avail Cap(c_a), veh/h	577	575	596	577	575	578	573	671	646	539	671	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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.3	21.5	21.5	21.3	22.8	22.9	12.3	11.4	11.4	12.4	11.0	11.3
Incr Delay (d2), s/veh	0.6	2.2	2.1	0.1	2.4	2.5	0.3	0.4	0.5	0.2	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.0	4.1	4.3	0.3	3.0	3.1	0.7	1.3	1.3	0.5	0.6	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.9	23.6	23.6	21.4	25.2	25.4	12.6	11.8	11.9	12.6	11.2	11.7
LnGrp LOS	C	C	C	C	C	C	B	B	B	B	B	B
Approach Vol, veh/h		488			287			233			148	
Approach Delay, s/veh		23.1			25.1			12.0			11.8	
Approach LOS		C			C			B			B	

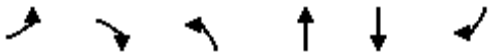
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.0		15.5		27.0		13.1				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		21.0		18.0		21.0		18.0				
Max Q Clear Time (g_c+I1), s		5.1		7.6		5.0		6.0				
Green Ext Time (p_c), s		1.0		1.9		0.6		1.2				

Intersection Summary												
HCM 6th Ctrl Delay			19.9									
HCM 6th LOS			B									

Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	Max	None	Max	None
Maximum Split (s)	27	24	27	24
Maximum Split (%)	36.0%	32.0%	36.0%	32.0%
Minimum Split (s)	24	24	24	24
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	27	0	51
End Time (s)	27	51	27	0
Yield/Force Off (s)	21	45	21	69
Yield/Force Off 170(s)	10	34	10	58
Local Start Time (s)	0	27	0	51
Local Yield (s)	21	45	21	69
Local Yield 170(s)	10	34	10	58

Intersection Summary	
Cycle Length	75
Control Type	Actuated-Uncoordinated
Natural Cycle	75

Splits and Phases: 3: Emil Jahna Rd & Hooks St



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	155	127	100	761	600	122
Future Volume (veh/h)	155	127	100	761	600	122
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	168	138	109	827	652	133
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	453	208	529	2347	1814	809
Arrive On Green	0.13	0.13	0.07	0.66	0.51	0.51
Sat Flow, veh/h	3456	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	168	138	109	827	652	133
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1777	1777	1585
Q Serve(g_s), s	2.6	4.8	1.4	5.9	6.3	2.6
Cycle Q Clear(g_c), s	2.6	4.8	1.4	5.9	6.3	2.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	453	208	529	2347	1814	809
V/C Ratio(X)	0.37	0.66	0.21	0.35	0.36	0.16
Avail Cap(c_a), veh/h	1201	551	633	2347	1814	809
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	23.8	5.2	4.3	8.4	7.5
Incr Delay (d2), s/veh	0.5	3.6	0.2	0.4	0.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	0.4	0.7	2.7	3.8	1.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.3	27.4	5.4	4.7	9.0	8.0
LnGrp LOS	C	C	A	A	A	A
Approach Vol, veh/h	306			936	785	
Approach Delay, s/veh	25.2			4.8	8.8	
Approach LOS	C			A	A	

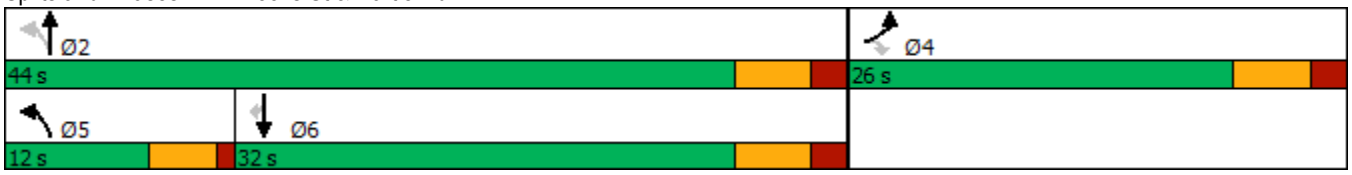
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		44.0		13.5	8.6	35.4
Change Period (Y+Rc), s		6.0		6.0	4.5	6.0
Max Green Setting (Gmax), s		38.0		20.0	7.5	26.0
Max Q Clear Time (g_c+I1), s		7.9		6.8	3.4	8.3
Green Ext Time (p_c), s		6.7		0.8	0.1	4.7

Intersection Summary	
HCM 6th Ctrl Delay	9.4
HCM 6th LOS	A

Phase Number	2	4	5	6
Movement	NBTL	EBL	NBL	SBT
Lead/Lag			Lead	Lag
Lead-Lag Optimize			Yes	Yes
Recall Mode	Max	None	None	Max
Maximum Split (s)	44	26	12	32
Maximum Split (%)	62.9%	37.1%	17.1%	45.7%
Minimum Split (s)	24	24	9.5	24
Yellow Time (s)	4	4	3.5	4
All-Red Time (s)	2	2	1	2
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7		7
Flash Dont Walk (s)	11	11		11
Dual Entry	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	44	0	12
End Time (s)	44	0	12	44
Yield/Force Off (s)	38	64	7.5	38
Yield/Force Off 170(s)	27	53	7.5	27
Local Start Time (s)	58	32	58	0
Local Yield (s)	26	52	65.5	26
Local Yield 170(s)	15	41	65.5	15

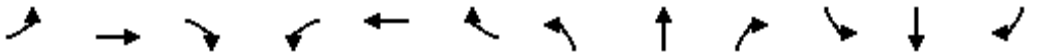
Intersection Summary	
Cycle Length	70
Control Type	Actuated-Uncoordinated
Natural Cycle	60

Splits and Phases: 4: Hooks St & Hartle Rd



HCM 6th Signalized Intersection Summary
1: Hancock Rd & Hooks St

2025 PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	178	134	128	100	146	121	85	544	61	102	651	327
Future Volume (veh/h)	178	134	128	100	146	121	85	544	61	102	651	327
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	189	143	136	106	155	129	90	579	65	109	693	348
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	269	254	223	135	408	182	264	1174	131	370	920	462
Arrive On Green	0.08	0.14	0.14	0.08	0.11	0.11	0.05	0.36	0.36	0.06	0.40	0.40
Sat Flow, veh/h	3456	1791	1573	1781	3554	1585	1781	3221	361	1781	2291	1150
Grp Volume(v), veh/h	189	142	137	106	155	129	90	319	325	109	538	503
Grp Sat Flow(s),veh/h/ln	1728	1777	1587	1781	1777	1585	1781	1777	1805	1781	1777	1663
Q Serve(g_s), s	4.3	5.9	6.5	4.7	3.2	6.2	2.5	11.1	11.1	3.0	20.7	20.7
Cycle Q Clear(g_c), s	4.3	5.9	6.5	4.7	3.2	6.2	2.5	11.1	11.1	3.0	20.7	20.7
Prop In Lane	1.00		0.99	1.00		1.00	1.00		0.20	1.00		0.69
Lane Grp Cap(c), veh/h	269	252	225	135	408	182	264	647	658	370	714	668
V/C Ratio(X)	0.70	0.56	0.61	0.78	0.38	0.71	0.34	0.49	0.49	0.29	0.75	0.75
Avail Cap(c_a), veh/h	304	424	379	179	803	358	279	647	658	435	714	668
HCM Platoon Ratio	1.00	1.00	1.00	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	35.8	31.9	32.1	36.2	32.6	34.0	16.5	19.6	19.6	15.1	20.4	20.4
Incr Delay (d2), s/veh	6.2	2.0	2.7	15.1	0.6	5.0	0.8	2.7	2.6	0.4	7.2	7.7
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(95%),veh/ln	3.4	4.5	4.5	4.5	2.5	4.5	1.7	8.1	8.2	2.0	13.8	13.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.0	33.8	34.8	51.3	33.2	39.0	17.3	22.3	22.3	15.5	27.7	28.1
LnGrp LOS	D	C	C	D	C	D	B	C	C	B	C	C
Approach Vol, veh/h		468			390			734			1150	
Approach Delay, s/veh		37.4			40.0			21.7			26.7	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	39.6	14.2	15.5	13.3	36.6	12.0	17.7
Change Period (Y+Rc), s	6.0	* 7.6	8.0	6.4	* 8.7	* 7.6	6.0	6.4
Max Green Setting (Gmax), s	5.0	* 32	7.0	18.0	* 7.5	* 27	8.0	19.0
Max Q Clear Time (g_c+I1), s	4.5	22.7	6.3	8.2	5.0	13.1	6.7	8.5
Green Ext Time (p_c), s	0.0	4.2	0.0	0.9	0.0	3.0	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	29.1
HCM 6th LOS	C

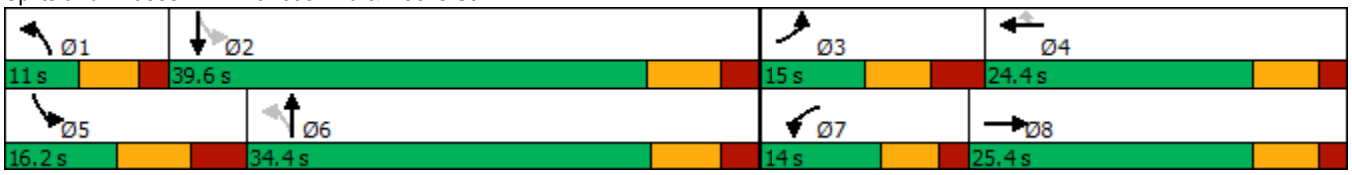
Notes

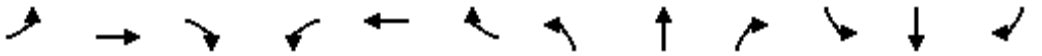
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBTL	EBL	WBT	SBL	NBTL	WBL	EBT
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	11	39.6	15	24.4	16.2	34.4	14	25.4
Maximum Split (%)	12.2%	44.0%	16.7%	27.1%	18.0%	38.2%	15.6%	28.2%
Minimum Split (s)	11	25.6	13	24.4	13.7	25.4	11	24.4
Yellow Time (s)	4	4.9	4.4	4.4	4.9	4.8	4	4.4
All-Red Time (s)	2	2.7	3.6	2	3.8	2.6	2	2
Minimum Initial (s)	5	15	5	8	5	15	5	8
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		7		7		7		7
Flash Dont Walk (s)		11		11		11		11
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	11	50.6	65.6	0	16.2	50.6	64.6
End Time (s)	11	50.6	65.6	0	16.2	50.6	64.6	0
Yield/Force Off (s)	5	43	57.6	83.6	7.5	43.2	58.6	83.6
Yield/Force Off 170(s)	5	32	57.6	72.6	7.5	32.2	58.6	72.6
Local Start Time (s)	73.8	84.8	34.4	49.4	73.8	0	34.4	48.4
Local Yield (s)	78.8	26.8	41.4	67.4	81.3	27	42.4	67.4
Local Yield 170(s)	78.8	15.8	41.4	56.4	81.3	16	42.4	56.4

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	80

Splits and Phases: 1: Hancock Rd & Hooks St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	187	50	50	261	18	28	47	31	24	80	78
Future Volume (veh/h)	110	187	50	50	261	18	28	47	31	24	80	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	120	203	54	54	284	20	30	51	34	26	87	85
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	237	372	97	254	481	34	564	828	504	624	699	613
Arrive On Green	0.13	0.13	0.13	0.14	0.14	0.14	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1781	2792	725	1781	3369	236	1213	2122	1292	1313	1792	1572
Grp Volume(v), veh/h	120	127	130	54	149	155	30	42	43	26	86	86
Grp Sat Flow(s),veh/h/ln	1781	1777	1740	1781	1777	1828	1213	1777	1638	1313	1777	1587
Q Serve(g_s), s	3.4	3.6	3.8	1.4	4.2	4.3	0.9	0.8	0.9	0.7	1.7	1.9
Cycle Q Clear(g_c), s	3.4	3.6	3.8	1.4	4.2	4.3	2.8	0.8	0.9	1.6	1.7	1.9
Prop In Lane	1.00		0.42	1.00		0.13	1.00		0.79	1.00		0.99
Lane Grp Cap(c), veh/h	237	237	232	254	253	261	564	693	639	624	693	619
V/C Ratio(X)	0.51	0.54	0.56	0.21	0.59	0.59	0.05	0.06	0.07	0.04	0.12	0.14
Avail Cap(c_a), veh/h	595	594	582	595	594	611	564	693	639	624	693	619
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(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	21.7	21.8	21.9	20.4	21.6	21.6	11.5	10.3	10.3	10.8	10.5	10.6
Incr Delay (d2), s/veh	1.7	1.9	2.1	0.4	2.2	2.2	0.2	0.2	0.2	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(95%),veh/ln	2.5	2.7	2.8	1.0	3.2	3.3	0.4	0.5	0.5	0.3	1.1	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	23.7	24.0	20.8	23.8	23.8	11.7	10.4	10.5	10.9	10.9	11.1
LnGrp LOS	C	C	C	C	C	C	B	B	B	B	B	B
Approach Vol, veh/h		377			358			115			198	
Approach Delay, s/veh		23.7			23.3			10.8			11.0	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.0		13.2		27.0		13.7				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		21.0		18.0		21.0		18.0				
Max Q Clear Time (g_c+I1), s		4.8		5.8		3.9		6.3				
Green Ext Time (p_c), s		0.4		1.4		0.9		1.4				

Intersection Summary												
HCM 6th Ctrl Delay			19.7									
HCM 6th LOS			B									

Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	Max	None	Max	None
Maximum Split (s)	27	24	27	24
Maximum Split (%)	36.0%	32.0%	36.0%	32.0%
Minimum Split (s)	24	24	24	24
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	27	0	51
End Time (s)	27	51	27	0
Yield/Force Off (s)	21	45	21	69
Yield/Force Off 170(s)	10	34	10	58
Local Start Time (s)	0	27	0	51
Local Yield (s)	21	45	21	69
Local Yield 170(s)	10	34	10	58

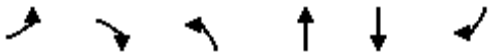
Intersection Summary	
Cycle Length	75
Control Type	Actuated-Uncoordinated
Natural Cycle	75

Splits and Phases: 3: Emil Jahna Rd & Hooks St

Intersection	
Intersection Delay, s/veh	4.5
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	377	358	115	198
Demand Flow Rate, veh/h	384	365	118	203
Vehicles Circulating, veh/h	171	205	356	376
Vehicles Exiting, veh/h	408	269	199	194
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.5	4.6	4.2	4.6
Approach LOS	A	A	A	A

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	LT	TR	LT	TR	LT	TR
RT Channelized								
Lane Util	0.469	0.531	0.471	0.529	0.466	0.534	0.468	0.532
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	180	204	172	193	55	63	95	108
Cap Entry Lane, veh/h	1153	1228	1118	1193	973	1049	955	1032
Entry HV Adj Factor	0.984	0.979	0.979	0.984	0.983	0.967	0.981	0.973
Flow Entry, veh/h	177	200	168	190	54	61	93	105
Cap Entry, veh/h	1135	1203	1095	1174	956	1015	937	1004
V/C Ratio	0.156	0.166	0.154	0.162	0.057	0.060	0.099	0.105
Control Delay, s/veh	4.5	4.4	4.7	4.5	4.3	4.1	4.8	4.5
LOS	A	A	A	A	A	A	A	A
95th %tile Queue, veh	1	1	1	1	0	0	0	0



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	116	106	142	536	754	165
Future Volume (veh/h)	116	106	142	536	754	165
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	126	115	154	583	820	179
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	385	177	481	2429	1877	837
Arrive On Green	0.11	0.11	0.08	0.68	0.53	0.53
Sat Flow, veh/h	3456	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	126	115	154	583	820	179
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1777	1777	1585
Q Serve(g_s), s	2.0	4.1	2.0	3.6	8.3	3.5
Cycle Q Clear(g_c), s	2.0	4.1	2.0	3.6	8.3	3.5
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	385	177	481	2429	1877	837
V/C Ratio(X)	0.33	0.65	0.32	0.24	0.44	0.21
Avail Cap(c_a), veh/h	1063	487	612	2429	1877	837
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	24.9	5.4	3.5	8.5	7.3
Incr Delay (d2), s/veh	0.5	4.0	0.4	0.2	0.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	0.4	1.0	1.6	4.9	2.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.5	28.9	5.8	3.7	9.2	7.9
LnGrp LOS	C	C	A	A	A	A
Approach Vol, veh/h	241			737	999	
Approach Delay, s/veh	26.6			4.2	9.0	
Approach LOS	C			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		46.0		12.5	9.1	36.9
Change Period (Y+Rc), s		6.0		6.0	4.5	6.0
Max Green Setting (Gmax), s		40.0		18.0	8.9	26.6
Max Q Clear Time (g_c+I1), s		5.6		6.1	4.0	10.3
Green Ext Time (p_c), s		4.4		0.6	0.2	5.9

Intersection Summary	
HCM 6th Ctrl Delay	9.3
HCM 6th LOS	A

Phase Number	2	4	5	6
Movement	NBTL	EBL	NBL	SBT
Lead/Lag			Lead	Lag
Lead-Lag Optimize			Yes	Yes
Recall Mode	Max	None	None	Max
Maximum Split (s)	46	24	13.4	32.6
Maximum Split (%)	65.7%	34.3%	19.1%	46.6%
Minimum Split (s)	24	24	9.5	24
Yellow Time (s)	4	4	3.5	4
All-Red Time (s)	2	2	1	2
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7		7
Flash Dont Walk (s)	11	11		11
Dual Entry	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	46	0	13.4
End Time (s)	46	0	13.4	46
Yield/Force Off (s)	40	64	8.9	40
Yield/Force Off 170(s)	29	53	8.9	29
Local Start Time (s)	56.6	32.6	56.6	0
Local Yield (s)	26.6	50.6	65.5	26.6
Local Yield 170(s)	15.6	39.6	65.5	15.6

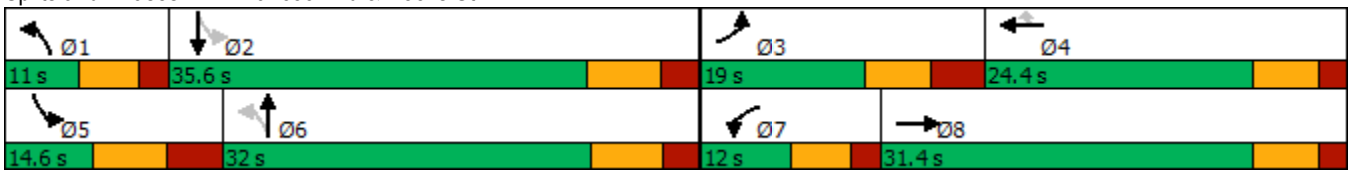
Intersection Summary	
Cycle Length	70
Control Type	Actuated-Uncoordinated
Natural Cycle	60

Splits and Phases: 4: Hooks St & Hartle Rd

Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBTL	EBL	WBT	SBL	NBTL	WBL	EBT
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	11	35.6	19	24.4	14.6	32	12	31.4
Maximum Split (%)	12.2%	39.6%	21.1%	27.1%	16.2%	35.6%	13.3%	34.9%
Minimum Split (s)	11	25.6	13	24.4	13.7	25.4	11	24.4
Yellow Time (s)	4	4.9	4.4	4.4	4.9	4.8	4	4.4
All-Red Time (s)	2	2.7	3.6	2	3.8	2.6	2	2
Minimum Initial (s)	5	15	5	8	5	15	5	8
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		7		7		7		7
Flash Dont Walk (s)		11		11		11		11
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	11	46.6	65.6	0	14.6	46.6	58.6
End Time (s)	11	46.6	65.6	0	14.6	46.6	58.6	0
Yield/Force Off (s)	5	39	57.6	83.6	5.9	39.2	52.6	83.6
Yield/Force Off 170(s)	5	28	57.6	72.6	5.9	28.2	52.6	72.6
Local Start Time (s)	75.4	86.4	32	51	75.4	0	32	44
Local Yield (s)	80.4	24.4	43	69	81.3	24.6	38	69
Local Yield 170(s)	80.4	13.4	43	58	81.3	13.6	38	58

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	90

Splits and Phases: 1: Hancock Rd & Hooks St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	386	137	163	49	144	138	146	753	146	155	590	278
Future Volume (veh/h)	386	137	163	49	144	138	146	753	146	155	590	278
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	411	146	173	52	153	147	155	801	155	165	628	296
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	461	426	380	75	442	197	257	886	171	238	802	378
Arrive On Green	0.13	0.24	0.24	0.04	0.12	0.12	0.06	0.30	0.30	0.07	0.34	0.34
Sat Flow, veh/h	3456	1777	1585	1781	3554	1585	1781	2969	575	1781	2344	1105
Grp Volume(v), veh/h	411	146	173	52	153	147	155	479	477	165	476	448
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	1781	1777	1767	1781	1777	1672
Q Serve(g_s), s	9.6	5.6	7.7	2.4	3.2	7.4	5.0	21.4	21.4	5.3	19.9	19.9
Cycle Q Clear(g_c), s	9.6	5.6	7.7	2.4	3.2	7.4	5.0	21.4	21.4	5.3	19.9	19.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		0.66
Lane Grp Cap(c), veh/h	461	426	380	75	442	197	257	530	527	238	608	572
V/C Ratio(X)	0.89	0.34	0.46	0.69	0.35	0.75	0.60	0.90	0.90	0.69	0.78	0.78
Avail Cap(c_a), veh/h	461	539	481	130	776	346	257	530	527	238	608	572
HCM Platoon Ratio	1.00	1.00	1.00	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	35.1	26.0	26.7	39.0	33.0	34.8	20.8	27.8	27.8	21.5	24.4	24.4
Incr Delay (d2), s/veh	19.1	0.5	0.9	10.8	0.5	5.5	4.0	21.4	21.5	8.4	9.7	10.3
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(95%),veh/ln	8.7	4.1	5.0	2.2	2.5	5.3	3.9	16.9	16.8	4.5	14.1	13.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.3	26.4	27.6	49.7	33.5	40.4	24.8	49.2	49.3	29.9	34.1	34.7
LnGrp LOS	D	C	C	D	C	D	C	D	D	C	C	C
Approach Vol, veh/h		730			352			1111			1089	
Approach Delay, s/veh		42.4			38.8			45.8			33.7	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	35.8	19.0	16.7	14.6	32.2	9.5	26.2
Change Period (Y+Rc), s	6.0	* 7.6	8.0	6.4	* 8.7	* 7.6	6.0	6.4
Max Green Setting (Gmax), s	5.0	* 28	11.0	18.0	* 5.9	* 25	6.0	25.0
Max Q Clear Time (g_c+I1), s	7.0	21.9	11.6	9.4	7.3	23.4	4.4	9.7
Green Ext Time (p_c), s	0.0	2.8	0.0	0.9	0.0	0.7	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	40.3
HCM 6th LOS	D

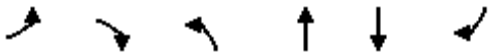
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	5.4
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	639	329	233	179
Demand Flow Rate, veh/h	651	335	238	183
Vehicles Circulating, veh/h	106	404	680	339
Vehicles Exiting, veh/h	416	514	77	400
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.2	5.4	6.5	4.4
Approach LOS	A	A	A	A

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	LT	TR	LT	TR	LT	R
RT Channelized								
Lane Util	0.470	0.530	0.469	0.531	0.471	0.529	0.492	0.508
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	306	345	157	178	112	126	90	93
Cap Entry Lane, veh/h	1224	1298	931	1007	722	797	988	1065
Entry HV Adj Factor	0.981	0.981	0.984	0.978	0.979	0.981	0.979	0.978
Flow Entry, veh/h	300	339	154	174	110	124	88	91
Cap Entry, veh/h	1201	1274	916	986	707	782	968	1042
V/C Ratio	0.250	0.266	0.169	0.177	0.155	0.158	0.091	0.087
Control Delay, s/veh	5.2	5.2	5.6	5.3	6.8	6.3	4.5	4.2
LOS	A	A	A	A	A	A	A	A
95th %tile Queue, veh	1	1	1	1	1	1	0	0



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	273	236	236	1463	946	194
Future Volume (veh/h)	273	236	236	1463	946	194
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	297	257	257	1590	1028	211
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	698	320	393	2182	1561	696
Arrive On Green	0.20	0.20	0.11	0.61	0.44	0.44
Sat Flow, veh/h	3456	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	297	257	257	1590	1028	211
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1777	1777	1585
Q Serve(g_s), s	4.9	10.1	4.7	20.4	14.9	5.6
Cycle Q Clear(g_c), s	4.9	10.1	4.7	20.4	14.9	5.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	698	320	393	2182	1561	696
V/C Ratio(X)	0.43	0.80	0.65	0.73	0.66	0.30
Avail Cap(c_a), veh/h	955	438	492	2182	1561	696
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	24.8	11.5	8.8	14.4	11.8
Incr Delay (d2), s/veh	0.4	7.5	2.1	2.2	2.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.4	13.9	3.0	10.8	9.7	3.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.1	32.2	13.7	11.0	16.6	12.9
LnGrp LOS	C	C	B	B	B	B
Approach Vol, veh/h	554			1847	1239	
Approach Delay, s/veh	27.3			11.3	16.0	
Approach LOS	C			B	B	

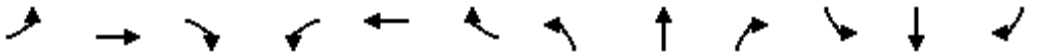
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		46.0		19.2	11.4	34.6
Change Period (Y+Rc), s		6.0		6.0	4.5	6.0
Max Green Setting (Gmax), s		40.0		18.0	10.5	25.0
Max Q Clear Time (g_c+I1), s		22.4		12.1	6.7	16.9
Green Ext Time (p_c), s		11.4		1.1	0.3	4.7

Intersection Summary		
HCM 6th Ctrl Delay		15.4
HCM 6th LOS		B

Phase Number	2	4	5	6
Movement	NBTL	EBL	NBL	SBT
Lead/Lag			Lead	Lag
Lead-Lag Optimize			Yes	Yes
Recall Mode	Max	None	None	Max
Maximum Split (s)	46	24	15	31
Maximum Split (%)	65.7%	34.3%	21.4%	44.3%
Minimum Split (s)	24	24	9.5	24
Yellow Time (s)	4	4	3.5	4
All-Red Time (s)	2	2	1	2
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7		7
Flash Dont Walk (s)	11	11		11
Dual Entry	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	46	0	15
End Time (s)	46	0	15	46
Yield/Force Off (s)	40	64	10.5	40
Yield/Force Off 170(s)	29	53	10.5	29
Local Start Time (s)	55	31	55	0
Local Yield (s)	25	49	65.5	25
Local Yield 170(s)	14	38	65.5	14

Intersection Summary	
Cycle Length	70
Control Type	Actuated-Uncoordinated
Natural Cycle	65

Splits and Phases: 4: Hooks St & Hartle Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	377	16	15	248	40	43	126	45	41	40	84
Future Volume (veh/h)	195	377	16	15	248	40	43	126	45	41	40	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	410	17	16	270	43	47	137	49	45	43	91
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	324	633	26	252	435	68	534	945	325	517	647	578
Arrive On Green	0.18	0.18	0.18	0.14	0.14	0.14	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	1781	3477	144	1781	3076	484	1256	2594	892	1198	1777	1585
Grp Volume(v), veh/h	212	209	218	16	155	158	47	92	94	45	43	91
Grp Sat Flow(s),veh/h/ln	1781	1777	1844	1781	1777	1783	1256	1777	1710	1198	1777	1585
Q Serve(g_s), s	6.4	6.3	6.3	0.4	4.7	4.8	1.5	2.0	2.1	1.5	0.9	2.2
Cycle Q Clear(g_c), s	6.4	6.3	6.3	0.4	4.7	4.8	3.7	2.0	2.1	3.6	0.9	2.2
Prop In Lane	1.00		0.08	1.00		0.27	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	324	323	336	252	251	252	534	647	623	517	647	578
V/C Ratio(X)	0.65	0.65	0.65	0.06	0.62	0.63	0.09	0.14	0.15	0.09	0.07	0.16
Avail Cap(c_a), veh/h	556	555	576	556	555	557	534	647	623	517	647	578
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.9	21.9	21.9	21.4	23.3	23.3	13.6	12.3	12.3	13.5	11.9	12.4
Incr Delay (d2), s/veh	2.2	2.2	2.1	0.1	2.4	2.6	0.3	0.5	0.5	0.3	0.2	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(95%),veh/ln	4.6	4.5	4.7	0.3	3.6	3.7	0.8	1.4	1.4	0.7	0.6	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.1	24.0	24.0	21.5	25.7	25.9	13.9	12.7	12.8	13.9	12.1	12.9
LnGrp LOS	C	C	C	C	C	C	B	B	B	B	B	B
Approach Vol, veh/h		639			329			233			179	
Approach Delay, s/veh		24.0			25.6			13.0			13.0	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.0		16.5		27.0		14.1				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		21.0		18.0		21.0		18.0				
Max Q Clear Time (g_c+I1), s		5.7		8.4		5.6		6.8				
Green Ext Time (p_c), s		1.0		2.1		0.7		1.4				

Intersection Summary												
HCM 6th Ctrl Delay			21.1									
HCM 6th LOS			C									

Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	Max	None	Max	None
Maximum Split (s)	27	24	27	24
Maximum Split (%)	36.0%	32.0%	36.0%	32.0%
Minimum Split (s)	24	24	24	24
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	27	0	51
End Time (s)	27	51	27	0
Yield/Force Off (s)	21	45	21	69
Yield/Force Off 170(s)	10	34	10	58
Local Start Time (s)	0	27	0	51
Local Yield (s)	21	45	21	69
Local Yield 170(s)	10	34	10	58

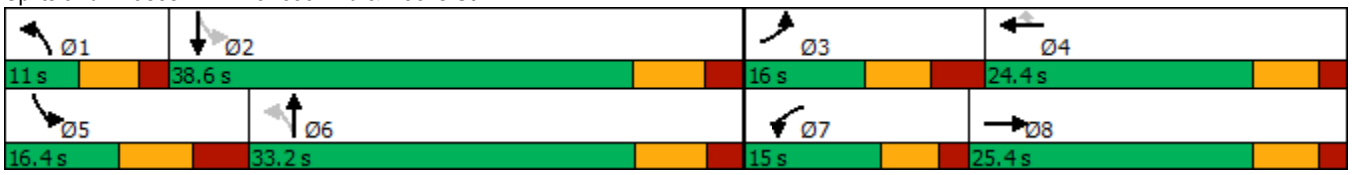
Intersection Summary		
Cycle Length		75
Control Type	Actuated-Uncoordinated	
Natural Cycle		75

Splits and Phases: 11: Emil Jahna Rd & Hooks St

Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBTL	EBL	WBT	SBL	NBTL	WBL	EBT
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	11	38.6	16	24.4	16.4	33.2	15	25.4
Maximum Split (%)	12.2%	42.9%	17.8%	27.1%	18.2%	36.9%	16.7%	28.2%
Minimum Split (s)	11	25.6	13	24.4	13.7	25.4	11	24.4
Yellow Time (s)	4	4.9	4.4	4.4	4.9	4.8	4	4.4
All-Red Time (s)	2	2.7	3.6	2	3.8	2.6	2	2
Minimum Initial (s)	5	15	5	8	5	15	5	8
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		7		7		7		7
Flash Dont Walk (s)		11		11		11		11
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	11	49.6	65.6	0	16.4	49.6	64.6
End Time (s)	11	49.6	65.6	0	16.4	49.6	64.6	0
Yield/Force Off (s)	5	42	57.6	83.6	7.7	42.2	58.6	83.6
Yield/Force Off 170(s)	5	31	57.6	72.6	7.7	31.2	58.6	72.6
Local Start Time (s)	73.6	84.6	33.2	49.2	73.6	0	33.2	48.2
Local Yield (s)	78.6	25.6	41.2	67.2	81.3	25.8	42.2	67.2
Local Yield 170(s)	78.6	14.6	41.2	56.2	81.3	14.8	42.2	56.2

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	90

Splits and Phases: 1: Hancock Rd & Hooks St



HCM 6th Signalized Intersection Summary
1: Hancock Rd & Hooks St

2035 PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	262	146	134	122	151	143	98	606	73	146	740	362
Future Volume (veh/h)	262	146	134	122	151	143	98	606	73	146	740	362
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	279	155	143	130	161	152	104	645	78	155	787	385
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	336	287	246	163	454	203	215	1027	124	339	873	426
Arrive On Green	0.10	0.16	0.16	0.09	0.13	0.13	0.06	0.32	0.32	0.08	0.38	0.38
Sat Flow, veh/h	3456	1813	1555	1781	3554	1585	1781	3192	386	1781	2315	1129
Grp Volume(v), veh/h	279	152	146	130	161	152	104	359	364	155	603	569
Grp Sat Flow(s),veh/h/ln	1728	1777	1591	1781	1777	1585	1781	1777	1801	1781	1777	1667
Q Serve(g_s), s	6.5	6.5	7.0	5.9	3.4	7.6	3.2	14.1	14.1	4.7	26.3	26.5
Cycle Q Clear(g_c), s	6.5	6.5	7.0	5.9	3.4	7.6	3.2	14.1	14.1	4.7	26.3	26.5
Prop In Lane	1.00		0.98	1.00		1.00	1.00		0.21	1.00		0.68
Lane Grp Cap(c), veh/h	336	281	252	163	454	203	215	572	580	339	670	629
V/C Ratio(X)	0.83	0.54	0.58	0.80	0.35	0.75	0.48	0.63	0.63	0.46	0.90	0.90
Avail Cap(c_a), veh/h	336	411	368	195	778	347	222	572	580	364	670	629
HCM Platoon Ratio	1.00	1.00	1.00	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	36.4	31.8	32.1	36.6	32.7	34.6	20.5	23.7	23.7	17.7	24.1	24.2
Incr Delay (d2), s/veh	15.8	1.6	2.1	17.6	0.5	5.5	1.7	5.1	5.1	1.0	17.5	18.8
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(95%),veh/ln	6.0	4.9	4.8	5.9	2.6	5.5	2.3	10.2	10.4	3.2	18.9	18.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.2	33.4	34.2	54.2	33.2	40.1	22.2	28.8	28.8	18.6	41.6	43.0
LnGrp LOS	D	C	C	D	C	D	C	C	C	B	D	D
Approach Vol, veh/h		577			443			827			1327	
Approach Delay, s/veh		42.7			41.7			28.0			39.5	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	38.6	16.0	16.9	15.2	34.1	13.5	19.4
Change Period (Y+Rc), s	6.0	* 7.6	8.0	6.4	* 8.7	* 7.6	6.0	6.4
Max Green Setting (Gmax), s	5.0	* 31	8.0	18.0	* 7.7	* 26	9.0	19.0
Max Q Clear Time (g_c+I1), s	5.2	28.5	8.5	9.6	6.7	16.1	7.9	9.0
Green Ext Time (p_c), s	0.0	1.6	0.0	0.9	0.0	2.9	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	37.4
HCM 6th LOS	D

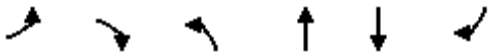
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	4.9
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	491	412	115	221
Demand Flow Rate, veh/h	501	420	118	226
Vehicles Circulating, veh/h	187	219	489	404
Vehicles Exiting, veh/h	443	388	199	235
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.0	4.9	4.7	4.9
Approach LOS	A	A	A	A

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	LT	TR	LT	TR	LT	TR
RT Channelized								
Lane Util	0.469	0.531	0.469	0.531	0.466	0.534	0.469	0.531
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	235	266	197	223	55	63	106	120
Cap Entry Lane, veh/h	1137	1211	1104	1179	861	937	931	1007
Entry HV Adj Factor	0.982	0.978	0.982	0.979	0.983	0.967	0.981	0.977
Flow Entry, veh/h	231	260	194	218	54	61	104	117
Cap Entry, veh/h	1116	1185	1084	1154	846	906	913	984
V/C Ratio	0.207	0.220	0.179	0.189	0.064	0.067	0.114	0.119
Control Delay, s/veh	5.1	5.0	4.9	4.8	4.9	4.6	5.0	4.7
LOS	A	A	A	A	A	A	A	A
95th %tile Queue, veh	1	1	1	1	0	0	0	0



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	235	164	249	1136	1185	259
Future Volume (veh/h)	235	164	249	1136	1185	259
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	255	178	271	1235	1288	282
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	541	248	358	2306	1678	748
Arrive On Green	0.16	0.16	0.10	0.65	0.47	0.47
Sat Flow, veh/h	3456	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	255	178	271	1235	1288	282
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1777	1777	1585
Q Serve(g_s), s	4.1	6.6	4.3	11.5	18.5	7.0
Cycle Q Clear(g_c), s	4.1	6.6	4.3	11.5	18.5	7.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	541	248	358	2306	1678	748
V/C Ratio(X)	0.47	0.72	0.76	0.54	0.77	0.38
Avail Cap(c_a), veh/h	1009	463	396	2306	1678	748
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.7	24.7	12.3	5.8	13.5	10.4
Incr Delay (d2), s/veh	0.6	3.9	7.4	0.9	3.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.9	0.5	4.2	5.9	11.4	4.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.3	28.6	19.8	6.7	16.9	11.9
LnGrp LOS	C	C	B	A	B	B
Approach Vol, veh/h	433			1506	1570	
Approach Delay, s/veh	26.1			9.1	16.0	
Approach LOS	C			A	B	

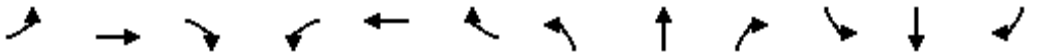
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		46.0		15.6	10.9	35.1
Change Period (Y+Rc), s		6.0		6.0	4.5	6.0
Max Green Setting (Gmax), s		40.0		18.0	7.7	27.8
Max Q Clear Time (g_c+I1), s		13.5		8.6	6.3	20.5
Green Ext Time (p_c), s		10.7		1.1	0.1	5.2

Intersection Summary		
HCM 6th Ctrl Delay	14.3	
HCM 6th LOS	B	

Phase Number	2	4	5	6
Movement	NBTL	EBL	NBL	SBT
Lead/Lag			Lead	Lag
Lead-Lag Optimize			Yes	Yes
Recall Mode	Max	None	None	Max
Maximum Split (s)	46	24	12.2	33.8
Maximum Split (%)	65.7%	34.3%	17.4%	48.3%
Minimum Split (s)	24	24	9.5	24
Yellow Time (s)	4	4	3.5	4
All-Red Time (s)	2	2	1	2
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7		7
Flash Dont Walk (s)	11	11		11
Dual Entry	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	46	0	12.2
End Time (s)	46	0	12.2	46
Yield/Force Off (s)	40	64	7.7	40
Yield/Force Off 170(s)	29	53	7.7	29
Local Start Time (s)	57.8	33.8	57.8	0
Local Yield (s)	27.8	51.8	65.5	27.8
Local Yield 170(s)	16.8	40.8	65.5	16.8

Intersection Summary	
Cycle Length	70
Control Type	Actuated-Uncoordinated
Natural Cycle	75

Splits and Phases: 4: Hooks St & Hartle Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	280	50	50	287	42	28	47	31	39	80	85
Future Volume (veh/h)	122	280	50	50	287	42	28	47	31	39	80	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	133	304	54	54	312	46	30	51	34	42	87	92
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	286	485	85	279	487	71	523	781	475	587	654	583
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1781	3021	530	1781	3111	454	1205	2122	1292	1313	1777	1585
Grp Volume(v), veh/h	133	177	181	54	177	181	30	42	43	42	87	92
Grp Sat Flow(s),veh/h/ln	1781	1777	1775	1781	1777	1789	1205	1777	1638	1313	1777	1585
Q Serve(g_s), s	3.9	5.3	5.4	1.5	5.3	5.4	1.0	0.9	1.0	1.2	1.9	2.2
Cycle Q Clear(g_c), s	3.9	5.3	5.4	1.5	5.3	5.4	3.2	0.9	1.0	2.2	1.9	2.2
Prop In Lane	1.00		0.30	1.00		0.25	1.00		0.79	1.00		1.00
Lane Grp Cap(c), veh/h	286	285	285	279	278	280	523	654	603	587	654	583
V/C Ratio(X)	0.47	0.62	0.64	0.19	0.64	0.65	0.06	0.06	0.07	0.07	0.13	0.16
Avail Cap(c_a), veh/h	562	560	560	562	560	564	523	654	603	587	654	583
HCM Platoon Ratio	1.00	1.00	1.00	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	21.7	22.4	22.4	20.9	22.6	22.6	13.2	11.7	11.7	12.4	12.0	12.1
Incr Delay (d2), s/veh	1.2	2.2	2.3	0.3	2.4	2.5	0.2	0.2	0.2	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(95%),veh/ln	2.8	3.9	3.9	1.1	3.9	4.0	0.5	0.6	0.6	0.6	1.3	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.9	24.6	24.7	21.3	25.0	25.1	13.4	11.9	11.9	12.7	12.4	12.7
LnGrp LOS	C	C	C	C	C	C	B	B	B	B	B	B
Approach Vol, veh/h		491			412			115			221	
Approach Delay, s/veh		24.2			24.5			12.3			12.6	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.0		15.2		27.0		14.9				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		21.0		18.0		21.0		18.0				
Max Q Clear Time (g_c+I1), s		5.2		7.4		4.2		7.4				
Green Ext Time (p_c), s		0.4		1.7		1.0		1.5				

Intersection Summary												
HCM 6th Ctrl Delay			21.1									
HCM 6th LOS			C									

Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	Max	None	Max	None
Maximum Split (s)	27	24	27	24
Maximum Split (%)	36.0%	32.0%	36.0%	32.0%
Minimum Split (s)	24	24	24	24
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	27	0	51
End Time (s)	27	51	27	0
Yield/Force Off (s)	21	45	21	69
Yield/Force Off 170(s)	10	34	10	58
Local Start Time (s)	0	27	0	51
Local Yield (s)	21	45	21	69
Local Yield 170(s)	10	34	10	58

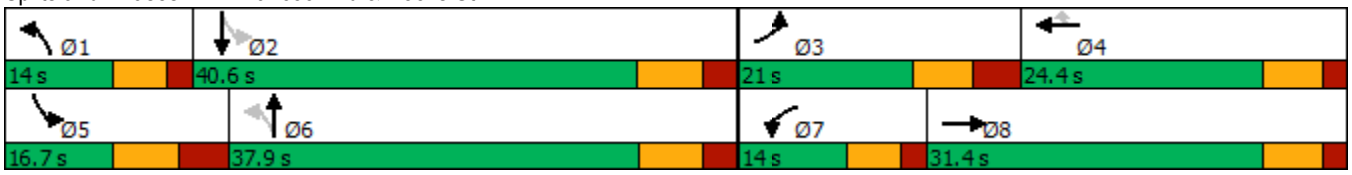
Intersection Summary		
Cycle Length		75
Control Type	Actuated-Uncoordinated	
Natural Cycle		75

Splits and Phases: 11: Emil Jahna Rd & Hooks St

Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBTL	EBL	WBT	SBL	NBTL	WBL	EBT
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	14	40.6	21	24.4	16.7	37.9	14	31.4
Maximum Split (%)	14.0%	40.6%	21.0%	24.4%	16.7%	37.9%	14.0%	31.4%
Minimum Split (s)	11	25.6	13	24.4	13.7	25.4	11	24.4
Yellow Time (s)	4	4.9	4.4	4.4	4.9	4.8	4	4.4
All-Red Time (s)	2	2.7	3.6	2	3.8	2.6	2	2
Minimum Initial (s)	5	15	5	8	5	15	5	8
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		7		7		7		7
Flash Dont Walk (s)		11		11		11		11
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	14	54.6	75.6	0	16.7	54.6	68.6
End Time (s)	14	54.6	75.6	0	16.7	54.6	68.6	0
Yield/Force Off (s)	8	47	67.6	93.6	8	47.2	62.6	93.6
Yield/Force Off 170(s)	8	36	67.6	82.6	8	36.2	62.6	82.6
Local Start Time (s)	83.3	97.3	37.9	58.9	83.3	0	37.9	51.9
Local Yield (s)	91.3	30.3	50.9	76.9	91.3	30.5	45.9	76.9
Local Yield 170(s)	91.3	19.3	50.9	65.9	91.3	19.5	45.9	65.9

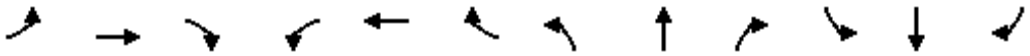
Intersection Summary	
Cycle Length	100
Control Type	Actuated-Uncoordinated
Natural Cycle	90

Splits and Phases: 1: Hancock Rd & Hooks St



HCM 6th Signalized Intersection Summary
1: Hancock Rd & Hooks St

2045 AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	412	148	177	54	151	148	160	772	155	166	606	293
Future Volume (veh/h)	412	148	177	54	151	148	160	772	155	166	606	293
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	438	157	188	57	161	157	170	821	165	177	645	312
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	478	434	387	73	448	200	287	956	192	264	825	399
Arrive On Green	0.14	0.24	0.24	0.04	0.13	0.13	0.08	0.32	0.32	0.09	0.36	0.36
Sat Flow, veh/h	3456	1777	1585	1781	3554	1585	1781	2948	592	1781	2322	1123
Grp Volume(v), veh/h	438	157	188	57	161	157	170	495	491	177	494	463
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	1781	1777	1764	1781	1777	1668
Q Serve(g_s), s	11.8	6.9	9.6	3.0	3.9	9.0	5.9	24.5	24.5	6.1	23.3	23.3
Cycle Q Clear(g_c), s	11.8	6.9	9.6	3.0	3.9	9.0	5.9	24.5	24.5	6.1	23.3	23.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.34	1.00		0.67
Lane Grp Cap(c), veh/h	478	434	387	73	448	200	287	576	572	264	631	593
V/C Ratio(X)	0.92	0.36	0.49	0.78	0.36	0.79	0.59	0.86	0.86	0.67	0.78	0.78
Avail Cap(c_a), veh/h	478	472	421	152	680	303	291	576	572	264	631	593
HCM Platoon Ratio	1.00	1.00	1.00	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	40.0	29.5	30.5	44.7	37.6	39.9	21.4	29.8	29.8	22.5	27.1	27.1
Incr Delay (d2), s/veh	22.6	0.5	0.9	15.9	0.5	7.5	3.1	15.3	15.4	6.4	9.3	9.9
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(95%),veh/ln	10.3	5.1	6.4	2.9	3.0	6.8	4.5	17.8	17.7	5.0	16.1	15.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.6	30.0	31.4	60.6	38.1	47.4	24.5	45.1	45.2	28.9	36.4	37.0
LnGrp LOS	E	C	C	E	D	D	C	D	D	C	D	D
Approach Vol, veh/h		783			375			1156			1134	
Approach Delay, s/veh		48.5			45.4			42.1			35.5	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.8	41.0	21.0	18.2	16.7	38.1	9.9	29.4
Change Period (Y+Rc), s	6.0	* 7.6	8.0	6.4	* 8.7	* 7.6	6.0	6.4
Max Green Setting (Gmax), s	8.0	* 33	13.0	18.0	* 8	* 31	8.0	25.0
Max Q Clear Time (g_c+I1), s	7.9	25.3	13.8	11.0	8.1	26.5	5.0	11.6
Green Ext Time (p_c), s	0.0	3.4	0.0	0.8	0.0	2.1	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	41.7
HCM 6th LOS	D

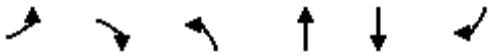
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	6.0
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	731	447	233	184
Demand Flow Rate, veh/h	745	455	238	188
Vehicles Circulating, veh/h	106	439	774	443
Vehicles Exiting, veh/h	525	573	77	451
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.6	6.4	7.2	4.9
Approach LOS	A	A	A	A

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	LT	TR	LT	TR	LT	R
RT Channelized								
Lane Util	0.470	0.530	0.470	0.530	0.471	0.529	0.479	0.521
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	350	395	214	241	112	126	90	98
Cap Entry Lane, veh/h	1224	1298	901	978	662	735	898	974
Entry HV Adj Factor	0.981	0.980	0.981	0.982	0.979	0.981	0.979	0.980
Flow Entry, veh/h	343	387	210	237	110	124	88	96
Cap Entry, veh/h	1201	1272	884	960	648	722	879	955
V/C Ratio	0.286	0.304	0.237	0.246	0.169	0.171	0.100	0.101
Control Delay, s/veh	5.6	5.6	6.5	6.2	7.5	6.9	5.0	4.7
LOS	A	A	A	A	A	A	A	A
95th %tile Queue, veh	1	1	1	1	1	1	0	0



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	376	334	273	1489	982	248
Future Volume (veh/h)	376	334	273	1489	982	248
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	409	363	297	1618	1067	270
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	876	402	374	2041	1372	612
Arrive On Green	0.25	0.25	0.12	0.57	0.39	0.39
Sat Flow, veh/h	3456	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	409	363	297	1618	1067	270
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1777	1777	1585
Q Serve(g_s), s	7.0	15.4	6.4	24.8	18.3	8.8
Cycle Q Clear(g_c), s	7.0	15.4	6.4	24.8	18.3	8.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	876	402	374	2041	1372	612
V/C Ratio(X)	0.47	0.90	0.79	0.79	0.78	0.44
Avail Cap(c_a), veh/h	893	410	422	2041	1372	612
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.0	25.2	14.2	11.6	18.8	15.8
Incr Delay (d2), s/veh	0.4	22.7	9.1	3.3	4.4	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.8	21.1	5.6	13.8	12.2	6.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.4	47.8	23.3	14.9	23.2	18.1
LnGrp LOS	C	D	C	B	C	B
Approach Vol, veh/h	772			1915	1337	
Approach Delay, s/veh	34.4			16.2	22.1	
Approach LOS	C			B	C	

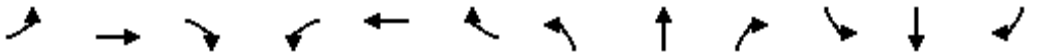
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		46.0		23.7	13.1	32.9
Change Period (Y+Rc), s		6.0		6.0	4.5	6.0
Max Green Setting (Gmax), s		40.0		18.0	10.5	25.0
Max Q Clear Time (g_c+I1), s		26.8		17.4	8.4	20.3
Green Ext Time (p_c), s		9.3		0.2	0.2	3.1

Intersection Summary		
HCM 6th Ctrl Delay	21.6	
HCM 6th LOS	C	

Phase Number	2	4	5	6
Movement	NBTL	EBL	NBL	SBT
Lead/Lag			Lead	Lag
Lead-Lag Optimize			Yes	Yes
Recall Mode	Max	None	None	Max
Maximum Split (s)	46	24	15	31
Maximum Split (%)	65.7%	34.3%	21.4%	44.3%
Minimum Split (s)	24	24	9.5	24
Yellow Time (s)	4	4	3.5	4
All-Red Time (s)	2	2	1	2
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7		7
Flash Dont Walk (s)	11	11		11
Dual Entry	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	46	0	15
End Time (s)	46	0	15	46
Yield/Force Off (s)	40	64	10.5	40
Yield/Force Off 170(s)	29	53	10.5	29
Local Start Time (s)	55	31	55	0
Local Yield (s)	25	49	65.5	25
Local Yield 170(s)	14	38	65.5	14

Intersection Summary	
Cycle Length	70
Control Type	Actuated-Uncoordinated
Natural Cycle	70

Splits and Phases: 4: Hooks St & Hartle Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	226	431	16	15	342	54	43	126	45	41	40	88
Future Volume (veh/h)	226	431	16	15	342	54	43	126	45	41	40	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	246	468	17	16	372	59	47	137	49	45	43	96
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	352	691	25	308	532	84	487	879	302	476	602	537
Arrive On Green	0.20	0.20	0.20	0.17	0.17	0.17	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1781	3498	127	1781	3076	484	1250	2594	892	1198	1777	1585
Grp Volume(v), veh/h	246	237	248	16	214	217	47	92	94	45	43	96
Grp Sat Flow(s),veh/h/ln	1781	1777	1848	1781	1777	1783	1250	1777	1710	1198	1777	1585
Q Serve(g_s), s	8.0	7.7	7.7	0.5	7.0	7.1	1.7	2.2	2.4	1.7	1.0	2.6
Cycle Q Clear(g_c), s	8.0	7.7	7.7	0.5	7.0	7.1	4.3	2.2	2.4	4.1	1.0	2.6
Prop In Lane	1.00		0.07	1.00		0.27	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	352	351	365	308	307	308	487	602	580	476	602	537
V/C Ratio(X)	0.70	0.68	0.68	0.05	0.70	0.71	0.10	0.15	0.16	0.09	0.07	0.18
Avail Cap(c_a), veh/h	518	516	537	518	516	518	487	602	580	476	602	537
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.1	23.0	23.0	21.4	24.1	24.1	15.9	14.3	14.3	15.7	13.9	14.4
Incr Delay (d2), s/veh	2.5	2.3	2.2	0.1	2.8	3.0	0.4	0.5	0.6	0.4	0.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.9	5.7	5.9	0.3	5.2	5.3	0.9	1.6	1.7	0.9	0.7	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.6	25.3	25.2	21.5	26.9	27.1	16.3	14.8	14.9	16.1	14.1	15.1
LnGrp LOS	C	C	C	C	C	C	B	B	B	B	B	B
Approach Vol, veh/h		731			447			233			184	
Approach Delay, s/veh		25.4			26.8			15.2			15.1	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.0		18.2		27.0		16.7				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		21.0		18.0		21.0		18.0				
Max Q Clear Time (g_c+I1), s		6.3		10.0		6.1		9.1				
Green Ext Time (p_c), s		0.9		2.3		0.8		1.6				

Intersection Summary												
HCM 6th Ctrl Delay			23.1									
HCM 6th LOS			C									

Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	Max	None	Max	None
Maximum Split (s)	27	24	27	24
Maximum Split (%)	36.0%	32.0%	36.0%	32.0%
Minimum Split (s)	24	24	24	24
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	27	0	51
End Time (s)	27	51	27	0
Yield/Force Off (s)	21	45	21	69
Yield/Force Off 170(s)	10	34	10	58
Local Start Time (s)	0	27	0	51
Local Yield (s)	21	45	21	69
Local Yield 170(s)	10	34	10	58

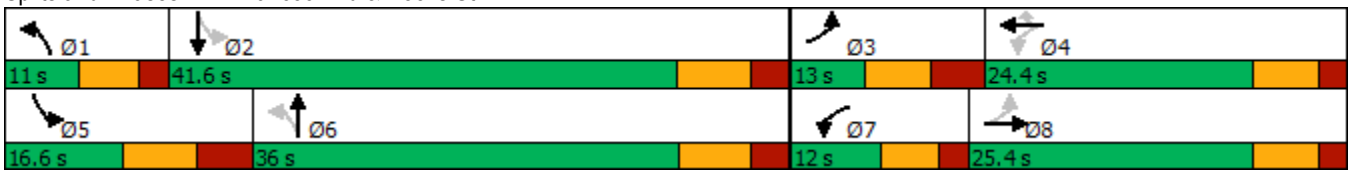
Intersection Summary		
Cycle Length		75
Control Type	Actuated-Uncoordinated	
Natural Cycle		75

Splits and Phases: 11: Emil Jahna Rd & Hooks St

Phase Number	1	2	3	4	5	6	7	8
Movement	NBL	SBTL	EBL	WBTL	SBL	NBTL	WBL	EBTL
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	11	41.6	13	24.4	16.6	36	12	25.4
Maximum Split (%)	12.2%	46.2%	14.4%	27.1%	18.4%	40.0%	13.3%	28.2%
Minimum Split (s)	11	25.6	13	24.4	13.7	25.4	11	24.4
Yellow Time (s)	4	4.9	4.4	4.4	4.9	4.8	4	4.4
All-Red Time (s)	2	2.7	3.6	2	3.8	2.6	2	2
Minimum Initial (s)	5	15	5	8	5	15	5	8
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		7		7		7		7
Flash Dont Walk (s)		11		11		11		11
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	11	52.6	65.6	0	16.6	52.6	64.6
End Time (s)	11	52.6	65.6	0	16.6	52.6	64.6	0
Yield/Force Off (s)	5	45	57.6	83.6	7.9	45.2	58.6	83.6
Yield/Force Off 170(s)	5	34	57.6	72.6	7.9	34.2	58.6	72.6
Local Start Time (s)	73.4	84.4	36	49	73.4	0	36	48
Local Yield (s)	78.4	28.4	41	67	81.3	28.6	42	67
Local Yield 170(s)	78.4	17.4	41	56	81.3	17.6	42	56

Intersection Summary	
Cycle Length	90
Control Type	Actuated-Uncoordinated
Natural Cycle	90

Splits and Phases: 1: Hancock Rd & Hooks St



HCM 6th Signalized Intersection Summary
1: Hancock Rd & Hooks St

2045 PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	275	165	152	140	166	151	112	621	79	152	752	375
Future Volume (veh/h)	275	165	152	140	166	151	112	621	79	152	752	375
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	293	176	162	149	177	161	119	661	84	162	800	399
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	559	263	227	264	475	212	237	1135	144	362	941	467
Arrive On Green	0.06	0.15	0.15	0.07	0.13	0.13	0.06	0.36	0.36	0.08	0.41	0.41
Sat Flow, veh/h	3456	1807	1559	1781	3554	1585	1781	3172	403	1781	2300	1142
Grp Volume(v), veh/h	293	173	165	149	177	161	119	370	375	162	617	582
Grp Sat Flow(s),veh/h/ln	1728	1777	1590	1781	1777	1585	1781	1777	1798	1781	1777	1665
Q Serve(g_s), s	5.0	7.6	8.2	6.0	3.8	8.1	3.5	14.0	14.1	4.7	26.1	26.4
Cycle Q Clear(g_c), s	5.0	7.6	8.2	6.0	3.8	8.1	3.5	14.0	14.1	4.7	26.1	26.4
Prop In Lane	1.00		0.98	1.00		1.00	1.00		0.22	1.00		0.69
Lane Grp Cap(c), veh/h	559	259	231	264	475	212	237	636	643	362	727	681
V/C Ratio(X)	0.52	0.67	0.71	0.56	0.37	0.76	0.50	0.58	0.58	0.45	0.85	0.85
Avail Cap(c_a), veh/h	559	406	363	264	770	343	237	636	643	391	727	681
HCM Platoon Ratio	1.00	1.00	1.00	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	30.4	33.6	33.8	29.0	32.8	34.7	19.0	21.6	21.7	16.0	22.2	22.3
Incr Delay (d2), s/veh	0.9	3.0	4.1	2.8	0.5	5.5	1.7	3.9	3.8	0.9	11.9	12.9
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(95%),veh/ln	4.8	5.9	5.8	4.8	2.9	5.9	2.5	9.9	10.1	3.2	17.6	17.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.3	36.6	37.9	31.8	33.3	40.3	20.7	25.5	25.5	16.9	34.1	35.2
LnGrp LOS	C	D	D	C	C	D	C	C	C	B	C	D
Approach Vol, veh/h		631			487			864			1361	
Approach Delay, s/veh		34.5			35.1			24.8			32.5	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	41.6	13.0	17.5	15.3	37.3	12.0	18.5
Change Period (Y+Rc), s	6.0	* 7.6	8.0	6.4	* 8.7	* 7.6	6.0	6.4
Max Green Setting (Gmax), s	5.0	* 34	5.0	18.0	* 7.9	* 29	6.0	19.0
Max Q Clear Time (g_c+I1), s	5.5	28.4	7.0	10.1	6.7	16.1	8.0	10.2
Green Ext Time (p_c), s	0.0	3.3	0.0	1.0	0.0	3.4	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	31.3
HCM 6th LOS	C

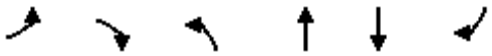
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	5.5
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	563	563	115	226
Demand Flow Rate, veh/h	574	574	118	231
Vehicles Circulating, veh/h	188	238	563	501
Vehicles Exiting, veh/h	544	443	199	311
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.4	5.7	5.1	5.4
Approach LOS	A	A	A	A

Lane	Left	Right	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR
Assumed Moves	LT	TR	LT	TR	LT	TR	LT	TR
RT Channelized								
Lane Util	0.470	0.530	0.470	0.530	0.466	0.534	0.472	0.528
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	270	304	270	304	55	63	109	122
Cap Entry Lane, veh/h	1135	1210	1084	1160	804	880	851	928
Entry HV Adj Factor	0.980	0.981	0.980	0.981	0.983	0.967	0.976	0.983
Flow Entry, veh/h	265	298	265	298	54	61	106	120
Cap Entry, veh/h	1113	1188	1063	1138	790	851	831	912
V/C Ratio	0.238	0.251	0.249	0.262	0.068	0.072	0.128	0.132
Control Delay, s/veh	5.4	5.3	5.8	5.6	5.2	4.9	5.6	5.2
LOS	A	A	A	A	A	A	A	A
95th %tile Queue, veh	1	1	1	1	0	0	0	0



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	285	273	271	1147	1210	354
Future Volume (veh/h)	285	273	271	1147	1210	354
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	310	297	295	1247	1315	385
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	735	337	334	2256	1566	699
Arrive On Green	0.21	0.21	0.12	0.63	0.44	0.44
Sat Flow, veh/h	3456	1585	1781	3647	3647	1585
Grp Volume(v), veh/h	310	297	295	1247	1315	385
Grp Sat Flow(s),veh/h/ln	1728	1585	1781	1777	1777	1585
Q Serve(g_s), s	6.1	14.3	7.2	15.5	25.9	14.1
Cycle Q Clear(g_c), s	6.1	14.3	7.2	15.5	25.9	14.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	735	337	334	2256	1566	699
V/C Ratio(X)	0.42	0.88	0.88	0.55	0.84	0.55
Avail Cap(c_a), veh/h	790	362	350	2256	1566	699
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	30.0	18.1	8.1	19.5	16.3
Incr Delay (d2), s/veh	0.4	20.5	21.7	1.0	5.6	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.4	3.5	8.1	9.0	16.4	9.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.2	50.5	39.8	9.1	25.1	19.4
LnGrp LOS	C	D	D	A	C	B
Approach Vol, veh/h	607			1542	1700	
Approach Delay, s/veh	38.6			14.9	23.8	
Approach LOS	D			B	C	

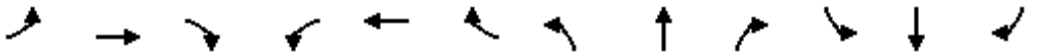
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		56.0		22.7	15.3	40.7
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		50.0		18.0	10.0	34.0
Max Q Clear Time (g_c+I1), s		17.5		16.3	9.2	27.9
Green Ext Time (p_c), s		11.8		0.5	0.1	4.7

Intersection Summary		
HCM 6th Ctrl Delay		22.6
HCM 6th LOS		C

Phase Number	2	4	5	6
Movement	NBTL	EBL	NBL	SBT
Lead/Lag			Lead	Lag
Lead-Lag Optimize			Yes	Yes
Recall Mode	Max	None	None	Max
Maximum Split (s)	56	24	16	40
Maximum Split (%)	70.0%	30.0%	20.0%	50.0%
Minimum Split (s)	24	24	11	24
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7		7
Flash Dont Walk (s)	11	11		11
Dual Entry	Yes	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	56	0	16
End Time (s)	56	0	16	56
Yield/Force Off (s)	50	74	10	50
Yield/Force Off 170(s)	39	63	10	39
Local Start Time (s)	64	40	64	0
Local Yield (s)	34	58	74	34
Local Yield 170(s)	23	47	74	23

Intersection Summary	
Cycle Length	80
Control Type	Actuated-Uncoordinated
Natural Cycle	80

Splits and Phases: 4: Hooks St & Hartle Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	328	50	50	374	94	28	47	31	40	80	88
Future Volume (veh/h)	140	328	50	50	374	94	28	47	31	40	80	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	152	357	54	54	407	102	30	51	34	43	87	96
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	313	545	82	361	571	142	452	678	413	516	567	506
Arrive On Green	0.18	0.18	0.18	0.20	0.20	0.20	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1781	3099	465	1781	2821	700	1201	2122	1292	1313	1777	1585
Grp Volume(v), veh/h	152	203	208	54	255	254	30	42	43	43	87	96
Grp Sat Flow(s),veh/h/ln	1781	1777	1787	1781	1777	1744	1201	1777	1638	1313	1777	1585
Q Serve(g_s), s	4.6	6.3	6.4	1.5	7.9	8.1	1.1	1.0	1.1	1.4	2.1	2.6
Cycle Q Clear(g_c), s	4.6	6.3	6.4	1.5	7.9	8.1	3.7	1.0	1.1	2.5	2.1	2.6
Prop In Lane	1.00		0.26	1.00		0.40	1.00		0.79	1.00		1.00
Lane Grp Cap(c), veh/h	313	312	314	361	360	353	452	567	523	516	567	506
V/C Ratio(X)	0.49	0.65	0.66	0.15	0.71	0.72	0.07	0.07	0.08	0.08	0.15	0.19
Avail Cap(c_a), veh/h	569	567	570	569	567	557	452	567	523	516	567	506
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.1	22.8	22.9	19.5	22.1	22.2	16.0	14.1	14.2	15.0	14.5	14.7
Incr Delay (d2), s/veh	1.2	2.3	2.4	0.2	2.6	2.8	0.3	0.3	0.3	0.3	0.6	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.3	4.6	4.7	1.0	5.6	5.6	0.6	0.7	0.7	0.8	1.5	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.3	25.1	25.3	19.7	24.7	24.9	16.3	14.4	14.5	15.4	15.1	15.5
LnGrp LOS	C	C	C	B	C	C	B	B	B	B	B	B
Approach Vol, veh/h		563			563			115			226	
Approach Delay, s/veh		24.7			24.3			14.9			15.3	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.0		16.5		25.0		18.1				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		19.0		19.0		19.0		19.0				
Max Q Clear Time (g_c+I1), s		5.7		8.4		4.6		10.1				
Green Ext Time (p_c), s		0.4		2.0		1.0		2.0				

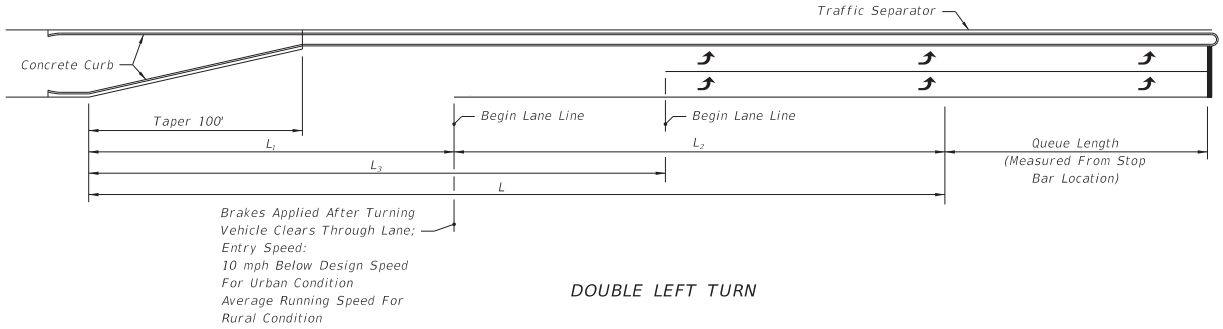
Intersection Summary												
HCM 6th Ctrl Delay			22.3									
HCM 6th LOS			C									

Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	Max	None	Max	None
Maximum Split (s)	25	25	25	25
Maximum Split (%)	33.3%	33.3%	33.3%	33.3%
Minimum Split (s)	24	24	24	24
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	5	5	5	5
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	0	25	0	50
End Time (s)	25	50	25	0
Yield/Force Off (s)	19	44	19	69
Yield/Force Off 170(s)	8	33	8	58
Local Start Time (s)	0	25	0	50
Local Yield (s)	19	44	19	69
Local Yield 170(s)	8	33	8	58

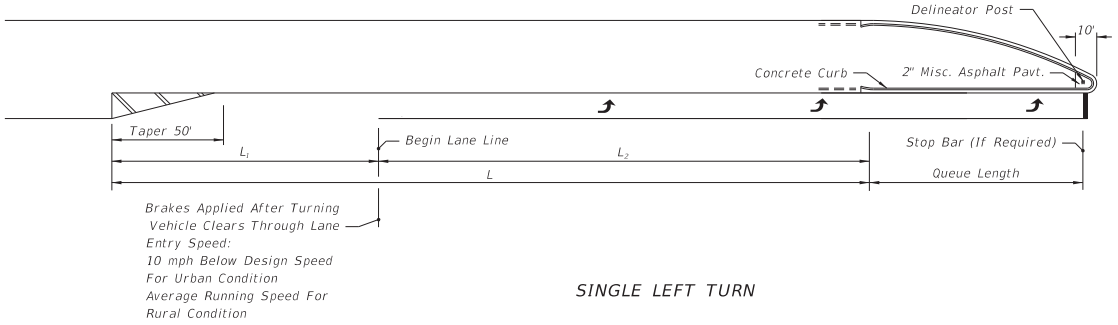
Intersection Summary	
Cycle Length	75
Control Type	Actuated-Uncoordinated
Natural Cycle	75

Splits and Phases: 11: Emil Jahna Rd & Hooks St

MEDIAN TURN LANES
MINIMUM DECELERATION LENGTHS



DOUBLE LEFT TURN



SINGLE LEFT TURN

MEDIAN TURN LANES								
			URBAN CONDITIONS			RURAL CONDITIONS		
Design Speed (mph)	Entry Speed (mph)	Clearance Distance L_1 (ft.)	Brake To Stop Distance L_2 (ft.)	Total Decel. Distance L (ft.)	Clearance Distance L_3 (ft.)	Brake To Stop Distance L_2 (ft.)	Total Decel. Distance L (ft.)	Clearance Distance L_3 (ft.)
35	25	70	75	145	110	——	——	——
40	30	80	75	155	120	——	——	——
45	35	85	100	185	135	——	——	——
50	40/44	105	135	240	160	185	290	160
55	48	125	——	——	——	225	350	195
60	52	145	——	——	——	260	405	230
65	55	170	——	——	——	290	460	270

NOT TO SCALE

EXHIBIT 212-1
01/01/2018