

TECHNICAL APPENDICES
WAKE AVENUE AFFORDABLE HOUSING
El Centro, California
February 24, 2022

LLG Ref. 3-21-3498

**Linscott, Law &
Greenspan, Engineers**
4542 Ruffner Street
Suite 100
San Diego, CA 92111
858.300.8800 T
858.300.8810 F
www.llgengineers.com

APPENDICES

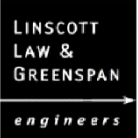
APPENDIX

- A. Intersection and Segment Manual Count Sheets and Copies of Signal Timing Plans from the City of El Centro
- B. Peak Hour Intersection Analysis Worksheets – Existing
- C. Peak Hour Intersection Analysis Worksheets – Existing + Project
- D. Peak Hour Intersection Analysis Worksheets – Existing + Cumulative Projects
- E. Peak Hour Intersection Analysis Worksheets – Existing + Project + Cumulative Projects
- F. Public Transit Route Schedules and Maps

APPENDIX A

INTERSECTION AND SEGMENT MANUAL COUNT SHEETS AND COPIES OF SIGNAL TIMING PLANS FROM THE CITY OF EL CENTRO

Intersection Turning Movement - Peak Hour Vehicle Count



Location:	#01	File Name:	ITM-21-085-08
Intersection:	Clark Road and Wake Avenue	Project:	LLG Ref. 3-21-XXXX
Date of Count:	Tuesday, December 14, 2021		El Centro

AM	Clark Road Southbound			Wake Avenue Westbound			Clark Road Northbound			Wake Avenue Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00	13	30	3	15	2	12	1	60	24	7	1	0	168
7:15	38	48	3	11	1	18	3	125	23	19	7	2	298
7:30	46	93	5	8	0	25	1	192	23	28	5	5	431
7:45	72	142	10	24	2	23	2	171	16	16	0	5	483
8:00	67	84	5	12	4	27	5	90	22	7	4	4	331
8:15	39	54	5	12	1	15	1	72	16	8	1	1	225
8:30	32	54	11	0	4	23	1	48	12	8	1	0	194
8:45	42	48	2	7	1	19	0	51	12	7	3	1	193
Total	349	553	44	89	15	162	14	809	148	100	22	18	2323
Approach%	36.9	58.5	4.7	33.5	5.6	60.9	1.4	83.3	15.2	71.4	15.7	12.9	
Total%	15.0	23.8	1.9	3.8	0.6	7.0	0.6	34.8	6.4	4.3	0.9	0.8	

AM Intersection Peak Hour: 07:15 to 08:15

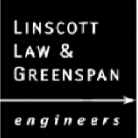
Volume	223	367	23	55	7	93	11	578	84	70	16	16	1,543
Approach%	36.4	59.9	3.8	35.5	4.5	60.0	1.6	85.9	12.5	68.6	15.7	15.7	
Total%	14.5	23.8	1.5	3.6	0.5	6.0	0.7	37.5	5.4	4.5	1.0	1.0	
PHF			0.68			0.79			0.78			0.67	0.80

PM	Clark Road Southbound			Wake Avenue Westbound			Clark Road Northbound			Wake Avenue Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	87	126	10	19	4	52	3	55	14	5	5	4	384
16:15	79	120	13	21	4	63	1	60	8	4	2	4	379
16:30	55	115	21	10	5	50	5	70	16	8	1	4	360
16:45	89	89	7	17	3	23	0	64	4	7	3	1	307
17:00	100	142	9	16	7	65	5	85	25	6	3	4	467
17:15	77	148	12	14	4	52	3	69	16	5	3	3	406
17:30	87	133	11	27	2	77	1	65	10	9	1	4	427
17:45	61	135	10	15	4	37	2	65	11	8	6	3	357
Total	635	1008	93	139	33	419	20	533	104	52	24	27	3087
Approach%	36.6	58.1	5.4	23.5	5.6	70.9	3.0	81.1	15.8	50.5	23.3	26.2	
Total%	20.6	32.7	3.0	4.5	1.1	13.6	0.6	17.3	3.4	1.7	0.8	0.9	

PM Intersection Peak Hour: 17:00 to 18:00

Volume	325	558	42	72	17	231	11	284	62	28	13	14	1,657
Approach%	35.1	60.3	4.5	22.5	5.3	72.2	3.1	79.6	17.4	50.9	23.6	25.5	
Total%	19.6	33.7	2.5	4.3	1.0	13.9	0.7	17.1	3.7	1.7	0.8	0.8	
PHF			0.92			0.75			0.78			0.81	0.89

Intersection Turning Movement - Bicycle & Pedestrian Count



Location:	#01	File Name:	ITM-21-085-08
Intersection:	Clark Road and Wake Avenue	Project:	LLG Ref. 3-21-XXXX
Date of Count:	Tuesday, December 14, 2021		El Centro

AM	Clark Road Southbound				Wake Avenue Westbound				Clark Road Northbound				Wake Avenue Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
7:30	1	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	3	1
7:45	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8:00	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	2
8:15	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Ped Total	6				0				2				2				10	
Bike Total		0	0	0		0	0	1		0	1	0		1	0	0		3

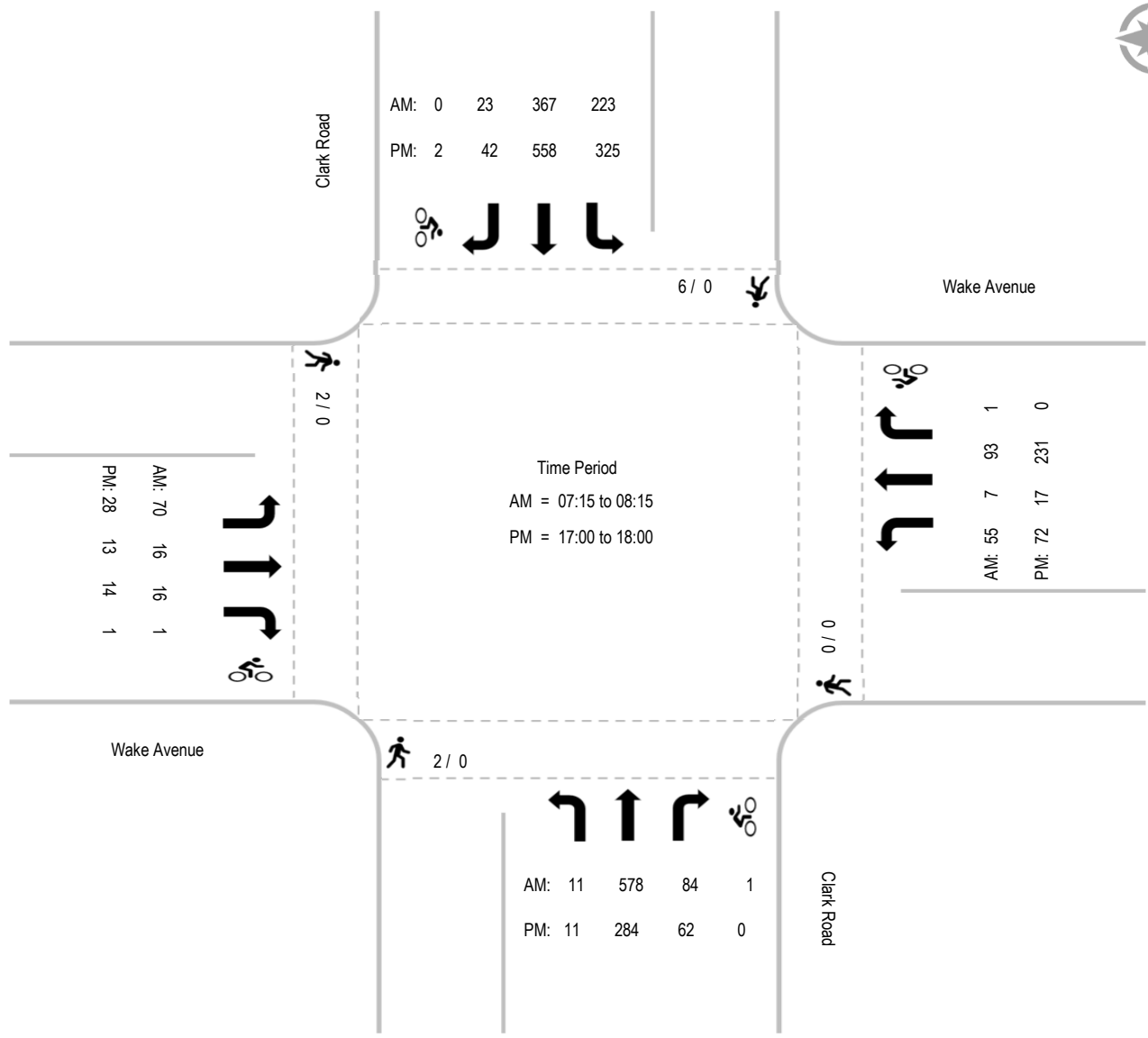
PM	Clark Road Southbound				Wake Avenue Westbound				Clark Road Northbound				Wake Avenue Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
16:30	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				0				0				0				0	
Bike Total		0	1	1		0	0	0		0	0	0		1	0	0		3

Intersection Turning Movement - Peak Hour Summary

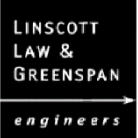


Location: #01
 Intersection: Clark Road and Wake Avenue
 Date of Count: Tuesday, December 14, 2021

File Name: ITM-21-085-08
 Project: LLG Ref. 3-21-XXXX
 El Centro



Intersection Turning Movement - Peak Hour Vehicle Count



Location: #02	File Name: ITM-21-085-07
Intersection: Thomas Drive and Wake Avenue	Project: LLG Ref. 3-21-XXXX
Date of Count: Tuesday, December 14, 2021	El Centro

AM	Thomas Drive Southbound			Wake Avenue Westbound			Thomas Drive Northbound			Wake Avenue Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00	3	0	0	0	28	7	2	1	1	0	33	0	75
7:15	0	0	1	0	34	7	2	0	4	3	65	2	118
7:30	2	0	0	2	36	7	8	2	1	2	64	2	126
7:45	2	0	0	4	53	10	8	0	4	5	87	2	175
8:00	2	0	1	4	37	17	5	0	6	7	65	6	150
8:15	7	1	0	3	25	15	6	0	10	2	42	4	115
8:30	5	1	1	1	29	12	2	1	4	1	45	3	105
8:45	3	0	0	3	26	14	3	0	3	1	43	3	99
Total	24	2	3	17	268	89	36	4	33	21	444	22	963
Approach%	82.8	6.9	10.3	4.5	71.7	23.8	49.3	5.5	45.2	4.3	91.2	4.5	
Total%	2.5	0.2	0.3	1.8	27.8	9.2	3.7	0.4	3.4	2.2	46.1	2.3	

AM Intersection Peak Hour: 07:15 to 08:15

Volume	6	-	2	10	160	41	23	2	15	17	281	12	569
Approach%	75.0	-	25.0	4.7	75.8	19.4	57.5	5.0	37.5	5.5	90.6	3.9	
Total%	1.1	-	0.4	1.8	28.1	7.2	4.0	0.4	2.6	3.0	49.4	2.1	
PHF			0.67			0.79			0.83			0.82	0.81

PM	Thomas Drive Southbound			Wake Avenue Westbound			Thomas Drive Northbound			Wake Avenue Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	13	0	4	3	66	13	8	0	2	4	79	9	201
16:15	12	0	2	2	62	13	12	0	4	2	82	0	191
16:30	22	0	5	4	57	7	6	0	1	4	72	9	187
16:45	11	1	3	7	71	8	6	1	0	3	86	9	206
17:00	13	0	3	1	72	9	7	1	4	0	110	9	229
17:15	11	0	4	4	64	6	7	0	1	1	87	9	194
17:30	13	0	5	5	71	6	9	0	2	0	90	13	214
17:45	11	0	2	2	46	2	6	0	2	2	73	5	151
Total	106	1	28	28	509	64	61	2	16	16	679	63	1573
Approach%	78.5	0.7	20.7	4.7	84.7	10.6	77.2	2.5	20.3	2.1	89.6	8.3	
Total%	6.7	0.1	1.8	1.8	32.4	4.1	3.9	0.1	1.0	1.0	43.2	4.0	

PM Intersection Peak Hour: 16:45 to 17:45

Volume	48	1	15	17	278	29	29	2	7	4	373	40	843
Approach%	75.0	1.6	23.4	5.2	85.8	9.0	76.3	5.3	18.4	1.0	89.4	9.6	
Total%	5.7	0.1	1.8	2.0	33.0	3.4	3.4	0.2	0.8	0.5	44.2	4.7	
PHF			0.89			0.94			0.79			0.88	0.92

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN <i>engineers</i>	Location: #02	File Name: ITM-21-085-07
	Intersection: Thomas Drive and Wake Avenue	Project: LLG Ref. 3-21-XXXX
	Date of Count: Tuesday, December 14, 2021	El Centro

AM	Thomas Drive Southbound				Wake Avenue Westbound				Thomas Drive Northbound				Wake Avenue Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	1
8:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
8:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
8:45	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
Ped Total	0				0				5				0				5	
Bike Total		0	0	0		0	1	0		0	0	0		0	0	0		1

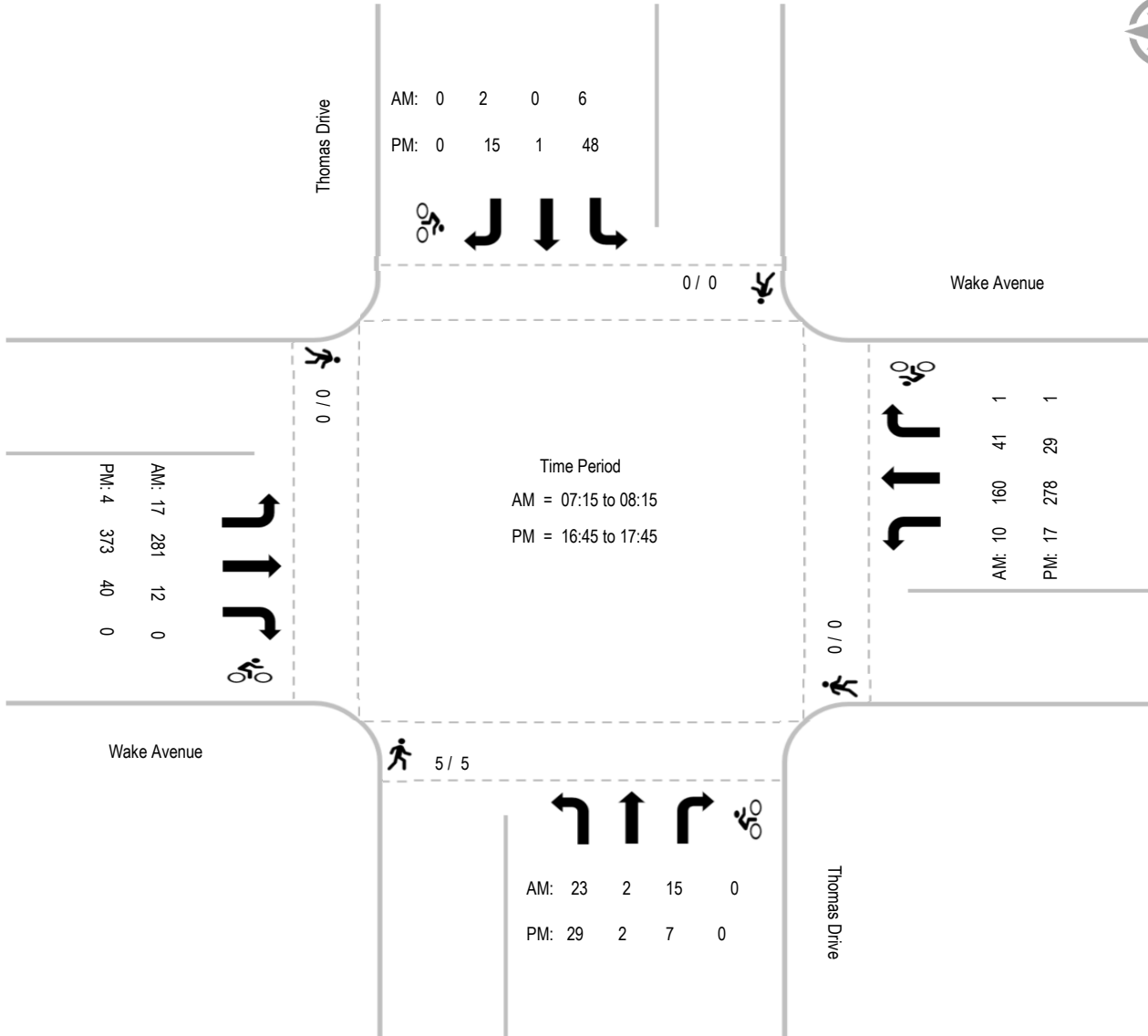
PM	Thomas Drive Southbound				Wake Avenue Westbound				Thomas Drive Northbound				Wake Avenue Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
16:45	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				0				5				0				5	
Bike Total		0	0	0		0	0	1		0	0	0		0	0	0		1

Intersection Turning Movement - Peak Hour Summary



Location: #02
Intersection: Thomas Drive and Wake Avenue
Date of Count: Tuesday, December 14, 2021

File Name: ITM-21-085-07
Project: LLG Ref. 3-21-XXXX
 El Centro



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN <i>engineers</i>	Location: #03 Revised	File Name: ITM-21-085-06R
	Intersection: 6th Street and Wake Avenue	Project: LLG Ref. 3-21-XXXX
	Date of Count: Tuesday, December 14, 2021	El Centro

AM	Business Driveway Southbound			Wake Avenue Westbound			6th Avenue Northbound			Wake Avenue Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00	1	0	1	0	34	1	0	0	2	0	36	0	75
7:15	0	0	0	1	32	1	3	0	5	0	59	0	101
7:30	1	0	1	1	38	3	0	0	5	1	71	0	121
7:45	0	0	0	4	68	7	1	0	3	2	83	1	169
8:00	0	0	2	2	58	6	0	0	4	2	65	0	139
8:15	2	0	1	1	49	4	0	0	3	1	60	1	122
8:30	6	0	1	0	44	3	0	0	0	0	46	0	100
8:45	0	0	1	1	48	7	0	0	2	0	54	0	113
Total	10	0	7	10	371	32	4	0	24	6	474	2	940
Approach%	58.8	-	41.2	2.4	89.8	7.7	14.3	-	85.7	1.2	98.3	0.4	
Total%	1.1	-	0.7	1.1	39.5	3.4	0.4	-	2.6	0.6	50.4	0.2	

AM Intersection Peak Hour: 07:30 to 08:30

Volume	3	-	4	8	213	20	1	-	15	6	279	2	551
Approach%	42.9	-	57.1	3.3	88.4	8.3	6.3	-	93.8	2.1	97.2	0.7	
Total%	0.5	-	0.7	1.5	38.7	3.6	0.2	-	2.7	1.1	50.6	0.4	
PHF			0.58			0.76			0.80			0.83	0.82

PM	Business Driveway Southbound			Wake Avenue Westbound			6th Avenue Northbound			Wake Avenue Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	3	0	0	0	88	5	0	0	4	1	96	0	197
16:15	3	0	2	4	82	5	0	0	2	1	100	0	199
16:30	0	0	1	6	74	8	1	0	7	0	93	0	190
16:45	2	0	3	2	86	4	0	0	5	1	95	0	198
17:00	10	0	1	2	84	4	0	0	3	0	130	1	235
17:15	5	0	1	3	76	2	0	0	2	2	103	0	194
17:30	1	0	5	6	83	1	0	0	0	0	108	0	204
17:45	2	0	1	5	52	3	0	0	3	0	84	1	151
Total	26	0	14	28	625	32	1	0	26	5	809	2	1568
Approach%	65.0	-	35.0	4.1	91.2	4.7	3.7	-	96.3	0.6	99.1	0.2	
Total%	1.7	-	0.9	1.8	39.9	2.0	0.1	-	1.7	0.3	51.6	0.1	

PM Intersection Peak Hour: 16:45 to 17:45

Volume	18	-	10	13	329	11	-	-	10	3	436	1	831
Approach%	64.3	-	35.7	3.7	93.2	3.1	-	-	100.0	0.7	99.1	0.2	
Total%	2.2	-	1.2	1.6	39.6	1.3	-	-	1.2	0.4	52.5	0.1	
PHF			0.64			0.96			0.50			0.84	0.88

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN <i>engineers</i>	Location: #03 Revised	File Name: ITM-21-085-06R
	Intersection: 6th Street and Wake Avenue	Project: LLG Ref. 3-21-XXXX
	Date of Count: Tuesday, December 14, 2021	El Centro

AM	Business Driveway Southbound				Wake Avenue Westbound				6th Avenue Northbound				Wake Avenue Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
8:00	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	1
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Ped Total	2				1				2				0				5	
Bike Total		0	0	0		0	1	0		0	0	0		0	0	0		1

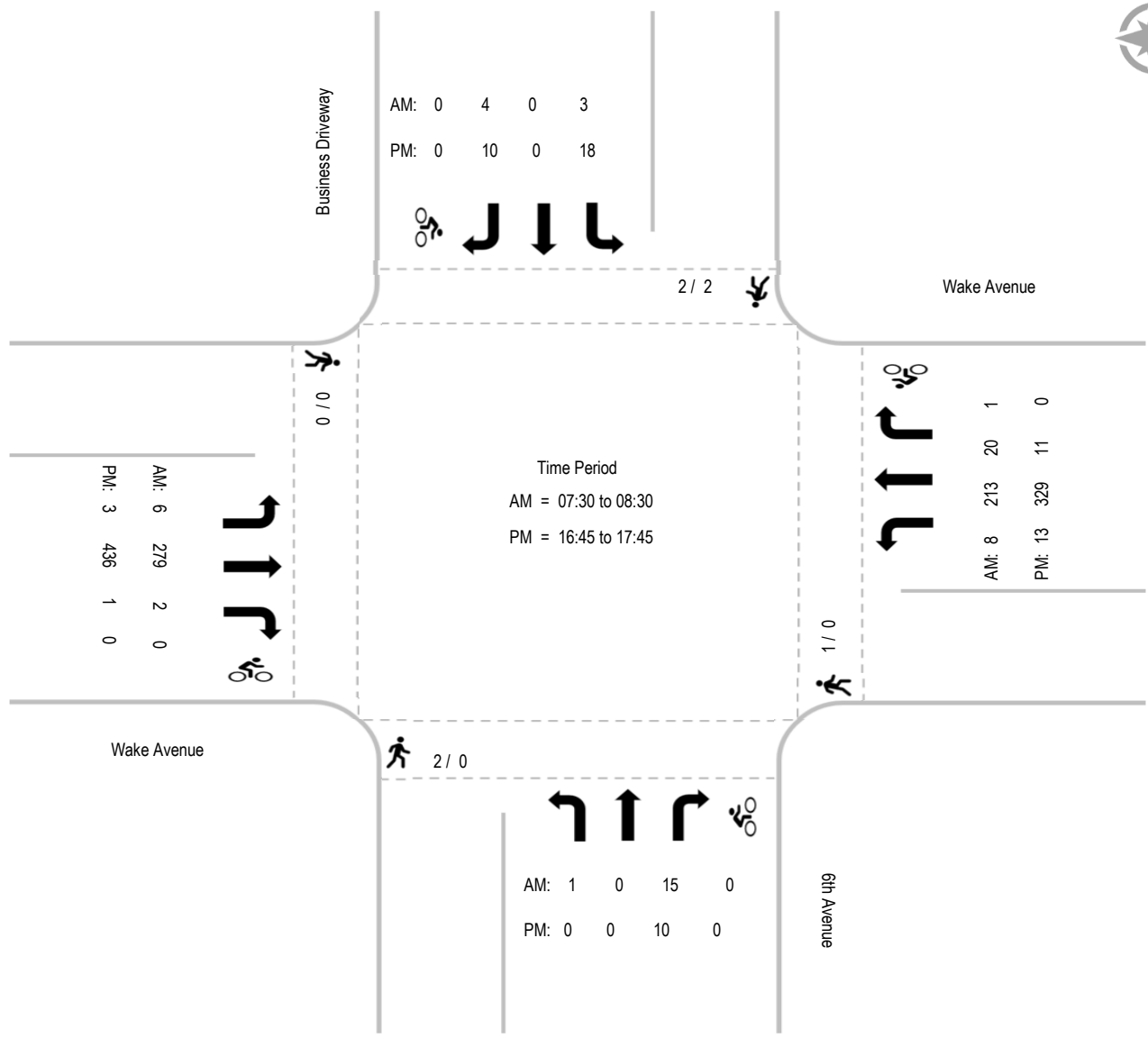
PM	Business Driveway Southbound				Wake Avenue Westbound				6th Avenue Northbound				Wake Avenue Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	2				0				0				0				2	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0

Intersection Turning Movement - Peak Hour Summary



Location: #03 Revised
 Intersection: 6th Street and Wake Avenue
 Date of Count: Tuesday, December 14, 2021

File Name: ITM-21-085-06R
 Project: LLG Ref. 3-21-XXXX
 El Centro



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN <i>engineers</i>	Location: #04	File Name: ITM-21-085-01
	Intersection: 4th Street (SR-86) and Ross Avenue	Project: LLG Ref. 3-21-XXXX
	Date of Count: Tuesday, December 14, 2021	El Centro

AM	4th Street (SR-86) Southbound			Ross Avenue Westbound			4th Street (SR-86) Northbound			Ross Avenue Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00	8	69	2	24	17	18	4	81	10	6	26	14	279
7:15	12	71	2	16	33	41	9	105	16	5	35	16	361
7:30	20	92	4	11	53	58	11	127	16	9	36	31	468
7:45	44	130	2	23	35	47	9	163	24	10	67	24	578
8:00	28	146	4	13	23	34	14	131	31	14	47	36	521
8:15	17	104	4	24	29	23	10	119	20	9	38	17	414
8:30	21	97	8	23	31	23	19	116	18	11	33	26	426
8:45	18	116	10	15	32	45	14	99	11	12	24	20	416
Total	168	825	36	149	253	289	90	941	146	76	306	184	3463
Approach%	16.3	80.2	3.5	21.6	36.6	41.8	7.6	79.9	12.4	13.4	54.1	32.5	
Total%	4.9	23.8	1.0	4.3	7.3	8.3	2.6	27.2	4.2	2.2	8.8	5.3	

AM Intersection Peak Hour: 07:30 to 08:30

Volume	109	472	14	71	140	162	44	540	91	42	188	108	1,981
Approach%	18.3	79.3	2.4	19.0	37.5	43.4	6.5	80.0	13.5	12.4	55.6	32.0	
Total%	5.5	23.8	0.7	3.6	7.1	8.2	2.2	27.3	4.6	2.1	9.5	5.5	
PHF			0.84			0.76			0.86			0.84	0.86

PM	4th Street (SR-86) Southbound			Ross Avenue Westbound			4th Street (SR-86) Northbound			Ross Avenue Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	28	200	8	24	36	39	15	118	17	14	51	50	600
16:15	17	183	6	33	33	53	14	170	14	11	54	26	614
16:30	19	183	3	22	37	48	37	133	17	6	54	31	590
16:45	43	161	6	19	41	43	8	142	23	10	42	34	572
17:00	41	199	5	21	23	39	16	170	21	8	48	35	626
17:15	26	170	5	21	22	42	15	158	23	8	50	43	583
17:30	32	161	3	26	21	30	13	124	16	1	37	26	490
17:45	21	174	10	25	20	32	7	120	48	9	32	28	526
Total	227	1431	46	191	233	326	125	1135	179	67	368	273	4601
Approach%	13.3	84.0	2.7	25.5	31.1	43.5	8.7	78.9	12.4	9.5	52.0	38.6	
Total%	4.9	31.1	1.0	4.2	5.1	7.1	2.7	24.7	3.9	1.5	8.0	5.9	

PM Intersection Peak Hour: 16:15 to 17:15

Volume	120	726	20	95	134	183	75	615	75	35	198	126	2,402
Approach%	13.9	83.8	2.3	23.1	32.5	44.4	9.8	80.4	9.8	9.7	55.2	35.1	
Total%	5.0	30.2	0.8	4.0	5.6	7.6	3.1	25.6	3.1	1.5	8.2	5.2	
PHF			0.88			0.87			0.92			0.99	0.96

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN <i>engineers</i>	Location: #04	File Name: ITM-21-085-01
	Intersection: 4th Street (SR-86) and Ross Avenue	Project: LLG Ref. 3-21-XXXX
	Date of Count: Tuesday, December 14, 2021	El Centro

AM	4th Street (SR-86) Southbound				Ross Avenue Westbound				4th Street (SR-86) Northbound				Ross Avenue Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
7:15	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	4	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
Ped Total	2				2				1				2				7	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0

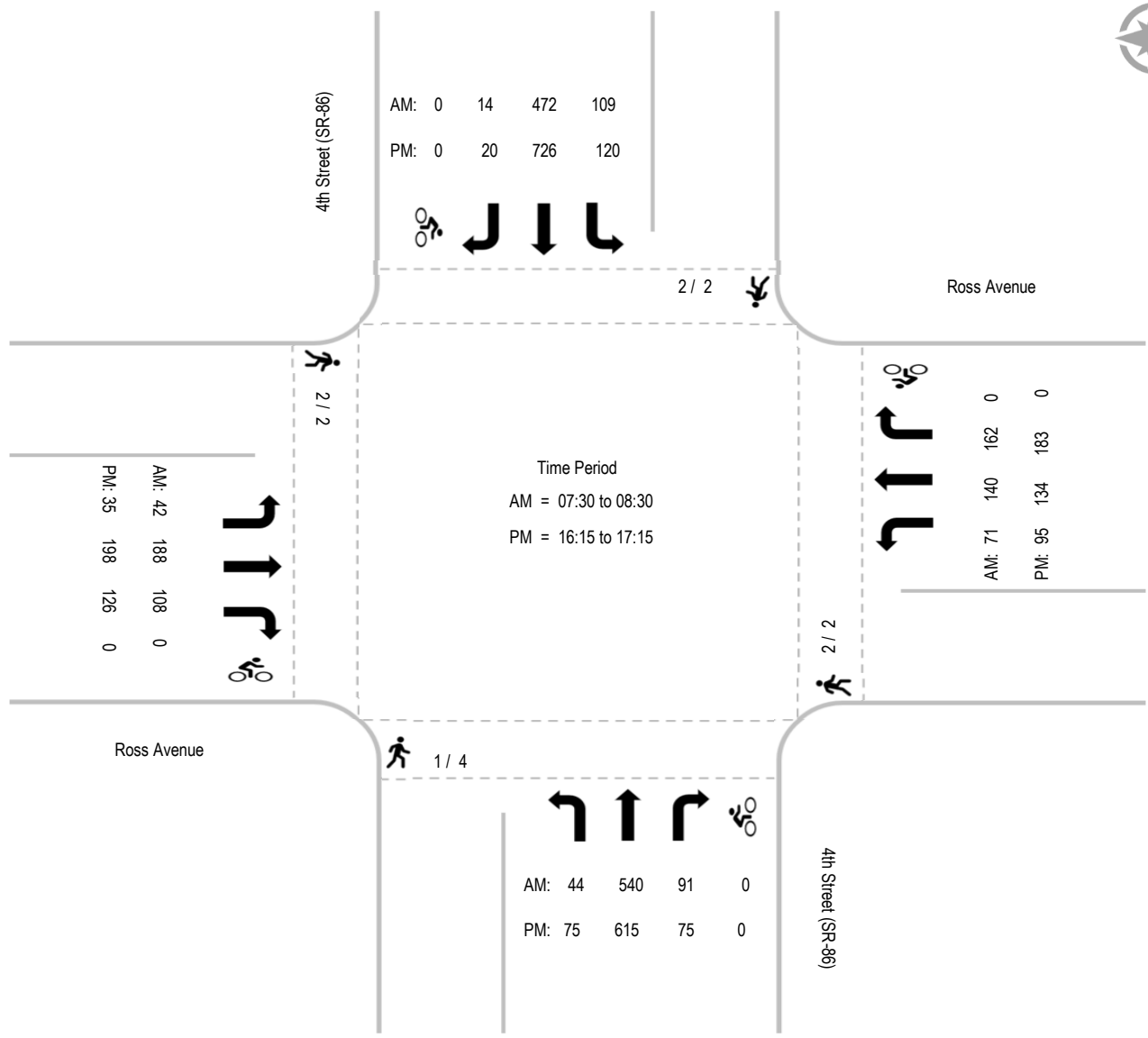
PM	4th Street (SR-86) Southbound				Ross Avenue Westbound				4th Street (SR-86) Northbound				Ross Avenue Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	3	0
16:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
17:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	1	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	4	0
Ped Total	2				2				4				2				10	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0

Intersection Turning Movement - Peak Hour Summary



Location: #04
 Intersection: 4th Street (SR-86) and Ross Avenue
 Date of Count: Tuesday, December 14, 2021

File Name: ITM-21-085-01
 Project: LLG Ref. 3-21-XXXX
 El Centro



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN <i>engineers</i>	Location: #05	File Name: ITM-21-085-02
	Intersection: 4th Street (SR-86) and I-8 Westbound Ramps	Project: LLG Ref. 3-21-XXXX
	Date of Count: Tuesday, December 14, 2021	El Centro

AM	4th Street (SR-86) Southbound			I-8 WB Off Ramp Westbound			4th Street (SR-86) Northbound			I-8 WB On Ramp Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00	0	130	16	20	0	67	17	50	0	0	0	0	300
7:15	0	139	28	25	0	88	28	86	0	0	0	0	394
7:30	0	181	21	30	0	102	46	114	0	0	0	0	494
7:45	0	299	19	64	0	94	36	113	0	0	0	0	625
8:00	0	170	14	54	0	77	16	114	0	0	0	0	445
8:15	0	175	21	39	0	54	15	107	0	0	0	0	411
8:30	0	171	17	46	0	62	15	85	0	0	0	0	396
8:45	0	266	15	39	0	86	31	128	0	0	0	0	565
Total	0	1531	151	317	0	630	204	797	0	0	0	0	3630
Approach%	-	91.0	9.0	33.5	-	66.5	20.4	79.6	-	-	-	-	
Total%	-	42.2	4.2	8.7	-	17.4	5.6	22.0	-	-	-	-	

AM Intersection Peak Hour: 07:30 to 08:30

Volume	-	825	75	187	-	327	113	448	-	-	-	-	1,975
Approach%	-	91.7	8.3	36.4	-	63.6	20.1	79.9	-	-	-	-	
Total%	-	41.8	3.8	9.5	-	16.6	5.7	22.7	-	-	-	-	
PHF			0.71			0.81			0.88			#DIV/0!	0.79

PM	4th Street (SR-86) Southbound			I-8 WB Off Ramp Westbound			4th Street (SR-86) Northbound			I-8 WB On Ramp Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	0	308	16	47	0	92	13	144	0	0	0	0	620
16:15	0	261	11	59	0	90	30	139	0	0	0	0	590
16:30	0	296	10	39	0	81	18	122	0	0	0	0	566
16:45	0	263	9	45	0	70	34	198	0	0	0	0	619
17:00	0	253	10	44	0	76	24	163	0	0	0	0	570
17:15	0	272	9	56	0	85	18	131	0	0	0	0	571
17:30	0	259	11	31	0	56	26	121	0	0	0	0	504
17:45	0	264	8	25	0	87	29	124	0	0	0	0	537
Total	0	2176	84	346	0	637	192	1142	0	0	0	0	4577
Approach%	-	96.3	3.7	35.2	-	64.8	14.4	85.6	-	-	-	-	
Total%	-	47.5	1.8	7.6	-	13.9	4.2	25.0	-	-	-	-	

PM Intersection Peak Hour: 16:00 to 17:00

Volume	-	1,128	46	190	-	333	95	603	-	-	-	-	2,395
Approach%	-	96.1	3.9	36.3	-	63.7	13.6	86.4	-	-	-	-	
Total%	-	47.1	1.9	7.9	-	13.9	4.0	25.2	-	-	-	-	
PHF			0.91			0.88			0.75			#DIV/0!	0.97

Intersection Turning Movement - Bicycle & Pedestrian Count

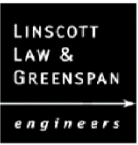


Location: #05	File Name: ITM-21-085-02
Intersection: 4th Street (SR-86) and I-8 Westbound Ramps	Project: LLG Ref. 3-21-XXXX
Date of Count: Tuesday, December 14, 2021	El Centro

AM	4th Street (SR-86) Southbound				I-8 WB Off Ramp Westbound				4th Street (SR-86) Northbound				I-8 WB On Ramp Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	2	1
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	4	0
Ped Total	2				5				1				0				8	
Bike Total		0	2	0		0	0	0		0	1	0		0	0	0		3

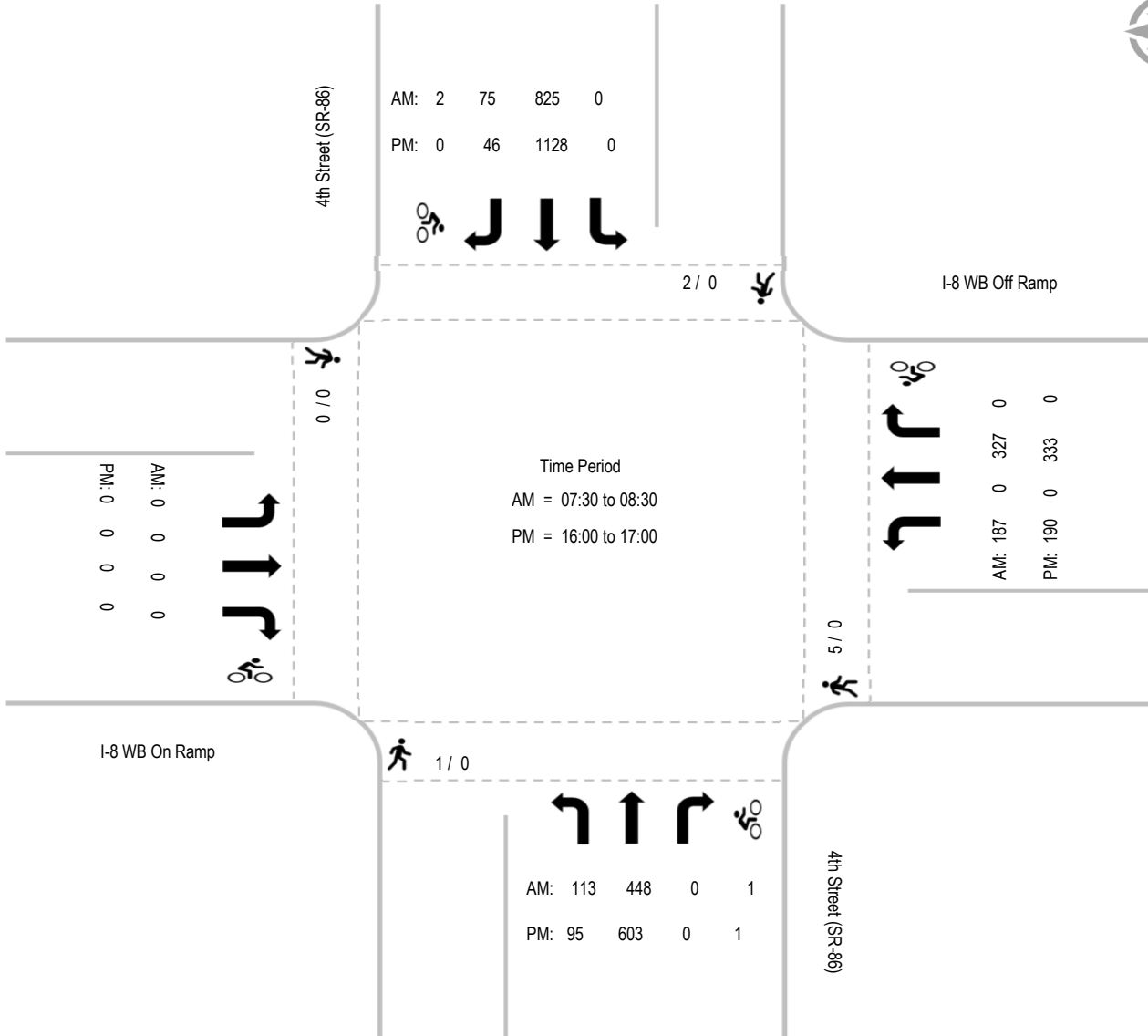
PM	4th Street (SR-86) Southbound				I-8 WB Off Ramp Westbound				4th Street (SR-86) Northbound				I-8 WB On Ramp Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				0				0				0				0	
Bike Total		0	0	0		0	0	0		0	1	0		0	0	0		1

Intersection Turning Movement - Peak Hour Summary



Location: #05
 Intersection: 4th Street (SR-86) and I-8 Westbound Ramps
 Date of Count: Tuesday, December 14, 2021

File Name: ITM-21-085-02
 Project: LLG Ref. 3-21-XXXX
 El Centro



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN <i>engineers</i>	Location: #06	File Name: ITM-21-085-03
	Intersection: 4th Street (SR-86) and I-8 Eastbound Ramps	Project: LLG Ref. 3-21-XXXX
	Date of Count: Tuesday, December 14, 2021	El Centro

AM	4th Street (SR-86) Southbound			I-8 EB On Ramp Westbound			4th Street (SR-86) Northbound			I-8 EB Off Ramp Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00	63	84	0	0	0	0	0	80	25	8	0	8	268
7:15	73	94	0	0	0	0	0	99	33	19	0	11	329
7:30	96	116	0	0	0	0	0	163	45	12	0	5	437
7:45	123	233	0	0	0	0	0	124	30	17	0	14	541
8:00	95	173	0	0	0	0	0	115	29	18	0	11	441
8:15	71	157	0	0	0	0	0	110	33	13	0	15	399
8:30	72	138	0	0	0	0	0	104	32	12	0	13	371
8:45	59	153	0	0	0	0	0	110	32	12	0	11	377
Total	652	1148	0	0	0	0	0	905	259	111	0	88	3163
Approach%	36.2	63.8	-	-	-	-	-	77.7	22.3	55.8	-	44.2	
Total%	20.6	36.3	-	-	-	-	-	28.6	8.2	3.5	-	2.8	

AM Intersection Peak Hour: 07:30 to 08:30

Volume	385	679	-	-	-	-	-	512	137	60	-	45	1,818
Approach%	36.2	63.8	-	-	-	-	-	78.9	21.1	57.1	-	42.9	
Total%	21.2	37.3	-	-	-	-	-	28.2	7.5	3.3	-	2.5	
PHF			0.75			#DIV/0!			0.78			0.85	0.84

PM	4th Street (SR-86) Southbound			I-8 EB On Ramp Westbound			4th Street (SR-86) Northbound			I-8 EB Off Ramp Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	117	215	0	0	0	0	0	136	60	14	0	29	571
16:15	121	198	0	0	0	0	0	128	52	16	0	30	545
16:30	116	202	0	0	0	0	0	161	57	12	0	12	560
16:45	107	219	0	0	0	0	0	145	43	11	0	23	548
17:00	110	209	0	0	0	0	0	148	82	14	0	14	577
17:15	106	208	0	0	0	0	0	139	64	10	0	7	534
17:30	119	178	0	0	0	0	0	134	55	17	0	6	509
17:45	103	176	0	0	0	0	0	144	44	8	0	13	488
Total	899	1605	0	0	0	0	0	1135	457	102	0	134	4332
Approach%	35.9	64.1	-	-	-	-	-	71.3	28.7	43.2	-	56.8	
Total%	20.8	37.0	-	-	-	-	-	26.2	10.5	2.4	-	3.1	

PM Intersection Peak Hour: 16:15 to 17:15

Volume	454	828	-	-	-	-	-	582	234	53	-	79	2,230
Approach%	35.4	64.6	-	-	-	-	-	71.3	28.7	40.2	-	59.8	
Total%	20.4	37.1	-	-	-	-	-	26.1	10.5	2.4	-	3.5	
PHF			0.98			#DIV/0!			0.89			0.72	0.97

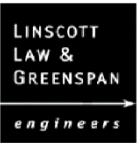
Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN <i>engineers</i>	Location: #06	File Name: ITM-21-085-03
	Intersection: 4th Street (SR-86) and I-8 Eastbound Ramps	Project: LLG Ref. 3-21-XXXX
	Date of Count: Tuesday, December 14, 2021	El Centro

AM	4th Street (SR-86) Southbound				I-8 EB On Ramp Westbound				4th Street (SR-86) Northbound				I-8 EB Off Ramp Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
8:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	1	2
Ped Total	0				0				1				2				3	
Bike Total		0	2	0		0	0	0		0	3	0		0	0	0		5

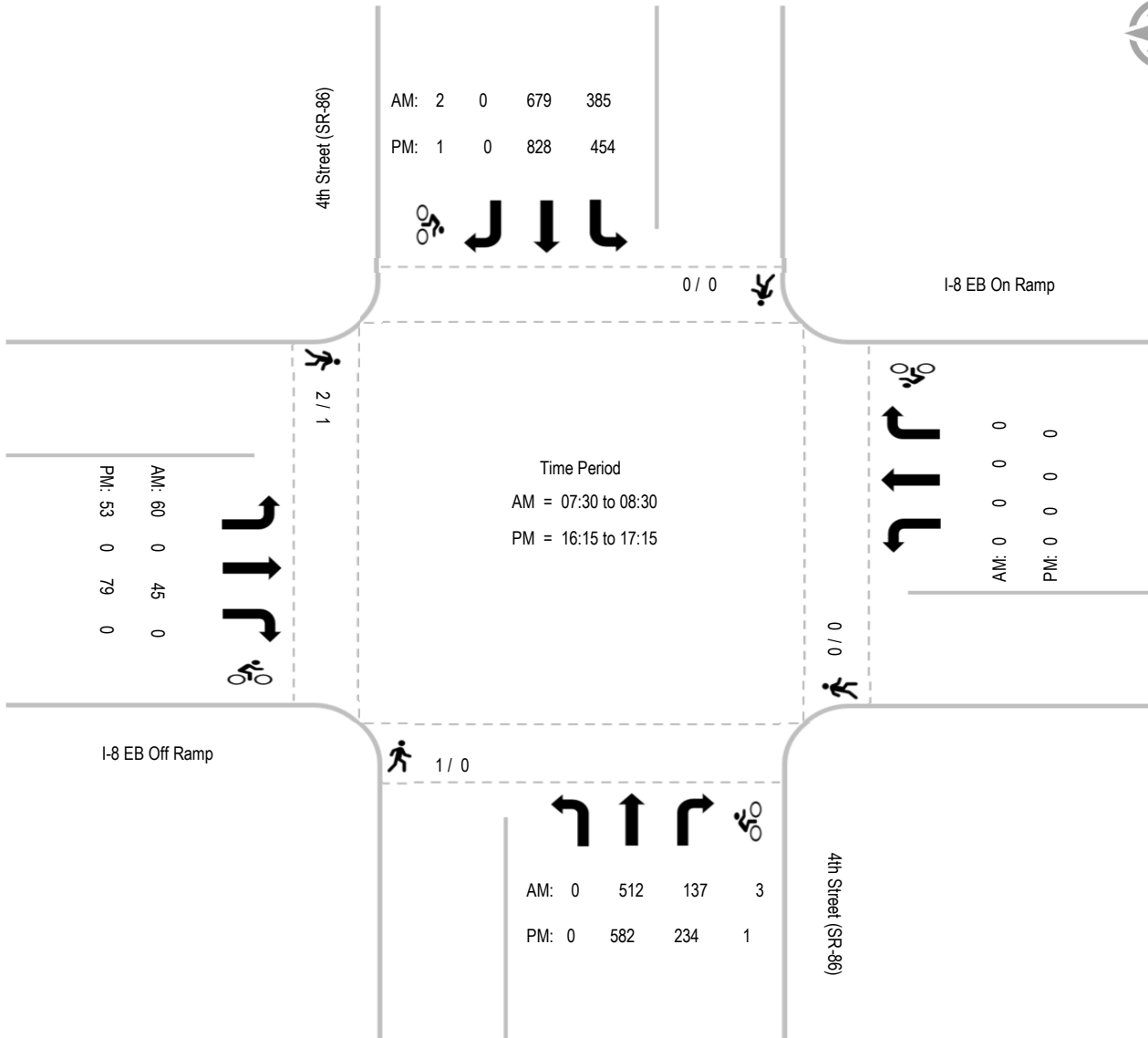
PM	4th Street (SR-86) Southbound				I-8 EB On Ramp Westbound				4th Street (SR-86) Northbound				I-8 EB Off Ramp Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
16:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				0				0				1				1	
Bike Total		0	1	0		0	0	0		0	1	0		0	0	0		2

Intersection Turning Movement - Peak Hour Summary



Location: #06
 Intersection: 4th Street (SR-86) and I-8 Eastbound Ramps
 Date of Count: Tuesday, December 14, 2021

File Name: ITM-21-085-03
 Project: LLG Ref. 3-21-XXXX
 El Centro



Intersection Turning Movement - Peak Hour Vehicle Count

LINSOTT LAW & GREENSPAN <i>engineers</i>	Location: #07	File Name: ITM-21-085-04
	Intersection: 4th Street (SR-86) and Wake Avenue	Project: LLG Ref. 3-21-XXXX
	Date of Count: Tuesday, December 14, 2021	El Centro

AM	4th Street (SR-86) Southbound			Wake Avenue Westbound			4th Street (SR-86) Northbound			Wake Avenue Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00	31	33	21	9	5	20	9	43	9	24	5	9	218
7:15	55	33	24	6	8	18	8	61	8	37	20	12	290
7:30	46	50	24	9	9	28	10	107	7	54	11	17	372
7:45	63	120	47	4	16	18	18	90	14	40	17	34	481
8:00	67	78	46	11	13	35	12	62	10	34	20	22	410
8:15	79	57	32	14	7	30	16	63	15	28	22	15	378
8:30	72	52	45	8	16	35	13	48	19	25	13	13	359
8:45	77	59	28	11	15	49	16	44	20	19	21	16	375
Total	490	482	267	72	89	233	102	518	102	261	129	138	2883
Approach%	39.5	38.9	21.5	18.3	22.6	59.1	14.1	71.7	14.1	49.4	24.4	26.1	
Total%	17.0	16.7	9.3	2.5	3.1	8.1	3.5	18.0	3.5	9.1	4.5	4.8	

AM Intersection Peak Hour: 07:30 to 08:30

Volume	255	305	149	38	45	111	56	322	46	156	70	88	1,641
Approach%	36.0	43.0	21.0	19.6	23.2	57.2	13.2	75.9	10.8	49.7	22.3	28.0	
Total%	15.5	18.6	9.1	2.3	2.7	6.8	3.4	19.6	2.8	9.5	4.3	5.4	
PHF			0.77			0.82			0.85			0.86	0.85

PM	4th Street (SR-86) Southbound			Wake Avenue Westbound			4th Street (SR-86) Northbound			Wake Avenue Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	71	110	47	18	13	46	38	92	13	31	24	34	537
16:15	58	131	44	22	20	59	32	67	24	64	26	39	586
16:30	55	113	39	21	15	45	27	83	11	53	17	35	514
16:45	49	120	38	19	23	46	31	81	16	27	23	48	521
17:00	59	97	38	26	23	59	51	135	12	76	27	40	643
17:15	56	121	26	7	17	36	34	86	18	48	16	52	517
17:30	61	99	39	24	19	46	37	83	7	49	23	35	522
17:45	58	99	28	16	14	25	22	65	14	45	16	37	439
Total	467	890	299	153	144	362	272	692	115	393	172	320	4279
Approach%	28.2	53.7	18.1	23.2	21.9	54.9	25.2	64.1	10.7	44.4	19.4	36.2	
Total%	10.9	20.8	7.0	3.6	3.4	8.5	6.4	16.2	2.7	9.2	4.0	7.5	

PM Intersection Peak Hour: 16:15 to 17:15

Volume	221	461	159	88	81	209	141	366	63	220	93	162	2,264
Approach%	26.3	54.8	18.9	23.3	21.4	55.3	24.7	64.2	11.1	46.3	19.6	34.1	
Total%	9.8	20.4	7.0	3.9	3.6	9.2	6.2	16.2	2.8	9.7	4.1	7.2	
PHF			0.90			0.88			0.72			0.83	0.88

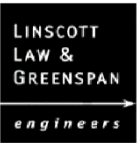
Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN <i>engineers</i>	Location: #07	File Name: ITM-21-085-04
	Intersection: 4th Street (SR-86) and Wake Avenue	Project: LLG Ref. 3-21-XXXX
	Date of Count: Tuesday, December 14, 2021	El Centro

AM	4th Street (SR-86) Southbound				Wake Avenue Westbound				4th Street (SR-86) Northbound				Wake Avenue Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
7:45	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
8:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
8:15	0	0	0	0	0	0	0	0	1	0	0	0	5	0	0	0	6	0
8:30	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	2	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	1				1				2				7				11	
Bike Total		1	0	0		0	0	0		0	2	0		0	0	0		3

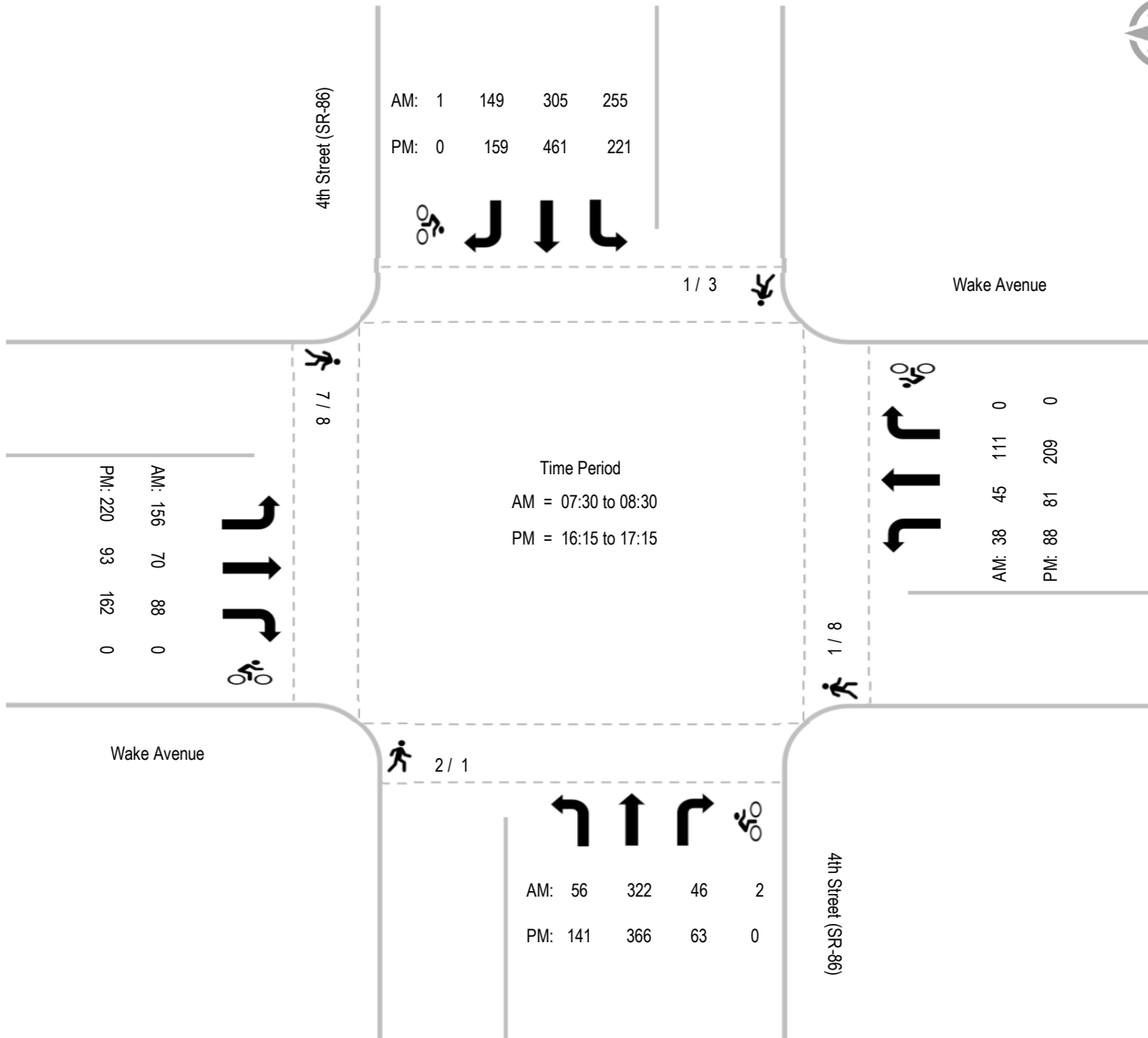
PM	4th Street (SR-86) Southbound				Wake Avenue Westbound				4th Street (SR-86) Northbound				Wake Avenue Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	4	0	0	0	0	0	0	0	2	0	0	0	6	0
16:30	2	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	5	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	4	0
17:30	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0
17:45	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0
Ped Total	3				8				1				8				20	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0

Intersection Turning Movement - Peak Hour Summary



Location: #07
 Intersection: 4th Street (SR-86) and Wake Avenue
 Date of Count: Tuesday, December 14, 2021

File Name: ITM-21-085-04
 Project: LLG Ref. 3-21-XXXX
 El Centro



Intersection Turning Movement - Peak Hour Vehicle Count



Location:	#08	File Name:	ITM-21-085-05
Intersection:	SR-86 and Danenberg Drive	Project:	LLG Ref. 3-21-XXXX
Date of Count:	Tuesday, December 14, 2021		El Centro

AM	SR-86 Southbound			Dananberg Drive Westbound			SR-86 Northbound			Dananberg Drive Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00	6	35	0	3	0	7	0	6	5	0	0	0	62
7:15	12	24	0	6	0	18	0	68	10	0	0	0	138
7:30	14	44	0	2	0	15	0	118	11	0	0	0	204
7:45	29	67	0	4	0	19	0	104	33	0	0	0	256
8:00	24	61	0	6	0	19	0	80	12	0	0	0	202
8:15	23	40	0	11	0	16	0	62	8	0	0	0	160
8:30	27	37	0	6	0	13	0	55	8	0	0	0	146
8:45	24	43	0	7	0	21	0	66	11	0	0	0	172
Total	159	351	0	45	0	128	0	559	98	0	0	0	1340
Approach%	31.2	68.8	-	26.0	-	74.0	-	85.1	14.9	-	-	-	
Total%	11.9	26.2	-	3.4	-	9.6	-	41.7	7.3	-	-	-	

AM Intersection Peak Hour: 07:30 to 08:30

Volume	90	212	-	23	-	69	-	364	64	-	-	-	822
Approach%	29.8	70.2	-	25.0	-	75.0	-	85.0	15.0	-	-	-	
Total%	10.9	25.8	-	2.8	-	8.4	-	44.3	7.8	-	-	-	
PHF			0.79			0.85			0.78			#DIV/0!	0.80

PM	SR-86 Southbound			Dananberg Drive Westbound			SR-86 Northbound			Dananberg Drive Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	76	87	0	18	0	55	0	60	17	0	0	0	313
16:15	72	108	0	14	0	42	0	63	18	0	0	0	317
16:30	58	115	0	18	0	43	0	61	11	0	0	0	306
16:45	89	109	0	11	0	45	0	61	27	0	0	0	342
17:00	70	109	0	47	0	71	0	55	15	0	0	0	367
17:15	78	111	0	15	0	41	0	77	18	0	0	0	340
17:30	80	87	0	19	0	48	0	57	12	0	0	0	303
17:45	75	90	0	7	0	37	0	55	13	0	0	0	277
Total	598	816	0	149	0	382	0	489	131	0	0	0	2565
Approach%	42.3	57.7	-	28.1	-	71.9	-	78.9	21.1	-	-	-	
Total%	23.3	31.8	-	5.8	-	14.9	-	19.1	5.1	-	-	-	

PM Intersection Peak Hour: 16:30 to 17:30

Volume	295	444	-	91	-	200	-	254	71	-	-	-	1,355
Approach%	39.9	60.1	-	31.3	-	68.7	-	78.2	21.8	-	-	-	
Total%	21.8	32.8	-	6.7	-	14.8	-	18.7	5.2	-	-	-	
PHF			0.93			0.62			0.86			#DIV/0!	0.92

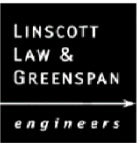
Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN <i>engineers</i>	Location: #08	File Name: ITM-21-085-05
	Intersection: SR-86 and Danenberg Drive	Project: LLG Ref. 3-21-XXXX
	Date of Count: Tuesday, December 14, 2021	El Centro

AM	SR-86 Southbound				Dananberg Drive Westbound				SR-86 Northbound				Dananberg Drive Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				1				0				0				1	
Bike Total		0	0	0		0	0	0		0	1	0		0	0	0		1

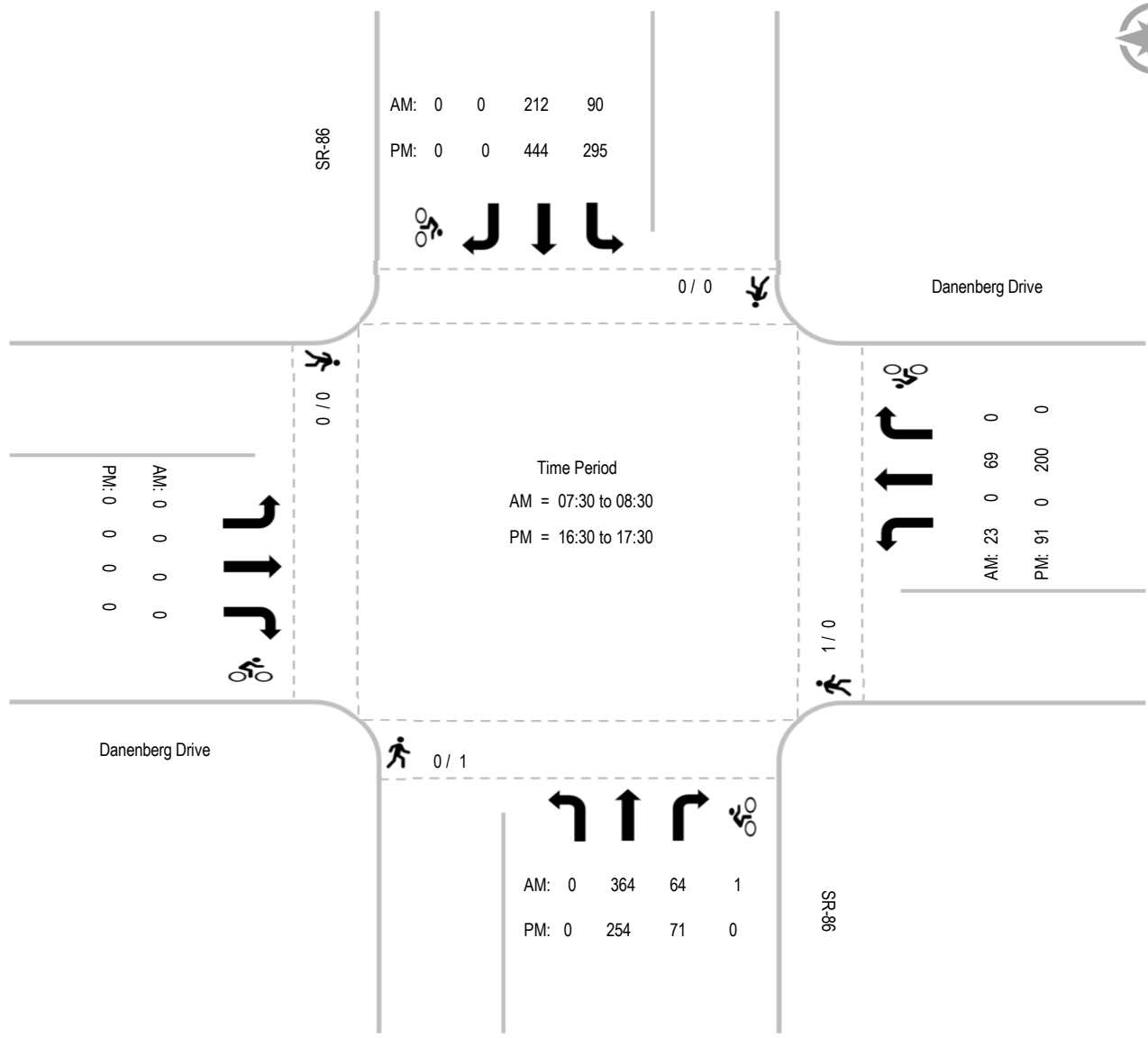
PM	SR-86 Southbound				Dananberg Drive Westbound				SR-86 Northbound				Dananberg Drive Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				0				1				0				1	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0

Intersection Turning Movement - Peak Hour Summary

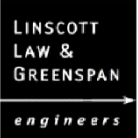


Location: #08
Intersection: SR-86 and Danenberg Drive
Date of Count: Tuesday, December 14, 2021

File Name: ITM-21-085-05
Project: LLG Ref. 3-21-XXXX
 El Centro



Intersection Turning Movement - Peak Hour Vehicle Count



Location:	#09 Revised	File Name:	ITM-21-085-09R
Intersection:	Danenberg Drive and Dogwood Road	Project:	LLG Ref. 3-21-XXXX
Date of Count:	Tuesday, December 14, 2021		El Centro

AM	Dogwood Road Southbound			Danenberg Drive Westbound			Dogwood Road Northbound			Danenberg Drive Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00	11	30	12	1	3	17	1	40	1	8	7	3	134
7:15	21	47	7	0	6	20	10	75	1	16	8	1	212
7:30	18	32	18	1	7	20	2	103	2	15	12	7	237
7:45	34	55	38	0	12	17	13	149	6	20	23	8	375
8:00	27	48	21	1	11	19	11	89	9	17	26	8	287
8:15	22	57	11	3	5	16	11	70	7	6	19	9	236
8:30	25	55	8	0	9	16	8	66	7	10	18	8	230
8:45	38	54	9	6	8	20	14	61	10	13	23	6	262
Total	196	378	124	12	61	145	70	653	43	105	136	50	1973
Approach%	28.1	54.2	17.8	5.5	28.0	66.5	9.1	85.2	5.6	36.1	46.7	17.2	
Total%	9.9	19.2	6.3	0.6	3.1	7.3	3.5	33.1	2.2	5.3	6.9	2.5	

AM Intersection Peak Hour: 07:30 to 08:30

Volume	101	192	88	5	35	72	37	411	24	58	80	32	1,135
Approach%	26.5	50.4	23.1	4.5	31.3	64.3	7.8	87.1	5.1	34.1	47.1	18.8	
Total%	8.9	16.9	7.8	0.4	3.1	6.3	3.3	36.2	2.1	5.1	7.0	2.8	
PHF			0.75			0.90			0.70			0.83	0.76

PM	Dogwood Road Southbound			Danenberg Drive Westbound			Dogwood Road Northbound			Danenberg Drive Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	47	118	15	11	42	61	16	97	8	17	67	21	520
16:15	61	103	21	17	24	59	18	86	6	15	56	20	486
16:30	54	109	23	20	30	51	12	86	7	19	56	16	483
16:45	64	125	15	10	31	46	19	111	8	19	73	14	535
17:00	69	110	19	12	46	51	22	76	8	41	71	26	551
17:15	85	114	17	17	33	50	16	106	8	27	67	18	558
17:30	63	82	11	10	32	47	18	93	7	21	58	22	464
17:45	58	95	18	5	29	54	12	95	13	31	68	16	494
Total	501	856	139	102	267	419	133	750	65	190	516	153	4091
Approach%	33.5	57.2	9.3	12.9	33.9	53.2	14.0	79.1	6.9	22.1	60.1	17.8	
Total%	12.2	20.9	3.4	2.5	6.5	10.2	3.3	18.3	1.6	4.6	12.6	3.7	

PM Intersection Peak Hour: 16:30 to 17:30

Volume	272	458	74	59	140	198	69	379	31	106	267	74	2,127
Approach%	33.8	57.0	9.2	14.9	35.3	49.9	14.4	79.1	6.5	23.7	59.7	16.6	
Total%	12.8	21.5	3.5	2.8	6.6	9.3	3.2	17.8	1.5	5.0	12.6	3.5	
PHF			0.93			0.91			0.87			0.81	0.95

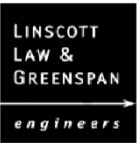
Intersection Turning Movement - Bicycle & Pedestrian Count

LINSOTT LAW & GREENSPAN <i>engineers</i>	Location: #09 Revised	File Name: ITM-21-085-09R
	Intersection: Danenberg Drive and Dogwood Road	Project: LLG Ref. 3-21-XXXX
	Date of Count: Tuesday, December 14, 2021	El Centro

AM	Dogwood Road Southbound				Dananberg Drive Westbound				Dogwood Road Northbound				Dananberg Drive Eastbound				Totals		
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle	
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ped Total	0				0				0				0				0		
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0	

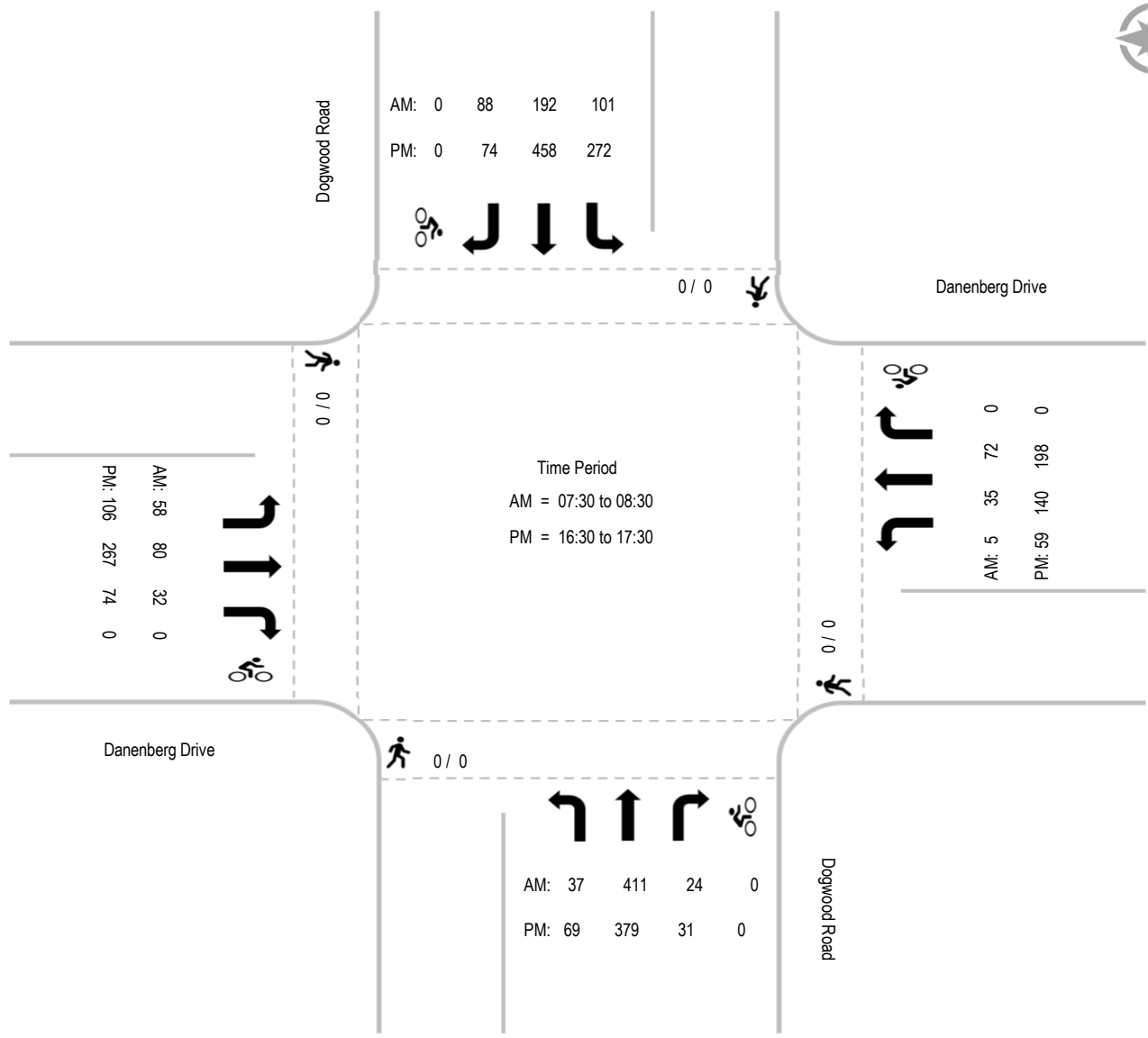
PM	Dogwood Road Southbound				Dananberg Drive Westbound				Dogwood Road Northbound				Dananberg Drive Eastbound				Totals		
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle	
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ped Total	0				0				0				0				0		
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0	

Intersection Turning Movement - Peak Hour Summary



Location: #09 Revised
 Intersection: Danenberg Drive and Dogwood Road
 Date of Count: Tuesday, December 14, 2021

File Name: ITM-21-085-09R
 Project: LLG Ref. 3-21-XXXX
 El Centro



Linscott, Law & Greenspan, Engineers

4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **Wake Ave, between Clark Rd and Thomas Dr**

Date: Tuesday, December 14, 2021		Total Daily Volume: 7962																				Description: Total Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
42	17	11	16	49	100	187	447	372	370	452	494	689	585	637	660	699	729	433	346	258	191	114	64
9	6	4	5	3	14	28	69	123	86	118	111	178	163	160	141	176	211	126	106	68	57	43	25
15	5	3	5	15	28	41	99	85	93	114	127	148	124	153	174	180	171	122	82	72	55	32	16
9	1	2	2	10	39	50	117	81	88	110	124	190	148	166	185	165	204	89	79	55	39	18	11
9	5	2	4	21	19	68	162	83	103	110	132	173	150	158	160	178	143	96	79	63	40	21	12

Date: Tuesday, December 14, 2021		Total Daily Volume: 4484																				Description: Eastbound Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
18	12	3	8	32	56	108	285	232	225	275	294	395	326	352	369	380	395	226	194	133	88	52	26
3	4	0	2	2	12	16	31	77	50	82	64	104	97	90	79	97	119	72	64	37	30	19	10
8	5	2	4	7	17	21	70	55	51	60	85	81	65	85	100	97	97	69	44	32	20	14	5
3	0	0	1	7	18	35	77	43	58	67	72	107	98	83	108	87	101	39	41	33	24	8	4
4	3	1	1	16	9	36	107	57	66	66	73	103	66	94	82	99	78	46	45	31	14	11	7

Date: Tuesday, December 14, 2021		Total Daily Volume: 3478																				Description: Westbound Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
24	5	8	8	17	44	79	162	140	145	177	200	294	259	285	291	319	334	207	152	125	103	62	38
6	2	4	3	1	2	12	38	46	36	36	47	74	66	70	62	79	92	54	42	31	27	24	15
7	0	1	1	8	11	20	29	30	42	54	42	67	59	68	74	83	74	53	38	40	35	18	11
6	1	2	1	3	21	15	40	38	30	43	52	83	50	83	77	78	103	50	38	22	15	10	7
5	2	1	3	5	10	32	55	26	37	44	59	70	84	64	78	79	65	50	34	32	26	10	5

Report Generated by "Count Data" all rights reserved

Linscott, Law & Greenspan, Engineers

4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **Wake Ave, between 6th St and 4th St-SR-86**

Date: Tuesday, December 14, 2021		Total Daily Volume: 9611																				Description: Total Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
63	38	34	35	77	145	244	481	499	460	547	653	811	689	775	712	852	806	513	410	320	212	146	89
22	19	5	6	15	23	47	81	151	98	130	149	202	192	190	150	216	243	147	110	82	66	50	29
14	4	9	8	17	38	49	105	130	125	139	173	194	158	193	183	214	209	146	110	92	59	38	17
21	5	6	10	20	53	72	130	109	110	128	167	206	162	213	224	210	192	111	96	68	37	28	16
6	10	14	11	25	31	76	165	109	127	150	164	209	177	179	155	212	162	109	94	78	50	30	27

Date: Tuesday, December 14, 2021		Total Daily Volume: 5233																				Description: Eastbound Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
22	18	14	17	48	93	146	286	263	261	311	390	451	366	420	396	441	465	262	207	155	99	63	39
5	8	2	3	9	19	29	43	86	56	81	93	112	110	97	88	105	149	76	60	42	38	22	14
4	4	5	6	9	23	27	69	71	62	76	113	106	81	109	101	118	121	74	54	42	25	15	4
12	3	4	4	12	32	51	88	54	63	75	94	115	98	103	122	110	103	58	40	34	23	11	4
1	3	3	4	18	19	39	86	52	80	79	90	118	77	111	85	108	92	54	53	37	13	15	17

Date: Tuesday, December 14, 2021		Total Daily Volume: 4378																				Description: Westbound Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
41	20	20	18	29	52	98	195	236	199	236	263	360	323	355	316	411	341	251	203	165	113	83	50
17	11	3	3	6	4	18	38	65	42	49	56	90	82	93	62	111	94	71	50	40	28	28	15
10	0	4	2	8	15	22	36	59	63	63	60	88	77	84	82	96	88	72	56	50	34	23	13
9	2	2	6	8	21	21	42	55	47	53	73	91	64	110	102	100	89	53	56	34	14	17	12
5	7	11	7	7	12	37	79	57	47	71	74	91	100	68	70	104	70	55	41	41	37	15	10

Report Generated by "Count Data" all rights reserved

Linscott, Law & Greenspan, Engineers

4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **4th Ave-SR-86, between Ross Ave and Aurora Dr**

Date: Tuesday, December 14, 2021		Total Daily Volume: 23147																				Description: Total Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
141	94	111	139	202	487	648	1158	1257	1326	1422	1650	1708	1698	1698	1800	1745	1655	1239	991	813	573	361	231
38	26	28	27	35	75	117	211	351	326	358	371	456	417	411	448	435	452	361	291	217	182	106	71
39	17	24	31	47	85	157	246	311	308	343	444	426	418	422	446	477	445	312	222	199	144	96	61
39	28	33	45	65	148	162	303	324	296	363	460	423	430	425	468	415	364	306	249	210	135	94	51
25	23	26	36	55	179	212	398	271	396	358	375	403	433	440	438	418	394	260	229	187	112	65	48

Date: Tuesday, December 14, 2021		Total Daily Volume: 10450																				Description: Northbound Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
76	48	42	66	97	224	347	625	643	637	671	738	762	768	733	750	713	740	517	416	320	252	172	93
16	15	11	11	19	36	63	111	177	159	170	149	205	177	191	198	155	216	149	114	84	78	44	34
17	4	5	10	25	33	74	135	163	146	177	212	182	193	194	176	211	191	137	92	83	68	47	21
25	15	10	24	27	60	86	177	172	139	166	224	207	205	174	195	173	151	112	108	81	60	49	20
18	14	16	21	26	95	124	202	131	193	158	153	168	193	174	181	174	182	119	102	72	46	32	18

Date: Tuesday, December 14, 2021		Total Daily Volume: 12697																				Description: Southbound Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
65	46	69	73	105	263	301	533	614	689	751	912	946	930	965	1050	1032	915	722	575	493	321	189	138
22	11	17	16	16	39	54	100	174	167	188	222	251	240	220	250	280	236	212	177	133	104	62	37
22	13	19	21	22	52	83	111	148	162	166	232	244	225	228	270	266	254	175	130	116	76	49	40
14	13	23	21	38	88	76	126	152	157	197	236	216	225	251	273	242	213	194	141	129	75	45	31
7	9	10	15	29	84	88	196	140	203	200	222	235	240	266	257	244	212	141	127	115	66	33	30

Report Generated by "Count Data" all rights reserved

Linscott, Law & Greenspan, Engineers

4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **4th Ave-SR-86, between I-8 Eastbound Ramps and Wake Ave**

Date: Tuesday, December 14, 2021		Total Daily Volume: 23972										Description: Total Volume											
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
141	84	73	112	210	476	678	1238	1311	1329	1505	1720	1800	1825	1802	1852	1851	1829	1300	952	723	569	363	229
40	32	15	14	32	78	128	209	364	341	365	439	437	459	454	444	447	542	373	278	207	186	117	78
37	11	20	35	42	96	155	257	323	293	394	402	447	464	448	452	503	452	332	224	182	140	93	48
39	22	22	32	57	148	175	345	313	317	388	483	460	454	463	510	470	442	308	209	164	118	97	41
25	19	16	31	79	154	220	427	311	378	358	396	456	448	437	446	431	393	287	241	170	125	56	62

Date: Tuesday, December 14, 2021		Total Daily Volume: 11620										Description: Northbound Volume											
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
71	47	31	57	120	303	366	626	596	630	716	858	859	890	873	829	807	931	627	472	347	288	165	111
10	17	7	7	21	63	71	105	159	161	182	229	232	232	225	212	191	311	180	120	104	99	56	42
19	8	7	21	18	61	88	139	154	139	186	212	207	230	195	195	211	219	157	121	80	68	41	20
25	8	9	15	35	92	102	221	148	155	183	233	220	217	232	225	227	224	146	103	79	70	47	15
17	14	8	14	46	87	105	161	135	175	165	184	200	211	221	197	178	177	144	128	84	51	21	34

Date: Tuesday, December 14, 2021		Total Daily Volume: 12352										Description: Southbound Volume											
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
70	37	42	55	90	173	312	612	715	699	789	862	941	935	929	1023	1044	898	673	480	376	281	198	118
30	15	8	7	11	15	57	104	205	180	183	210	205	227	229	232	256	231	193	158	103	87	61	36
18	3	13	14	24	35	67	118	169	154	208	190	240	234	253	257	292	233	175	103	102	72	52	28
14	14	13	17	22	56	73	124	165	162	205	250	240	237	231	285	243	218	162	106	85	48	50	26
8	5	8	17	33	67	115	266	176	203	193	212	256	237	216	249	253	216	143	113	86	74	35	28

Report Generated by "Count Data" all rights reserved

Linscott, Law & Greenspan, Engineers

4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **SR-86, between Wake Ave and Danenberg Dr**

Date: Tuesday, December 14, 2021		Total Daily Volume: 14094																				Description: Total Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
71	35	40	47	117	263	353	639	640	725	818	980	1087	1080	1088	1158	1183	1181	841	612	465	350	204	117
14	10	9	8	19	43	65	105	187	169	179	251	272	281	270	281	292	334	242	172	141	112	57	32
27	7	9	9	23	48	89	123	153	177	223	232	272	267	291	279	296	316	220	157	103	84	52	32
19	11	12	13	29	86	97	188	143	170	211	261	291	260	269	304	280	270	184	122	115	76	54	18
11	7	10	17	46	86	102	223	157	209	205	236	252	272	258	294	315	261	195	161	106	78	41	35

Date: Tuesday, December 14, 2021		Total Daily Volume: 6455																				Description: Northbound Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
24	21	16	26	73	177	210	396	354	345	381	431	458	503	480	480	463	473	357	284	204	152	96	51
5	5	4	4	12	34	44	65	99	90	87	116	138	136	112	123	125	157	100	65	58	55	27	9
7	6	5	6	10	35	51	80	89	88	90	99	104	126	134	117	109	124	90	88	45	34	20	15
8	4	3	7	16	53	49	125	76	80	114	109	110	114	110	120	101	97	85	58	54	32	30	10
4	6	4	9	35	55	66	126	90	87	90	107	106	127	124	120	128	95	82	73	47	31	19	17

Date: Tuesday, December 14, 2021		Total Daily Volume: 7639																				Description: Southbound Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
47	14	24	21	44	86	143	243	286	380	437	549	629	577	608	678	720	708	484	328	261	198	108	66
9	5	5	4	7	9	21	40	88	79	92	135	134	145	158	158	167	177	142	107	83	57	30	23
20	1	4	3	13	13	38	43	64	89	133	133	168	141	157	162	187	192	130	69	58	50	32	17
11	7	9	6	13	33	48	63	67	90	97	152	181	146	159	184	179	173	99	64	61	44	24	8
7	1	6	8	11	31	36	97	67	122	115	129	146	145	134	174	187	166	113	88	59	47	22	18

Report Generated by "Count Data" all rights reserved

Linscott, Law & Greenspan, Engineers

4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **SR-86, between Danenberg Dr and McCabe Rd**

Date: Tuesday, December 14, 2021		Total Daily Volume: 9957																				Description: Total Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
54	29	37	44	107	229	319	604	536	494	570	592	701	688	714	794	827	790	568	423	350	248	149	90
12	8	10	7	17	41	55	107	170	129	131	142	174	173	152	184	204	233	168	124	110	72	42	27
20	4	7	11	21	43	77	116	127	121	153	155	172	170	187	192	210	215	141	110	79	61	38	21
13	8	10	10	25	79	84	172	109	113	148	166	180	159	183	205	204	179	119	80	73	69	39	13
9	9	10	16	44	66	103	209	130	131	138	129	175	186	192	213	209	163	140	109	88	46	30	29

Date: Tuesday, December 14, 2021		Total Daily Volume: 4738																				Description: Northbound Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
18	17	15	24	69	161	204	414	316	251	291	278	307	350	311	342	324	298	244	188	129	92	60	35
5	5	4	3	12	31	37	70	97	65	63	72	77	94	63	79	83	74	72	54	35	30	14	8
3	3	4	7	10	32	47	79	72	67	70	73	64	81	86	74	79	91	58	53	35	23	15	7
6	2	3	5	14	51	44	124	65	57	87	72	73	81	72	87	74	66	53	35	29	29	17	6
4	7	4	9	33	47	76	141	82	62	71	61	93	94	90	102	88	67	61	46	30	10	14	14

Date: Tuesday, December 14, 2021		Total Daily Volume: 5219																				Description: Southbound Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
36	12	22	20	38	68	115	190	220	243	279	314	394	338	403	452	503	492	324	235	221	156	89	55
7	3	6	4	5	10	18	37	73	64	68	70	97	79	89	105	121	159	96	70	75	42	28	19
17	1	3	4	11	11	30	37	55	54	83	82	108	89	101	118	131	124	83	57	44	38	23	14
7	6	7	5	11	28	40	48	44	56	61	94	107	78	111	118	130	113	66	45	44	40	22	7
5	2	6	7	11	19	27	68	48	69	67	68	82	92	102	111	121	96	79	63	58	36	16	15

Report Generated by "Count Data" all rights reserved

Linscott, Law & Greenspan, Engineers

4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **Wake Ave, between 6th St and 4th St-SR-86**

Date: Tuesday, December 14, 2021		Total Daily Volume: 7877																				Description: Total Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
24	13	5	10	20	54	106	280	289	358	435	632	761	696	604	668	674	767	544	382	262	153	101	39
8	5	1	2	2	7	18	39	80	80	81	163	204	180	168	167	183	222	147	120	73	63	34	9
9	3	2	2	2	13	20	54	61	87	109	130	175	183	138	161	167	186	152	98	58	30	26	16
4	4	1	3	6	13	28	66	68	80	136	160	181	158	152	164	147	182	119	87	68	21	27	6
3	1	1	3	10	21	40	121	80	111	109	179	201	175	146	176	177	177	126	77	63	39	14	8

Date: Tuesday, December 14, 2021		Total Daily Volume: 4496																				Description: Eastbound Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
15	5	3	6	13	33	54	147	166	209	276	395	455	380	339	390	405	495	293	189	111	66	37	14
4	3	0	1	1	5	10	23	43	37	52	109	131	93	99	94	106	139	80	69	32	29	10	4
4	0	1	0	2	9	10	28	34	53	70	85	107	103	69	86	101	117	86	44	30	13	13	6
4	1	1	2	4	9	16	39	40	47	84	90	104	86	99	101	83	122	56	43	28	10	6	1
3	1	1	3	6	10	18	57	49	72	70	111	113	98	72	109	115	117	71	33	21	14	8	3

Date: Tuesday, December 14, 2021		Total Daily Volume: 3381																				Description: Westbound Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
9	8	2	4	7	21	52	133	123	149	159	237	306	316	265	278	269	272	251	193	151	87	64	25
4	2	1	1	1	2	8	16	37	43	29	54	73	87	69	73	77	83	67	51	41	34	24	5
5	3	1	2	0	4	10	26	27	34	39	45	68	80	69	75	66	69	66	54	28	17	13	10
0	3	0	1	2	4	12	27	28	33	52	70	77	72	53	63	64	60	63	44	40	11	21	5
0	0	0	0	4	11	22	64	31	39	39	68	88	77	74	67	62	60	55	44	42	25	6	5

Report Generated by "Count Data" all rights reserved

Phase Timing & Functions

Timing Page 1 of 10



INTERSECTION: ColdFire 1

Page 1 (of 10)

QuicNet System Parameters

Group Assignment:
Field Master Assignment:
System Reference Number:
Communications Channel:
Drop Address:
Area Number:
Area Address:

N/S Street Name: **Dogwood Road**
E/W Street Name: **Danenburg Drive**

Last QuicNet Database Change: 2/4/2021 16:17

Notes:

Field Change Record						
Change	By	Date	Change	By	Date	

Excl Ped Assignment		Note: Set the Exclusive Ped Outputs on the "Outputs / General" page				
Exclusive Walk						
Exclusive FDW						
All Red Clear						
Exclusive Ped Phase		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Walk Output</td> <td></td> </tr> <tr> <td>Don't Walk Output</td> <td></td> </tr> </table>	Walk Output		Don't Walk Output	
Walk Output						
Don't Walk Output						

	Phase							
	1	2	3	4	5	6	7	8
Min Green	7	10	7	10	7	10	7	10
Extension	2.0	4.3	2.0	4.3	2.0	4.3	2.0	4.3
Max	30	40	17	40	17	40	17	40
Max 2								
Cond Serve Check								

	Phase							
	1	2	3	4	5	6	7	8
Alternate Walk								
Alternate Ped Clear								
Alternate Minimum								
Alternate Extension								

	Phase							
	1	2	3	4	5	6	7	8
Yellow Change	3.6	5.0	3.6	5.0	3.6	5.0	3.6	5.0
Red Clear	2.0	1.0	2.0	1.0	2.0	1.0	2.0	1.0

Red Lock		Red Rest	
Yellow Lock		Dual Entry	_2_4_6_8_
Simultaneous Gap		Sequential Timing	
Rest In Walk		Inhibit Ped Reservice	
Advance Walk		Semi-Actuated	
Flashing Walk		Guaranteed Passage	
Max Extension		Conditional Service	

	Phase							
	1	2	3	4	5	6	7	8
Walk		7		7		7		7
Ped Clear - FDW		23		25		23		25
Adv / Delay Walk	0	0	0	0	0	0	0	0
PE Min Ped FDW	0	0	0	0	0	0	0	0

	Phase							
	1	2	3	4	5	6	7	8
Type 3 Disconnect								
Added per Vehicle								
Max Added Initial								
Min Gap	2.0	2.0	2.0	4.3	2.0	2.0	2.0	4.3
Max Gap	2.0	7.0	2.0	4.3	2.0	7.0	4.3	2.0
Reduce Every		1.0		1.0		1.0		1.0

Minimum Recall		Soft Recall	_2_6_
Ped Recall		External Recall	
Maximum Recall		Manual Control Calls	
Green Flash		Fast Green Flash	
Overlap Green Flash		Fast Overlap G. Flash	

Phase Timing - Bank 1

Phase Functions - Page 1

Phase Functions - Page 2



		Phase							
		1	2	3	4	5	6	7	8
Basic Phase Timing	Min Green								
	Extension								
	Max								
	Max 2								
	Cond Serve Check								
Clear	Yellow Change								
	Red Clear								
Pedestrian Timing	Walk								
	Ped Clear - FDW								
	Adv / Delay Walk								
	PE Min Ped FDW								
Volume Density	Type 3 Disconnect								
	Added per Vehicle								
	Max Added Initial								
	Min Gap								
	Max Gap								
	Reduce Every								

Phase Timing - Bank 2

		Phase							
		1	2	3	4	5	6	7	8
Basic Phase Timing	Min Green								
	Extension								
	Max								
	Max 2								
	Cond Serve Check								
Clear	Yellow Change								
	Red Clear								
Pedestrian Timing	Walk								
	Ped Clear - FDW								
	Adv / Delay Walk								
	PE Min Ped FDW								
Volume Density	Type 3 Disconnect								
	Added per Vehicle								
	Max Added Initial								
	Min Gap								
	Max Gap								
	Reduce Every								

Phase Timing - Bank 3

		Phase							
		1	2	3	4	5	6	7	8
Alternate Walk									
Alternate Ped Clear									
Alternate Minimum									
Alternate Extension									

Alternate Timing - Bank 2

		Phase							
		1	2	3	4	5	6	7	8
Alternate Walk									
Alternate Ped Clear									
Alternate Minimum									
Alternate Extension									

Alternate Timing - Bank 3

Note: Set the Limited Service Interval on the "Utilities / Misc" page

Delay Time (if any) ->

Clear Phases	
Delay	
Clear Time	
Railroad - 1	

Clear Phases	
Limited Service Phases	
Delay	
Clear Time	
Railroad - 2	

Railroad Preempt Parameters

Min Grn Before PE Force-Off	
Max Pre-Empt Time	
Min Time Before Same PE	

	Delay	Clear	Clear Phases
EV - A			
EV - B			
EV - C			
EV - D			

Emergency Vehicle Preempt

SE - 1	0
SE - 2	18
EV - A	0
EV - B	6
EV - C	0
EV - D	33

Preempt Priority

Step	Time	Clear	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit	Ped Omit	Output
0	1									
1	10									
2	1									
3	0									
4	0									
5	0									
6	0									
7	0									
8	0									
9	0									
10	0									
11	0									
12	0									
13	0									
14	0									
15	0									

Special Event Sequence - 1

Step	Time	Clear	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit	Ped Omit	Output
0	0									
1	0									
2	0									
3	0									
4	0									
5	0									
6	0									
7	0									
8	0									
9	0									
10	0									
11	0									
12	0									
13	0									
14	0									
15	0									

Special Event Sequence - 2

INTERSECTION: ColdFire 1

Note:
The Ring-Barrier Sum of these Minimums will be the Minimum Cycle Length During Transition

Transition Type	
Coord Extra Functions	
Phase 1 - Minimum	
Phase 2 - Minimum	
Phase 3 - Minimum	
Phase 4 - Minimum	
Phase 5 - Minimum	
Phase 6 - Minimum	
Phase 7 - Minimum	
Phase 8 - Minimum	

Coordination - General

- Coord Extra**
- 1 = Programmed Walk Time for Sync Phases
 - 2 = Always Terminate Sync Phase Peds
 - 3 = Use "Floating Force Off"
 - 4 =
 - 5 = Use "Start of Green" for Sync Point

- Transition Type**
- 0.X = Shortway
 - 1.X = Lengthen Only
 - 2.X = Shorten Only
 - X.1 thru X.4 = Number of Cycles to get "In Step"

Coordination Plan									
	1	2	3	4	5	6	7	8	9
Cycle	110	110	100	100	110			110	
Offset - 1	0	0	0	0	0			0	
Offset - 2									
Offset - 3									
Zone Offset									
Ring Offset									
Hold Release									
Ped Adjust									
Force Off - 1	56	56	65	66	75			76	
Force Off - 2	0	0	0	0	0			0	
Force Off - 3	16	16	13	13	15			14	
Force Off - 4	40	40	47	47	49			48	
Force Off - 5	56	56	63	60	65			67	
Force Off - 6	0	0	0	0	0			0	
Force Off - 7	16	16	13	13	13			14	
Force Off - 8	40	40	47	47	49			48	

Coordination - Cycle, Offsets, & Force Offs

Coordination Plan									
	1	2	3	4	5	6	7	8	9
Perm 1 - Begin									
Perm 1 - End									
Perm 1 - Veh Phases									
Perm 1 - Ped Phases									
Perm 2 - Begin									
Perm 2 - End									
Perm 2 - Veh Phases									
Perm 2 - Ped Phases									
Perm 3 - Begin									
Perm 3 - End									
Perm 3 - Veh Phases									
Perm 3 - Ped Phases									
Max Inhibit Phases									
Max Recall Phases									
Sync Phases									
Lag Phases									
Pre-Timed Phases									

Coordination - Permissives & Phase Sequence

Overlaps & In-Out Logic

Timing Page 5 of 10



INTERSECTION: ColdFire 1

Page 5 (of 10)

	Overlap Number							
	1	2	3	4	5	6	7	8
Load Switch Number								
Vehicle Set 1								
Vehicle Set 2								
Vehicle Set 3								
Negative Vehicle								
Negative Ped								
Green Omit								
Green Clear Omit								
Green Clearance								
Yellow Change								
Red Clearance								

Overlaps

	AND 1	AND 2	AND 3	AND 4
Input - A				
Input - B				
Output				

AND Gates

	NAND 1	NAND 2	NAND 3	NAND 4
Input - A				
Input - B				
Output				

NAND Gates

	OR 1	OR 2	OR 3	OR 4	OR 5	OR 6
Input - A						
Input - B						
Output						

2 Input - OR Gates

	OR 7	OR 8
Input - A		
Input - B		
Input - C		
Input - D		
Output		

4 Input - OR Gates

	NOT 1	NOT 2	NOT 3	NOT 4
Input				
Output				

NOT Gates (Inverters)

	DELAY 1	DELAY 2	DELAY 3	DELAY 4	DELAY 5	DELAY 6
Input						
Delay Time						
Output						

DELAY Gates

Latch:	1	2	3	4	5	6	7	8
Set								
Reset								
Out								
/Out								

Logic Latches

INTERSECTION: ColdFire 1

Det. #	C-1 Pin #	Delay	Carry-over	Phase Assignmmts	Detector Attributes	Detector Set Assignments
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

Detector Assignments

Detector Attributes

- 1 = Full Time Delay
- 2 = Ped Call
- 3 =
- 4 = Count
- 5 = Extension
- 6 = Type 3
- 7 = Calling
- 8 = Alternate

Detector Assignments

- 1 = Detector Set 1
- 2 = Detector Set 2
- 3 = Detector Set 3
- 4 =
- 5 =
- 6 = Failure - Min Recall
- 7 = Failure - Max Recall
- 8 = Report on Failure

	C-1 Pin #
Flash Sense	
External Permit - 1	
External Permit - 2	
External Permit - 3	
Exclusive Ped Omit	
Max. Term Inhibit	
Max. 2	
External Lag Phases	
External Max. Recall	
Stop Time	
Manual Control Enable	
Manual Cont. Advance	
External Min. Recall	

General Inputs

	C-1 Pin #
Plan 1	
Plan 2	
Plan 3	
Plan 4	
Plan 5	
Plan 6	
Plan 7	
Plan 8	
Plan 9	
Free	
Flash	

Coordination Plan Inputs

	C-1 Pin #
Railroad - 1	
Railroad - 2	
Special Event - 1	
Special Event - 2	
Gate Down	
EV - A	
EV - B	
EV - C	
EV - D	

Preempt Inputs

	C-1 Pin #
Phase Bank - 2	
Phase Bank - 3	
Detector Set - 2	
Detector Set - 3	
Overlap Vehicle Set - 2	
Overlap Vehicle Set - 3	

Bank & Set Inputs

	C-1 Pin #
Door Ajar	
UPS Battery	
UPS Power	
Cabinet Temperature	

	C-1 Pin #
Alarm - 1	
Alarm - 2	
Alarm - 3	
Alarm - 4	

Outputs

Timing Page 7 of 10



	C-1 Pin #
Advance Warning - 1	
Advance Warning - 2	
Detector Failure	
Flasher - Alternating 1	
Flasher - Alternating 2	
Fast Flasher	
On Line	
Exclusive - Walk	
Exclusive - Don't Walk	

General Outputs

	C-1 Pin #
Output - 1	
Output - 2	
Output - 3	
Output - 4	
Output - 5	
Output - 6	
Output - 7	
Output - 8	

Time of Day Outputs

	C-1 Pin #
Plan - 1	
Plan - 2	
Plan - 3	
Plan - 4	
Plan - 5	
Plan - 6	
Plan - 7	
Plan - 8	
Plan - 9	
Free	

Coordination Plan Out

	Ped Phase
Ped 2-P Loadswitch	
Ped 4-P Loadswitch	
Ped 6-P Loadswitch	
Ped 8-P Loadswitch	

Ped Loadswitch Assignment

	C-1 Pin #
Dial - 2	
Dial - 3	
Offset - 1	
Offset - 2	
Offset - 3	
Free	
Flash	

Seven Wire Outputs

	C-1 Pin #	
	On	Flash
Railroad - 1		
Railroad - 2		
Special Event - 1		
Special Event - 2		
Preempt Failure		
EV - A		
EV - B		
EV - C		
EV - D		
Any Preempt		

Preemption Outputs

	C-1 Pin #
Output - 1	
Output - 2	
Output - 3	
Output - 4	
Output - 5	
Output - 6	
Output - 7	
Output - 8	

Special Event Outputs

	C-1 Pin #
Phase - 1	
Phase - 2	
Phase - 3	
Phase - 4	
Phase - 5	
Phase - 6	
Phase - 7	
Phase - 8	

FYA PPLT Outputs

	Phase Number							
	1	2	3	4	5	6	7	8
Red								
Yellow								
Green								
Walk								
Don't Walk								

Phase Output Redirection

	C-1 Pin #
Output - 1	
Output - 2	
Output - 3	
Output - 4	
Output - 5	
Output - 6	
Output - 7	
Output - 8	

Special Function Output

	Overlap Number							
	1	2	3	4	5	6	7	8
Red								
Yellow								
Green								

Overlap Output Redirection

Event	Day of Week	Season	Hour	Minute	Plan	Offset
0						
1	_23456_		6	30	3	A
2	_23456_		8	30	E	A
3	_23456_		11	30	4	A
4	_23456_		16	0	5	A
5	_234567_		20	0	E	A
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						

Time Base Coordination Events

Event	Day of Week	Season	Hour	Minute	Funct.	Phase / Bits
0						
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						

Time of Day Function Events

TOD Functions

- 0 = Permitted Phases
- 1 = Red Lock
- 2 = Yellow Lock
- 3 = Vehicle Min Recall
- 4 = Ped Recall
- 5 =
- 6 = Rest In Walk
- 7 = Red Rest
- 8 = Double Entry
- 9 = Vehicle Max Recall
- 10 = Soft Recall
- 11 = Max Extension 2
- 12 = Conditional Service
- 13 = Lag Free Phases
- 14, Bit 1 = Local Override
- 14, Bit 4 = Disable Det Off Monitoring
- 15 = TOD Outputs

#	Holiday Type	Day	Month	Year
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				

Holiday Dates

Event	Holiday Type	Hour	Minute	Plan	Offset
0					
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

Holiday Time Base Coordination Events

Event	Holiday Type	Hour	Minute	Funct.	Phase / Bits
0					
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

Holiday Time of Day Function Events

Season #	Start Month	Start Day	End Month	End Day
1				
2				
3				
4				
5				
6				
7				
8				

Season Definitions

Red Start Time	
Yellow Start Phases	
First Green Phases	
Startup Vehicle Calls	
Startup Ped Calls	
Startup	

Max ON Time	
Max OFF Time	
Chatter	
Detector Check	

	Sign	Sign
	1	2
Phase Number		
Time Before Yellow		
Advance Warning Signs		

Flash Entry Phases	#NAME?
Flash Phases Yellow	#NAME?
Flash Overlaps Yellow	#NAME?
Flash Type	
Flash Setup	

Exclusive Phases	
Protect / Permissive	
Disable Yellow Range	
Extra One	
Lag Phases - Free	
Configuration	

Permitted Phases	
Restricted Phases	
Disable Overlap Range	
Extra Two	
External Permit 1	
External Permit 2	
External Permit 3	
Configuration	

Keyboard Beep	
Backlight Timeout	
Spec Evnt 1 - Ltd Serv Interval	
Spec Evnt 2 - Ltd Serv Interval	
Red Start	
Flash Start	
Red Revert	
Miscellaneous	

Spring Month (Begin)	
Spring Week (Begin)	
Fall Month (End)	
Fall Week (End)	
Daylight Savings Time	

Manual Plan	
Manual Offset	
Manual	

Address			
Area Number			
Area Address			
IP Port			
IP Address			
Subnet Mask			
Gateway			
Ethernet Port Address			

	Port	Port	Port	Port
	1	2	3	4
Address				
Area Number				
Area Address				
Comm Time Out				
CTS Delay				
RTS Hold				
Baud Rate				
Data Format				
Communications Parameters				

- Manual Plan**
1 thru 9 = Coordination
Plan 1 thru 9
14 = Free
15 = Flash

- Extra One**
1 =
2 =
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 =
8 =























- Extra Two**
1 =
2 =
3 = Disable Min Walk
4 = QuicNet/4 System
5 = Ignor P/P on EV
6 =
7 =
8 =

- Flash Type**
0 = All On-Off (12345678-0)
1 = Main-Side (1256-3478)
2 = Ping Pong (1234-5678)
3 = Ring Pairs (1638-5247)

APPENDIX B
PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS
– EXISTING

HCM 6th Signalized Intersection Summary
1: 8th St & Wake Ave

Existing AM
02/24/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	16	16	55	7	93	11	578	84	223	367	23
Future Volume (veh/h)	70	16	16	55	7	93	11	578	84	223	367	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	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	88	20	20	69	9	116	14	722	105	279	459	29
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	130	309	257	119	294	251	30	1047	453	320	856	709
Arrive On Green	0.07	0.17	0.17	0.07	0.17	0.17	0.02	0.29	0.29	0.18	0.46	0.46
Sat Flow, veh/h	1781	1802	1499	1781	1777	1517	1781	3554	1538	1781	1870	1548
Grp Volume(v), veh/h	88	20	20	69	9	116	14	722	105	279	459	29
Grp Sat Flow(s),veh/h/ln	1781	1777	1524	1781	1777	1517	1781	1777	1538	1781	1870	1548
Q Serve(g_s), s	4.0	0.8	0.9	3.1	0.4	5.8	0.7	15.0	4.3	12.7	14.7	0.9
Cycle Q Clear(g_c), s	4.0	0.8	0.9	3.1	0.4	5.8	0.7	15.0	4.3	12.7	14.7	0.9
Prop In Lane	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	130	304	261	119	294	251	30	1047	453	320	856	709
V/C Ratio(X)	0.68	0.06	0.08	0.58	0.03	0.46	0.47	0.69	0.23	0.87	0.54	0.04
Avail Cap(c_a), veh/h	149	723	620	149	723	617	107	1531	663	405	1119	927
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	37.8	29.0	29.1	37.8	29.3	31.5	40.7	26.1	22.3	33.3	16.3	12.5
Incr Delay (d2), s/veh	9.7	0.1	0.1	4.4	0.0	1.3	11.3	0.8	0.3	15.4	0.5	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	2.0	0.3	0.3	1.5	0.1	2.1	0.4	5.8	1.5	6.5	5.6	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.5	29.1	29.2	42.2	29.3	32.8	52.0	26.9	22.6	48.7	16.8	12.5
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	B	B
Approach Vol, veh/h		128			194			841			767	
Approach Delay, s/veh		41.8			36.0			26.8			28.2	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.6	31.4	11.2	20.3	7.0	45.1	11.7	19.8				
Change Period (Y+Rc), s	5.6	6.8	5.6	6.0	5.6	6.8	5.6	6.0				
Max Green Setting (Gmax), s	19.0	36.0	7.0	34.0	5.0	50.0	7.0	34.0				
Max Q Clear Time (g_c+I1), s	14.7	17.0	5.1	2.9	2.7	16.7	6.0	7.8				
Green Ext Time (p_c), s	0.3	4.6	0.0	0.2	0.0	2.8	0.0	0.7				
Intersection Summary												
HCM 6th Ctrl Delay				29.3								
HCM 6th LOS				C								

Intersection												
Intersection Delay, s/veh	9.1											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕		↵	↕			↕			↕	
Traffic Vol, veh/h	17	281	12	10	160	41	23	2	15	6	0	2
Future Vol, veh/h	17	281	12	10	160	41	23	2	15	6	0	2
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	347	15	12	198	51	28	2	19	7	0	2
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	9.4	8.6	9.2	9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	57%	100%	0%	0%	100%	0%	0%	75%
Vol Thru, %	5%	0%	100%	89%	0%	100%	57%	0%
Vol Right, %	38%	0%	0%	11%	0%	0%	43%	25%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	40	17	187	106	10	107	94	8
LT Vol	23	17	0	0	10	0	0	6
Through Vol	2	0	187	94	0	107	53	0
RT Vol	15	0	0	12	0	0	41	2
Lane Flow Rate	49	21	231	130	12	132	116	10
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.081	0.032	0.317	0.176	0.019	0.184	0.153	0.017
Departure Headway (Hd)	5.919	5.429	4.928	4.848	5.54	5.039	4.733	6.161
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	604	661	731	741	647	712	758	580
Service Time	3.663	3.152	2.651	2.571	3.266	2.764	2.459	3.91
HCM Lane V/C Ratio	0.081	0.032	0.316	0.175	0.019	0.185	0.153	0.017
HCM Control Delay	9.2	8.3	9.9	8.6	8.4	8.9	8.3	9
HCM Lane LOS	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0.3	0.1	1.4	0.6	0.1	0.7	0.5	0.1

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Traffic Vol, veh/h	6	279	2	8	213	20	1	0	15	3	0	4
Future Vol, veh/h	6	279	2	8	213	20	1	0	15	3	0	4
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10	10	0	10
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	340	2	10	260	24	1	0	18	4	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	294	0	0	352	0	0	525	679	191	496	668	162
Stage 1	-	-	-	-	-	-	365	365	-	302	302	-
Stage 2	-	-	-	-	-	-	160	314	-	194	366	-
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	1264	-	-	1203	-	-	435	372	818	457	378	854
Stage 1	-	-	-	-	-	-	627	622	-	682	663	-
Stage 2	-	-	-	-	-	-	826	655	-	789	621	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1252	-	-	1192	-	-	420	359	802	433	365	838
Mov Cap-2 Maneuver	-	-	-	-	-	-	420	359	-	433	365	-
Stage 1	-	-	-	-	-	-	618	612	-	672	651	-
Stage 2	-	-	-	-	-	-	807	643	-	759	611	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.3			9.9			11.1		
HCM LOS							A			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	759	1252	-	-	1192	-	-	598
HCM Lane V/C Ratio	0.026	0.006	-	-	0.008	-	-	0.014
HCM Control Delay (s)	9.9	7.9	-	-	8	-	-	11.1
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

HCM 6th Signalized Intersection Summary

4: 4th St & Ross Ave

Existing AM
02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↗	↕↗		↗	↕↗	
Traffic Volume (veh/h)	42	188	108	71	140	162	44	540	91	109	472	14
Future Volume (veh/h)	42	188	108	71	140	162	44	540	91	109	472	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.95	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	49	219	126	83	163	188	51	628	106	127	549	16
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	67	299	301	109	215	268	79	1014	171	123	1271	37
Arrive On Green	0.20	0.20	0.20	0.18	0.18	0.18	0.04	0.34	0.34	0.07	0.36	0.36
Sat Flow, veh/h	339	1515	1525	621	1219	1520	1781	3019	508	1781	3521	102
Grp Volume(v), veh/h	268	0	126	246	0	188	51	369	365	127	277	288
Grp Sat Flow(s),veh/h/ln	1853	0	1525	1839	0	1520	1781	1777	1750	1781	1777	1846
Q Serve(g_s), s	14.3	0.0	7.6	13.4	0.0	12.2	3.0	18.3	18.4	7.3	12.4	12.5
Cycle Q Clear(g_c), s	14.3	0.0	7.6	13.4	0.0	12.2	3.0	18.3	18.4	7.3	12.4	12.5
Prop In Lane	0.18		1.00	0.34		1.00	1.00		0.29	1.00		0.06
Lane Grp Cap(c), veh/h	366	0	301	324	0	268	79	597	588	123	642	667
V/C Ratio(X)	0.73	0.00	0.42	0.76	0.00	0.70	0.65	0.62	0.62	1.03	0.43	0.43
Avail Cap(c_a), veh/h	651	0	536	646	0	534	162	597	588	123	642	667
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.7	0.0	37.0	41.3	0.0	40.8	49.5	29.3	29.3	49.0	25.5	25.5
Incr Delay (d2), s/veh	2.9	0.0	0.9	1.4	0.0	1.3	3.3	4.7	4.9	89.0	2.1	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	0.0	2.9	6.1	0.0	4.6	1.4	8.3	8.2	6.2	5.4	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.5	0.0	37.9	42.6	0.0	42.0	52.9	34.1	34.2	138.0	27.6	27.5
LnGrp LOS	D	A	D	D	A	D	D	C	C	F	C	C
Approach Vol, veh/h		394			434			785			692	
Approach Delay, s/veh		41.1			42.4			35.4			47.8	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.0	40.8		26.9	10.4	43.4		24.7				
Change Period (Y+Rc), s	* 5.7	5.4		6.1	* 5.7	5.4		6.1				
Max Green Setting (Gmax), s	* 7.3	35.4		37.0	* 9.6	33.1		37.0				
Max Q Clear Time (g_c+I1), s	9.3	20.4		16.3	5.0	14.5		15.4				
Green Ext Time (p_c), s	0.0	7.8		1.9	0.0	6.9		0.2				

Intersection Summary

HCM 6th Ctrl Delay	41.4
HCM 6th LOS	D

Notes

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

HCM 6th Signalized Intersection Summary

5: 4th St & I-8 WB On-Ramp/I-8 WB Off-Ramp

Existing AM
02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕	↕	↕↕			↕↕	
Traffic Volume (veh/h)	0	0	0	187	0	327	113	448	0	0	825	75
Future Volume (veh/h)	0	0	0	187	0	327	113	448	0	0	825	75
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.97	1.00		1.00	1.00		0.96
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				237	0	414	143	567	0	0	1044	95
Peak Hour Factor				0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				592	0	512	173	1854	0	0	1177	107
Arrive On Green				0.33	0.00	0.33	0.10	0.52	0.00	0.00	0.36	0.36
Sat Flow, veh/h				1781	0	1542	1781	3647	0	0	3373	298
Grp Volume(v), veh/h				237	0	414	143	567	0	0	565	574
Grp Sat Flow(s),veh/h/ln				1781	0	1542	1781	1777	0	0	1777	1801
Q Serve(g_s), s				7.4	0.0	17.6	5.7	6.5	0.0	0.0	21.5	21.5
Cycle Q Clear(g_c), s				7.4	0.0	17.6	5.7	6.5	0.0	0.0	21.5	21.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.17
Lane Grp Cap(c), veh/h				592	0	512	173	1854	0	0	638	646
V/C Ratio(X)				0.40	0.00	0.81	0.82	0.31	0.00	0.00	0.89	0.89
Avail Cap(c_a), veh/h				917	0	793	173	1854	0	0	638	646
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				18.5	0.0	21.9	31.8	9.8	0.0	0.0	21.7	21.7
Incr Delay (d2), s/veh				0.4	0.0	3.6	25.0	0.4	0.0	0.0	16.6	16.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.9	0.0	6.4	3.5	2.2	0.0	0.0	10.8	10.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				18.9	0.0	25.5	56.9	10.2	0.0	0.0	38.3	38.2
LnGrp LOS				B	A	C	E	B	A	A	D	D
Approach Vol, veh/h					651			710			1139	
Approach Delay, s/veh					23.1			19.6			38.3	
Approach LOS					C			B			D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	1.7	31.2		29.0		42.9						
Change Period (Y+Rc), s	4.7	5.4		5.1		5.4						
Max Green Setting (Gmax), s	25.8			37.0		37.5						
Max Q Clear Time (g_c+1I), s	23.5			19.6		8.5						
Green Ext Time (p_c), s	0.0	2.0		2.9		9.1						

Intersection Summary

HCM 6th Ctrl Delay	29.0
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary
6: 4th St & I-8 EB Off-Ramp/I-8 EB On-Ramp

Existing AM
02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↑↑	↗	↘	↑↑	
Traffic Volume (veh/h)	60	0	45	0	0	0	0	512	137	385	679	0
Future Volume (veh/h)	60	0	45	0	0	0	0	512	137	385	679	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	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				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	71	0	54				0	610	163	458	808	0
Peak Hour Factor	0.84	0.84	0.84				0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	149	0	113				0	1230	524	377	2294	0
Arrive On Green	0.16	0.00	0.16				0.00	0.35	0.35	0.21	0.65	0.00
Sat Flow, veh/h	943	0	717				0	3647	1514	1781	3647	0
Grp Volume(v), veh/h	125	0	0				0	610	163	458	808	0
Grp Sat Flow(s),veh/h/ln	1660	0	0				0	1777	1514	1781	1777	0
Q Serve(g_s), s	3.7	0.0	0.0				0.0	7.2	4.2	11.3	5.6	0.0
Cycle Q Clear(g_c), s	3.7	0.0	0.0				0.0	7.2	4.2	11.3	5.6	0.0
Prop In Lane	0.57		0.43				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	262	0	0				0	1230	524	377	2294	0
V/C Ratio(X)	0.48	0.00	0.00				0.00	0.50	0.31	1.22	0.35	0.00
Avail Cap(c_a), veh/h	311	0	0				0	1230	524	377	2294	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.5	0.0	0.0				0.0	13.8	12.8	21.1	4.3	0.0
Incr Delay (d2), s/veh	1.3	0.0	0.0				0.0	1.4	1.5	119.1	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4	0.0	0.0				0.0	2.6	1.4	16.4	1.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.8	0.0	0.0				0.0	15.2	14.3	140.2	4.8	0.0
LnGrp LOS	C	A	A				A	B	B	F	A	A
Approach Vol, veh/h		125						773			1266	
Approach Delay, s/veh		21.8						15.0			53.7	
Approach LOS		C						B			D	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		39.9			16.0	23.9		13.5				
Change Period (Y+Rc), s		5.4			* 4.7	5.4		5.1				
Max Green Setting (Gmax), s		34.5			* 11	18.5		10.0				
Max Q Clear Time (g_c+I1), s		7.6			13.3	9.2		5.7				
Green Ext Time (p_c), s		13.0			0.0	5.5		0.2				

Intersection Summary

HCM 6th Ctrl Delay	38.1
HCM 6th LOS	D

Notes

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

HCM 6th Signalized Intersection Summary
7: 4th St & Wake Ave

Existing AM
02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔		↖	↑	↗	↖	↔↔		↖	↔↔	
Traffic Volume (veh/h)	156	70	88	38	45	111	56	322	46	255	305	149
Future Volume (veh/h)	156	70	88	38	45	111	56	322	46	255	305	149
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	0.99		0.97	1.00		0.98	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	184	82	104	45	53	131	66	379	54	300	359	175
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	302	152	194	203	426	641	106	1307	185	329	1274	609
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.06	0.42	0.42	0.18	0.55	0.55
Sat Flow, veh/h	1064	669	854	1188	1870	1530	1781	3115	440	1781	2313	1106
Grp Volume(v), veh/h	186	0	184	45	53	131	66	215	218	300	274	260
Grp Sat Flow(s),veh/h/ln1074	0	1512	1188	1870	1530	1781	1777	1778	1781	1777	1643	
Q Serve(g_s), s	17.6	0.0	12.8	4.1	2.7	6.6	4.3	9.5	9.7	19.7	9.8	10.1
Cycle Q Clear(g_c), s	20.2	0.0	12.8	17.0	2.7	6.6	4.3	9.5	9.7	19.7	9.8	10.1
Prop In Lane	0.99		0.56	1.00		1.00	1.00		0.25	1.00		0.67
Lane Grp Cap(c), veh/h	304	0	344	203	426	641	106	745	746	329	979	905
V/C Ratio(X)	0.61	0.00	0.54	0.22	0.12	0.20	0.62	0.29	0.29	0.91	0.28	0.29
Avail Cap(c_a), veh/h	408	0	475	316	603	787	183	745	746	605	979	905
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	0.0	40.6	48.1	36.7	22.6	55.0	22.9	23.0	47.8	14.3	14.3
Incr Delay (d2), s/veh	2.8	0.0	1.8	0.2	0.0	0.1	2.2	1.0	1.0	4.1	0.7	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln5.3	0.0	4.9	1.2	1.2	2.3	2.0	4.1	4.2	8.9	3.9	3.8	
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.6	0.0	42.5	48.3	36.8	22.6	57.2	23.9	24.0	51.8	15.0	15.1
LnGrp LOS	D	A	D	D	D	C	E	C	C	D	B	B
Approach Vol, veh/h		370			229			499			834	
Approach Delay, s/veh		45.0			31.0			28.3			28.3	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	37.5	57.5		34.6	11.8	73.2		34.6				
Change Period (Y+Rc), s	5.4	7.3		7.4	* 4.7	* 7.3		* 7.4				
Max Green Setting (Gmax), s	40.6	36.7		37.6	* 12	* 66		* 39				
Max Q Clear Time (g_c+D), s	11.7	11.7		22.2	6.3	12.1		19.0				
Green Ext Time (p_c), s	0.4	6.0		2.6	0.0	9.8		0.4				

Intersection Summary

HCM 6th Ctrl Delay	31.8
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary

8: SR-86/4th St & Danenberg Dr

Existing AM
02/24/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	23	69	364	64	90	212
Future Volume (veh/h)	23	69	364	64	90	212
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.96	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	29	86	455	80	112	265
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	180	160	1068	186	237	1107
Arrive On Green	0.10	0.10	0.36	0.36	0.13	0.59
Sat Flow, veh/h	1781	1585	3095	524	1781	1870
Grp Volume(v), veh/h	29	86	268	267	112	265
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1748	1781	1870
Q Serve(g_s), s	0.7	2.4	5.2	5.3	2.7	3.1
Cycle Q Clear(g_c), s	0.7	2.4	5.2	5.3	2.7	3.1
Prop In Lane	1.00	1.00		0.30	1.00	
Lane Grp Cap(c), veh/h	180	160	632	622	237	1107
V/C Ratio(X)	0.16	0.54	0.42	0.43	0.47	0.24
Avail Cap(c_a), veh/h	289	257	1138	1120	379	1847
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	18.7	19.5	11.1	11.2	18.3	4.4
Incr Delay (d2), s/veh	0.4	2.8	1.6	1.7	0.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.9	1.8	1.8	0.9	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.1	22.3	12.8	12.9	18.8	4.8
LnGrp LOS	B	C	B	B	B	A
Approach Vol, veh/h	115		535			377
Approach Delay, s/veh	21.5		12.8			9.0
Approach LOS	C		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	10.8	24.0			34.8	10.8
Change Period (Y+Rc), s	4.7	7.8			* 7.8	6.2
Max Green Setting (Gmax), s	29.2				* 45	7.4
Max Q Clear Time (g_c+1), s	7.3				5.1	4.4
Green Ext Time (p_c), s	0.1	7.2			4.1	0.1

Intersection Summary

HCM 6th Ctrl Delay		12.4
HCM 6th LOS		B

Notes

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

HCM 6th Signalized Intersection Summary
 9: Dogwood Rd & Danenberg Dr

Existing AM
 02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	58	80	32	5	35	72	37	411	24	101	192	88
Future Volume (veh/h)	58	80	32	5	35	72	37	411	24	101	192	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	1.00		0.98	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		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	105	42	7	46	95	49	541	32	133	253	116
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	102	473	178	22	257	218	88	1691	100	161	1278	567
Arrive On Green	0.06	0.19	0.19	0.01	0.14	0.14	0.05	0.50	0.50	0.09	0.54	0.54
Sat Flow, veh/h	1781	2494	939	1781	1777	1510	1781	3405	201	1781	2377	1053
Grp Volume(v), veh/h	76	73	74	7	46	95	49	282	291	133	187	182
Grp Sat Flow(s),veh/h/ln	1781	1777	1656	1781	1777	1510	1781	1777	1829	1781	1777	1653
Q Serve(g_s), s	4.6	3.8	4.2	0.4	2.5	6.3	3.0	10.4	10.5	8.1	6.0	6.3
Cycle Q Clear(g_c), s	4.6	3.8	4.2	0.4	2.5	6.3	3.0	10.4	10.5	8.1	6.0	6.3
Prop In Lane	1.00		0.57	1.00		1.00	1.00		0.11	1.00		0.64
Lane Grp Cap(c), veh/h	102	337	314	22	257	218	88	883	908	161	956	889
V/C Ratio(X)	0.74	0.22	0.24	0.32	0.18	0.44	0.56	0.32	0.32	0.82	0.20	0.20
Avail Cap(c_a), veh/h	152	556	518	113	517	439	118	883	908	233	956	889
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	37.7	37.8	53.9	41.3	43.0	51.1	16.6	16.6	49.2	13.1	13.2
Incr Delay (d2), s/veh	4.0	0.5	0.6	3.1	0.5	2.2	2.0	1.0	0.9	9.8	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	2.1	1.7	1.7	0.2	1.1	2.4	1.3	4.3	4.4	4.0	2.4	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.0	38.2	38.4	57.0	41.9	45.1	53.1	17.5	17.5	59.0	13.6	13.7
LnGrp LOS	E	D	D	E	D	D	D	B	B	E	B	B
Approach Vol, veh/h		223			148			622			502	
Approach Delay, s/veh		44.0			44.7			20.3			25.7	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.6	60.6	6.9	26.9	11.0	65.2	11.9	21.9				
Change Period (Y+Rc), s	5.6	6.0	5.6	6.0	5.6	6.0	5.6	6.0				
Max Green Setting (Gmax), s	14.4	31.0	7.0	34.4	7.3	38.1	9.4	32.0				
Max Q Clear Time (g_c+10), s	11.0	12.5	2.4	6.2	5.0	8.3	6.6	8.3				
Green Ext Time (p_c), s	0.1	4.7	0.0	1.2	0.0	3.4	0.0	1.1				
Intersection Summary												
HCM 6th Ctrl Delay											28.1	
HCM 6th LOS											C	

Intersection	
Intersection Delay, s/veh	7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	0	10	0	0	0	10	10	0	0	10	10
Future Vol, veh/h	10	0	10	0	0	0	10	10	0	0	10	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	0	11	0	0	0	11	11	0	0	11	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	6.9	0	7.2	6.8
HCM LOS	A	-	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	50%	50%	0%	0%
Vol Thru, %	50%	0%	100%	50%
Vol Right, %	0%	50%	0%	50%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	20	0	20
LT Vol	10	10	0	0
Through Vol	10	0	0	10
RT Vol	0	10	0	10
Lane Flow Rate	22	22	0	22
Geometry Grp	1	1	1	1
Degree of Util (X)	0.025	0.023	0	0.022
Departure Headway (Hd)	4.088	3.808	4.024	3.687
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	879	942	0	973
Service Time	2.098	1.825	2.045	1.7
HCM Lane V/C Ratio	0.025	0.023	0	0.023
HCM Control Delay	7.2	6.9	7	6.8
HCM Lane LOS	A	A	N	A
HCM 95th-tile Q	0.1	0.1	0	0.1

HCM 6th Signalized Intersection Summary
1: 8th St & Wake Ave

Existing PM
02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕	↖	↖	↕	↖
Traffic Volume (veh/h)	28	13	14	72	17	231	11	284	62	325	558	42
Future Volume (veh/h)	28	13	14	72	17	231	11	284	62	325	558	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.96	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	31	15	16	81	19	260	12	319	70	365	627	47
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	77	382	328	129	433	374	26	689	295	400	755	624
Arrive On Green	0.04	0.21	0.21	0.07	0.24	0.24	0.01	0.19	0.19	0.22	0.40	0.40
Sat Flow, veh/h	1781	1777	1528	1781	1777	1533	1781	3554	1524	1781	1870	1546
Grp Volume(v), veh/h	31	15	16	81	19	260	12	319	70	365	627	47
Grp Sat Flow(s),veh/h/ln	1781	1777	1528	1781	1777	1533	1781	1777	1524	1781	1870	1546
Q Serve(g_s), s	1.4	0.5	0.7	3.6	0.7	12.6	0.5	6.5	3.2	16.3	24.5	1.5
Cycle Q Clear(g_c), s	1.4	0.5	0.7	3.6	0.7	12.6	0.5	6.5	3.2	16.3	24.5	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	77	382	328	129	433	374	26	689	295	400	755	624
V/C Ratio(X)	0.40	0.04	0.05	0.63	0.04	0.70	0.46	0.46	0.24	0.91	0.83	0.08
Avail Cap(c_a), veh/h	153	742	638	153	742	640	109	1597	685	402	1148	949
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	37.9	25.3	25.4	36.7	23.5	28.1	39.8	29.1	27.7	30.8	21.8	14.9
Incr Delay (d2), s/veh	3.3	0.0	0.1	6.0	0.0	2.3	12.2	0.5	0.4	24.7	3.2	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	0.6	0.2	0.2	1.7	0.3	4.5	0.3	2.6	1.1	9.1	10.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.3	25.4	25.4	42.7	23.6	30.4	52.0	29.6	28.2	55.5	25.0	15.0
LnGrp LOS	D	C	C	D	C	C	D	C	C	E	C	B
Approach Vol, veh/h		62			360			401			1039	
Approach Delay, s/veh		33.3			32.8			30.0			35.3	
Approach LOS		C			C			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.9	22.6	11.5	23.5	6.8	39.7	9.1	25.8				
Change Period (Y+Rc), s	5.6	6.8	5.6	6.0	5.6	6.8	5.6	6.0				
Max Green Setting (Gmax), s	18.4	36.6	7.0	34.0	5.0	50.0	7.0	34.0				
Max Q Clear Time (g_c+I1), s	18.3	8.5	5.6	2.7	2.5	26.5	3.4	14.6				
Green Ext Time (p_c), s	0.0	2.1	0.0	0.1	0.0	4.1	0.0	1.6				

Intersection Summary

HCM 6th Ctrl Delay	33.6
HCM 6th LOS	C

Intersection												
Intersection Delay, s/veh	10.2											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↕		↙	↕			↕			↕	
Traffic Vol, veh/h	4	373	40	17	278	29	29	2	7	48	1	15
Future Vol, veh/h	4	373	40	17	278	29	29	2	7	48	1	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	405	43	18	302	32	32	2	8	52	1	16
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	10.6	9.8	10	10.3
HCM LOS	B	A	A	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	76%	100%	0%	0%	100%	0%	0%	75%
Vol Thru, %	5%	0%	100%	76%	0%	100%	76%	2%
Vol Right, %	18%	0%	0%	24%	0%	0%	24%	23%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	38	4	249	164	17	185	122	64
LT Vol	29	4	0	0	17	0	0	48
Through Vol	2	0	249	124	0	185	93	1
RT Vol	7	0	0	40	0	0	29	15
Lane Flow Rate	41	4	270	179	18	201	132	70
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.077	0.007	0.393	0.251	0.03	0.298	0.189	0.128
Departure Headway (Hd)	6.713	5.734	5.231	5.059	5.828	5.325	5.157	6.606
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	537	620	684	704	610	669	690	546
Service Time	4.415	3.506	3.002	2.83	3.606	3.102	2.934	4.307
HCM Lane V/C Ratio	0.076	0.006	0.395	0.254	0.03	0.3	0.191	0.128
HCM Control Delay	10	8.5	11.4	9.5	8.8	10.4	9.1	10.3
HCM Lane LOS	A	A	B	A	A	B	A	B
HCM 95th-tile Q	0.2	0	1.9	1	0.1	1.2	0.7	0.4

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕			↕			↕	
Traffic Vol, veh/h	3	436	1	13	329	11	0	0	10	18	0	10
Future Vol, veh/h	3	436	1	13	329	11	0	0	10	18	0	10
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10	10	0	10
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	495	1	15	374	13	0	0	11	20	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	397	0	0	506	0	0	739	939	268	685	933	214
Stage 1	-	-	-	-	-	-	512	512	-	421	421	-
Stage 2	-	-	-	-	-	-	227	427	-	264	512	-
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	1158	-	-	1055	-	-	306	263	730	334	265	791
Stage 1	-	-	-	-	-	-	513	535	-	581	587	-
Stage 2	-	-	-	-	-	-	755	584	-	718	535	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1147	-	-	1045	-	-	292	253	716	318	255	776
Mov Cap-2 Maneuver	-	-	-	-	-	-	292	253	-	318	255	-
Stage 1	-	-	-	-	-	-	507	528	-	574	573	-
Stage 2	-	-	-	-	-	-	726	570	-	698	528	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.3			10.1			14.7		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	716	1147	-	-	1045	-	-	403
HCM Lane V/C Ratio	0.016	0.003	-	-	0.014	-	-	0.079
HCM Control Delay (s)	10.1	8.1	-	-	8.5	-	-	14.7
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.3

HCM 6th Signalized Intersection Summary
4: 4th St & Ross Ave

Existing PM
02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↗	↕↗		↗	↕↗	
Traffic Volume (veh/h)	35	198	126	95	134	183	75	615	75	120	726	20
Future Volume (veh/h)	35	198	126	95	134	183	75	615	75	120	726	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	36	206	131	99	140	191	78	641	78	125	756	21
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	51	294	283	132	187	265	100	1089	132	126	1263	35
Arrive On Green	0.19	0.19	0.19	0.17	0.17	0.17	0.06	0.34	0.34	0.07	0.36	0.36
Sat Flow, veh/h	276	1580	1522	759	1073	1520	1781	3171	385	1781	3526	98
Grp Volume(v), veh/h	242	0	131	239	0	191	78	359	360	125	381	396
Grp Sat Flow(s),veh/h/ln	1857	0	1522	1832	0	1520	1781	1777	1780	1781	1777	1847
Q Serve(g_s), s	12.6	0.0	7.9	12.8	0.0	12.2	4.5	17.1	17.2	7.2	18.1	18.1
Cycle Q Clear(g_c), s	12.6	0.0	7.9	12.8	0.0	12.2	4.5	17.1	17.2	7.2	18.1	18.1
Prop In Lane	0.15		1.00	0.41		1.00	1.00		0.22	1.00		0.05
Lane Grp Cap(c), veh/h	345	0	283	319	0	265	100	610	611	126	636	661
V/C Ratio(X)	0.70	0.00	0.46	0.75	0.00	0.72	0.78	0.59	0.59	0.99	0.60	0.60
Avail Cap(c_a), veh/h	666	0	546	657	0	545	130	610	611	126	636	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.3	0.0	37.4	40.4	0.0	40.2	48.1	27.9	27.9	47.9	27.0	27.1
Incr Delay (d2), s/veh	2.6	0.0	1.2	1.3	0.0	1.4	15.1	4.1	4.1	77.3	4.1	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	5.9	0.0	3.0	5.8	0.0	4.6	2.4	7.7	7.7	5.8	8.0	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.9	0.0	38.6	41.8	0.0	41.6	63.1	32.0	32.0	125.1	31.2	31.0
LnGrp LOS	D	A	D	D	A	D	E	C	C	F	C	C
Approach Vol, veh/h		373			430			797			902	
Approach Delay, s/veh		40.7			41.7			35.1			44.1	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.0	40.8		25.3	11.5	42.3		24.1				
Change Period (Y+Rc), s	* 5.7	5.4		6.1	* 5.7	5.4		6.1				
Max Green Setting (Gmax), s	* 7.3	35.4		37.0	* 7.5	35.2		37.0				
Max Q Clear Time (g_c+I1), s	9.2	19.2		14.6	6.5	20.1		14.8				
Green Ext Time (p_c), s	0.0	8.1		1.8	0.0	8.3		0.2				

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.

HCM 6th Signalized Intersection Summary
 5: 4th St & I-8 WB On-Ramp/I-8 WB Off-Ramp

Existing PM
 02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕	↕	↕↕			↕↕	
Traffic Volume (veh/h)	0	0	0	190	0	333	95	603	0	0	1128	46
Future Volume (veh/h)	0	0	0	190	0	333	95	603	0	0	1128	46
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.97	1.00		1.00	1.00		0.96
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No		No		No		No		No
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				196	0	343	98	622	0	0	1163	47
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				522	0	451	155	1962	0	0	1376	56
Arrive On Green				0.29	0.00	0.29	0.09	0.55	0.00	0.00	0.40	0.40
Sat Flow, veh/h				1781	0	1538	1781	3647	0	0	3568	140
Grp Volume(v), veh/h				196	0	343	98	622	0	0	594	616
Grp Sat Flow(s),veh/h/ln				1781	0	1538	1781	1777	0	0	1777	1838
Q Serve(g_s), s				5.9	0.0	13.8	3.6	6.5	0.0	0.0	20.6	20.7
Cycle Q Clear(g_c), s				5.9	0.0	13.8	3.6	6.5	0.0	0.0	20.6	20.7
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.08
Lane Grp Cap(c), veh/h				522	0	451	155	1962	0	0	704	728
V/C Ratio(X)				0.38	0.00	0.76	0.63	0.32	0.00	0.00	0.84	0.85
Avail Cap(c_a), veh/h				970	0	838	184	1962	0	0	704	728
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				19.1	0.0	21.8	30.0	8.3	0.0	0.0	18.6	18.6
Incr Delay (d2), s/veh				0.4	0.0	2.7	2.8	0.4	0.0	0.0	11.9	11.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.4	0.0	4.9	1.6	2.0	0.0	0.0	9.5	9.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				19.5	0.0	24.5	32.8	8.7	0.0	0.0	30.5	30.2
LnGrp LOS				B	A	C	C	A	A	A	C	C
Approach Vol, veh/h					539			720			1210	
Approach Delay, s/veh					22.7			12.0			30.3	
Approach LOS					C			B			C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	10.6	32.3		25.0		42.9						
Change Period (Y+Rc), s	4.7	5.4		5.1		5.4						
Max Green Setting (Gmax), s	25.8			37.0		37.5						
Max Q Clear Time (g_c+1/3), s	22.7			15.8		8.5						
Green Ext Time (p_c), s	0.0	2.8		2.4		10.1						

Intersection Summary

HCM 6th Ctrl Delay	23.3
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary
6: 4th St & I-8 EB Off-Ramp/I-8 EB On-Ramp

Existing PM
02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↑↑	↗	↘	↑↑	
Traffic Volume (veh/h)	53	0	79	0	0	0	0	582	234	454	828	0
Future Volume (veh/h)	53	0	79	0	0	0	0	582	234	454	828	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	55	0	81				0	600	241	468	854	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	106	0	156				0	1225	522	375	2284	0
Arrive On Green	0.16	0.00	0.16				0.00	0.34	0.34	0.21	0.64	0.00
Sat Flow, veh/h	654	0	963				0	3647	1514	1781	3647	0
Grp Volume(v), veh/h	136	0	0				0	600	241	468	854	0
Grp Sat Flow(s),veh/h/ln	1618	0	0				0	1777	1514	1781	1777	0
Q Serve(g_s), s	4.1	0.0	0.0				0.0	7.1	6.7	11.3	6.1	0.0
Cycle Q Clear(g_c), s	4.1	0.0	0.0				0.0	7.1	6.7	11.3	6.1	0.0
Prop In Lane	0.40		0.60				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	262	0	0				0	1225	522	375	2284	0
V/C Ratio(X)	0.52	0.00	0.00				0.00	0.49	0.46	1.25	0.37	0.00
Avail Cap(c_a), veh/h	301	0	0				0	1225	522	375	2284	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.6	0.0	0.0				0.0	13.9	13.7	21.2	4.5	0.0
Incr Delay (d2), s/veh	1.6	0.0	0.0				0.0	1.4	2.9	132.1	0.5	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
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.0				0.0	2.6	2.3	17.8	1.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.2	0.0	0.0				0.0	15.3	16.6	153.3	5.0	0.0
LnGrp LOS	C	A	A				A	B	B	F	A	A
Approach Vol, veh/h		136						841			1322	
Approach Delay, s/veh		22.2						15.7			57.5	
Approach LOS		C						B			E	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		39.9			16.0	23.9		13.8				
Change Period (Y+Rc), s		5.4			* 4.7	5.4		5.1				
Max Green Setting (Gmax), s		34.5			* 11	18.5		10.0				
Max Q Clear Time (g_c+I1), s		8.1			13.3	9.1		6.1				
Green Ext Time (p_c), s		13.6			0.0	5.9		0.2				

Intersection Summary

HCM 6th Ctrl Delay	40.1
HCM 6th LOS	D

Notes

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

HCM 6th Signalized Intersection Summary
7: 4th St & Wake Ave

Existing PM
02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↕	↑	↕	↕	↕↕		↕	↕↕	
Traffic Volume (veh/h)	220	93	162	88	81	209	141	366	63	221	461	159
Future Volume (veh/h)	220	93	162	88	81	209	141	366	63	221	461	159
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	1.00		0.97	1.00		0.97	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		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	250	106	184	100	92	238	160	416	72	251	524	181
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	350	171	296	221	583	730	189	1077	185	281	1068	367
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.11	0.36	0.36	0.16	0.41	0.41
Sat Flow, veh/h	925	548	951	1085	1870	1540	1781	3019	518	1781	2576	885
Grp Volume(v), veh/h	250	0	290	100	92	238	160	243	245	251	361	344
Grp Sat Flow(s),veh/h/ln	925	0	1498	1085	1870	1540	1781	1777	1761	1781	1777	1685
Q Serve(g_s), s	26.4	0.0	19.1	10.0	4.1	11.2	10.2	11.8	12.0	16.0	17.2	17.4
Cycle Q Clear(g_c), s	30.5	0.0	19.1	29.1	4.1	11.2	10.2	11.8	12.0	16.0	17.2	17.4
Prop In Lane	1.00		0.63	1.00		1.00	1.00		0.29	1.00		0.53
Lane Grp Cap(c), veh/h	350	0	467	221	583	730	189	634	628	281	736	698
V/C Ratio(X)	0.71	0.00	0.62	0.45	0.16	0.33	0.85	0.38	0.39	0.89	0.49	0.49
Avail Cap(c_a), veh/h	419	0	565	302	722	845	375	634	628	533	736	698
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.8	0.0	34.0	46.4	28.8	19.2	50.7	27.7	27.8	47.7	24.9	24.9
Incr Delay (d2), s/veh	5.4	0.0	2.0	0.5	0.0	0.1	4.0	1.8	1.8	3.9	2.3	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	0.0	7.0	2.7	1.8	3.9	4.7	5.2	5.2	7.2	7.5	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.3	0.0	36.0	46.9	28.9	19.3	54.7	29.5	29.6	51.6	27.2	27.4
LnGrp LOS	D	A	D	D	C	B	D	C	C	D	C	C
Approach Vol, veh/h		540			430			648			956	
Approach Delay, s/veh		40.3			27.8			35.7			33.7	
Approach LOS		D			C			D			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	33.7	48.5		43.4	17.0	55.2		43.4				
Change Period (Y+Rc), s	5.4	7.3		7.4	* 4.7	* 7.3		* 7.4				
Max Green Setting (Gmax), s	31.6	36.7		43.6	* 24	* 48		* 45				
Max Q Clear Time (g_c+10), s	119.0	14.0		32.5	12.2	19.4		31.1				
Green Ext Time (p_c), s	0.3	6.6		3.5	0.2	11.1		0.8				

Intersection Summary

HCM 6th Ctrl Delay	34.6
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary
8: SR-86/4th St & Danenberg Dr

Existing PM
02/24/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	91	200	254	71	295	444
Future Volume (veh/h)	91	200	254	71	295	444
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.95	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	99	217	276	77	321	483
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	223	198	741	201	379	1090
Arrive On Green	0.13	0.13	0.27	0.27	0.21	0.58
Sat Flow, veh/h	1781	1585	2819	741	1781	1870
Grp Volume(v), veh/h	99	217	177	176	321	483
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1690	1781	1870
Q Serve(g_s), s	2.5	6.0	3.9	4.0	8.3	7.0
Cycle Q Clear(g_c), s	2.5	6.0	3.9	4.0	8.3	7.0
Prop In Lane	1.00	1.00		0.44	1.00	
Lane Grp Cap(c), veh/h	223	198	483	459	379	1090
V/C Ratio(X)	0.44	1.09	0.37	0.38	0.85	0.44
Avail Cap(c_a), veh/h	223	198	1075	1022	420	1810
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	19.4	21.0	14.1	14.2	18.1	5.6
Incr Delay (d2), s/veh	1.4	91.2	1.7	1.9	12.5	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.9	1.5	1.5	4.1	1.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.8	112.2	15.8	16.1	30.6	6.7
LnGrp LOS	C	F	B	B	C	A
Approach Vol, veh/h	316		353			804
Approach Delay, s/veh	83.5		15.9			16.2
Approach LOS	F		B			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	14.9	20.8			35.7	12.2
Change Period (Y+Rc), s	4.7	7.8			* 7.8	6.2
Max Green Setting (Gmax), s	15	29.0			* 46	6.0
Max Q Clear Time (g_c+M), s	10	6.0			9.0	8.0
Green Ext Time (p_c), s	0.1	4.7			8.5	0.0

Intersection Summary

HCM 6th Ctrl Delay		30.6
HCM 6th LOS		C

Notes

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

HCM 6th Signalized Intersection Summary
 9: Dogwood Rd & Danenberg Dr

Existing PM
 02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	267	74	59	140	198	69	379	31	272	458	74
Future Volume (veh/h)	106	267	74	59	140	198	69	379	31	272	458	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	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	112	281	78	62	147	208	73	399	33	286	482	78
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	120	588	160	96	358	308	101	1213	100	275	1415	228
Arrive On Green	0.07	0.21	0.21	0.05	0.20	0.20	0.06	0.37	0.37	0.15	0.46	0.46
Sat Flow, veh/h	1781	2738	743	1781	1777	1526	1781	3317	273	1781	3054	491
Grp Volume(v), veh/h	112	180	179	62	147	208	73	213	219	286	279	281
Grp Sat Flow(s),veh/h/ln	1781	1777	1704	1781	1777	1526	1781	1777	1813	1781	1777	1768
Q Serve(g_s), s	6.9	9.7	10.1	3.8	7.9	13.9	4.4	9.5	9.6	17.0	11.0	11.1
Cycle Q Clear(g_c), s	6.9	9.7	10.1	3.8	7.9	13.9	4.4	9.5	9.6	17.0	11.0	11.1
Prop In Lane	1.00		0.44	1.00		1.00	1.00		0.15	1.00		0.28
Lane Grp Cap(c), veh/h	120	382	366	96	358	308	101	650	663	275	823	819
V/C Ratio(X)	0.93	0.47	0.49	0.64	0.41	0.68	0.72	0.33	0.33	1.04	0.34	0.34
Avail Cap(c_a), veh/h	120	523	502	113	517	444	164	650	663	275	823	819
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.1	37.7	37.9	51.0	38.2	40.6	51.0	25.1	25.2	46.5	18.8	18.8
Incr Delay (d2), s/veh	61.3	1.4	1.6	5.4	1.2	4.1	3.6	1.3	1.3	64.7	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	4.3	4.3	1.8	3.5	5.4	2.0	4.1	4.2	12.3	4.6	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	112.3	39.2	39.5	56.4	39.4	44.7	54.6	26.5	26.5	111.2	19.9	20.0
LnGrp LOS	F	D	D	E	D	D	D	C	C	F	B	B
Approach Vol, veh/h		471			417			505			846	
Approach Delay, s/veh		56.7			44.6			30.6			50.8	
Approach LOS		E			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	32.6	46.2	11.5	29.6	11.8	57.0	13.0	28.2				
Change Period (Y+Rc), s	5.6	6.0	5.6	6.0	5.6	6.0	5.6	6.0				
Max Green Setting (Gmax), s	30.4	7.0	32.4	10.1	37.3	7.4	32.0					
Max Q Clear Time (g_c+119), s	11.6	5.8	12.1	6.4	13.1	8.9	15.9					
Green Ext Time (p_c), s	0.0	3.4	0.0	2.9	0.0	5.1	0.0	2.7				

Intersection Summary

HCM 6th Ctrl Delay	46.3
HCM 6th LOS	D

Intersection	
Intersection Delay, s/veh	7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	0	10	0	0	0	10	10	0	0	10	10
Future Vol, veh/h	10	0	10	0	0	0	10	10	0	0	10	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	0	11	0	0	0	11	11	0	0	11	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	6.9	0	7.2	6.8
HCM LOS	A	-	A	A























Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	50%	50%	0%	0%
Vol Thru, %	50%	0%	100%	50%
Vol Right, %	0%	50%	0%	50%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	20	0	20
LT Vol	10	10	0	0
Through Vol	10	0	0	10
RT Vol	0	10	0	10
Lane Flow Rate	22	22	0	22
Geometry Grp	1	1	1	1
Degree of Util (X)	0.025	0.023	0	0.022
Departure Headway (Hd)	4.088	3.808	4.024	3.687
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	879	942	0	973
Service Time	2.098	1.825	2.045	1.7
HCM Lane V/C Ratio	0.025	0.023	0	0.023
HCM Control Delay	7.2	6.9	7	6.8
HCM Lane LOS	A	A	N	A
HCM 95th-tile Q	0.1	0.1	0	0.1

APPENDIX C
PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS –
EXISTING + PROJECT

HCM 6th Signalized Intersection Summary

1: 8th St & Wake Ave

02/24/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	18	16	57	11	97	11	578	85	224	367	23
Future Volume (veh/h)	70	18	16	57	11	97	11	578	85	224	367	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	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	88	22	20	71	14	121	14	722	106	280	459	29
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	129	324	249	120	298	255	30	1045	452	321	856	708
Arrive On Green	0.07	0.17	0.17	0.07	0.17	0.17	0.02	0.29	0.29	0.18	0.46	0.46
Sat Flow, veh/h	1781	1874	1440	1781	1777	1518	1781	3554	1538	1781	1870	1548
Grp Volume(v), veh/h	88	21	21	71	14	121	14	722	106	280	459	29
Grp Sat Flow(s),veh/h/ln	1781	1777	1538	1781	1777	1518	1781	1777	1538	1781	1870	1548
Q Serve(g_s), s	4.1	0.8	1.0	3.3	0.6	6.1	0.7	15.1	4.4	12.9	14.8	0.9
Cycle Q Clear(g_c), s	4.1	0.8	1.0	3.3	0.6	6.1	0.7	15.1	4.4	12.9	14.8	0.9
Prop In Lane	1.00		0.94	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	129	308	266	120	298	255	30	1045	452	321	856	708
V/C Ratio(X)	0.68	0.07	0.08	0.59	0.05	0.47	0.47	0.69	0.23	0.87	0.54	0.04
Avail Cap(c_a), veh/h	148	718	622	148	718	614	106	1521	659	402	1112	920
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	38.0	29.1	29.2	38.1	29.3	31.6	41.0	26.3	22.5	33.5	16.4	12.6
Incr Delay (d2), s/veh	10.1	0.1	0.1	4.6	0.1	1.4	11.3	0.8	0.3	15.8	0.5	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	2.1	0.3	0.4	1.5	0.2	2.2	0.4	5.9	1.5	6.6	5.7	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.1	29.2	29.3	42.7	29.4	33.0	52.3	27.1	22.8	49.3	16.9	12.6
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	B	B
Approach Vol, veh/h		130			206			842			768	
Approach Delay, s/veh		42.0			36.1			27.0			28.6	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.7	31.5	11.3	20.6	7.0	45.3	11.7	20.1				
Change Period (Y+Rc), s	5.6	6.8	5.6	6.0	5.6	6.8	5.6	6.0				
Max Green Setting (Gmax), s	19.0	36.0	7.0	34.0	5.0	50.0	7.0	34.0				
Max Q Clear Time (g_c+I1), s	14.9	17.1	5.3	3.0	2.7	16.8	6.1	8.1				
Green Ext Time (p_c), s	0.3	4.6	0.0	0.2	0.0	2.8	0.0	0.7				
Intersection Summary												
HCM 6th Ctrl Delay				29.6								
HCM 6th LOS				C								

HCM 6th AWSC
2: Thomas Dr & Wake Ave

02/24/2022

Intersection

Intersection Delay, s/veh	9.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕		↵	↕			↕			↕	
Traffic Vol, veh/h	17	284	13	10	167	41	26	2	15	6	0	2
Future Vol, veh/h	17	284	13	10	167	41	26	2	15	6	0	2
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	351	16	12	206	51	32	2	19	7	0	2
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	9.5	8.7	9.3	9.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	60%	100%	0%	0%	100%	0%	0%	75%
Vol Thru, %	5%	0%	100%	88%	0%	100%	58%	0%
Vol Right, %	35%	0%	0%	12%	0%	0%	42%	25%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	43	17	189	108	10	111	97	8
LT Vol	26	17	0	0	10	0	0	6
Through Vol	2	0	189	95	0	111	56	0
RT Vol	15	0	0	13	0	0	41	2
Lane Flow Rate	53	21	234	133	12	137	119	10
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.088	0.032	0.321	0.18	0.019	0.193	0.158	0.017
Departure Headway (Hd)	5.978	5.451	4.949	4.864	5.559	5.057	4.759	6.195
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	598	658	727	738	644	709	754	576
Service Time	3.726	3.177	2.676	2.591	3.288	2.786	2.488	3.949
HCM Lane V/C Ratio	0.089	0.032	0.322	0.18	0.019	0.193	0.158	0.017
HCM Control Delay	9.3	8.4	10	8.7	8.4	9	8.4	9.1
HCM Lane LOS	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0.3	0.1	1.4	0.7	0.1	0.7	0.6	0.1

HCM 6th TWSC
3: 6th St/Comm. Dwy & Wake Ave

02/24/2022

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	6	279	5	27	213	20	8	0	62	3	0	4
Future Vol, veh/h	6	279	5	27	213	20	8	0	62	3	0	4
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10	10	0	10
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	340	6	33	260	24	10	0	76	4	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	294	0	0	356	0	0	573	727	193	542	718	162
Stage 1	-	-	-	-	-	-	367	367	-	348	348	-
Stage 2	-	-	-	-	-	-	206	360	-	194	370	-
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	1264	-	-	1199	-	-	402	349	816	423	353	854
Stage 1	-	-	-	-	-	-	625	621	-	641	633	-
Stage 2	-	-	-	-	-	-	777	625	-	789	619	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1252	-	-	1188	-	-	382	331	801	366	334	838
Mov Cap-2 Maneuver	-	-	-	-	-	-	382	331	-	366	334	-
Stage 1	-	-	-	-	-	-	616	611	-	631	609	-
Stage 2	-	-	-	-	-	-	744	601	-	704	609	-























Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.8			10.7			11.8		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	712	1252	-	-	1188	-	-	540
HCM Lane V/C Ratio	0.12	0.006	-	-	0.028	-	-	0.016
HCM Control Delay (s)	10.7	7.9	-	-	8.1	-	-	11.8
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.4	0	-	-	0.1	-	-	0

HCM 6th Signalized Intersection Summary

4: 4th St & Ross Ave

02/24/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	188	109	71	140	162	46	546	91	109	474	14
Future Volume (veh/h)	42	188	109	71	140	162	46	546	91	109	474	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.95	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	49	219	127	83	163	188	53	635	106	127	551	16
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	67	299	301	109	215	268	80	1016	169	123	1269	37
Arrive On Green	0.20	0.20	0.20	0.18	0.18	0.18	0.04	0.34	0.34	0.07	0.36	0.36
Sat Flow, veh/h	339	1515	1525	621	1219	1520	1781	3024	504	1781	3521	102
Grp Volume(v), veh/h	268	0	127	246	0	188	53	373	368	127	278	289
Grp Sat Flow(s),veh/h/ln	1853	0	1525	1839	0	1520	1781	1777	1751	1781	1777	1846
Q Serve(g_s), s	14.3	0.0	7.7	13.4	0.0	12.2	3.1	18.6	18.6	7.3	12.5	12.5
Cycle Q Clear(g_c), s	14.3	0.0	7.7	13.4	0.0	12.2	3.1	18.6	18.6	7.3	12.5	12.5
Prop In Lane	0.18		1.00	0.34		1.00	1.00		0.29	1.00		0.06
Lane Grp Cap(c), veh/h	366	0	301	324	0	268	80	597	588	123	640	665
V/C Ratio(X)	0.73	0.00	0.42	0.76	0.00	0.70	0.66	0.62	0.63	1.03	0.43	0.43
Avail Cap(c_a), veh/h	651	0	536	646	0	534	166	597	588	123	640	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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.7	0.0	37.0	41.3	0.0	40.8	49.5	29.4	29.4	49.0	25.5	25.6
Incr Delay (d2), s/veh	2.9	0.0	0.9	1.4	0.0	1.3	3.5	4.9	5.0	89.0	2.1	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	0.0	2.9	6.1	0.0	4.6	1.4	8.4	8.3	6.2	5.4	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.5	0.0	38.0	42.6	0.0	42.0	53.0	34.3	34.4	138.0	27.7	27.6
LnGrp LOS	D	A	D	D	A	D	D	C	C	F	C	C
Approach Vol, veh/h		395			434			794			694	
Approach Delay, s/veh		41.1			42.4			35.6			47.8	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.0	40.8		26.9	10.4	43.4		24.7				
Change Period (Y+Rc), s	* 5.7	5.4		6.1	* 5.7	5.4		6.1				
Max Green Setting (Gmax), s	* 7.3	35.4		37.0	* 9.8	32.9		37.0				
Max Q Clear Time (g_c+I1), s	9.3	20.6		16.3	5.1	14.5		15.4				
Green Ext Time (p_c), s	0.0	7.8		1.9	0.0	6.8		0.2				

Intersection Summary

HCM 6th Ctrl Delay	41.5
HCM 6th LOS	D

Notes

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

HCM 6th Signalized Intersection Summary

5: 4th St & I-8 WB On-Ramp/I-8 WB Off-Ramp

02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕	↕	↕			↕	↕
Traffic Volume (veh/h)	0	0	0	189	0	327	126	456	0	0	828	75
Future Volume (veh/h)	0	0	0	189	0	327	126	456	0	0	828	75
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.97	1.00		1.00	1.00		0.96
Parking Bus, Adj				1.00	1.00	1.00	1.00	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	0	0	1870	1870
Adj Flow Rate, veh/h				239	0	414	159	577	0	0	1048	95
Peak Hour Factor				0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				592	0	512	173	1854	0	0	1177	107
Arrive On Green				0.33	0.00	0.33	0.10	0.52	0.00	0.00	0.36	0.36
Sat Flow, veh/h				1781	0	1542	1781	3647	0	0	3374	297
Grp Volume(v), veh/h				239	0	414	159	577	0	0	567	576
Grp Sat Flow(s),veh/h/ln				1781	0	1542	1781	1777	0	0	1777	1801
Q Serve(g_s), s				7.4	0.0	17.6	6.4	6.7	0.0	0.0	21.6	21.7
Cycle Q Clear(g_c), s				7.4	0.0	17.6	6.4	6.7	0.0	0.0	21.6	21.7
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.17
Lane Grp Cap(c), veh/h				592	0	512	173	1854	0	0	638	646
V/C Ratio(X)				0.40	0.00	0.81	0.92	0.31	0.00	0.00	0.89	0.89
Avail Cap(c_a), veh/h				917	0	793	173	1854	0	0	638	646
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				18.5	0.0	21.9	32.2	9.8	0.0	0.0	21.7	21.7
Incr Delay (d2), s/veh				0.4	0.0	3.6	44.3	0.4	0.0	0.0	17.0	16.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.0	0.0	6.4	4.7	2.3	0.0	0.0	10.9	11.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				19.0	0.0	25.5	76.5	10.3	0.0	0.0	38.7	38.6
LnGrp LOS				B	A	C	E	B	A	A	D	D
Approach Vol, veh/h				653				736			1143	
Approach Delay, s/veh				23.1				24.6			38.7	
Approach LOS				C				C			D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	1.7	31.2		29.0		42.9						
Change Period (Y+Rc), s	4.7	5.4		5.1		5.4						
Max Green Setting (Gmax), s	25.8			37.0		37.5						
Max Q Clear Time (g_c+10), s	23.7			19.6		8.7						
Green Ext Time (p_c), s	0.0	1.9		2.9		9.3						

Intersection Summary

HCM 6th Ctrl Delay	30.5
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary

6: 4th St & I-8 EB Off-Ramp/I-8 EB On-Ramp

02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↑↑	↗	↘	↑↑	
Traffic Volume (veh/h)	60	0	50	0	0	0	0	533	142	385	687	0
Future Volume (veh/h)	60	0	50	0	0	0	0	533	142	385	687	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	71	0	60				0	635	169	458	818	0
Peak Hour Factor	0.84	0.84	0.84				0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	143	0	121				0	1227	523	376	2288	0
Arrive On Green	0.16	0.00	0.16				0.00	0.35	0.35	0.21	0.64	0.00
Sat Flow, veh/h	896	0	757				0	3647	1514	1781	3647	0
Grp Volume(v), veh/h	131	0	0				0	635	169	458	818	0
Grp Sat Flow(s),veh/h/ln	1653	0	0				0	1777	1514	1781	1777	0
Q Serve(g_s), s	3.9	0.0	0.0				0.0	7.6	4.4	11.3	5.7	0.0
Cycle Q Clear(g_c), s	3.9	0.0	0.0				0.0	7.6	4.4	11.3	5.7	0.0
Prop In Lane	0.54		0.46				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	265	0	0				0	1227	523	376	2288	0
V/C Ratio(X)	0.50	0.00	0.00				0.00	0.52	0.32	1.22	0.36	0.00
Avail Cap(c_a), veh/h	308	0	0				0	1227	523	376	2288	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.5	0.0	0.0				0.0	14.0	12.9	21.1	4.4	0.0
Incr Delay (d2), s/veh	1.4	0.0	0.0				0.0	1.6	1.6	120.4	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.0				0.0	2.7	1.5	16.6	1.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.0	0.0	0.0				0.0	15.5	14.6	141.5	4.8	0.0
LnGrp LOS	C	A	A				A	B	B	F	A	A
Approach Vol, veh/h		131						804			1276	
Approach Delay, s/veh		22.0						15.3			53.9	
Approach LOS		C						B			D	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		39.9			16.0	23.9		13.7				
Change Period (Y+Rc), s		5.4			* 4.7	5.4		5.1				
Max Green Setting (Gmax), s		34.5			* 11	18.5		10.0				
Max Q Clear Time (g_c+I1), s		7.7			13.3	9.6		5.9				
Green Ext Time (p_c), s		13.1			0.0	5.5		0.2				
Intersection Summary												
HCM 6th Ctrl Delay											38.0	
HCM 6th LOS											D	
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary

7: 4th St & Wake Ave

02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↙	↑	↗	↙	↕↕		↙	↕↕	
Traffic Volume (veh/h)	183	72	106	38	46	111	63	322	46	255	305	160
Future Volume (veh/h)	183	72	106	38	46	111	63	322	46	255	305	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	0.99		0.97	1.00		0.98	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	215	85	125	45	54	131	74	379	54	300	359	188
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	321	148	218	199	456	666	107	1270	179	329	1212	622
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.06	0.41	0.41	0.18	0.54	0.54
Sat Flow, veh/h	1078	609	896	1164	1870	1533	1781	3115	440	1781	2252	1157
Grp Volume(v), veh/h	215	0	210	45	54	131	74	215	218	300	282	265
Grp Sat Flow(s),veh/h/ln1078	0	1505	1164	1870	1533	1781	1777	1778	1781	1777	1632	
Q Serve(g_s), s	21.1	0.0	15.0	4.3	2.8	6.5	5.0	10.0	10.1	20.2	10.7	11.0
Cycle Q Clear(g_c), s	23.8	0.0	15.0	19.4	2.8	6.5	5.0	10.0	10.1	20.2	10.7	11.0
Prop In Lane	1.00		0.60	1.00		1.00	1.00		0.25	1.00		0.71
Lane Grp Cap(c), veh/h	321	0	367	199	456	666	107	725	725	329	956	878
V/C Ratio(X)	0.67	0.00	0.57	0.23	0.12	0.20	0.69	0.30	0.30	0.91	0.29	0.30
Avail Cap(c_a), veh/h	397	0	462	283	589	776	179	725	725	590	956	878
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.4	0.0	40.7	49.2	36.1	21.9	56.5	24.4	24.5	49.0	15.5	15.6
Incr Delay (d2), s/veh	4.0	0.0	2.0	0.2	0.0	0.1	3.0	1.0	1.1	4.8	0.8	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	6.4	0.0	5.7	1.3	1.3	2.3	2.3	4.3	4.4	9.2	4.4	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.4	0.0	42.7	49.4	36.1	22.0	59.4	25.5	25.6	53.8	16.3	16.5
LnGrp LOS	D	A	D	D	D	C	E	C	C	D	B	B
Approach Vol, veh/h		425			230			507			847	
Approach Delay, s/veh		46.1			30.7			30.5			29.7	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	38.0	57.2		37.2	12.1	73.2		37.2				
Change Period (Y+Rc), s	5.4	7.3		7.4	* 4.7	* 7.3		* 7.4				
Max Green Setting (Gmax), s	40.6	36.7		37.6	* 12	* 66		* 39				
Max Q Clear Time (g_c+Q), s	22.2	12.1		25.8	7.0	13.0		21.4				
Green Ext Time (p_c), s	0.4	6.0		2.7	0.0	10.1		0.4				

Intersection Summary

HCM 6th Ctrl Delay	33.5
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary

8: SR-86/4th St & Danenberg Dr

02/24/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	23	73	366	64	101	218
Future Volume (veh/h)	23	73	366	64	101	218
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.96	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	29	91	458	80	126	272
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	182	162	1064	184	247	1113
Arrive On Green	0.10	0.10	0.35	0.35	0.14	0.59
Sat Flow, veh/h	1781	1585	3098	521	1781	1870
Grp Volume(v), veh/h	29	91	269	269	126	272
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1748	1781	1870
Q Serve(g_s), s	0.7	2.5	5.3	5.4	3.0	3.2
Cycle Q Clear(g_c), s	0.7	2.5	5.3	5.4	3.0	3.2
Prop In Lane	1.00	1.00		0.30	1.00	
Lane Grp Cap(c), veh/h	182	162	629	619	247	1113
V/C Ratio(X)	0.16	0.56	0.43	0.43	0.51	0.24
Avail Cap(c_a), veh/h	285	254	1123	1105	374	1822
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	18.9	19.8	11.4	11.4	18.4	4.4
Incr Delay (d2), s/veh	0.4	3.0	1.7	1.7	0.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.9	1.9	1.9	1.1	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.3	22.8	13.0	13.1	19.0	4.8
LnGrp LOS	B	C	B	B	B	A
Approach Vol, veh/h	120		538			398
Approach Delay, s/veh	22.0		13.1			9.3
Approach LOS	C		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.1	24.2			35.3	10.9
Change Period (Y+Rc), s	4.7	7.8			* 7.8	6.2
Max Green Setting (Gmax), s	29.2				* 45	7.4
Max Q Clear Time (g_c+1/3), s		7.4			5.2	4.5
Green Ext Time (p_c), s	0.1	7.2			4.3	0.1

Intersection Summary

HCM 6th Ctrl Delay	12.7
HCM 6th LOS	B

Notes

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

HCM 6th Signalized Intersection Summary

9: Dogwood Rd & Danenberg Dr

02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	80	33	5	35	72	37	411	24	101	192	92
Future Volume (veh/h)	68	80	33	5	35	72	37	411	24	101	192	92
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	1.00		0.98	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		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	89	105	43	7	46	95	49	541	32	133	253	121
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	112	484	186	22	257	218	88	1672	99	161	1246	576
Arrive On Green	0.06	0.20	0.20	0.01	0.14	0.14	0.05	0.49	0.49	0.09	0.53	0.53
Sat Flow, veh/h	1781	2477	954	1781	1777	1510	1781	3405	201	1781	2342	1082
Grp Volume(v), veh/h	89	73	75	7	46	95	49	282	291	133	190	184
Grp Sat Flow(s),veh/h/ln	1781	1777	1654	1781	1777	1510	1781	1777	1829	1781	1777	1647
Q Serve(g_s), s	5.4	3.8	4.2	0.4	2.5	6.3	3.0	10.6	10.6	8.1	6.2	6.5
Cycle Q Clear(g_c), s	5.4	3.8	4.2	0.4	2.5	6.3	3.0	10.6	10.6	8.1	6.2	6.5
Prop In Lane	1.00		0.58	1.00		1.00	1.00		0.11	1.00		0.66
Lane Grp Cap(c), veh/h	112	347	323	22	257	218	88	872	898	161	945	877
V/C Ratio(X)	0.79	0.21	0.23	0.32	0.18	0.44	0.56	0.32	0.32	0.82	0.20	0.21
Avail Cap(c_a), veh/h	152	556	517	113	517	439	118	872	898	233	945	877
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	50.8	37.1	37.3	53.9	41.3	43.0	51.1	16.9	16.9	49.2	13.5	13.6
Incr Delay (d2), s/veh	12.6	0.5	0.6	3.1	0.5	2.2	2.0	1.0	1.0	9.8	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	2.8	1.7	1.7	0.2	1.1	2.4	1.3	4.3	4.5	4.0	2.5	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.4	37.6	37.9	57.0	41.9	45.1	53.1	17.9	17.9	59.0	14.0	14.1
LnGrp LOS	E	D	D	E	D	D	D	B	B	E	B	B
Approach Vol, veh/h		237			148			622			507	
Approach Delay, s/veh		47.4			44.7			20.7			25.8	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.6	60.0	6.9	27.5	11.0	64.5	12.5	21.9				
Change Period (Y+Rc), s	5.6	6.0	5.6	6.0	5.6	6.0	5.6	6.0				
Max Green Setting (Gmax), s	14.4	31.0	7.0	34.4	7.3	38.1	9.4	32.0				
Max Q Clear Time (g_c+10), s	11.0	12.6	2.4	6.2	5.0	8.5	7.4	8.3				
Green Ext Time (p_c), s	0.1	4.7	0.0	1.2	0.0	3.5	0.0	1.1				
Intersection Summary												
HCM 6th Ctrl Delay											28.9	
HCM 6th LOS											C	

Intersection

Intersection Delay, s/veh 7.1

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	1	10	0	3	54	10	10	0	22	10	10
Future Vol, veh/h	10	1	10	0	3	54	10	10	0	22	10	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	1	11	0	3	59	11	11	0	24	11	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7	6.8	7.4	7.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	50%	48%	0%	52%
Vol Thru, %	50%	5%	5%	24%
Vol Right, %	0%	48%	95%	24%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	21	57	42
LT Vol	10	10	0	22
Through Vol	10	1	3	10
RT Vol	0	10	54	10
Lane Flow Rate	22	23	62	46
Geometry Grp	1	1	1	1
Degree of Util (X)	0.025	0.025	0.06	0.051
Departure Headway (Hd)	4.216	3.908	3.499	4.059
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	848	913	1019	882
Service Time	2.244	1.943	1.535	2.083
HCM Lane V/C Ratio	0.026	0.025	0.061	0.052
HCM Control Delay	7.4	7	6.8	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.2	0.2

HCM 6th Signalized Intersection Summary
1: 8th St & Wake Ave

Existing + Project PM
02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	18	14	74	20	234	11	284	65	329	558	42
Future Volume (veh/h)	28	18	14	74	20	234	11	284	65	329	558	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.96	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	31	20	16	83	22	263	12	319	73	370	627	47
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	77	426	295	129	435	376	26	688	295	401	755	624
Arrive On Green	0.04	0.22	0.22	0.07	0.25	0.25	0.01	0.19	0.19	0.22	0.40	0.40
Sat Flow, veh/h	1781	1976	1366	1781	1777	1533	1781	3554	1524	1781	1870	1546
Grp Volume(v), veh/h	31	18	18	83	22	263	12	319	73	370	627	47
Grp Sat Flow(s),veh/h/ln	1781	1777	1565	1781	1777	1533	1781	1777	1524	1781	1870	1546
Q Serve(g_s), s	1.4	0.6	0.8	3.7	0.8	12.8	0.5	6.5	3.3	16.6	24.6	1.5
Cycle Q Clear(g_c), s	1.4	0.6	0.8	3.7	0.8	12.8	0.5	6.5	3.3	16.6	24.6	1.5
Prop In Lane	1.00		0.87	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	77	383	338	129	435	376	26	688	295	401	755	624
V/C Ratio(X)	0.40	0.05	0.05	0.64	0.05	0.70	0.46	0.46	0.25	0.92	0.83	0.08
Avail Cap(c_a), veh/h	152	738	650	152	738	637	109	1589	682	401	1143	945
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	25.4	25.5	36.9	23.6	28.1	40.0	29.2	28.0	31.0	21.9	15.0
Incr Delay (d2), s/veh	3.4	0.0	0.1	6.9	0.0	2.4	12.2	0.5	0.4	26.9	3.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.3	0.3	1.8	0.3	4.6	0.3	2.6	1.2	9.5	10.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.5	25.5	25.5	43.8	23.7	30.5	52.2	29.7	28.4	57.9	25.1	15.1
LnGrp LOS	D	C	C	D	C	C	D	C	C	E	C	B
Approach Vol, veh/h		67			368			404			1044	
Approach Delay, s/veh		32.9			33.1			30.2			36.3	
Approach LOS		C			C			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	24.0	22.6	11.5	23.7	6.8	39.8	9.1	26.1				
Change Period (Y+Rc), s	5.6	6.8	5.6	6.0	5.6	6.8	5.6	6.0				
Max Green Setting (Gmax), s	18.4	36.6	7.0	34.0	5.0	50.0	7.0	34.0				
Max Q Clear Time (g_c+I1), s	18.6	8.5	5.7	2.8	2.5	26.6	3.4	14.8				
Green Ext Time (p_c), s	0.0	2.1	0.0	0.1	0.0	4.0	0.0	1.6				
Intersection Summary												
HCM 6th Ctrl Delay				34.2								
HCM 6th LOS				C								

Intersection												
Intersection Delay, s/veh	10.4											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕		↵	↕			↕			↕	
Traffic Vol, veh/h	4	381	44	17	283	29	32	2	7	48	1	15
Future Vol, veh/h	4	381	44	17	283	29	32	2	7	48	1	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	414	48	18	308	32	35	2	8	52	1	16
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	10.8	9.9	10.1	10.3
HCM LOS	B	A	B	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	78%	100%	0%	0%	100%	0%	0%	75%
Vol Thru, %	5%	0%	100%	74%	0%	100%	76%	2%
Vol Right, %	17%	0%	0%	26%	0%	0%	24%	23%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	41	4	254	171	17	189	123	64
LT Vol	32	4	0	0	17	0	0	48
Through Vol	2	0	254	127	0	189	94	1
RT Vol	7	0	0	44	0	0	29	15
Lane Flow Rate	45	4	276	186	18	205	134	70
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.084	0.007	0.403	0.262	0.03	0.305	0.193	0.129
Departure Headway (Hd)	6.772	5.754	5.25	5.069	5.855	5.352	5.186	6.654
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	532	617	679	703	606	664	685	542
Service Time	4.476	3.532	3.028	2.847	3.64	3.137	2.971	4.357
HCM Lane V/C Ratio	0.085	0.006	0.406	0.265	0.03	0.309	0.196	0.129
HCM Control Delay	10.1	8.6	11.6	9.7	8.8	10.5	9.2	10.3
HCM Lane LOS	B	A	B	A	A	B	A	B
HCM 95th-tile Q	0.3	0	1.9	1	0.1	1.3	0.7	0.4

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Traffic Vol, veh/h	3	436	9	66	329	11	5	0	47	18	0	10
Future Vol, veh/h	3	436	9	66	329	11	5	0	47	18	0	10
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10	10	0	10
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	495	10	75	374	13	6	0	53	20	0	11























Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	397	0	0	515	0	0	863	1063	273	805	1062	214
Stage 1	-	-	-	-	-	-	516	516	-	541	541	-
Stage 2	-	-	-	-	-	-	347	547	-	264	521	-
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	1158	-	-	1047	-	-	248	222	725	274	222	791
Stage 1	-	-	-	-	-	-	510	533	-	493	519	-
Stage 2	-	-	-	-	-	-	642	516	-	718	530	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1147	-	-	1037	-	-	226	201	711	234	201	776
Mov Cap-2 Maneuver	-	-	-	-	-	-	226	201	-	234	201	-
Stage 1	-	-	-	-	-	-	504	526	-	487	477	-
Stage 2	-	-	-	-	-	-	581	474	-	656	523	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			1.4			11.8			17.8		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	589	1147	-	-	1037	-	-	312
HCM Lane V/C Ratio	0.1	0.003	-	-	0.072	-	-	0.102
HCM Control Delay (s)	11.8	8.1	-	-	8.7	-	-	17.8
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.3	0	-	-	0.2	-	-	0.3

HCM 6th Signalized Intersection Summary
4: 4th St & Ross Ave

Existing + Project PM
02/24/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	198	128	95	134	183	76	620	75	120	733	20
Future Volume (veh/h)	35	198	128	95	134	183	76	620	75	120	733	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	36	206	133	99	140	191	79	646	78	125	764	21
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	51	294	283	132	187	265	101	1090	131	126	1261	35
Arrive On Green	0.19	0.19	0.19	0.17	0.17	0.17	0.06	0.34	0.34	0.07	0.36	0.36
Sat Flow, veh/h	276	1580	1523	759	1073	1520	1781	3174	383	1781	3528	97
Grp Volume(v), veh/h	242	0	133	239	0	191	79	361	363	125	385	400
Grp Sat Flow(s),veh/h/ln	1857	0	1523	1832	0	1520	1781	1777	1780	1781	1777	1848
Q Serve(g_s), s	12.6	0.0	8.0	12.8	0.0	12.2	4.5	17.3	17.3	7.2	18.3	18.3
Cycle Q Clear(g_c), s	12.6	0.0	8.0	12.8	0.0	12.2	4.5	17.3	17.3	7.2	18.3	18.3
Prop In Lane	0.15		1.00	0.41		1.00	1.00		0.21	1.00		0.05
Lane Grp Cap(c), veh/h	345	0	283	319	0	265	101	610	611	126	635	660
V/C Ratio(X)	0.70	0.00	0.47	0.75	0.00	0.72	0.78	0.59	0.59	0.99	0.61	0.61
Avail Cap(c_a), veh/h	666	0	546	657	0	545	130	610	611	126	635	660
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.3	0.0	37.5	40.4	0.0	40.2	48.0	27.9	27.9	47.9	27.2	27.2
Incr Delay (d2), s/veh	2.6	0.0	1.2	1.3	0.0	1.4	15.6	4.2	4.2	77.3	4.3	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(50%),veh/ln	5.9	0.0	3.0	5.8	0.0	4.6	2.4	7.7	7.8	5.8	8.1	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.9	0.0	38.7	41.8	0.0	41.6	63.7	32.1	32.2	125.2	31.4	31.3
LnGrp LOS	D	A	D	D	A	D	E	C	C	F	C	C
Approach Vol, veh/h		375			430			803			910	
Approach Delay, s/veh		40.8			41.7			35.2			44.3	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.0	40.8		25.3	11.5	42.3		24.1				
Change Period (Y+Rc), s	* 5.7	5.4		6.1	* 5.7	5.4		6.1				
Max Green Setting (Gmax), s	* 7.3	35.4		37.0	* 7.5	35.2		37.0				
Max Q Clear Time (g_c+I1), s	9.2	19.3		14.6	6.5	20.3		14.8				
Green Ext Time (p_c), s	0.0	8.1		1.8	0.0	8.2		0.2				

Intersection Summary

HCM 6th Ctrl Delay	40.4
HCM 6th LOS	D

Notes

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

HCM 6th Signalized Intersection Summary
 5: 4th St & I-8 WB On-Ramp/I-8 WB Off-Ramp

Existing + Project PM
 02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕	↕	↕↕			↕↕	
Traffic Volume (veh/h)	0	0	0	195	0	333	105	609	0	0	1137	46
Future Volume (veh/h)	0	0	0	195	0	333	105	609	0	0	1137	46
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.97	1.00		1.00	1.00		0.96
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				201	0	343	108	628	0	0	1172	47
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				523	0	452	160	1961	0	0	1366	55
Arrive On Green				0.29	0.00	0.29	0.09	0.55	0.00	0.00	0.39	0.39
Sat Flow, veh/h				1781	0	1538	1781	3647	0	0	3569	139
Grp Volume(v), veh/h				201	0	343	108	628	0	0	599	620
Grp Sat Flow(s),veh/h/ln				1781	0	1538	1781	1777	0	0	1777	1838
Q Serve(g_s), s				6.1	0.0	13.8	4.0	6.5	0.0	0.0	21.0	21.0
Cycle Q Clear(g_c), s				6.1	0.0	13.8	4.0	6.5	0.0	0.0	21.0	21.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.08
Lane Grp Cap(c), veh/h				523	0	452	160	1961	0	0	699	723
V/C Ratio(X)				0.38	0.00	0.76	0.68	0.32	0.00	0.00	0.86	0.86
Avail Cap(c_a), veh/h				970	0	838	184	1961	0	0	699	723
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				19.1	0.0	21.8	30.0	8.3	0.0	0.0	18.9	18.9
Incr Delay (d2), s/veh				0.5	0.0	2.7	5.5	0.4	0.0	0.0	12.9	12.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.4	0.0	5.0	1.8	2.1	0.0	0.0	9.8	10.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				19.6	0.0	24.5	35.5	8.7	0.0	0.0	31.8	31.5
LnGrp LOS				B	A	C	D	A	A	A	C	C
Approach Vol, veh/h					544			736			1219	
Approach Delay, s/veh					22.7			12.6			31.6	
Approach LOS					C			B			C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	10.8	32.1		25.0		42.9						
Change Period (Y+Rc), s	4.7	5.4		5.1		5.4						
Max Green Setting (Gmax), s	25.8			37.0		37.5						
Max Q Clear Time (g_c+10), s	23.0			15.8		8.5						
Green Ext Time (p_c), s	0.0	2.5		2.4		10.2						

Intersection Summary

HCM 6th Ctrl Delay	24.1
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary
6: 4th St & I-8 EB Off-Ramp/I-8 EB On-Ramp

Existing + Project PM

02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↑↑	↗	↘	↑↑	
Traffic Volume (veh/h)	53	0	94	0	0	0	0	598	238	454	851	0
Future Volume (veh/h)	53	0	94	0	0	0	0	598	238	454	851	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No					No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	55	0	97				0	616	245	468	877	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	97	0	171				0	1218	519	373	2271	0
Arrive On Green	0.17	0.00	0.17				0.00	0.34	0.34	0.21	0.64	0.00
Sat Flow, veh/h	581	0	1025				0	3647	1514	1781	3647	0
Grp Volume(v), veh/h	152	0	0				0	616	245	468	877	0
Grp Sat Flow(s),veh/h/ln1607	0	0	0				0	1777	1514	1781	1777	0
Q Serve(g_s), s	4.7	0.0	0.0				0.0	7.4	6.9	11.3	6.4	0.0
Cycle Q Clear(g_c), s	4.7	0.0	0.0				0.0	7.4	6.9	11.3	6.4	0.0
Prop In Lane	0.36		0.64				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	267	0	0				0	1218	519	373	2271	0
V/C Ratio(X)	0.57	0.00	0.00				0.00	0.51	0.47	1.25	0.39	0.00
Avail Cap(c_a), veh/h	298	0	0				0	1218	519	373	2271	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.7	0.0	0.0				0.0	14.1	13.9	21.3	4.7	0.0
Incr Delay (d2), s/veh	2.0	0.0	0.0				0.0	1.5	3.1	134.9	0.5	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
%ile BackOfQ(50%),veh/ln1.8	0.0	0.0	0.0				0.0	2.7	2.3	18.0	1.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.8	0.0	0.0				0.0	15.6	17.0	156.3	5.2	0.0
LnGrp LOS	C	A	A				A	B	B	F	A	A
Approach Vol, veh/h		152						861			1345	
Approach Delay, s/veh		22.8						16.0			57.7	
Approach LOS		C						B			E	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		39.9			16.0	23.9		14.1				
Change Period (Y+Rc), s		5.4			* 4.7	5.4		5.1				
Max Green Setting (Gmax), s		34.5			* 11	18.5		10.0				
Max Q Clear Time (g_c+I1), s		8.4			13.3	9.4		6.7				
Green Ext Time (p_c), s		13.9			0.0	5.8		0.2				

Intersection Summary

HCM 6th Ctrl Delay	40.2
HCM 6th LOS	D

Notes

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

HCM 6th Signalized Intersection Summary
7: 4th St & Wake Ave

Existing + Project PM
02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔		↗	↑	↖	↗	↔↔		↗	↔↔	
Traffic Volume (veh/h)	242	94	176	88	83	209	162	366	63	221	461	189
Future Volume (veh/h)	242	94	176	88	83	209	162	366	63	221	461	189
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	1.00		0.97	1.00		0.97	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	275	107	200	100	94	238	184	416	72	251	524	215
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	363	170	318	223	612	753	212	1058	181	280	962	393
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.12	0.35	0.35	0.16	0.39	0.39
Sat Flow, veh/h	929	521	973	1069	1870	1541	1781	3019	518	1781	2441	997
Grp Volume(v), veh/h	275	0	307	100	94	238	184	243	245	251	381	358
Grp Sat Flow(s),veh/h/ln	929	0	1494	1069	1870	1541	1781	1777	1760	1781	1777	1661
Q Serve(g_s), s	30.8	0.0	21.1	10.6	4.3	11.4	12.3	12.5	12.7	16.8	20.1	20.2
Cycle Q Clear(g_c), s	35.2	0.0	21.1	31.8	4.3	11.4	12.3	12.5	12.7	16.8	20.1	20.2
Prop In Lane	1.00		0.65	1.00		1.00	1.00		0.29	1.00		0.60
Lane Grp Cap(c), veh/h	363	0	489	223	612	753	212	622	617	280	700	655
V/C Ratio(X)	0.76	0.00	0.63	0.45	0.15	0.32	0.87	0.39	0.40	0.90	0.54	0.55
Avail Cap(c_a), veh/h	396	0	536	266	686	815	356	622	617	507	700	655
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.4	0.0	34.6	48.1	29.0	19.1	52.6	29.7	29.8	50.3	28.4	28.4
Incr Delay (d2), s/veh	8.3	0.0	2.5	0.5	0.0	0.1	5.6	1.8	1.9	4.1	3.0	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	0.0	7.8	2.8	1.9	4.0	5.7	5.6	5.6	7.7	8.9	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.7	0.0	37.1	48.6	29.0	19.2	58.2	31.6	31.7	54.4	31.4	31.7
LnGrp LOS	D	A	D	D	C	B	E	C	C	D	C	C
Approach Vol, veh/h		582			432			672			990	
Approach Delay, s/veh		43.1			28.1			38.9			37.3	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	34.5	49.9		47.2	19.2	55.2		47.2				
Change Period (Y+Rc), s	5.4	7.3		7.4	* 4.7	* 7.3		* 7.4				
Max Green Setting (Gmax), s	31.6	36.7		43.6	* 24	* 48		* 45				
Max Q Clear Time (g_c+10), s	119.8	14.7		37.2	14.3	22.2		33.8				
Green Ext Time (p_c), s	0.3	6.5		2.6	0.2	11.2		0.8				

Intersection Summary

HCM 6th Ctrl Delay	37.5
HCM 6th LOS	D

Notes

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

HCM 6th Signalized Intersection Summary
8: SR-86/4th St & Danenberg Dr

Existing + Project PM
02/24/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	91	213	261	71	304	449
Future Volume (veh/h)	91	213	261	71	304	449
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.95	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	99	232	284	77	330	488
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	220	196	750	198	387	1099
Arrive On Green	0.12	0.12	0.27	0.27	0.22	0.59
Sat Flow, veh/h	1781	1585	2838	726	1781	1870
Grp Volume(v), veh/h	99	232	181	180	330	488
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1693	1781	1870
Q Serve(g_s), s	2.5	6.0	4.0	4.2	8.6	7.1
Cycle Q Clear(g_c), s	2.5	6.0	4.0	4.2	8.6	7.1
Prop In Lane	1.00	1.00		0.43	1.00	
Lane Grp Cap(c), veh/h	220	196	486	463	387	1099
V/C Ratio(X)	0.45	1.18	0.37	0.39	0.85	0.44
Avail Cap(c_a), veh/h	220	196	1062	1012	415	1789
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	19.7	21.3	14.3	14.3	18.2	5.6
Incr Delay (d2), s/veh	1.4	122.5	1.7	1.9	13.8	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0	8.6	1.5	1.5	4.4	1.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.2	143.7	16.0	16.3	32.0	6.6
LnGrp LOS	C	F	B	B	C	A
Approach Vol, veh/h	331		361			818
Approach Delay, s/veh	107.1		16.1			16.9
Approach LOS	F		B			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	15.3	21.1			36.3	12.2
Change Period (Y+Rc), s	4.7	7.8			* 7.8	6.2
Max Green Setting (Gmax), s	15	29.0			* 46	6.0
Max Q Clear Time (g_c+M), s	10.6	6.2			9.1	8.0
Green Ext Time (p_c), s	0.0	4.8			8.6	0.0

Intersection Summary

HCM 6th Ctrl Delay		36.5	
HCM 6th LOS		D	

Notes

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

HCM 6th Signalized Intersection Summary
 9: Dogwood Rd & Danenberg Dr

Existing + Project PM
 02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	267	75	59	140	198	70	379	31	272	458	86
Future Volume (veh/h)	114	267	75	59	140	198	70	379	31	272	458	86
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	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	120	281	79	62	147	208	74	399	33	286	482	91
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	120	587	161	96	358	308	102	1213	100	275	1377	258
Arrive On Green	0.07	0.21	0.21	0.05	0.20	0.20	0.06	0.37	0.37	0.15	0.46	0.46
Sat Flow, veh/h	1781	2730	750	1781	1777	1526	1781	3317	273	1781	2973	558
Grp Volume(v), veh/h	120	181	179	62	147	208	74	213	219	286	287	286
Grp Sat Flow(s),veh/h/ln	1781	1777	1703	1781	1777	1526	1781	1777	1813	1781	1777	1754
Q Serve(g_s), s	7.4	9.8	10.2	3.8	7.9	13.9	4.5	9.5	9.6	17.0	11.4	11.5
Cycle Q Clear(g_c), s	7.4	9.8	10.2	3.8	7.9	13.9	4.5	9.5	9.6	17.0	11.4	11.5
Prop In Lane	1.00		0.44	1.00		1.00	1.00		0.15	1.00		0.32
Lane Grp Cap(c), veh/h	120	382	366	96	358	308	102	650	663	275	823	813
V/C Ratio(X)	1.00	0.47	0.49	0.64	0.41	0.68	0.73	0.33	0.33	1.04	0.35	0.35
Avail Cap(c_a), veh/h	120	523	501	113	517	444	164	650	663	275	823	813
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.3	37.7	37.9	51.0	38.2	40.6	51.0	25.1	25.2	46.5	18.9	18.9
Incr Delay (d2), s/veh	82.6	1.4	1.6	5.4	1.2	4.1	3.7	1.3	1.3	64.7	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.3	4.3	1.8	3.5	5.4	2.1	4.1	4.2	12.3	4.7	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	133.9	39.2	39.5	56.4	39.4	44.7	54.7	26.5	26.5	111.2	20.1	20.1
LnGrp LOS	F	D	D	E	D	D	D	C	C	F	C	C
Approach Vol, veh/h		480			417			506			859	
Approach Delay, s/veh		63.0			44.6			30.6			50.4	
Approach LOS		E			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	32.6	46.2	11.5	29.6	11.9	56.9	13.0	28.2				
Change Period (Y+Rc), s	5.6	6.0	5.6	6.0	5.6	6.0	5.6	6.0				
Max Green Setting (Gmax), s	30.4	7.0	32.4	10.1	37.3	7.4	32.0					
Max Q Clear Time (g_c+119), s	11.6	5.8	12.2	6.5	13.5	9.4	15.9					
Green Ext Time (p_c), s	0.0	3.4	0.0	2.9	0.0	5.3	0.0	2.7				
Intersection Summary												
HCM 6th Ctrl Delay											47.6	
HCM 6th LOS											D	

Intersection												
Intersection Delay, s/veh	7.4											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	4	10	0	3	42	10	10	0	61	10	10
Future Vol, veh/h	10	4	10	0	3	42	10	10	0	61	10	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	4	11	0	3	46	11	11	0	66	11	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.2	6.8	7.4	7.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	50%	42%	0%	75%
Vol Thru, %	50%	17%	7%	12%
Vol Right, %	0%	42%	93%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	24	45	81
LT Vol	10	10	0	61
Through Vol	10	4	3	10
RT Vol	0	10	42	10
Lane Flow Rate	22	26	49	88
Geometry Grp	1	1	1	1
Degree of Util (X)	0.026	0.029	0.049	0.102
Departure Headway (Hd)	4.23	3.994	3.582	4.156
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	842	887	988	862
Service Time	2.275	2.06	1.648	2.185
HCM Lane V/C Ratio	0.026	0.029	0.05	0.102
HCM Control Delay	7.4	7.2	6.8	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.2	0.3























APPENDIX D

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS – EXISTING + CUMULATIVE PROJECTS

HCM 6th Signalized Intersection Summary

1: 8th St & Wake Ave

02/24/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	18	16	60	8	98	11	578	101	240	367	23
Future Volume (veh/h)	70	18	16	60	8	98	11	578	101	240	367	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	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	88	22	20	75	10	122	14	722	126	300	459	29
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	127	320	246	121	297	254	29	1039	450	338	871	721
Arrive On Green	0.07	0.17	0.17	0.07	0.17	0.17	0.02	0.29	0.29	0.19	0.47	0.47
Sat Flow, veh/h	1781	1874	1440	1781	1777	1518	1781	3554	1538	1781	1870	1549
Grp Volume(v), veh/h	88	21	21	75	10	122	14	722	126	300	459	29
Grp Sat Flow(s),veh/h/ln	1781	1777	1537	1781	1777	1518	1781	1777	1538	1781	1870	1549
Q Serve(g_s), s	4.1	0.8	1.0	3.5	0.4	6.3	0.7	15.5	5.4	14.1	14.9	0.9
Cycle Q Clear(g_c), s	4.1	0.8	1.0	3.5	0.4	6.3	0.7	15.5	5.4	14.1	14.9	0.9
Prop In Lane	1.00		0.94	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	127	303	262	121	297	254	29	1039	450	338	871	721
V/C Ratio(X)	0.69	0.07	0.08	0.62	0.03	0.48	0.48	0.69	0.28	0.89	0.53	0.04
Avail Cap(c_a), veh/h	145	703	608	145	703	600	104	1513	655	381	1088	901
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	39.0	29.9	30.0	39.0	30.0	32.4	41.9	27.0	23.4	33.9	16.3	12.5
Incr Delay (d2), s/veh	11.2	0.1	0.1	5.7	0.0	1.4	11.4	0.8	0.3	20.1	0.5	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	2.1	0.4	0.4	1.7	0.2	2.3	0.4	6.1	1.9	7.6	5.7	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.2	30.0	30.1	44.7	30.0	33.8	53.3	27.8	23.8	54.0	16.8	12.5
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	B	B
Approach Vol, veh/h		130			207			862			788	
Approach Delay, s/veh		43.7			37.6			27.7			30.8	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.9	31.9	11.4	20.7	7.0	46.8	11.7	20.4				
Change Period (Y+Rc), s	5.6	6.8	5.6	6.0	5.6	6.8	5.6	6.0				
Max Green Setting (Gmax), s	18.4	36.6	7.0	34.0	5.0	50.0	7.0	34.0				
Max Q Clear Time (g_c+I1), s	16.1	17.5	5.5	3.0	2.7	16.9	6.1	8.3				
Green Ext Time (p_c), s	0.2	4.6	0.0	0.2	0.0	2.8	0.0	0.7				
Intersection Summary												
HCM 6th Ctrl Delay				31.0								
HCM 6th LOS				C								

HCM 6th AWSC
2: Thomas Dr & Wake Ave

02/24/2022

Intersection												
Intersection Delay, s/veh	9.6											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↕		↙	↕			↕			↕	
Traffic Vol, veh/h	17	308	12	10	243	41	23	2	15	6	0	2
Future Vol, veh/h	17	308	12	10	243	41	23	2	15	6	0	2
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	380	15	12	300	51	28	2	19	7	0	2
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	9.8	9.3	9.5	9.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	57%	100%	0%	0%	100%	0%	0%	75%
Vol Thru, %	5%	0%	100%	90%	0%	100%	66%	0%
Vol Right, %	38%	0%	0%	10%	0%	0%	34%	25%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	40	17	205	115	10	162	122	8
LT Vol	23	17	0	0	10	0	0	6
Through Vol	2	0	205	103	0	162	81	0
RT Vol	15	0	0	12	0	0	41	2
Lane Flow Rate	49	21	253	142	12	200	151	10
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.085	0.032	0.354	0.195	0.019	0.282	0.203	0.018
Departure Headway (Hd)	6.175	5.527	5.026	4.952	5.58	5.078	4.842	6.426
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	578	647	715	723	641	706	740	554
Service Time	3.936	3.264	2.762	2.689	3.317	2.815	2.579	4.196
HCM Lane V/C Ratio	0.085	0.032	0.354	0.196	0.019	0.283	0.204	0.018
HCM Control Delay	9.5	8.4	10.5	8.9	8.4	9.8	8.8	9.3
HCM Lane LOS	A	A	B	A	A	A	A	A
HCM 95th-tile Q	0.3	0.1	1.6	0.7	0.1	1.2	0.8	0.1

HCM 6th TWSC
3: 6th St/Comm. Dwy & Wake Ave

02/24/2022

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗			↕			↕	
Traffic Vol, veh/h	6	306	2	8	296	20	1	0	15	3	0	4
Future Vol, veh/h	6	306	2	8	296	20	1	0	15	3	0	4
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10	10	0	10
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	373	2	10	361	24	1	0	18	4	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	395	0	0	385	0	0	609	813	208	614	802	213
Stage 1	-	-	-	-	-	-	398	398	-	403	403	-
Stage 2	-	-	-	-	-	-	211	415	-	211	399	-
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	1160	-	-	1170	-	-	379	311	798	376	316	792
Stage 1	-	-	-	-	-	-	599	601	-	595	598	-
Stage 2	-	-	-	-	-	-	771	591	-	771	601	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1149	-	-	1159	-	-	365	300	783	356	305	777
Mov Cap-2 Maneuver	-	-	-	-	-	-	365	300	-	356	305	-
Stage 1	-	-	-	-	-	-	589	591	-	585	587	-
Stage 2	-	-	-	-	-	-	752	580	-	741	591	-























Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.2			10.1			12.1		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	731	1149	-	-	1159	-	-	516
HCM Lane V/C Ratio	0.027	0.006	-	-	0.008	-	-	0.017
HCM Control Delay (s)	10.1	8.2	-	-	8.1	-	-	12.1
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

HCM 6th Signalized Intersection Summary

4: 4th St & Ross Ave

02/24/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	188	108	71	140	162	44	546	91	109	489	14
Future Volume (veh/h)	42	188	108	71	140	162	44	546	91	109	489	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.95	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	49	219	126	83	163	188	51	635	106	127	569	16
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	67	299	301	109	215	268	79	1016	169	123	1273	36
Arrive On Green	0.20	0.20	0.20	0.18	0.18	0.18	0.04	0.34	0.34	0.07	0.36	0.36
Sat Flow, veh/h	339	1515	1525	621	1219	1520	1781	3024	504	1781	3525	99
Grp Volume(v), veh/h	268	0	126	246	0	188	51	373	368	127	287	298
Grp Sat Flow(s),veh/h/ln	1853	0	1525	1839	0	1520	1781	1777	1751	1781	1777	1847
Q Serve(g_s), s	14.3	0.0	7.6	13.4	0.0	12.2	3.0	18.6	18.6	7.3	12.9	13.0
Cycle Q Clear(g_c), s	14.3	0.0	7.6	13.4	0.0	12.2	3.0	18.6	18.6	7.3	12.9	13.0
Prop In Lane	0.18		1.00	0.34		1.00	1.00		0.29	1.00		0.05
Lane Grp Cap(c), veh/h	366	0	301	324	0	268	79	597	588	123	642	667
V/C Ratio(X)	0.73	0.00	0.42	0.76	0.00	0.70	0.65	0.62	0.63	1.03	0.45	0.45
Avail Cap(c_a), veh/h	651	0	536	646	0	534	162	597	588	123	642	667
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.7	0.0	37.0	41.3	0.0	40.8	49.5	29.4	29.4	49.0	25.6	25.6
Incr Delay (d2), s/veh	2.9	0.0	0.9	1.4	0.0	1.3	3.3	4.9	5.0	89.0	2.2	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	0.0	2.9	6.1	0.0	4.6	1.4	8.4	8.3	6.2	5.6	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.5	0.0	37.9	42.6	0.0	42.0	52.9	34.2	34.4	138.0	27.9	27.8
LnGrp LOS	D	A	D	D	A	D	D	C	C	F	C	C
Approach Vol, veh/h		394			434			792			712	
Approach Delay, s/veh		41.1			42.4			35.5			47.5	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.0	40.8		26.9	10.4	43.4		24.7				
Change Period (Y+Rc), s	* 5.7	5.4		6.1	* 5.7	5.4		6.1				
Max Green Setting (Gmax), s	* 7.3	35.4		37.0	* 9.6	33.1		37.0				
Max Q Clear Time (g_c+I1), s	9.3	20.6		16.3	5.0	15.0		15.4				
Green Ext Time (p_c), s	0.0	7.8		1.9	0.0	7.0		0.2				

Intersection Summary

HCM 6th Ctrl Delay	41.4
HCM 6th LOS	D

Notes

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

HCM 6th Signalized Intersection Summary

5: 4th St & I-8 WB On-Ramp/I-8 WB Off-Ramp

02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕	↕	↕			↕	↕
Traffic Volume (veh/h)	0	0	0	218	0	327	124	454	0	0	842	75
Future Volume (veh/h)	0	0	0	218	0	327	124	454	0	0	842	75
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.97	1.00		1.00	1.00		0.96
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No		No		No		No		No
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				276	0	414	157	575	0	0	1066	95
Peak Hour Factor				0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				596	0	516	180	1848	0	0	1162	103
Arrive On Green				0.33	0.00	0.33	0.10	0.52	0.00	0.00	0.35	0.35
Sat Flow, veh/h				1781	0	1542	1781	3647	0	0	3379	293
Grp Volume(v), veh/h				276	0	414	157	575	0	0	576	585
Grp Sat Flow(s),veh/h/ln				1781	0	1542	1781	1777	0	0	1777	1802
Q Serve(g_s), s				8.8	0.0	17.6	6.3	6.7	0.0	0.0	22.4	22.4
Cycle Q Clear(g_c), s				8.8	0.0	17.6	6.3	6.7	0.0	0.0	22.4	22.4
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.16
Lane Grp Cap(c), veh/h				596	0	516	180	1848	0	0	628	637
V/C Ratio(X)				0.46	0.00	0.80	0.87	0.31	0.00	0.00	0.92	0.92
Avail Cap(c_a), veh/h				914	0	791	180	1848	0	0	628	637
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				18.9	0.0	21.8	31.9	9.9	0.0	0.0	22.3	22.3
Incr Delay (d2), s/veh				0.6	0.0	3.5	32.8	0.4	0.0	0.0	20.4	20.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.5	0.0	6.4	4.2	2.3	0.0	0.0	11.8	11.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				19.5	0.0	25.3	64.7	10.4	0.0	0.0	42.7	42.7
LnGrp LOS				B	A	C	E	B	A	A	D	D
Approach Vol, veh/h				690				732			1161	
Approach Delay, s/veh				23.0				22.0			42.7	
Approach LOS				C				C			D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	12.0	30.9		29.2		42.9						
Change Period (Y+Rc), s	4.7	5.4		5.1		5.4						
Max Green Setting (Gmax), s	3	25.5		37.0		37.5						
Max Q Clear Time (g_c+I), s	3	24.4		19.6		8.7						
Green Ext Time (p_c), s	0.0	1.0		3.1		9.2						

Intersection Summary

HCM 6th Ctrl Delay	31.6
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary

6: 4th St & I-8 EB Off-Ramp/I-8 EB On-Ramp

02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↑↑	↗	↘	↑↑	
Traffic Volume (veh/h)	60	0	76	0	0	0	0	530	148	385	726	0
Future Volume (veh/h)	60	0	76	0	0	0	0	530	148	385	726	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		0.95	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	71	0	90				0	631	176	458	864	0
Peak Hour Factor	0.84	0.84	0.84				0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	121	0	153				0	1215	518	372	2266	0
Arrive On Green	0.17	0.00	0.17				0.00	0.34	0.34	0.21	0.64	0.00
Sat Flow, veh/h	717	0	909				0	3647	1514	1781	3647	0
Grp Volume(v), veh/h	161	0	0				0	631	176	458	864	0
Grp Sat Flow(s),veh/h/ln	1627	0	0				0	1777	1514	1781	1777	0
Q Serve(g_s), s	4.9	0.0	0.0				0.0	7.7	4.7	11.3	6.3	0.0
Cycle Q Clear(g_c), s	4.9	0.0	0.0				0.0	7.7	4.7	11.3	6.3	0.0
Prop In Lane	0.44		0.56				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	274	0	0				0	1215	518	372	2266	0
V/C Ratio(X)	0.59	0.00	0.00				0.00	0.52	0.34	1.23	0.38	0.00
Avail Cap(c_a), veh/h	301	0	0				0	1215	518	372	2266	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.8	0.0	0.0				0.0	14.2	13.3	21.4	4.7	0.0
Incr Delay (d2), s/veh	2.5	0.0	0.0				0.0	1.6	1.8	125.4	0.5	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
%ile BackOfQ(50%),veh/ln	9	0.0	0.0				0.0	2.8	1.6	17.0	1.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.3	0.0	0.0				0.0	15.8	15.0	146.8	5.2	0.0
LnGrp LOS	C	A	A				A	B	B	F	A	A
Approach Vol, veh/h		161						807			1322	
Approach Delay, s/veh		23.3						15.7			54.3	
Approach LOS		C						B			D	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		39.9			16.0	23.9		14.2				
Change Period (Y+Rc), s		5.4			* 4.7	5.4		5.1				
Max Green Setting (Gmax), s		34.5			* 11	18.5		10.0				
Max Q Clear Time (g_c+I1), s		8.3			13.3	9.7		6.9				
Green Ext Time (p_c), s		13.7			0.0	5.5		0.2				
Intersection Summary												
HCM 6th Ctrl Delay											38.5	
HCM 6th LOS											D	
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary

7: 4th St & Wake Ave

02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔		↖	↗	↖	↖	↗↗		↖	↗↗	
Traffic Volume (veh/h)	176	70	96	38	45	111	56	332	46	255	324	149
Future Volume (veh/h)	176	70	96	38	45	111	56	332	46	255	324	149
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	0.99		0.97	1.00		0.98	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		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	207	82	113	45	53	131	66	391	54	300	381	175
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	317	152	209	208	447	659	105	1285	176	329	1281	579
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.06	0.41	0.41	0.18	0.54	0.54
Sat Flow, veh/h	1078	635	874	1179	1870	1532	1781	3129	429	1781	2361	1067
Grp Volume(v), veh/h	207	0	195	45	53	131	66	221	224	300	285	271
Grp Sat Flow(s),veh/h/ln1078	0	1509	1179	1870	1532	1781	1777	1781	1781	1777	1651	
Q Serve(g_s), s	20.1	0.0	13.7	4.2	2.7	6.5	4.4	10.1	10.3	20.1	10.6	10.9
Cycle Q Clear(g_c), s	22.8	0.0	13.7	17.9	2.7	6.5	4.4	10.1	10.3	20.1	10.6	10.9
Prop In Lane	1.00		0.58	1.00		1.00	1.00		0.24	1.00		0.65
Lane Grp Cap(c), veh/h	317	0	361	208	447	659	105	730	731	329	964	896
V/C Ratio(X)	0.65	0.00	0.54	0.22	0.12	0.20	0.63	0.30	0.31	0.91	0.30	0.30
Avail Cap(c_a), veh/h	401	0	467	301	594	780	180	730	731	595	964	896
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	0.0	40.4	48.2	36.2	22.1	55.9	24.1	24.1	48.5	15.1	15.2
Incr Delay (d2), s/veh	3.5	0.0	1.8	0.2	0.0	0.1	2.3	1.1	1.1	4.4	0.8	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	6.1	0.0	5.2	1.2	1.2	2.3	2.0	4.4	4.5	9.1	4.3	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.6	0.0	42.2	48.4	36.2	22.1	58.2	25.1	25.2	53.0	15.9	16.1
LnGrp LOS	D	A	D	D	D	C	E	C	C	D	B	B
Approach Vol, veh/h		402			229			511			856	
Approach Delay, s/veh		45.5			30.5			29.4			29.0	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	37.8	57.2		36.4	11.8	73.2		36.4				
Change Period (Y+Rc), s	5.4	7.3		7.4	* 4.7	* 7.3		* 7.4				
Max Green Setting (Gmax), s	40.6	36.7		37.6	* 12	* 66		* 39				
Max Q Clear Time (g_c+Q), s	22.5	12.3		24.8	6.4	12.9		19.9				
Green Ext Time (p_c), s	0.4	6.1		2.6	0.0	10.3		0.4				

Intersection Summary

HCM 6th Ctrl Delay	32.6
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary
8: SR-86/4th St & Danenberg Dr

02/24/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	23	87	370	64	96	214
Future Volume (veh/h)	23	87	370	64	96	214
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.96	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	29	109	462	80	120	268
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	191	170	1073	184	241	1109
Arrive On Green	0.11	0.11	0.36	0.36	0.14	0.59
Sat Flow, veh/h	1781	1585	3102	517	1781	1870
Grp Volume(v), veh/h	29	109	271	271	120	268
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1749	1781	1870
Q Serve(g_s), s	0.7	3.1	5.4	5.5	2.9	3.2
Cycle Q Clear(g_c), s	0.7	3.1	5.4	5.5	2.9	3.2
Prop In Lane	1.00	1.00		0.30	1.00	
Lane Grp Cap(c), veh/h	191	170	634	624	241	1109
V/C Ratio(X)	0.15	0.64	0.43	0.43	0.50	0.24
Avail Cap(c_a), veh/h	260	231	1151	1133	355	1829
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	18.9	20.0	11.4	11.4	18.7	4.5
Incr Delay (d2), s/veh	0.4	4.0	1.7	1.7	0.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.1	1.9	1.9	1.0	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.3	24.0	13.1	13.1	19.3	4.9
LnGrp LOS	B	C	B	B	B	A
Approach Vol, veh/h	138		542			388
Approach Delay, s/veh	23.0		13.1			9.4
Approach LOS	C		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	1.0	24.4			35.4	11.2
Change Period (Y+Rc), s	4.7	7.8			* 7.8	6.2
Max Green Setting (Gmax), s	30.2				* 46	6.8
Max Q Clear Time (g_c+1), s	7.5				5.2	5.1
Green Ext Time (p_c), s	0.1	7.4			4.2	0.1

Intersection Summary

HCM 6th Ctrl Delay	13.0
HCM 6th LOS	B

Notes

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

HCM 6th Signalized Intersection Summary

9: Dogwood Rd & Danenberg Dr

02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	61	82	34	5	42	72	44	411	24	101	192	95
Future Volume (veh/h)	61	82	34	5	42	72	44	411	24	101	192	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	1.00		0.98	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		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	80	108	45	7	55	95	58	541	32	133	253	125
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	104	469	184	22	257	218	94	1689	100	161	1236	589
Arrive On Green	0.06	0.19	0.19	0.01	0.14	0.14	0.05	0.50	0.50	0.09	0.53	0.53
Sat Flow, veh/h	1781	2463	965	1781	1777	1510	1781	3405	201	1781	2316	1104
Grp Volume(v), veh/h	80	76	77	7	55	95	58	282	291	133	192	186
Grp Sat Flow(s),veh/h/ln	1781	1777	1651	1781	1777	1510	1781	1777	1829	1781	1777	1643
Q Serve(g_s), s	4.9	4.0	4.4	0.4	3.0	6.3	3.5	10.5	10.5	8.1	6.2	6.5
Cycle Q Clear(g_c), s	4.9	4.0	4.4	0.4	3.0	6.3	3.5	10.5	10.5	8.1	6.2	6.5
Prop In Lane	1.00		0.58	1.00		1.00	1.00		0.11	1.00		0.67
Lane Grp Cap(c), veh/h	104	338	314	22	257	218	94	881	907	161	948	877
V/C Ratio(X)	0.77	0.22	0.25	0.32	0.21	0.44	0.62	0.32	0.32	0.82	0.20	0.21
Avail Cap(c_a), veh/h	152	556	516	113	517	439	147	881	907	233	948	877
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	51.1	37.7	37.8	53.9	41.5	43.0	51.0	16.6	16.6	49.2	13.4	13.5
Incr Delay (d2), s/veh	7.0	0.5	0.6	3.1	0.7	2.2	2.4	1.0	0.9	9.8	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	1.7	1.8	0.2	1.3	2.4	1.6	4.3	4.4	4.0	2.5	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.1	38.2	38.5	57.0	42.2	45.1	53.4	17.6	17.6	59.0	13.9	14.0
LnGrp LOS	E	D	D	E	D	D	D	B	B	E	B	B
Approach Vol, veh/h		233		157		631		511				
Approach Delay, s/veh		45.1		44.6		20.9		25.7				
Approach LOS		D		D		C		C				
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.6	60.6	6.9	26.9	11.4	64.7	12.0	21.9				
Change Period (Y+Rc), s	5.6	6.0	5.6	6.0	5.6	6.0	5.6	6.0				
Max Green Setting (Gmax), s	14.4	31.0	7.0	34.4	9.1	36.3	9.4	32.0				
Max Q Clear Time (g_c+10), s	11.0	12.5	2.4	6.4	5.5	8.5	6.9	8.3				
Green Ext Time (p_c), s	0.1	4.7	0.0	1.2	0.0	3.5	0.0	1.2				
Intersection Summary												
HCM 6th Ctrl Delay			28.6									
HCM 6th LOS			C									

HCM 6th AWSC
10: 6th Street/6th St & Spears Ave

02/24/2022

Intersection

Intersection Delay, s/veh	7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	0	10	0	0	0	10	10	0	0	10	10
Future Vol, veh/h	10	0	10	0	0	0	10	10	0	0	10	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	0	11	0	0	0	11	11	0	0	11	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0























Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	6.9	0	7.2	6.8
HCM LOS	A	-	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	50%	50%	0%	0%
Vol Thru, %	50%	0%	100%	50%
Vol Right, %	0%	50%	0%	50%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	20	0	20
LT Vol	10	10	0	0
Through Vol	10	0	0	10
RT Vol	0	10	0	10
Lane Flow Rate	22	22	0	22
Geometry Grp	1	1	1	1
Degree of Util (X)	0.025	0.023	0	0.022
Departure Headway (Hd)	4.088	3.808	4.024	3.687
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	879	942	0	973
Service Time	2.098	1.825	2.045	1.7
HCM Lane V/C Ratio	0.025	0.023	0	0.023
HCM Control Delay	7.2	6.9	7	6.8
HCM Lane LOS	A	A	N	A
HCM 95th-tile Q	0.1	0.1	0	0.1

HCM 6th Signalized Intersection Summary

1: 8th St & Wake Ave

02/24/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	13	14	80	18	239	11	284	65	328	558	42
Future Volume (veh/h)	28	13	14	80	18	239	11	284	65	328	558	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.96	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	31	15	16	90	20	269	12	319	73	369	627	47
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	77	386	332	134	443	382	26	691	297	384	740	611
Arrive On Green	0.04	0.22	0.22	0.08	0.25	0.25	0.01	0.19	0.19	0.22	0.40	0.40
Sat Flow, veh/h	1781	1777	1529	1781	1777	1533	1781	3554	1524	1781	1870	1545
Grp Volume(v), veh/h	31	15	16	90	20	269	12	319	73	369	627	47
Grp Sat Flow(s),veh/h/ln	1781	1777	1529	1781	1777	1533	1781	1777	1524	1781	1870	1545
Q Serve(g_s), s	1.4	0.5	0.7	4.0	0.7	12.9	0.5	6.4	3.3	16.5	24.6	1.5
Cycle Q Clear(g_c), s	1.4	0.5	0.7	4.0	0.7	12.9	0.5	6.4	3.3	16.5	24.6	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	77	386	332	134	443	382	26	691	297	384	740	611
V/C Ratio(X)	0.40	0.04	0.05	0.67	0.05	0.70	0.46	0.46	0.25	0.96	0.85	0.08
Avail Cap(c_a), veh/h	154	748	644	154	748	646	110	1655	710	384	1158	957
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	37.6	24.9	25.0	36.4	23.0	27.6	39.5	28.8	27.5	31.3	22.2	15.2
Incr Delay (d2), s/veh	3.3	0.0	0.1	9.0	0.0	2.4	12.2	0.5	0.4	35.8	3.6	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	0.6	0.2	0.2	2.0	0.3	4.7	0.3	2.5	1.2	10.3	10.2	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.9	25.0	25.0	45.3	23.1	30.0	51.6	29.2	27.9	67.1	25.8	15.3
LnGrp LOS	D	C	C	D	C	C	D	C	C	E	C	B
Approach Vol, veh/h		62			379			404			1043	
Approach Delay, s/veh		33.0			33.3			29.7			39.9	
Approach LOS		C			C			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.0	22.5	11.7	23.6	6.8	38.7	9.1	26.1				
Change Period (Y+Rc), s	5.6	6.8	5.6	6.0	5.6	6.8	5.6	6.0				
Max Green Setting (Gmax), s	17.4	37.6	7.0	34.0	5.0	50.0	7.0	34.0				
Max Q Clear Time (g_c+I1), s	18.5	8.4	6.0	2.7	2.5	26.6	3.4	14.9				
Green Ext Time (p_c), s	0.0	2.1	0.0	0.1	0.0	4.0	0.0	1.7				
Intersection Summary												
HCM 6th Ctrl Delay				36.2								
HCM 6th LOS				D								

HCM 6th AWSC
2: Thomas Dr & Wake Ave

02/24/2022

Intersection

Intersection Delay, s/veh 10.7

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Traffic Vol, veh/h	4	414	40	17	292	29	29	2	7	48	1	15
Future Vol, veh/h	4	414	40	17	292	29	29	2	7	48	1	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	450	43	18	317	32	32	2	8	52	1	16
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	11.2	10.1	10.1	10.4
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	76%	100%	0%	0%	100%	0%	0%	75%
Vol Thru, %	5%	0%	100%	78%	0%	100%	77%	2%
Vol Right, %	18%	0%	0%	22%	0%	0%	23%	23%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	38	4	276	178	17	195	126	64
LT Vol	29	4	0	0	17	0	0	48
Through Vol	2	0	276	138	0	195	97	1
RT Vol	7	0	0	40	0	0	29	15
Lane Flow Rate	41	4	300	193	18	212	137	70
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.078	0.007	0.438	0.274	0.03	0.316	0.199	0.13
Departure Headway (Hd)	6.84	5.755	5.252	5.093	5.88	5.376	5.214	6.729
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	527	617	681	698	604	662	681	536
Service Time	4.543	3.533	3.03	2.871	3.665	3.161	2.999	4.43
HCM Lane V/C Ratio	0.078	0.006	0.441	0.277	0.03	0.32	0.201	0.131
HCM Control Delay	10.1	8.6	12.1	9.8	8.8	10.7	9.3	10.4
HCM Lane LOS	B	A	B	A	A	B	A	B
HCM 95th-tile Q	0.3	0	2.2	1.1	0.1	1.4	0.7	0.4

HCM 6th TWSC
3: 6th St/Comm. Dwy & Wake Ave

02/24/2022

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕		↵	↕			↕			↕	↕
Traffic Vol, veh/h	3	477	1	13	343	11	0	0	10	18	0	10
Future Vol, veh/h	3	477	1	13	343	11	0	0	10	18	0	10
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10	10	0	10
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	542	1	15	390	13	0	0	11	20	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	413	0	0	553	0	0	794	1002	292	724	996	222
Stage 1	-	-	-	-	-	-	559	559	-	437	437	-
Stage 2	-	-	-	-	-	-	235	443	-	287	559	-
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	1142	-	-	1013	-	-	279	241	704	313	243	782
Stage 1	-	-	-	-	-	-	481	509	-	568	578	-
Stage 2	-	-	-	-	-	-	747	574	-	696	509	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1131	-	-	1003	-	-	266	232	691	298	234	767
Mov Cap-2 Maneuver	-	-	-	-	-	-	266	232	-	298	234	-
Stage 1	-	-	-	-	-	-	475	502	-	561	564	-
Stage 2	-	-	-	-	-	-	718	560	-	676	502	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.3			10.3			15.3		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	691	1131	-	-	1003	-	-	381
HCM Lane V/C Ratio	0.016	0.003	-	-	0.015	-	-	0.084
HCM Control Delay (s)	10.3	8.2	-	-	8.6	-	-	15.3
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3

HCM 6th Signalized Intersection Summary

4: 4th St & Ross Ave

02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↗	↕↗		↗	↕↗	
Traffic Volume (veh/h)	35	198	126	95	134	183	75	624	75	120	730	20
Future Volume (veh/h)	35	198	126	95	134	183	75	624	75	120	730	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	36	206	131	99	140	191	78	650	78	125	760	21
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	51	294	283	132	187	265	100	1091	131	126	1263	35
Arrive On Green	0.19	0.19	0.19	0.17	0.17	0.17	0.06	0.34	0.34	0.07	0.36	0.36
Sat Flow, veh/h	276	1580	1522	759	1073	1520	1781	3177	381	1781	3527	97
Grp Volume(v), veh/h	242	0	131	239	0	191	78	363	365	125	383	398
Grp Sat Flow(s),veh/h/ln	1857	0	1522	1832	0	1520	1781	1777	1781	1781	1777	1848
Q Serve(g_s), s	12.6	0.0	7.9	12.8	0.0	12.2	4.5	17.4	17.5	7.2	18.2	18.2
Cycle Q Clear(g_c), s	12.6	0.0	7.9	12.8	0.0	12.2	4.5	17.4	17.5	7.2	18.2	18.2
Prop In Lane	0.15		1.00	0.41		1.00	1.00		0.21	1.00		0.05
Lane Grp Cap(c), veh/h	345	0	283	319	0	265	100	610	611	126	636	662
V/C Ratio(X)	0.70	0.00	0.46	0.75	0.00	0.72	0.78	0.60	0.60	0.99	0.60	0.60
Avail Cap(c_a), veh/h	666	0	546	657	0	545	130	610	611	126	636	662
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.3	0.0	37.4	40.4	0.0	40.2	48.1	28.0	28.0	47.9	27.1	27.1
Incr Delay (d2), s/veh	2.6	0.0	1.2	1.3	0.0	1.4	15.1	4.2	4.3	77.3	4.2	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	5.9	0.0	3.0	5.8	0.0	4.6	2.4	7.8	7.8	5.8	8.1	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.9	0.0	38.6	41.8	0.0	41.6	63.1	32.2	32.2	125.1	31.3	31.1
LnGrp LOS	D	A	D	D	A	D	E	C	C	F	C	C
Approach Vol, veh/h		373			430			806			906	
Approach Delay, s/veh		40.7			41.7			35.2			44.1	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.0	40.8		25.3	11.5	42.3		24.1				
Change Period (Y+Rc), s	* 5.7	5.4		6.1	* 5.7	5.4		6.1				
Max Green Setting (Gmax), s	* 7.3	35.4		37.0	* 7.5	35.2		37.0				
Max Q Clear Time (g_c+I1), s	9.2	19.5		14.6	6.5	20.2		14.8				
Green Ext Time (p_c), s	0.0	8.1		1.8	0.0	8.3		0.2				

Intersection Summary

HCM 6th Ctrl Delay	40.4
HCM 6th LOS	D

Notes

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

HCM 6th Signalized Intersection Summary

5: 4th St & I-8 WB On-Ramp/I-8 WB Off-Ramp

02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕	↕	↕			↕	↕
Traffic Volume (veh/h)	0	0	0	197	0	333	111	612	0	0	1132	46
Future Volume (veh/h)	0	0	0	197	0	333	111	612	0	0	1132	46
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.97	1.00		1.00	1.00		0.96
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No		No		No		No		No
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				203	0	343	114	631	0	0	1167	47
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				523	0	452	162	1961	0	0	1361	55
Arrive On Green				0.29	0.00	0.29	0.09	0.55	0.00	0.00	0.39	0.39
Sat Flow, veh/h				1781	0	1538	1781	3647	0	0	3568	140
Grp Volume(v), veh/h				203	0	343	114	631	0	0	596	618
Grp Sat Flow(s),veh/h/ln				1781	0	1538	1781	1777	0	0	1777	1838
Q Serve(g_s), s				6.2	0.0	13.8	4.2	6.6	0.0	0.0	20.9	20.9
Cycle Q Clear(g_c), s				6.2	0.0	13.8	4.2	6.6	0.0	0.0	20.9	20.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.08
Lane Grp Cap(c), veh/h				523	0	452	162	1961	0	0	696	720
V/C Ratio(X)				0.39	0.00	0.76	0.70	0.32	0.00	0.00	0.86	0.86
Avail Cap(c_a), veh/h				970	0	838	183	1961	0	0	696	720
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				19.1	0.0	21.8	30.0	8.3	0.0	0.0	18.9	18.9
Incr Delay (d2), s/veh				0.5	0.0	2.7	7.5	0.4	0.0	0.0	12.9	12.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.5	0.0	4.9	2.0	2.1	0.0	0.0	9.8	10.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				19.6	0.0	24.5	37.5	8.7	0.0	0.0	31.8	31.6
LnGrp LOS				B	A	C	D	A	A	A	C	C
Approach Vol, veh/h					546			745			1214	
Approach Delay, s/veh					22.7			13.1			31.7	
Approach LOS					C			B			C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	10.9	32.0		25.1		42.9						
Change Period (Y+Rc), s	4.7	5.4		5.1		5.4						
Max Green Setting (Gmax), s	25.8			37.0		37.5						
Max Q Clear Time (g_c+10), s	22.9			15.8		8.6						
Green Ext Time (p_c), s	0.0	2.6		2.5		10.3						

Intersection Summary

HCM 6th Ctrl Delay		24.2	
HCM 6th LOS		C	

Notes

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

HCM 6th Signalized Intersection Summary

6: 4th St & I-8 EB Off-Ramp/I-8 EB On-Ramp

02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↑↑	↗	↘	↑↑	
Traffic Volume (veh/h)	53	0	86	0	0	0	0	607	250	454	839	0
Future Volume (veh/h)	53	0	86	0	0	0	0	607	250	454	839	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	55	0	89				0	626	258	468	865	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	101	0	164				0	1221	520	374	2277	0
Arrive On Green	0.16	0.00	0.16				0.00	0.34	0.34	0.21	0.64	0.00
Sat Flow, veh/h	616	0	996				0	3647	1514	1781	3647	0
Grp Volume(v), veh/h	144	0	0				0	626	258	468	865	0
Grp Sat Flow(s),veh/h/ln	1612	0	0				0	1777	1514	1781	1777	0
Q Serve(g_s), s	4.4	0.0	0.0				0.0	7.6	7.3	11.3	6.2	0.0
Cycle Q Clear(g_c), s	4.4	0.0	0.0				0.0	7.6	7.3	11.3	6.2	0.0
Prop In Lane	0.38		0.62				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	265	0	0				0	1221	520	374	2277	0
V/C Ratio(X)	0.54	0.00	0.00				0.00	0.51	0.50	1.25	0.38	0.00
Avail Cap(c_a), veh/h	299	0	0				0	1221	520	374	2277	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.7	0.0	0.0				0.0	14.1	14.0	21.3	4.6	0.0
Incr Delay (d2), s/veh	1.7	0.0	0.0				0.0	1.5	3.4	133.6	0.5	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
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.0				0.0	2.7	2.5	17.9	1.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.4	0.0	0.0				0.0	15.6	17.3	154.9	5.1	0.0
LnGrp LOS	C	A	A				A	B	B	F	A	A
Approach Vol, veh/h		144						884			1333	
Approach Delay, s/veh		22.4						16.1			57.7	
Approach LOS		C						B			E	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		39.9			16.0	23.9		13.9				
Change Period (Y+Rc), s		5.4			* 4.7	5.4		5.1				
Max Green Setting (Gmax), s		34.5			* 11	18.5		10.0				
Max Q Clear Time (g_c+I1), s		8.2			13.3	9.6		6.4				
Green Ext Time (p_c), s		13.7			0.0	5.9		0.2				

Intersection Summary

HCM 6th Ctrl Delay	40.0
HCM 6th LOS	D

Notes

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

HCM 6th Signalized Intersection Summary

7: 4th St & Wake Ave

02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↕	↑	↕	↕	↕↕		↕	↕↕	
Traffic Volume (veh/h)	249	93	174	88	81	209	141	378	63	221	468	159
Future Volume (veh/h)	249	93	174	88	81	209	141	378	63	221	468	159
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	1.00		0.97	1.00		0.97	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		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	283	106	198	100	92	238	160	430	72	251	532	181
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	379	177	330	243	633	772	189	1010	168	281	1010	342
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.11	0.33	0.33	0.16	0.39	0.39
Sat Flow, veh/h	939	521	974	1072	1870	1542	1781	3035	504	1781	2587	876
Grp Volume(v), veh/h	283	0	304	100	92	238	160	250	252	251	365	348
Grp Sat Flow(s),veh/h/ln	939	0	1495	1072	1870	1542	1781	1777	1763	1781	1777	1686
Q Serve(g_s), s	30.4	0.0	19.9	10.0	4.0	10.8	10.4	12.9	13.1	16.2	18.5	18.7
Cycle Q Clear(g_c), s	34.4	0.0	19.9	29.9	4.0	10.8	10.4	12.9	13.1	16.2	18.5	18.7
Prop In Lane	1.00		0.65	1.00		1.00	1.00		0.29	1.00		0.52
Lane Grp Cap(c), veh/h	379	0	506	243	633	772	189	591	587	281	694	658
V/C Ratio(X)	0.75	0.00	0.60	0.41	0.15	0.31	0.85	0.42	0.43	0.89	0.53	0.53
Avail Cap(c_a), veh/h	431	0	580	305	741	861	368	591	587	509	694	658
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.0	0.0	32.3	44.7	27.0	17.6	51.6	30.5	30.5	48.6	27.5	27.5
Incr Delay (d2), s/veh	6.9	0.0	1.8	0.4	0.0	0.1	4.0	2.2	2.3	4.0	2.8	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	0.0	7.2	2.7	1.8	3.7	4.8	5.7	5.8	7.4	8.1	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.9	0.0	34.1	45.1	27.1	17.7	55.7	32.7	32.8	52.6	30.3	30.6
LnGrp LOS	D	A	C	D	C	B	E	C	C	D	C	C
Approach Vol, veh/h		587			430			662			964	
Approach Delay, s/veh		39.8			26.1			38.3			36.2	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	33.9	46.4		47.2	17.2	53.2		47.2				
Change Period (Y+Rc), s	5.4	7.3		7.4	* 4.7	* 7.3		* 7.4				
Max Green Setting (Gmax), s	33.6	35.7		45.6	* 24	* 46		* 47				
Max Q Clear Time (g_c+10), s	19.2	15.1		36.4	12.4	20.7		31.9				
Green Ext Time (p_c), s	0.3	6.5		3.4	0.2	10.6		0.8				

Intersection Summary

HCM 6th Ctrl Delay	35.9
HCM 6th LOS	D

Notes

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

HCM 6th Signalized Intersection Summary

8: SR-86/4th St & Danenberg Dr

02/24/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	91	203	255	71	304	447
Future Volume (veh/h)	91	203	255	71	304	447
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.95	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	99	221	277	77	330	486
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	221	197	739	200	388	1096
Arrive On Green	0.12	0.12	0.27	0.27	0.22	0.59
Sat Flow, veh/h	1781	1585	2821	739	1781	1870
Grp Volume(v), veh/h	99	221	178	176	330	486
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1690	1781	1870
Q Serve(g_s), s	2.5	6.0	3.9	4.1	8.6	7.0
Cycle Q Clear(g_c), s	2.5	6.0	3.9	4.1	8.6	7.0
Prop In Lane	1.00	1.00		0.44	1.00	
Lane Grp Cap(c), veh/h	221	197	482	458	388	1096
V/C Ratio(X)	0.45	1.12	0.37	0.38	0.85	0.44
Avail Cap(c_a), veh/h	221	197	1067	1015	417	1797
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	19.6	21.2	14.3	14.3	18.1	5.6
Incr Delay (d2), s/veh	1.4	100.9	1.7	1.9	13.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.4	1.5	1.5	4.4	1.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.0	122.1	16.0	16.2	31.8	6.6
LnGrp LOS	C	F	B	B	C	A
Approach Vol, veh/h	320		354			816
Approach Delay, s/veh	90.8		16.1			16.8
Approach LOS	F		B			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	15.2	20.9			36.1	12.2
Change Period (Y+Rc), s	4.7	7.8			* 7.8	6.2
Max Green Setting (Gmax), s	15	29.0			* 46	6.0
Max Q Clear Time (g_c+M), s	10.6	6.1			9.0	8.0
Green Ext Time (p_c), s	0.0	4.7			8.6	0.0

Intersection Summary

HCM 6th Ctrl Delay		32.5	
HCM 6th LOS		C	

Notes

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

HCM 6th Signalized Intersection Summary

9: Dogwood Rd & Danenberg Dr

02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	110	271	78	59	141	198	70	379	31	272	458	75
Future Volume (veh/h)	110	271	78	59	141	198	70	379	31	272	458	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	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		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	116	285	82	62	148	208	74	399	33	286	482	79
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	121	586	165	96	358	308	102	1209	100	275	1408	230
Arrive On Green	0.07	0.22	0.22	0.05	0.20	0.20	0.06	0.36	0.36	0.15	0.46	0.46
Sat Flow, veh/h	1781	2714	763	1781	1777	1526	1781	3317	273	1781	3047	497
Grp Volume(v), veh/h	116	184	183	62	148	208	74	213	219	286	280	281
Grp Sat Flow(s),veh/h/ln	1781	1777	1700	1781	1777	1526	1781	1777	1813	1781	1777	1767
Q Serve(g_s), s	7.1	10.0	10.4	3.8	8.0	13.9	4.5	9.5	9.6	17.0	11.1	11.2
Cycle Q Clear(g_c), s	7.1	10.0	10.4	3.8	8.0	13.9	4.5	9.5	9.6	17.0	11.1	11.2
Prop In Lane	1.00		0.45	1.00		1.00	1.00		0.15	1.00		0.28
Lane Grp Cap(c), veh/h	121	383	367	96	358	308	102	648	661	275	821	817
V/C Ratio(X)	0.96	0.48	0.50	0.64	0.41	0.68	0.73	0.33	0.33	1.04	0.34	0.34
Avail Cap(c_a), veh/h	121	525	502	113	517	444	164	648	661	275	821	817
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	51.1	37.7	37.9	51.0	38.2	40.6	51.0	25.2	25.3	46.5	18.9	18.9
Incr Delay (d2), s/veh	67.0	1.5	1.7	5.4	1.2	4.1	3.7	1.4	1.3	64.7	1.1	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	4.4	4.4	1.8	3.5	5.4	2.1	4.1	4.3	12.3	4.6	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	118.1	39.2	39.6	56.4	39.4	44.6	54.7	26.6	26.6	111.2	20.0	20.1
LnGrp LOS	F	D	D	E	D	D	D	C	C	F	C	C
Approach Vol, veh/h		483		418		506		847				
Approach Delay, s/veh		58.3		44.6		30.7		50.8				
Approach LOS		E		D		C		D				
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	32.6	46.1	11.5	29.7	11.9	56.8	13.1	28.2				
Change Period (Y+Rc), s	5.6	6.0	5.6	6.0	5.6	6.0	5.6	6.0				
Max Green Setting (Gmax), s	30.3	7.0	32.5	10.1	37.2	7.5	32.0					
Max Q Clear Time (g_c+119), s	11.6	5.8	12.4	6.5	13.2	9.1	15.9					
Green Ext Time (p_c), s	0.0	3.4	0.0	3.0	0.0	5.1	0.0	2.7				

Intersection Summary

HCM 6th Ctrl Delay	46.7
HCM 6th LOS	D

HCM 6th AWSC
 10: 6th Street/6th St & Spears Ave

02/24/2022

Intersection	
Intersection Delay, s/veh	7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	0	10	0	0	0	10	10	0	0	10	10
Future Vol, veh/h	10	0	10	0	0	0	10	10	0	0	10	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	0	11	0	0	0	11	11	0	0	11	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	6.9	0	7.2	6.8
HCM LOS	A	-	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	50%	50%	0%	0%
Vol Thru, %	50%	0%	100%	50%
Vol Right, %	0%	50%	0%	50%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	20	0	20
LT Vol	10	10	0	0
Through Vol	10	0	0	10
RT Vol	0	10	0	10
Lane Flow Rate	22	22	0	22
Geometry Grp	1	1	1	1
Degree of Util (X)	0.025	0.023	0	0.022
Departure Headway (Hd)	4.088	3.808	4.024	3.687
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	879	942	0	973
Service Time	2.098	1.825	2.045	1.7
HCM Lane V/C Ratio	0.025	0.023	0	0.023
HCM Control Delay	7.2	6.9	7	6.8
HCM Lane LOS	A	A	N	A
HCM 95th-tile Q	0.1	0.1	0	0.1

APPENDIX E

PEAK HOUR INTERSECTION ANALYSIS WORKSHEET – EXISTING + PROJECT + CUMULATIVE PROJECTS

HCM 6th Signalized Intersection Summary
1: 8th St & Wake Ave

02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↘		↗	↗↘		↗	↗↘	↗	↗	↗	↗
Traffic Volume (veh/h)	70	20	16	63	12	102	11	578	101	240	367	23
Future Volume (veh/h)	70	20	16	63	12	102	11	578	101	240	367	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	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	88	25	20	79	15	128	14	722	126	300	459	29
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	127	340	235	123	302	259	29	1037	449	338	869	720
Arrive On Green	0.07	0.17	0.17	0.07	0.17	0.17	0.02	0.29	0.29	0.19	0.46	0.46
Sat Flow, veh/h	1781	1972	1360	1781	1777	1519	1781	3554	1538	1781	1870	1549
Grp Volume(v), veh/h	88	22	23	79	15	128	14	722	126	300	459	29
Grp Sat Flow(s),veh/h/ln	1781	1777	1556	1781	1777	1519	1781	1777	1538	1781	1870	1549
Q Serve(g_s), s	4.2	0.9	1.1	3.7	0.6	6.6	0.7	15.6	5.5	14.2	15.1	0.9
Cycle Q Clear(g_c), s	4.2	0.9	1.1	3.7	0.6	6.6	0.7	15.6	5.5	14.2	15.1	0.9
Prop In Lane	1.00		0.87	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	127	307	269	123	302	259	29	1037	449	338	869	720
V/C Ratio(X)	0.69	0.07	0.09	0.64	0.05	0.50	0.48	0.70	0.28	0.89	0.53	0.04
Avail Cap(c_a), veh/h	144	698	611	144	698	597	103	1503	651	379	1081	895
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	39.3	30.0	30.1	39.3	30.0	32.5	42.2	27.2	23.6	34.2	16.4	12.6
Incr Delay (d2), s/veh	11.6	0.1	0.1	7.4	0.1	1.5	11.5	0.9	0.3	20.4	0.5	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	2.2	0.4	0.4	1.8	0.3	2.4	0.4	6.1	1.9	7.7	5.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.9	30.1	30.2	46.7	30.1	34.0	53.6	28.1	24.0	54.6	16.9	12.7
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	B	B
Approach Vol, veh/h		133			222			862			788	
Approach Delay, s/veh		43.9			38.2			27.9			31.1	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.0	32.0	11.6	20.9	7.0	47.0	11.8	20.7				
Change Period (Y+Rc), s	5.6	6.8	5.6	6.0	5.6	6.8	5.6	6.0				
Max Green Setting (Gmax), s	18.4	36.6	7.0	34.0	5.0	50.0	7.0	34.0				
Max Q Clear Time (g_c+I1), s	16.2	17.6	5.7	3.1	2.7	17.1	6.2	8.6				
Green Ext Time (p_c), s	0.2	4.6	0.0	0.2	0.0	2.8	0.0	0.8				
Intersection Summary												
HCM 6th Ctrl Delay				31.4								
HCM 6th LOS				C								

Intersection												
Intersection Delay, s/veh	9.7											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕↗		↵	↕↗			↕↗			↕↗	
Traffic Vol, veh/h	17	311	13	10	249	41	26	2	15	6	0	2
Future Vol, veh/h	17	311	13	10	249	41	26	2	15	6	0	2
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	384	16	12	307	51	32	2	19	7	0	2
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	9.9	9.4	9.6	9.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	60%	100%	0%	0%	100%	0%	0%	75%
Vol Thru, %	5%	0%	100%	89%	0%	100%	67%	0%
Vol Right, %	35%	0%	0%	11%	0%	0%	33%	25%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	43	17	207	117	10	166	124	8
LT Vol	26	17	0	0	10	0	0	6
Through Vol	2	0	207	104	0	166	83	0
RT Vol	15	0	0	13	0	0	41	2
Lane Flow Rate	53	21	256	144	12	205	153	10
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.092	0.032	0.359	0.199	0.019	0.29	0.207	0.018
Departure Headway (Hd)	6.231	5.551	5.049	4.971	5.601	5.099	4.867	6.459
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	572	645	712	722	639	703	736	551
Service Time	3.997	3.289	2.787	2.708	3.34	2.838	2.606	4.232
HCM Lane V/C Ratio	0.093	0.033	0.36	0.199	0.019	0.292	0.208	0.018
HCM Control Delay	9.6	8.5	10.6	8.9	8.4	9.9	8.9	9.4
HCM Lane LOS	A	A	B	A	A	A	A	A
HCM 95th-tile Q	0.3	0.1	1.6	0.7	0.1	1.2	0.8	0.1

HCM 6th TWSC
3: 6th St/Comm. Dwy & Wake Ave

02/24/2022

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Traffic Vol, veh/h	6	306	5	27	296	20	8	0	62	3	0	4
Future Vol, veh/h	6	306	5	27	296	20	8	0	62	3	0	4
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10	10	0	10
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	373	6	33	361	24	10	0	76	4	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	395	0	0	389	0	0	657	861	210	660	852	213
Stage 1	-	-	-	-	-	-	400	400	-	449	449	-
Stage 2	-	-	-	-	-	-	257	461	-	211	403	-
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	1160	-	-	1166	-	-	350	292	796	348	295	792
Stage 1	-	-	-	-	-	-	597	600	-	559	571	-
Stage 2	-	-	-	-	-	-	725	564	-	771	598	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1149	-	-	1155	-	-	332	276	781	300	279	777
Mov Cap-2 Maneuver	-	-	-	-	-	-	332	276	-	300	279	-
Stage 1	-	-	-	-	-	-	587	590	-	550	549	-
Stage 2	-	-	-	-	-	-	693	542	-	686	588	-























Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.6			11.1			12.9		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	676	1149	-	-	1155	-	-	462
HCM Lane V/C Ratio	0.126	0.006	-	-	0.029	-	-	0.018
HCM Control Delay (s)	11.1	8.2	-	-	8.2	-	-	12.9
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.4	0	-	-	0.1	-	-	0.1

HCM 6th Signalized Intersection Summary

4: 4th St & Ross Ave

02/24/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	188	109	71	140	162	46	552	91	109	491	14
Future Volume (veh/h)	42	188	109	71	140	162	46	552	91	109	491	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.95	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	49	219	127	83	163	188	53	642	106	127	571	16
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	67	299	301	109	215	268	80	1018	168	123	1271	36
Arrive On Green	0.20	0.20	0.20	0.18	0.18	0.18	0.04	0.34	0.34	0.07	0.36	0.36
Sat Flow, veh/h	339	1515	1525	621	1219	1520	1781	3030	499	1781	3525	99
Grp Volume(v), veh/h	268	0	127	246	0	188	53	376	372	127	288	299
Grp Sat Flow(s),veh/h/ln	1853	0	1525	1839	0	1520	1781	1777	1752	1781	1777	1847
Q Serve(g_s), s	14.3	0.0	7.7	13.4	0.0	12.2	3.1	18.8	18.9	7.3	13.0	13.0
Cycle Q Clear(g_c), s	14.3	0.0	7.7	13.4	0.0	12.2	3.1	18.8	18.9	7.3	13.0	13.0
Prop In Lane	0.18		1.00	0.34		1.00	1.00		0.28	1.00		0.05
Lane Grp Cap(c), veh/h	366	0	301	324	0	268	80	597	589	123	640	666
V/C Ratio(X)	0.73	0.00	0.42	0.76	0.00	0.70	0.66	0.63	0.63	1.03	0.45	0.45
Avail Cap(c_a), veh/h	651	0	536	646	0	534	166	597	589	123	640	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.7	0.0	37.0	41.3	0.0	40.8	49.5	29.5	29.5	49.0	25.7	25.7
Incr Delay (d2), s/veh	2.9	0.0	0.9	1.4	0.0	1.3	3.5	5.0	5.1	89.0	2.3	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	0.0	2.9	6.1	0.0	4.6	1.4	8.5	8.4	6.2	5.7	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.5	0.0	38.0	42.6	0.0	42.0	53.0	34.4	34.6	138.0	28.0	27.9
LnGrp LOS	D	A	D	D	A	D	D	C	C	F	C	C
Approach Vol, veh/h		395			434			801			714	
Approach Delay, s/veh		41.1			42.4			35.7			47.5	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.0	40.8		26.9	10.4	43.4		24.7				
Change Period (Y+Rc), s	* 5.7	5.4		6.1	* 5.7	5.4		6.1				
Max Green Setting (Gmax), s	* 7.3	35.4		37.0	* 9.8	32.9		37.0				
Max Q Clear Time (g_c+I1), s	9.3	20.9		16.3	5.1	15.0		15.4				
Green Ext Time (p_c), s	0.0	7.8		1.9	0.0	7.0		0.2				

Intersection Summary

HCM 6th Ctrl Delay	41.5
HCM 6th LOS	D

Notes

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

HCM 6th Signalized Intersection Summary

5: 4th St & I-8 WB On-Ramp/I-8 WB Off-Ramp

02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕	↕	↕↕			↕↕	
Traffic Volume (veh/h)	0	0	0	220	0	327	138	463	0	0	845	75
Future Volume (veh/h)	0	0	0	220	0	327	138	463	0	0	845	75
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.97	1.00		1.00	1.00		0.96
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No		No		No		No		No
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				278	0	414	175	586	0	0	1070	95
Peak Hour Factor				0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				596	0	516	180	1848	0	0	1162	103
Arrive On Green				0.33	0.00	0.33	0.10	0.52	0.00	0.00	0.35	0.35
Sat Flow, veh/h				1781	0	1542	1781	3647	0	0	3381	292
Grp Volume(v), veh/h				278	0	414	175	586	0	0	578	587
Grp Sat Flow(s),veh/h/ln				1781	0	1542	1781	1777	0	0	1777	1802
Q Serve(g_s), s				8.9	0.0	17.6	7.1	6.8	0.0	0.0	22.5	22.5
Cycle Q Clear(g_c), s				8.9	0.0	17.6	7.1	6.8	0.0	0.0	22.5	22.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.16
Lane Grp Cap(c), veh/h				596	0	516	180	1848	0	0	628	637
V/C Ratio(X)				0.47	0.00	0.80	0.97	0.32	0.00	0.00	0.92	0.92
Avail Cap(c_a), veh/h				914	0	791	180	1848	0	0	628	637
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				18.9	0.0	21.8	32.3	10.0	0.0	0.0	22.3	22.4
Incr Delay (d2), s/veh				0.6	0.0	3.5	58.0	0.5	0.0	0.0	20.9	20.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.5	0.0	6.4	5.7	2.3	0.0	0.0	11.9	12.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				19.5	0.0	25.3	90.3	10.4	0.0	0.0	43.2	43.2
LnGrp LOS				B	A	C	F	B	A	A	D	D
Approach Vol, veh/h				692				761			1165	
Approach Delay, s/veh				23.0				28.8			43.2	
Approach LOS				C				C			D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	2.0	30.9		29.2		42.9						
Change Period (Y+Rc), s	4.7	5.4		5.1		5.4						
Max Green Setting (Gmax), s	3	25.5		37.0		37.5						
Max Q Clear Time (g_c+I), s	19	24.5		19.6		8.8						
Green Ext Time (p_c), s	0.0	0.9		3.1		9.4						

Intersection Summary

HCM 6th Ctrl Delay	33.7
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary

6: 4th St & I-8 EB Off-Ramp/I-8 EB On-Ramp

02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↑↑	↗	↘	↑↑	
Traffic Volume (veh/h)	60	0	81	0	0	0	0	550	153	385	735	0
Future Volume (veh/h)	60	0	81	0	0	0	0	550	153	385	735	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		0.95	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	71	0	96				0	655	182	458	875	0
Peak Hour Factor	0.84	0.84	0.84				0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	117	0	158				0	1213	517	371	2262	0
Arrive On Green	0.17	0.00	0.17				0.00	0.34	0.34	0.21	0.64	0.00
Sat Flow, veh/h	690	0	933				0	3647	1514	1781	3647	0
Grp Volume(v), veh/h	167	0	0				0	655	182	458	875	0
Grp Sat Flow(s),veh/h/ln	1623	0	0				0	1777	1514	1781	1777	0
Q Serve(g_s), s	5.2	0.0	0.0				0.0	8.1	4.9	11.3	6.4	0.0
Cycle Q Clear(g_c), s	5.2	0.0	0.0				0.0	8.1	4.9	11.3	6.4	0.0
Prop In Lane	0.43		0.57				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	275	0	0				0	1213	517	371	2262	0
V/C Ratio(X)	0.61	0.00	0.00				0.00	0.54	0.35	1.23	0.39	0.00
Avail Cap(c_a), veh/h	299	0	0				0	1213	517	371	2262	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.8	0.0	0.0				0.0	14.4	13.4	21.4	4.7	0.0
Incr Delay (d2), s/veh	3.0	0.0	0.0				0.0	1.7	1.9	126.2	0.5	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
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.0				0.0	2.9	1.6	17.0	1.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.9	0.0	0.0				0.0	16.1	15.2	147.6	5.2	0.0
LnGrp LOS	C	A	A				A	B	B	F	A	A
Approach Vol, veh/h		167						837			1333	
Approach Delay, s/veh		23.9						15.9			54.2	
Approach LOS		C						B			D	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		39.9			16.0	23.9		14.3				
Change Period (Y+Rc), s		5.4			* 4.7	5.4		5.1				
Max Green Setting (Gmax), s		34.5			* 11	18.5		10.0				
Max Q Clear Time (g_c+I1), s		8.4			13.3	10.1		7.2				
Green Ext Time (p_c), s		13.8			0.0	5.5		0.2				
Intersection Summary												
HCM 6th Ctrl Delay											38.3	
HCM 6th LOS											D	
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary

7: 4th St & Wake Ave

02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↕	↑	↕	↕	↕↕		↕	↕↕	
Traffic Volume (veh/h)	202	72	114	38	46	111	63	332	46	255	324	160
Future Volume (veh/h)	202	72	114	38	46	111	63	332	46	255	324	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	0.99		0.97	1.00		0.97	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	238	85	134	45	54	131	74	391	54	300	381	188
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	347	153	241	219	491	697	111	1192	163	330	1174	570
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.06	0.38	0.38	0.19	0.51	0.51
Sat Flow, veh/h	1089	583	919	1155	1870	1535	1781	3128	429	1781	2300	1116
Grp Volume(v), veh/h	238	0	219	45	54	131	74	221	224	300	293	276
Grp Sat Flow(s),veh/h/ln	1089	0	1501	1155	1870	1535	1781	1777	1780	1781	1777	1640
Q Serve(g_s), s	22.3	0.0	14.8	4.1	2.6	6.0	4.8	10.3	10.5	19.4	11.3	11.6
Cycle Q Clear(g_c), s	24.9	0.0	14.8	18.9	2.6	6.0	4.8	10.3	10.5	19.4	11.3	11.6
Prop In Lane	1.00		0.61	1.00		1.00	1.00		0.24	1.00		0.68
Lane Grp Cap(c), veh/h	347	0	394	219	491	697	111	677	678	330	907	837
V/C Ratio(X)	0.69	0.00	0.56	0.21	0.11	0.19	0.67	0.33	0.33	0.91	0.32	0.33
Avail Cap(c_a), veh/h	436	0	506	315	647	825	247	677	678	631	907	837
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.3	0.0	37.4	45.5	32.9	19.6	53.9	25.7	25.7	46.8	16.9	16.9
Incr Delay (d2), s/veh	4.1	0.0	1.7	0.2	0.0	0.0	2.6	1.3	1.3	4.0	0.9	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	16.8	0.0	5.5	1.2	1.2	2.1	2.2	4.5	4.6	8.7	4.7	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.4	0.0	39.1	45.7	32.9	19.6	56.5	27.0	27.0	50.8	17.8	18.0
LnGrp LOS	D	A	D	D	C	B	E	C	C	D	B	B
Approach Vol, veh/h		457			230			519			869	
Approach Delay, s/veh		42.9			27.8			31.2			29.3	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	37.2	52.0		38.2	12.0	67.2		38.2				
Change Period (Y+Rc), s	5.4	7.3		7.4	* 4.7	* 7.3		* 7.4				
Max Green Setting (Gmax), s	41.6	33.7		39.6	* 16	* 60		* 41				
Max Q Clear Time (g_c+D), s	21.4	12.5		26.9	6.8	13.6		20.9				
Green Ext Time (p_c), s	0.4	5.7		3.0	0.0	10.3		0.4				

Intersection Summary

HCM 6th Ctrl Delay	32.6
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary

8: SR-86/4th St & Danenberg Dr

02/24/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	23	90	372	64	107	220
Future Volume (veh/h)	23	90	372	64	107	220
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.96	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	29	112	465	80	134	275
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	191	170	1071	183	250	1114
Arrive On Green	0.11	0.11	0.36	0.36	0.14	0.60
Sat Flow, veh/h	1781	1585	3106	514	1781	1870
Grp Volume(v), veh/h	29	112	273	272	134	275
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1750	1781	1870
Q Serve(g_s), s	0.7	3.2	5.5	5.6	3.3	3.3
Cycle Q Clear(g_c), s	0.7	3.2	5.5	5.6	3.3	3.3
Prop In Lane	1.00	1.00		0.29	1.00	
Lane Grp Cap(c), veh/h	191	170	632	622	250	1114
V/C Ratio(X)	0.15	0.66	0.43	0.44	0.54	0.25
Avail Cap(c_a), veh/h	257	229	1139	1121	352	1810
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	19.1	20.2	11.6	11.6	18.8	4.5
Incr Delay (d2), s/veh	0.4	4.3	1.7	1.8	0.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.2	1.9	1.9	1.2	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.5	24.5	13.3	13.3	19.5	4.9
LnGrp LOS	B	C	B	B	B	A
Approach Vol, veh/h	141		545			409
Approach Delay, s/veh	23.5		13.3			9.7
Approach LOS	C		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.3	24.6			35.9	11.3
Change Period (Y+Rc), s	4.7	7.8			* 7.8	6.2
Max Green Setting (Gmax), s	30.2				* 46	6.8
Max Q Clear Time (g_c+I), s	7.6				5.3	5.2
Green Ext Time (p_c), s	0.1	7.4			4.3	0.1

Intersection Summary

HCM 6th Ctrl Delay	13.3
HCM 6th LOS	B

Notes

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

HCM 6th Signalized Intersection Summary

9: Dogwood Rd & Danenberg Dr

02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗		↖	↖↗		↖	↖↗	
Traffic Volume (veh/h)	71	82	36	5	42	72	44	411	24	101	192	99
Future Volume (veh/h)	71	82	36	5	42	72	44	411	24	101	192	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	1.00		0.98	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		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	93	108	47	7	55	95	58	541	32	133	253	130
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	117	481	196	22	257	218	94	1663	98	161	1201	595
Arrive On Green	0.07	0.20	0.20	0.01	0.14	0.14	0.05	0.49	0.49	0.09	0.53	0.53
Sat Flow, veh/h	1781	2431	992	1781	1777	1510	1781	3405	201	1781	2283	1131
Grp Volume(v), veh/h	93	77	78	7	55	95	58	282	291	133	195	188
Grp Sat Flow(s),veh/h/ln	1781	1777	1646	1781	1777	1510	1781	1777	1829	1781	1777	1637
Q Serve(g_s), s	5.7	4.0	4.4	0.4	3.0	6.3	3.5	10.6	10.7	8.1	6.4	6.8
Cycle Q Clear(g_c), s	5.7	4.0	4.4	0.4	3.0	6.3	3.5	10.6	10.7	8.1	6.4	6.8
Prop In Lane	1.00		0.60	1.00		1.00	1.00		0.11	1.00		0.69
Lane Grp Cap(c), veh/h	117	352	326	22	257	218	94	868	893	161	935	861
V/C Ratio(X)	0.79	0.22	0.24	0.32	0.21	0.44	0.62	0.32	0.33	0.83	0.21	0.22
Avail Cap(c_a), veh/h	168	572	530	113	517	439	149	868	893	217	935	861
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	50.6	37.0	37.1	53.9	41.5	43.0	51.0	17.1	17.1	49.2	13.9	14.0
Incr Delay (d2), s/veh	9.5	0.5	0.6	3.1	0.7	2.2	2.4	1.0	1.0	13.1	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	1.8	1.8	0.2	1.3	2.4	1.6	4.3	4.5	4.1	2.6	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.1	37.5	37.7	57.0	42.2	45.1	53.4	18.1	18.1	62.2	14.4	14.5
LnGrp LOS	E	D	D	E	D	D	D	B	B	E	B	B
Approach Vol, veh/h		248			157			631			516	
Approach Delay, s/veh		46.0			44.6			21.3			26.8	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.5	59.7	6.9	27.8	11.4	63.9	12.8	21.9				
Change Period (Y+Rc), s	5.6	6.0	5.6	6.0	5.6	6.0	5.6	6.0				
Max Green Setting (Gmax), s	13.4	31.0	7.0	35.4	9.2	35.2	10.4	32.0				
Max Q Clear Time (g_c+10), s	11.0	12.7	2.4	6.4	5.5	8.8	7.7	8.3				
Green Ext Time (p_c), s	0.0	4.7	0.0	1.3	0.0	3.5	0.0	1.2				
Intersection Summary												
HCM 6th Ctrl Delay											29.5	
HCM 6th LOS											C	

Intersection

Intersection Delay, s/veh 7.1

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	1	10	0	3	54	10	10	0	22	10	10
Future Vol, veh/h	10	1	10	0	3	54	10	10	0	22	10	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	1	11	0	3	59	11	11	0	24	11	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0























Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7	6.8	7.4	7.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	50%	48%	0%	52%
Vol Thru, %	50%	5%	5%	24%
Vol Right, %	0%	48%	95%	24%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	21	57	42
LT Vol	10	10	0	22
Through Vol	10	1	3	10
RT Vol	0	10	54	10
Lane Flow Rate	22	23	62	46
Geometry Grp	1	1	1	1
Degree of Util (X)	0.025	0.025	0.06	0.051
Departure Headway (Hd)	4.216	3.908	3.499	4.059
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	848	913	1019	882
Service Time	2.244	1.943	1.535	2.083
HCM Lane V/C Ratio	0.026	0.025	0.061	0.052
HCM Control Delay	7.4	7	6.8	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.2	0.2

HCM 6th Signalized Intersection Summary

1: 8th St & Wake Ave

02/24/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	18	14	82	21	242	11	284	67	331	558	42
Future Volume (veh/h)	28	18	14	82	21	242	11	284	67	331	558	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.96	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	31	20	16	92	24	272	12	319	75	372	627	47
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	77	432	299	135	446	385	26	691	296	383	738	610
Arrive On Green	0.04	0.22	0.22	0.08	0.25	0.25	0.01	0.19	0.19	0.21	0.39	0.39
Sat Flow, veh/h	1781	1976	1366	1781	1777	1534	1781	3554	1524	1781	1870	1545
Grp Volume(v), veh/h	31	18	18	92	24	272	12	319	75	372	627	47
Grp Sat Flow(s),veh/h/ln	1781	1777	1565	1781	1777	1534	1781	1777	1524	1781	1870	1545
Q Serve(g_s), s	1.4	0.6	0.7	4.1	0.8	13.1	0.5	6.4	3.4	16.8	24.7	1.5
Cycle Q Clear(g_c), s	1.4	0.6	0.7	4.1	0.8	13.1	0.5	6.4	3.4	16.8	24.7	1.5
Prop In Lane	1.00		0.87	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	77	388	342	135	446	385	26	691	296	383	738	610
V/C Ratio(X)	0.40	0.05	0.05	0.68	0.05	0.71	0.46	0.46	0.25	0.97	0.85	0.08
Avail Cap(c_a), veh/h	154	746	657	154	746	644	110	1651	708	383	1155	955
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	37.7	25.0	25.0	36.5	23.0	27.6	39.6	28.9	27.6	31.5	22.3	15.3
Incr Delay (d2), s/veh	3.3	0.0	0.1	10.0	0.0	2.4	12.2	0.5	0.4	38.4	3.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.3	0.3	2.1	0.3	4.7	0.3	2.6	1.2	10.7	10.2	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.0	25.0	25.1	46.4	23.1	30.0	51.7	29.3	28.1	69.9	26.0	15.3
LnGrp LOS	D	C	C	D	C	C	D	C	C	E	C	B
Approach Vol, veh/h		67			388			406			1046	
Approach Delay, s/veh		32.4			33.5			29.8			41.1	
Approach LOS		C			C			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.0	22.5	11.7	23.7	6.8	38.8	9.1	26.3				
Change Period (Y+Rc), s	5.6	6.8	5.6	6.0	5.6	6.8	5.6	6.0				
Max Green Setting (Gmax), s	17.4	37.6	7.0	34.0	5.0	50.0	7.0	34.0				
Max Q Clear Time (g_c+I1), s	18.8	8.4	6.1	2.7	2.5	26.7	3.4	15.1				
Green Ext Time (p_c), s	0.0	2.1	0.0	0.1	0.0	4.0	0.0	1.7				
Intersection Summary												
HCM 6th Ctrl Delay				36.8								
HCM 6th LOS				D								

HCM 6th AWSC
2: Thomas Dr & Wake Ave

02/24/2022

Intersection

Intersection Delay, s/veh 10.8

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕		↵	↕			↕			↕	
Traffic Vol, veh/h	4	421	44	17	297	29	32	2	7	48	1	15
Future Vol, veh/h	4	421	44	17	297	29	32	2	7	48	1	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	458	48	18	323	32	35	2	8	52	1	16
Number of Lanes	1	2	0	1	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	11.3	10.2	10.2	10.5
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	78%	100%	0%	0%	100%	0%	0%	75%
Vol Thru, %	5%	0%	100%	76%	0%	100%	77%	2%
Vol Right, %	17%	0%	0%	24%	0%	0%	23%	23%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	41	4	281	184	17	198	128	64
LT Vol	32	4	0	0	17	0	0	48
Through Vol	2	0	281	140	0	198	99	1
RT Vol	7	0	0	44	0	0	29	15
Lane Flow Rate	45	4	305	200	18	215	139	70
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.085	0.007	0.447	0.284	0.03	0.323	0.203	0.131
Departure Headway (Hd)	6.897	5.777	5.274	5.106	5.909	5.405	5.246	6.775
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	522	615	677	697	601	659	678	532
Service Time	4.6	3.559	3.056	2.887	3.698	3.194	3.034	4.477
HCM Lane V/C Ratio	0.086	0.007	0.451	0.287	0.03	0.326	0.205	0.132
HCM Control Delay	10.2	8.6	12.3	9.9	8.9	10.8	9.4	10.5
HCM Lane LOS	B	A	B	A	A	B	A	B
HCM 95th-tile Q	0.3	0	2.3	1.2	0.1	1.4	0.8	0.4

HCM 6th TWSC
3: 6th St/Comm. Dwy & Wake Ave

02/24/2022

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗			↕			↕	
Traffic Vol, veh/h	3	477	9	66	343	11	5	0	47	18	0	10
Future Vol, veh/h	3	477	9	66	343	11	5	0	47	18	0	10
Conflicting Peds, #/hr	10	0	10	10	0	10	10	0	10	10	0	10
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	542	10	75	390	13	6	0	53	20	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	413	0	0	562	0	0	918	1126	296	844	1125	222
Stage 1	-	-	-	-	-	-	563	563	-	557	557	-
Stage 2	-	-	-	-	-	-	355	563	-	287	568	-
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	1142	-	-	1005	-	-	227	203	700	256	204	782
Stage 1	-	-	-	-	-	-	478	507	-	482	510	-
Stage 2	-	-	-	-	-	-	635	507	-	696	505	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1131	-	-	995	-	-	206	184	687	218	184	767
Mov Cap-2 Maneuver	-	-	-	-	-	-	206	184	-	218	184	-
Stage 1	-	-	-	-	-	-	472	500	-	476	467	-
Stage 2	-	-	-	-	-	-	573	464	-	634	498	-























Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			1.4			12.2			18.8		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	561	1131	-	-	995	-	-	293
HCM Lane V/C Ratio	0.105	0.003	-	-	0.075	-	-	0.109
HCM Control Delay (s)	12.2	8.2	-	-	8.9	-	-	18.8
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.4	0	-	-	0.2	-	-	0.4

HCM 6th Signalized Intersection Summary

4: 4th St & Ross Ave

02/24/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	198	128	95	134	183	76	628	75	120	736	20
Future Volume (veh/h)	35	198	128	95	134	183	76	628	75	120	736	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	36	206	133	99	140	191	79	654	78	125	767	21
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	51	294	283	132	187	265	101	1091	130	126	1261	35
Arrive On Green	0.19	0.19	0.19	0.17	0.17	0.17	0.06	0.34	0.34	0.07	0.36	0.36
Sat Flow, veh/h	276	1580	1523	759	1073	1520	1781	3179	379	1781	3528	97
Grp Volume(v), veh/h	242	0	133	239	0	191	79	365	367	125	386	402
Grp Sat Flow(s),veh/h/ln	1857	0	1523	1832	0	1520	1781	1777	1781	1781	1777	1848
Q Serve(g_s), s	12.6	0.0	8.0	12.8	0.0	12.2	4.5	17.5	17.6	7.2	18.4	18.4
Cycle Q Clear(g_c), s	12.6	0.0	8.0	12.8	0.0	12.2	4.5	17.5	17.6	7.2	18.4	18.4
Prop In Lane	0.15		1.00	0.41		1.00	1.00		0.21	1.00		0.05
Lane Grp Cap(c), veh/h	345	0	283	319	0	265	101	610	611	126	635	660
V/C Ratio(X)	0.70	0.00	0.47	0.75	0.00	0.72	0.78	0.60	0.60	0.99	0.61	0.61
Avail Cap(c_a), veh/h	666	0	546	657	0	545	130	610	611	126	635	660
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.3	0.0	37.5	40.4	0.0	40.2	48.0	28.0	28.0	47.9	27.2	27.2
Incr Delay (d2), s/veh	2.6	0.0	1.2	1.3	0.0	1.4	15.6	4.3	4.3	77.3	4.3	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(50%),veh/ln	5.9	0.0	3.0	5.8	0.0	4.6	2.4	7.8	7.9	5.8	8.2	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.9	0.0	38.7	41.8	0.0	41.6	63.7	32.3	32.3	125.2	31.5	31.4
LnGrp LOS	D	A	D	D	A	D	E	C	C	F	C	C
Approach Vol, veh/h		375			430			811			913	
Approach Delay, s/veh		40.8			41.7			35.4			44.3	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.0	40.8		25.3	11.5	42.3		24.1				
Change Period (Y+Rc), s	* 5.7	5.4		6.1	* 5.7	5.4		6.1				
Max Green Setting (Gmax), s	* 7.3	35.4		37.0	* 7.5	35.2		37.0				
Max Q Clear Time (g_c+I1), s	9.2	19.6		14.6	6.5	20.4		14.8				
Green Ext Time (p_c), s	0.0	8.1		1.8	0.0	8.2		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			40.5									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary

5: 4th St & I-8 WB On-Ramp/I-8 WB Off-Ramp

02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕	↕	↕			↕	↕
Traffic Volume (veh/h)	0	0	0	202	0	333	121	618	0	0	1141	46
Future Volume (veh/h)	0	0	0	202	0	333	121	618	0	0	1141	46
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.97	1.00		1.00	1.00		0.96
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				208	0	343	125	637	0	0	1176	47
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				524	0	452	166	1960	0	0	1353	54
Arrive On Green				0.29	0.00	0.29	0.09	0.55	0.00	0.00	0.39	0.39
Sat Flow, veh/h				1781	0	1538	1781	3647	0	0	3570	139
Grp Volume(v), veh/h				208	0	343	125	637	0	0	601	622
Grp Sat Flow(s),veh/h/ln				1781	0	1538	1781	1777	0	0	1777	1838
Q Serve(g_s), s				6.3	0.0	13.8	4.7	6.7	0.0	0.0	21.2	21.2
Cycle Q Clear(g_c), s				6.3	0.0	13.8	4.7	6.7	0.0	0.0	21.2	21.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.08
Lane Grp Cap(c), veh/h				524	0	452	166	1960	0	0	692	715
V/C Ratio(X)				0.40	0.00	0.76	0.75	0.32	0.00	0.00	0.87	0.87
Avail Cap(c_a), veh/h				969	0	837	183	1960	0	0	692	715
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				19.2	0.0	21.8	30.1	8.3	0.0	0.0	19.2	19.2
Incr Delay (d2), s/veh				0.5	0.0	2.6	12.3	0.4	0.0	0.0	13.9	13.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.5	0.0	4.9	2.4	2.1	0.0	0.0	10.1	10.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				19.7	0.0	24.4	42.4	8.8	0.0	0.0	33.1	32.8
LnGrp LOS				B	A	C	D	A	A	A	C	C
Approach Vol, veh/h					551			762			1223	
Approach Delay, s/veh					22.6			14.3			32.9	
Approach LOS					C			B			C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	1.0	31.9		25.1		42.9						
Change Period (Y+Rc), s	4.7	5.4		5.1		5.4						
Max Green Setting (Gmax), s		25.8		37.0		37.5						
Max Q Clear Time (g_c+1), s		23.2		15.8		8.7						
Green Ext Time (p_c), s	0.0	2.3		2.5		10.4						

Intersection Summary

HCM 6th Ctrl Delay	25.1
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary

6: 4th St & I-8 EB Off-Ramp/I-8 EB On-Ramp

02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↑↑	↗	↘	↑↑	
Traffic Volume (veh/h)	53	0	101	0	0	0	0	623	254	454	862	0
Future Volume (veh/h)	53	0	101	0	0	0	0	623	254	454	862	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96				1.00		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	55	0	104				0	642	262	468	889	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	93	0	176				0	1216	518	372	2267	0
Arrive On Green	0.17	0.00	0.17				0.00	0.34	0.34	0.21	0.64	0.00
Sat Flow, veh/h	554	0	1048				0	3647	1514	1781	3647	0
Grp Volume(v), veh/h	159	0	0				0	642	262	468	889	0
Grp Sat Flow(s),veh/h/ln1603	0	0	0				0	1777	1514	1781	1777	0
Q Serve(g_s), s	5.0	0.0	0.0				0.0	7.8	7.4	11.3	6.5	0.0
Cycle Q Clear(g_c), s	5.0	0.0	0.0				0.0	7.8	7.4	11.3	6.5	0.0
Prop In Lane	0.35		0.65				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	269	0	0				0	1216	518	372	2267	0
V/C Ratio(X)	0.59	0.00	0.00				0.00	0.53	0.51	1.26	0.39	0.00
Avail Cap(c_a), veh/h	296	0	0				0	1216	518	372	2267	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.8	0.0	0.0				0.0	14.3	14.2	21.4	4.7	0.0
Incr Delay (d2), s/veh	2.6	0.0	0.0				0.0	1.6	3.5	136.0	0.5	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
%ile BackOfQ(50%),veh/ln1.9	0.0	0.0	0.0				0.0	2.8	2.6	18.1	1.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	0.0	0.0				0.0	15.9	17.7	157.4	5.2	0.0
LnGrp LOS	C	A	A				A	B	B	F	A	A
Approach Vol, veh/h		159						904			1357	
Approach Delay, s/veh		23.4						16.4			57.7	
Approach LOS		C						B			E	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		39.9			16.0	23.9		14.2				
Change Period (Y+Rc), s		5.4			* 4.7	5.4		5.1				
Max Green Setting (Gmax), s		34.5			* 11	18.5		10.0				
Max Q Clear Time (g_c+I1), s		8.5			13.3	9.8		7.0				
Green Ext Time (p_c), s		14.0			0.0	5.8		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			40.0									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary

7: 4th St & Wake Ave

02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕		↕	↑	↕	↕	↕↕		↕	↕↕	
Traffic Volume (veh/h)	271	94	188	88	83	209	162	378	63	221	468	189
Future Volume (veh/h)	271	94	188	88	83	209	162	378	63	221	468	189
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.97	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	308	107	214	100	94	238	184	430	72	251	532	215
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	396	177	355	250	667	800	212	970	161	280	891	358
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.12	0.32	0.32	0.16	0.36	0.36
Sat Flow, veh/h	944	497	994	1056	1870	1543	1781	3035	504	1781	2452	987
Grp Volume(v), veh/h	308	0	321	100	94	238	184	250	252	251	385	362
Grp Sat Flow(s),veh/h/ln	944	0	1491	1056	1870	1543	1781	1777	1762	1781	1777	1662
Q Serve(g_s), s	34.3	0.0	21.3	10.4	4.1	10.7	12.3	13.5	13.7	16.7	21.3	21.4
Cycle Q Clear(g_c), s	38.4	0.0	21.3	31.7	4.1	10.7	12.3	13.5	13.7	16.7	21.3	21.4
Prop In Lane	1.00		0.67	1.00		1.00	1.00		0.29	1.00		0.59
Lane Grp Cap(c), veh/h	396	0	532	250	667	800	212	568	563	280	646	604
V/C Ratio(X)	0.78	0.00	0.60	0.40	0.14	0.30	0.87	0.44	0.45	0.90	0.60	0.60
Avail Cap(c_a), veh/h	426	0	575	289	737	857	373	568	563	466	646	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.3	0.0	31.8	44.8	26.3	16.9	52.3	32.5	32.6	50.0	31.3	31.3
Incr Delay (d2), s/veh	9.0	0.0	2.0	0.4	0.0	0.1	4.1	2.5	2.6	7.3	4.0	4.4
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	9.5	0.0	7.8	2.7	1.8	3.7	5.6	6.1	6.1	7.9	9.6	9.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.3	0.0	33.8	45.2	26.3	17.0	56.4	35.0	35.2	57.3	35.3	35.7
LnGrp LOS	D	A	C	D	C	B	E	D	D	E	D	D
Approach Vol, veh/h		629			432			686			998	
Approach Delay, s/veh		40.9			25.5			40.8			41.0	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	34.4	45.9		50.5	19.1	51.2		50.5				
Change Period (Y+Rc), s	5.4	7.3		7.4	* 4.7	* 7.3		* 7.4				
Max Green Setting (Gmax), s	31.6	36.7		46.6	* 25	* 44		* 48				
Max Q Clear Time (g_c+10), s	11.7	15.7		40.4	14.3	23.4		33.7				
Green Ext Time (p_c), s	0.3	6.5		2.7	0.2	9.9		0.8				

Intersection Summary

HCM 6th Ctrl Delay	38.5
HCM 6th LOS	D

Notes

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

HCM 6th Signalized Intersection Summary
8: SR-86/4th St & Danenberg Dr

02/24/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	91	216	262	71	313	451
Future Volume (veh/h)	91	216	262	71	313	451
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.95	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	99	235	285	77	340	490
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	218	194	748	197	396	1106
Arrive On Green	0.12	0.12	0.27	0.27	0.22	0.59
Sat Flow, veh/h	1781	1585	2840	724	1781	1870
Grp Volume(v), veh/h	99	235	182	180	340	490
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1694	1781	1870
Q Serve(g_s), s	2.5	6.0	4.1	4.2	9.0	7.1
Cycle Q Clear(g_c), s	2.5	6.0	4.1	4.2	9.0	7.1
Prop In Lane	1.00	1.00		0.43	1.00	
Lane Grp Cap(c), veh/h	218	194	484	462	396	1106
V/C Ratio(X)	0.45	1.21	0.38	0.39	0.86	0.44
Avail Cap(c_a), veh/h	218	194	1053	1004	411	1774
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	19.9	21.5	14.4	14.5	18.3	5.5
Incr Delay (d2), s/veh	1.5	132.1	1.7	1.9	15.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.0	1.6	1.6	4.7	1.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.4	153.5	16.2	16.4	33.3	6.6
LnGrp LOS	C	F	B	B	C	A
Approach Vol, veh/h	334		362		830	
Approach Delay, s/veh	114.4		16.3		17.5	
Approach LOS	F		B		B	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	5.6	21.1			36.7	12.2
Change Period (Y+Rc), s	4.7	7.8			* 7.8	6.2
Max Green Setting (Gmax), s	29.0				* 46	6.0
Max Q Clear Time (g_c+M), s	6.2				9.1	8.0
Green Ext Time (p_c), s	0.0	4.8			8.7	0.0

Intersection Summary

HCM 6th Ctrl Delay	38.4
HCM 6th LOS	D

Notes

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

HCM 6th Signalized Intersection Summary

9: Dogwood Rd & Danenberg Dr

02/24/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	271	78	59	141	198	72	379	31	272	458	87
Future Volume (veh/h)	118	271	78	59	141	198	72	379	31	272	458	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	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	124	285	82	62	148	208	76	399	33	286	482	92
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	126	593	167	96	358	308	102	1200	99	275	1362	258
Arrive On Green	0.07	0.22	0.22	0.05	0.20	0.20	0.06	0.36	0.36	0.15	0.46	0.46
Sat Flow, veh/h	1781	2714	763	1781	1777	1526	1781	3317	273	1781	2967	563
Grp Volume(v), veh/h	124	184	183	62	148	208	76	213	219	286	287	287
Grp Sat Flow(s),veh/h/ln	1781	1777	1700	1781	1777	1526	1781	1777	1813	1781	1777	1753
Q Serve(g_s), s	7.6	9.9	10.4	3.8	8.0	13.9	4.6	9.6	9.7	17.0	11.5	11.6
Cycle Q Clear(g_c), s	7.6	9.9	10.4	3.8	8.0	13.9	4.6	9.6	9.7	17.0	11.5	11.6
Prop In Lane	1.00		0.45	1.00		1.00	1.00		0.15	1.00		0.32
Lane Grp Cap(c), veh/h	126	388	372	96	358	308	102	643	656	275	816	805
V/C Ratio(X)	0.98	0.47	0.49	0.64	0.41	0.68	0.74	0.33	0.33	1.04	0.35	0.36
Avail Cap(c_a), veh/h	126	530	507	113	517	444	167	643	656	275	816	805
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	37.5	37.6	51.0	38.2	40.6	51.0	25.4	25.5	46.5	19.2	19.2
Incr Delay (d2), s/veh	74.0	1.4	1.6	5.4	1.2	4.1	4.0	1.4	1.4	64.7	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	4.4	4.4	1.8	3.5	5.4	2.1	4.1	4.3	12.3	4.8	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	125.0	38.9	39.2	56.4	39.4	44.6	55.0	26.8	26.8	111.2	20.4	20.5
LnGrp LOS	F	D	D	E	D	D	E	C	C	F	C	C
Approach Vol, veh/h		491			418			508			860	
Approach Delay, s/veh		60.8			44.6			31.0			50.6	
Approach LOS		E			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	32.6	45.8	11.5	30.0	11.9	56.5	13.4	28.2				
Change Period (Y+Rc), s	5.6	6.0	5.6	6.0	5.6	6.0	5.6	6.0				
Max Green Setting (Gmax), s	30.0	7.0	32.8	10.3	36.7	7.8	32.0					
Max Q Clear Time (g_c+119), s	11.7	5.8	12.4	6.6	13.6	9.6	15.9					
Green Ext Time (p_c), s	0.0	3.4	0.0	3.0	0.0	5.2	0.0	2.7				
Intersection Summary												
HCM 6th Ctrl Delay											47.3	
HCM 6th LOS											D	

HCM 6th AWSC
10: 6th Street/6th St & Spears Ave

02/24/2022

Intersection

Intersection Delay, s/veh 7.4

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	4	10	0	3	42	10	10	0	61	10	10
Future Vol, veh/h	10	4	10	0	3	42	10	10	0	61	10	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	4	11	0	3	46	11	11	0	66	11	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.2	6.8	7.4	7.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	50%	42%	0%	75%
Vol Thru, %	50%	17%	7%	12%
Vol Right, %	0%	42%	93%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	24	45	81
LT Vol	10	10	0	61
Through Vol	10	4	3	10
RT Vol	0	10	42	10
Lane Flow Rate	22	26	49	88
Geometry Grp	1	1	1	1
Degree of Util (X)	0.026	0.029	0.049	0.102
Departure Headway (Hd)	4.23	3.994	3.582	4.156
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	842	887	988	862
Service Time	2.275	2.06	1.648	2.185
HCM Lane V/C Ratio	0.026	0.029	0.05	0.102
HCM Control Delay	7.4	7.2	6.8	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.2	0.3

APPENDIX F
PUBLIC TRANSIT ROUTE SCHEDULES AND MAPS

IMPERIAL VALLEY TRANSIT

RIDE WITH US • VIAJE CON NOSOTROS



Rider's Guide Guía De Pasajeros

760-482-2900

APRIL 2021

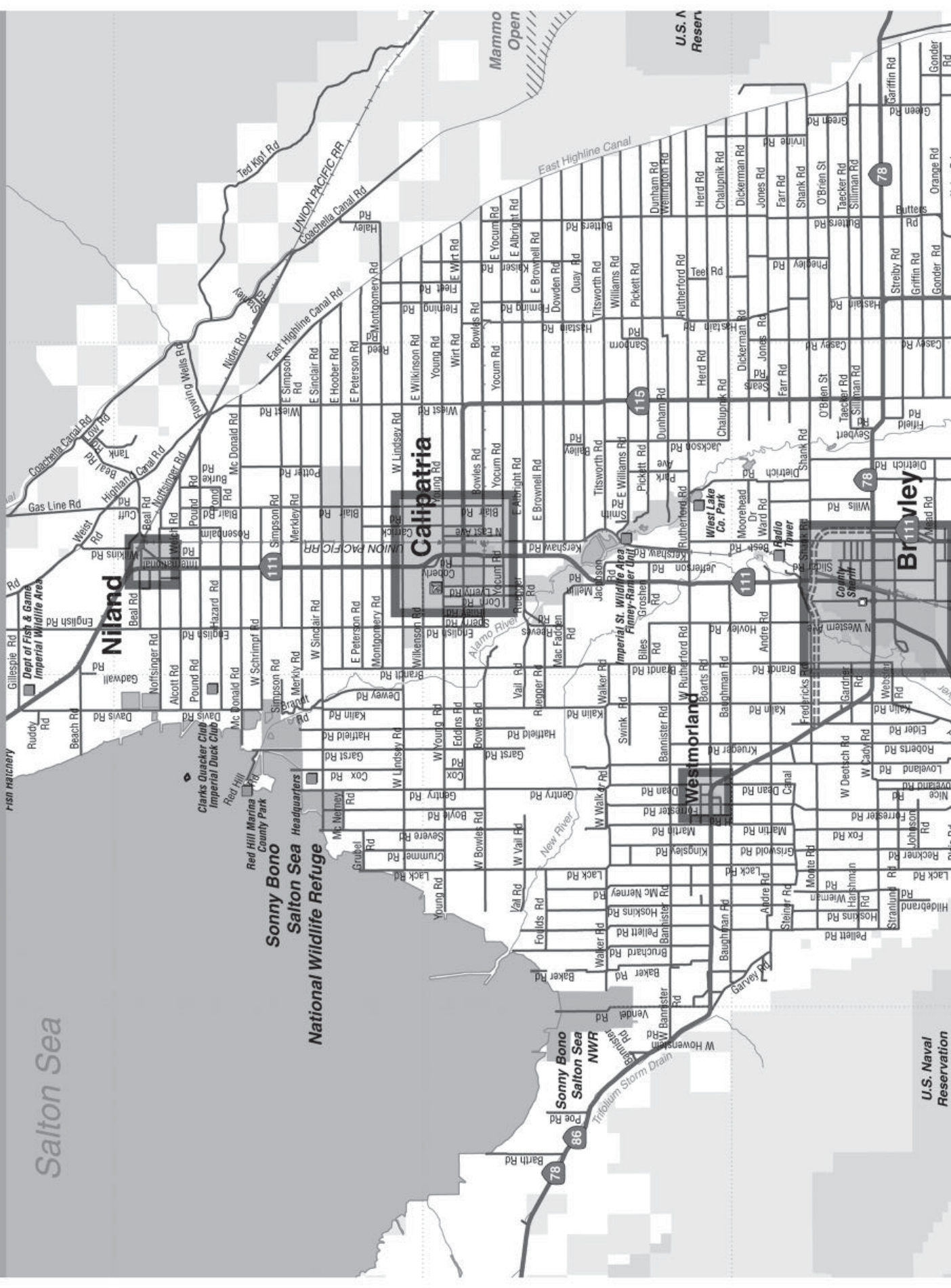


All buses
equipped with
bike racks



Provides
wheelchair lift
service

Imperial Valley

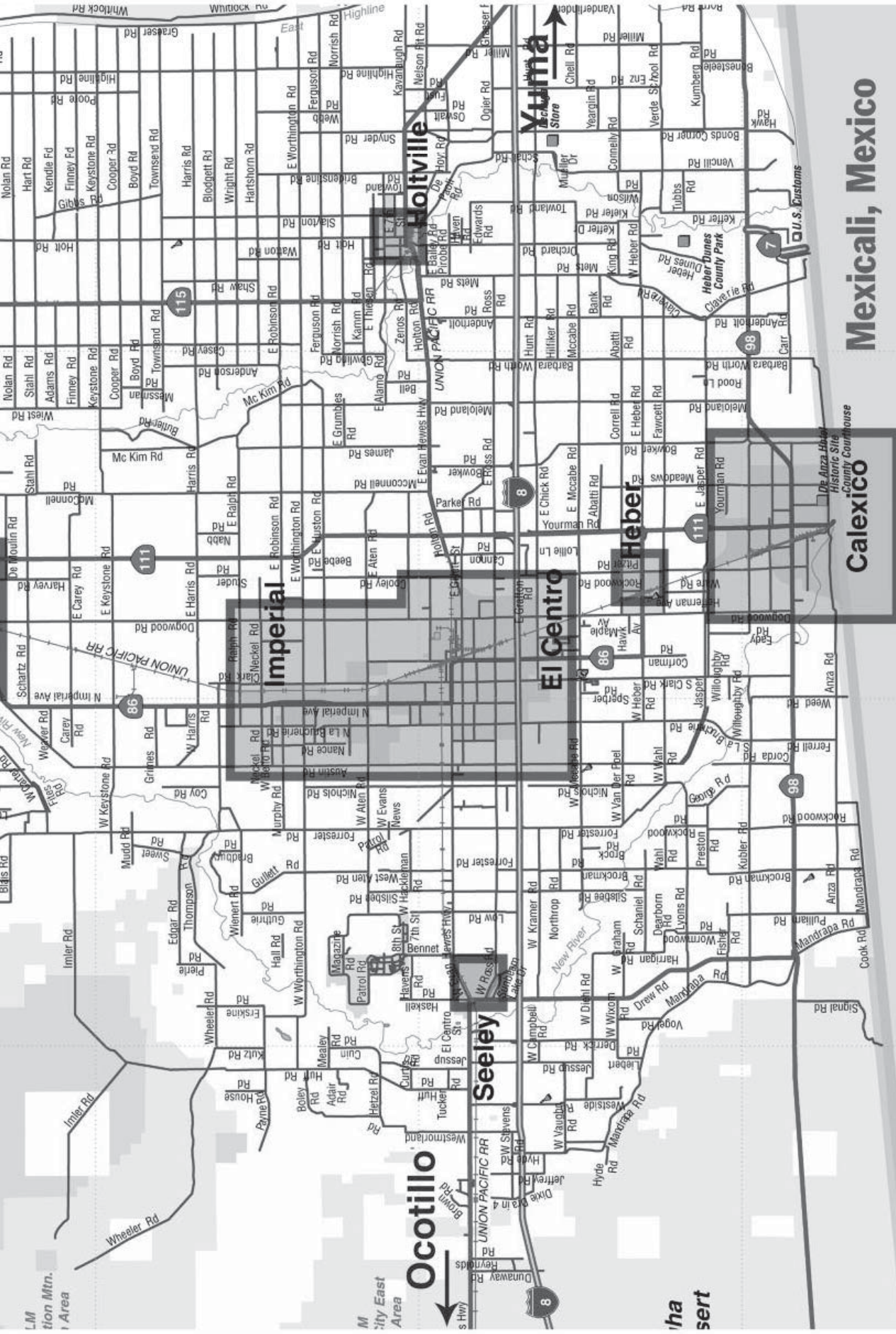


Salton Sea

Sonny Bono
Salton Sea
National Wildlife Refuge

Sonny Bono
Salton Sea
NWR

U.S. Naval
Reservation



Mexicali, Mexico

Calexico

**IMPERIAL VALLEY
TRANSIT**

Ride with Us • Viaje con Nosotros

1 South

El Centro - Calexico

Monday - Friday

EL CENTRO 7th Street & State	EL CENTRO 4th Street & Brighton	EL CENTRO El Centro Hospital	EL CENTRO 4th Street & Wake	EL CENTRO IV Mall	HEBER Post Office	CALEXICO Hacienda
5:54	5:57	6:04	6:09	*	6:20	6:35
7:10	7:13	7:20	7:25	7:35	7:43	7:55
7:45	7:48	7:55	8:00	8:10	8:18	8:30
8:20	8:23	8:30	8:35	8:45	8:53	9:05
8:55	8:58	9:05	9:10	9:20	9:28	9:40
9:30	9:33	9:40	9:45	9:55	10:03	10:15
10:05	10:08	10:15	10:20	10:30	10:38	10:50
10:40	10:43	10:50	10:55	11:05	11:13	11:25
11:15	11:18	11:25	11:30	11:40	11:48	12:00
11:50	11:53	12:00	12:05	12:15	12:23	12:35
12:25	12:28	12:35	12:40	12:50	12:58	1:10
1:00	1:03	1:10	1:15	1:25	1:33	1:45
1:35	1:38	1:45	1:50	2:00	2:08	2:20
2:10	2:13	2:20	2:25	2:35	2:43	2:55
2:45	2:48	2:55	3:00	3:10	3:18	3:30
3:20	3:23	3:30	3:35	3:45	3:53	4:05
3:55	3:58	4:05	4:10	4:20	4:28	4:40
4:35	4:38	4:45	4:50	5:00	5:08	5:20
5:40	5:43	5:50	5:55	6:05	6:13	6:25
6:50	6:53	7:00	7:05	7:15	7:23	7:35
**10:20	10:23	10:30	10:35	10:40	10:43	10:55

Times in bold is only from El Centro to Calexico

**Only when IVC is in session.

Saturday

7:10	7:13	7:20	7:25	7:35	7:43	7:55
8:10	8:13	8:20	8:25	8:35	8:43	8:55
9:40	9:43	9:50	9:55	10:05	10:13	10:25
11:20	11:23	11:30	11:35	11:45	11:53	12:05
12:50	12:53	1:00	1:05	1:15	1:23	1:35
2:00	2:03	2:10	2:15	2:25	2:33	2:45
3:40	3:43	3:50	3:55	4:05	4:13	4:25
5:10	5:13	5:20	5:25	5:35	5:43	5:55
6:30	6:33	6:40	6:45	6:55	7:03	7:15

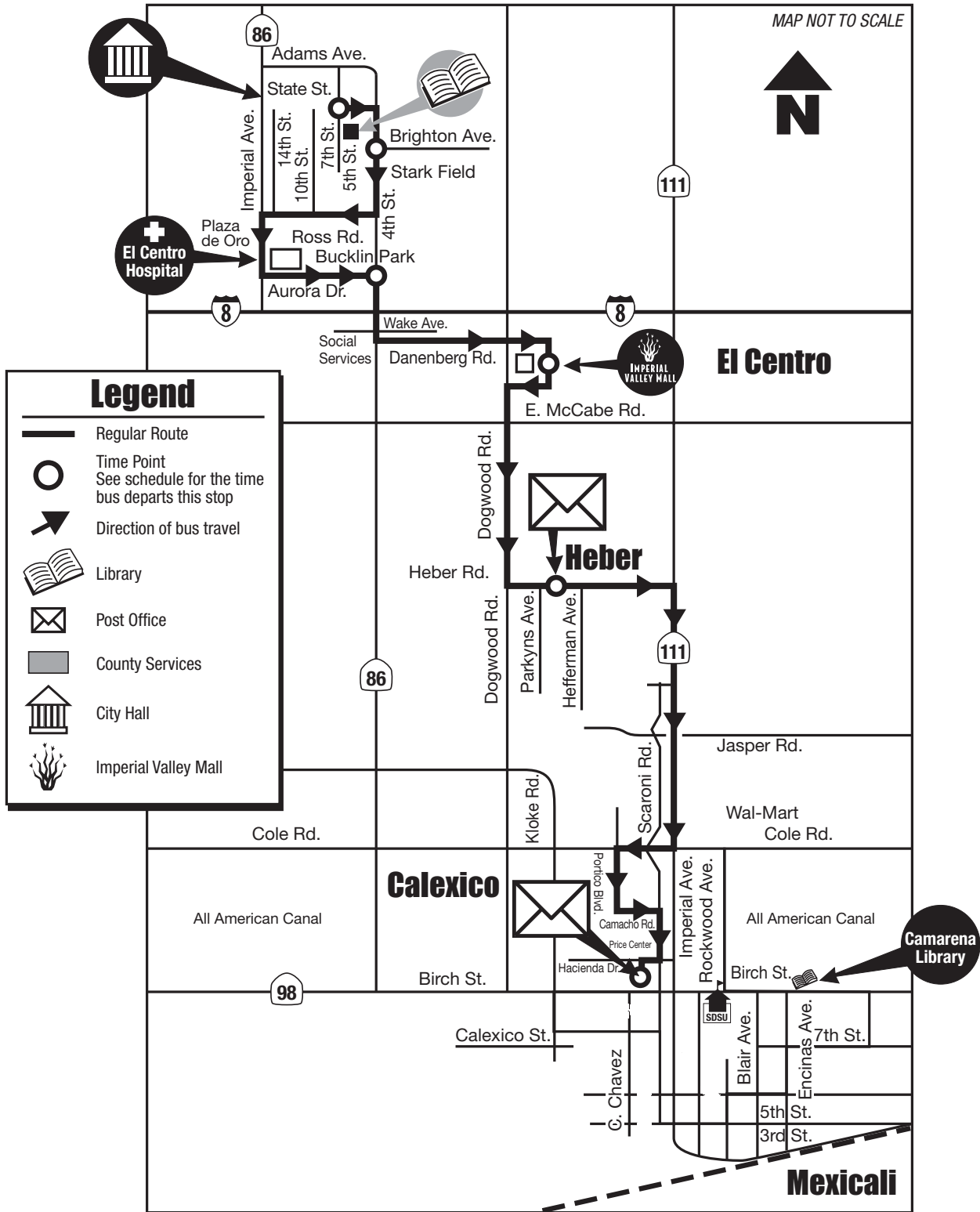
Sunday

8:25	8:28	8:35	8:40	8:50	8:55	9:10
10:40	10:43	10:50	10:55	11:05	11:10	11:25
1:40	1:43	1:50	1:55	2:05	2:10	2:25
4:00	4:03	4:10	4:15	4:25	4:30	4:45

(PM - Time is shaded)

*Does not stop at mall at this time.

1 South El Centro - Calexico



1 North

Calexico - El Centro Monday - Friday

CALEXICO Hacienda	CALEXICO 3rd Street & Paulin	CALEXICO Rockwood & Kennedy	HEBER Post Office	EL CENTRO IV Mall	EL CENTRO 4th Street & Danenberg	EL CENTRO El Centro Hospital	EL CENTRO 4th Street & Brighton	EL CENTRO State Street & 7th Street
5:45	6:00	6:10	6:20	6:30	6:35	6:40	6:45	7:00
6:40	6:55	7:05	7:15	7:25	7:30	7:35	7:40	7:55
7:30	7:45	7:55	8:05	8:15	8:20	8:25	8:30	8:45
8:05	8:20	8:30	8:40	8:50	8:55	9:00	9:05	9:20
8:40	8:55	9:05	9:15	9:25	9:30	9:35	9:40	9:55
9:15	9:30	9:40	9:50	10:00	10:05	10:10	10:15	10:30
9:50	10:05	10:15	10:25	10:35	10:40	10:45	10:50	11:05
10:25	10:40	10:50	11:00	11:10	11:15	11:20	11:25	11:40
11:00	11:15	11:25	11:35	11:45	11:50	11:55	12:00	12:15
11:35	11:50	12:00	12:10	12:20	12:25	12:30	12:35	12:50
12:10	12:25	12:35	12:45	12:55	1:00	1:05	1:10	1:25
12:45	1:00	1:10	1:20	1:30	1:35	1:40	1:45	2:00
1:20	1:35	1:45	1:55	2:05	2:10	2:15	2:20	2:35
1:55	2:10	2:20	2:30	2:40	2:45	2:50	2:55	3:10
2:30	2:45	2:55	3:05	3:15	3:20	3:25	3:30	3:45
3:05	3:20	3:30	3:40	3:50	3:55	4:00	4:05	4:20
3:40	3:55	4:05	4:15	4:25	4:30	4:35	4:40	4:55
4:15	4:30	4:40	4:50	5:00	5:05	5:10	5:15	5:30
4:50	5:05	5:10	- -	- -	- -	- -	- -	- -
5:25	5:40	5:50	6:00	6:10	6:15	6:20	6:25	6:40
6:35	6:50	7:00	7:10	7:20	7:25	7:30	7:35	7:50
7:45	8:00	8:10	8:20	8:30	8:35	8:40	8:45	9:00
**10:55	11:10	11:23	- -	- -	- -	- -	- -	- -

Times in bold is only from Calexico to El Centro

**Only when IVC is in session.

Saturday

5:55	6:10	6:20	6:30	6:40	6:45	6:50	6:55	7:10
7:55	8:10	8:20	8:30	8:40	8:45	8:50	8:55	9:10
8:55	9:10	9:20	9:30	9:40	9:45	9:50	9:55	10:10
10:25	10:40	10:50	11:00	11:10	11:15	11:20	11:25	11:40
12:05	12:20	12:30	12:40	12:50	12:55	1:00	1:05	1:20
1:35	1:50	2:00	2:10	2:20	2:25	2:30	2:35	2:50
2:45	3:00	3:10	3:20	3:30	3:35	3:40	3:45	4:00
4:25	4:40	4:50	5:00	5:10	5:15	5:20	5:25	5:40
5:55	6:10	6:20	6:30	6:40	6:45	6:50	6:55	7:10
7:15	7:30	7:40	7:50	8:00	8:05	8:10	8:15	8:30

Sunday

7:00	7:15	7:25	7:35	7:45	7:50	8:00	8:05	8:15
9:20	9:35	9:45	9:55	10:05	10:10	10:20	10:25	10:35
11:25	11:40	11:50						
	12:30	12:40	12:50	1:00	1:05	1:15	1:20	1:30
2:35	2:50	3:00	3:10	3:20	3:25	3:35	3:40	3:50
4:45	5:00	5:10*	Ends Here					

1 North Calexico-El Centro



MAP NOT TO SCALE



Legend

- Regular Route
- Time Point
See schedule for the time bus departs this stop
- Direction of bus travel
- Library
- Post Office
- County Services
- City Hall
- Imperial Valley Mall

