

HCM Signalized Intersection Capacity Analysis

6: University Drive & Sunset Strip

16202 Existing PM Peak

10/13/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	122	230	66	231	252	113	24	85	1975	342	12	101
Future Volume (vph)	122	230	66	231	252	113	24	85	1975	342	12	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0		7.0	7.0			7.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		0.97	0.91			0.97
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.98		1.00	0.99			1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		1.00	1.00			1.00
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.98			1.00
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.95	1.00			0.95
Satd. Flow (prot)	1770	3360		1767	3610	1587		3422	4987			3502
Flt Permitted	0.59	1.00		0.23	1.00	1.00		0.95	1.00			0.95
Satd. Flow (perm)	1096	3360		421	3610	1587		3422	4987			3502
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	128	242	69	243	265	119	25	89	2079	360	13	106
RTOR Reduction (vph)	0	17	0	0	0	96	0	0	14	0	0	0
Lane Group Flow (vph)	128	294	0	243	265	23	0	114	2425	0	0	119
Confl. Peds. (#/hr)			8	8			6	4		17		17
Confl. Bikes (#/hr)			4			4				3		
Heavy Vehicles (%)	2%	3%	3%	2%	0%	0%	0%	3%	1%	2%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	Prot	NA		Prot	Prot
Protected Phases	7	4		3	8		5	5	2		1	1
Permitted Phases	4			8		8						
Actuated Green, G (s)	28.2	17.8		43.8	27.4	27.4		8.8	87.3			8.9
Effective Green, g (s)	28.2	17.8		43.8	27.4	27.4		8.8	87.3			8.9
Actuated g/C Ratio	0.18	0.11		0.27	0.17	0.17		0.06	0.55			0.06
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0		7.0	7.0			7.0
Vehicle Extension (s)	1.5	2.0		2.5	2.0	2.0		1.5	3.0			1.5
Lane Grp Cap (vph)	236	373		283	618	271		188	2721			194
v/s Ratio Prot	0.04	0.09		c0.11	0.07			0.03	c0.49			c0.03
v/s Ratio Perm	0.06			c0.13		0.01						
v/c Ratio	0.54	0.79		0.86	0.43	0.08		0.61	0.89			0.61
Uniform Delay, d1	58.5	69.3		49.7	59.3	55.8		73.9	32.1			73.9
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00			1.14
Incremental Delay, d2	1.4	9.8		21.6	0.2	0.0		3.8	4.9			3.4
Delay (s)	59.9	79.1		71.4	59.5	55.8		77.7	37.1			87.6
Level of Service	E	E		E	E	E		E	D			F
Approach Delay (s)		73.5			63.4				38.9			
Approach LOS		E			E				D			
Intersection Summary												
HCM 2000 Control Delay			42.8				HCM 2000 Level of Service		D			
HCM 2000 Volume to Capacity ratio			0.88									
Actuated Cycle Length (s)			160.0				Sum of lost time (s)		26.0			
Intersection Capacity Utilization			87.7%				ICU Level of Service		E			
Analysis Period (min)			15									
c Critical Lane Group												

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Movement	SBT	SBR
Lane Configurations	↑↑↑	↑
Traffic Volume (vph)	1641	73
Future Volume (vph)	1641	73
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.0	
Lane Util. Factor	0.91	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.99	
Flt Protected	1.00	
Satd. Flow (prot)	5051	
Flt Permitted	1.00	
Satd. Flow (perm)	5051	
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	1727	77
RTOR Reduction (vph)	3	0
Lane Group Flow (vph)	1801	0
Confl. Peds. (#/hr)		4
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	2%	1%
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	87.4	
Effective Green, g (s)	87.4	
Actuated g/C Ratio	0.55	
Clearance Time (s)	7.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	2759	
v/s Ratio Prot	0.36	
v/s Ratio Perm		
v/c Ratio	0.65	
Uniform Delay, d1	25.6	
Progression Factor	1.16	
Incremental Delay, d2	1.0	
Delay (s)	30.7	
Level of Service	C	
Approach Delay (s)	34.2	
Approach LOS	C	
Intersection Summary		

Timings
6: University Drive & Sunset Strip

16202 Existing PM Peak

10/13/2022

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	122	230	231	252	113	85	1975	101	1641
Future Volume (vph)	122	230	231	252	113	85	1975	101	1641
Lane Group Flow (vph)	128	311	243	265	119	114	2439	119	1804
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases	4		8		8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	6.0	4.0	6.0	6.0	5.0	10.0	5.0	10.0
Minimum Split (s)	16.0	27.0	24.0	37.0	37.0	12.0	40.0	12.0	40.0
Total Split (s)	17.0	27.0	27.0	37.0	37.0	17.0	89.0	17.0	89.0
Total Split (%)	10.6%	16.9%	16.9%	23.1%	23.1%	10.6%	55.6%	10.6%	55.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min
v/c Ratio	0.54	0.80	0.86	0.43	0.32	0.61	0.89	0.61	0.65
Control Delay	55.2	80.2	75.6	61.0	11.6	87.6	37.7	95.7	31.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.2	80.2	75.6	61.0	11.6	87.6	37.7	95.7	31.7
Queue Length 50th (ft)	104	158	213	131	3	61	821	56	693
Queue Length 95th (ft)	160	212	#307	175	61	96	936	96	722
Internal Link Dist (ft)		1123		804			609		1629
Turn Bay Length (ft)	100		175		105	250		325	
Base Capacity (vph)	243	457	292	699	401	215	2735	221	2762
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.68	0.83	0.38	0.30	0.53	0.89	0.54	0.65

Intersection Summary

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 30 (19%), Referenced to phase 2:NBT and 6:SBT, Start of Green

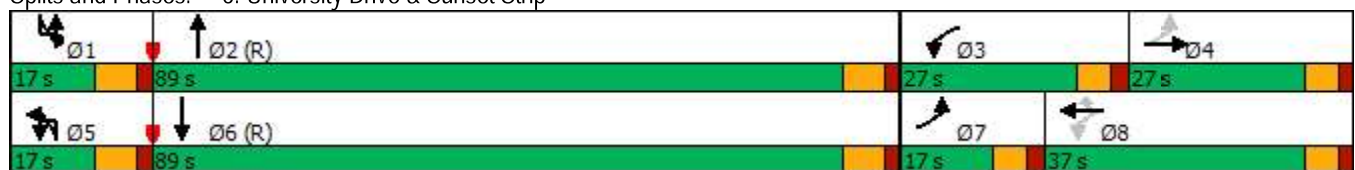
Natural Cycle: 135

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: University Drive & Sunset Strip



Intersection							
Int Delay, s/veh	0.5						
Movement	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations		↗ ↑↑↑				↘ ↑↑↑	
Traffic Vol, veh/h	0	80	1755	55	19	48	1910
Future Vol, veh/h	0	80	1755	55	19	48	1910
Conflicting Peds, #/hr	1	0	0	3	0	3	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	-	0	-	-	-	290	-
Veh in Median Storage, #	0	-	0	-	-	-	0
Grade, %	0	-	0	-	-	-	0
Peak Hour Factor	98	98	98	98	98	98	98
Heavy Vehicles, %	0	4	3	4	0	6	2
Mvmt Flow	0	82	1791	56	19	49	1949

Major/Minor	Minor1	Major1	Major2				
Conflicting Flow All	-	927	0	0	1348	1850	0
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Critical Hdwy	-	7.18	-	-	5.6	5.42	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-
Follow-up Hdwy	-	3.94	-	-	2.3	3.16	-
Pot Cap-1 Maneuver	0	*522	-	-	*894	*651	-
Stage 1	0	-	-	-	-	-	-
Stage 2	0	-	-	-	-	-	-
Platoon blocked, %		1	-	-	1	1	-
Mov Cap-1 Maneuver	-	*520	-	-	*676	*676	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.2	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	520	* 676
HCM Lane V/C Ratio	-	-	0.157	0.101
HCM Control Delay (s)	-	-	13.2	10.9
HCM Lane LOS	-	-	B	B
HCM 95th %tile Q(veh)	-	-	0.6	0.3

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

Intersection							
Int Delay, s/veh	0.7						
Movement	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations		 	 			 	 
Traffic Vol, veh/h	0	72	2041	161	31	94	1855
Future Vol, veh/h	0	72	2041	161	31	94	1855
Conflicting Peds, #/hr	0	0	0	3	0	3	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	-	0	-	-	-	290	-
Veh in Median Storage, #	0	-	0	-	-	-	0
Grade, %	0	-	0	-	-	-	0
Peak Hour Factor	94	94	94	94	94	94	94
Heavy Vehicles, %	0	5	1	1	0	0	1
Mvmt Flow	0	77	2171	171	33	100	1973
Major/Minor	Minor1		Major1		Major2		
Conflicting Flow All	-	1174	0	0	1710	2345	0
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Critical Hdwy	-	7.2	-	-	5.6	5.3	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-
Follow-up Hdwy	-	3.95	-	-	2.3	3.1	-
Pot Cap-1 Maneuver	0	*440	-	-	*756	536	-
Stage 1	0	-	-	-	-	-	-
Stage 2	0	-	-	-	-	-	-
Platoon blocked, %		1	-	-	1	1	-
Mov Cap-1 Maneuver	-	*439	-	-	*555	555	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-
Approach	WB		NB		SB		
HCM Control Delay, s	14.9		0		0.9		
HCM LOS	B						
Minor Lane/Major Mvmt		NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)		-	-	439	555	-	
HCM Lane V/C Ratio		-	-	0.174	0.24	-	
HCM Control Delay (s)		-	-	14.9	13.5	-	
HCM Lane LOS		-	-	B	B	-	
HCM 95th %tile Q(veh)		-	-	0.6	0.9	-	
Notes							
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined		*: All major volume in platoon

HCM Signalized Intersection Capacity Analysis

8: University Drive & Sunrise Lakes Boulevard

16202 Existing AM Peak

10/12/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	85	14	29	30	7	4	28	1673	7	11	21	1906
Future Volume (vph)	85	14	29	30	7	4	28	1673	7	11	21	1906
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0		7.0	7.0			7.0	7.0
Lane Util. Factor	1.00	1.00			0.95		1.00	0.91			1.00	0.91
Frpb, ped/bikes	1.00	0.99			1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00			1.00	1.00
Frt	1.00	0.90			0.99		1.00	1.00			1.00	1.00
Flt Protected	0.95	1.00			0.96		0.95	1.00			0.95	1.00
Satd. Flow (prot)	1787	1540			3101		1736	5076			1749	5072
Flt Permitted	0.37	1.00			0.82		0.95	1.00			0.95	1.00
Satd. Flow (perm)	696	1540			2649		1736	5076			1749	5072
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	89	15	31	32	7	4	29	1761	7	12	22	2006
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	1
Lane Group Flow (vph)	89	46	0	0	43	0	29	1768	0	0	34	2034
Confl. Peds. (#/hr)			4	4			4		2		2	
Confl. Bikes (#/hr)			3			4						
Heavy Vehicles (%)	1%	14%	7%	7%	29%	0%	4%	2%	29%	9%	0%	2%
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA		Prot	Prot	NA
Protected Phases	7	4		3	8		5	2		1	1	6
Permitted Phases	4			8								
Actuated Green, G (s)	22.5	22.5			6.2		4.8	111.2			6.3	112.7
Effective Green, g (s)	22.5	22.5			6.2		4.8	111.2			6.3	112.7
Actuated g/C Ratio	0.14	0.14			0.04		0.03	0.70			0.04	0.70
Clearance Time (s)	6.0	6.0			6.0		7.0	7.0			7.0	7.0
Vehicle Extension (s)	1.5	2.0			2.0		1.5	3.0			1.5	3.0
Lane Grp Cap (vph)	168	216			102		52	3527			68	3572
v/s Ratio Prot	c0.03	0.03					0.02	0.35			c0.02	c0.40
v/s Ratio Perm	c0.04				0.02							
v/c Ratio	0.53	0.21			0.42		0.56	0.50			0.50	0.57
Uniform Delay, d1	62.3	60.9			75.1		76.6	11.4			75.3	11.7
Progression Factor	1.00	1.00			1.00		1.17	1.27			1.03	0.48
Incremental Delay, d2	1.4	0.2			1.0		6.1	0.4			1.3	0.4
Delay (s)	63.7	61.1			76.2		95.4	15.0			78.8	6.0
Level of Service	E	E			E		F	B			E	A
Approach Delay (s)		62.8			76.2			16.3				7.2
Approach LOS		E			E			B				A
Intersection Summary												
HCM 2000 Control Delay			13.8				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			160.0				Sum of lost time (s)			26.0		
Intersection Capacity Utilization			62.2%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

8: University Drive & Sunrise Lakes Boulevard

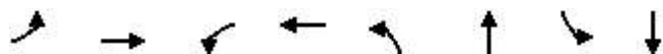
16202 Existing AM Peak

10/12/2022

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	28
Future Volume (vph)	28
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	29
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	4
Confl. Bikes (#/hr)	1
Heavy Vehicles (%)	4%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timings 8: University Drive & Sunrise Lakes Boulevard

16202 Existing AM Peak
10/12/2022

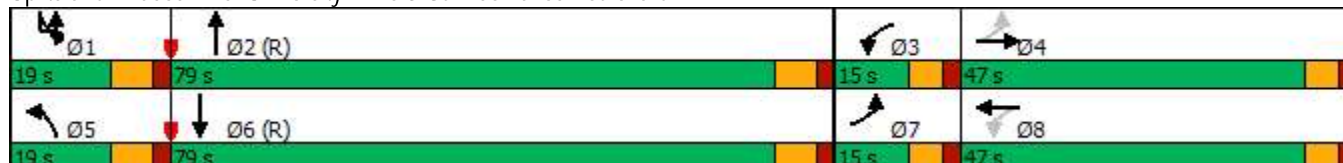


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	85	14	30	7	28	1673	21	1906
Future Volume (vph)	85	14	30	7	28	1673	21	1906
Lane Group Flow (vph)	89	46	0	43	29	1768	34	2035
Turn Type	pm+pt	NA	pm+pt	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8					
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	4.0	6.0	4.0	6.0	5.0	12.0	5.0	12.0
Minimum Split (s)	11.0	44.0	11.0	45.0	12.0	36.0	12.0	36.0
Total Split (s)	15.0	47.0	15.0	47.0	19.0	79.0	19.0	79.0
Total Split (%)	9.4%	29.4%	9.4%	29.4%	11.9%	49.4%	11.9%	49.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
v/c Ratio	0.55	0.22		0.35	0.39	0.49	0.43	0.55
Control Delay	74.5	62.0		81.4	98.9	15.4	86.1	5.9
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	74.5	62.0		81.4	98.9	15.4	86.1	5.9
Queue Length 50th (ft)	84	42		23	26	539	37	158
Queue Length 95th (ft)	144	85		46	m46	662	m49	79
Internal Link Dist (ft)		1140		233		1533		1742
Turn Bay Length (ft)					190		195	
Base Capacity (vph)	167	395		680	130	3610	131	3700
Starvation Cap Reductn	0	0		0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0
Reduced v/c Ratio	0.53	0.12		0.06	0.22	0.49	0.26	0.55

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 128 (80%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 115
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: University Drive & Sunrise Lakes Boulevard



HCM Signalized Intersection Capacity Analysis

8: University Drive & Sunrise Lakes Boulevard

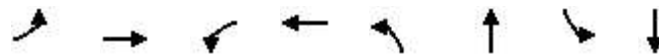
16202 Existing PM Peak

10/13/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	11	39	54	12	7	55	1881	17	45	1829	50
Future Volume (vph)	90	11	39	54	12	7	55	1881	17	45	1829	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	1.00			0.95		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	0.99			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.88			0.99		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00			0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1586			3180		1703	5123		1719	5114	
Flt Permitted	0.43	1.00			0.76		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	804	1586			2509		1703	5123		1719	5114	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	96	12	41	57	13	7	59	2001	18	48	1946	53
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	1	0
Lane Group Flow (vph)	96	53	0	0	77	0	59	2019	0	48	1998	0
Confl. Peds. (#/hr)							4		1	1		4
Confl. Bikes (#/hr)			5			5						
Heavy Vehicles (%)	2%	9%	3%	5%	8%	29%	6%	1%	12%	5%	1%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)	26.3	26.3			9.5		8.4	106.2		7.5	105.3	
Effective Green, g (s)	26.3	26.3			9.5		8.4	106.2		7.5	105.3	
Actuated g/C Ratio	0.16	0.16			0.06		0.05	0.66		0.05	0.66	
Clearance Time (s)	6.0	6.0			6.0		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	1.5	2.0			2.0		1.5	3.0		1.5	3.0	
Lane Grp Cap (vph)	197	260			148		89	3400		80	3365	
v/s Ratio Prot	c0.03	0.03					c0.03	c0.39		0.03	0.39	
v/s Ratio Perm	c0.05				0.03							
v/c Ratio	0.49	0.20			0.52		0.66	0.59		0.60	0.59	
Uniform Delay, d1	59.2	57.8			73.0		74.4	14.9		74.8	15.3	
Progression Factor	1.00	1.00			1.00		1.35	0.29		1.00	0.65	
Incremental Delay, d2	0.7	0.1			1.5		7.9	0.4		5.9	0.6	
Delay (s)	59.9	57.9			74.6		108.6	4.7		80.5	10.5	
Level of Service	E	E			E		F	A		F	B	
Approach Delay (s)		59.2			74.6			7.6			12.2	
Approach LOS		E			E			A			B	
Intersection Summary												
HCM 2000 Control Delay			12.7				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.60									
Actuated Cycle Length (s)			160.0				Sum of lost time (s)			26.0		
Intersection Capacity Utilization			68.2%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

Timings 8: University Drive & Sunrise Lakes Boulevard

16202 Existing PM Peak
10/13/2022

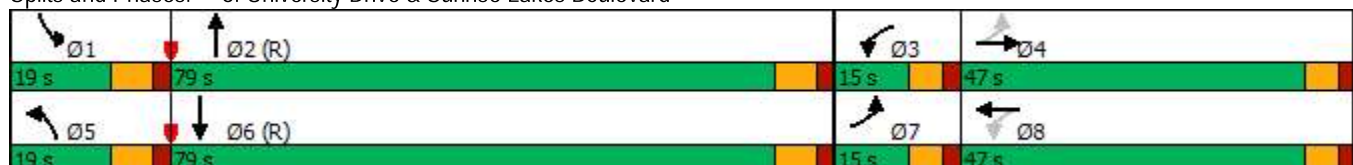


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	90	11	54	12	55	1881	45	1829
Future Volume (vph)	90	11	54	12	55	1881	45	1829
Lane Group Flow (vph)	96	53	0	77	59	2019	48	1999
Turn Type	pm+pt	NA	pm+pt	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases	4		8					
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	4.0	6.0	4.0	6.0	5.0	12.0	5.0	12.0
Minimum Split (s)	11.0	44.0	11.0	45.0	12.0	36.0	12.0	36.0
Total Split (s)	15.0	47.0	15.0	47.0	19.0	79.0	19.0	79.0
Total Split (%)	9.4%	29.4%	9.4%	29.4%	11.9%	49.4%	11.9%	49.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
v/c Ratio	0.49	0.20		0.52	0.59	0.59	0.53	0.59
Control Delay	67.0	58.5		84.8	111.9	4.8	88.6	11.0
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	67.0	58.5		84.8	111.9	4.8	88.6	11.0
Queue Length 50th (ft)	89	48		42	65	43	52	238
Queue Length 95th (ft)	149	92		71	m72	420	m79	168
Internal Link Dist (ft)		1140		233		1533		1742
Turn Bay Length (ft)					190		195	
Base Capacity (vph)	199	407		643	131	3448	129	3411
Starvation Cap Reductn	0	0		0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0
Reduced v/c Ratio	0.48	0.13		0.12	0.45	0.59	0.37	0.59

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 122 (76%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 115
 Control Type: Actuated-Coordinated
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: University Drive & Sunrise Lakes Boulevard



HCM 6th TWSC
9: E Aragon Boulevard & Inverrary Boulevard W

16202 Existing AM Peak

10/12/2022

Intersection						
Int Delay, s/veh	7.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	91	3	0	18	15	55
Future Vol, veh/h	91	3	0	18	15	55
Conflicting Peds, #/hr	1	0	0	1	2	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	0	0	0	0	0
Mvmt Flow	108	4	0	21	18	65
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	22	0	-	0	234	13
Stage 1	-	-	-	-	12	-
Stage 2	-	-	-	-	222	-
Critical Hdwy	4.12	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.218	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1593	-	-	-	759	1073
Stage 1	-	-	-	-	1016	-
Stage 2	-	-	-	-	820	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1591	-	-	-	706	1071
Mov Cap-2 Maneuver	-	-	-	-	706	-
Stage 1	-	-	-	-	946	-
Stage 2	-	-	-	-	819	-
Approach	EB	WB		SB		
HCM Control Delay, s	7.2	0		9.1		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1591	-	-	-	964	
HCM Lane V/C Ratio	0.068	-	-	-	0.086	
HCM Control Delay (s)	7.4	0	-	-	9.1	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0.2	-	-	-	0.3	

Intersection						
Int Delay, s/veh	7.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	94	1	2	14	19	96
Future Vol, veh/h	94	1	2	14	19	96
Conflicting Peds, #/hr	0	0	0	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	0	0	0	0	1
Mvmt Flow	102	1	2	15	21	104

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	17	0	0	216	10
Stage 1	-	-	-	10	-
Stage 2	-	-	-	206	-
Critical Hdwy	4.12	-	-	6.4	6.21
Critical Hdwy Stg 1	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	5.4	-
Follow-up Hdwy	2.218	-	-	3.5	3.309
Pot Cap-1 Maneuver	1600	-	-	777	1074
Stage 1	-	-	-	1018	-
Stage 2	-	-	-	833	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1600	-	-	727	1074
Mov Cap-2 Maneuver	-	-	-	727	-
Stage 1	-	-	-	953	-
Stage 2	-	-	-	833	-

Approach	EB	WB	SB
HCM Control Delay, s	7.3	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1600	-	-	-	995
HCM Lane V/C Ratio	0.064	-	-	-	0.126
HCM Control Delay (s)	7.4	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0.4

HCM 6th TWSC
10: Inverrary Boulevard W & Sunrise Lakes Drive

16202 Existing AM Peak
10/12/2022

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	2	1	0	3	0	52	0	103	4	79	67	0
Future Vol, veh/h	2	1	0	3	0	52	0	103	4	79	67	0
Conflicting Peds, #/hr	1	0	0	0	0	1	1	0	2	2	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	2	0	2	0	6	0	0
Mvmt Flow	2	1	0	4	0	61	0	121	5	93	79	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	421	394	80	392	392	127	80	0	0	128	0	0
Stage 1	266	266	-	126	126	-	-	-	-	-	-	-
Stage 2	155	128	-	266	266	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.22	4.1	-	-	4.16	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.318	2.2	-	-	2.254	-	-
Pot Cap-1 Maneuver	546	546	986	571	547	923	1531	-	-	1434	-	-
Stage 1	744	692	-	883	796	-	-	-	-	-	-	-
Stage 2	852	794	-	744	692	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	482	507	985	540	508	920	1530	-	-	1431	-	-
Mov Cap-2 Maneuver	482	507	-	540	508	-	-	-	-	-	-	-
Stage 1	743	644	-	881	794	-	-	-	-	-	-	-
Stage 2	795	792	-	692	644	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.4		9.4		0		4.2	
HCM LOS	B		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1530	-	-	490 886	1431	-	-
HCM Lane V/C Ratio	-	-	-	0.007 0.073	0.065	-	-
HCM Control Delay (s)	0	-	-	12.4 9.4	7.7	0	-
HCM Lane LOS	A	-	-	B A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0 0.2	0.2	-	-

HCM 6th TWSC
10: Inverrary Boulevard W & Sunrise Lakes Drive

16202 Existing PM Peak
10/13/2022

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	0	0	0	5	1	41	0	96	3	62	98	0
Future Vol, veh/h	0	0	0	5	1	41	0	96	3	62	98	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	0	0	2	0	2	33	8	1	0
Mvmt Flow	0	0	0	6	1	49	0	114	4	74	117	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	406	384	117	382	382	117	117	0	0	119	0	0
Stage 1	265	265	-	117	117	-	-	-	-	-	-	-
Stage 2	141	119	-	265	265	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.22	4.1	-	-	4.18	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.318	2.2	-	-	2.272	-	-
Pot Cap-1 Maneuver	559	553	941	580	554	935	1484	-	-	1432	-	-
Stage 1	745	693	-	892	803	-	-	-	-	-	-	-
Stage 2	867	801	-	745	693	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	506	522	941	555	523	934	1484	-	-	1431	-	-
Mov Cap-2 Maneuver	506	522	-	555	523	-	-	-	-	-	-	-
Stage 1	745	655	-	891	802	-	-	-	-	-	-	-
Stage 2	820	800	-	704	655	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	9.5	0	3
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1484	-	-	-	857	1431	-
HCM Lane V/C Ratio	-	-	-	-	0.065	0.052	-
HCM Control Delay (s)	0	-	-	0	9.5	7.7	0
HCM Lane LOS	A	-	-	A	A	A	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2	0.2	-

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	0	25	15	21	29	0	19	0	57	0	1	1
Future Vol, veh/h	0	25	15	21	29	0	19	0	57	0	1	1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	0	0	20	0	3	0	16	0	2	0	0	0
Mvmt Flow	0	30	18	25	35	0	23	0	69	0	1	1
Number of Lanes	0	1	0	0	1	0	1	0	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	7.2	7.6	7.4	7
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	0%	42%	0%
Vol Thru, %	0%	0%	62%	58%	50%
Vol Right, %	0%	100%	38%	0%	50%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	19	57	40	50	2
LT Vol	19	0	0	21	0
Through Vol	0	0	25	29	1
RT Vol	0	57	15	0	1
Lane Flow Rate	23	69	48	60	2
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.035	0.077	0.052	0.07	0.003
Departure Headway (Hd)	5.464	4.024	3.88	4.18	3.958
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	653	885	911	849	893
Service Time	3.213	1.772	1.954	2.247	2.033
HCM Lane V/C Ratio	0.035	0.078	0.053	0.071	0.002
HCM Control Delay	8.4	7.1	7.2	7.6	7
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.1	0.2	0.2	0.2	0

Intersection

Intersection Delay, s/veh 7.5

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	31	17	60	24	0	15	0	51	0	1	1
Future Vol, veh/h	0	31	17	60	24	0	15	0	51	0	1	1
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, %	0	3	18	2	0	0	7	0	0	0	0	100
Mvmt Flow	0	34	18	65	26	0	16	0	55	0	1	1
Number of Lanes	0	1	0	0	1	0	1	0	1	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			2			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			1			1			1		
HCM Control Delay	7.2			7.8			7.4			7.1		
HCM LOS	A			A			A			A		

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	0%	71%	0%
Vol Thru, %	0%	0%	65%	29%	50%
Vol Right, %	0%	100%	35%	0%	50%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	15	51	48	84	2
LT Vol	15	0	0	60	0
Through Vol	0	0	31	24	1
RT Vol	0	51	17	0	1
Lane Flow Rate	16	55	52	91	2
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.024	0.062	0.057	0.108	0.002
Departure Headway (Hd)	5.369	4.047	3.932	4.241	4.002
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	662	875	901	840	879
Service Time	3.143	1.82	2	2.294	2.097
HCM Lane V/C Ratio	0.024	0.063	0.058	0.108	0.002
HCM Control Delay	8.3	7.1	7.2	7.8	7.1
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.1	0.2	0.2	0.4	0

Intersection						
Int Delay, s/veh	4.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	54	30	58	2	0	114
Future Vol, veh/h	54	30	58	2	0	114
Conflicting Peds, #/hr	3	3	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	9	7	2	50	0	3
Mvmt Flow	65	36	70	2	0	137

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	146	4	138
Stage 1	1	-	-
Stage 2	145	-	-
Critical Hdwy	6.49	6.27	4.12
Critical Hdwy Stg 1	5.49	-	-
Critical Hdwy Stg 2	5.49	-	-
Follow-up Hdwy	3.581	3.363	2.218
Pot Cap-1 Maneuver	830	1065	1446
Stage 1	1004	-	-
Stage 2	865	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	789	1061	1445
Mov Cap-2 Maneuver	789	-	-
Stage 1	955	-	-
Stage 2	864	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.7	7.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1445	-	869	-	-
HCM Lane V/C Ratio	0.048	-	0.116	-	-
HCM Control Delay (s)	7.6	-	9.7	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.4	-	-

Intersection						
Int Delay, s/veh	6.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	114	54	37	7	5	88
Future Vol, veh/h	114	54	37	7	5	88
Conflicting Peds, #/hr	2	1	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	4	0	3	0	0	2
Mvmt Flow	131	62	43	8	6	101

Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	102	7	107	0	-	0
Stage 1	6	-	-	-	-	-
Stage 2	96	-	-	-	-	-
Critical Hdwy	6.44	6.2	4.13	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.3	2.227	-	-	-
Pot Cap-1 Maneuver	891	1081	1478	-	-	-
Stage 1	1012	-	-	-	-	-
Stage 2	923	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	865	1080	1478	-	-	-
Mov Cap-2 Maneuver	865	-	-	-	-	-
Stage 1	983	-	-	-	-	-
Stage 2	923	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.9	6.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1478	-	924	-	-
HCM Lane V/C Ratio	0.029	-	0.209	-	-
HCM Control Delay (s)	7.5	-	9.9	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	-	-

Future without Project

HCM Signalized Intersection Capacity Analysis

1: W Oakland Park Boulevard & University Drive

16202 Future without Project AM Peak

10/13/2022

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	323	973	234	16	293	945	157	16	216	1247	346	214
Future Volume (vph)	323	973	234	16	293	945	157	16	216	1247	346	214
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0		7.0	7.0	7.0		7.0	7.0	7.0	7.0
Lane Util. Factor	0.97	0.91	1.00		0.97	0.91	1.00		0.97	0.91	1.00	0.97
Frpb, ped/bikes	1.00	1.00	0.98		1.00	1.00	0.98		1.00	1.00	0.98	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	1.00	0.85		1.00	1.00	0.85	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00	0.95
Satd. Flow (prot)	3400	5036	1505		3436	5036	1541		3376	5085	1563	3467
Flt Permitted	0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00	0.95
Satd. Flow (perm)	3400	5036	1505		3436	5036	1541		3376	5085	1563	3467
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	347	1046	252	17	315	1016	169	17	232	1341	372	230
RTOR Reduction (vph)	0	0	148	0	0	0	127	0	0	0	88	0
Lane Group Flow (vph)	347	1046	104	0	332	1016	42	0	249	1341	284	230
Confl. Peds. (#/hr)	3		7	5	7		3	4	13		9	9
Confl. Bikes (#/hr)			2				2					
Heavy Vehicles (%)	3%	3%	5%	0%	2%	3%	3%	0%	4%	2%	1%	1%
Turn Type	Prot	NA	Perm	Prot	Prot	NA	Perm	Prot	Prot	NA	Perm	Prot
Protected Phases	7	4		3	3	8		5	5	2		1
Permitted Phases			4				8				2	
Actuated Green, G (s)	18.3	40.5	40.5		17.8	40.0	40.0		15.7	59.2	59.2	14.5
Effective Green, g (s)	18.3	40.5	40.5		17.8	40.0	40.0		15.7	59.2	59.2	14.5
Actuated g/C Ratio	0.11	0.25	0.25		0.11	0.25	0.25		0.10	0.37	0.37	0.09
Clearance Time (s)	7.0	7.0	7.0		7.0	7.0	7.0		7.0	7.0	7.0	7.0
Vehicle Extension (s)	1.5	3.0	3.0		1.5	3.0	3.0		1.5	3.0	3.0	1.5
Lane Grp Cap (vph)	388	1274	380		382	1259	385		331	1881	578	314
v/s Ratio Prot	c0.10	c0.21			0.10	0.20			c0.07	0.26		0.07
v/s Ratio Perm			0.07				0.03				0.18	
v/c Ratio	0.89	0.82	0.27		0.87	0.81	0.11		0.75	0.71	0.49	0.73
Uniform Delay, d1	69.9	56.3	48.0		70.0	56.4	46.3		70.3	43.1	38.8	70.9
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00		1.20	0.84	0.91	1.00
Incremental Delay, d2	21.6	4.4	0.4		17.9	3.9	0.1		7.4	2.1	2.6	7.4
Delay (s)	91.5	60.7	48.3		87.9	60.3	46.4		91.6	38.1	38.0	78.3
Level of Service	F	E	D		F	E	D		F	D	D	E
Approach Delay (s)		65.3				64.8				44.9		
Approach LOS		E				E				D		
Intersection Summary												
HCM 2000 Control Delay			56.3									
HCM 2000 Volume to Capacity ratio			0.85									
Actuated Cycle Length (s)			160.0							28.0		
Intersection Capacity Utilization			94.1%							F		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

1: W Oakland Park Boulevard & University Drive

16202 Future without Project AM Peak

10/13/2022



Movement	SBT	SBR
Lane Configurations	↑↑↑↑	↑
Traffic Volume (vph)	1516	321
Future Volume (vph)	1516	321
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.0	7.0
Lane Util. Factor	0.91	1.00
Frpb, ped/bikes	1.00	0.97
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	5136	1540
Flt Permitted	1.00	1.00
Satd. Flow (perm)	5136	1540
Peak-hour factor, PHF	0.93	0.93
Adj. Flow (vph)	1630	345
RTOR Reduction (vph)	0	143
Lane Group Flow (vph)	1630	202
Confl. Peds. (#/hr)		13
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	1%	2%
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	58.0	58.0
Effective Green, g (s)	58.0	58.0
Actuated g/C Ratio	0.36	0.36
Clearance Time (s)	7.0	7.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	1861	558
v/s Ratio Prot	c0.32	
v/s Ratio Perm		0.13
v/c Ratio	0.88	0.36
Uniform Delay, d1	47.6	37.4
Progression Factor	1.00	1.00
Incremental Delay, d2	6.1	1.8
Delay (s)	53.8	39.2
Level of Service	D	D
Approach Delay (s)	54.1	
Approach LOS	D	
Intersection Summary		

Timings

16202 Future without Project AM Peak

1: W Oakland Park Boulevard & University Drive

10/13/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	323	973	234	293	945	157	216	1247	346	214	1516	321
Future Volume (vph)	323	973	234	293	945	157	216	1247	346	214	1516	321
Lane Group Flow (vph)	347	1046	252	332	1016	169	249	1341	372	230	1630	345
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	12.0	48.0	48.0	12.0	47.0	47.0	12.0	47.0	47.0	12.0	47.0	47.0
Total Split (s)	26.0	50.0	50.0	26.0	50.0	50.0	30.0	54.0	54.0	30.0	54.0	54.0
Total Split (%)	16.3%	31.3%	31.3%	16.3%	31.3%	31.3%	18.8%	33.8%	33.8%	18.8%	33.8%	33.8%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio	0.90	0.82	0.48	0.87	0.81	0.33	0.75	0.71	0.56	0.73	0.88	0.49
Control Delay	95.2	62.4	14.8	91.9	61.8	7.6	96.8	39.3	26.5	84.4	54.3	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	95.2	62.4	14.8	91.9	61.8	7.6	96.8	39.3	26.5	84.4	54.3	16.8
Queue Length 50th (ft)	186	376	44	177	362	0	142	189	70	123	600	94
Queue Length 95th (ft)	#269	429	129	#248	415	60	187	371	241	166	#755	206
Internal Link Dist (ft)		950			3832			1742			882	
Turn Bay Length (ft)	260		220	260		370	245		120	260		280
Base Capacity (vph)	403	1353	549	408	1353	537	485	1881	666	498	1862	701
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.77	0.46	0.81	0.75	0.31	0.51	0.71	0.56	0.46	0.88	0.49

Intersection Summary

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 102 (64%), Referenced to phase 2:NBT and 6:SBT, Start of Green

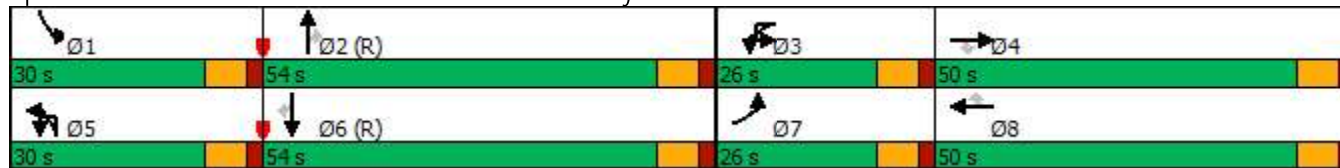
Natural Cycle: 130

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: W Oakland Park Boulevard & University Drive



HCM Signalized Intersection Capacity Analysis

1: W Oakland Park Boulevard & University Drive

16202 Future without Project PM Peak

10/14/2022

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU
Lane Configurations												
Traffic Volume (vph)	401	914	312	19	371	1027	222	23	251	1436	293	17
Future Volume (vph)	401	914	312	19	371	1027	222	23	251	1436	293	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0		7.0	7.0	7.0		7.0	7.0	7.0	
Lane Util. Factor	0.97	0.91	1.00		0.97	0.91	1.00		0.97	0.91	1.00	
Frpb, ped/bikes	1.00	1.00	0.98		1.00	1.00	0.97		1.00	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Frt	1.00	1.00	0.85		1.00	1.00	0.85		1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00	
Satd. Flow (prot)	3467	5085	1575		3502	5136	1536		3470	5136	1553	
Flt Permitted	0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	1.00	
Satd. Flow (perm)	3467	5085	1575		3502	5136	1536		3470	5136	1553	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	401	914	312	19	371	1027	222	23	251	1436	293	17
RTOR Reduction (vph)	0	0	134	0	0	0	142	0	0	0	78	0
Lane Group Flow (vph)	401	914	178	0	390	1027	80	0	274	1436	215	0
Confl. Peds. (#/hr)	12		9	2	9		12	8	7		6	6
Confl. Bikes (#/hr)			3				4					
Heavy Vehicles (%)	1%	2%	0%	0%	0%	1%	2%	0%	1%	1%	2%	0%
Turn Type	Prot	NA	Perm	Prot	Prot	NA	Perm	Prot	Prot	NA	Perm	Prot
Protected Phases	7	4		3	3	8		5	5	2		1
Permitted Phases			4				8				2	
Actuated Green, G (s)	21.8	39.6	39.6		21.2	39.0	39.0		16.3	58.4	58.4	
Effective Green, g (s)	21.8	39.6	39.6		21.2	39.0	39.0		16.3	58.4	58.4	
Actuated g/C Ratio	0.14	0.25	0.25		0.13	0.24	0.24		0.10	0.36	0.36	
Clearance Time (s)	7.0	7.0	7.0		7.0	7.0	7.0		7.0	7.0	7.0	
Vehicle Extension (s)	1.5	3.0	3.0		1.5	3.0	3.0		1.5	3.0	3.0	
Lane Grp Cap (vph)	472	1258	389		464	1251	374		353	1874	566	
v/s Ratio Prot	c0.12	0.18			0.11	c0.20			c0.08	c0.28		
v/s Ratio Perm			0.11				0.05				0.14	
v/c Ratio	0.85	0.73	0.46		0.84	0.82	0.21		0.78	0.77	0.38	
Uniform Delay, d1	67.5	55.2	51.1		67.7	57.2	48.3		70.1	44.8	37.4	
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00		1.16	1.06	1.32	
Incremental Delay, d2	12.9	2.1	0.9		12.4	4.5	0.3		7.7	2.5	1.6	
Delay (s)	80.4	57.4	51.9		80.2	61.6	48.6		88.8	49.9	51.0	
Level of Service	F		D		F	E	D		F	D	D	
Approach Delay (s)		62.0				64.3				55.4		
Approach LOS		E				E				E		
Intersection Summary												
HCM 2000 Control Delay			57.9									
HCM 2000 Volume to Capacity ratio			0.82									
Actuated Cycle Length (s)			160.0							28.0		
Intersection Capacity Utilization			100.2%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
1: W Oakland Park Boulevard & University Drive

16202 Future without Project PM Peak

10/14/2022

			
Movement	SBL	SBT	SBR
Lane Configurations			
Traffic Volume (vph)	177	1312	261
Future Volume (vph)	177	1312	261
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0
Lane Util. Factor	0.97	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00
Frt	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00
Satd. Flow (prot)	3470	5085	1551
Flt Permitted	0.95	1.00	1.00
Satd. Flow (perm)	3470	5085	1551
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	177	1312	261
RTOR Reduction (vph)	0	0	137
Lane Group Flow (vph)	194	1312	124
Confl. Peds. (#/hr)	6		7
Confl. Bikes (#/hr)			
Heavy Vehicles (%)	1%	2%	2%
Turn Type	Prot	NA	Perm
Protected Phases	1	6	
Permitted Phases			6
Actuated Green, G (s)	12.8	54.9	54.9
Effective Green, g (s)	12.8	54.9	54.9
Actuated g/C Ratio	0.08	0.34	0.34
Clearance Time (s)	7.0	7.0	7.0
Vehicle Extension (s)	1.5	3.0	3.0
Lane Grp Cap (vph)	277	1744	532
v/s Ratio Prot	0.06	0.26	
v/s Ratio Perm			0.08
v/c Ratio	0.70	0.75	0.23
Uniform Delay, d1	71.7	46.5	37.5
Progression Factor	1.00	1.00	1.00
Incremental Delay, d2	6.4	3.1	1.0
Delay (s)	78.1	49.6	38.5
Level of Service	E	D	D
Approach Delay (s)		51.1	
Approach LOS		D	
Intersection Summary			

Timings

16202 Future without Project PM Peak

1: W Oakland Park Boulevard & University Drive

10/14/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	401	914	312	371	1027	222	251	1436	293	177	1312	261
Future Volume (vph)	401	914	312	371	1027	222	251	1436	293	177	1312	261
Lane Group Flow (vph)	401	914	312	390	1027	222	274	1436	293	194	1312	261
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	12.0	48.0	48.0	12.0	47.0	47.0	12.0	47.0	47.0	12.0	47.0	47.0
Total Split (s)	32.0	48.0	48.0	32.0	48.0	48.0	27.0	53.0	53.0	27.0	53.0	53.0
Total Split (%)	20.0%	30.0%	30.0%	20.0%	30.0%	30.0%	16.9%	33.1%	33.1%	16.9%	33.1%	33.1%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio	0.85	0.73	0.60	0.84	0.82	0.43	0.78	0.77	0.45	0.70	0.75	0.39
Control Delay	84.6	59.0	26.8	84.0	63.3	12.5	93.5	51.2	32.9	85.1	50.9	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.6	59.0	26.8	84.0	63.3	12.5	93.5	51.2	32.9	85.1	50.9	11.7
Queue Length 50th (ft)	213	319	121	207	369	27	156	319	105	103	457	38
Queue Length 95th (ft)	270	373	230	262	425	104	206	488	230	145	549	123
Internal Link Dist (ft)		950			3832			1742			882	
Turn Bay Length (ft)	260		220	260		370	245		120	260		280
Base Capacity (vph)	541	1314	538	547	1318	534	433	1877	645	433	1747	670
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.70	0.58	0.71	0.78	0.42	0.63	0.77	0.45	0.45	0.75	0.39

Intersection Summary

Cycle Length: 160

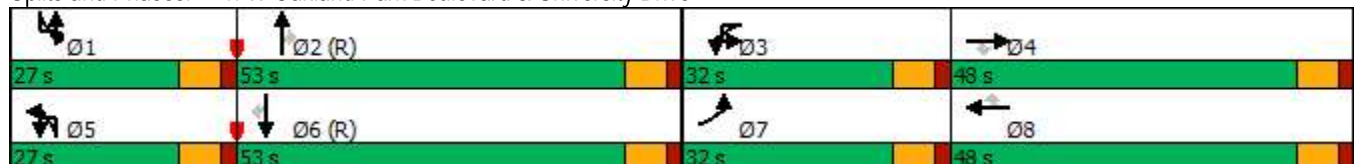
Actuated Cycle Length: 160

Offset: 99 (62%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Splits and Phases: 1: W Oakland Park Boulevard & University Drive



HCM Signalized Intersection Capacity Analysis

2: W Oakland Park Boulevard & Inverrary Boulevard W

16202 Future without Project AM Peak

10/13/2022

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		  				  				 		
Traffic Volume (vph)	50	1278	25	47	44	1302	253	29	59	84	252	39
Future Volume (vph)	50	1278	25	47	44	1302	253	29	59	84	252	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0	7.0	7.0		6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	0.91			1.00	0.91	1.00		1.00	1.00	0.95	0.95
Frpb, ped/bikes	1.00	1.00			1.00	1.00	0.98		1.00	0.98	1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00		1.00	1.00	1.00	1.00
Frt	1.00	1.00			1.00	1.00	0.85		1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00			0.95	1.00	1.00		0.98	1.00	0.95	0.96
Satd. Flow (prot)	1736	5070			1805	5036	1532		1832	1587	1633	1658
Flt Permitted	0.95	1.00			0.13	1.00	1.00		0.98	1.00	0.95	0.96
Satd. Flow (perm)	1736	5070			253	5036	1532		1832	1587	1633	1658
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	56	1436	28	53	49	1463	284	33	66	94	283	44
RTOR Reduction (vph)	0	1	0	0	0	0	39	0	0	87	0	0
Lane Group Flow (vph)	56	1463	0	0	102	1463	245	0	99	7	161	166
Confl. Peds. (#/hr)	1		1	1	1		1	2		4	4	
Confl. Bikes (#/hr)												
Heavy Vehicles (%)	4%	2%	0%	0%	0%	3%	3%	0%	3%	0%	5%	5%
Turn Type	Prot	NA		pm+pt	pm+pt	NA	Perm	Split	NA	Perm	Split	NA
Protected Phases	1	6		5	5	2		4	4		3	3
Permitted Phases				2	2		2			4		
Actuated Green, G (s)	8.7	108.7			116.0	108.0	108.0		14.2	14.2	23.1	23.1
Effective Green, g (s)	8.7	108.7			116.0	108.0	108.0		14.2	14.2	23.1	23.1
Actuated g/C Ratio	0.05	0.60			0.64	0.60	0.60		0.08	0.08	0.13	0.13
Clearance Time (s)	7.0	7.0			7.0	7.0	7.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	1.5	3.0			1.5	3.0	3.0		2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	83	3061			232	3021	919		144	125	209	212
v/s Ratio Prot	c0.03	0.29			0.02	c0.29			c0.05		0.10	c0.10
v/s Ratio Perm					0.26		0.16			0.00		
v/c Ratio	0.67	0.48			0.44	0.48	0.27		0.69	0.06	0.77	0.78
Uniform Delay, d1	84.3	19.9			14.1	20.3	17.1		80.7	76.7	75.9	76.0
Progression Factor	1.00	1.00			1.11	0.64	0.59		1.00	1.00	1.00	1.00
Incremental Delay, d2	15.7	0.5			0.5	0.5	0.7		10.3	0.1	14.7	15.8
Delay (s)	99.9	20.4			16.2	13.5	10.8		91.1	76.8	90.6	91.8
Level of Service	F	C			B	B	B		F	E	F	F
Approach Delay (s)		23.3				13.3			84.1			81.9
Approach LOS		C				B			F			F
Intersection Summary												
HCM 2000 Control Delay			29.9									
HCM 2000 Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			180.0						26.0			
Intersection Capacity Utilization			70.4%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: W Oakland Park Boulevard & Inverrary Boulevard W

16202 Future without Project AM Peak

10/13/2022

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	227
Future Volume (vph)	227
Ideal Flow (vphpl)	1900
Total Lost time (s)	6.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.98
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1570
Flt Permitted	1.00
Satd. Flow (perm)	1570
Peak-hour factor, PHF	0.89
Adj. Flow (vph)	255
RTOR Reduction (vph)	222
Lane Group Flow (vph)	33
Confl. Peds. (#/hr)	2
Confl. Bikes (#/hr)	2
Heavy Vehicles (%)	1%
Turn Type	Perm
Protected Phases	
Permitted Phases	3
Actuated Green, G (s)	23.1
Effective Green, g (s)	23.1
Actuated g/C Ratio	0.13
Clearance Time (s)	6.0
Vehicle Extension (s)	2.0
Lane Grp Cap (vph)	201
v/s Ratio Prot	
v/s Ratio Perm	0.02
v/c Ratio	0.16
Uniform Delay, d1	69.8
Progression Factor	1.00
Incremental Delay, d2	0.1
Delay (s)	70.0
Level of Service	E
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timings

16202 Future without Project AM Peak

2: W Oakland Park Boulevard & Inverrary Boulevard W

10/13/2022

											
Lane Group	EBL	EBT	WBU	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	50	1278	47	44	1302	253	59	84	252	39	227
Future Volume (vph)	50	1278	47	44	1302	253	59	84	252	39	227
Lane Group Flow (vph)	56	1464	0	102	1463	284	99	94	161	166	255
Turn Type	Prot	NA	pm+pt	pm+pt	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	1	6	5	5	2		4		3	3	
Permitted Phases			2	2		2		4			3
Detector Phase	1	6	5	5	2	2	4	4	3	3	3
Switch Phase											
Minimum Initial (s)	5.0	10.0	4.0	4.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	12.0	43.0	12.0	12.0	46.0	46.0	45.0	45.0	42.0	42.0	42.0
Total Split (s)	25.0	61.0	25.0	25.0	61.0	61.0	49.0	49.0	45.0	45.0	45.0
Total Split (%)	13.9%	33.9%	13.9%	13.9%	33.9%	33.9%	27.2%	27.2%	25.0%	25.0%	25.0%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0		7.0	7.0	7.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.60	0.48		0.44	0.48	0.29	0.69	0.43	0.77	0.78	0.60
Control Delay	107.9	22.1		18.4	14.6	8.6	103.6	15.6	98.1	99.1	12.9
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	107.9	22.1		18.4	14.6	8.6	103.6	15.6	98.1	99.1	12.9
Queue Length 50th (ft)	66	339		28	185	50	116	0	196	203	0
Queue Length 95th (ft)	117	481		65	252	97	179	48	272	280	81
Internal Link Dist (ft)		3832			1714		275			517	
Turn Bay Length (ft)	280			150		130		50	250		350
Base Capacity (vph)	173	3063		328	3061	969	437	457	353	359	540
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.48		0.31	0.48	0.29	0.23	0.21	0.46	0.46	0.47

Intersection Summary

Cycle Length: 180

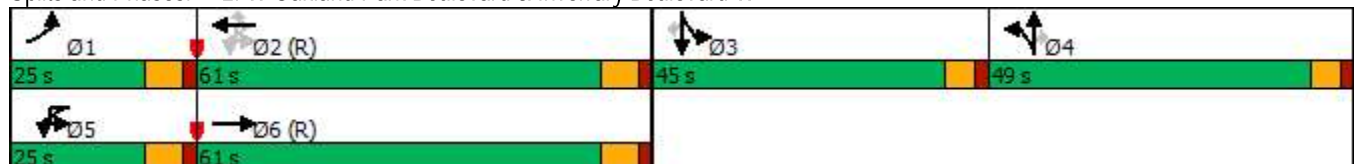
Actuated Cycle Length: 180

Offset: 144 (80%), Referenced to phase 2:WBTL and 6:EBT, Start of Green

Natural Cycle: 145

Control Type: Actuated-Coordinated

Splits and Phases: 2: W Oakland Park Boulevard & Inverrary Boulevard W



HCM Signalized Intersection Capacity Analysis

2: W Oakland Park Boulevard & Inverrary Boulevard W

16202 Future without Project PM Peak

10/14/2022

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		  				  				 		
Traffic Volume (vph)	125	1400	53	38	64	1353	293	32	60	50	268	56
Future Volume (vph)	125	1400	53	38	64	1353	293	32	60	50	268	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0			7.0	7.0	7.0		6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	0.91			1.00	0.91	1.00		1.00	1.00	0.95	0.95
Frpb, ped/bikes	1.00	1.00			1.00	1.00	0.98		1.00	0.98	1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00		1.00	1.00	1.00	1.00
Frt	1.00	0.99			1.00	1.00	0.85		1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00			0.95	1.00	1.00		0.98	1.00	0.95	0.97
Satd. Flow (prot)	1770	5056			1805	5136	1566		1868	1496	1681	1714
Flt Permitted	0.95	1.00			0.14	1.00	1.00		0.98	1.00	0.95	0.97
Satd. Flow (perm)	1770	5056			275	5136	1566		1868	1496	1681	1714
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	126	1414	54	38	65	1367	296	32	61	51	271	57
RTOR Reduction (vph)	0	1	0	0	0	0	48	0	0	47	0	0
Lane Group Flow (vph)	126	1467	0	0	103	1367	248	0	93	4	163	165
Confl. Peds. (#/hr)			2		2							
Confl. Bikes (#/hr)			1				1			2		
Heavy Vehicles (%)	2%	2%	0%	0%	0%	1%	1%	0%	0%	6%	2%	2%
Turn Type	Prot	NA		pm+pt	pm+pt	NA	Perm	Split	NA	Perm	Split	NA
Protected Phases	1	6		5	5	2		4	4		3	3
Permitted Phases				2	2		2			4		
Actuated Green, G (s)	17.4	110.0			109.4	101.0	101.0		13.4	13.4	22.2	22.2
Effective Green, g (s)	17.4	110.0			109.4	101.0	101.0		13.4	13.4	22.2	22.2
Actuated g/C Ratio	0.10	0.61			0.61	0.56	0.56		0.07	0.07	0.12	0.12
Clearance Time (s)	7.0	7.0			7.0	7.0	7.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	1.5	3.0			1.5	3.0	3.0		2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	171	3089			238	2881	878		139	111	207	211
v/s Ratio Prot	c0.07	c0.29			0.02	0.27			c0.05		c0.10	0.10
v/s Ratio Perm					0.24		0.16			0.00		
v/c Ratio	0.74	0.47			0.43	0.47	0.28		0.67	0.03	0.79	0.78
Uniform Delay, d1	79.1	19.2			15.5	23.6	20.6		81.1	77.3	76.6	76.6
Progression Factor	1.00	1.00			1.17	1.06	1.15		1.00	1.00	1.00	1.00
Incremental Delay, d2	13.3	0.5			0.4	0.5	0.8		9.1	0.0	16.5	15.8
Delay (s)	92.3	19.7			18.6	25.7	24.4		90.2	77.3	93.1	92.4
Level of Service	F	B			B	C	C		F	E	F	F
Approach Delay (s)		25.4				25.1			85.7			85.0
Approach LOS		C				C			F			F
Intersection Summary												
HCM 2000 Control Delay			34.9									
HCM 2000 Volume to Capacity ratio			0.57									
Actuated Cycle Length (s)			180.0						26.0			
Intersection Capacity Utilization			69.4%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: W Oakland Park Boulevard & Inverrary Boulevard W

16202 Future without Project PM Peak

10/14/2022

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	169
Future Volume (vph)	169
Ideal Flow (vphpl)	1900
Total Lost time (s)	6.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.99
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1577
Flt Permitted	1.00
Satd. Flow (perm)	1577
Peak-hour factor, PHF	0.99
Adj. Flow (vph)	171
RTOR Reduction (vph)	150
Lane Group Flow (vph)	21
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	1
Heavy Vehicles (%)	1%
Turn Type	Perm
Protected Phases	
Permitted Phases	3
Actuated Green, G (s)	22.2
Effective Green, g (s)	22.2
Actuated g/C Ratio	0.12
Clearance Time (s)	6.0
Vehicle Extension (s)	2.0
Lane Grp Cap (vph)	194
v/s Ratio Prot	
v/s Ratio Perm	0.01
v/c Ratio	0.11
Uniform Delay, d1	70.1
Progression Factor	1.00
Incremental Delay, d2	0.1
Delay (s)	70.2
Level of Service	E
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timings

16202 Future without Project PM Peak

2: W Oakland Park Boulevard & Inverrary Boulevard W

10/14/2022

											
Lane Group	EBL	EBT	WBU	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	125	1400	38	64	1353	293	60	50	268	56	169
Future Volume (vph)	125	1400	38	64	1353	293	60	50	268	56	169
Lane Group Flow (vph)	126	1468	0	103	1367	296	93	51	163	165	171
Turn Type	Prot	NA	pm+pt	pm+pt	NA	Perm	NA	Perm	Split	NA	Perm
Protected Phases	1	6	5	5	2		4		3	3	
Permitted Phases			2	2		2		4			3
Detector Phase	1	6	5	5	2	2	4	4	3	3	3
Switch Phase											
Minimum Initial (s)	5.0	10.0	4.0	4.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	12.0	43.0	12.0	12.0	46.0	46.0	45.0	45.0	42.0	42.0	42.0
Total Split (s)	23.0	66.0	23.0	23.0	66.0	66.0	47.0	47.0	44.0	44.0	44.0
Total Split (%)	12.8%	36.7%	12.8%	12.8%	36.7%	36.7%	26.1%	26.1%	24.4%	24.4%	24.4%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0		7.0	7.0	7.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.74	0.48		0.43	0.47	0.32	0.67	0.25	0.79	0.78	0.50
Control Delay	103.1	21.4		19.0	27.8	18.1	103.2	2.8	101.1	100.0	13.2
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	103.1	21.4		19.0	27.8	18.1	103.2	2.8	101.1	100.0	13.2
Queue Length 50th (ft)	147	328		48	342	119	109	0	201	203	0
Queue Length 95th (ft)	221	482		99	413	192	173	0	281	283	73
Internal Link Dist (ft)		3832			1714		275			517	
Turn Bay Length (ft)	280			150		130		50	250		350
Base Capacity (vph)	182	3087		315	2881	925	425	421	354	361	468
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.48		0.33	0.47	0.32	0.22	0.12	0.46	0.46	0.37

Intersection Summary

Cycle Length: 180

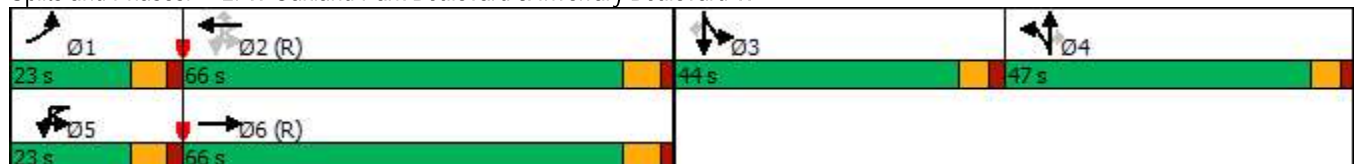
Actuated Cycle Length: 180

Offset: 126 (70%), Referenced to phase 2:WBTL and 6:EBT, Start of Green

Natural Cycle: 145

Control Type: Actuated-Coordinated

Splits and Phases: 2: W Oakland Park Boulevard & Inverrary Boulevard W



HCM Signalized Intersection Capacity Analysis

3: NW 68th Avenue & W Oakland Park Boulevard

16202 Future without Project AM Peak

10/13/2022

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		  				  						
Traffic Volume (vph)	28	1480	131	12	99	1439	22	114	4	129	44	13
Future Volume (vph)	28	1480	131	12	99	1439	22	114	4	129	44	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0		7.0	7.0	7.0		6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	0.91	1.00		1.00	0.91	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98		1.00	1.00	0.97		1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00	1.00		0.99	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	1.00	0.85		1.00	0.85	1.00	0.88
Flt Protected	0.95	1.00	1.00		0.95	1.00	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	1735	5085	1559		1758	5036	1568		1744	1615	1805	1630
Flt Permitted	0.14	1.00	1.00		0.12	1.00	1.00		0.63	1.00	0.50	1.00
Satd. Flow (perm)	256	5085	1559		231	5036	1568		1159	1615	959	1630
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	30	1591	141	13	106	1547	24	123	4	139	47	14
RTOR Reduction (vph)	0	0	29	0	0	0	6	0	0	95	0	58
Lane Group Flow (vph)	30	1591	112	0	119	1547	18	0	127	44	47	23
Confl. Peds. (#/hr)	3		2		2		3	8				
Confl. Bikes (#/hr)												
Heavy Vehicles (%)	4%	2%	2%	8%	2%	3%	0%	3%	0%	0%	0%	0%
Turn Type	pm+pt	NA	Perm	pm+pt	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA
Protected Phases	1	6		5	5	2			4			8
Permitted Phases	6		6	2	2		2	4		4	8	
Actuated Green, G (s)	133.7	129.8	129.8		139.7	132.8	132.8		23.3	23.3	23.3	23.3
Effective Green, g (s)	133.7	129.8	129.8		139.7	132.8	132.8		23.3	23.3	23.3	23.3
Actuated g/C Ratio	0.74	0.72	0.72		0.78	0.74	0.74		0.13	0.13	0.13	0.13
Clearance Time (s)	7.0	7.0	7.0		7.0	7.0	7.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	1.5	3.0	3.0		1.5	3.0	3.0		2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	222	3666	1124		237	3715	1156		150	209	124	210
v/s Ratio Prot	0.00	0.31			c0.02	0.31						0.01
v/s Ratio Perm	0.10		0.07		c0.37		0.01		c0.11	0.03	0.05	
v/c Ratio	0.14	0.43	0.10		0.50	0.42	0.02		0.85	0.21	0.38	0.11
Uniform Delay, d1	6.5	10.2	7.5		6.8	8.9	6.3		76.6	70.1	71.7	69.2
Progression Factor	0.72	0.66	0.61		1.74	0.62	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.3	0.2		0.6	0.3	0.0		32.2	0.2	0.7	0.1
Delay (s)	4.8	7.1	4.8		12.4	5.9	6.3		108.8	70.3	72.4	69.3
Level of Service	A	A	A		B	A	A		F	E	E	E
Approach Delay (s)		6.9				6.4			88.7			70.4
Approach LOS		A				A			F			E
Intersection Summary												
HCM 2000 Control Delay			14.4									
HCM 2000 Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			180.0						20.0			
Intersection Capacity Utilization			75.6%									
Analysis Period (min)			15									
c Critical Lane Group												

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	62
Future Volume (vph)	62
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.93
Adj. Flow (vph)	67
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	8
Confl. Bikes (#/hr)	1
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timings

16202 Future without Project AM Peak

3: NW 68th Avenue & W Oakland Park Boulevard

10/13/2022

												
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	28	1480	131	12	99	1439	22	114	4	129	44	13
Future Volume (vph)	28	1480	131	12	99	1439	22	114	4	129	44	13
Lane Group Flow (vph)	30	1591	141	0	119	1547	24	0	127	139	47	81
Turn Type	pm+pt	NA	Perm	pm+pt	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA
Protected Phases	1	6		5	5	2			4			8
Permitted Phases	6		6	2	2		2	4		4	8	
Detector Phase	1	6	6	5	5	2	2	4	4	4	8	8
Switch Phase												
Minimum Initial (s)	4.0	10.0	10.0	4.0	4.0	10.0	10.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	12.0	36.0	36.0	12.0	12.0	36.0	36.0	46.0	46.0	46.0	43.0	43.0
Total Split (s)	12.0	110.0	110.0	21.0	21.0	119.0	119.0	49.0	49.0	49.0	49.0	49.0
Total Split (%)	6.7%	61.1%	61.1%	11.7%	11.7%	66.1%	66.1%	27.2%	27.2%	27.2%	27.2%	27.2%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0		7.0	7.0	7.0		6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	C-Min	None	None	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.13	0.43	0.12		0.50	0.41	0.02		0.85	0.46	0.38	0.30
Control Delay	4.8	7.7	2.1		15.2	6.2	0.0		117.8	22.8	78.2	21.2
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay	4.8	7.7	2.1		15.2	6.2	0.0		117.8	22.8	78.2	21.2
Queue Length 50th (ft)	6	171	10		18	147	0		149	32	52	15
Queue Length 95th (ft)	m13	142	17		37	169	m0		221	100	94	66
Internal Link Dist (ft)		1714				1242			649			220
Turn Bay Length (ft)	225		180		315		100			135		
Base Capacity (vph)	233	3666	1153		303	3755	1184		276	468	229	440
Starvation Cap Reductn	0	0	0		0	0	0		0	0	0	0
Spillback Cap Reductn	0	0	0		0	0	0		0	0	0	0
Storage Cap Reductn	0	0	0		0	0	0		0	0	0	0
Reduced v/c Ratio	0.13	0.43	0.12		0.39	0.41	0.02		0.46	0.30	0.21	0.18

Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

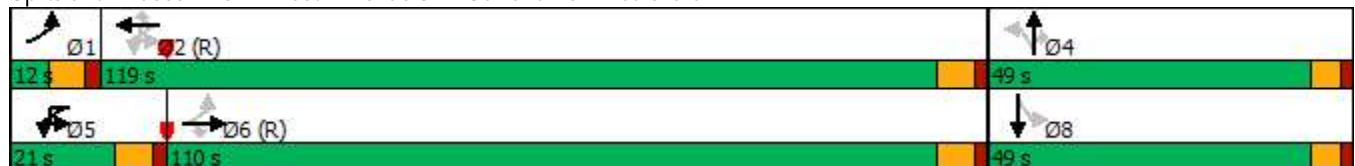
Offset: 167 (93%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: NW 68th Avenue & W Oakland Park Boulevard



HCM Signalized Intersection Capacity Analysis

3: NW 68th Avenue & W Oakland Park Boulevard

16202 Future without Project PM Peak

10/14/2022

												
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	11	32	1536	151	10	133	1501	39	143	14	139	30
Future Volume (vph)	11	32	1536	151	10	133	1501	39	143	14	139	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	7.0	7.0		7.0	7.0	7.0		6.0	6.0	6.0
Lane Util. Factor		1.00	0.91	1.00		1.00	0.91	1.00		1.00	1.00	1.00
Frpb, ped/bikes		1.00	1.00	0.99		1.00	1.00	0.98		1.00	0.98	1.00
Flpb, ped/bikes		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85		1.00	0.85	1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00		0.96	1.00	0.95
Satd. Flow (prot)		1805	5085	1577		1805	5136	1532		1810	1542	1805
Flt Permitted		0.14	1.00	1.00		0.12	1.00	1.00		0.71	1.00	0.43
Satd. Flow (perm)		266	5085	1577		231	5136	1532		1348	1542	808
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	11	33	1584	156	10	137	1547	40	147	14	143	31
RTOR Reduction (vph)	0	0	0	31	0	0	0	11	0	0	122	0
Lane Group Flow (vph)	0	44	1584	125	0	147	1547	29	0	161	21	31
Confl. Peds. (#/hr)	2	1		1		1		1	3			
Confl. Bikes (#/hr)												3
Heavy Vehicles (%)	0%	0%	2%	1%	0%	0%	1%	3%	0%	0%	3%	0%
Turn Type	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt	NA	Perm	Perm	NA	Perm	Perm
Protected Phases	1	1	6		5	5	2			4		
Permitted Phases	6	6		6	2	2		2	4		4	8
Actuated Green, G (s)		129.5	125.3	125.3		138.5	129.8	129.8		26.0	26.0	26.0
Effective Green, g (s)		129.5	125.3	125.3		138.5	129.8	129.8		26.0	26.0	26.0
Actuated g/C Ratio		0.72	0.70	0.70		0.77	0.72	0.72		0.14	0.14	0.14
Clearance Time (s)		7.0	7.0	7.0		7.0	7.0	7.0		6.0	6.0	6.0
Vehicle Extension (s)		1.5	3.0	3.0		1.5	3.0	3.0		2.0	2.0	2.0
Lane Grp Cap (vph)		227	3539	1097		253	3703	1104		194	222	116
v/s Ratio Prot		0.00	0.31			c0.03	0.30					
v/s Ratio Perm		0.13		0.08		c0.42		0.02		c0.12	0.01	0.04
v/c Ratio		0.19	0.45	0.11		0.58	0.42	0.03		0.83	0.09	0.27
Uniform Delay, d1		7.7	12.1	9.0		8.4	10.0	7.1		74.9	66.8	68.5
Progression Factor		0.41	0.42	0.12		2.59	0.83	0.34		1.00	1.00	1.00
Incremental Delay, d2		0.1	0.4	0.2		2.1	0.3	0.0		23.4	0.1	0.5
Delay (s)		3.3	5.4	1.3		23.8	8.6	2.5		98.3	66.8	69.0
Level of Service		A	A	A		C	A	A		F	E	E
Approach Delay (s)			5.0				9.8			83.5		
Approach LOS			A				A			F		
Intersection Summary												
HCM 2000 Control Delay			14.5				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.64									
Actuated Cycle Length (s)			180.0				Sum of lost time (s)			20.0		
Intersection Capacity Utilization			75.3%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis 3: NW 68th Avenue & W Oakland Park Boulevard

16202 Future without Project PM Peak

10/14/2022



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	6	38
Future Volume (vph)	6	38
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	6.0	
Lane Util. Factor	1.00	
Frpb, ped/bikes	0.99	
Flpb, ped/bikes	1.00	
Frt	0.87	
Flt Protected	1.00	
Satd. Flow (prot)	1630	
Flt Permitted	1.00	
Satd. Flow (perm)	1630	
Peak-hour factor, PHF	0.97	0.97
Adj. Flow (vph)	6	39
RTOR Reduction (vph)	33	0
Lane Group Flow (vph)	12	0
Confl. Peds. (#/hr)		3
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	0%	0%
Turn Type	NA	
Protected Phases	8	
Permitted Phases		
Actuated Green, G (s)	26.0	
Effective Green, g (s)	26.0	
Actuated g/C Ratio	0.14	
Clearance Time (s)	6.0	
Vehicle Extension (s)	2.0	
Lane Grp Cap (vph)	235	
v/s Ratio Prot	0.01	
v/s Ratio Perm		
v/c Ratio	0.05	
Uniform Delay, d1	66.4	
Progression Factor	1.00	
Incremental Delay, d2	0.0	
Delay (s)	66.4	
Level of Service	E	
Approach Delay (s)	67.4	
Approach LOS	E	
Intersection Summary		

Timings

16202 Future without Project PM Peak

3: NW 68th Avenue & W Oakland Park Boulevard

10/14/2022

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	11	32	1536	151	10	133	1501	39	143	14	139	30
Future Volume (vph)	11	32	1536	151	10	133	1501	39	143	14	139	30
Lane Group Flow (vph)	0	44	1584	156	0	147	1547	40	0	161	143	31
Turn Type	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt	NA	Perm	Perm	NA	Perm	Perm
Protected Phases	1	1	6		5	5	2			4		
Permitted Phases	6	6		6	2	2		2	4		4	8
Detector Phase	1	1	6	6	5	5	2	2	4	4	4	8
Switch Phase												
Minimum Initial (s)	4.0	4.0	10.0	10.0	4.0	4.0	10.0	10.0	6.0	6.0	6.0	6.0
Minimum Split (s)	12.0	12.0	36.0	36.0	12.0	12.0	36.0	36.0	46.0	46.0	46.0	43.0
Total Split (s)	14.0	14.0	101.0	101.0	30.0	30.0	117.0	117.0	49.0	49.0	49.0	49.0
Total Split (%)	7.8%	7.8%	56.1%	56.1%	16.7%	16.7%	65.0%	65.0%	27.2%	27.2%	27.2%	27.2%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		7.0	7.0	7.0		7.0	7.0	7.0		6.0	6.0	6.0
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	C-Min	C-Min	None	None	C-Min	C-Min	None	None	None	None
v/c Ratio		0.19	0.45	0.14		0.58	0.41	0.04		0.83	0.41	0.27
Control Delay		4.0	5.9	0.7		22.9	9.1	0.3		105.7	12.0	71.3
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		4.0	5.9	0.7		22.9	9.1	0.3		105.7	12.0	71.3
Queue Length 50th (ft)		2	271	1		32	212	0		188	0	33
Queue Length 95th (ft)		4	334	10		114	286	m3		265	65	68
Internal Link Dist (ft)			1714				1242			649		
Turn Bay Length (ft)		225		180		315		100			135	
Base Capacity (vph)		255	3541	1129		381	3743	1133		322	477	193
Starvation Cap Reductn		0	0	0		0	0	0		0	0	0
Spillback Cap Reductn		0	0	0		0	0	0		0	0	0
Storage Cap Reductn		0	0	0		0	0	0		0	0	0
Reduced v/c Ratio		0.17	0.45	0.14		0.39	0.41	0.04		0.50	0.30	0.16

Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

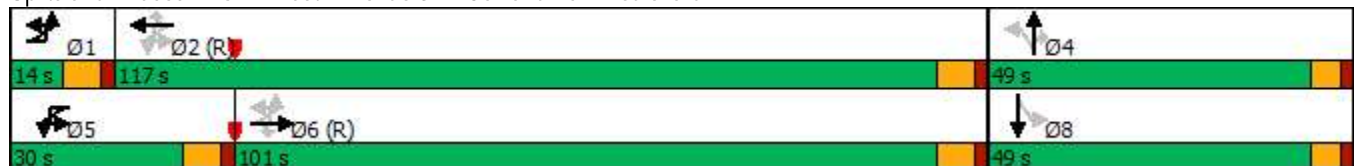
Offset: 178 (99%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: NW 68th Avenue & W Oakland Park Boulevard



Timings
3: NW 68th Avenue & W Oakland Park Boulevard

16202 Future without Project PM Peak

10/14/2022



Lane Group	SBT
Lane Configurations	P
Traffic Volume (vph)	6
Future Volume (vph)	6
Lane Group Flow (vph)	45
Turn Type	NA
Protected Phases	8
Permitted Phases	
Detector Phase	8
Switch Phase	
Minimum Initial (s)	6.0
Minimum Split (s)	43.0
Total Split (s)	49.0
Total Split (%)	27.2%
Yellow Time (s)	4.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	6.0
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
v/c Ratio	0.17
Control Delay	20.9
Queue Delay	0.0
Total Delay	20.9
Queue Length 50th (ft)	6
Queue Length 95th (ft)	45
Internal Link Dist (ft)	220
Turn Bay Length (ft)	
Base Capacity (vph)	419
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.11
Intersection Summary	

HCM 6th Signalized Intersection Summary 4: NW 64th Avenue & W Oakland Park Boulevard

16202 Future without Project AM Peak

10/13/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	1451	208	139	1328	0	173	7	96	0	1	4
Future Volume (veh/h)	9	1451	208	139	1328	0	173	7	96	0	1	4
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		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	1900	1870	1870	1870	1856	1900	1870	1693	1856	1900	1900	1900
Adj Flow Rate, veh/h	10	1560	224	149	1428	0	186	8	103	0	1	4
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	2	3	0	2	14	3	0	0	0
Cap, veh/h	296	3524	1091	287	3873	1231	265	17	215	40	53	213
Arrive On Green	1.00	1.00	1.00	0.04	0.76	0.00	0.16	0.16	0.16	0.00	0.16	0.16
Sat Flow, veh/h	381	5106	1581	1781	5066	1610	1398	102	1317	1302	326	1304
Grp Volume(v), veh/h	10	1560	224	149	1428	0	186	0	111	0	0	5
Grp Sat Flow(s),veh/h/ln	381	1702	1581	1781	1689	1610	1398	0	1420	1302	0	1630
Q Serve(g_s), s	0.1	0.0	0.0	4.3	16.6	0.0	23.2	0.0	12.8	0.0	0.0	0.5
Cycle Q Clear(g_c), s	3.3	0.0	0.0	4.3	16.6	0.0	23.6	0.0	12.8	0.0	0.0	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.93	1.00		0.80
Lane Grp Cap(c), veh/h	296	3524	1091	287	3873	1231	265	0	232	40	0	266
V/C Ratio(X)	0.03	0.44	0.21	0.52	0.37	0.00	0.70	0.00	0.48	0.00	0.00	0.02
Avail Cap(c_a), veh/h	296	3524	1091	441	3873	1231	370	0	339	139	0	389
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.90	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	6.8	6.9	0.0	73.1	0.0	68.4	0.0	0.0	63.2
Incr Delay (d2), s/veh	0.2	0.4	0.4	0.5	0.3	0.0	1.3	0.0	0.6	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.2	0.2	2.9	9.4	0.0	13.3	0.0	8.3	0.0	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.2	0.4	0.4	7.4	7.2	0.0	74.5	0.0	68.9	0.0	0.0	63.2
LnGrp LOS	A	A	A	A	A	A	E	A	E	A	A	E
Approach Vol, veh/h	1794			1577			297			5		
Approach Delay, s/veh	0.4			7.2			72.4			63.2		
Approach LOS	A			A			E			E		
Timer - Assigned Phs	2			4		5	6	8				
Phs Duration (G+Y+Rc), s	144.6			35.4		13.4	131.2	35.4				
Change Period (Y+Rc), s	7.0			6.0		7.0	7.0	6.0				
Max Green Setting (Gmax), s	124.0			43.0		22.0	95.0	43.0				
Max Q Clear Time (g_c+I1), s	18.6			25.6		6.3	5.3	2.5				
Green Ext Time (p_c), s	14.2			0.6		0.1	19.4	0.0				
Intersection Summary												
HCM 6th Ctrl Delay				9.2								
HCM 6th LOS				A								

Timings

16202 Future without Project AM Peak

4: NW 64th Avenue & W Oakland Park Boulevard

10/13/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBT
Lane Configurations	↰	↑↑↑	↱	↰	↑↑↑	↰	↱	↱
Traffic Volume (vph)	9	1451	208	139	1328	173	7	1
Future Volume (vph)	9	1451	208	139	1328	173	7	1
Lane Group Flow (vph)	10	1560	224	149	1428	186	111	5
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	NA	NA
Protected Phases		6		5	2		4	8
Permitted Phases	6		6	2		4		
Detector Phase	6	6	6	5	2	4	4	8
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	4.0	10.0	6.0	6.0	6.0
Minimum Split (s)	33.0	33.0	33.0	12.0	33.0	46.0	46.0	46.0
Total Split (s)	102.0	102.0	102.0	29.0	131.0	49.0	49.0	49.0
Total Split (%)	56.7%	56.7%	56.7%	16.1%	72.8%	27.2%	27.2%	27.2%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	None	None	None
v/c Ratio	0.04	0.45	0.20	0.60	0.37	0.85	0.33	0.02
Control Delay	8.0	7.2	0.6	16.3	7.5	103.6	14.5	36.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.0	7.2	0.6	16.3	7.5	103.6	14.5	36.8
Queue Length 50th (ft)	2	114	0	40	180	217	8	1
Queue Length 95th (ft)	m5	126	5	77	255	297	66	14
Internal Link Dist (ft)		1242			1372		3893	198
Turn Bay Length (ft)	270		260	430		90		
Base Capacity (vph)	226	3466	1113	361	3875	333	449	396
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.45	0.20	0.41	0.37	0.56	0.25	0.01

Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

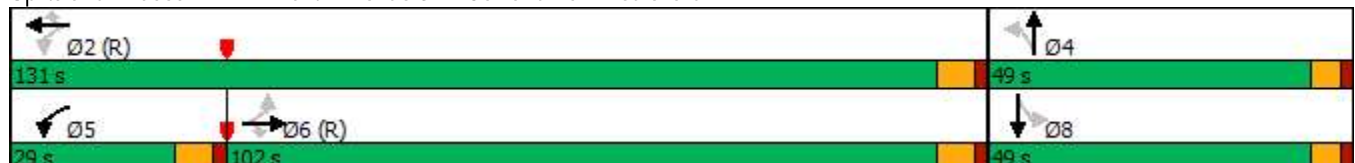
Offset: 162 (90%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: NW 64th Avenue & W Oakland Park Boulevard



HCM Signalized Intersection Capacity Analysis

4: NW 64th Avenue & W Oakland Park Boulevard

16202 Future without Project PM Peak

10/14/2022

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		  				  						
Traffic Volume (vph)	24	1426	223	18	195	1428	5	199	8	134	5	6
Future Volume (vph)	24	1426	223	18	195	1428	5	199	8	134	5	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0		7.0	7.0	7.0	6.0	6.0		6.0	6.0
Lane Util. Factor	1.00	0.91	1.00		1.00	0.91	1.00	1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98		1.00	1.00	0.96	1.00	0.98		1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		0.99	1.00
Frt	1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.86		1.00	0.89
Flt Protected	0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00
Satd. Flow (prot)	1732	5085	1542		1780	5136	1555	1765	1516		1794	1666
Flt Permitted	0.17	1.00	1.00		0.13	1.00	1.00	0.74	1.00		0.51	1.00
Satd. Flow (perm)	309	5085	1542		249	5136	1555	1378	1516		968	1666
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	24	1455	228	18	199	1457	5	203	8	137	5	6
RTOR Reduction (vph)	0	0	72	0	0	0	1	0	113	0	0	15
Lane Group Flow (vph)	24	1455	156	0	217	1457	4	203	32	0	5	9
Confl. Peds. (#/hr)	5		2	3	2		5	2		6	6	
Confl. Bikes (#/hr)			1							1		
Heavy Vehicles (%)	4%	2%	3%	6%	1%	1%	0%	2%	13%	5%	0%	0%
Turn Type	Perm	NA	Perm	pm+pt	pm+pt	NA	Perm	Perm	NA		Perm	NA
Protected Phases		6		5	5	2			4			8
Permitted Phases	6		6	2	2		2	4			8	
Actuated Green, G (s)	116.3	116.3	116.3		136.1	136.1	136.1	30.9	30.9		30.9	30.9
Effective Green, g (s)	116.3	116.3	116.3		136.1	136.1	136.1	30.9	30.9		30.9	30.9
Actuated g/C Ratio	0.65	0.65	0.65		0.76	0.76	0.76	0.17	0.17		0.17	0.17
Clearance Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		1.5	3.0	3.0	2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	199	3285	996		297	3883	1175	236	260		166	285
v/s Ratio Prot		0.29			c0.05	0.28			0.02			0.01
v/s Ratio Perm	0.08		0.10		c0.50		0.00	c0.15			0.01	
v/c Ratio	0.12	0.44	0.16		0.73	0.38	0.00	0.86	0.12		0.03	0.03
Uniform Delay, d1	12.2	15.8	12.5		12.3	7.5	5.4	72.5	63.1		62.1	62.1
Progression Factor	1.41	1.66	4.56		1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.1	0.4	0.3		7.7	0.3	0.0	25.1	0.1		0.0	0.0
Delay (s)	18.4	26.7	57.5		20.1	7.8	5.4	97.5	63.1		62.1	62.1
Level of Service	B	C	E		C	A	A	F	E		E	E
Approach Delay (s)		30.7				9.3			83.2			62.1
Approach LOS		C				A			F			E
Intersection Summary												
HCM 2000 Control Delay			26.3			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.77									
Actuated Cycle Length (s)			180.0			Sum of lost time (s)			20.0			
Intersection Capacity Utilization			76.5%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

4: NW 64th Avenue & W Oakland Park Boulevard

16202 Future without Project PM Peak

10/14/2022

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	18
Future Volume (vph)	18
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.98
Adj. Flow (vph)	18
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	2
Confl. Bikes (#/hr)	1
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timings

16202 Future without Project PM Peak

4: NW 64th Avenue & W Oakland Park Boulevard

10/14/2022

											
Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations		  				  					
Traffic Volume (vph)	24	1426	223	18	195	1428	5	199	8	5	6
Future Volume (vph)	24	1426	223	18	195	1428	5	199	8	5	6
Lane Group Flow (vph)	24	1455	228	0	217	1457	5	203	145	5	24
Turn Type	Perm	NA	Perm	pm+pt	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases		6		5	5	2			4		8
Permitted Phases	6		6	2	2		2	4		8	
Detector Phase	6	6	6	5	5	2	2	4	4	8	8
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	4.0	4.0	10.0	10.0	6.0	6.0	6.0	6.0
Minimum Split (s)	33.0	33.0	33.0	12.0	12.0	33.0	33.0	46.0	46.0	46.0	46.0
Total Split (s)	101.0	101.0	101.0	30.0	30.0	131.0	131.0	49.0	49.0	49.0	49.0
Total Split (%)	56.1%	56.1%	56.1%	16.7%	16.7%	72.8%	72.8%	27.2%	27.2%	27.2%	27.2%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Recall Mode	C-Min	C-Min	C-Min	None	None	C-Min	C-Min	None	None	None	None
v/c Ratio	0.12	0.44	0.21		0.73	0.38	0.00	0.86	0.39	0.03	0.08
Control Delay	25.8	29.5	14.3		25.1	8.4	0.0	102.3	12.7	57.2	27.0
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	29.5	14.3		25.1	8.4	0.0	102.3	12.7	57.2	27.0
Queue Length 50th (ft)	17	471	97		65	197	0	236	8	5	6
Queue Length 95th (ft)	m51	607	205		156	276	0	319	73	18	34
Internal Link Dist (ft)		1242				1372			3893		198
Turn Bay Length (ft)	270		260		430		265	90			
Base Capacity (vph)	200	3283	1068		383	3882	1179	329	466	231	411
Starvation Cap Reductn	0	0	0		0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0		0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0		0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.44	0.21		0.57	0.38	0.00	0.62	0.31	0.02	0.06

Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

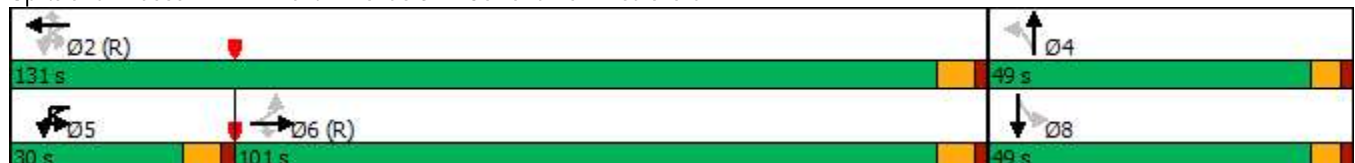
Offset: 56 (31%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: NW 64th Avenue & W Oakland Park Boulevard



MOVEMENT SUMMARY

 **Site: 5 [Sunset Strip & NW 64th Avenue (Site Folder: General)]**

Future without Project AM
Site Category: Future without Project 2022
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES [Total HV] [Veh/h %]		DEMAND FLOWS [Total HV] [Veh/h %]		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. Dist] veh ft		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: NW 64th Avenue														
NW	L1	16	0.0	16	0.0	0.061	8.4	LOS A	0.2	6.0	0.56	0.49	0.56	16.7
N	T1	23	0.0	24	0.0	0.061	8.4	LOS A	0.2	6.0	0.56	0.49	0.56	15.7
NBR	R3	4	25.0	4	25.0	0.061	9.3	LOS A	0.2	6.0	0.56	0.49	0.56	15.8
Approach		43	2.3	44	2.3	0.061	8.4	LOS A	0.2	6.0	0.56	0.49	0.56	16.2
SouthEast: Sunset Strip														
WBL	L3	10	0.0	10	0.0	0.422	7.1	LOS A	2.7	69.4	0.34	0.18	0.34	18.8
WB	T1	277	4.0	286	4.0	0.422	7.2	LOS A	2.7	69.4	0.34	0.18	0.34	15.1
WBR	R1	214	0.0	221	0.0	0.422	7.1	LOS A	2.7	69.4	0.34	0.18	0.34	15.1
Approach		501	2.2	516	2.2	0.422	7.2	LOS A	2.7	69.4	0.34	0.18	0.34	15.1
North: NW 64th Avenue														
SBL	L1	246	2.0	254	2.0	0.391	10.6	LOS B	2.1	53.7	0.56	0.47	0.56	17.5
SB	T1	68	1.0	70	1.0	0.391	10.6	LOS B	2.1	53.7	0.56	0.47	0.56	15.3
SBR	R3	55	4.0	57	4.0	0.391	10.6	LOS B	2.1	53.7	0.56	0.47	0.56	15.2
Approach		369	2.1	380	2.1	0.391	10.6	LOS B	2.1	53.7	0.56	0.47	0.56	16.5
NorthWest: Sunset Strip														
EBL	L3	53	0.0	55	0.0	0.392	8.1	LOS A	2.1	52.9	0.57	0.49	0.57	19.9
EB	T1	283	4.0	292	4.0	0.392	8.2	LOS A	2.1	52.9	0.57	0.49	0.57	17.6
EBR	R1	22	6.0	23	6.0	0.392	8.3	LOS A	2.1	52.9	0.57	0.49	0.57	17.6
Approach		358	3.5	369	3.5	0.392	8.2	LOS A	2.1	52.9	0.57	0.49	0.57	17.9
All Vehicles		1271	2.6	1310	2.6	0.422	8.5	LOS A	2.7	69.4	0.48	0.36	0.48	16.4

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

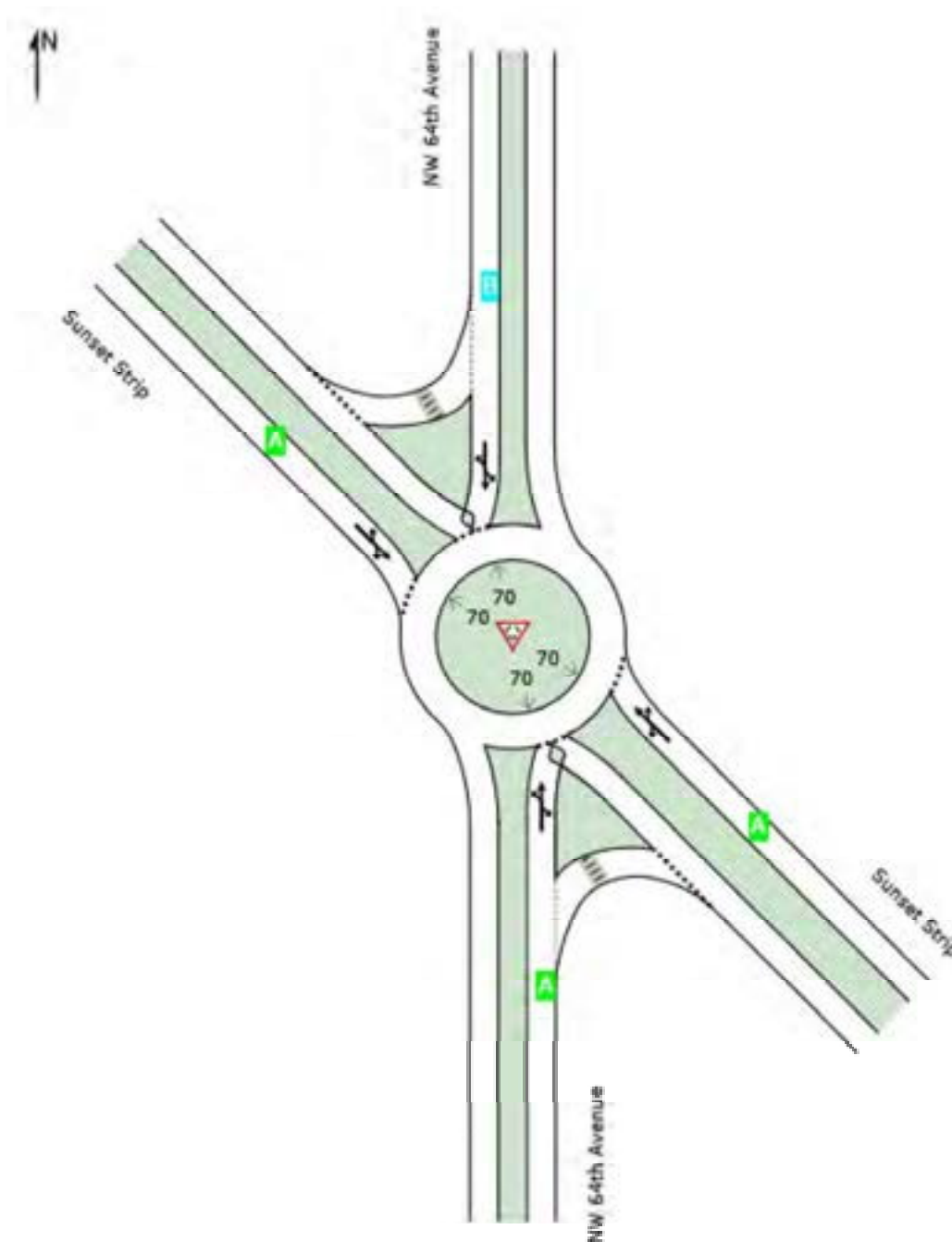
Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: W:\16\16202\01_Responses to FDOT Comments Sept 2022\SIDRA\Future without AM.sip9



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if $v/c > 1$ irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Delay Model: HCM Delay Formula (Geometric Delay is not included).

LEVEL OF SERVICE

Movement Level of Service

Site: 5 [Sunset Strip & NW 64th Avenue (Site Folder: General)]

Future without Project AM

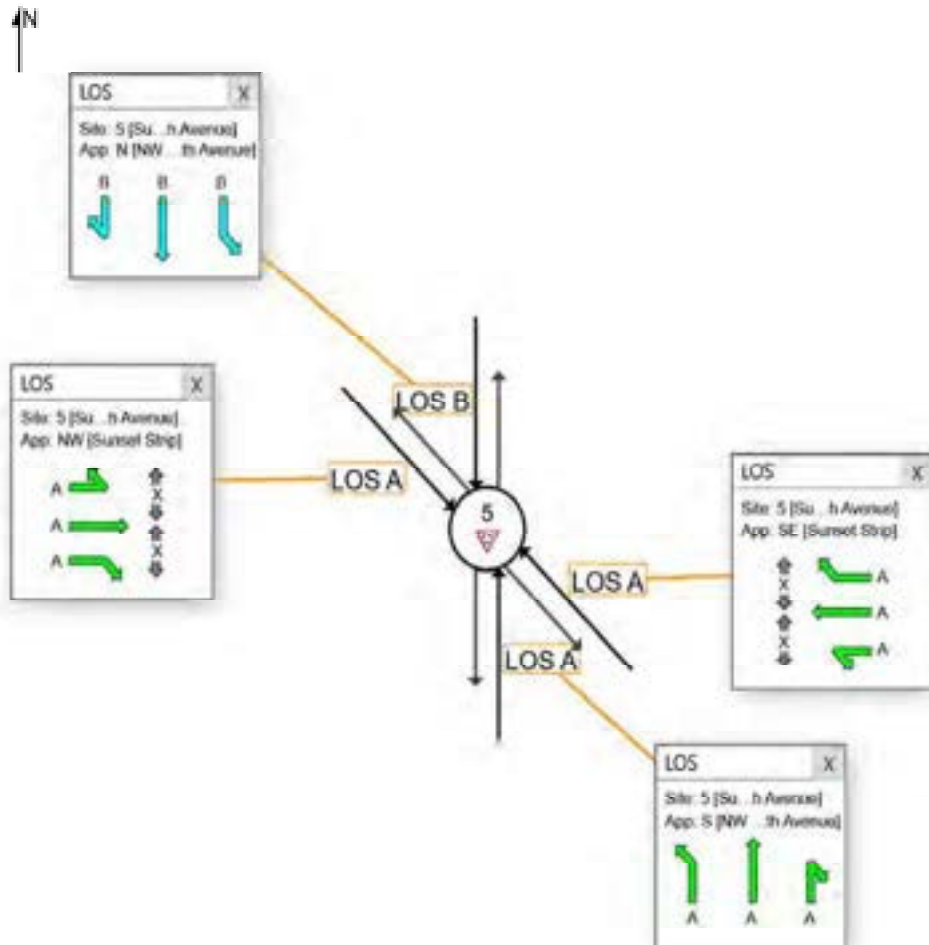
Site Category: Future without Project 2022

Roundabout

Use the button below to open or close all popup boxes. Click value labels to open selected ones.

Click and drag popup boxes to move to preferred positions.

Close All Popups



DELAY (CONTROL)

Average control delay per vehicle, or average pedestrian delay (seconds)

 **Site: 5 [Sunset Strip & NW 64th Avenue (Site Folder: General)]**

Future without Project AM

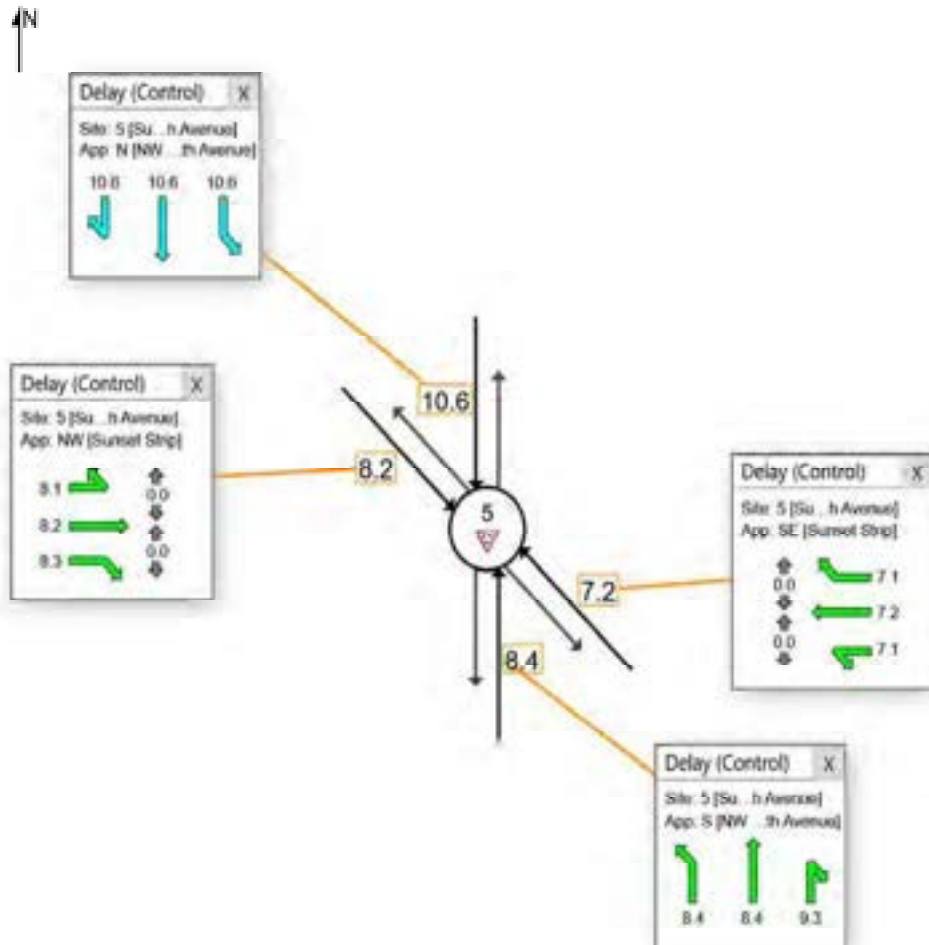
Site Category: Future without Project 2022

Roundabout

Use the button below to open or close all popup boxes. Click value labels to open selected ones.

Click and drag popup boxes to move to preferred positions.

Close All Popups



QUEUE DISTANCE (AVERAGE)

Largest Average Back of Queue Distance for any lane used by the vehicle movement (feet)

 **Site: 5 [Sunset Strip & NW 64th Avenue (Site Folder: General)]**

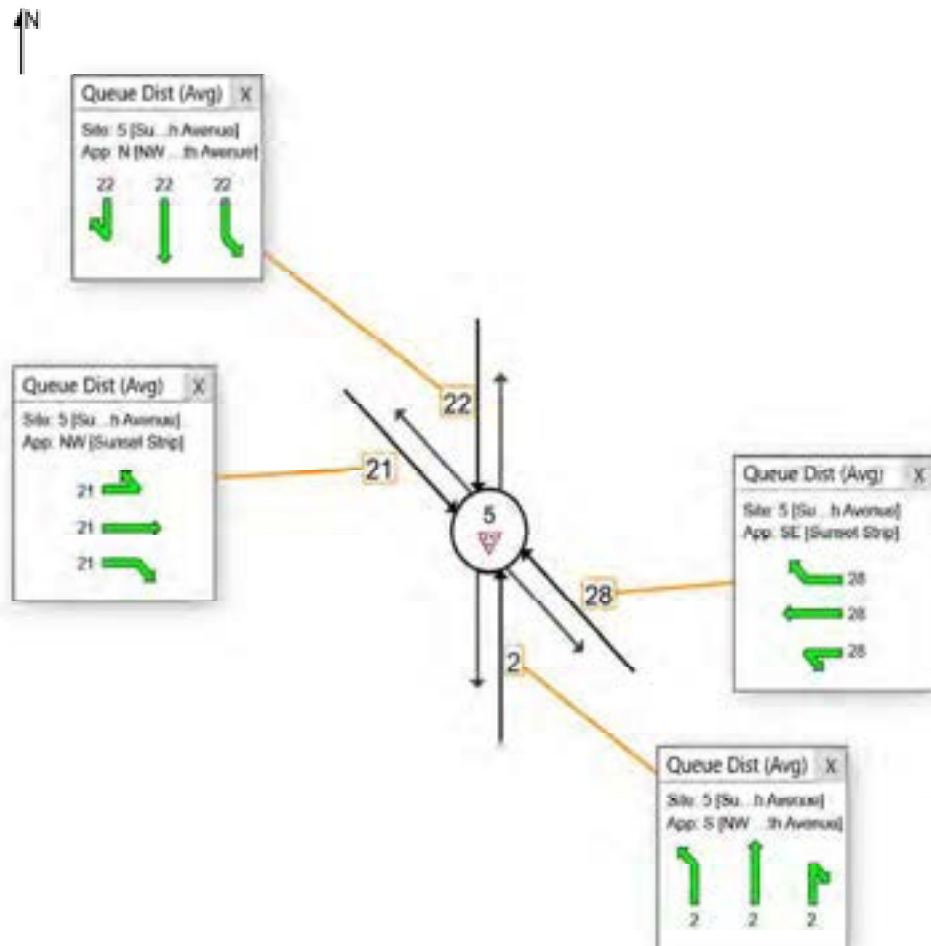
Future without Project AM

Site Category: Future without Project 2022

Roundabout

Use the button below to open or close all popup boxes. Click value labels to open selected ones.
Click and drag popup boxes to move to preferred positions.

Close All Popups



Colour code based on Level of Service



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

LOS F will result if $v/c > 1$ irrespective of movement delay value (does not apply for approaches and intersection).

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Roundabout Level of Service Method: Same as Sign Control

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Approach values are flow-weighted average values for vehicle movements (pedestrian delays not included).

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