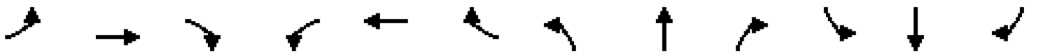
APPENDIX D – STAGE 2 ICE ANALYSIS

CHULUOTA ROAD & LAKE PICKETT ROAD



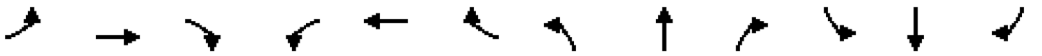
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	60	182	115	146	9	238	494	89	4	460	245
Future Volume (vph)	69	60	182	115	146	9	238	494	89	4	460	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0	100		0	465		425	400		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.887			0.992				0.850		0.948	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1636	0	1752	1830	0	1752	1845	1568	1752	1749	0
Flt Permitted	0.543			0.292			0.090			0.368		
Satd. Flow (perm)	1002	1636	0	539	1830	0	166	1845	1568	679	1749	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		134			3				184		32	
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		743			754			1072			892	
Travel Time (s)		11.3			11.4			14.6			12.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	73	63	192	121	154	9	251	520	94	4	484	258
Shared Lane Traffic (%)												
Lane Group Flow (vph)	73	255	0	121	163	0	251	520	94	4	742	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	D.P+P	NA	
Protected Phases	3	8		7	4		1	6		5	2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	8			4			6		6	6		
Detector Phase	3	8		7	4		1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	16.0	16.0	5.0	16.0	
Minimum Split (s)	11.8	24.8		11.0	24.0		12.1	25.1	25.1	12.1	25.1	
Total Split (s)	11.9	24.9		11.0	24.0		17.7	52.0	52.0	12.1	46.4	
Total Split (%)	11.9%	24.9%		11.0%	24.0%		17.7%	52.0%	52.0%	12.1%	46.4%	
Maximum Green (s)	5.1	18.1		5.0	18.0		10.6	44.9	44.9	5.0	39.3	
Yellow Time (s)	4.8	4.8		4.0	4.0		5.1	5.1	5.1	5.1	5.1	
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)	6.8	6.8		6.0	6.0		7.1	7.1	7.1	7.1	7.1	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Min	Min	None	Min	
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	
Flash Don't Walk (s)		11.0			11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	17.9	12.8		19.2	15.3		56.8	54.8	54.8	55.8	39.4	
Actuated g/C Ratio	0.19	0.13		0.20	0.16		0.60	0.58	0.58	0.59	0.42	
v/c Ratio	0.32	0.76		0.70	0.55		0.91	0.49	0.10	0.01	1.00	
Control Delay (s/veh)	31.4	33.4		52.1	44.4		58.9	15.7	0.2	9.3	61.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	31.4	33.4		52.1	44.4		58.9	15.7	0.2	9.3	61.1	
LOS	C	C		D	D		E	B	A	A	E	
Approach Delay (s/veh)		32.9			47.7			26.5			60.9	
Approach LOS		C			D			C			E	
90th %ile Green (s)	5.1	18.1		5.0	18.0		10.6	44.9	44.9	5.0	39.3	
90th %ile Term Code	Max	Max		Max	Max		Max	Hold	Hold	Max	Max	
70th %ile Green (s)	5.1	16.3		5.0	16.2		10.6	57.0	57.0	0.0	39.3	
70th %ile Term Code	Max	Gap		Max	Hold		Max	Hold	Hold	Skip	Max	
50th %ile Green (s)	5.1	13.7		5.0	13.6		10.6	57.0	57.0	0.0	39.3	
50th %ile Term Code	Max	Hold		Max	Gap		Max	Hold	Hold	Skip	Max	
30th %ile Green (s)	5.1	11.5		5.0	11.4		10.6	57.0	57.0	0.0	39.3	
30th %ile Term Code	Max	Hold		Max	Gap		Max	Hold	Hold	Skip	Max	
10th %ile Green (s)	0.0	5.5		5.0	17.3		10.6	57.0	57.0	0.0	39.3	
10th %ile Term Code	Skip	Gap		Max	Hold		Max	Hold	Hold	Skip	Max	
Stops (vph)	53	114		100	137		128	290	0	3	561	
Fuel Used(gal)	1	4		3	4		6	9	1	0	21	
CO Emissions (g/hr)	100	296		212	270		450	656	43	5	1494	
NOx Emissions (g/hr)	19	58		41	53		88	128	8	1	291	
VOC Emissions (g/hr)	23	69		49	63		104	152	10	1	346	
Dilemma Vehicles (#)	0	11		0	7		0	21	0	0	34	
Queue Length 50th (ft)	34	69		58	93		98	164	0	1	~434	
Queue Length 95th (ft)	69	155		#121	158		#266	360	0	6	#735	
Internal Link Dist (ft)		663			674			992			812	
Turn Bay Length (ft)	75			100			465		425	400		
Base Capacity (vph)	230	421		173	350		276	1065	983	455	744	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	0.32	0.61		0.70	0.47		0.91	0.49	0.10	0.01	1.00	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 94.9			
Natural Cycle: 100			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay (s/veh): 41.7		Intersection LOS: D	
Intersection Capacity Utilization 95.6%		ICU Level of Service F	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 100			
70th %ile Actuated Cycle: 98.2			
50th %ile Actuated Cycle: 95.6			
30th %ile Actuated Cycle: 93.4			
10th %ile Actuated Cycle: 87.4			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Chuluota Rd & Lake Pickett Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	60	182	115	146	9	238	494	89	4	460	245
Future Volume (veh/h)	69	60	182	115	146	9	238	494	89	4	460	245
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	73	63	192	121	154	9	251	520	94	4	484	258
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, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	263	70	214	186	295	17	261	924	783	324	451	241
Arrive On Green	0.05	0.17	0.17	0.05	0.17	0.17	0.11	0.50	0.50	0.01	0.40	0.40
Sat Flow, veh/h	1767	404	1230	1767	1736	101	1767	1856	1572	1767	1139	607
Grp Volume(v), veh/h	73	0	255	121	0	163	251	520	94	4	0	742
Grp Sat Flow(s),veh/h/ln	1767	0	1634	1767	0	1837	1767	1856	1572	1767	0	1746
Q Serve(g_s), s	3.3	0.0	15.1	5.0	0.0	8.0	9.9	19.4	3.2	0.1	0.0	39.3
Cycle Q Clear(g_c), s	3.3	0.0	15.1	5.0	0.0	8.0	9.9	19.4	3.2	0.1	0.0	39.3
Prop In Lane	1.00		0.75	1.00		0.06	1.00		1.00	1.00		0.35
Lane Grp Cap(c), veh/h	263	0	285	186	0	312	261	924	783	324	0	692
V/C Ratio(X)	0.28	0.00	0.90	0.65	0.00	0.52	0.96	0.56	0.12	0.01	0.00	1.07
Avail Cap(c_a), veh/h	271	0	298	186	0	333	261	924	783	404	0	692
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	1.00
Uniform Delay (d), s/veh	32.1	0.0	40.1	35.1	0.0	37.5	28.9	17.4	13.3	14.2	0.0	29.9
Incr Delay (d2), s/veh	0.6	0.0	26.8	7.8	0.0	1.4	44.5	0.8	0.1	0.0	0.0	55.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	7.9	2.7	0.0	3.6	7.0	7.4	1.0	0.0	0.0	25.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	32.7	0.0	66.8	43.0	0.0	38.9	73.4	18.2	13.4	14.2	0.0	85.2
LnGrp LOS	C		E	D		D	E	B	B	B		F
Approach Vol, veh/h		328			284			865			746	
Approach Delay, s/veh		59.2			40.6			33.7			84.8	
Approach LOS		E			D			C			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.7	46.4	11.4	23.6	7.6	56.5	11.0	24.1
Change Period (Y+Rc), s	7.1	7.1	6.8	* 6.8	7.1	7.1	6.0	6.8
Max Green Setting (Gmax), s	10.6	39.3	5.1	* 18	5.0	44.9	5.0	18.1
Max Q Clear Time (g_c+I1), s	11.9	41.3	5.3	10.0	2.1	21.4	7.0	17.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.0	3.2	0.0	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	55.5
HCM 7th LOS	E

Notes

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

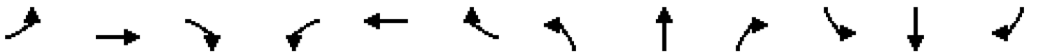
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	207	162	308	69	72	6	138	513	130	20	574	142
Future Volume (vph)	207	162	308	69	72	6	138	513	130	20	574	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0	100		0	465		425	400		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.902			0.989				0.850		0.970	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1664	0	1752	1824	0	1752	1845	1568	1752	1789	0
Flt Permitted	0.508			0.217			0.069			0.300		
Satd. Flow (perm)	937	1664	0	400	1824	0	127	1845	1568	553	1789	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		71			3				199		12	
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		743			754			1072			892	
Travel Time (s)		11.3			11.4			14.6			12.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	218	171	324	73	76	6	145	540	137	21	604	149
Shared Lane Traffic (%)												
Lane Group Flow (vph)	218	495	0	73	82	0	145	540	137	21	753	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	D.P+P	NA	
Protected Phases	3	8		7	4		1	6		5	2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	8			4			6		6	6		
Detector Phase	3	8		7	4		1	6	6	5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	16.0	16.0	5.0	16.0	
Minimum Split (s)	11.8	24.8		11.0	24.0		12.1	25.1	25.1	12.1	25.1	
Total Split (s)	22.6	41.0		11.0	29.4		15.5	65.9	65.9	12.1	62.5	
Total Split (%)	17.4%	31.5%		8.5%	22.6%		11.9%	50.7%	50.7%	9.3%	48.1%	
Maximum Green (s)	15.8	34.2		5.0	23.4		8.4	58.8	58.8	5.0	55.4	
Yellow Time (s)	4.8	4.8		4.0	4.0		5.1	5.1	5.1	5.1	5.1	
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)	6.8	6.8		6.0	6.0		7.1	7.1	7.1	7.1	7.1	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Min	Min	None	Min	
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	
Flash Don't Walk (s)		11.0			11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	42.9	34.3		23.4	19.9		67.6	62.7	62.7	65.6	54.2	
Actuated g/C Ratio	0.34	0.27		0.18	0.16		0.53	0.50	0.50	0.52	0.43	
v/c Ratio	0.49	0.98		0.57	0.28		0.83	0.59	0.16	0.06	0.97	
Control Delay (s/veh)	36.0	76.7		50.4	47.2		61.2	27.9	0.9	14.3	62.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	36.0	76.7		50.4	47.2		61.2	27.9	0.9	14.3	62.4	
LOS	D	E		D	D		E	C	A	B	E	
Approach Delay (s/veh)		64.3			48.7			29.3			61.1	
Approach LOS		E			D			C			E	
90th %ile Green (s)	15.8	34.2		5.0	23.4		8.4	58.8	58.8	5.0	55.4	
90th %ile Term Code	Max	Max		Max	Hold		Max	Hold	Hold	Max	Max	
70th %ile Green (s)	15.8	34.2		5.0	23.4		8.4	58.8	58.8	5.0	55.4	
70th %ile Term Code	Max	Max		Max	Hold		Max	Hold	Hold	Max	Max	
50th %ile Green (s)	15.8	34.2		5.0	23.4		8.4	58.8	58.8	5.0	55.4	
50th %ile Term Code	Max	Max		Max	Hold		Max	Hold	Hold	Max	Max	
30th %ile Green (s)	15.0	34.2		5.0	24.2		8.4	70.9	70.9	0.0	55.4	
30th %ile Term Code	Gap	Max		Max	Hold		Max	Hold	Hold	Skip	Max	
10th %ile Green (s)	34.2	34.2		0.0	0.0		8.4	64.9	64.9	0.0	49.4	
10th %ile Term Code	Hold	Max		Skip	Skip		Max	Hold	Hold	Skip	Gap	
Stops (vph)	151	354		57	63		73	366	2	10	611	
Fuel Used(gal)	4	14		2	2		4	12	1	0	23	
CO Emissions (g/hr)	307	979		123	134		264	841	66	23	1574	
NOx Emissions (g/hr)	60	191		24	26		51	164	13	4	306	
VOC Emissions (g/hr)	71	227		28	31		61	195	15	5	365	
Dilemma Vehicles (#)	0	17		0	3		0	16	0	0	26	
Queue Length 50th (ft)	136	~379		41	58		70	346	0	8	609	
Queue Length 95th (ft)	207	#611		77	107		#192	473	7	21	#885	
Internal Link Dist (ft)		663			674			992			812	
Turn Bay Length (ft)	75			100			465		425	400		
Base Capacity (vph)	445	503		127	342		175	913	877	334	792	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	0.49	0.98		0.57	0.24		0.83	0.59	0.16	0.06	0.95	

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 126.6			
Natural Cycle: 130			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay (s/veh): 50.6		Intersection LOS: D	
Intersection Capacity Utilization 100.6%		ICU Level of Service G	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 130			
70th %ile Actuated Cycle: 130			
50th %ile Actuated Cycle: 130			
30th %ile Actuated Cycle: 130			
10th %ile Actuated Cycle: 113			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Chuluota Rd & Lake Pickett Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	207	162	308	69	72	6	138	513	130	20	574	142
Future Volume (veh/h)	207	162	308	69	72	6	138	513	130	20	574	142
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	218	171	324	73	76	6	145	540	137	21	604	149
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, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	445	151	287	124	312	25	172	869	736	281	615	152
Arrive On Green	0.11	0.26	0.26	0.04	0.18	0.18	0.06	0.47	0.47	0.02	0.43	0.43
Sat Flow, veh/h	1767	573	1087	1767	1697	134	1767	1856	1572	1767	1437	355
Grp Volume(v), veh/h	218	0	495	73	0	82	145	540	137	21	0	753
Grp Sat Flow(s),veh/h/ln	1767	0	1660	1767	0	1831	1767	1856	1572	1767	0	1792
Q Serve(g_s), s	12.5	0.0	34.2	4.3	0.0	5.0	5.9	28.3	6.6	0.8	0.0	53.7
Cycle Q Clear(g_c), s	12.5	0.0	34.2	4.3	0.0	5.0	5.9	28.3	6.6	0.8	0.0	53.7
Prop In Lane	1.00		0.65	1.00		0.07	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	445	0	438	124	0	337	172	869	736	281	0	767
V/C Ratio(X)	0.49	0.00	1.13	0.59	0.00	0.24	0.84	0.62	0.19	0.07	0.00	0.98
Avail Cap(c_a), veh/h	461	0	438	124	0	337	179	869	736	313	0	767
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	1.00
Uniform Delay (d), s/veh	35.2	0.0	47.6	43.0	0.0	45.2	30.2	25.8	20.1	20.3	0.0	36.6
Incr Delay (d2), s/veh	0.8	0.0	83.1	7.2	0.0	0.4	27.8	1.4	0.1	0.1	0.0	28.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	0.0	23.8	2.1	0.0	2.2	3.6	12.0	2.4	0.3	0.0	27.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.0	0.0	130.8	50.2	0.0	45.5	58.0	27.2	20.2	20.4	0.0	64.6
LnGrp LOS	D		F	D		D	E	C	C	C		E
Approach Vol, veh/h		713			155			822			774	
Approach Delay, s/veh		101.8			47.7			31.5			63.4	
Approach LOS		F			D			C			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	62.5	21.4	30.6	9.8	67.7	11.0	41.0
Change Period (Y+Rc), s	7.1	7.1	6.8	* 6.8	7.1	7.1	6.0	6.8
Max Green Setting (Gmax), s	8.4	55.4	15.8	* 23	5.0	58.8	5.0	34.2
Max Q Clear Time (g_c+I1), s	7.9	55.7	14.5	7.0	2.8	30.3	6.3	36.2
Green Ext Time (p_c), s	0.0	0.0	0.1	0.3	0.0	3.6	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	62.9
HCM 7th LOS	E

Notes

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

Intersection	
Intersection Delay, s/veh	23.9
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	328	284	865	746
Demand Flow Rate, veh/h	338	293	892	769
Vehicles Circulating, veh/h	628	870	144	543
Vehicles Exiting, veh/h	684	69	624	620
Ped Vol Crossing Leg, #/h	1	1	1	1
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.9	15.9	11.5	48.4
Approach LOS	A	C	B	E

Lane	Left	Bypass	Left	Left	Bypass	Left
Designated Moves	LT	R	LTR	LT	R	LTR
Assumed Moves	LT		LTR	LT		LTR
RT Channelized		Yield			Yield	
Lane Util	1.000		1.000	1.000		1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976	4.976	4.976
A (Intercept)	1380	1380	1380	1380	1380	1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3	1.02e-3	1.02e-3	1.02e-3
Entry Flow, veh/h	140	198	293	795	97	769
Cap Entry Lane, veh/h	727	730	568	1191	1286	793
Entry HV Adj Factor	0.972	0.971	0.971	0.970	0.971	0.971
Flow Entry, veh/h	136	192	284	771	94	746
Cap Entry, veh/h	707	709	551	1156	1248	770
V/C Ratio	0.193	0.271	0.516	0.667	0.075	0.970
Control Delay, s/veh	7.3	8.3	15.9	12.5	3.5	48.4
LOS	A	A	C	B	A	E
95th %tile Queue, veh	1	1	3	5	0	15

MOVEMENT SUMMARY

Site: 101 [Chuluota Rd at Lake Pickett Rd AM Design (2048) No-Build (2-lane) Roundabout (Site Folder: General)]

Roundabout 2048 NB AM

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Chuluota Rd NB															
3	L2	All MCs	251	3.5	251	3.5	0.522	13.0	LOS B	4.8	124.0	0.50	0.54	0.50	38.1
8	T1	All MCs	520	3.5	520	3.5	0.522	6.2	LOS A	4.8	124.0	0.50	0.54	0.50	39.2
18	R2	All MCs	94	3.5	94	3.5	0.060	5.3	LOS A	0.4	9.0	0.22	0.49	0.22	41.3
Approach			864	3.5	864	3.5	0.522	8.1	LOS A	4.8	124.0	0.47	0.53	0.47	39.1
East: Lake Pickett Rd WB															
1	L2	All MCs	121	3.5	121	3.5	0.449	19.3	LOS B	3.6	91.9	0.92	0.82	1.03	32.7
6	T1	All MCs	154	3.5	154	3.5	0.449	12.6	LOS B	3.6	91.9	0.92	0.82	1.03	33.6
16	R2	All MCs	9	3.5	9	3.5	0.449	12.6	LOS B	3.6	91.9	0.92	0.82	1.03	33.2
Approach			284	3.5	284	3.5	0.449	15.5	LOS B	3.6	91.9	0.92	0.82	1.03	33.2
North: Chuluota Rd SB															
7	L2	All MCs	4	3.5	4	3.5	0.852	26.4	LOS C	15.0	384.5	1.00	1.08	1.67	32.7
4	T1	All MCs	484	3.5	484	3.5	0.852	19.7	LOS B	15.0	384.5	1.00	1.08	1.67	33.6
14	R2	All MCs	258	3.5	258	3.5	0.852	19.5	LOS B	15.0	384.5	1.00	1.08	1.67	33.2
Approach			746	3.5	746	3.5	0.852	19.6	LOS B	15.0	384.5	1.00	1.08	1.67	33.4
West: Lake Pickett Rd EB															
5	L2	All MCs	73	3.5	73	3.5	0.140	13.9	LOS B	1.0	25.9	0.74	0.67	0.74	34.6
2	T1	All MCs	63	3.5	63	3.5	0.140	7.2	LOS A	1.0	25.9	0.74	0.67	0.74	35.5
12	R2	All MCs	192	3.5	192	3.5	0.196	7.2	LOS A	1.5	37.3	0.76	0.65	0.76	37.0
Approach			327	3.5	327	3.5	0.196	8.7	LOS A	1.5	37.3	0.75	0.66	0.75	36.1
All Vehicles			2222	3.5	2222	3.5	0.852	13.0	LOS B	15.0	384.5	0.75	0.77	0.99	35.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Intersection	
Intersection Delay, s/veh	17.4
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	713	155	822	774
Demand Flow Rate, veh/h	735	159	846	797
Vehicles Circulating, veh/h	719	930	423	302
Vehicles Exiting, veh/h	380	198	697	787
Ped Vol Crossing Leg, #/h	1	1	1	1
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	15.1	11.3	18.6	19.5
Approach LOS	C	B	C	C

Lane	Left	Bypass	Left	Left	Bypass	Left
Designated Moves	LT	R	LTR	LT	R	LTR
Assumed Moves	LT		LTR	LT		LTR
RT Channelized		Yield			Yield	
Lane Util	1.000		1.000	1.000		1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976	4.976	4.976
A (Intercept)	1380	1380	1380	1380	1380	1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3	1.02e-3	1.02e-3	1.02e-3
Entry Flow, veh/h	401	334	159	705	141	797
Cap Entry Lane, veh/h	663	678	534	896	1128	1014
Entry HV Adj Factor	0.970	0.971	0.973	0.971	0.971	0.971
Flow Entry, veh/h	389	324	155	685	137	774
Cap Entry, veh/h	643	658	520	871	1095	985
V/C Ratio	0.605	0.492	0.297	0.787	0.125	0.786
Control Delay, s/veh	16.8	13.1	11.3	21.5	4.4	19.5
LOS	C	B	B	C	A	C
95th %tile Queue, veh	4	3	1	8	0	8

MOVEMENT SUMMARY

Site: 101 [Chuluota Rd at Lake Pickett Rd PM Design (2048) No-Build (2-lane) Roundabout (Site Folder: General)]

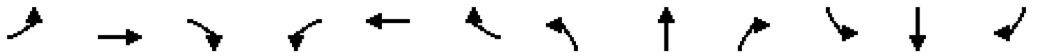
Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Chuluota Rd NB															
3	L2	All MCs	145	3.5	145	3.5	0.585	15.1	LOS B	5.8	150.0	0.82	0.68	0.86	37.1
8	T1	All MCs	540	3.5	540	3.5	0.585	8.3	LOS A	5.8	150.0	0.82	0.68	0.86	38.2
18	R2	All MCs	137	3.5	137	3.5	0.097	5.8	LOS A	0.6	15.3	0.39	0.52	0.39	40.7
Approach			822	3.5	822	3.5	0.585	9.1	LOS A	5.8	150.0	0.75	0.65	0.78	38.4
East: Lake Pickett Rd WB															
1	L2	All MCs	73	3.5	73	3.5	0.282	18.3	LOS B	2.0	51.9	0.91	0.78	0.91	33.1
6	T1	All MCs	76	3.5	76	3.5	0.282	11.6	LOS B	2.0	51.9	0.91	0.78	0.91	33.9
16	R2	All MCs	6	3.5	6	3.5	0.282	11.6	LOS B	2.0	51.9	0.91	0.78	0.91	33.6
Approach			155	3.5	155	3.5	0.282	14.8	LOS B	2.0	51.9	0.91	0.78	0.91	33.5
North: Chuluota Rd SB															
7	L2	All MCs	21	3.5	21	3.5	0.718	16.8	LOS B	8.8	226.6	0.83	0.70	0.96	37.6
4	T1	All MCs	604	3.5	604	3.5	0.718	10.0	LOS B	8.8	226.6	0.83	0.70	0.96	38.7
14	R2	All MCs	149	3.5	149	3.5	0.718	9.8	LOS A	8.8	226.6	0.83	0.70	0.96	38.2
Approach			775	3.5	775	3.5	0.718	10.2	LOS B	8.8	226.6	0.83	0.70	0.96	38.6
West: Lake Pickett Rd EB															
5	L2	All MCs	218	3.5	218	3.5	0.435	15.2	LOS B	3.7	94.5	0.90	0.73	0.90	33.9
2	T1	All MCs	171	3.5	171	3.5	0.435	8.5	LOS A	3.7	94.5	0.90	0.73	0.90	34.8
12	R2	All MCs	324	3.5	324	3.5	0.354	8.1	LOS A	2.9	73.6	0.86	0.69	0.86	36.8
Approach			713	3.5	713	3.5	0.435	10.4	LOS B	3.7	94.5	0.88	0.71	0.88	35.4
All Vehicles			2464	3.5	2464	3.5	0.718	10.2	LOS B	8.8	226.6	0.82	0.69	0.87	37.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↱		↑	↱		↑	↱		↑	↱
Traffic Volume (vph)	0	133	297	0	499	78	0	494	327	0	460	249
Future Volume (vph)	0	133	297	0	499	78	0	494	327	0	460	249
Ideal Flow (vphpl)	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950
Storage Length (ft)	0		200	0		200	0		400	0		400
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected												
Satd. Flow (prot)	0	1912	1625	0	1912	1625	0	1912	1625	0	1912	1625
Flt Permitted												
Satd. Flow (perm)	0	1912	1625	0	1912	1625	0	1912	1625	0	1912	1625
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			*60			*60			*60			*60
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		990			1052			1271			1196	
Travel Time (s)		13.5			14.3			15.8			14.8	
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
Adj. Flow (vph)	0	140	313	0	525	82	0	520	344	0	484	262
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	140	313	0	525	82	0	520	344	0	484	262
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1		2	1		2	1		2	1
Detector Template		Thru	Right		Thru	Right		Thru	Right		Thru	Right
Leading Detector (ft)		100	20		100	20		100	20		100	20
Trailing Detector (ft)		0	0		0	0		0	0		0	0
Detector 1 Position(ft)		0	0		0	0		0	0		0	0
Detector 1 Size(ft)		6	20		6	20		6	20		6	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA	Perm		NA	Perm		NA	Perm		NA	Perm
Protected Phases		8			4			6			2	
Permitted Phases			8			4			6			2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		8	8		4	4		6	6		2	2
Switch Phase												
Minimum Initial (s)		5.0	5.0		5.0	5.0		16.0	16.0		16.0	16.0
Minimum Split (s)		29.0	29.0		29.0	29.0		25.0	25.0		25.0	25.0
Total Split (s)		33.0	33.0		33.0	33.0		42.0	42.0		42.0	42.0
Total Split (%)		44.0%	44.0%		44.0%	44.0%		56.0%	56.0%		56.0%	56.0%
Maximum Green (s)		26.0	26.0		26.0	26.0		35.0	35.0		35.0	35.0
Yellow Time (s)		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
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	7.0		7.0	7.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0
Recall Mode		None	None		None	None		Min	Min		Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Don't Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)		20.6	20.6		20.6	20.6		23.6	23.6		23.6	23.6
Actuated g/C Ratio		0.35	0.35		0.35	0.35		0.40	0.40		0.40	0.40
v/c Ratio		0.21	0.51		0.78	0.13		0.68	0.50		0.63	0.38
Control Delay (s/veh)		15.7	16.5		28.2	7.4		20.0	13.9		18.8	11.6
Queue Delay		0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Delay (s/veh)		15.7	16.5		28.2	7.4		20.0	13.9		18.8	11.6
LOS		B	B		C	A		C	B		B	B
Approach Delay (s/veh)		16.2			25.4			17.6			16.3	
Approach LOS		B			C			B			B	
90th %ile Green (s)		26.0	26.0		26.0	26.0		35.0	35.0		35.0	35.0
90th %ile Term Code		Hold	Hold		Max	Max		Max	Max		Hold	Hold
70th %ile Green (s)		26.0	26.0		26.0	26.0		28.0	28.0		28.0	28.0
70th %ile Term Code		Hold	Hold		Max	Max		Gap	Gap		Hold	Hold
50th %ile Green (s)		22.4	22.4		22.4	22.4		23.3	23.3		23.3	23.3
50th %ile Term Code		Hold	Hold		Gap	Gap		Gap	Gap		Hold	Hold
30th %ile Green (s)		17.0	17.0		17.0	17.0		17.8	17.8		17.8	17.8
30th %ile Term Code		Hold	Hold		Gap	Gap		Gap	Gap		Hold	Hold
10th %ile Green (s)		12.8	12.8		12.8	12.8		16.0	16.0		16.0	16.0
10th %ile Term Code		Hold	Hold		Gap	Gap		Min	Min		Min	Min
Stops (vph)		83	174		396	23		368	182		333	117
Fuel Used(gal)		3	6		12	1		13	7		11	5
CO Emissions (g/hr)		177	387		858	69		897	485		799	325
NOx Emissions (g/hr)		34	75		167	13		174	94		155	63
VOC Emissions (g/hr)		41	90		199	16		208	112		185	75
Dilemma Vehicles (#)		8	0		36	0		36	0		33	0
Queue Length 50th (ft)		33	65		158	5		151	73		137	49
Queue Length 95th (ft)		85	165		#371	34		262	147		239	104
Internal Link Dist (ft)		910			972			1191			1116	
Turn Bay Length (ft)			200			200			400			400
Base Capacity (vph)		881	781		881	781		1186	1031		1186	1031
Starvation Cap Reductn		0	0		0	0		0	0		0	0

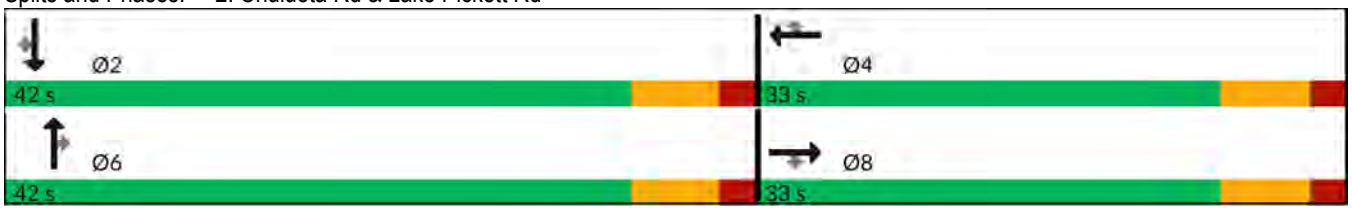
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn		0	0		0	0		0	0		0	0
Storage Cap Reductn		0	0		0	0		0	0		0	0
Reduced v/c Ratio		0.16	0.40		0.60	0.10		0.44	0.33		0.41	0.25

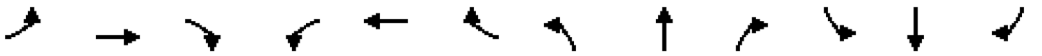
Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 58.9			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay (s/veh): 18.8		Intersection LOS: B	
Intersection Capacity Utilization 62.6%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 75			
70th %ile Actuated Cycle: 68			
50th %ile Actuated Cycle: 59.7			
30th %ile Actuated Cycle: 48.8			
10th %ile Actuated Cycle: 42.8			

* User Entered Value

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

Splits and Phases: 2: Chuluota Rd & Lake Pickett Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↱		↑	↱		↑	↱		↑	↱
Traffic Volume (veh/h)	0	133	297	0	499	78	0	494	327	0	460	249
Future Volume (veh/h)	0	133	297	0	499	78	0	494	327	0	460	249
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1920	1920	0	1920	1920	0	1920	1920	0	1920	1920
Adj Flow Rate, veh/h	0	140	313	0	525	82	0	520	344	0	484	262
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, %	0	2	2	0	2	2	0	2	2	0	2	2
Cap, veh/h	0	659	558	0	659	558	0	696	590	0	696	590
Arrive On Green	0.00	0.34	0.34	0.00	0.34	0.34	0.00	0.36	0.36	0.00	0.36	0.36
Sat Flow, veh/h	0	1920	1627	0	1920	1627	0	1920	1627	0	1920	1627
Grp Volume(v), veh/h	0	140	313	0	525	82	0	520	344	0	484	262
Grp Sat Flow(s),veh/h/ln	0	1920	1627	0	1920	1627	0	1920	1627	0	1920	1627
Q Serve(g_s), s	0.0	2.5	7.4	0.0	11.8	1.7	0.0	11.3	8.1	0.0	10.2	5.8
Cycle Q Clear(g_c), s	0.0	2.5	7.4	0.0	11.8	1.7	0.0	11.3	8.1	0.0	10.2	5.8
Prop In Lane	0.00		1.00	0.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	0	659	558	0	659	558	0	696	590	0	696	590
V/C Ratio(X)	0.00	0.21	0.56	0.00	0.80	0.15	0.00	0.75	0.58	0.00	0.70	0.44
Avail Cap(c_a), veh/h	0	1049	889	0	1049	889	0	1412	1197	0	1412	1197
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	11.1	12.7	0.0	14.1	10.8	0.0	13.3	12.3	0.0	12.9	11.5
Incr Delay (d2), s/veh	0.0	0.2	0.9	0.0	2.3	0.1	0.0	1.6	0.9	0.0	1.3	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	0.0	0.8	2.0	0.0	3.9	0.4	0.0	3.5	2.1	0.0	3.1	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	11.2	13.6	0.0	16.4	10.9	0.0	14.9	13.2	0.0	14.2	12.0
LnGrp LOS		B	B		B	B		B	B		B	B
Approach Vol, veh/h		453			607			864			746	
Approach Delay, s/veh		12.9			15.7			14.2			13.4	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.2		23.3		24.2		23.3				
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0				
Max Green Setting (Gmax), s		35.0		26.0		35.0		26.0				
Max Q Clear Time (g_c+I1), s		12.2		13.8		13.3		9.4				
Green Ext Time (p_c), s		3.4		2.6		4.0		1.5				

Intersection Summary												
HCM 7th Control Delay, s/veh			14.1									
HCM 7th LOS			B									

Intersection	
Intersection Delay, s/veh	6.2
Intersection LOS	A

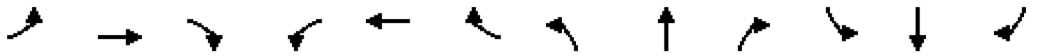
Approach	EB	WB	NB	SB
Entry Lanes	1	1	0	0
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	484	284	0	0
Demand Flow Rate, veh/h	493	290	0	0
Vehicles Circulating, veh/h	0	329	493	619
Vehicles Exiting, veh/h	619	164	0	0
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.9	6.7	0.0	0.0
Approach LOS	A	A	-	-

Lane	Left	Left
Designated Moves	LT	T
Assumed Moves	LT	T
RT Channelized		
Lane Util	1.000	1.000
Follow-Up Headway, s	2.609	2.609
Critical Headway, s	4.976	4.976
A (Intercept)	1380	1380
B (Slope)	1.02e-3	1.02e-3
Entry Flow, veh/h	493	290
Cap Entry Lane, veh/h	1380	987
Entry HV Adj Factor	0.980	0.980
Flow Entry, veh/h	483	284
Cap Entry, veh/h	1353	967
V/C Ratio	0.357	0.294
Control Delay, s/veh	5.9	6.7
LOS	A	A
95th %tile Queue, veh	2	1

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	0	0
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	327	787	0	0
Demand Flow Rate, veh/h	334	803	0	0
Vehicles Circulating, veh/h	128	0	462	803
Vehicles Exiting, veh/h	675	462	0	0
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.6	9.2	0.0	0.0
Approach LOS	A	A	-	-

Lane	Left	Left
Designated Moves	T	LT
Assumed Moves	T	LT
RT Channelized		
Lane Util	1.000	1.000
Follow-Up Headway, s	2.609	2.609
Critical Headway, s	4.976	4.976
A (Intercept)	1380	1380
B (Slope)	1.02e-3	1.02e-3
Entry Flow, veh/h	334	803
Cap Entry Lane, veh/h	1211	1380
Entry HV Adj Factor	0.980	0.980
Flow Entry, veh/h	327	787
Cap Entry, veh/h	1187	1353
V/C Ratio	0.276	0.582
Control Delay, s/veh	5.6	9.2
LOS	A	A
95th %tile Queue, veh	1	4



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↱		↑	↱		↑	↱		↑	↱
Traffic Volume (vph)	0	389	377	0	279	213	0	513	268	0	574	162
Future Volume (vph)	0	389	377	0	279	213	0	513	268	0	574	162
Ideal Flow (vphpl)	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950
Storage Length (ft)	0		200	0		200	0		400	0		400
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected												
Satd. Flow (prot)	0	1912	1625	0	1912	1625	0	1912	1625	0	1912	1625
Flt Permitted												
Satd. Flow (perm)	0	1912	1625	0	1912	1625	0	1912	1625	0	1912	1625
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			*60			*60			*60			*60
Link Speed (mph)		50			50			55			55	
Link Distance (ft)		990			1052			1271			1196	
Travel Time (s)		13.5			14.3			15.8			14.8	
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
Adj. Flow (vph)	0	409	397	0	294	224	0	540	282	0	604	171
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	409	397	0	294	224	0	540	282	0	604	171
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1		2	1		2	1		2	1
Detector Template		Thru	Right		Thru	Right		Thru	Right		Thru	Right
Leading Detector (ft)		100	20		100	20		100	20		100	20
Trailing Detector (ft)		0	0		0	0		0	0		0	0
Detector 1 Position(ft)		0	0		0	0		0	0		0	0
Detector 1 Size(ft)		6	20		6	20		6	20		6	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA	Perm		NA	Perm		NA	Perm		NA	Perm
Protected Phases		8			4			6			2	
Permitted Phases			8			4			6			2

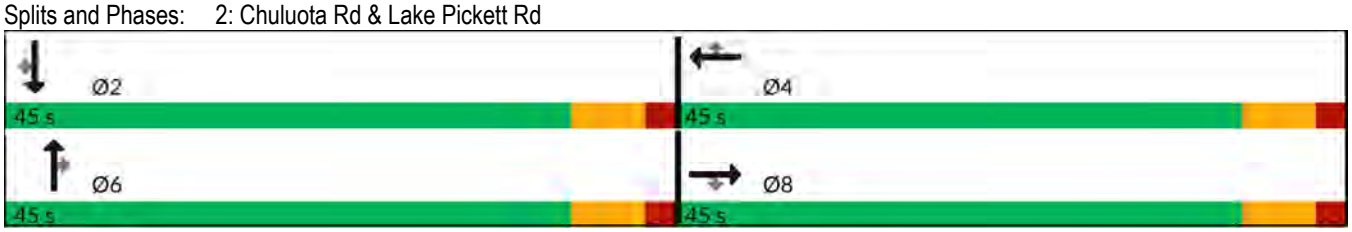
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		8	8		4	4		6	6		2	2
Switch Phase												
Minimum Initial (s)		5.0	5.0		5.0	5.0		16.0	16.0		16.0	16.0
Minimum Split (s)		29.0	29.0		29.0	29.0		25.0	25.0		25.0	25.0
Total Split (s)		45.0	45.0		45.0	45.0		45.0	45.0		45.0	45.0
Total Split (%)		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%
Maximum Green (s)		38.0	38.0		38.0	38.0		38.0	38.0		38.0	38.0
Yellow Time (s)		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
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	7.0		7.0	7.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0
Recall Mode		None	None		None	None		Min	Min		Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Don't Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)		21.0	21.0		21.0	21.0		25.6	25.6		25.6	25.6
Actuated g/C Ratio		0.34	0.34		0.34	0.34		0.42	0.42		0.42	0.42
v/c Ratio		0.63	0.67		0.45	0.38		0.68	0.40		0.76	0.24
Control Delay (s/veh)		22.4	21.4		18.9	13.8		20.8	12.6		23.8	9.9
Queue Delay		0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Delay (s/veh)		22.4	21.4		18.9	13.8		20.8	12.6		23.8	9.9
LOS		C	C		B	B		C	B		C	A
Approach Delay (s/veh)		21.9			16.7			18.0			20.7	
Approach LOS		C			B			B			C	
90th %ile Green (s)		35.0	35.0		35.0	35.0		38.0	38.0		38.0	38.0
90th %ile Term Code		Gap	Gap		Hold	Hold		Max	Max		Max	Max
70th %ile Green (s)		26.3	26.3		26.3	26.3		31.5	31.5		31.5	31.5
70th %ile Term Code		Gap	Gap		Hold	Hold		Hold	Hold		Gap	Gap
50th %ile Green (s)		20.7	20.7		20.7	20.7		24.4	24.4		24.4	24.4
50th %ile Term Code		Gap	Gap		Hold	Hold		Hold	Hold		Gap	Gap
30th %ile Green (s)		15.9	15.9		15.9	15.9		19.5	19.5		19.5	19.5
30th %ile Term Code		Gap	Gap		Hold	Hold		Hold	Hold		Gap	Gap
10th %ile Green (s)		10.8	10.8		10.8	10.8		16.0	16.0		16.0	16.0
10th %ile Term Code		Gap	Gap		Hold	Hold		Min	Min		Min	Min
Stops (vph)		289	247		190	102		380	129		449	63
Fuel Used(gal)		9	8		6	4		13	5		15	3
CO Emissions (g/hr)		605	545		409	251		934	367		1081	190
NOx Emissions (g/hr)		118	106		80	49		182	71		210	37
VOC Emissions (g/hr)		140	126		95	58		217	85		251	44
Dilemma Vehicles (#)		25	0		17	0		36	0		41	0
Queue Length 50th (ft)		117	97		78	41		150	51		176	24
Queue Length 95th (ft)		253	231		176	112		335	139		392	76
Internal Link Dist (ft)		910			972			1191			1116	
Turn Bay Length (ft)			200			200			400			400
Base Capacity (vph)		1265	1095		1265	1095		1265	1095		1265	1095
Starvation Cap Reductn		0	0		0	0		0	0		0	0

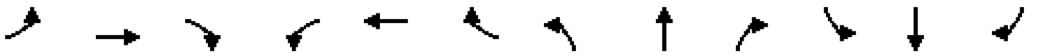
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn		0	0		0	0		0	0		0	0
Storage Cap Reductn		0	0		0	0		0	0		0	0
Reduced v/c Ratio		0.32	0.36		0.23	0.20		0.43	0.26		0.48	0.16

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 61.6			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay (s/veh): 19.6		Intersection LOS: B	
Intersection Capacity Utilization 63.8%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 87			
70th %ile Actuated Cycle: 71.8			
50th %ile Actuated Cycle: 59.1			
30th %ile Actuated Cycle: 49.4			
10th %ile Actuated Cycle: 40.8			

* User Entered Value

Splits and Phases: 2: Chuluota Rd & Lake Pickett Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↱		↑	↱		↑	↱		↑	↱
Traffic Volume (veh/h)	0	389	377	0	279	213	0	513	268	0	574	162
Future Volume (veh/h)	0	389	377	0	279	213	0	513	268	0	574	162
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1920	1920	0	1920	1920	0	1920	1920	0	1920	1920
Adj Flow Rate, veh/h	0	409	397	0	294	224	0	540	282	0	604	171
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, %	0	2	2	0	2	2	0	2	2	0	2	2
Cap, veh/h	0	631	534	0	631	534	0	758	643	0	758	643
Arrive On Green	0.00	0.33	0.33	0.00	0.33	0.33	0.00	0.39	0.39	0.00	0.39	0.39
Sat Flow, veh/h	0	1920	1627	0	1920	1627	0	1920	1627	0	1920	1627
Grp Volume(v), veh/h	0	409	397	0	294	224	0	540	282	0	604	171
Grp Sat Flow(s),veh/h/ln	0	1920	1627	0	1920	1627	0	1920	1627	0	1920	1627
Q Serve(g_s), s	0.0	9.2	11.0	0.0	6.1	5.4	0.0	12.0	6.4	0.0	14.1	3.6
Cycle Q Clear(g_c), s	0.0	9.2	11.0	0.0	6.1	5.4	0.0	12.0	6.4	0.0	14.1	3.6
Prop In Lane	0.00		1.00	0.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	0	631	534	0	631	534	0	758	643	0	758	643
V/C Ratio(X)	0.00	0.65	0.74	0.00	0.47	0.42	0.00	0.71	0.44	0.00	0.80	0.27
Avail Cap(c_a), veh/h	0	1441	1221	0	1441	1221	0	1441	1221	0	1441	1221
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	14.5	15.1	0.0	13.5	13.2	0.0	12.9	11.2	0.0	13.5	10.4
Incr Delay (d2), s/veh	0.0	1.1	2.1	0.0	0.5	0.5	0.0	1.3	0.5	0.0	2.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.1	3.3	0.0	2.0	1.5	0.0	3.6	1.6	0.0	4.4	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	15.6	17.2	0.0	14.0	13.8	0.0	14.1	11.7	0.0	15.5	10.6
LnGrp LOS		B	B		B	B		B	B		B	B
Approach Vol, veh/h		806			518			822			775	
Approach Delay, s/veh		16.4			13.9			13.3			14.4	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	27.0	23.6	27.0	23.6
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	38.0	38.0	38.0	38.0
Max Q Clear Time (g_c+I1), s	16.1	8.1	14.0	13.0
Green Ext Time (p_c), s	3.9	2.3	4.0	3.7

Intersection Summary	
HCM 7th Control Delay, s/veh	14.6
HCM 7th LOS	B

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	0	0
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	691	155	0	0
Demand Flow Rate, veh/h	705	158	0	0
Vehicles Circulating, veh/h	0	370	705	528
Vehicles Exiting, veh/h	528	335	0	0
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.0	5.5	0.0	0.0
Approach LOS	A	A	-	-

Lane	Left	Left
Designated Moves	LT	T
Assumed Moves	LT	T
RT Channelized		
Lane Util	1.000	1.000
Follow-Up Headway, s	2.609	2.609
Critical Headway, s	4.976	4.976
A (Intercept)	1380	1380
B (Slope)	1.02e-3	1.02e-3
Entry Flow, veh/h	705	158
Cap Entry Lane, veh/h	1380	946
Entry HV Adj Factor	0.980	0.980
Flow Entry, veh/h	691	155
Cap Entry, veh/h	1353	928
V/C Ratio	0.511	0.167
Control Delay, s/veh	8.0	5.5
LOS	A	A
95th %tile Queue, veh	3	1

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	0	0
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	713	465	0	0
Demand Flow Rate, veh/h	727	474	0	0
Vehicles Circulating, veh/h	96	0	823	474
Vehicles Exiting, veh/h	378	823	0	0
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	9.8	5.8	0.0	0.0
Approach LOS	A	A	-	-

Lane	Left	Left
Designated Moves	T	LT
Assumed Moves	T	LT
RT Channelized		
Lane Util	1.000	1.000
Follow-Up Headway, s	2.609	2.609
Critical Headway, s	4.976	4.976
A (Intercept)	1380	1380
B (Slope)	1.02e-3	1.02e-3
Entry Flow, veh/h	727	474
Cap Entry Lane, veh/h	1251	1380
Entry HV Adj Factor	0.980	0.980
Flow Entry, veh/h	713	465
Cap Entry, veh/h	1227	1353
V/C Ratio	0.581	0.344
Control Delay, s/veh	9.8	5.8
LOS	A	A
95th %tile Queue, veh	4	2

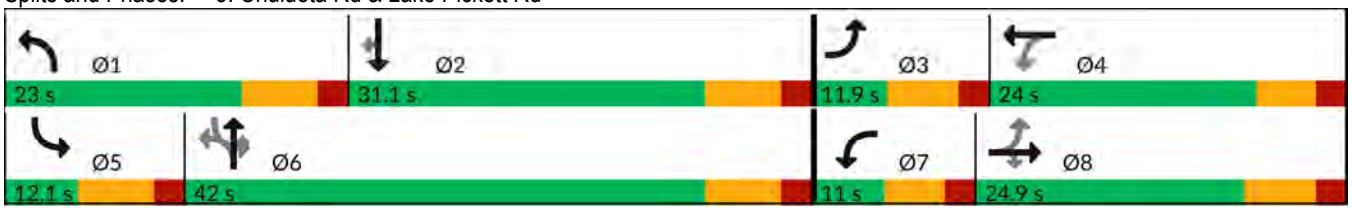
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	81	248	156	198	12	324	680	121	6	689	333
Future Volume (vph)	94	81	248	156	198	12	324	680	121	6	689	333
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		300	100		0	465		425	400		400
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.921	0.850		0.991				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1614	1490	1752	1828	0	1752	3505	1568	1752	3505	1568
Flt Permitted	0.467			0.552			0.196			0.327		
Satd. Flow (perm)	861	1614	1490	1018	1828	0	362	3505	1568	603	3505	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		55	295		3				205			351
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		743			754			1072			892	
Travel Time (s)		11.3			11.4			14.6			12.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	99	85	261	164	208	13	341	716	127	6	725	351
Shared Lane Traffic (%)			36%									
Lane Group Flow (vph)	99	179	167	164	221	0	341	716	127	6	725	351
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	D.P+P	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	

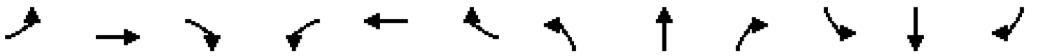
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	8		8	4			6		6	6		2
Detector Phase	3	8	8	7	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	16.0	16.0	5.0	16.0	16.0
Minimum Split (s)	11.8	24.8	24.8	11.0	24.0		12.1	25.1	25.1	12.1	25.1	25.1
Total Split (s)	11.9	24.9	24.9	11.0	24.0		23.0	42.0	42.0	12.1	31.1	31.1
Total Split (%)	13.2%	27.7%	27.7%	12.2%	26.7%		25.6%	46.7%	46.7%	13.4%	34.6%	34.6%
Maximum Green (s)	5.1	18.1	18.1	5.0	18.0		15.9	34.9	34.9	5.0	24.0	24.0
Yellow Time (s)	4.8	4.8	4.8	4.0	4.0		5.1	5.1	5.1	5.1	5.1	5.1
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	0.0
Total Lost Time (s)	6.8	6.8	6.8	6.0	6.0		7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min	Min	None	Min	Min
Walk Time (s)		7.0	7.0		7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)		11.0	11.0		11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	19.0	13.8	13.8	20.5	16.7		43.4	41.2	41.2	42.1	21.8	21.8
Actuated g/C Ratio	0.23	0.17	0.17	0.25	0.20		0.53	0.50	0.50	0.51	0.26	0.26
v/c Ratio	0.39	0.57	0.34	0.55	0.59		0.79	0.41	0.14	0.02	0.78	0.52
Control Delay (s/veh)	27.6	29.6	1.8	32.3	39.0		28.9	15.2	0.7	10.5	35.8	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	27.6	29.6	1.8	32.3	39.0		28.9	15.2	0.7	10.5	35.8	6.2
LOS	C	C	A	C	D		C	B	A	B	D	A
Approach Delay (s/veh)		18.7			36.1			17.6			26.1	
Approach LOS		B			D			B			C	
90th %ile Green (s)	5.1	18.1	18.1	5.0	18.0		15.9	34.9	34.9	5.0	24.0	24.0
90th %ile Term Code	Max	Max	Max	Max	Max		Max	Hold	Hold	Max	Max	Max
70th %ile Green (s)	5.1	18.1	18.1	5.0	18.0		15.9	47.0	47.0	0.0	24.0	24.0
70th %ile Term Code	Max	Hold	Hold	Max	Max		Max	Hold	Hold	Skip	Max	Max
50th %ile Green (s)	5.1	15.7	15.7	5.0	15.6		15.9	47.0	47.0	0.0	24.0	24.0
50th %ile Term Code	Max	Hold	Hold	Max	Gap		Max	Hold	Hold	Skip	Max	Max
30th %ile Green (s)	5.1	12.9	12.9	5.0	12.8		14.1	42.6	42.6	0.0	21.4	21.4
30th %ile Term Code	Max	Hold	Hold	Max	Gap		Gap	Hold	Hold	Skip	Gap	Gap
10th %ile Green (s)	0.0	6.1	6.1	5.0	17.9		10.6	33.7	33.7	0.0	16.0	16.0
10th %ile Term Code	Skip	Gap	Gap	Max	Hold		Gap	Hold	Hold	Skip	Min	Min
Stops (vph)	71	103	0	142	182		181	407	2	5	608	37
Fuel Used(gal)	2	3	1	4	5		7	13	1	0	18	3
CO Emissions (g/hr)	130	218	58	249	347		481	907	61	9	1276	201
NOx Emissions (g/hr)	25	42	11	48	67		94	176	12	2	248	39
VOC Emissions (g/hr)	30	51	13	58	80		112	210	14	2	296	47
Dilemma Vehicles (#)	0	9	0	0	11		0	34	0	0	38	0
Queue Length 50th (ft)	40	65	0	68	114		102	114	0	1	192	0
Queue Length 95th (ft)	78	132	0	118	188		#237	215	5	7	267	64
Internal Link Dist (ft)		663			674			992			812	
Turn Bay Length (ft)	75		300	100			465		425	400		400
Base Capacity (vph)	254	402	561	298	407		462	1763	890	378	1035	710

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.45	0.30	0.55	0.54		0.74	0.41	0.14	0.02	0.70	0.49

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 82.5			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay (s/veh): 23.0		Intersection LOS: C	
Intersection Capacity Utilization 77.5%		ICU Level of Service D	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 90			
70th %ile Actuated Cycle: 90			
50th %ile Actuated Cycle: 87.6			
30th %ile Actuated Cycle: 80.4			
10th %ile Actuated Cycle: 64.7			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Chuluota Rd & Lake Pickett Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	81	248	156	198	12	324	680	121	6	689	333
Future Volume (veh/h)	94	81	248	156	198	12	324	680	121	6	689	333
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	99	217	173	164	208	13	341	716	127	6	725	351
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, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	243	296	250	253	258	16	418	1490	665	285	953	425
Arrive On Green	0.06	0.16	0.16	0.06	0.15	0.15	0.16	0.42	0.42	0.01	0.27	0.27
Sat Flow, veh/h	1767	1856	1572	1767	1728	108	1767	3526	1572	1767	3526	1572
Grp Volume(v), veh/h	99	217	173	164	0	221	341	716	127	6	725	351
Grp Sat Flow(s),veh/h/ln	1767	1856	1572	1767	0	1836	1767	1763	1572	1767	1763	1572
Q Serve(g_s), s	3.6	8.7	8.1	5.0	0.0	9.1	10.1	11.5	4.0	0.2	14.7	16.4
Cycle Q Clear(g_c), s	3.6	8.7	8.1	5.0	0.0	9.1	10.1	11.5	4.0	0.2	14.7	16.4
Prop In Lane	1.00		1.00	1.00		0.06	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	296	250	253	0	274	418	1490	665	285	953	425
V/C Ratio(X)	0.41	0.73	0.69	0.65	0.00	0.81	0.82	0.48	0.19	0.02	0.76	0.83
Avail Cap(c_a), veh/h	246	430	365	253	0	424	495	1577	703	384	1084	484
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	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	26.2	31.2	31.0	28.7	0.0	32.1	17.3	16.3	14.1	13.5	26.2	26.7
Incr Delay (d2), s/veh	1.1	3.6	3.4	5.7	0.0	6.4	8.8	0.2	0.1	0.0	2.8	10.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	3.9	3.1	2.8	0.0	4.2	4.4	4.0	1.3	0.1	5.9	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.3	34.9	34.4	34.4	0.0	38.5	26.2	16.6	14.3	13.6	29.0	36.9
LnGrp LOS	C	C	C	C		D	C	B	B	B	C	D
Approach Vol, veh/h		489			385			1184			1082	
Approach Delay, s/veh		33.1			36.7			19.1			31.5	
Approach LOS		C			D			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.6	28.2	11.8	18.4	7.7	40.1	11.0	19.2
Change Period (Y+Rc), s	7.1	7.1	6.8	* 6.8	7.1	7.1	6.0	6.8
Max Green Setting (Gmax), s	15.9	24.0	5.1	* 18	5.0	34.9	5.0	18.1
Max Q Clear Time (g_c+I1), s	12.1	18.4	5.6	11.1	2.2	13.5	7.0	10.7
Green Ext Time (p_c), s	0.4	2.7	0.0	0.6	0.0	4.8	0.0	1.0

Intersection Summary	
HCM 7th Control Delay, s/veh	27.7
HCM 7th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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

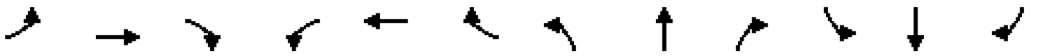
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	281	220	418	94	98	9	187	734	177	27	836	193
Future Volume (vph)	281	220	418	94	98	9	187	734	177	27	836	193
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		300	100		0	465		425	400		400
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.948	0.850		0.988				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1661	1490	1752	1823	0	1752	3505	1568	1752	3505	1568
Flt Permitted	0.467			0.539			0.129			0.258		
Satd. Flow (perm)	861	1661	1490	994	1823	0	238	3505	1568	476	3505	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27	215		4				235			235
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		743			754			1072			892	
Travel Time (s)		11.3			11.4			14.6			12.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	296	232	440	99	103	9	197	773	186	28	880	203
Shared Lane Traffic (%)			28%									
Lane Group Flow (vph)	296	355	317	99	112	0	197	773	186	28	880	203
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	D.P+P	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	8		8	4			6		6	6		2
Detector Phase	3	8	8	7	4		1	6	6	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	16.0	16.0	5.0	16.0	16.0
Minimum Split (s)	11.8	24.8	24.8	11.0	24.0		12.1	25.1	25.1	12.1	25.1	25.1
Total Split (s)	24.6	46.0	46.0	11.0	32.4		16.3	40.9	40.9	12.1	36.7	36.7
Total Split (%)	22.4%	41.8%	41.8%	10.0%	29.5%		14.8%	37.2%	37.2%	11.0%	33.4%	33.4%
Maximum Green (s)	17.8	39.2	39.2	5.0	26.4		9.2	33.8	33.8	5.0	29.6	29.6
Yellow Time (s)	4.8	4.8	4.8	4.0	4.0		5.1	5.1	5.1	5.1	5.1	5.1
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	0.0
Total Lost Time (s)	6.8	6.8	6.8	6.0	6.0		7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min	Min	None	Min	Min
Walk Time (s)		7.0	7.0		7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)		11.0	11.0		11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	35.8	27.4	27.4	19.0	13.9		43.2	38.0	38.0	40.8	28.3	28.3
Actuated g/C Ratio	0.38	0.29	0.29	0.20	0.15		0.46	0.40	0.40	0.43	0.30	0.30
v/c Ratio	0.62	0.71	0.54	0.41	0.41		0.77	0.55	0.24	0.10	0.84	0.32
Control Delay (s/veh)	28.0	37.2	13.4	26.9	40.2		40.2	26.6	2.3	17.2	40.9	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	28.0	37.2	13.4	26.9	40.2		40.2	26.6	2.3	17.2	40.9	3.9
LOS	C	D	B	C	D		D	C	A	B	D	A
Approach Delay (s/veh)		26.6			33.9			25.0			33.6	
Approach LOS		C			C			C			C	
90th %ile Green (s)	17.8	37.7	37.7	5.0	24.9		9.2	33.8	33.8	5.0	29.6	29.6
90th %ile Term Code	Max	Gap	Gap	Max	Hold		Max	Max	Max	Max	Max	Max
70th %ile Green (s)	17.8	30.0	30.0	5.0	17.2		9.2	33.8	33.8	5.0	29.6	29.6
70th %ile Term Code	Max	Gap	Gap	Max	Hold		Max	Hold	Hold	Max	Max	Max
50th %ile Green (s)	17.6	24.9	24.9	5.0	12.3		9.2	33.8	33.8	5.0	29.6	29.6
50th %ile Term Code	Gap	Gap	Gap	Max	Hold		Max	Hold	Hold	Max	Max	Max
30th %ile Green (s)	15.1	21.0	21.0	5.0	10.9		9.2	45.9	45.9	0.0	29.6	29.6
30th %ile Term Code	Gap	Gap	Gap	Max	Hold		Max	Hold	Hold	Skip	Max	Max
10th %ile Green (s)	11.1	23.9	23.9	0.0	6.8		9.2	38.8	38.8	0.0	22.5	22.5
10th %ile Term Code	Gap	Hold	Hold	Skip	Gap		Max	Hold	Hold	Skip	Gap	Gap
Stops (vph)	196	270	87	73	85		100	555	7	16	717	12
Fuel Used(gal)	5	8	3	2	2		4	17	1	0	23	1
CO Emissions (g/hr)	377	527	234	132	171		303	1222	97	34	1587	100
NOx Emissions (g/hr)	73	102	46	26	33		59	238	19	7	309	19
VOC Emissions (g/hr)	87	122	54	30	40		70	283	23	8	368	23
Dilemma Vehicles (#)	0	14	0	0	4		0	33	0	0	41	0
Queue Length 50th (ft)	133	195	51	39	62		68	202	0	9	257	0
Queue Length 95th (ft)	202	301	135	71	112		#216	318	24	29	#433	37
Internal Link Dist (ft)		663			674			992			812	
Turn Bay Length (ft)	75		300	100			465		425	400		400
Base Capacity (vph)	495	712	750	240	518		257	1406	769	273	1111	657

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.50	0.42	0.41	0.22		0.77	0.55	0.24	0.10	0.79	0.31

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 94.7			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay (s/veh): 28.8		Intersection LOS: C	
Intersection Capacity Utilization 81.3%		ICU Level of Service D	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 108.5			
70th %ile Actuated Cycle: 100.8			
50th %ile Actuated Cycle: 95.7			
30th %ile Actuated Cycle: 91.8			
10th %ile Actuated Cycle: 76.6			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Chuluota Rd & Lake Pickett Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	281	220	418	94	98	9	187	734	177	27	836	193
Future Volume (veh/h)	281	220	418	94	98	9	187	734	177	27	836	193
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	296	388	336	99	103	9	197	773	186	28	880	203
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, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	476	480	406	222	242	21	279	1272	567	234	1029	459
Arrive On Green	0.16	0.26	0.26	0.06	0.14	0.14	0.10	0.36	0.36	0.03	0.29	0.29
Sat Flow, veh/h	1767	1856	1572	1767	1682	147	1767	3526	1572	1767	3526	1572
Grp Volume(v), veh/h	296	388	336	99	0	112	197	773	186	28	880	203
Grp Sat Flow(s),veh/h/ln	1767	1856	1572	1767	0	1829	1767	1763	1572	1767	1763	1572
Q Serve(g_s), s	12.3	17.8	18.3	4.3	0.0	5.1	6.8	16.3	7.8	0.9	21.4	9.5
Cycle Q Clear(g_c), s	12.3	17.8	18.3	4.3	0.0	5.1	6.8	16.3	7.8	0.9	21.4	9.5
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	476	480	406	222	0	264	279	1272	567	234	1029	459
V/C Ratio(X)	0.62	0.81	0.83	0.45	0.00	0.42	0.70	0.61	0.33	0.12	0.86	0.44
Avail Cap(c_a), veh/h	538	802	680	222	0	532	288	1314	586	282	1151	513
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	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	25.0	31.5	31.7	31.2	0.0	35.4	22.1	23.7	21.0	18.8	30.3	26.1
Incr Delay (d2), s/veh	1.8	3.3	4.3	1.4	0.0	1.1	7.4	0.8	0.3	0.2	6.0	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	7.9	6.9	1.8	0.0	2.2	3.1	6.2	2.7	0.3	9.1	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.9	34.8	36.0	32.6	0.0	36.5	29.5	24.5	21.3	19.0	36.3	26.8
LnGrp LOS	C	C	D	C		D	C	C	C	B	D	C
Approach Vol, veh/h		1020			211			1156			1111	
Approach Delay, s/veh		32.9			34.6			24.8			34.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.9	33.6	21.4	19.9	9.6	39.8	11.0	30.2
Change Period (Y+Rc), s	7.1	7.1	6.8	* 6.8	7.1	7.1	6.0	6.8
Max Green Setting (Gmax), s	9.2	29.6	17.8	* 26	5.0	33.8	5.0	39.2
Max Q Clear Time (g_c+I1), s	8.8	23.4	14.3	7.1	2.9	18.3	6.3	20.3
Green Ext Time (p_c), s	0.0	3.1	0.3	0.4	0.0	4.8	0.0	3.2

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

Notes

User approved volume balancing among the lanes for turning movement.

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

Intersection	
Intersection Delay, s/veh	17.7
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	445	385	1184	1082
Demand Flow Rate, veh/h	459	396	1219	1115
Vehicles Circulating, veh/h	922	1190	196	734
Vehicles Exiting, veh/h	927	225	916	852
Ped Vol Crossing Leg, #/h	1	1	1	1
Ped Cap Adj	1.000	1.000	0.999	1.000
Approach Delay, s/veh	13.2	30.9	9.3	24.0
Approach LOS	B	D	A	C

Lane	Left	Bypass	Left	Left	Right	Left	Right
Designated Moves	LT	R	LTR	LT	TR	LT	TR
Assumed Moves	LT		LTR	LT	TR	LT	TR
RT Channelized		Yield					
Lane Util	1.000		1.000	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.609	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.976	4.328	4.645	4.328	4.645	4.328
A (Intercept)	1420	1380	1420	1350	1420	1350	1420
B (Slope)	8.501e-4	1.02e-3	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4
Entry Flow, veh/h	190	269	396	573	646	524	591
Cap Entry Lane, veh/h	649	542	516	1127	1202	687	761
Entry HV Adj Factor	0.971	0.971	0.972	0.971	0.971	0.971	0.971
Flow Entry, veh/h	184	261	385	556	627	509	574
Cap Entry, veh/h	630	526	502	1093	1166	667	738
V/C Ratio	0.293	0.496	0.767	0.509	0.538	0.763	0.777
Control Delay, s/veh	9.5	15.9	30.9	9.2	9.3	24.4	23.6
LOS	A	C	D	A	A	C	C
95th %tile Queue, veh	1	3	7	3	3	7	8

MOVEMENT SUMMARY

Site: 101 [Chuluota Rd at Lake Pickett Rd AM Design (2048) Build (4-lane) Roundabout (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Chuluota Rd NB															
3	L2	All MCs	341	3.5	341	3.5	0.453	12.5	LOS B	3.6	92.3	0.55	0.59	0.55	34.8
8	T1	All MCs	716	3.5	716	3.5	0.453	5.9	LOS A	3.7	96.0	0.53	0.52	0.53	36.9
18	R2	All MCs	127	3.5	127	3.5	0.453	5.6	LOS A	3.7	96.0	0.52	0.49	0.52	37.0
Approach			1184	3.5	1184	3.5	0.453	7.8	LOS A	3.7	96.0	0.53	0.54	0.53	36.3
East: Lake Pickett Rd WB															
1	L2	All MCs	164	3.5	164	3.5	0.605	18.3	LOS B	3.8	98.9	0.82	0.97	1.10	33.3
6	T1	All MCs	208	3.5	208	3.5	0.605	11.7	LOS B	3.8	98.9	0.82	0.97	1.10	34.1
16	R2	All MCs	13	3.5	13	3.5	0.605	11.5	LOS B	3.8	98.9	0.82	0.97	1.10	33.8
Approach			385	3.5	385	3.5	0.605	14.5	LOS B	3.8	98.9	0.82	0.97	1.10	33.7
North: Chuluota Rd SB															
7	L2	All MCs	6	3.5	6	3.5	0.646	21.7	LOS C	6.8	175.8	0.95	0.91	1.30	32.8
4	T1	All MCs	725	3.5	725	3.5	0.646	14.4	LOS B	7.7	197.7	0.95	0.90	1.28	33.9
14	R2	All MCs	351	3.5	351	3.5	0.646	12.8	LOS B	7.7	197.7	0.96	0.87	1.25	34.2
Approach			1082	3.5	1082	3.5	0.646	13.9	LOS B	7.7	197.7	0.95	0.89	1.27	34.0
West: Lake Pickett Rd EB															
5	L2	All MCs	99	3.5	99	3.5	0.220	13.8	LOS B	1.2	30.7	0.71	0.72	0.71	34.6
2	T1	All MCs	85	3.5	85	3.5	0.220	7.3	LOS A	1.2	30.7	0.71	0.72	0.71	35.4
12	R2	All MCs	261	3.5	261	3.5	0.310	7.1	LOS A	1.8	45.1	0.74	0.74	0.74	37.0
Approach			445	3.5	445	3.5	0.310	8.6	LOS A	1.8	45.1	0.73	0.73	0.73	36.1
All Vehicles			3097	3.5	3097	3.5	0.646	10.9	LOS B	7.7	197.7	0.74	0.74	0.89	35.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Intersection	
Intersection Delay, s/veh	25.2
Intersection LOS	D

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	968	211	1156	1111
Demand Flow Rate, veh/h	997	217	1191	1144
Vehicles Circulating, veh/h	1037	1304	573	411
Vehicles Exiting, veh/h	518	460	1008	1110
Ped Vol Crossing Leg, #/h	1	1	1	1
Ped Cap Adj	1.000	1.000	0.999	0.999
Approach Delay, s/veh	50.0	16.8	18.3	12.3
Approach LOS	E	C	C	B

Lane	Left	Bypass	Left	Left	Right	Left	Right
Designated Moves	LT	R	LTR	LT	TR	LT	TR
Assumed Moves	LT		LTR	LT	TR	LT	TR
RT Channelized		Yield					
Lane Util	1.000		1.000	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.609	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.976	4.328	4.645	4.328	4.645	4.328
A (Intercept)	1420	1380	1420	1350	1420	1350	1420
B (Slope)	8.501e-4	1.02e-3	8.501e-4	9.199e-4	8.501e-4	9.199e-4	8.501e-4
Entry Flow, veh/h	544	453	217	560	631	538	606
Cap Entry Lane, veh/h	588	494	469	797	873	925	1001
Entry HV Adj Factor	0.971	0.971	0.972	0.970	0.971	0.970	0.971
Flow Entry, veh/h	528	440	211	543	613	522	589
Cap Entry, veh/h	571	479	456	773	847	897	972
V/C Ratio	0.925	0.918	0.463	0.703	0.724	0.582	0.606
Control Delay, s/veh	48.0	52.4	16.8	18.4	18.2	12.4	12.2
LOS	E	F	C	C	C	B	B
95th %tile Queue, veh	12	11	2	6	6	4	4

MOVEMENT SUMMARY

Site: 101 [Chuluota Rd at Lake Pickett Rd PM Design (2048) Build (4-lane) Roundabout (Site Folder: General)]

Roundabout 2048 Bld PM

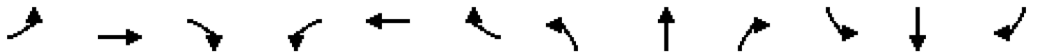
Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

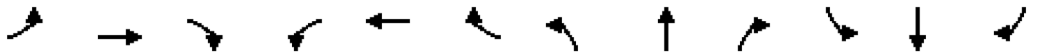
Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Chuluota Rd NB															
3	L2	All MCs	197	3.5	197	3.5	0.634	18.4	LOS B	6.7	171.8	0.93	0.84	1.15	33.3
8	T1	All MCs	773	3.5	773	3.5	0.634	10.9	LOS B	7.3	187.0	0.93	0.81	1.12	35.1
18	R2	All MCs	186	3.5	186	3.5	0.634	10.0	LOS B	7.3	187.0	0.93	0.79	1.10	35.4
Approach			1156	3.5	1156	3.5	0.634	12.0	LOS B	7.3	187.0	0.93	0.81	1.12	34.8
East: Lake Pickett Rd WB															
1	L2	All MCs	99	3.5	99	3.5	0.411	17.2	LOS B	2.3	58.9	0.83	0.90	0.94	33.7
6	T1	All MCs	103	3.5	103	3.5	0.411	10.6	LOS B	2.3	58.9	0.83	0.90	0.94	34.5
16	R2	All MCs	9	3.5	9	3.5	0.411	10.4	LOS B	2.3	58.9	0.83	0.90	0.94	34.2
Approach			212	3.5	212	3.5	0.411	13.7	LOS B	2.3	58.9	0.83	0.90	0.94	34.1
North: Chuluota Rd SB															
7	L2	All MCs	28	3.5	28	3.5	0.500	14.3	LOS B	3.8	98.0	0.72	0.64	0.74	35.5
4	T1	All MCs	880	3.5	880	3.5	0.500	7.5	LOS A	4.0	102.4	0.71	0.62	0.72	36.6
14	R2	All MCs	203	3.5	203	3.5	0.500	6.9	LOS A	4.0	102.4	0.70	0.60	0.70	36.4
Approach			1112	3.5	1112	3.5	0.500	7.5	LOS A	4.0	102.4	0.71	0.62	0.72	36.5
West: Lake Pickett Rd EB															
5	L2	All MCs	296	3.5	296	3.5	0.625	16.4	LOS B	4.7	120.2	0.84	0.92	1.07	33.7
2	T1	All MCs	232	3.5	232	3.5	0.625	9.8	LOS A	4.7	120.2	0.84	0.92	1.07	34.4
12	R2	All MCs	440	3.5	440	3.5	0.512	8.3	LOS A	3.3	84.9	0.79	0.83	0.92	36.8
Approach			967	3.5	967	3.5	0.625	11.1	LOS B	4.7	120.2	0.82	0.88	1.00	35.2
All Vehicles			3446	3.5	3446	3.5	0.634	10.4	LOS B	7.3	187.0	0.82	0.77	0.95	35.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↱		↑	↱		↑	↱		↑↑	↱
Traffic Volume (vph)	0	181	404	0	678	106	0	680	445	0	689	339
Future Volume (vph)	0	181	404	0	678	106	0	680	445	0	689	339
Ideal Flow (vphpl)	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950
Storage Length (ft)	0		200	0		200	0		400	0		400
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected												
Satd. Flow (prot)	0	1912	1625	0	1912	1625	0	1912	1625	0	3632	1625
Flt Permitted												
Satd. Flow (perm)	0	1912	1625	0	1912	1625	0	1912	1625	0	3632	1625
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			*60			*60			*60			*60
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		990			1052			1271			1196	
Travel Time (s)		13.5			14.3			17.3			16.3	
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
Adj. Flow (vph)	0	191	425	0	714	112	0	716	468	0	725	357
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	191	425	0	714	112	0	716	468	0	725	357
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1		2	1		2	1		2	1
Detector Template		Thru	Right		Thru	Right		Thru	Right		Thru	Right
Leading Detector (ft)		100	20		100	20		100	20		100	20
Trailing Detector (ft)		0	0		0	0		0	0		0	0
Detector 1 Position(ft)		0	0		0	0		0	0		0	0
Detector 1 Size(ft)		6	20		6	20		6	20		6	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA	Perm		NA	Perm		NA	Perm		NA	Perm
Protected Phases		8			4			6			2	
Permitted Phases			8			4			6			2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		8	8		4	4		6	6		2	2
Switch Phase												
Minimum Initial (s)		5.0	5.0		5.0	5.0		16.0	16.0		16.0	16.0
Minimum Split (s)		29.0	29.0		29.0	29.0		25.0	25.0		25.0	25.0
Total Split (s)		29.0	29.0		29.0	29.0		26.0	26.0		26.0	26.0
Total Split (%)		52.7%	52.7%		52.7%	52.7%		47.3%	47.3%		47.3%	47.3%
Maximum Green (s)		22.0	22.0		22.0	22.0		19.0	19.0		19.0	19.0
Yellow Time (s)		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
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	7.0		7.0	7.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0
Recall Mode		None	None		None	None		Min	Min		Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Don't Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)		21.7	21.7		21.7	21.7		19.0	19.0		19.0	19.0
Actuated g/C Ratio		0.40	0.40		0.40	0.40		0.35	0.35		0.35	0.35
v/c Ratio		0.25	0.63		0.94	0.16		1.08	0.78		0.57	0.59
Control Delay (s/veh)		12.2	16.1		40.5	6.6		80.2	25.4		16.8	17.0
Queue Delay		0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Delay (s/veh)		12.2	16.1		40.5	6.6		80.2	25.4		16.8	17.0
LOS		B	B		D	A		F	C		B	B
Approach Delay (s/veh)		14.9			35.9			58.5			16.9	
Approach LOS		B			D			E			B	
90th %ile Green (s)		22.0	22.0		22.0	22.0		19.0	19.0		19.0	19.0
90th %ile Term Code		Max	Max		Max	Max		Max	Max		Max	Max
70th %ile Green (s)		22.0	22.0		22.0	22.0		19.0	19.0		19.0	19.0
70th %ile Term Code		Hold	Hold		Max	Max		Max	Max		Max	Max
50th %ile Green (s)		22.0	22.0		22.0	22.0		19.0	19.0		19.0	19.0
50th %ile Term Code		Hold	Hold		Max	Max		Max	Max		Hold	Hold
30th %ile Green (s)		22.0	22.0		22.0	22.0		19.0	19.0		19.0	19.0
30th %ile Term Code		Hold	Hold		Max	Max		Max	Max		Hold	Hold
10th %ile Green (s)		20.4	20.4		20.4	20.4		19.0	19.0		19.0	19.0
10th %ile Term Code		Hold	Hold		Gap	Gap		Max	Max		Hold	Hold
Stops (vph)		112	272		547	36		542	321		527	227
Fuel Used(gal)		3	8		19	1		25	11		16	7
CO Emissions (g/hr)		231	562		1294	98		1741	756		1096	505
NOx Emissions (g/hr)		45	109		252	19		339	147		213	98
VOC Emissions (g/hr)		54	130		300	23		403	175		254	117
Dilemma Vehicles (#)		15	0		55	0		52	0		57	0
Queue Length 50th (ft)		40	89		214	10		~274	116		99	76
Queue Length 95th (ft)		77	170		#412	35		#450	#256		146	149
Internal Link Dist (ft)		910			972			1191			1116	
Turn Bay Length (ft)			200			200			400			400
Base Capacity (vph)		769	690		769	690		664	603		1262	603
Starvation Cap Reductn		0	0		0	0		0	0		0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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		0.25	0.62		0.93	0.16		1.08	0.78		0.57	0.59

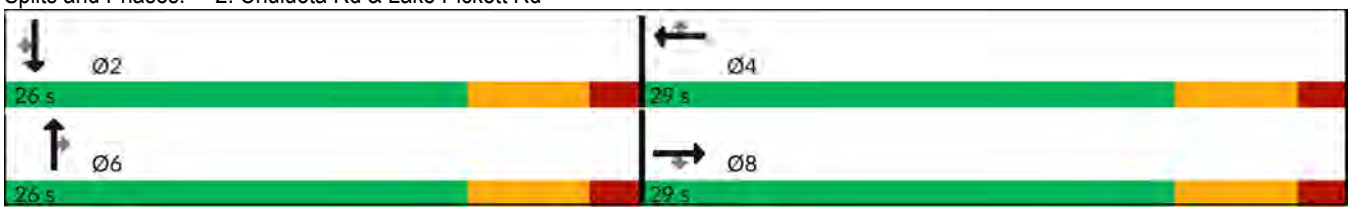
Intersection Summary			
Area Type:	Other		
Cycle Length: 55			
Actuated Cycle Length: 54.7			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.08			
Intersection Signal Delay (s/veh): 34.1		Intersection LOS: C	
Intersection Capacity Utilization 81.3%		ICU Level of Service D	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 55			
70th %ile Actuated Cycle: 55			
50th %ile Actuated Cycle: 55			
30th %ile Actuated Cycle: 55			
10th %ile Actuated Cycle: 53.4			

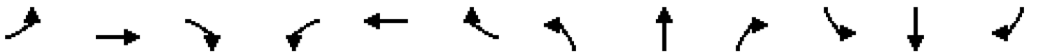
* User Entered Value

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

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

Splits and Phases: 2: Chuluota Rd & Lake Pickett Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↱		↑	↱		↑	↱		↑↑	↱
Traffic Volume (veh/h)	0	181	404	0	678	106	0	680	445	0	689	339
Future Volume (veh/h)	0	181	404	0	678	106	0	680	445	0	689	339
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1920	1920	0	1920	1920	0	1920	1920	0	1920	1920
Adj Flow Rate, veh/h	0	191	425	0	714	112	0	716	468	0	725	357
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, %	0	2	2	0	2	2	0	2	2	0	2	2
Cap, veh/h	0	763	647	0	763	647	0	666	564	0	1265	564
Arrive On Green	0.00	0.40	0.40	0.00	0.40	0.40	0.00	0.35	0.35	0.00	0.35	0.35
Sat Flow, veh/h	0	1920	1627	0	1920	1627	0	1920	1627	0	3743	1627
Grp Volume(v), veh/h	0	191	425	0	714	112	0	716	468	0	725	357
Grp Sat Flow(s),veh/h/ln	0	1920	1627	0	1920	1627	0	1920	1627	0	1824	1627
Q Serve(g_s), s	0.0	3.6	11.7	0.0	19.5	2.4	0.0	19.0	14.5	0.0	8.9	10.1
Cycle Q Clear(g_c), s	0.0	3.6	11.7	0.0	19.5	2.4	0.0	19.0	14.5	0.0	8.9	10.1
Prop In Lane	0.00		1.00	0.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	0	763	647	0	763	647	0	666	564	0	1265	564
V/C Ratio(X)	0.00	0.25	0.66	0.00	0.94	0.17	0.00	1.08	0.83	0.00	0.57	0.63
Avail Cap(c_a), veh/h	0	771	653	0	771	653	0	666	564	0	1265	564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	11.0	13.5	0.0	15.8	10.7	0.0	17.9	16.4	0.0	14.6	15.0
Incr Delay (d2), s/veh	0.0	0.2	2.4	0.0	18.5	0.1	0.0	56.9	10.0	0.0	0.6	2.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.2	3.5	0.0	10.0	0.7	0.0	16.8	5.6	0.0	2.9	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	11.2	15.8	0.0	34.3	10.8	0.0	74.8	26.5	0.0	15.2	17.3
LnGrp LOS		B	B		C	B		F	C		B	B
Approach Vol, veh/h		616			826			1184			1082	
Approach Delay, s/veh		14.4			31.1			55.7			15.9	
Approach LOS		B			C			E			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	26.0	28.8	26.0	28.8
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	19.0	22.0	19.0	22.0
Max Q Clear Time (g_c+I1), s	12.1	21.5	21.0	13.7
Green Ext Time (p_c), s	3.2	0.2	0.0	1.7

Intersection Summary	
HCM 7th Control Delay, s/veh	31.7
HCM 7th LOS	C

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	0	0
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	659	385	0	0
Demand Flow Rate, veh/h	672	393	0	0
Vehicles Circulating, veh/h	0	449	672	842
Vehicles Exiting, veh/h	842	223	0	0
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.6	9.9	0.0	0.0
Approach LOS	A	A	-	-

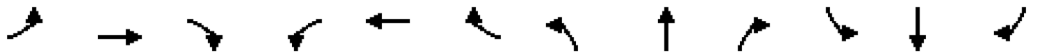
Lane	Left	Left
Designated Moves	LT	T
Assumed Moves	LT	T
RT Channelized		
Lane Util	1.000	1.000
Follow-Up Headway, s	2.609	2.609
Critical Headway, s	4.976	4.976
A (Intercept)	1380	1380
B (Slope)	1.02e-3	1.02e-3
Entry Flow, veh/h	672	393
Cap Entry Lane, veh/h	1380	873
Entry HV Adj Factor	0.980	0.980
Flow Entry, veh/h	659	385
Cap Entry, veh/h	1353	856
V/C Ratio	0.487	0.450
Control Delay, s/veh	7.6	9.9
LOS	A	A
95th %tile Queue, veh	3	2

Intersection	
Intersection Delay, s/veh	13.3
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	0	0
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	445	1071	0	0
Demand Flow Rate, veh/h	454	1092	0	0
Vehicles Circulating, veh/h	174	0	628	1092
Vehicles Exiting, veh/h	918	628	0	0
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.2	15.8	0.0	0.0
Approach LOS	A	C	-	-

Lane	Left	Left
Designated Moves	T	LT
Assumed Moves	T	LT
RT Channelized		
Lane Util	1.000	1.000
Follow-Up Headway, s	2.609	2.609
Critical Headway, s	4.976	4.976
A (Intercept)	1380	1380
B (Slope)	1.02e-3	1.02e-3
Entry Flow, veh/h	454	1092
Cap Entry Lane, veh/h	1155	1380
Entry HV Adj Factor	0.980	0.980
Flow Entry, veh/h	445	1071
Cap Entry, veh/h	1133	1353
V/C Ratio	0.393	0.791
Control Delay, s/veh	7.2	15.8
LOS	A	C
95th %tile Queue, veh	2	9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↱		↑	↱		↑	↱		↑↑	↱
Traffic Volume (vph)	0	528	512	0	379	290	0	734	364	0	836	220
Future Volume (vph)	0	528	512	0	379	290	0	734	364	0	836	220
Ideal Flow (vphpl)	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950
Storage Length (ft)	0		200	0		200	0		400	0		400
Storage Lanes	0		1	0		1	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected												
Satd. Flow (prot)	0	1912	1625	0	1912	1625	0	1912	1625	0	3632	1625
Flt Permitted												
Satd. Flow (perm)	0	1912	1625	0	1912	1625	0	1912	1625	0	3632	1625
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			*60			*60			*60			*60
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		990			1052			1271			1196	
Travel Time (s)		13.5			14.3			17.3			16.3	
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
Adj. Flow (vph)	0	556	539	0	399	305	0	773	383	0	880	232
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	556	539	0	399	305	0	773	383	0	880	232
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1		2	1		2	1		2	1
Detector Template		Thru	Right		Thru	Right		Thru	Right		Thru	Right
Leading Detector (ft)		100	20		100	20		100	20		100	20
Trailing Detector (ft)		0	0		0	0		0	0		0	0
Detector 1 Position(ft)		0	0		0	0		0	0		0	0
Detector 1 Size(ft)		6	20		6	20		6	20		6	20
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA	Perm		NA	Perm		NA	Perm		NA	Perm
Protected Phases		8			4			6			2	
Permitted Phases			8			4			6			2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase		8	8		4	4		6	6		2	2
Switch Phase												
Minimum Initial (s)		5.0	5.0		5.0	5.0		16.0	16.0		16.0	16.0
Minimum Split (s)		29.0	29.0		29.0	29.0		25.0	25.0		25.0	25.0
Total Split (s)		29.0	29.0		29.0	29.0		26.0	26.0		26.0	26.0
Total Split (%)		52.7%	52.7%		52.7%	52.7%		47.3%	47.3%		47.3%	47.3%
Maximum Green (s)		22.0	22.0		22.0	22.0		19.0	19.0		19.0	19.0
Yellow Time (s)		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
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	7.0		7.0	7.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0
Recall Mode		None	None		None	None		Min	Min		Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Don't Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)		19.8	19.8		19.8	19.8		19.1	19.1		19.1	19.1
Actuated g/C Ratio		0.37	0.37		0.37	0.37		0.36	0.36		0.36	0.36
v/c Ratio		0.78	0.84		0.56	0.47		1.12	0.61		0.67	0.37
Control Delay (s/veh)		23.6	27.1		16.4	12.5		95.6	17.4		18.0	11.9
Queue Delay		0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0
Total Delay (s/veh)		23.6	27.1		16.4	12.5		95.6	17.4		18.0	11.9
LOS		C	C		B	B		F	B		B	B
Approach Delay (s/veh)		25.3			14.7			69.7			16.7	
Approach LOS		C			B			E			B	
90th %ile Green (s)		22.0	22.0		22.0	22.0		19.0	19.0		19.0	19.0
90th %ile Term Code		Max	Max		Max	Max		Max	Max		Max	Max
70th %ile Green (s)		22.0	22.0		22.0	22.0		19.0	19.0		19.0	19.0
70th %ile Term Code		Max	Max		Hold	Hold		Max	Max		Max	Max
50th %ile Green (s)		22.0	22.0		22.0	22.0		19.0	19.0		19.0	19.0
50th %ile Term Code		Max	Max		Hold	Hold		Max	Max		Max	Max
30th %ile Green (s)		19.9	19.9		19.9	19.9		19.0	19.0		19.0	19.0
30th %ile Term Code		Gap	Gap		Hold	Hold		Max	Max		Hold	Hold
10th %ile Green (s)		13.8	13.8		13.8	13.8		19.0	19.0		19.0	19.0
10th %ile Term Code		Gap	Gap		Hold	Hold		Max	Max		Hold	Hold
Stops (vph)		427	375		276	164		565	249		665	116
Fuel Used(gal)		12	12		8	5		29	8		20	4
CO Emissions (g/hr)		867	824		561	363		2019	563		1371	279
NOx Emissions (g/hr)		169	160		109	71		393	109		267	54
VOC Emissions (g/hr)		201	191		130	84		468	130		318	65
Dilemma Vehicles (#)		46	0		31	0		56	0		74	0
Queue Length 50th (ft)		147	131		95	54		~314	85		127	40
Queue Length 95th (ft)		#259	#286		164	110		#495	164		184	88
Internal Link Dist (ft)		910			972			1191			1116	
Turn Bay Length (ft)			200			200			400			400
Base Capacity (vph)		797	713		797	713		688	623		1308	623
Starvation Cap Reductn		0	0		0	0		0	0		0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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		0.70	0.76		0.50	0.43		1.12	0.61		0.67	0.37

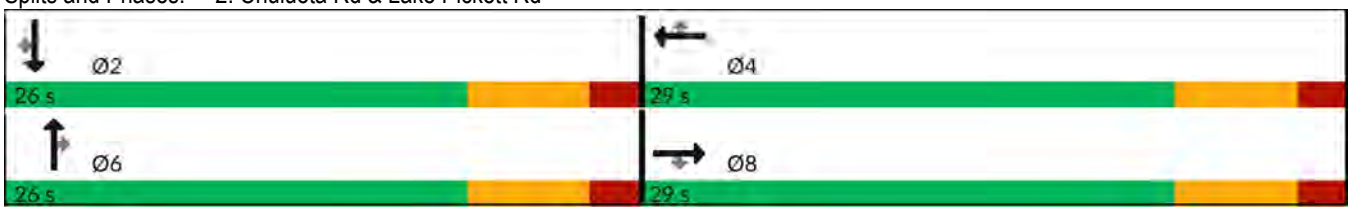
Intersection Summary			
Area Type:	Other		
Cycle Length: 55			
Actuated Cycle Length: 52.9			
Natural Cycle: 75			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.12			
Intersection Signal Delay (s/veh): 33.7		Intersection LOS: C	
Intersection Capacity Utilization 76.4%		ICU Level of Service D	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 55			
70th %ile Actuated Cycle: 55			
50th %ile Actuated Cycle: 55			
30th %ile Actuated Cycle: 52.9			
10th %ile Actuated Cycle: 46.8			

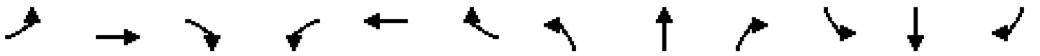
* User Entered Value

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

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

Splits and Phases: 2: Chuluota Rd & Lake Pickett Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↱		↑	↱		↑	↱		↑↑	↱
Traffic Volume (veh/h)	0	528	512	0	379	290	0	734	364	0	836	220
Future Volume (veh/h)	0	528	512	0	379	290	0	734	364	0	836	220
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1920	1920	0	1920	1920	0	1920	1920	0	1920	1920
Adj Flow Rate, veh/h	0	556	539	0	399	305	0	773	383	0	880	232
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, %	0	2	2	0	2	2	0	2	2	0	2	2
Cap, veh/h	0	729	618	0	729	618	0	686	581	0	1303	581
Arrive On Green	0.00	0.38	0.38	0.00	0.38	0.38	0.00	0.36	0.36	0.00	0.36	0.36
Sat Flow, veh/h	0	1920	1627	0	1920	1627	0	1920	1627	0	3743	1627
Grp Volume(v), veh/h	0	556	539	0	399	305	0	773	383	0	880	232
Grp Sat Flow(s),veh/h/ln	0	1920	1627	0	1920	1627	0	1920	1627	0	1824	1627
Q Serve(g_s), s	0.0	13.5	16.4	0.0	8.7	7.6	0.0	19.0	10.5	0.0	10.9	5.7
Cycle Q Clear(g_c), s	0.0	13.5	16.4	0.0	8.7	7.6	0.0	19.0	10.5	0.0	10.9	5.7
Prop In Lane	0.00		1.00	0.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	0	729	618	0	729	618	0	686	581	0	1303	581
V/C Ratio(X)	0.00	0.76	0.87	0.00	0.55	0.49	0.00	1.13	0.66	0.00	0.68	0.40
Avail Cap(c_a), veh/h	0	794	673	0	794	673	0	686	581	0	1303	581
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	14.4	15.3	0.0	12.9	12.6	0.0	17.1	14.4	0.0	14.5	12.8
Incr Delay (d2), s/veh	0.0	4.1	11.5	0.0	0.7	0.6	0.0	75.1	2.7	0.0	1.4	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.0	6.3	0.0	2.8	2.1	0.0	20.4	3.3	0.0	3.6	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	18.5	26.8	0.0	13.6	13.2	0.0	92.1	17.1	0.0	15.9	13.3
LnGrp LOS		B	C		B	B		F	B		B	B
Approach Vol, veh/h		1095			704			1156			1112	
Approach Delay, s/veh		22.6			13.4			67.3			15.3	
Approach LOS		C			B			E			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	26.0	27.2	26.0	27.2
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	19.0	22.0	19.0	22.0
Max Q Clear Time (g_c+I1), s	12.9	10.7	21.0	18.4
Green Ext Time (p_c), s	3.1	2.5	0.0	1.8

Intersection Summary	
HCM 7th Control Delay, s/veh	31.7
HCM 7th LOS	C

Intersection	
Intersection Delay, s/veh	11.1
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	0	0
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	939	212	0	0
Demand Flow Rate, veh/h	958	216	0	0
Vehicles Circulating, veh/h	0	503	958	719
Vehicles Exiting, veh/h	719	455	0	0
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	11.9	7.3	0.0	0.0
Approach LOS	B	A	-	-

Lane	Left	Left
Designated Moves	LT	T
Assumed Moves	LT	T
RT Channelized		
Lane Util	1.000	1.000
Follow-Up Headway, s	2.609	2.609
Critical Headway, s	4.976	4.976
A (Intercept)	1380	1380
B (Slope)	1.02e-3	1.02e-3
Entry Flow, veh/h	958	216
Cap Entry Lane, veh/h	1380	826
Entry HV Adj Factor	0.980	0.980
Flow Entry, veh/h	939	212
Cap Entry, veh/h	1353	810
V/C Ratio	0.694	0.261
Control Delay, s/veh	11.9	7.3
LOS	B	A
95th %tile Queue, veh	6	1

Intersection	
Intersection Delay, s/veh	14.3
Intersection LOS	B

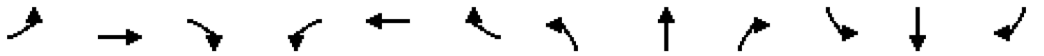
Approach	EB	WB	NB	SB
Entry Lanes	1	1	0	0
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	967	630	0	0
Demand Flow Rate, veh/h	986	643	0	0
Vehicles Circulating, veh/h	130	0	1116	643
Vehicles Exiting, veh/h	513	1116	0	0
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	18.9	7.3	0.0	0.0
Approach LOS	C	A	-	-

Lane	Left	Left
Designated Moves	T	LT
Assumed Moves	T	LT
RT Channelized		
Lane Util	1.000	1.000
Follow-Up Headway, s	2.609	2.609
Critical Headway, s	4.976	4.976
A (Intercept)	1380	1380
B (Slope)	1.02e-3	1.02e-3
Entry Flow, veh/h	986	643
Cap Entry Lane, veh/h	1209	1380
Entry HV Adj Factor	0.980	0.980
Flow Entry, veh/h	967	630
Cap Entry, veh/h	1185	1353
V/C Ratio	0.816	0.466
Control Delay, s/veh	18.9	7.3
LOS	C	A
95th %tile Queue, veh	10	3

Chuluota Road at Lake Pickett Road Design Year 2048 Operational Analysis Results													
	Build Configuration	**No-Build (2-lane)**						**Build (4-lane)**					
	Peak Time	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
	Intersection Control Type	**Traffic Signal**	**Traffic Signal**	**1x1 Roundabout**	**1x1 Roundabout**	**Bowtie N-S**	**Bowtie N-S**	**Traffic Signal**	**Traffic Signal**	**2x1 Roundabout**	**2x1 Roundabout**	**Bowtie N-S**	**Bowtie N-S**
	Measure of Effectiveness	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**
Approach	Eastbound	32.9 (C)	64.3 (E)	7.9 (A)	15.1 (C)	16.2 (B)	21.9 (C)	18.7 (B)	26.6 (C)	13.2 (B)	50.0 (E)	14.9 (B)	25.3 (C)
	Westbound	47.7 (D)	48.7 (D)	15.9 (C)	11.3 (B)	25.4 (C)	16.7 (B)	36.1 (D)	33.9 (C)	30.9 (D)	16.8 (C)	35.9 (D)	14.7 (B)
	Northbound	26.5 (C)	29.3 (C)	11.5 (B)	18.6 (C)	17.6 (B)	18.0 (B)	17.6 (B)	25.0 (C)	9.3 (A)	18.3 (C)	58.5 (E)	69.7 (E)
	Southbound	60.9 (E)	61.1 (E)	48.4 (E)	19.5 (C)	16.3 (B)	20.7 (C)	26.1 (C)	33.6 (C)	24.0 (C)	12.3 (B)	16.9 (B)	16.7 (B)
	Intersection	41.7 (D)	50.6 (D)	23.9 (C)	17.4 (C)	18.8 (B)	19.6 (B)	23.0 (C)	28.8 (C)	17.7 (C)	25.2 (D)	34.1 (C)	33.7 (C)

LOS Legend	
	LOS A
	LOS B
	LOS C
	LOS D
	LOS E
	LOS F

CHULUOTA ROAD & CYPRESS LAKE GLEN BOULEVARD S/LONG BOAT LANE



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1	9	107	2	139	3	632	97	71	637	3
Future Volume (vph)	5	1	9	107	2	139	3	632	97	71	637	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	425		350	350		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.919			0.852				0.850		0.999	
Flt Protected		0.984		0.950			0.950			0.950		
Satd. Flow (prot)	0	1668	0	1752	1572	0	1752	1845	1568	1752	1843	0
Flt Permitted		0.984		0.950			0.950			0.950		
Satd. Flow (perm)	0	1668	0	1752	1572	0	1752	1845	1568	1752	1843	0
Link Speed (mph)		35			35			50			50	
Link Distance (ft)		414			612			603			690	
Travel Time (s)		8.1			11.9			8.2			9.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	5	1	9	113	2	146	3	665	102	75	671	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	15	0	113	148	0	3	665	102	75	674	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 59.8%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	19.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	1	9	107	2	139	3	632	97	71	637	3
Future Vol, veh/h	5	1	9	107	2	139	3	632	97	71	637	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Free	-	-	None
Storage Length	-	-	-	0	-	-	425	-	350	350	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	5	1	9	113	2	146	3	665	102	75	671	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1494	1493	672	1492	1495	665	674	0	-	665	0	0
Stage 1	822	822	-	672	672	-	-	-	-	-	-	-
Stage 2	673	672	-	821	823	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	101	123	454	~ 101	122	458	913	-	0	919	-	-
Stage 1	367	387	-	444	453	-	-	-	0	-	-	-
Stage 2	443	453	-	367	386	-	-	-	0	-	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	62	112	454	~ 90	112	458	913	-	-	919	-	-
Mov Cap-2 Maneuver	62	112	-	~ 90	112	-	-	-	-	-	-	-
Stage 1	337	355	-	442	452	-	-	-	-	-	-	-
Stage 2	299	452	-	329	355	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	34.75	123.21	0.04	0.92
HCM LOS	D	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	913	-	137	90	439	919	-	-
HCM Lane V/C Ratio	0.003	-	0.116	1.253	0.338	0.081	-	-
HCM Control Delay (s/veh)	9	-	34.7	262.7	17.3	9.3	-	-
HCM Lane LOS	A	-	D	F	C	A	-	-
HCM 95th %tile Q(veh)	0	-	0.4	8.1	1.5	0.3	-	-

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	2	74	0	68	5	660	85	77	819	4
Future Volume (vph)	4	0	2	74	0	68	5	660	85	77	819	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	425		350	350		0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.955			0.850				0.850		0.999	
Flt Protected		0.968		0.950			0.950			0.950		
Satd. Flow (prot)	0	1705	0	1752	1568	0	1752	1845	1568	1752	1843	0
Flt Permitted		0.968		0.950			0.950			0.950		
Satd. Flow (perm)	0	1705	0	1752	1568	0	1752	1845	1568	1752	1843	0
Link Speed (mph)		35			35			50			50	
Link Distance (ft)		414			612			603			690	
Travel Time (s)		8.1			11.9			8.2			9.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	4	0	2	78	0	72	5	695	89	81	862	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	6	0	78	72	0	5	695	89	81	866	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 62.3%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	14.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	0	2	74	0	68	5	660	85	77	819	4
Future Vol, veh/h	4	0	2	74	0	68	5	660	85	77	819	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Free	-	-	None
Storage Length	-	-	-	0	-	-	425	-	350	350	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	4	0	2	78	0	72	5	695	89	81	862	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1732	1732	864	1729	1734	695	866	0	-	695	0	0
Stage 1	1026	1026	-	705	705	-	-	-	-	-	-	-
Stage 2	705	705	-	1024	1028	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	69	87	352	~ 69	87	441	773	-	0	896	-	-
Stage 1	282	311	-	425	437	-	-	-	0	-	-	-
Stage 2	425	437	-	283	310	-	-	-	0	-	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	52	79	352	~ 62	79	441	773	-	-	896	-	-
Mov Cap-2 Maneuver	52	79	-	~ 62	79	-	-	-	-	-	-	-
Stage 1	256	283	-	422	434	-	-	-	-	-	-	-
Stage 2	354	434	-	256	282	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	59.25	169.55	0.07	0.81
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	773	-	73	62	441	896	-	-
HCM Lane V/C Ratio	0.007	-	0.087	1.258	0.162	0.09	-	-
HCM Control Delay (s/veh)	9.7	-	59.2	$ 311.8	14.7	9.4	-	-
HCM Lane LOS	A	-	F	F	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.3	6.5	0.6	0.3	-	-

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

Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	14	261	770	749
Demand Flow Rate, veh/h	14	268	793	771
Vehicles Circulating, veh/h	884	693	82	121
Vehicles Exiting, veh/h	8	77	807	690
Ped Vol Crossing Leg, #/h	1	1	1	1
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.4	7.8	7.8	11.3
Approach LOS	A	A	A	B

Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left
Designated Moves	LT	R	LT	R	LT	R	LTR
Assumed Moves	LT		LT		LT		LTR
RT Channelized		Yield		Yield		Free	
Lane Util	1.000		1.000		1.000		1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609	2.609		2.609
Critical Headway, s	4.976	4.976	4.976	4.976	4.976		4.976
A (Intercept)	1380	1380	1380	1380	1380		1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3	1.02e-3	1.02e-3		1.02e-3
Entry Flow, veh/h	5	9	118	150	688	105	771
Cap Entry Lane, veh/h	560	606	681	683	1269	1957	1220
Entry HV Adj Factor	1.000	0.971	0.974	0.971	0.971	0.971	0.971
Flow Entry, veh/h	5	9	115	146	668	102	749
Cap Entry, veh/h	560	588	663	663	1232	1900	1184
V/C Ratio	0.009	0.015	0.173	0.220	0.542	0.054	0.632
Control Delay, s/veh	6.5	6.3	7.4	8.1	9.0	0.0	11.3
LOS	A	A	A	A	A	A	B
95th %tile Queue, veh	0	0	1	1	3	0	5

MOVEMENT SUMMARY

Site: 101 [Chuluota Rd at Cypress Lake Glen Blvd N-Long Boat Ln AM Design (2048) No-Build (2-lane) Roundabout (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Roundabout 2048 NB AM

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Chuluota Rd NB															
3	L2	All MCs	3	3.5	3	3.5	0.429	11.6	LOS B	3.5	88.8	0.33	0.40	0.33	37.4
8	T1	All MCs	665	3.5	665	3.5	0.429	4.9	LOS A	3.5	88.8	0.33	0.40	0.33	38.5
18	R2	All MCs	102	3.5	102	3.5	0.063	4.6	LOS A	0.0	0.0	0.00	0.50	0.00	39.0
Approach			771	3.5	771	3.5	0.429	4.9	LOS A	3.5	88.8	0.28	0.42	0.28	38.5
East: Cypress Lake Glen Blvd N WB															
1	L2	All MCs	113	3.5	113	3.5	0.149	12.9	LOS B	0.9	22.8	0.71	0.72	0.71	28.8
6	T1	All MCs	2	3.5	2	3.5	0.149	6.5	LOS A	0.9	22.8	0.71	0.72	0.71	29.3
16	R2	All MCs	146	3.5	146	3.5	0.144	6.2	LOS A	0.9	24.3	0.70	0.62	0.70	31.4
Approach			261	3.5	261	3.5	0.149	9.1	LOS A	0.9	24.3	0.71	0.66	0.71	30.2
North: Chuluota Rd SB															
7	L2	All MCs	75	3.5	75	3.5	0.599	12.3	LOS B	6.1	155.5	0.55	0.48	0.55	36.3
4	T1	All MCs	671	3.5	671	3.5	0.599	5.5	LOS A	6.1	155.5	0.55	0.48	0.55	37.3
14	R2	All MCs	3	3.5	3	3.5	0.599	5.5	LOS A	6.1	155.5	0.55	0.48	0.55	36.9
Approach			748	3.5	748	3.5	0.599	6.2	LOS A	6.1	155.5	0.55	0.48	0.55	37.2
West: Long Boat Ln EB															
5	L2	All MCs	5	3.5	5	3.5	0.011	14.4	LOS B	0.1	1.7	0.79	0.66	0.79	28.6
2	T1	All MCs	1	3.5	1	3.5	0.011	7.9	LOS A	0.1	1.7	0.79	0.66	0.79	29.1
12	R2	All MCs	9	3.5	9	3.5	0.012	7.3	LOS A	0.1	2.1	0.81	0.58	0.81	31.0
Approach			16	3.5	16	3.5	0.012	9.7	LOS A	0.1	2.1	0.80	0.61	0.80	30.0
All Vehicles			1796	3.5	1796	3.5	0.599	6.1	LOS A	6.1	155.5	0.46	0.48	0.46	36.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Intersection	
Intersection Delay, s/veh	12.1
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	6	150	789	947
Demand Flow Rate, veh/h	6	154	813	975
Vehicles Circulating, veh/h	1051	725	87	85
Vehicles Exiting, veh/h	9	83	968	720
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.6	6.9	8.5	15.8
Approach LOS	A	A	A	C

Lane	Left	Bypass	Left	Bypass	Left	Bypass	Left
Designated Moves	LT	R	LT	R	LT	R	LTR
Assumed Moves	LT		LT		LT		LTR
RT Channelized		Yield		Yield		Free	
Lane Util	1.000		1.000		1.000		1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609	2.609		2.609
Critical Headway, s	4.976	4.976	4.976	4.976	4.976		4.976
A (Intercept)	1380	1380	1380	1380	1380		1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3	1.02e-3	1.02e-3		1.02e-3
Entry Flow, veh/h	4	2	80	74	721	92	975
Cap Entry Lane, veh/h	472	514	659	662	1263	1957	1265
Entry HV Adj Factor	1.000	0.971	0.975	0.971	0.971	0.971	0.971
Flow Entry, veh/h	4	2	78	72	700	89	947
Cap Entry, veh/h	472	499	642	643	1226	1900	1229
V/C Ratio	0.008	0.004	0.121	0.112	0.571	0.047	0.771
Control Delay, s/veh	7.7	7.3	7.0	6.9	9.6	0.0	15.8
LOS	A	A	A	A	A	A	C
95th %tile Queue, veh	0	0	0	0	4	0	8

MOVEMENT SUMMARY

Site: 101 [Chuluota Rd at Cypress Lake Glen Blvd N-Long Boat Ln PM Design (2048) No-Build (2-lane) Roundabout (Site Folder: General)]

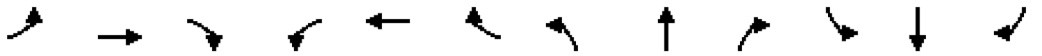
Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Chuluota Rd NB															
3	L2	All MCs	5	3.5	5	3.5	0.452	12.6	LOS B	3.8	97.9	0.35	0.44	0.35	39.6
8	T1	All MCs	695	3.5	695	3.5	0.452	5.8	LOS A	3.8	97.9	0.35	0.44	0.35	40.9
18	R2	All MCs	89	3.5	89	3.5	0.055	5.3	LOS A	0.0	0.0	0.00	0.53	0.00	41.8
Approach			789	3.5	789	3.5	0.452	5.8	LOS A	3.8	97.9	0.31	0.45	0.31	40.9
East: Cypress Lake Glen Blvd N WB															
1	L2	All MCs	78	3.5	78	3.5	0.080	12.0	LOS B	0.5	13.5	0.71	0.69	0.71	29.0
6	T1	All MCs	1	3.5	1	3.5	0.080	5.5	LOS A	0.5	13.5	0.71	0.69	0.71	29.5
16	R2	All MCs	72	3.5	72	3.5	0.096	7.3	LOS A	0.6	14.6	0.71	0.66	0.71	31.0
Approach			151	3.5	151	3.5	0.096	9.7	LOS A	0.6	14.6	0.71	0.67	0.71	29.9
North: Chuluota Rd SB															
7	L2	All MCs	81	3.5	81	3.5	0.732	13.2	LOS B	10.0	257.7	0.61	0.48	0.61	38.3
4	T1	All MCs	862	3.5	862	3.5	0.732	6.5	LOS A	10.0	257.7	0.61	0.48	0.61	39.5
14	R2	All MCs	4	3.5	4	3.5	0.732	6.3	LOS A	10.0	257.7	0.61	0.48	0.61	39.0
Approach			947	3.5	947	3.5	0.732	7.0	LOS A	10.0	257.7	0.61	0.48	0.61	39.4
West: Long Boat Ln EB															
5	L2	All MCs	4	3.5	4	3.5	0.008	11.5	LOS B	0.1	1.7	0.92	0.61	0.92	22.4
2	T1	All MCs	1	3.5	1	3.5	0.008	6.4	LOS A	0.1	1.7	0.92	0.61	0.92	22.5
12	R2	All MCs	2	3.5	2	3.5	0.005	9.0	LOS A	0.0	0.8	0.89	0.58	0.89	22.7
Approach			7	3.5	7	3.5	0.008	10.1	LOS B	0.1	1.7	0.91	0.60	0.91	22.5
All Vehicles			1895	3.5	1895	3.5	0.732	6.8	LOS A	10.0	257.7	0.50	0.48	0.50	38.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	1	10	119	3	155	4	866	108	79	935	4
Future Volume (vph)	6	1	10	119	3	155	4	866	108	79	935	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	425		350	350		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.862			0.853				0.850		0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1590	0	1752	1573	0	1752	3505	1568	1752	3501	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	1590	0	1752	1573	0	1752	3505	1568	1752	3501	0
Link Speed (mph)		35			35			50			50	
Link Distance (ft)		414			612			603			690	
Travel Time (s)		8.1			11.9			8.2			9.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	6	1	11	125	3	163	4	912	114	83	984	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	6	12	0	125	166	0	4	912	114	83	988	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	36.1

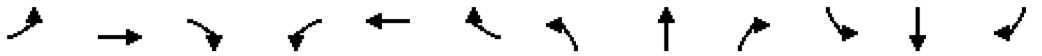
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	1	10	119	3	155	4	866	108	79	935	4
Future Vol, veh/h	6	1	10	119	3	155	4	866	108	79	935	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Free	-	-	None
Storage Length	0	-	-	0	-	-	425	-	350	350	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	6	1	11	125	3	163	4	912	114	83	984	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1618	2073	494	1579	2075	456	988	0	-	912	0	0
Stage 1	1153	1153	-	920	920	-	-	-	-	-	-	-
Stage 2	466	920	-	659	1155	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	7.56	6.56	6.96	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.53	4.03	3.33	2.23	-	-	2.23	-	-
Pot Cap-1 Maneuver	68	53	518	~ 73	52	549	689	-	0	737	-	-
Stage 1	208	268	-	290	346	-	-	-	0	-	-	-
Stage 2	544	346	-	417	268	-	-	-	0	-	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	40	46	518	~ 62	46	549	689	-	-	737	-	-
Mov Cap-2 Maneuver	40	46	-	~ 62	46	-	-	-	-	-	-	-
Stage 1	185	238	-	288	343	-	-	-	-	-	-	-
Stage 2	376	343	-	361	237	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	51.99	277.77	0.05	0.82
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	689	-	40	269	62	455	737	-	-
HCM Lane V/C Ratio	0.006	-	0.16	0.043	2.033	0.366	0.113	-	-
HCM Control Delay (s/veh)	10.3	-	112.5	19$	623.5	17.4	10.5	-	-
HCM Lane LOS	B	-	F	C	F	C	B	-	-
HCM 95th %tile Q(veh)	0	-	0.5	0.1	11.9	1.7	0.4	-	-

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	3	83	0	76	6	924	95	86	1156	5
Future Volume (vph)	5	0	3	83	0	76	6	924	95	86	1156	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	425		350	350		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.850			0.850				0.850		0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1568	0	1752	1568	0	1752	3505	1568	1752	3501	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	1568	0	1752	1568	0	1752	3505	1568	1752	3501	0
Link Speed (mph)		35			35			50			50	
Link Distance (ft)		414			612			603			690	
Travel Time (s)		8.1			11.9			8.2			9.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	5	0	3	87	0	80	6	973	100	91	1217	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	3	0	87	80	0	6	973	100	91	1222	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 56.7%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	24.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	3	83	0	76	6	924	95	86	1156	5
Future Vol, veh/h	5	0	3	83	0	76	6	924	95	86	1156	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Free	-	-	None
Storage Length	0	-	-	0	-	-	425	-	350	350	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	5	0	3	87	0	80	6	973	100	91	1217	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1899	2386	611	1775	2388	486	1222	0	-	973	0	0
Stage 1	1401	1401	-	985	985	-	-	-	-	-	-	-
Stage 2	499	985	-	789	1403	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	7.56	6.56	6.96	4.16	-	-	4.16	-	-
Critical Hdwy Stg 1	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.53	4.03	3.33	2.23	-	-	2.23	-	-
Pot Cap-1 Maneuver	42	33	434	~ 52	33	524	561	-	0	698	-	-
Stage 1	146	203	-	264	322	-	-	-	0	-	-	-
Stage 2	520	322	-	348	203	-	-	-	0	-	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	30	29	434	~ 44	28	524	561	-	-	698	-	-
Mov Cap-2 Maneuver	30	29	-	~ 44	28	-	-	-	-	-	-	-
Stage 1	127	177	-	261	318	-	-	-	-	-	-	-
Stage 2	435	318	-	300	177	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	96.83	$ 346.82	0.07	0.75
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	561	-	30	434	44	524	698	-	-
HCM Lane V/C Ratio	0.011	-	0.173	0.007	1.974	0.153	0.13	-	-
HCM Control Delay (s/veh)	11.5	-	146.9	13.4	$ 652.4	13.1	10.9	-	-
HCM Lane LOS	B	-	F	B	F	B	B	-	-
HCM 95th %tile Q(veh)	0	-	0.5	0	9	0.5	0.4	-	-

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

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	17	291	1030	1071
Demand Flow Rate, veh/h	17	300	1060	1103
Vehicles Circulating, veh/h	1228	949	91	136
Vehicles Exiting, veh/h	11	202	1143	945
Ped Vol Crossing Leg, #/h	1	1	1	1
Ped Cap Adj	1.000	1.000	0.999	0.999
Approach Delay, s/veh	8.4	10.4	7.0	7.7
Approach LOS	A	B	A	A

Lane	Left	Bypass	Left	Bypass	Left	Right	Left	Right
Designated Moves	LT	R	LT	R	LT	TR	LT	TR
Assumed Moves	LT		LT		LT	TR	LT	TR
RT Channelized		Yield		Yield				
Lane Util	1.000		1.000		0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.609	2.535	2.609	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.976	4.328	4.976	4.645	4.328	4.645	4.328
A (Intercept)	1420	1380	1420	1380	1350	1420	1350	1420
B (Slope)	8.501e-4	1.02e-3	8.501e-4	1.02e-3	9.199e-4	8.501e-4	9.199e-4	8.501e-4
Entry Flow, veh/h	6	11	132	168	498	562	518	585
Cap Entry Lane, veh/h	500	430	634	526	1241	1314	1191	1265
Entry HV Adj Factor	1.000	0.971	0.969	0.971	0.972	0.971	0.972	0.971
Flow Entry, veh/h	6	11	128	163	484	546	504	568
Cap Entry, veh/h	500	418	614	511	1205	1275	1157	1227
V/C Ratio	0.012	0.026	0.208	0.319	0.402	0.428	0.435	0.463
Control Delay, s/veh	7.3	9.0	8.4	11.9	7.0	7.1	7.7	7.8
LOS	A	A	A	B	A	A	A	A
95th %tile Queue, veh	0	0	1	1	2	2	2	3

MOVEMENT SUMMARY

Site: 101 [Chuluota Rd at Cypress Lake Glen Blvd N-Long Boat Ln AM Design (2048) Build (4-lane) Roundabout (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Chuluota Rd NB															
3	L2	All MCs	4	3.5	4	3.5	0.357	11.8	LOS B	2.5	64.1	0.33	0.42	0.33	37.1
8	T1	All MCs	912	3.5	912	3.5	0.357	5.2	LOS A	2.5	65.3	0.32	0.42	0.32	38.2
18	R2	All MCs	114	3.5	114	3.5	0.357	5.0	LOS A	2.5	65.3	0.31	0.42	0.31	37.8
Approach			1029	3.5	1029	3.5	0.357	5.2	LOS A	2.5	65.3	0.32	0.42	0.32	38.2
East: Cypress Lake Glen Blvd N WB															
1	L2	All MCs	125	3.5	125	3.5	0.168	11.7	LOS B	0.7	17.1	0.60	0.78	0.60	29.3
6	T1	All MCs	3	3.5	3	3.5	0.168	5.4	LOS A	0.7	17.1	0.60	0.78	0.60	29.7
16	R2	All MCs	163	3.5	163	3.5	0.166	5.1	LOS A	0.7	17.9	0.58	0.64	0.58	31.7
Approach			292	3.5	292	3.5	0.168	7.9	LOS A	0.7	17.9	0.59	0.70	0.59	30.5
North: Chuluota Rd SB															
7	L2	All MCs	83	3.5	83	3.5	0.388	12.1	LOS B	2.9	73.9	0.43	0.48	0.43	36.4
4	T1	All MCs	984	3.5	984	3.5	0.388	5.5	LOS A	3.0	76.1	0.41	0.46	0.41	37.6
14	R2	All MCs	4	3.5	4	3.5	0.388	5.3	LOS A	3.0	76.1	0.40	0.43	0.40	37.4
Approach			1072	3.5	1072	3.5	0.388	6.0	LOS A	3.0	76.1	0.41	0.46	0.41	37.5
West: Long Boat Ln EB															
5	L2	All MCs	6	3.5	6	3.5	0.011	12.1	LOS B	0.0	1.1	0.62	0.72	0.62	29.4
2	T1	All MCs	1	3.5	1	3.5	0.011	5.8	LOS A	0.0	1.1	0.62	0.72	0.62	29.8
12	R2	All MCs	11	3.5	11	3.5	0.012	5.2	LOS A	0.1	1.3	0.61	0.60	0.61	31.6
Approach			18	3.5	18	3.5	0.012	7.7	LOS A	0.1	1.3	0.62	0.65	0.62	30.6
All Vehicles			2411	3.5	2411	3.5	0.388	5.9	LOS A	3.0	76.1	0.39	0.47	0.39	36.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	8	167	1079	1313
Demand Flow Rate, veh/h	8	172	1111	1353
Vehicles Circulating, veh/h	1438	1013	99	96
Vehicles Exiting, veh/h	11	197	1344	1007
Ped Vol Crossing Leg, #/h	1	1	1	1
Ped Cap Adj	1.000	1.000	0.999	0.999
Approach Delay, s/veh	9.5	8.9	7.4	8.9
Approach LOS	A	A	A	A

Lane	Left	Bypass	Left	Bypass	Left	Right	Left	Right
Designated Moves	LT	R	LT	R	LT	TR	LT	TR
Assumed Moves	LT		LT		LT	TR	LT	TR
RT Channelized		Yield		Yield				
Lane Util	1.000		1.000		0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.609	2.535	2.609	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.976	4.328	4.976	4.645	4.328	4.645	4.328
A (Intercept)	1420	1380	1420	1380	1350	1420	1350	1420
B (Slope)	8.501e-4	1.02e-3	8.501e-4	1.02e-3	9.199e-4	8.501e-4	9.199e-4	8.501e-4
Entry Flow, veh/h	5	3	90	82	522	589	636	717
Cap Entry Lane, veh/h	418	350	600	494	1232	1305	1236	1309
Entry HV Adj Factor	1.000	0.971	0.967	0.971	0.971	0.971	0.971	0.971
Flow Entry, veh/h	5	3	87	80	507	572	617	696
Cap Entry, veh/h	418	340	580	480	1196	1266	1198	1269
V/C Ratio	0.012	0.009	0.150	0.167	0.424	0.452	0.515	0.548
Control Delay, s/veh	8.8	10.7	8.0	9.8	7.3	7.4	8.7	9.0
LOS	A	B	A	A	A	A	A	A
95th %tile Queue, veh	0	0	1	1	2	2	3	3

MOVEMENT SUMMARY

Site: 101 [Chuluota Rd at Cypress Lake Glen Blvd N-Long Boat Ln PM Design (2048) Build (4-lane) Roundabout (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

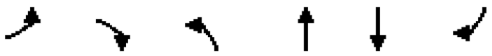
Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Chuluota Rd NB															
3	L2	All MCs	6	3.5	6	3.5	0.376	11.8	LOS B	2.7	68.4	0.34	0.42	0.34	37.1
8	T1	All MCs	973	3.5	973	3.5	0.376	5.3	LOS A	2.7	69.6	0.33	0.42	0.33	38.1
18	R2	All MCs	100	3.5	100	3.5	0.376	5.1	LOS A	2.7	69.6	0.32	0.42	0.32	37.8
Approach			1079	3.5	1079	3.5	0.376	5.3	LOS A	2.7	69.6	0.33	0.42	0.33	38.1
East: Cypress Lake Glen Blvd N WB															
1	L2	All MCs	87	3.5	87	3.5	0.092	10.9	LOS B	0.4	9.6	0.57	0.75	0.57	29.3
6	T1	All MCs	1	3.5	1	3.5	0.092	4.6	LOS A	0.4	9.6	0.57	0.75	0.57	29.7
16	R2	All MCs	80	3.5	80	3.5	0.107	5.8	LOS A	0.4	10.6	0.59	0.68	0.59	31.6
Approach			168	3.5	168	3.5	0.107	8.4	LOS A	0.4	10.6	0.58	0.72	0.58	30.3
North: Chuluota Rd SB															
7	L2	All MCs	91	3.5	91	3.5	0.458	11.9	LOS B	3.8	96.6	0.39	0.46	0.39	36.5
4	T1	All MCs	1217	3.5	1217	3.5	0.458	5.3	LOS A	3.8	98.6	0.38	0.43	0.38	37.8
14	R2	All MCs	5	3.5	5	3.5	0.458	5.1	LOS A	3.8	98.6	0.37	0.42	0.37	37.5
Approach			1313	3.5	1313	3.5	0.458	5.8	LOS A	3.8	98.6	0.38	0.44	0.38	37.7
West: Long Boat Ln EB															
5	L2	All MCs	5	3.5	5	3.5	0.008	11.4	LOS B	0.0	0.8	0.65	0.68	0.65	29.5
2	T1	All MCs	1	3.5	1	3.5	0.008	5.2	LOS A	0.0	0.8	0.65	0.68	0.65	30.0
12	R2	All MCs	3	3.5	3	3.5	0.005	6.8	LOS A	0.0	0.5	0.65	0.62	0.65	31.2
Approach			9	3.5	9	3.5	0.008	9.2	LOS A	0.0	0.8	0.65	0.66	0.65	30.1
All Vehicles			2569	3.5	2569	3.5	0.458	5.8	LOS A	3.8	98.6	0.37	0.45	0.37	37.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Chuluota Road at Cypress Lake Glen Boulevard N/Long Boat Lane Design Year 2048 Operational Analysis Results									
	Build Configuration	**No-Build (2-lane)**				**Build (4-lane)**			
	Peak Time	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
	Intersection Control Type	**Two-Way Stop Control**	**Two-Way Stop Control**	**1x1 Roundabout**	**1x1 Roundabout**	**Two-Way Stop Control**	**Two-Way Stop Control**	**2x1 Roundabout**	**2x1 Roundabout**
	Measure of Effectiveness	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**
Approach	Eastbound	34.8 (D)	59.3 (F)	6.4 (A)	7.6 (A)	52.0 (F)	96.8 (F)	8.4 (A)	9.5 (A)
	Westbound	123.2 (F)	169.6 (F)	7.8 (A)	6.9 (A)	277.8 (F)	346.8 (F)	10.4 (B)	8.9 (A)
	Northbound	0.0 (A)	0.1 (A)	7.8 (A)	8.5 (A)	0.1 (A)	0.1 (A)	7.0 (A)	7.4 (A)
	Southbound	0.9 (A)	0.8 (A)	11.3 (B)	15.8 (C)	0.8 (A)	0.8 (A)	7.7 (A)	8.9 (A)
	Intersection	19.7 (C)	14.7 (B)	9.3 (A)	12.1 (B)	36.1 (E)	24.3 (C)	7.7 (A)	8.2 (A)

LOS Legend	
	LOS A
	LOS B
	LOS C
	LOS D
	LOS E
	LOS F

CHULUOTA ROAD & CORNER LAKE DRIVE



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	54	49	14	675	735	22
Future Volume (vph)	54	49	14	675	735	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	325			250
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1752	1568	1752	1845	1845	1568
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1752	1568	1752	1845	1845	1568
Link Speed (mph)	25			50	50	
Link Distance (ft)	547			644	608	
Travel Time (s)	14.9			8.8	8.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	57	52	15	711	774	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	57	52	15	711	774	23
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 48.7%		ICU Level of Service A	
Analysis Period (min) 15			

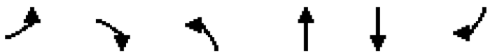
Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	54	49	14	675	735	22
Future Vol, veh/h	54	49	14	675	735	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	325	-	-	250
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	57	52	15	711	774	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1514	774	797	0	-	0
Stage 1	774	-	-	-	-	-
Stage 2	740	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	131	397	821	-	-	-
Stage 1	453	-	-	-	-	-
Stage 2	470	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	129	397	821	-	-	-
Mov Cap-2 Maneuver	129	-	-	-	-	-
Stage 1	445	-	-	-	-	-
Stage 2	470	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	35.33	0.19	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	821	-	129	397	-	-
HCM Lane V/C Ratio	0.018	-	0.441	0.13	-	-
HCM Control Delay (s/veh)	9.5	-	53.4	15.4	-	-
HCM Lane LOS	A	-	F	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.9	0.4	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	25	44	22	726	856	38
Future Volume (vph)	25	44	22	726	856	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	325			250
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1752	1568	1752	1845	1845	1568
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1752	1568	1752	1845	1845	1568
Link Speed (mph)	25			50	50	
Link Distance (ft)	547			644	608	
Travel Time (s)	14.9			8.8	8.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	26	46	23	764	901	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	26	46	23	764	901	40
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	25	44	22	726	856	38
Future Vol, veh/h	25	44	22	726	856	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	325	-	-	250
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	26	46	23	764	901	40

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1712	901	941	0	-	0
Stage 1	901	-	-	-	-	-
Stage 2	811	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	99	335	724	-	-	-
Stage 1	395	-	-	-	-	-
Stage 2	436	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	96	335	724	-	-	-
Mov Cap-2 Maneuver	96	-	-	-	-	-
Stage 1	382	-	-	-	-	-
Stage 2	436	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	31.5	0.3	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	724	-	96	335	-	-
HCM Lane V/C Ratio	0.032	-	0.275	0.138	-	-
HCM Control Delay (s/veh)	10.1	-	56.2	17.5	-	-
HCM Lane LOS	B	-	F	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1	0.5	-	-

Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	109	726	797
Demand Flow Rate, veh/h	113	747	821
Vehicles Circulating, veh/h	797	59	15
Vehicles Exiting, veh/h	15	797	791
Ped Vol Crossing Leg, #/h	1	0	1
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	7.2	9.5	9.2
Approach LOS	A	A	A

Lane	Left	Bypass	Left	Left	Bypass
Designated Moves	L	R	LT	T	R
Assumed Moves	L		LT	T	
RT Channelized		Yield			Free
Lane Util	1.000		1.000	1.000	
Follow-Up Headway, s	2.609	2.609	2.609	2.609	
Critical Headway, s	4.976	4.976	4.976	4.976	
A (Intercept)	1380	1380	1380	1380	
B (Slope)	1.02e-3	1.02e-3	1.02e-3	1.02e-3	
Entry Flow, veh/h	59	54	747	797	24
Cap Entry Lane, veh/h	612	612	1299	1359	1957
Entry HV Adj Factor	0.966	0.971	0.971	0.971	0.971
Flow Entry, veh/h	57	52	726	774	23
Cap Entry, veh/h	591	594	1262	1319	1900
V/C Ratio	0.096	0.088	0.575	0.587	0.012
Control Delay, s/veh	7.2	7.1	9.5	9.5	0.0
LOS	A	A	A	A	A
95th %tile Queue, veh	0	0	4	4	0

MOVEMENT SUMMARY

Site: 101 [Chuluota Rd at Corner Lake Dr AM Design (2048) No-Build (2-lane) Roundabout (Site Folder: General)]

Roundabout 2048 NB AM

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Chuluota Rd NB															
3	L2	All MCs	15	3.5	15	3.5	0.543	12.7	LOS B	5.5	140.2	0.36	0.43	0.36	39.5
8	T1	All MCs	711	3.5	711	3.5	0.543	5.8	LOS A	5.5	140.2	0.36	0.43	0.36	40.8
Approach			725	3.5	725	3.5	0.543	6.0	LOS A	5.5	140.2	0.36	0.43	0.36	40.7
North: Chuluota Rd SB															
4	T1	All MCs	774	3.5	774	3.5	0.467	5.4	LOS A	4.0	102.6	0.13	0.42	0.13	42.0
14	R2	All MCs	23	3.5	23	3.5	0.014	5.3	LOS A	0.0	0.0	0.00	0.53	0.00	41.8
Approach			797	3.5	797	3.5	0.467	5.4	LOS A	4.0	102.6	0.12	0.42	0.12	42.0
West: Corner Lake Dr EB															
5	L2	All MCs	57	3.5	57	3.5	0.057	8.9	LOS A	0.4	9.3	0.70	0.66	0.70	22.7
12	R2	All MCs	52	3.5	52	3.5	0.070	5.9	LOS A	0.4	10.2	0.70	0.59	0.70	23.4
Approach			108	3.5	108	3.5	0.070	7.5	LOS A	0.4	10.2	0.70	0.63	0.70	23.0
All Vehicles			1631	3.5	1631	3.5	0.543	5.8	LOS A	5.5	140.2	0.27	0.44	0.27	39.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Organisation: JOHNSON MIRMIRAN & THOMPSON | Licence: NETWORK / FLOATING | Processed: Wednesday, August 7, 2024 10:44:36 AM
Project: C:\Users\mknight\Desktop\Working Folder\Chuluota ICE\03 - Corner Lake Drive\Stage 2\Operational Analysis\Chuluota Rd at Corner Lake Dr AM Design (2048) No-Build (2-lane) Roundabout.sip9

Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	72	787	941
Demand Flow Rate, veh/h	74	811	969
Vehicles Circulating, veh/h	928	27	24
Vehicles Exiting, veh/h	24	928	814
Ped Vol Crossing Leg, #/h	1	0	1
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	7.9	9.9	11.6
Approach LOS	A	A	B

Lane	Left	Bypass	Left	Left	Bypass
Designated Moves	L	R	LT	T	R
Assumed Moves	L		LT	T	
RT Channelized		Yield			Free
Lane Util	1.000		1.000	1.000	
Follow-Up Headway, s	2.609	2.609	2.609	2.609	
Critical Headway, s	4.976	4.976	4.976	4.976	
A (Intercept)	1380	1380	1380	1380	
B (Slope)	1.02e-3	1.02e-3	1.02e-3	1.02e-3	
Entry Flow, veh/h	27	47	811	928	41
Cap Entry Lane, veh/h	536	536	1342	1346	1957
Entry HV Adj Factor	0.963	0.971	0.971	0.971	0.971
Flow Entry, veh/h	26	46	787	901	40
Cap Entry, veh/h	516	520	1303	1307	1900
V/C Ratio	0.050	0.088	0.604	0.689	0.021
Control Delay, s/veh	7.6	8.0	9.9	12.1	0.0
LOS	A	A	A	B	A
95th %tile Queue, veh	0	0	4	6	0

MOVEMENT SUMMARY

Site: 101 [Chuluota Rd at Corner Lake Dr PM Design (2048) No-Build (2-lane) Roundabout (Site Folder: General)]

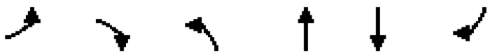
Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Chuluota Rd NB															
3	L2	All MCs	23	3.5	23	3.5	0.572	12.4	LOS B	6.5	165.8	0.26	0.41	0.26	39.9
8	T1	All MCs	764	3.5	764	3.5	0.572	5.6	LOS A	6.5	165.8	0.26	0.41	0.26	41.2
Approach			787	3.5	787	3.5	0.572	5.8	LOS A	6.5	165.8	0.26	0.41	0.26	41.2
North: Chuluota Rd SB															
4	T1	All MCs	901	3.5	901	3.5	0.548	5.5	LOS A	5.1	131.2	0.18	0.41	0.18	41.7
14	R2	All MCs	40	3.5	40	3.5	0.025	5.3	LOS A	0.0	0.0	0.00	0.53	0.00	41.8
Approach			941	3.5	941	3.5	0.548	5.5	LOS A	5.1	131.2	0.17	0.42	0.17	41.7
West: Corner Lake Dr EB															
5	L2	All MCs	26	3.5	26	3.5	0.042	11.7	LOS B	0.2	6.4	0.77	0.71	0.77	22.1
12	R2	All MCs	46	3.5	46	3.5	0.053	6.0	LOS A	0.4	9.3	0.78	0.61	0.78	23.4
Approach			73	3.5	73	3.5	0.053	8.0	LOS A	0.4	9.3	0.78	0.65	0.78	22.9
All Vehicles			1801	3.5	1801	3.5	0.572	5.7	LOS A	6.5	165.8	0.24	0.43	0.24	40.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	60	55	16	918	1039	25
Future Volume (vph)	60	55	16	918	1039	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	325			250
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1752	1568	1752	3505	3505	1568
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1752	1568	1752	3505	3505	1568
Link Speed (mph)	25			50	50	
Link Distance (ft)	547			644	608	
Travel Time (s)	14.9			8.8	8.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	63	58	17	966	1094	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	63	58	17	966	1094	26
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	38.8%	ICU Level of Service	A
Analysis Period (min)	15		

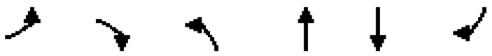
Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	60	55	16	918	1039	25
Future Vol, veh/h	60	55	16	918	1039	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	325	-	-	250
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	63	58	17	966	1094	26

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1611	547	1120	0	-	0
Stage 1	1094	-	-	-	-	-
Stage 2	517	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	-	-
Pot Cap-1 Maneuver	94	479	614	-	-	-
Stage 1	280	-	-	-	-	-
Stage 2	560	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	92	479	614	-	-	-
Mov Cap-2 Maneuver	92	-	-	-	-	-
Stage 1	273	-	-	-	-	-
Stage 2	560	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	61.22	0.19	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	614	-	92	479	-	-
HCM Lane V/C Ratio	0.027	-	0.689	0.121	-	-
HCM Control Delay (s/veh)	11	-	104.9	13.6	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	3.4	0.4	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	28	49	25	997	1199	43
Future Volume (vph)	28	49	25	997	1199	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	325			250
Storage Lanes	1	1	1			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1752	1568	1752	3505	3505	1568
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1752	1568	1752	3505	3505	1568
Link Speed (mph)	25			50	50	
Link Distance (ft)	547			644	608	
Travel Time (s)	14.9			8.8	8.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	29	52	26	1049	1262	45
Shared Lane Traffic (%)						
Lane Group Flow (vph)	29	52	26	1049	1262	45
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	28	49	25	997	1199	43
Future Vol, veh/h	28	49	25	997	1199	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	325	-	-	250
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	29	52	26	1049	1262	45

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1839	631	1307	0	-	0
Stage 1	1262	-	-	-	-	-
Stage 2	577	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	-	-
Pot Cap-1 Maneuver	66	421	520	-	-	-
Stage 1	228	-	-	-	-	-
Stage 2	522	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	63	421	520	-	-	-
Mov Cap-2 Maneuver	63	-	-	-	-	-
Stage 1	216	-	-	-	-	-
Stage 2	522	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	47.66	0.3	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	520	-	63	421	-	-
HCM Lane V/C Ratio	0.051	-	0.469	0.122	-	-
HCM Control Delay (s/veh)	12.3	-	105.3	14.7	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.2	-	1.8	0.4	-	-

Intersection	
Intersection Delay, s/veh	6.8
Intersection LOS	A

Approach	EB	NB	SB
Entry Lanes	1	2	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	121	983	1120
Demand Flow Rate, veh/h	125	1013	1154
Vehicles Circulating, veh/h	1127	65	18
Vehicles Exiting, veh/h	45	1127	1060
Ped Vol Crossing Leg, #/h	1	0	1
Ped Cap Adj	1.000	1.000	0.999
Approach Delay, s/veh	9.4	6.6	6.8
Approach LOS	A	A	A

Lane	Left	Bypass	Left	Right	Left	Right
Designated Moves	L	R	LT	TR	LT	TR
Assumed Moves	L		LT	TR	LT	TR
RT Channelized		Yield				
Lane Util	1.000		0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.609	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.976	4.645	4.328	4.645	4.328
A (Intercept)	1420	1380	1350	1420	1350	1420
B (Slope)	8.501e-4	1.02e-3	9.199e-4	8.501e-4	9.199e-4	8.501e-4
Entry Flow, veh/h	65	60	476	537	542	612
Cap Entry Lane, veh/h	545	437	1271	1344	1328	1399
Entry HV Adj Factor	0.969	0.971	0.971	0.970	0.971	0.970
Flow Entry, veh/h	63	58	462	521	526	594
Cap Entry, veh/h	528	424	1234	1304	1288	1355
V/C Ratio	0.119	0.137	0.374	0.400	0.409	0.438
Control Delay, s/veh	8.3	10.5	6.5	6.6	6.8	6.9
LOS	A	B	A	A	A	A
95th %tile Queue, veh	0	0	2	2	2	2

MOVEMENT SUMMARY

Site: 101 [Chuluota Rd at Corner Lake Dr AM Design (2048) Build (4-lane) Roundabout (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Chuluota Rd NB															
3	L2	All MCs	17	3.5	17	3.5	0.333	11.6	LOS B	2.4	61.8	0.28	0.41	0.28	37.5
8	T1	All MCs	966	3.5	966	3.5	0.333	4.8	LOS A	2.5	63.1	0.27	0.40	0.27	38.7
Approach			983	3.5	983	3.5	0.333	4.9	LOS A	2.5	63.1	0.27	0.40	0.27	38.6
North: Chuluota Rd SB															
4	T1	All MCs	1094	3.5	1094	3.5	0.362	4.8	LOS A	2.6	66.4	0.12	0.38	0.12	39.1
14	R2	All MCs	26	3.5	26	3.5	0.362	4.7	LOS A	2.6	66.4	0.12	0.39	0.12	38.6
Approach			1120	3.5	1120	3.5	0.362	4.8	LOS A	2.6	66.4	0.12	0.38	0.12	39.1
West: Corner Lake Dr EB															
5	L2	All MCs	63	3.5	63	3.5	0.064	7.3	LOS A	0.2	6.3	0.55	0.69	0.55	23.0
12	R2	All MCs	58	3.5	58	3.5	0.077	3.9	LOS A	0.3	7.2	0.57	0.58	0.57	23.9
Approach			121	3.5	121	3.5	0.077	5.7	LOS A	0.3	7.2	0.56	0.64	0.56	23.4
All Vehicles			2224	3.5	2224	3.5	0.362	4.9	LOS A	2.6	66.4	0.21	0.40	0.21	37.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Approach	EB	NB	SB
Entry Lanes	1	2	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	81	1075	1307
Demand Flow Rate, veh/h	84	1107	1346
Vehicles Circulating, veh/h	1300	30	27
Vehicles Exiting, veh/h	73	1300	1110
Ped Vol Crossing Leg, #/h	1	0	1
Ped Cap Adj	1.000	1.000	0.999
Approach Delay, s/veh	11.2	6.7	7.9
Approach LOS	B	A	A

Lane	Left	Bypass	Left	Right	Left	Right
Designated Moves	L	R	LT	TR	LT	TR
Assumed Moves	L		LT	TR	LT	TR
RT Channelized		Yield				
Lane Util	1.000		0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.609	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.976	4.645	4.328	4.645	4.328
A (Intercept)	1420	1380	1350	1420	1350	1420
B (Slope)	8.501e-4	1.02e-3	9.199e-4	8.501e-4	9.199e-4	8.501e-4
Entry Flow, veh/h	30	54	520	587	633	713
Cap Entry Lane, veh/h	470	366	1313	1384	1317	1388
Entry HV Adj Factor	0.967	0.971	0.971	0.970	0.971	0.972
Flow Entry, veh/h	29	52	505	570	614	693
Cap Entry, veh/h	455	356	1275	1343	1277	1347
V/C Ratio	0.064	0.146	0.396	0.424	0.481	0.514
Control Delay, s/veh	8.8	12.6	6.6	6.8	7.8	8.0
LOS	A	B	A	A	A	A
95th %tile Queue, veh	0	1	2	2	3	3

MOVEMENT SUMMARY

Site: 101 [Chuluota Rd at Corner Lake Dr PM Design (2048) Build (4-lane) Roundabout (Site Folder: General)]

Roundabout 2048 Bld PM

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Chuluota Rd NB															
3	L2	All MCs	26	3.5	26	3.5	0.353	11.4	LOS B	2.7	69.8	0.19	0.40	0.19	37.8
8	T1	All MCs	1049	3.5	1049	3.5	0.353	4.6	LOS A	2.8	71.1	0.18	0.39	0.18	39.0
Approach			1076	3.5	1076	3.5	0.353	4.7	LOS A	2.8	71.1	0.18	0.39	0.18	39.0
North: Chuluota Rd SB															
4	T1	All MCs	1262	3.5	1262	3.5	0.426	4.9	LOS A	3.2	82.2	0.17	0.38	0.17	38.9
14	R2	All MCs	45	3.5	45	3.5	0.426	4.7	LOS A	3.2	82.1	0.16	0.39	0.16	38.4
Approach			1307	3.5	1307	3.5	0.426	4.9	LOS A	3.2	82.2	0.17	0.38	0.17	38.9
West: Corner Lake Dr EB															
5	L2	All MCs	29	3.5	29	3.5	0.044	8.8	LOS A	0.2	4.1	0.61	0.75	0.61	22.8
12	R2	All MCs	52	3.5	52	3.5	0.055	3.3	LOS A	0.2	5.6	0.59	0.57	0.59	24.0
Approach			81	3.5	81	3.5	0.055	5.3	LOS A	0.2	5.6	0.60	0.64	0.60	23.5
All Vehicles			2464	3.5	2464	3.5	0.426	4.8	LOS A	3.2	82.2	0.19	0.39	0.19	38.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
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: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Chuluota Road at Corner Lake Drive Design Year 2048 Operational Analysis Results									
	Build Configuration	**No-Build (2-lane)**				**Build (4-lane)**			
	Peak Time	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
	Intersection Control Type	**Two-Way Stop Control**	**Two-Way Stop Control**	**1x1 Roundabout**	**1x1 Roundabout**	**Two-Way Stop Control**	**Two-Way Stop Control**	**2x1 Roundabout**	**2x1 Roundabout**
	Measure of Effectiveness	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**
Approach	Eastbound	35.3 (E)	31.5 (D)	7.2 (A)	7.9 (A)	62.1 (F)	47.7 (E)	9.4 (A)	11.2 (B)
	Northbound	0.2 (A)	0.3 (A)	9.5 (A)	9.9 (A)	0.2 (A)	0.3 (A)	6.6 (A)	6.7 (A)
	Southbound	0.0 (A)	0.0 (A)	9.2 (A)	11.6 (B)	0.0 (A)	0.0 (A)	6.8 (A)	7.9 (A)
	Intersection	2.4 (A)	1.4 (A)	9.2 (A)	10.7 (B)	3.4 (A)	1.7 (A)	6.8 (A)	7.5 (A)

LOS Legend	
	LOS A
	LOS B
	LOS C
	LOS D
	LOS E
	LOS F

CHULUOTA ROAD & CYPRESS LAKE GLEN BOULEVARD S

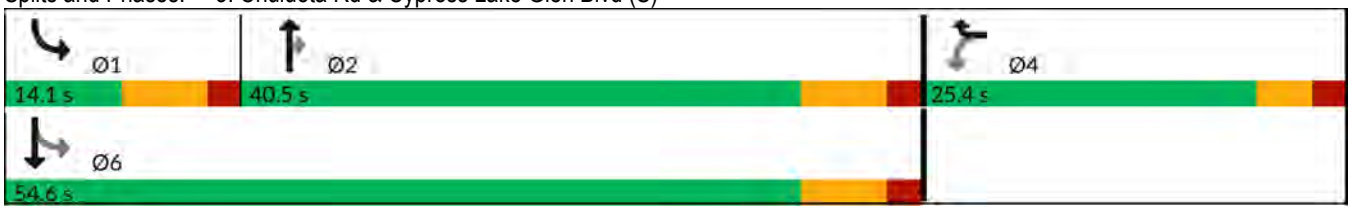
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	202	43	629	75	12	747
Future Volume (vph)	202	43	629	75	12	747
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	175	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1752	1568	1845	1568	1752	1845
Flt Permitted	0.950				0.188	
Satd. Flow (perm)	1752	1568	1845	1568	347	1845
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		45		79		
Link Speed (mph)	35		50			50
Link Distance (ft)	979		682			553
Travel Time (s)	19.1		9.3			7.5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	213	45	662	79	13	786
Shared Lane Traffic (%)						
Lane Group Flow (vph)	213	45	662	79	13	786
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	37		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Perm	Prot	NA	Perm	pm+pt	NA
Protected Phases		4	2		1	6

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases	4	4		2	6	
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	16.0	16.0	7.0	16.0
Minimum Split (s)	25.4	25.4	37.1	37.1	14.1	37.1
Total Split (s)	25.4	25.4	40.5	40.5	14.1	54.6
Total Split (%)	31.8%	31.8%	50.6%	50.6%	17.6%	68.3%
Maximum Green (s)	20.0	20.0	33.4	33.4	7.0	47.5
Yellow Time (s)	3.4	3.4	5.1	5.1	5.1	5.1
All-Red Time (s)	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
Total Lost Time (s)	5.4	5.4	7.1	7.1	7.1	7.1
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	Min	None	Min
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Don't Walk (s)	13.0	13.0	23.0	23.0		23.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	13.3	13.3	29.1	29.1	31.1	31.1
Actuated g/C Ratio	0.23	0.23	0.51	0.51	0.54	0.54
v/c Ratio	0.52	0.11	0.71	0.10	0.04	0.79
Control Delay (s/veh)	26.6	8.6	18.6	3.6	6.6	17.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	26.6	8.6	18.6	3.6	6.6	17.5
LOS	C	A	B	A	A	B
Approach Delay (s/veh)	23.5		17.0			17.3
Approach LOS	C		B			B
90th %ile Green (s)	20.0	20.0	33.4	33.4	7.0	47.5
90th %ile Term Code	Max	Max	Max	Max	Max	Max
70th %ile Green (s)	15.2	15.2	36.5	36.5	0.0	36.5
70th %ile Term Code	Gap	Gap	Hold	Hold	Skip	Gap
50th %ile Green (s)	12.1	12.1	29.0	29.0	0.0	29.0
50th %ile Term Code	Gap	Gap	Hold	Hold	Skip	Gap
30th %ile Green (s)	10.1	10.1	22.3	22.3	0.0	22.3
30th %ile Term Code	Gap	Gap	Hold	Hold	Skip	Gap
10th %ile Green (s)	10.0	10.0	22.7	22.7	0.0	22.7
10th %ile Term Code	Min	Min	Dwell	Dwell	Skip	Dwell
Stops (vph)	162	12	415	11	6	536
Fuel Used(gal)	4	0	11	1	0	14
CO Emissions (g/hr)	261	33	802	38	11	944
NOx Emissions (g/hr)	51	6	156	7	2	184
VOC Emissions (g/hr)	61	8	186	9	2	219
Dilemma Vehicles (#)	0	0	47	0	0	57
Queue Length 50th (ft)	60	0	134	0	2	177
Queue Length 95th (ft)	156	24	#492	24	9	391
Internal Link Dist (ft)	899		602			473
Turn Bay Length (ft)					175	
Base Capacity (vph)	638	600	1140	999	366	1557

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.08	0.58	0.08	0.04	0.50

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 57.6			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay (s/veh): 18.1		Intersection LOS: B	
Intersection Capacity Utilization 60.9%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 80			
70th %ile Actuated Cycle: 64.2			
50th %ile Actuated Cycle: 53.6			
30th %ile Actuated Cycle: 44.9			
10th %ile Actuated Cycle: 45.2			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Chuluota Rd & Cypress Lake Glen Blvd (S)



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	202	43	629	75	12	747
Future Volume (veh/h)	202	43	629	75	12	747
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	213	45	662	0	13	786
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	326	290	784		255	1075
Arrive On Green	0.18	0.18	0.42	0.00	0.02	0.58
Sat Flow, veh/h	1767	1572	1856	1572	1767	1856
Grp Volume(v), veh/h	213	45	662	0	13	786
Grp Sat Flow(s),veh/h/ln	1767	1572	1856	1572	1767	1856
Q Serve(g_s), s	5.9	1.3	17.0	0.0	0.2	16.4
Cycle Q Clear(g_c), s	5.9	1.3	17.0	0.0	0.2	16.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	326	290	784		255	1075
V/C Ratio(X)	0.65	0.16	0.84		0.05	0.73
Avail Cap(c_a), veh/h	667	594	1170		448	1664
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	20.0	18.1	13.7	0.0	10.6	8.1
Incr Delay (d2), s/veh	2.2	0.2	3.8	0.0	0.1	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	2.3	0.4	5.7	0.0	0.1	3.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	22.2	18.4	17.5	0.0	10.7	9.1
LnGrp LOS	C	B	B		B	A
Approach Vol, veh/h	258		662			799
Approach Delay, s/veh	21.6		17.5			9.1
Approach LOS	C		B			A

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	8.3	29.5		15.2		37.8
Change Period (Y+Rc), s	7.1	7.1		5.4		7.1
Max Green Setting (Gmax), s	7.0	33.4		20.0		47.5
Max Q Clear Time (g_c+I1), s	2.2	19.0		7.9		18.4
Green Ext Time (p_c), s	0.0	3.4		0.6		5.5

Intersection Summary	
HCM 7th Control Delay, s/veh	14.2
HCM 7th LOS	B

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

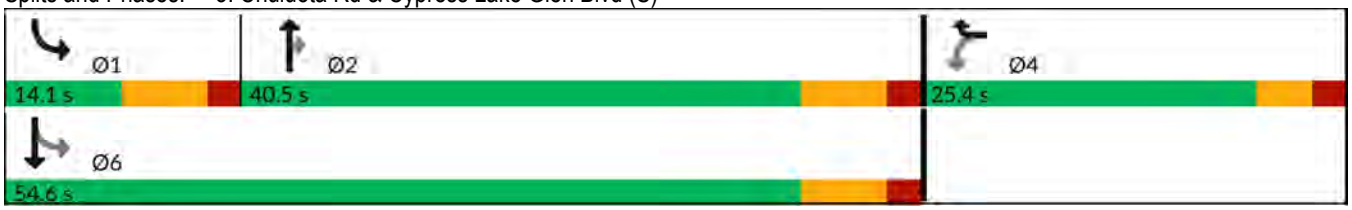
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	166	22	719	218	29	891
Future Volume (vph)	166	22	719	218	29	891
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	175	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1752	1568	1845	1568	1752	1845
Flt Permitted	0.950				0.158	
Satd. Flow (perm)	1752	1568	1845	1568	291	1845
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		23		229		
Link Speed (mph)	35		50			50
Link Distance (ft)	979		682			553
Travel Time (s)	19.1		9.3			7.5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	175	23	757	229	31	938
Shared Lane Traffic (%)						
Lane Group Flow (vph)	175	23	757	229	31	938
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	37		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Perm	Prot	NA	Perm	pm+pt	NA
Protected Phases		4	2		1	6

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases	4	4		2	6	
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	16.0	16.0	7.0	16.0
Minimum Split (s)	25.4	25.4	37.1	37.1	14.1	37.1
Total Split (s)	25.4	25.4	40.5	40.5	14.1	54.6
Total Split (%)	31.8%	31.8%	50.6%	50.6%	17.6%	68.3%
Maximum Green (s)	20.0	20.0	33.4	33.4	7.0	47.5
Yellow Time (s)	3.4	3.4	5.1	5.1	5.1	5.1
All-Red Time (s)	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
Total Lost Time (s)	5.4	5.4	7.1	7.1	7.1	7.1
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	Min	None	Min
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Don't Walk (s)	13.0	13.0	23.0	23.0		23.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	12.8	12.8	36.4	36.4	41.3	41.3
Actuated g/C Ratio	0.19	0.19	0.54	0.54	0.62	0.62
v/c Ratio	0.52	0.07	0.75	0.24	0.09	0.82
Control Delay (s/veh)	31.0	11.4	21.8	2.8	6.1	18.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	31.0	11.4	21.8	2.8	6.1	18.3
LOS	C	B	C	A	A	B
Approach Delay (s/veh)	28.8		17.4			17.9
Approach LOS	C		B			B
90th %ile Green (s)	17.8	17.8	33.4	33.4	7.0	47.5
90th %ile Term Code	Gap	Gap	Max	Max	Max	Max
70th %ile Green (s)	14.5	14.5	33.4	33.4	7.0	47.5
70th %ile Term Code	Gap	Gap	Max	Max	Max	Max
50th %ile Green (s)	12.2	12.2	38.1	38.1	0.0	38.1
50th %ile Term Code	Gap	Gap	Hold	Hold	Skip	Gap
30th %ile Green (s)	10.0	10.0	31.6	31.6	0.0	31.6
30th %ile Term Code	Min	Min	Gap	Gap	Skip	Hold
10th %ile Green (s)	10.0	10.0	42.4	42.4	0.0	42.4
10th %ile Term Code	Min	Min	Dwell	Dwell	Skip	Dwell
Stops (vph)	140	9	481	22	11	629
Fuel Used(gal)	3	0	14	1	0	16
CO Emissions (g/hr)	229	19	957	98	21	1125
NOx Emissions (g/hr)	45	4	186	19	4	219
VOC Emissions (g/hr)	53	4	222	23	5	261
Dilemma Vehicles (#)	0	0	46	0	0	60
Queue Length 50th (ft)	60	0	167	0	4	249
Queue Length 95th (ft)	131	18	#577	37	15	#553
Internal Link Dist (ft)	899		602			473
Turn Bay Length (ft)					175	
Base Capacity (vph)	533	493	1016	966	335	1333

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.05	0.75	0.24	0.09	0.70

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 66.8			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay (s/veh): 18.7		Intersection LOS: B	
Intersection Capacity Utilization 66.5%		ICU Level of Service C	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 77.8			
70th %ile Actuated Cycle: 74.5			
50th %ile Actuated Cycle: 62.8			
30th %ile Actuated Cycle: 54.1			
10th %ile Actuated Cycle: 64.9			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Chuluota Rd & Cypress Lake Glen Blvd (S)



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	166	22	719	218	29	891
Future Volume (veh/h)	166	22	719	218	29	891
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	175	23	757	0	31	938
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	287	255	853		266	1163
Arrive On Green	0.16	0.16	0.46	0.00	0.05	0.63
Sat Flow, veh/h	1767	1572	1856	1572	1767	1856
Grp Volume(v), veh/h	175	23	757	0	31	938
Grp Sat Flow(s),veh/h/ln	1767	1572	1856	1572	1767	1856
Q Serve(g_s), s	5.5	0.7	22.1	0.0	0.5	22.6
Cycle Q Clear(g_c), s	5.5	0.7	22.1	0.0	0.5	22.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	287	255	853		266	1163
V/C Ratio(X)	0.61	0.09	0.89		0.12	0.81
Avail Cap(c_a), veh/h	596	531	1046		392	1487
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	23.1	21.1	14.6	0.0	11.5	8.3
Incr Delay (d2), s/veh	2.1	0.2	8.1	0.0	0.2	2.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.3	8.5	0.0	0.1	5.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	25.2	21.3	22.7	0.0	11.7	11.0
LnGrp LOS	C	C	C		B	B
Approach Vol, veh/h	198		757			969
Approach Delay, s/veh	24.7		22.7			11.0
Approach LOS	C		C			B

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.9	34.4		15.0		44.3
Change Period (Y+Rc), s	7.1	7.1		5.4		7.1
Max Green Setting (Gmax), s	7.0	33.4		20.0		47.5
Max Q Clear Time (g_c+I1), s	2.5	24.1		7.5		24.6
Green Ext Time (p_c), s	0.0	3.2		0.4		6.8

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

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Intersection Delay, s/veh	11.4
Intersection LOS	B

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	258	741	799
Demand Flow Rate, veh/h	265	763	823
Vehicles Circulating, veh/h	682	13	219
Vehicles Exiting, veh/h	13	1029	682
Ped Vol Crossing Leg, #/h	1	1	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	8.9	7.1	16.2
Approach LOS	A	A	C

Lane	Left	Bypass	Left	Bypass	Left
Designated Moves	L	R	T	R	LT
Assumed Moves	L		T		LT
RT Channelized		Yield		Free	
Lane Util	1.000		1.000		1.000
Follow-Up Headway, s	2.609	2.609	2.609		2.609
Critical Headway, s	4.976	4.976	4.976		4.976
A (Intercept)	1380	1380	1380		1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3		1.02e-3
Entry Flow, veh/h	219	46	682	81	823
Cap Entry Lane, veh/h	688	688	1362	1957	1104
Entry HV Adj Factor	0.973	0.971	0.971	0.971	0.971
Flow Entry, veh/h	213	45	662	79	799
Cap Entry, veh/h	669	668	1322	1900	1072
V/C Ratio	0.318	0.067	0.501	0.042	0.746
Control Delay, s/veh	9.5	6.1	7.9	0.0	16.2
LOS	A	A	A	A	C
95th %tile Queue, veh	1	0	3	0	7

MOVEMENT SUMMARY

Site: 101 [Chuluota Rd at Cypress Lake Glen Blvd S AM Design (2048) No-Build (2-lane) Roundabout (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Chuluota Rd NB															
8	T1	All MCs	662	3.5	662	3.5	0.400	5.4	LOS A	3.5	91.0	0.12	0.42	0.12	42.0
18	R2	All MCs	79	3.5	79	3.5	0.049	5.3	LOS A	0.0	0.0	0.00	0.53	0.00	41.8
Approach			741	3.5	741	3.5	0.400	5.4	LOS A	3.5	91.0	0.11	0.43	0.11	42.0
East: Cypress Lake Glen Blvd S WB															
1	L2	All MCs	213	3.5	213	3.5	0.196	12.0	LOS B	1.3	32.3	0.68	0.69	0.68	29.1
16	R2	All MCs	45	3.5	45	3.5	0.061	7.2	LOS A	0.3	8.3	0.65	0.64	0.65	31.0
Approach			258	3.5	258	3.5	0.196	11.2	LOS B	1.3	32.3	0.67	0.68	0.67	29.4
North: Chuluota Rd SB															
7	L2	All MCs	13	3.5	13	3.5	0.692	14.8	LOS B	7.9	202.7	0.76	0.60	0.79	37.8
4	T1	All MCs	786	3.5	786	3.5	0.692	8.0	LOS A	7.9	202.7	0.76	0.60	0.79	39.0
Approach			799	3.5	799	3.5	0.692	8.1	LOS A	7.9	202.7	0.76	0.60	0.79	39.0
All Vehicles			1798	3.5	1798	3.5	0.692	7.4	LOS A	7.9	202.7	0.48	0.54	0.49	38.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Intersection	
Intersection Delay, s/veh	15.1
Intersection LOS	C

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	198	986	969
Demand Flow Rate, veh/h	204	1016	998
Vehicles Circulating, veh/h	780	32	180
Vehicles Exiting, veh/h	32	1146	780
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	9.4	7.3	24.3
Approach LOS	A	A	C

Lane	Left	Bypass	Left	Bypass	Left
Designated Moves	L	R	T	R	LT
Assumed Moves	L		T		LT
RT Channelized		Yield		Free	
Lane Util	1.000		1.000		1.000
Follow-Up Headway, s	2.609	2.609	2.609		2.609
Critical Headway, s	4.976	4.976	4.976		4.976
A (Intercept)	1380	1380	1380		1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3		1.02e-3
Entry Flow, veh/h	180	24	780	236	998
Cap Entry Lane, veh/h	623	623	1336	1957	1148
Entry HV Adj Factor	0.972	0.971	0.971	0.971	0.971
Flow Entry, veh/h	175	23	757	229	969
Cap Entry, veh/h	606	605	1297	1900	1115
V/C Ratio	0.289	0.038	0.584	0.121	0.869
Control Delay, s/veh	9.8	6.4	9.5	0.0	24.3
LOS	A	A	A	A	C
95th %tile Queue, veh	1	0	4	0	12

MOVEMENT SUMMARY

Site: 101 [Chuluota Rd at Cypress Lake Glen Blvd S PM Design (2048) No-Build (2-lane) Roundabout (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Chuluota Rd NB															
8	T1	All MCs	757	3.5	757	3.5	0.467	5.5	LOS A	4.7	119.6	0.23	0.41	0.23	41.5
18	R2	All MCs	229	3.5	229	3.5	0.142	5.3	LOS A	0.0	0.0	0.00	0.53	0.00	41.7
Approach			986	3.5	986	3.5	0.467	5.5	LOS A	4.7	119.6	0.18	0.44	0.18	41.5
East: Cypress Lake Glen Blvd S WB															
1	L2	All MCs	175	3.5	175	3.5	0.179	12.7	LOS B	1.2	31.3	0.75	0.70	0.75	28.8
16	R2	All MCs	23	3.5	23	3.5	0.034	7.9	LOS A	0.2	4.9	0.70	0.64	0.70	30.7
Approach			198	3.5	198	3.5	0.179	12.2	LOS B	1.2	31.3	0.74	0.70	0.74	29.0
North: Chuluota Rd SB															
7	L2	All MCs	31	3.5	31	3.5	0.819	16.1	LOS B	13.7	350.9	0.91	0.64	0.99	37.2
4	T1	All MCs	938	3.5	938	3.5	0.819	9.3	LOS A	13.7	350.9	0.91	0.64	0.99	38.3
Approach			968	3.5	968	3.5	0.819	9.5	LOS A	13.7	350.9	0.91	0.64	0.99	38.2
All Vehicles			2153	3.5	2153	3.5	0.819	7.9	LOS A	13.7	350.9	0.56	0.55	0.59	38.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	225	48	851	84	14	1030
Future Volume (vph)	225	48	851	84	14	1030
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		200	175	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1752	1568	3505	1568	1752	3505
Flt Permitted	0.950				0.194	
Satd. Flow (perm)	1752	1568	3505	1568	358	3505
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		51		88		
Link Speed (mph)	35		50			50
Link Distance (ft)	979		682			553
Travel Time (s)	19.1		9.3			7.5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	237	51	896	88	15	1084
Shared Lane Traffic (%)						
Lane Group Flow (vph)	237	51	896	88	15	1084
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	37		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Perm	Prot	NA	Perm	pm+pt	NA
Protected Phases		4	2		1	6

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases	4	4		2	6	
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	16.0	16.0	7.0	16.0
Minimum Split (s)	25.4	25.4	37.1	37.1	14.1	37.1
Total Split (s)	26.0	26.0	39.9	39.9	14.1	54.0
Total Split (%)	32.5%	32.5%	49.9%	49.9%	17.6%	67.5%
Maximum Green (s)	20.6	20.6	32.8	32.8	7.0	46.9
Yellow Time (s)	3.4	3.4	5.1	5.1	5.1	5.1
All-Red Time (s)	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
Total Lost Time (s)	5.4	5.4	7.1	7.1	7.1	7.1
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	Min	None	Min
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Don't Walk (s)	13.0	13.0	23.0	23.0		23.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	13.3	13.3	23.9	23.9	25.7	25.7
Actuated g/C Ratio	0.25	0.25	0.46	0.46	0.49	0.49
v/c Ratio	0.53	0.12	0.56	0.12	0.04	0.63
Control Delay (s/veh)	23.9	7.6	13.2	3.8	7.1	11.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	23.9	7.6	13.2	3.8	7.1	11.4
LOS	C	A	B	A	A	B
Approach Delay (s/veh)	21.0		12.3			11.3
Approach LOS	C		B			B
90th %ile Green (s)	20.6	20.6	32.8	32.8	7.0	46.9
90th %ile Term Code	Max	Max	Max	Max	Max	Hold
70th %ile Green (s)	14.3	14.3	26.5	26.5	0.0	26.5
70th %ile Term Code	Gap	Gap	Hold	Hold	Skip	Gap
50th %ile Green (s)	11.8	11.8	21.9	21.9	0.0	21.9
50th %ile Term Code	Gap	Gap	Hold	Hold	Skip	Gap
30th %ile Green (s)	10.0	10.0	19.0	19.0	0.0	19.0
30th %ile Term Code	Min	Min	Hold	Hold	Skip	Gap
10th %ile Green (s)	10.0	10.0	17.8	17.8	0.0	17.8
10th %ile Term Code	Min	Min	Dwell	Dwell	Skip	Dwell
Stops (vph)	177	12	554	13	7	652
Fuel Used(gal)	4	1	14	1	0	16
CO Emissions (g/hr)	281	35	1011	44	12	1119
NOx Emissions (g/hr)	55	7	197	9	2	218
VOC Emissions (g/hr)	65	8	234	10	3	259
Dilemma Vehicles (#)	0	0	72	0	0	85
Queue Length 50th (ft)	54	0	80	0	2	105
Queue Length 95th (ft)	171	26	242	26	10	205
Internal Link Dist (ft)	899		602			473
Turn Bay Length (ft)				200	175	
Base Capacity (vph)	735	687	2341	1076	374	3131

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.07	0.38	0.08	0.04	0.35

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 52.3			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay (s/veh): 12.9		Intersection LOS: B	
Intersection Capacity Utilization 51.4%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 80			
70th %ile Actuated Cycle: 53.3			
50th %ile Actuated Cycle: 46.2			
30th %ile Actuated Cycle: 41.5			
10th %ile Actuated Cycle: 40.3			

Splits and Phases: 3: Chuluota Rd & Cypress Lake Glen Blvd (S)

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	225	48	851	84	14	1030
Future Volume (veh/h)	225	48	851	84	14	1030
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	237	51	896	0	15	1084
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	355	316	1305		290	1912
Arrive On Green	0.20	0.20	0.37	0.00	0.03	0.54
Sat Flow, veh/h	1767	1572	3618	1572	1767	3618
Grp Volume(v), veh/h	237	51	896	0	15	1084
Grp Sat Flow(s),veh/h/ln	1767	1572	1763	1572	1767	1763
Q Serve(g_s), s	6.0	1.3	10.5	0.0	0.2	9.9
Cycle Q Clear(g_c), s	6.0	1.3	10.5	0.0	0.2	9.9
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	355	316	1305		290	1912
V/C Ratio(X)	0.67	0.16	0.69		0.05	0.57
Avail Cap(c_a), veh/h	747	665	2374		498	3395
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	17.9	16.1	13.0	0.0	9.4	7.4
Incr Delay (d2), s/veh	2.2	0.2	0.7	0.0	0.1	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.4	3.0	0.0	0.1	1.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	20.1	16.3	13.6	0.0	9.5	7.6
LnGrp LOS	C	B	B		A	A
Approach Vol, veh/h	288		896			1099
Approach Delay, s/veh	19.4		13.6			7.7
Approach LOS	B		B			A

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	8.4	25.1		15.2		33.5
Change Period (Y+Rc), s	7.1	7.1		5.4		7.1
Max Green Setting (Gmax), s	7.0	32.8		20.6		46.9
Max Q Clear Time (g_c+I1), s	2.2	12.5		8.0		11.9
Green Ext Time (p_c), s	0.0	5.6		0.7		8.3

Intersection Summary	
HCM 7th Control Delay, s/veh	11.5
HCM 7th LOS	B

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

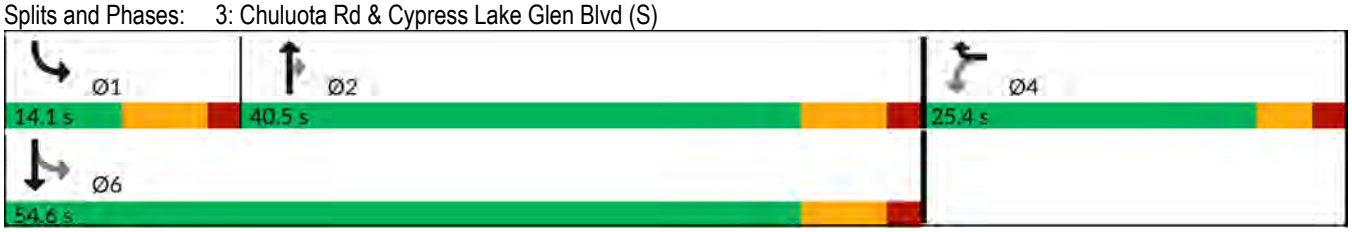
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	185	25	973	243	33	1256
Future Volume (vph)	185	25	973	243	33	1256
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		200	175	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1752	1568	3505	1568	1752	3505
Flt Permitted	0.950				0.166	
Satd. Flow (perm)	1752	1568	3505	1568	306	3505
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		26		256		
Link Speed (mph)	35		50			50
Link Distance (ft)	979		682			553
Travel Time (s)	19.1		9.3			7.5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	195	26	1024	256	35	1322
Shared Lane Traffic (%)						
Lane Group Flow (vph)	195	26	1024	256	35	1322
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	37		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Perm	Prot	NA	Perm	pm+pt	NA
Protected Phases		4	2		1	6

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Permitted Phases	4	4		2	6	
Detector Phase	4	4	2	2	1	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	16.0	16.0	7.0	16.0
Minimum Split (s)	25.4	25.4	37.1	37.1	14.1	37.1
Total Split (s)	25.4	25.4	40.5	40.5	14.1	54.6
Total Split (%)	31.8%	31.8%	50.6%	50.6%	17.6%	68.3%
Maximum Green (s)	20.0	20.0	33.4	33.4	7.0	47.5
Yellow Time (s)	3.4	3.4	5.1	5.1	5.1	5.1
All-Red Time (s)	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
Total Lost Time (s)	5.4	5.4	7.1	7.1	7.1	7.1
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	Min	None	Min
Walk Time (s)	7.0	7.0	7.0	7.0		7.0
Flash Don't Walk (s)	13.0	13.0	23.0	23.0		23.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	13.5	13.5	30.1	30.1	34.6	34.6
Actuated g/C Ratio	0.22	0.22	0.49	0.49	0.57	0.57
v/c Ratio	0.51	0.07	0.59	0.28	0.10	0.67
Control Delay (s/veh)	27.9	10.7	14.8	3.0	6.7	11.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	27.9	10.7	14.8	3.0	6.7	11.2
LOS	C	B	B	A	A	B
Approach Delay (s/veh)	25.9		12.4			11.1
Approach LOS	C		B			B
90th %ile Green (s)	19.2	19.2	33.4	33.4	7.0	47.5
90th %ile Term Code	Gap	Gap	Max	Max	Max	Hold
70th %ile Green (s)	15.6	15.6	33.4	33.4	7.0	47.5
70th %ile Term Code	Gap	Gap	Max	Max	Max	Hold
50th %ile Green (s)	12.9	12.9	28.0	28.0	0.0	28.0
50th %ile Term Code	Gap	Gap	Gap	Gap	Skip	Hold
30th %ile Green (s)	10.0	10.0	22.9	22.9	0.0	22.9
30th %ile Term Code	Min	Min	Hold	Hold	Skip	Gap
10th %ile Green (s)	10.0	10.0	29.9	29.9	0.0	29.9
10th %ile Term Code	Min	Min	Dwell	Dwell	Skip	Dwell
Stops (vph)	150	10	652	23	14	772
Fuel Used(gal)	3	0	17	2	0	19
CO Emissions (g/hr)	244	21	1198	109	26	1336
NOx Emissions (g/hr)	47	4	233	21	5	260
VOC Emissions (g/hr)	56	5	278	25	6	310
Dilemma Vehicles (#)	0	0	74	0	0	89
Queue Length 50th (ft)	53	0	102	0	5	150
Queue Length 95th (ft)	144	19	279	41	17	262
Internal Link Dist (ft)	899		602			473
Turn Bay Length (ft)				200	175	
Base Capacity (vph)	600	554	2006	1007	346	2821

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.05	0.51	0.25	0.10	0.47

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 61.2			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay (s/veh): 12.8		Intersection LOS: B	
Intersection Capacity Utilization 55.4%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 79.2			
70th %ile Actuated Cycle: 75.6			
50th %ile Actuated Cycle: 53.4			
30th %ile Actuated Cycle: 45.4			
10th %ile Actuated Cycle: 52.4			

Splits and Phases: 3: Chuluota Rd & Cypress Lake Glen Blvd (S)



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	185	25	973	243	33	1256
Future Volume (veh/h)	185	25	973	243	33	1256
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	195	26	1024	0	35	1322
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	318	283	1411		313	2066
Arrive On Green	0.18	0.18	0.40	0.00	0.05	0.59
Sat Flow, veh/h	1767	1572	3618	1572	1767	3618
Grp Volume(v), veh/h	195	26	1024	0	35	1322
Grp Sat Flow(s),veh/h/ln	1767	1572	1763	1572	1767	1763
Q Serve(g_s), s	5.4	0.7	13.1	0.0	0.6	13.3
Cycle Q Clear(g_c), s	5.4	0.7	13.1	0.0	0.6	13.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	318	283	1411		313	2066
V/C Ratio(X)	0.61	0.09	0.73		0.11	0.64
Avail Cap(c_a), veh/h	661	588	2203		451	3133
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	20.2	18.3	13.6	0.0	9.4	7.3
Incr Delay (d2), s/veh	1.9	0.1	0.7	0.0	0.2	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.3	3.8	0.0	0.1	2.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	22.1	18.4	14.3	0.0	9.5	7.7
LnGrp LOS	C	B	B		A	A
Approach Vol, veh/h	221		1024			1357
Approach Delay, s/veh	21.7		14.3			7.7
Approach LOS	C		B			A

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.9	28.5		15.0		38.4
Change Period (Y+Rc), s	7.1	7.1		5.4		7.1
Max Green Setting (Gmax), s	7.0	33.4		20.0		47.5
Max Q Clear Time (g_c+I1), s	2.6	15.1		7.4		15.3
Green Ext Time (p_c), s	0.0	6.3		0.5		10.8

Intersection Summary	
HCM 7th Control Delay, s/veh	11.5
HCM 7th LOS	B

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	2	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	288	984	1099
Demand Flow Rate, veh/h	297	1014	1132
Vehicles Circulating, veh/h	923	15	244
Vehicles Exiting, veh/h	106	1361	923
Ped Vol Crossing Leg, #/h	1	1	0
Ped Cap Adj	1.000	0.999	1.000
Approach Delay, s/veh	10.5	6.2	9.2
Approach LOS	B	A	A

Lane	Left	Bypass	Left	Right	Left	Right
Designated Moves	L	R	LT	TR	LT	TR
Assumed Moves	L		LT	TR	LT	TR
RT Channelized		Yield				
Lane Util	1.000		0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.609	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.976	4.645	4.328	4.645	4.328
A (Intercept)	1420	1380	1350	1420	1350	1420
B (Slope)	8.501e-4	1.02e-3	9.199e-4	8.501e-4	9.199e-4	8.501e-4
Entry Flow, veh/h	244	53	477	537	532	600
Cap Entry Lane, veh/h	648	538	1331	1402	1078	1154
Entry HV Adj Factor	0.971	0.971	0.970	0.971	0.971	0.971
Flow Entry, veh/h	237	51	463	522	517	583
Cap Entry, veh/h	629	523	1290	1360	1048	1121
V/C Ratio	0.377	0.098	0.359	0.383	0.493	0.520
Control Delay, s/veh	11.0	8.1	6.1	6.2	9.2	9.2
LOS	B	A	A	A	A	A
95th %tile Queue, veh	2	0	2	2	3	3

MOVEMENT SUMMARY

Site: 101 [Chuluota Rd at Cypress Lake Glen Blvd S AM Design (2048) Build (4-lane) Roundabout (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Chuluota Rd NB															
8	T1	All MCs	896	3.5	896	3.5	0.318	3.8	LOS A	2.4	61.1	0.12	0.34	0.12	37.6
18	R2	All MCs	88	3.5	88	3.5	0.318	3.9	LOS A	2.4	61.1	0.11	0.34	0.11	37.2
Approach			984	3.5	984	3.5	0.318	3.8	LOS A	2.4	61.1	0.12	0.34	0.12	37.6
East: Cypress Lake Glen Blvd S WB															
1	L2	All MCs	237	3.5	237	3.5	0.225	10.9	LOS B	0.9	23.6	0.55	0.75	0.55	29.3
16	R2	All MCs	51	3.5	51	3.5	0.076	6.4	LOS A	0.3	6.8	0.55	0.67	0.55	31.4
Approach			287	3.5	287	3.5	0.225	10.1	LOS B	0.9	23.6	0.55	0.73	0.55	29.6
North: Chuluota Rd SB															
7	L2	All MCs	15	3.5	15	3.5	0.431	12.7	LOS B	3.2	82.5	0.57	0.52	0.57	35.4
4	T1	All MCs	1084	3.5	1084	3.5	0.431	5.8	LOS A	3.3	86.0	0.55	0.51	0.55	36.4
Approach			1099	3.5	1099	3.5	0.431	5.9	LOS A	3.3	86.0	0.55	0.51	0.55	36.4
All Vehicles			2371	3.5	2371	3.5	0.431	5.5	LOS A	3.3	86.0	0.37	0.47	0.37	35.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	2	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	221	1280	1357
Demand Flow Rate, veh/h	228	1319	1398
Vehicles Circulating, veh/h	1055	36	201
Vehicles Exiting, veh/h	300	1563	1055
Ped Vol Crossing Leg, #/h	1	1	0
Ped Cap Adj	1.000	0.999	1.000
Approach Delay, s/veh	11.2	7.9	10.9
Approach LOS	B	A	B

Lane	Left	Bypass	Left	Right	Left	Right
Designated Moves	L	R	LT	TR	LT	TR
Assumed Moves	L		LT	TR	LT	TR
RT Channelized		Yield				
Lane Util	1.000		0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.609	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.976	4.645	4.328	4.645	4.328
A (Intercept)	1420	1380	1350	1420	1350	1420
B (Slope)	8.501e-4	1.02e-3	9.199e-4	8.501e-4	9.199e-4	8.501e-4
Entry Flow, veh/h	201	27	620	699	657	741
Cap Entry Lane, veh/h	579	470	1306	1377	1122	1197
Entry HV Adj Factor	0.970	0.971	0.971	0.971	0.971	0.971
Flow Entry, veh/h	195	26	602	679	638	719
Cap Entry, veh/h	562	457	1266	1336	1089	1162
V/C Ratio	0.347	0.057	0.475	0.508	0.586	0.619
Control Delay, s/veh	11.5	8.6	7.8	8.0	10.8	11.1
LOS	B	A	A	A	B	B
95th %tile Queue, veh	2	0	3	3	4	5

MOVEMENT SUMMARY

Site: 101 [Chuluota Rd at Cypress Lake Glen Blvd S PM Design (2048) Build (4-lane) Roundabout (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Chuluota Rd NB															
8	T1	All MCs	1024	3.5	1024	3.5	0.422	3.9	LOS A	3.6	91.7	0.22	0.35	0.22	37.2
18	R2	All MCs	256	3.5	256	3.5	0.422	4.0	LOS A	3.6	91.7	0.21	0.37	0.21	36.8
Approach			1280	3.5	1280	3.5	0.422	3.9	LOS A	3.6	91.7	0.22	0.35	0.22	37.1
East: Cypress Lake Glen Blvd S WB															
1	L2	All MCs	195	3.5	195	3.5	0.200	11.3	LOS B	0.9	22.5	0.61	0.76	0.61	29.2
16	R2	All MCs	26	3.5	26	3.5	0.042	6.8	LOS A	0.2	4.0	0.59	0.68	0.59	31.3
Approach			221	3.5	221	3.5	0.200	10.8	LOS B	0.9	22.5	0.61	0.75	0.61	29.4
North: Chuluota Rd SB															
7	L2	All MCs	35	3.5	35	3.5	0.517	12.6	LOS B	4.3	111.7	0.58	0.52	0.58	35.3
4	T1	All MCs	1322	3.5	1322	3.5	0.517	5.7	LOS A	4.5	115.8	0.56	0.50	0.56	36.3
Approach			1357	3.5	1357	3.5	0.517	5.9	LOS A	4.5	115.8	0.56	0.50	0.56	36.3
All Vehicles			2858	3.5	2858	3.5	0.517	5.4	LOS A	4.5	115.8	0.41	0.45	0.41	36.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Chuluota Road at Cypress Lake Glen Boulevard S Design Year 2048 Operational Analysis Results									
	Build Configuration	**No-Build (2-lane)**				**Build (4-lane)**			
	Peak Time	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
	Intersection Control Type	**Traffic Signal**	**Traffic Signal**	**1x1 Roundabout**	**1x1 Roundabout**	**Traffic Signal**	**Traffic Signal**	**2x1 Roundabout**	**2x1 Roundabout**
	Measure of Effectiveness	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**
Approach	Westbound	23.5 (C)	28.8 (C)	8.9 (A)	9.4 (A)	21.0 (C)	25.9 (C)	10.5 (B)	11.2 (B)
	Northbound	17.0 (B)	17.4 (B)	7.1 (A)	7.3 (A)	12.3 (B)	12.4 (B)	6.2 (A)	7.9 (A)
	Southbound	17.3 (B)	17.9 (B)	16.2 (C)	24.3 (C)	11.3 (B)	11.1 (B)	9.2 (A)	10.9 (B)
	Intersection	18.1 (B)	18.7 (B)	11.4 (B)	15.1 (C)	12.9 (B)	12.8 (B)	8.1 (A)	9.6 (A)

LOS Legend	
	LOS A
	LOS B
	LOS C
	LOS D
	LOS E
	LOS F

CORNER LAKE DRIVE & SCHOOLVIEW WAY

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	95	4	25	38	6	36
Future Volume (vph)	95	4	25	38	6	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.918			
Flt Protected	0.950					0.993
Satd. Flow (prot)	1752	1568	1693	0	0	1832
Flt Permitted	0.950					0.993
Satd. Flow (perm)	1752	1568	1693	0	0	1832
Link Speed (mph)	25		25			25
Link Distance (ft)	1052		1066			774
Travel Time (s)	28.7		29.1			21.1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	100	4	26	40	6	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	100	4	66	0	0	44
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Stop			Stop

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	95	4	25	38	6	36
Future Vol, veh/h	95	4	25	38	6	36
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	100	4	26	40	6	38
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay, s/veh	8.8	7.2	7.6
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	14%
Vol Thru, %	40%	0%	0%	86%
Vol Right, %	60%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	63	95	4	42
LT Vol	0	95	0	6
Through Vol	25	0	0	36
RT Vol	38	0	4	0
Lane Flow Rate	66	100	4	44
Geometry Grp	2	5	5	2
Degree of Util (X)	0.072	0.146	0.005	0.053
Departure Headway (Hd)	3.928	5.243	4.041	4.335
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	917	681	880	831
Service Time	1.929	2.995	1.792	2.337
HCM Lane V/C Ratio	0.072	0.147	0.005	0.053
HCM Control Delay, s/veh	7.2	8.9	6.8	7.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.5	0	0.2

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	51	11	76	110	7	20
Future Volume (vph)	51	11	76	110	7	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.920			
Flt Protected	0.950					0.988
Satd. Flow (prot)	1752	1568	1697	0	0	1823
Flt Permitted	0.950					0.988
Satd. Flow (perm)	1752	1568	1697	0	0	1823
Link Speed (mph)	25		25			25
Link Distance (ft)	1052		1066			774
Travel Time (s)	28.7		29.1			21.1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	54	12	80	116	7	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	54	12	196	0	0	28
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Stop			Stop

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	51	11	76	110	7	20
Future Vol, veh/h	51	11	76	110	7	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	54	12	80	116	7	21
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay, s/veh	8.4	7.8	7.5
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	26%
Vol Thru, %	41%	0%	0%	74%
Vol Right, %	59%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	186	51	11	27
LT Vol	0	51	0	7
Through Vol	76	0	0	20
RT Vol	110	0	11	0
Lane Flow Rate	196	54	12	28
Geometry Grp	2	5	5	2
Degree of Util (X)	0.203	0.081	0.014	0.034
Departure Headway (Hd)	3.729	5.44	4.237	4.264
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	948	654	836	825
Service Time	1.808	3.213	2.009	2.364
HCM Lane V/C Ratio	0.207	0.083	0.014	0.034
HCM Control Delay, s/veh	7.8	8.7	7.1	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.8	0.3	0	0.1

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	95	4	25	38	6	36
Future Volume (vph)	95	4	25	38	6	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.918			
Flt Protected	0.950					0.993
Satd. Flow (prot)	1752	1568	1693	0	0	1832
Flt Permitted	0.950					0.993
Satd. Flow (perm)	1752	1568	1693	0	0	1832
Link Speed (mph)	25		25			25
Link Distance (ft)	1052		1066			774
Travel Time (s)	28.7		29.1			21.1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	100	4	26	40	6	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	100	4	66	0	0	44
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	95	4	25	38	6	36
Future Vol, veh/h	95	4	25	38	6	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	100	4	26	40	6	38

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	97	46	0	0	66	0
Stage 1	46	-	-	-	-	-
Stage 2	51	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	900	1020	-	-	1529	-
Stage 1	974	-	-	-	-	-
Stage 2	969	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	896	1020	-	-	1529	-
Mov Cap-2 Maneuver	896	-	-	-	-	-
Stage 1	974	-	-	-	-	-
Stage 2	965	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.48	0	1.05
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	896	1020	257	-
HCM Lane V/C Ratio	-	-	0.112	0.004	0.004	-
HCM Control Delay (s/veh)	-	-	9.5	8.5	7.4	0
HCM Lane LOS	-	-	A	A	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	51	11	76	110	7	20
Future Volume (vph)	51	11	76	110	7	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.920			
Flt Protected	0.950					0.988
Satd. Flow (prot)	1752	1568	1697	0	0	1823
Flt Permitted	0.950					0.988
Satd. Flow (perm)	1752	1568	1697	0	0	1823
Link Speed (mph)	25		25			25
Link Distance (ft)	1052		1066			774
Travel Time (s)	28.7		29.1			21.1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	54	12	80	116	7	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	54	12	196	0	0	28
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	51	11	76	110	7	20
Future Vol, veh/h	51	11	76	110	7	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	54	12	80	116	7	21

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	174	138	0	0	196	0
Stage 1	138	-	-	-	-	-
Stage 2	36	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	814	908	-	-	1371	-
Stage 1	886	-	-	-	-	-
Stage 2	984	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	810	908	-	-	1371	-
Mov Cap-2 Maneuver	810	-	-	-	-	-
Stage 1	886	-	-	-	-	-
Stage 2	979	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.63	0	1.98
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	810	908	467	-
HCM Lane V/C Ratio	-	-	0.066	0.013	0.005	-
HCM Control Delay (s/veh)	-	-	9.8	9	7.6	0
HCM Lane LOS	-	-	A	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	0	-

Intersection	
Intersection Delay, s/veh	3.3
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	104	66	44
Demand Flow Rate, veh/h	107	68	45
Vehicles Circulating, veh/h	27	6	103
Vehicles Exiting, veh/h	47	142	31
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.4	3.1	3.3
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
A (Intercept)	1380	1380	1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3
Entry Flow, veh/h	107	68	45
Cap Entry Lane, veh/h	1342	1371	1242
Entry HV Adj Factor	0.972	0.974	0.975
Flow Entry, veh/h	104	66	44
Cap Entry, veh/h	1305	1335	1211
V/C Ratio	0.080	0.050	0.036
Control Delay, s/veh	3.4	3.1	3.3
LOS	A	A	A
95th %tile Queue, veh	0	0	0

MOVEMENT SUMMARY

Site: 101 [Corner School Drive at Schoolview Way AM Design (2048) No-Build (2-lane) Roundabout (Site Folder: General)]

Roundabout 2048 NB AM

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Corner School Drive NB															
8	T1	All MCs	26	3.5	26	3.5	0.047	0.0	LOS A	0.2	6.0	0.05	0.08	0.05	24.8
18	R2	All MCs	40	3.5	40	3.5	0.047	0.7	LOS A	0.2	6.0	0.05	0.08	0.05	24.8
Approach			66	3.5	66	3.5	0.047	0.4	LOS A	0.2	6.0	0.05	0.08	0.05	24.8
East: Schoolview Way WB															
1	L2	All MCs	100	3.5	100	3.5	0.075	5.3	LOS A	0.4	9.3	0.11	0.46	0.11	23.5
16	R2	All MCs	4	3.5	4	3.5	0.075	0.8	LOS A	0.4	9.3	0.11	0.46	0.11	23.6
Approach			104	3.5	104	3.5	0.075	5.1	LOS A	0.4	9.3	0.11	0.46	0.11	23.5
North: Corner School Drive SB															
7	L2	All MCs	6	3.5	6	3.5	0.034	5.6	LOS A	0.2	4.2	0.24	0.14	0.24	24.3
4	T1	All MCs	38	3.5	38	3.5	0.034	0.4	LOS A	0.2	4.2	0.24	0.14	0.24	24.4
Approach			44	3.5	44	3.5	0.034	1.2	LOS A	0.2	4.2	0.24	0.14	0.24	24.4
All Vehicles			215	3.5	215	3.5	0.075	2.8	LOS A	0.4	9.3	0.12	0.28	0.12	24.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Intersection	
Intersection Delay, s/veh	3.7
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	66	196	28
Demand Flow Rate, veh/h	68	201	29
Vehicles Circulating, veh/h	82	7	56
Vehicles Exiting, veh/h	126	78	94
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.4	3.9	3.0
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
A (Intercept)	1380	1380	1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3
Entry Flow, veh/h	68	201	29
Cap Entry Lane, veh/h	1269	1370	1303
Entry HV Adj Factor	0.971	0.973	0.978
Flow Entry, veh/h	66	196	28
Cap Entry, veh/h	1232	1333	1274
V/C Ratio	0.054	0.147	0.022
Control Delay, s/veh	3.4	3.9	3.0
LOS	A	A	A
95th %tile Queue, veh	0	1	0

MOVEMENT SUMMARY

Site: 101 [Corner School Drive at Schoolview Way PM Design (2048) No-Build (2-lane) Roundabout (Site Folder: General)]

Roundabout 2048 NB PM

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Corner School Drive NB															
8	T1	All MCs	80	3.5	80	3.5	0.139	0.0	LOS A	0.7	19.0	0.06	0.08	0.06	24.8
18	R2	All MCs	116	3.5	116	3.5	0.139	0.7	LOS A	0.7	19.0	0.06	0.08	0.06	24.8
Approach			196	3.5	196	3.5	0.139	0.4	LOS A	0.7	19.0	0.06	0.08	0.06	24.8
East: Schoolview Way WB															
1	L2	All MCs	54	3.5	54	3.5	0.049	5.5	LOS A	0.2	6.0	0.21	0.44	0.21	23.5
16	R2	All MCs	12	3.5	12	3.5	0.049	1.0	LOS A	0.2	6.0	0.21	0.44	0.21	23.6
Approach			65	3.5	65	3.5	0.049	4.7	LOS A	0.2	6.0	0.21	0.44	0.21	23.5
North: Corner School Drive SB															
7	L2	All MCs	7	3.5	7	3.5	0.021	5.4	LOS A	0.1	2.6	0.17	0.18	0.17	24.2
4	T1	All MCs	21	3.5	21	3.5	0.021	0.2	LOS A	0.1	2.6	0.17	0.18	0.17	24.4
Approach			28	3.5	28	3.5	0.021	1.6	LOS A	0.1	2.6	0.17	0.18	0.17	24.4
All Vehicles			289	3.5	289	3.5	0.139	1.5	LOS A	0.7	19.0	0.11	0.17	0.11	24.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	59	4	25	44	6	36
Future Volume (vph)	59	4	25	44	6	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.914			
Flt Protected	0.950					0.993
Satd. Flow (prot)	1752	1568	1686	0	0	1832
Flt Permitted	0.950					0.993
Satd. Flow (perm)	1752	1568	1686	0	0	1832
Link Speed (mph)	25		25			25
Link Distance (ft)	1052		1066			774
Travel Time (s)	28.7		29.1			21.1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	62	4	26	46	6	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	62	4	72	0	0	44
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Stop			Stop

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	59	4	25	44	6	36
Future Vol, veh/h	59	4	25	44	6	36
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	62	4	26	46	6	38
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay, s/veh	8.4	7.1	7.5
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	14%
Vol Thru, %	36%	0%	0%	86%
Vol Right, %	64%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	69	59	4	42
LT Vol	0	59	0	6
Through Vol	25	0	0	36
RT Vol	44	0	4	0
Lane Flow Rate	73	62	4	44
Geometry Grp	2	5	5	2
Degree of Util (X)	0.075	0.091	0.005	0.051
Departure Headway (Hd)	3.716	5.254	4.052	4.15
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	949	681	879	851
Service Time	1.798	2.997	1.794	2.231
HCM Lane V/C Ratio	0.077	0.091	0.005	0.052
HCM Control Delay, s/veh	7.1	8.5	6.8	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.3	0	0.2

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	76	11	76	143	7	27
Future Volume (vph)	76	11	76	143	7	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.912			
Flt Protected	0.950					0.990
Satd. Flow (prot)	1752	1568	1682	0	0	1826
Flt Permitted	0.950					0.990
Satd. Flow (perm)	1752	1568	1682	0	0	1826
Link Speed (mph)	25		25			25
Link Distance (ft)	1052		1066			774
Travel Time (s)	28.7		29.1			21.1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	80	12	80	151	7	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	80	12	231	0	0	35
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Stop			Stop

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	76	11	76	143	7	27
Future Vol, veh/h	76	11	76	143	7	27
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	80	12	80	151	7	28
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay, s/veh	8.9	8.1	7.7
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	21%
Vol Thru, %	35%	0%	0%	79%
Vol Right, %	65%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	219	76	11	34
LT Vol	0	76	0	7
Through Vol	76	0	0	27
RT Vol	143	0	11	0
Lane Flow Rate	231	80	12	36
Geometry Grp	2	5	5	2
Degree of Util (X)	0.247	0.125	0.014	0.044
Departure Headway (Hd)	3.86	5.617	4.412	4.471
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	936	642	816	804
Service Time	1.865	3.317	2.112	2.481
HCM Lane V/C Ratio	0.247	0.125	0.015	0.045
HCM Control Delay, s/veh	8.1	9.1	7.2	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1	0.4	0	0.1

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	59	4	25	44	6	36
Future Volume (vph)	59	4	25	44	6	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.914			
Flt Protected	0.950					0.993
Satd. Flow (prot)	1752	1568	1686	0	0	1832
Flt Permitted	0.950					0.993
Satd. Flow (perm)	1752	1568	1686	0	0	1832
Link Speed (mph)	25		25			25
Link Distance (ft)	1052		1066			774
Travel Time (s)	28.7		29.1			21.1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	62	4	26	46	6	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	62	4	72	0	0	44
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.0%		ICU Level of Service A	
Analysis Period (min) 15			

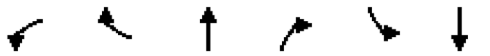
Intersection	
Int Delay, s/veh	3.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	59	4	25	44	6	36
Future Vol, veh/h	59	4	25	44	6	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	62	4	26	46	6	38

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	100	49	0	0	73	0
Stage 1	49	-	-	-	-	-
Stage 2	51	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	896	1016	-	-	1521	-
Stage 1	970	-	-	-	-	-
Stage 2	969	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	892	1016	-	-	1521	-
Mov Cap-2 Maneuver	892	-	-	-	-	-
Stage 1	970	-	-	-	-	-
Stage 2	965	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.29	0	1.05
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	892	1016	257	-
HCM Lane V/C Ratio	-	-	0.07	0.004	0.004	-
HCM Control Delay (s/veh)	-	-	9.3	8.6	7.4	0
HCM Lane LOS	-	-	A	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	0	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	76	11	76	143	7	27
Future Volume (vph)	76	11	76	143	7	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.912			
Flt Protected	0.950					0.990
Satd. Flow (prot)	1752	1568	1682	0	0	1826
Flt Permitted	0.950					0.990
Satd. Flow (perm)	1752	1568	1682	0	0	1826
Link Speed (mph)	25		25			25
Link Distance (ft)	1052		1066			774
Travel Time (s)	28.7		29.1			21.1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	80	12	80	151	7	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	80	12	231	0	0	35
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	76	11	76	143	7	27
Future Vol, veh/h	76	11	76	143	7	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	80	12	80	151	7	28

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	198	155	0	0	231	0
Stage 1	155	-	-	-	-	-
Stage 2	43	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	788	888	-	-	1331	-
Stage 1	871	-	-	-	-	-
Stage 2	977	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	784	888	-	-	1331	-
Mov Cap-2 Maneuver	784	-	-	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	971	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.99	0	1.59
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	784	888	371	-
HCM Lane V/C Ratio	-	-	0.102	0.013	0.006	-
HCM Control Delay (s/veh)	-	-	10.1	9.1	7.7	0
HCM Lane LOS	-	-	B	A	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	0	-

Intersection	
Intersection Delay, s/veh	3.1
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	66	72	44
Demand Flow Rate, veh/h	68	74	45
Vehicles Circulating, veh/h	27	6	64
Vehicles Exiting, veh/h	53	103	31
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.2	3.1	3.1
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
A (Intercept)	1380	1380	1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3
Entry Flow, veh/h	68	74	45
Cap Entry Lane, veh/h	1342	1371	1293
Entry HV Adj Factor	0.971	0.976	0.975
Flow Entry, veh/h	66	72	44
Cap Entry, veh/h	1303	1338	1260
V/C Ratio	0.051	0.054	0.035
Control Delay, s/veh	3.2	3.1	3.1
LOS	A	A	A
95th %tile Queue, veh	0	0	0

MOVEMENT SUMMARY

Site: 101 [Corner School Drive at Schoolview Way AM Design (2048) Build (4-lane) Roundabout (Site Folder: General)]

Roundabout 2048 Bld AM

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Corner School Drive NB															
8	T1	All MCs	26	3.5	26	3.5	0.052	0.0	LOS A	0.3	6.5	0.05	0.08	0.05	24.8
18	R2	All MCs	46	3.5	46	3.5	0.052	0.7	LOS A	0.3	6.5	0.05	0.08	0.05	24.8
Approach			73	3.5	73	3.5	0.052	0.5	LOS A	0.3	6.5	0.05	0.08	0.05	24.8
East: Schoolview Way WB															
1	L2	All MCs	62	3.5	62	3.5	0.048	5.2	LOS A	0.2	5.8	0.11	0.46	0.11	23.5
16	R2	All MCs	4	3.5	4	3.5	0.048	0.8	LOS A	0.2	5.8	0.11	0.46	0.11	23.6
Approach			66	3.5	66	3.5	0.048	5.0	LOS A	0.2	5.8	0.11	0.46	0.11	23.5
North: Corner School Drive SB															
7	L2	All MCs	6	3.5	6	3.5	0.033	5.4	LOS A	0.2	4.0	0.18	0.12	0.18	24.4
4	T1	All MCs	38	3.5	38	3.5	0.033	0.3	LOS A	0.2	4.0	0.18	0.12	0.18	24.5
Approach			44	3.5	44	3.5	0.033	1.0	LOS A	0.2	4.0	0.18	0.12	0.18	24.5
All Vehicles			183	3.5	183	3.5	0.052	2.2	LOS A	0.3	6.5	0.10	0.23	0.10	24.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Intersection	
Intersection Delay, s/veh	3.9
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	92	231	35
Demand Flow Rate, veh/h	94	238	36
Vehicles Circulating, veh/h	82	7	82
Vehicles Exiting, veh/h	163	111	94
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.5	4.1	3.1
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
A (Intercept)	1380	1380	1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3
Entry Flow, veh/h	94	238	36
Cap Entry Lane, veh/h	1269	1370	1269
Entry HV Adj Factor	0.979	0.969	0.977
Flow Entry, veh/h	92	231	35
Cap Entry, veh/h	1242	1327	1239
V/C Ratio	0.074	0.174	0.028
Control Delay, s/veh	3.5	4.1	3.1
LOS	A	A	A
95th %tile Queue, veh	0	1	0

MOVEMENT SUMMARY

Site: 101 [Corner School Drive at Schoolview Way PM Design (2048) Build (4-lane) Roundabout (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Corner School Drive NB															
8	T1	All MCs	80	3.5	80	3.5	0.164	0.0	LOS A	0.9	23.2	0.06	0.09	0.06	24.8
18	R2	All MCs	151	3.5	151	3.5	0.164	0.7	LOS A	0.9	23.2	0.06	0.09	0.06	24.8
Approach			231	3.5	231	3.5	0.164	0.5	LOS A	0.9	23.2	0.06	0.09	0.06	24.8
East: Schoolview Way WB															
1	L2	All MCs	80	3.5	80	3.5	0.069	5.5	LOS A	0.3	8.6	0.22	0.45	0.22	23.5
16	R2	All MCs	12	3.5	12	3.5	0.069	1.1	LOS A	0.3	8.6	0.22	0.45	0.22	23.6
Approach			92	3.5	92	3.5	0.069	4.9	LOS A	0.3	8.6	0.22	0.45	0.22	23.5
North: Corner School Drive SB															
7	L2	All MCs	7	3.5	7	3.5	0.027	5.5	LOS A	0.1	3.4	0.22	0.16	0.22	24.2
4	T1	All MCs	28	3.5	28	3.5	0.027	0.3	LOS A	0.1	3.4	0.22	0.16	0.22	24.4
Approach			36	3.5	36	3.5	0.027	1.4	LOS A	0.1	3.4	0.22	0.16	0.22	24.4
All Vehicles			358	3.5	358	3.5	0.164	1.7	LOS A	0.9	23.2	0.12	0.19	0.12	24.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Corner School Drive at Schoolview Way Design Year 2048 Operational Analysis Results													
	Build Configuration	**No-Build (2-lane)**						**Build (4-lane)**					
	Peak Time	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
	Intersection Control Type	**All-Way Stop Control**	**All-Way Stop Control**	**Two-Way Stop Control**	**Two-Way Stop Control**	**1x1 Roundabout**	**1x1 Roundabout**	**All-Way Stop Control**	**All-Way Stop Control**	**Two-Way Stop Control**	**Two-Way Stop Control**	**1x1 Roundabout**	**1x1 Roundabout**
	Measure of Effectiveness	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**
Approach	Westbound	8.8 (A)	8.4 (A)	9.5 (A)	9.6 (A)	3.4 (A)	3.4 (A)	8.4 (A)	8.9 (A)	9.3 (A)	10.0 (B)	3.2 (A)	3.5 (A)
	Northbound	7.2 (A)	7.8 (A)	0.0 (A)	0.0 (A)	3.1 (A)	3.9 (A)	7.1 (A)	8.1 (A)	0.0 (A)	0.0 (A)	3.1 (A)	4.1 (A)
	Southbound	7.6 (A)	7.5 (A)	1.1 (A)	2.0 (A)	3.3 (A)	3.0 (A)	7.5 (A)	7.7 (A)	1.1 (A)	1.6 (A)	3.1 (A)	3.1 (A)
	Intersection	8.1 (A)	7.9 (A)	4.8 (A)	2.4 (A)	3.3 (A)	3.7 (A)	7.7 (A)	8.3 (A)	3.6 (A)	2.7 (A)	3.1 (A)	3.9 (A)

LOS Legend	
	LOS A
	LOS B
	LOS C
	LOS D
	LOS E
	LOS F

CHULUOTA ROAD & SCHOOLVIEW WAY/CYPRESS LAKE GLEN BOULEVARD S

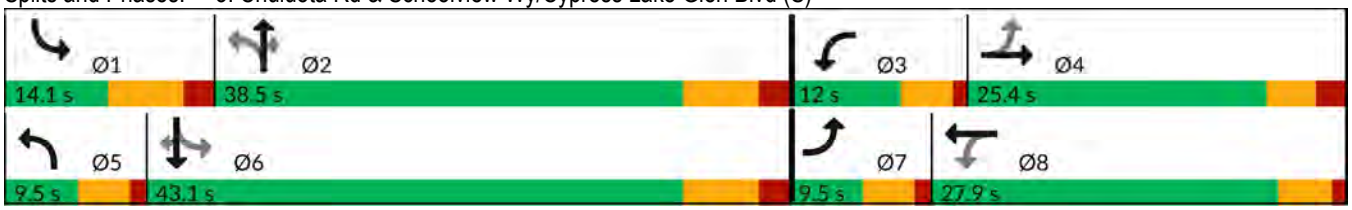
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	6	9	225	9	48	4	850	84	14	927	50
Future Volume (vph)	35	6	9	225	9	48	4	850	84	14	927	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	200		200	200		200
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.910			0.872				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1679	0	1752	1609	0	1752	3505	1568	1752	3505	1568
Flt Permitted				0.606			0.249			0.210		
Satd. Flow (perm)	1845	1679	0	1118	1609	0	459	3505	1568	387	3505	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			51				138			138
Link Speed (mph)		35			35			50			50	
Link Distance (ft)		706			979			682			553	
Travel Time (s)		13.8			19.1			9.3			7.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	37	6	9	237	9	51	4	895	88	15	976	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	37	15	0	237	60	0	4	895	88	15	976	53
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		37			37			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

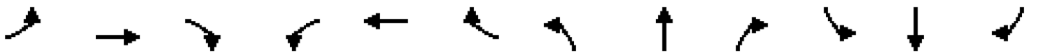
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	5.0		5.0	16.0	16.0	7.0	16.0	16.0
Minimum Split (s)	9.5	25.4		9.5	22.5		9.5	37.1	37.1	14.1	37.1	37.1
Total Split (s)	9.5	25.4		12.0	27.9		9.5	38.5	38.5	14.1	43.1	43.1
Total Split (%)	10.6%	28.2%		13.3%	31.0%		10.6%	42.8%	42.8%	15.7%	47.9%	47.9%
Maximum Green (s)	5.0	20.0		7.5	23.4		5.0	31.4	31.4	7.0	36.0	36.0
Yellow Time (s)	3.5	3.4		3.5	3.5		3.5	5.1	5.1	5.1	5.1	5.1
All-Red Time (s)	1.0	2.0		1.0	1.0		1.0	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)	4.5	5.4		4.5	4.5		4.5	7.1	7.1	7.1	7.1	7.1
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Min	Min	None	Min	Min
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)		13.0			11.0			23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	6.8	11.0		11.5	8.8		25.5	22.0	22.0	23.4	22.6	22.6
Actuated g/C Ratio	0.14	0.23		0.24	0.18		0.53	0.46	0.46	0.49	0.47	0.47
v/c Ratio	0.15	0.04		0.60	0.18		0.01	0.56	0.11	0.04	0.59	0.07
Control Delay (s/veh)	21.4	17.8		25.4	11.7		6.5	12.9	1.4	7.4	12.4	0.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	21.4	17.8		25.4	11.7		6.5	12.9	1.4	7.4	12.4	0.2
LOS	C	B		C	B		A	B	A	A	B	A
Approach Delay (s/veh)		20.3			22.6			11.8			11.7	
Approach LOS		C			C			B			B	
90th %ile Green (s)	5.0	10.0		7.5	13.4		5.0	31.4	31.4	7.0	36.0	36.0
90th %ile Term Code	Max	Min		Max	Hold		Max	Max	Max	Max	Max	Max
70th %ile Green (s)	5.0	0.0		16.3	6.8		0.0	23.1	23.1	0.0	23.1	23.1
70th %ile Term Code	Max	Skip		Hold	Gap		Skip	Hold	Hold	Skip	Gap	Gap
50th %ile Green (s)	0.0	0.0		7.5	7.5		0.0	19.8	19.8	0.0	19.8	19.8
50th %ile Term Code	Skip	Skip		Max	Hold		Skip	Hold	Hold	Skip	Gap	Gap
30th %ile Green (s)	0.0	0.0		7.5	7.5		0.0	16.0	16.0	0.0	16.0	16.0
30th %ile Term Code	Skip	Skip		Max	Hold		Skip	Min	Min	Skip	Min	Min
10th %ile Green (s)	0.0	0.0		7.3	7.3		0.0	17.2	17.2	0.0	17.2	17.2
10th %ile Term Code	Skip	Skip		Gap	Hold		Skip	Dwell	Dwell	Skip	Dwell	Dwell
Stops (vph)	30	10		175	20		3	552	4	7	601	0
Fuel Used(gal)	1	0		4	1		0	14	0	0	15	0
CO Emissions (g/hr)	39	14		284	48		5	1005	31	12	1035	12
NOx Emissions (g/hr)	8	3		55	9		1	196	6	2	201	2
VOC Emissions (g/hr)	9	3		66	11		1	233	7	3	240	3
Dilemma Vehicles (#)	0	1		0	4		0	80	0	0	88	0
Queue Length 50th (ft)	7	1		48	2		0	57	0	1	64	0
Queue Length 95th (ft)	35	20		#173	35		4	251	11	11	250	0
Internal Link Dist (ft)		626			899			602			473	
Turn Bay Length (ft)							200		200	200		200
Base Capacity (vph)	249	770		397	882		390	2509	1161	406	2859	1304

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	0.15	0.02		0.60	0.07		0.01	0.36	0.08	0.04	0.34	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 48.2			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay (s/veh): 13.3		Intersection LOS: B	
Intersection Capacity Utilization 54.4%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 80			
70th %ile Actuated Cycle: 51			
50th %ile Actuated Cycle: 38.9			
30th %ile Actuated Cycle: 35.1			
10th %ile Actuated Cycle: 36.1			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Chuluota Rd & Schoolview Wy/Cypress Lake Glen Blvd (S)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	6	9	225	9	48	4	850	84	14	927	50
Future Volume (veh/h)	35	6	9	225	9	48	4	850	84	14	927	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	37	6	9	237	9	51	4	895	0	15	976	53
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, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	363	91	137	503	53	298	215	1184		228	1401	625
Arrive On Green	0.04	0.14	0.14	0.12	0.22	0.22	0.01	0.34	0.00	0.03	0.40	0.40
Sat Flow, veh/h	1767	670	1005	1767	241	1368	1767	3526	1572	1767	3526	1572
Grp Volume(v), veh/h	37	0	15	237	0	60	4	895	0	15	976	53
Grp Sat Flow(s),veh/h/ln	1767	0	1675	1767	0	1609	1767	1763	1572	1767	1763	1572
Q Serve(g_s), s	1.1	0.0	0.5	6.9	0.0	1.9	0.1	14.2	0.0	0.3	14.5	1.3
Cycle Q Clear(g_c), s	1.1	0.0	0.5	6.9	0.0	1.9	0.1	14.2	0.0	0.3	14.5	1.3
Prop In Lane	1.00		0.60	1.00		0.85	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	363	0	229	503	0	350	215	1184		228	1401	625
V/C Ratio(X)	0.10	0.00	0.07	0.47	0.00	0.17	0.02	0.76		0.07	0.70	0.08
Avail Cap(c_a), veh/h	437	0	532	503	0	598	345	1759		379	2016	899
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.9	0.0	23.7	18.5	0.0	20.0	14.6	18.6	0.0	14.6	15.8	11.8
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.7	0.0	0.2	0.0	1.1	0.0	0.1	0.6	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	0.4	0.0	0.2	2.7	0.0	0.7	0.0	4.9	0.0	0.1	4.7	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	22.0	0.0	23.8	19.2	0.0	20.2	14.6	19.7	0.0	14.7	16.4	11.9
LnGrp LOS	C		C	B		C	B	B		B	B	B
Approach Vol, veh/h		52			297			899			1044	
Approach Delay, s/veh		22.5			19.4			19.7			16.2	
Approach LOS		C			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	28.2	12.0	14.0	4.8	32.1	6.9	19.1
Change Period (Y+Rc), s	7.1	7.1	4.5	5.4	4.5	7.1	4.5	* 5.4
Max Green Setting (Gmax), s	7.0	31.4	7.5	20.0	5.0	36.0	5.0	* 23
Max Q Clear Time (g_c+I1), s	2.3	16.2	8.9	2.5	2.1	16.5	3.1	3.9
Green Ext Time (p_c), s	0.0	4.9	0.0	0.0	0.0	6.2	0.0	0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	18.1
HCM 7th LOS	B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

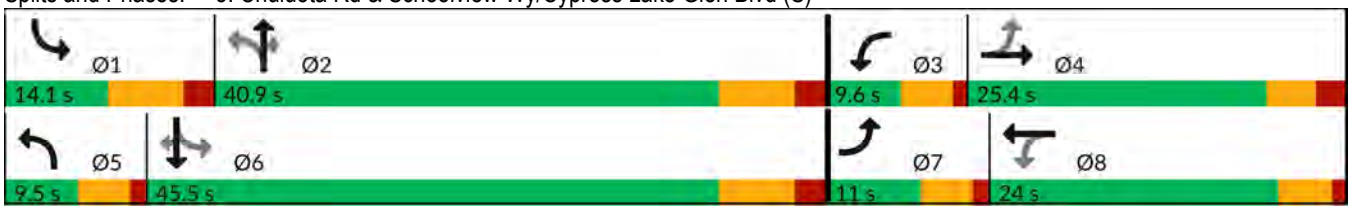
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	14	16	185	8	25	11	973	243	33	1256	68
Future Volume (vph)	120	14	16	185	8	25	11	973	243	33	1256	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	200		200	200		200
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.920			0.885				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1697	0	1752	1633	0	1752	3505	1568	1752	3505	1568
Flt Permitted				0.800			0.144			0.174		
Satd. Flow (perm)	1845	1697	0	1476	1633	0	266	3505	1568	321	3505	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			26				256			138
Link Speed (mph)		35			35			50			50	
Link Distance (ft)		706			979			682			553	
Travel Time (s)		13.8			19.1			9.3			7.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	126	15	17	195	8	26	12	1024	256	35	1322	72
Shared Lane Traffic (%)												
Lane Group Flow (vph)	126	32	0	195	34	0	12	1024	256	35	1322	72
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		37			37			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

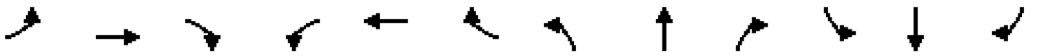
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	5.0		5.0	16.0	16.0	7.0	16.0	16.0
Minimum Split (s)	9.5	25.4		9.5	22.5		9.5	37.1	37.1	14.1	37.1	37.1
Total Split (s)	11.0	25.4		9.6	24.0		9.5	40.9	40.9	14.1	45.5	45.5
Total Split (%)	12.2%	28.2%		10.7%	26.7%		10.6%	45.4%	45.4%	15.7%	50.6%	50.6%
Maximum Green (s)	6.5	20.0		5.1	19.5		5.0	33.8	33.8	7.0	38.4	38.4
Yellow Time (s)	3.5	3.4		3.5	3.5		3.5	5.1	5.1	5.1	5.1	5.1
All-Red Time (s)	1.0	2.0		1.0	1.0		1.0	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)	4.5	5.4		4.5	4.5		4.5	7.1	7.1	7.1	7.1	7.1
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Min	Min	None	Min	Min
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)		13.0			11.0			23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	10.4	11.3		9.3	7.4		32.2	27.8	27.8	31.4	30.4	30.4
Actuated g/C Ratio	0.19	0.20		0.17	0.13		0.58	0.50	0.50	0.56	0.54	0.54
v/c Ratio	0.38	0.09		0.70	0.14		0.04	0.59	0.28	0.09	0.69	0.08
Control Delay (s/veh)	25.6	20.2		39.2	17.6		5.9	14.2	3.1	6.6	12.8	0.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	25.6	20.2		39.2	17.6		5.9	14.2	3.1	6.6	12.8	0.4
LOS	C	C		D	B		A	B	A	A	B	A
Approach Delay (s/veh)		24.5			36.0			11.9			12.0	
Approach LOS		C			D			B			B	
90th %ile Green (s)	6.5	10.0		5.1	9.5		5.0	33.8	33.8	7.0	38.4	38.4
90th %ile Term Code	Max	Min		Max	Hold		Max	Max	Max	Max	Max	Max
70th %ile Green (s)	6.5	10.0		5.1	9.5		0.0	33.8	33.8	7.0	47.9	47.9
70th %ile Term Code	Max	Min		Max	Hold		Skip	Max	Max	Max	Hold	Hold
50th %ile Green (s)	6.5	0.0		6.5	0.0		0.0	25.2	25.2	0.0	25.2	25.2
50th %ile Term Code	Max	Skip		Hold	Skip		Skip	Hold	Hold	Skip	Gap	Gap
30th %ile Green (s)	6.5	0.0		6.5	0.0		0.0	22.4	22.4	0.0	22.4	22.4
30th %ile Term Code	Max	Skip		Hold	Skip		Skip	Hold	Hold	Skip	Gap	Gap
10th %ile Green (s)	0.0	0.0		5.5	5.5		0.0	18.0	18.0	0.0	18.0	18.0
10th %ile Term Code	Skip	Skip		Hold	Hold		Skip	Hold	Hold	Skip	Gap	Gap
Stops (vph)	92	18		172	15		6	623	23	13	807	1
Fuel Used(gal)	2	0		4	0		0	17	2	0	20	0
CO Emissions (g/hr)	135	29		285	32		11	1159	109	25	1402	18
NOx Emissions (g/hr)	26	6		55	6		2	226	21	5	273	4
VOC Emissions (g/hr)	31	7		66	7		2	269	25	6	325	4
Dilemma Vehicles (#)	0	2		0	2		0	81	0	0	102	0
Queue Length 50th (ft)	29	3		47	2		1	64	0	3	94	0
Queue Length 95th (ft)	95	32		#159	29		8	282	41	17	362	3
Internal Link Dist (ft)		626			899			602			473	
Turn Bay Length (ft)							200		200	200		200
Base Capacity (vph)	331	697		278	660		303	2399	1154	383	2743	1257

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	0.38	0.05		0.70	0.05		0.04	0.43	0.22	0.09	0.48	0.06

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 55.8			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay (s/veh): 14.4		Intersection LOS: B	
Intersection Capacity Utilization 61.3%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 80			
70th %ile Actuated Cycle: 80			
50th %ile Actuated Cycle: 43.3			
30th %ile Actuated Cycle: 40.5			
10th %ile Actuated Cycle: 35.1			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Chuluota Rd & Schoolview Wy/Cypress Lake Glen Blvd (S)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	14	16	185	8	25	11	973	243	33	1256	68
Future Volume (veh/h)	120	14	16	185	8	25	11	973	243	33	1256	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	126	15	17	195	8	26	12	1024	0	35	1322	72
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	404	112	127	404	51	166	183	1368		267	1622	724
Arrive On Green	0.08	0.14	0.14	0.07	0.13	0.13	0.01	0.39	0.00	0.05	0.46	0.46
Sat Flow, veh/h	1767	794	900	1767	384	1247	1767	3526	1572	1767	3526	1572
Grp Volume(v), veh/h	126	0	32	195	0	34	12	1024	0	35	1322	72
Grp Sat Flow(s),veh/h/ln	1767	0	1694	1767	0	1631	1767	1763	1572	1767	1763	1572
Q Serve(g_s), s	4.2	0.0	1.1	5.1	0.0	1.3	0.3	17.3	0.0	0.8	22.4	1.8
Cycle Q Clear(g_c), s	4.2	0.0	1.1	5.1	0.0	1.3	0.3	17.3	0.0	0.8	22.4	1.8
Prop In Lane	1.00		0.53	1.00		0.76	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	404	0	239	404	0	217	183	1368		267	1622	724
V/C Ratio(X)	0.31	0.00	0.13	0.48	0.00	0.16	0.07	0.75		0.13	0.81	0.10
Avail Cap(c_a), veh/h	426	0	489	404	0	459	284	1721		358	1955	872
HCM Platoon Ratio	1.00	1.00	1.00	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	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.0	0.0	26.0	24.7	0.0	26.6	14.7	18.3	0.0	13.5	16.1	10.6
Incr Delay (d2), s/veh	0.4	0.0	0.3	0.9	0.0	0.3	0.1	1.4	0.0	0.2	2.3	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	1.7	0.0	0.5	2.8	0.0	0.5	0.1	6.0	0.0	0.3	7.5	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	23.5	0.0	26.3	25.6	0.0	26.9	14.8	19.7	0.0	13.7	18.5	10.6
LnGrp LOS	C		C	C		C	B	B		B	B	B
Approach Vol, veh/h		158			229			1036			1429	
Approach Delay, s/veh		24.0			25.8			19.6			18.0	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	34.0	9.6	15.2	5.5	39.0	10.1	14.6
Change Period (Y+Rc), s	7.1	7.1	4.5	5.4	4.5	7.1	4.5	* 5.4
Max Green Setting (Gmax), s	7.0	33.8	5.1	20.0	5.0	38.4	6.5	* 20
Max Q Clear Time (g_c+I1), s	2.8	19.3	7.1	3.1	2.3	24.4	6.2	3.3
Green Ext Time (p_c), s	0.0	5.6	0.0	0.1	0.0	7.4	0.0	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	19.5
HCM 7th LOS	B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	52	297	987	1044
Demand Flow Rate, veh/h	53	306	1017	1075
Vehicles Circulating, veh/h	1264	964	59	257
Vehicles Exiting, veh/h	68	112	1258	960
Ped Vol Crossing Leg, #/h	1	1	1	1
Ped Cap Adj	1.000	1.000	0.999	0.999
Approach Delay, s/veh	9.1	11.3	6.5	9.0
Approach LOS	A	B	A	A

Lane	Left	Left	Bypass	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	LT	TR
Assumed Moves	LTR	LT		LT	TR	LT	TR
RT Channelized			Yield				
Lane Util	1.000	1.000		0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535	2.609	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.976	4.645	4.328	4.645	4.328
A (Intercept)	1420	1420	1380	1350	1420	1350	1420
B (Slope)	8.501e-4	8.501e-4	1.02e-3	9.199e-4	8.501e-4	9.199e-4	8.501e-4
Entry Flow, veh/h	53	253	53	478	539	505	570
Cap Entry Lane, veh/h	485	626	518	1279	1351	1066	1141
Entry HV Adj Factor	0.978	0.971	0.971	0.971	0.971	0.971	0.970
Flow Entry, veh/h	52	246	51	464	523	491	553
Cap Entry, veh/h	474	608	503	1240	1310	1034	1107
V/C Ratio	0.109	0.404	0.101	0.374	0.400	0.474	0.500
Control Delay, s/veh	9.1	11.9	8.5	6.5	6.6	9.0	9.0
LOS	A	B	A	A	A	A	A
95th %tile Queue, veh	0	2	0	2	2	3	3

MOVEMENT SUMMARY

Site: 101 [Chuluota Rd at Schoolview Relocation-Cypress Lake Glen Blvd S AM Design (2048) Build A Roundabout (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Chuluota Rd NB															
3	L2	All MCs	4	3.5	4	3.5	0.333	10.4	LOS B	2.4	61.3	0.26	0.35	0.26	36.1
8	T1	All MCs	895	3.5	895	3.5	0.333	4.0	LOS A	2.4	62.5	0.25	0.36	0.25	37.0
18	R2	All MCs	88	3.5	88	3.5	0.333	4.1	LOS A	2.4	62.5	0.25	0.36	0.25	36.7
Approach			987	3.5	987	3.5	0.333	4.0	LOS A	2.4	62.5	0.25	0.36	0.25	37.0
East: Cypress Lake Glen Blvd S WB															
1	L2	All MCs	237	3.5	237	3.5	0.247	11.1	LOS B	1.1	27.5	0.59	0.75	0.59	29.3
6	T1	All MCs	9	3.5	9	3.5	0.247	4.8	LOS A	1.1	27.5	0.59	0.75	0.59	29.8
16	R2	All MCs	51	3.5	51	3.5	0.080	6.5	LOS A	0.3	7.4	0.58	0.69	0.58	31.3
Approach			297	3.5	297	3.5	0.247	10.1	LOS B	1.1	27.5	0.59	0.74	0.59	29.6
North: Chuluota Rd SB															
7	L2	All MCs	15	3.5	15	3.5	0.418	12.9	LOS B	3.1	78.7	0.58	0.53	0.58	35.2
4	T1	All MCs	976	3.5	976	3.5	0.418	6.2	LOS A	3.2	82.4	0.56	0.52	0.56	36.1
14	R2	All MCs	53	3.5	53	3.5	0.418	5.9	LOS A	3.2	82.4	0.55	0.51	0.55	35.8
Approach			1043	3.5	1043	3.5	0.418	6.3	LOS A	3.2	82.4	0.56	0.52	0.56	36.1
West: Schoolview Way EB															
5	L2	All MCs	37	3.5	37	3.5	0.111	13.9	LOS B	0.4	11.4	0.69	0.84	0.69	29.0
2	T1	All MCs	6	3.5	6	3.5	0.111	7.7	LOS A	0.4	11.4	0.69	0.84	0.69	29.5
12	R2	All MCs	9	3.5	9	3.5	0.111	7.9	LOS A	0.4	11.4	0.69	0.84	0.69	29.3
Approach			53	3.5	53	3.5	0.111	12.1	LOS B	0.4	11.4	0.69	0.84	0.69	29.1
All Vehicles			2380	3.5	2380	3.5	0.418	6.0	LOS A	3.2	82.4	0.44	0.49	0.44	35.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Intersection	
Intersection Delay, s/veh	11.8
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	158	229	1292	1429
Demand Flow Rate, veh/h	163	236	1331	1472
Vehicles Circulating, veh/h	1599	1197	181	221
Vehicles Exiting, veh/h	94	315	1581	1185
Ped Vol Crossing Leg, #/h	1	1	1	1
Ped Cap Adj	1.000	1.000	0.999	0.999
Approach Delay, s/veh	20.4	13.7	10.0	12.3
Approach LOS	C	B	A	B

Lane	Left	Left	Bypass	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	LT	TR
Assumed Moves	LTR	LT		LT	TR	LT	TR
RT Channelized			Yield				
Lane Util	1.000	1.000		0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535	2.609	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.976	4.645	4.328	4.645	4.328
A (Intercept)	1420	1420	1380	1350	1420	1350	1420
B (Slope)	8.501e-4	8.501e-4	1.02e-3	9.199e-4	8.501e-4	9.199e-4	8.501e-4
Entry Flow, veh/h	163	209	27	626	705	692	780
Cap Entry Lane, veh/h	365	513	412	1143	1218	1102	1177
Entry HV Adj Factor	0.967	0.970	0.971	0.970	0.971	0.971	0.971
Flow Entry, veh/h	158	203	26	607	685	672	758
Cap Entry, veh/h	353	498	400	1108	1182	1068	1142
V/C Ratio	0.447	0.407	0.065	0.548	0.580	0.629	0.663
Control Delay, s/veh	20.4	14.1	9.9	9.9	10.1	12.0	12.4
LOS	C	B	A	A	B	B	B
95th %tile Queue, veh	2	2	0	3	4	5	5

MOVEMENT SUMMARY

Site: 101 [Chuluota Rd at Schoolview Relocation-Cypress Lake Glen Blvd S PM Design (2048) Build A Roundabout (Site Folder: General)]

Roundabout 2048 Bld A PM

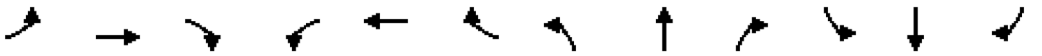
Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

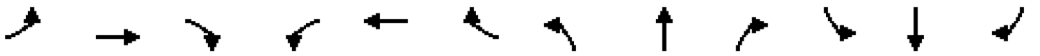
Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Chuluota Rd NB															
3	L2	All MCs	12	3.5	12	3.5	0.488	11.4	LOS B	4.0	103.4	0.55	0.47	0.55	35.0
8	T1	All MCs	1024	3.5	1024	3.5	0.488	4.9	LOS A	4.2	107.1	0.53	0.46	0.53	36.0
18	R2	All MCs	256	3.5	256	3.5	0.488	4.8	LOS A	4.2	107.1	0.52	0.46	0.52	35.7
Approach			1292	3.5	1292	3.5	0.488	4.9	LOS A	4.2	107.1	0.53	0.46	0.53	35.9
East: Cypress Lake Glen Blvd S WB															
1	L2	All MCs	195	3.5	195	3.5	0.247	11.9	LOS B	1.2	32.0	0.72	0.79	0.72	29.1
6	T1	All MCs	8	3.5	8	3.5	0.247	5.7	LOS A	1.2	32.0	0.72	0.79	0.72	29.5
16	R2	All MCs	26	3.5	26	3.5	0.049	7.3	LOS A	0.2	5.1	0.67	0.74	0.67	31.0
Approach			229	3.5	229	3.5	0.247	11.1	LOS B	1.2	32.0	0.71	0.79	0.71	29.3
North: Chuluota Rd SB															
7	L2	All MCs	35	3.5	35	3.5	0.559	12.9	LOS B	4.9	126.4	0.64	0.54	0.64	34.9
4	T1	All MCs	1322	3.5	1322	3.5	0.559	6.3	LOS A	5.1	131.8	0.62	0.53	0.62	35.8
14	R2	All MCs	72	3.5	72	3.5	0.559	6.0	LOS A	5.1	131.8	0.61	0.52	0.61	35.6
Approach			1428	3.5	1428	3.5	0.559	6.4	LOS A	5.1	131.8	0.62	0.53	0.62	35.8
West: Schoolview Way EB															
5	L2	All MCs	126	3.5	126	3.5	0.419	17.8	LOS B	2.0	51.1	0.82	0.98	0.98	27.6
2	T1	All MCs	15	3.5	15	3.5	0.419	11.5	LOS B	2.0	51.1	0.82	0.98	0.98	28.0
12	R2	All MCs	17	3.5	17	3.5	0.419	11.7	LOS B	2.0	51.1	0.82	0.98	0.98	27.8
Approach			158	3.5	158	3.5	0.419	16.5	LOS B	2.0	51.1	0.82	0.98	0.98	27.6
All Vehicles			3107	3.5	3107	3.5	0.559	6.7	LOS A	5.1	131.8	0.60	0.54	0.61	34.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	6	0	225	9	48	4	850	84	14	968	9
Future Volume (vph)	35	6	0	225	9	48	4	850	84	14	968	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	200		200	200		200
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt					0.872				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1845	0	1752	1609	0	1752	3505	1568	1752	3505	1568
Flt Permitted				0.606			0.229			0.212		
Satd. Flow (perm)	1845	1845	0	1118	1609	0	422	3505	1568	391	3505	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					51				138			138
Link Speed (mph)		35			35			50			50	
Link Distance (ft)		706			979			682			553	
Travel Time (s)		13.8			19.1			9.3			7.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	37	6	0	237	9	51	4	895	88	15	1019	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	37	6	0	237	60	0	4	895	88	15	1019	9
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		37			37			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

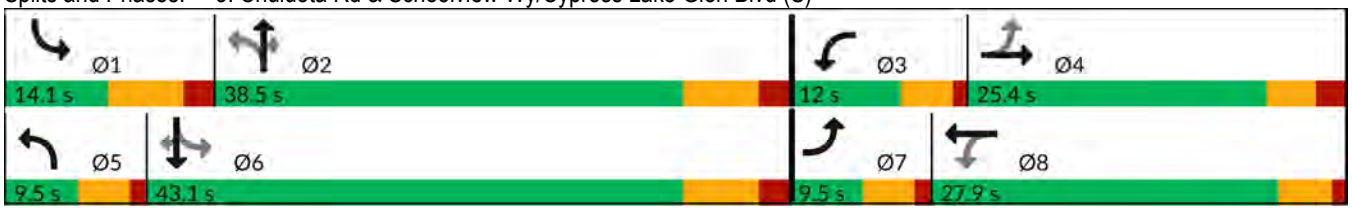


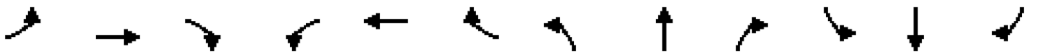
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	5.0		5.0	16.0	16.0	7.0	16.0	16.0
Minimum Split (s)	9.5	25.4		9.5	22.5		9.5	37.1	37.1	14.1	37.1	37.1
Total Split (s)	9.5	25.4		12.0	27.9		9.5	38.5	38.5	14.1	43.1	43.1
Total Split (%)	10.6%	28.2%		13.3%	31.0%		10.6%	42.8%	42.8%	15.7%	47.9%	47.9%
Maximum Green (s)	5.0	20.0		7.5	23.4		5.0	31.4	31.4	7.0	36.0	36.0
Yellow Time (s)	3.5	3.4		3.5	3.5		3.5	5.1	5.1	5.1	5.1	5.1
All-Red Time (s)	1.0	2.0		1.0	1.0		1.0	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)	4.5	5.4		4.5	4.5		4.5	7.1	7.1	7.1	7.1	7.1
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Min	Min	None	Min	Min
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)		13.0			11.0			23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	6.8	11.0		11.5	8.8		25.8	22.3	22.3	23.8	22.9	22.9
Actuated g/C Ratio	0.14	0.23		0.24	0.18		0.53	0.46	0.46	0.49	0.47	0.47
v/c Ratio	0.15	0.01		0.60	0.18		0.01	0.55	0.11	0.04	0.62	0.01
Control Delay (s/veh)	21.6	24.0		25.7	11.8		6.5	12.8	1.4	7.4	12.6	0.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	21.6	24.0		25.7	11.8		6.5	12.8	1.4	7.4	12.6	0.0
LOS	C	C		C	B		A	B	A	A	B	A
Approach Delay (s/veh)		21.9			22.9			11.8			12.4	
Approach LOS		C			C			B			B	
90th %ile Green (s)	5.0	10.0		7.5	13.4		5.0	31.4	31.4	7.0	36.0	36.0
90th %ile Term Code	Max	Min		Max	Hold		Max	Max	Max	Max	Max	Max
70th %ile Green (s)	5.0	0.0		16.3	6.8		0.0	23.9	23.9	0.0	23.9	23.9
70th %ile Term Code	Max	Skip		Hold	Gap		Skip	Hold	Hold	Skip	Gap	Gap
50th %ile Green (s)	0.0	0.0		7.5	7.5		0.0	20.5	20.5	0.0	20.5	20.5
50th %ile Term Code	Skip	Skip		Max	Hold		Skip	Hold	Hold	Skip	Gap	Gap
30th %ile Green (s)	0.0	0.0		7.5	7.5		0.0	16.0	16.0	0.0	16.0	16.0
30th %ile Term Code	Skip	Skip		Max	Hold		Skip	Min	Min	Skip	Min	Min
10th %ile Green (s)	0.0	0.0		7.3	7.3		0.0	17.2	17.2	0.0	17.2	17.2
10th %ile Term Code	Skip	Skip		Gap	Hold		Skip	Dwell	Dwell	Skip	Dwell	Dwell
Stops (vph)	30	9		175	20		3	548	4	7	636	0
Fuel Used(gal)	1	0		4	1		0	14	0	0	16	0
CO Emissions (g/hr)	39	9		286	48		5	1000	31	12	1094	2
NOx Emissions (g/hr)	8	2		56	9		1	195	6	2	213	0
VOC Emissions (g/hr)	9	2		66	11		1	232	7	3	254	1
Dilemma Vehicles (#)	0	0		0	4		0	80	0	0	91	0
Queue Length 50th (ft)	8	1		50	2		0	57	0	1	68	0
Queue Length 95th (ft)	35	14		#173	35		4	251	11	11	264	0
Internal Link Dist (ft)		626			899			602			473	
Turn Bay Length (ft)							200		200	200		200
Base Capacity (vph)	248	835		394	876		375	2492	1154	407	2840	1296

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	0.15	0.01		0.60	0.07		0.01	0.36	0.08	0.04	0.36	0.01

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 48.5			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay (s/veh): 13.6		Intersection LOS: B	
Intersection Capacity Utilization 55.6%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 80			
70th %ile Actuated Cycle: 51.8			
50th %ile Actuated Cycle: 39.6			
30th %ile Actuated Cycle: 35.1			
10th %ile Actuated Cycle: 36.1			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Chuluota Rd & Schoolview Wy/Cypress Lake Glen Blvd (S)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	6	0	225	9	48	4	850	84	14	968	9
Future Volume (veh/h)	35	6	0	225	9	48	4	850	84	14	968	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	37	6	0	237	9	51	4	895	0	15	1019	9
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, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	359	247	0	509	52	294	208	1186		229	1404	626
Arrive On Green	0.04	0.13	0.00	0.12	0.21	0.21	0.01	0.34	0.00	0.03	0.40	0.40
Sat Flow, veh/h	1767	1856	0	1767	241	1368	1767	3526	1572	1767	3526	1572
Grp Volume(v), veh/h	37	6	0	237	0	60	4	895	0	15	1019	9
Grp Sat Flow(s),veh/h/ln	1767	1856	0	1767	0	1609	1767	1763	1572	1767	1763	1572
Q Serve(g_s), s	1.1	0.2	0.0	6.9	0.0	1.9	0.1	14.1	0.0	0.3	15.3	0.2
Cycle Q Clear(g_c), s	1.1	0.2	0.0	6.9	0.0	1.9	0.1	14.1	0.0	0.3	15.3	0.2
Prop In Lane	1.00		0.00	1.00		0.85	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	359	247	0	509	0	346	208	1186		229	1404	626
V/C Ratio(X)	0.10	0.02	0.00	0.47	0.00	0.17	0.02	0.75		0.07	0.73	0.01
Avail Cap(c_a), veh/h	433	593	0	509	0	602	340	1768		381	2027	904
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.0	23.6	0.0	18.5	0.0	20.0	14.6	18.5	0.0	14.5	15.9	11.4
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.7	0.0	0.2	0.0	1.0	0.0	0.1	0.7	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.1	0.0	2.6	0.0	0.7	0.0	4.8	0.0	0.1	4.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	22.1	23.6	0.0	19.2	0.0	20.3	14.7	19.5	0.0	14.6	16.7	11.4
LnGrp LOS	C	C		B		C	B	B		B	B	B
Approach Vol, veh/h		43			297			899			1043	
Approach Delay, s/veh		22.3			19.4			19.5			16.6	
Approach LOS		C			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	28.2	12.0	13.7	4.8	32.0	6.9	18.9
Change Period (Y+Rc), s	7.1	7.1	4.5	5.4	4.5	7.1	4.5	* 5.4
Max Green Setting (Gmax), s	7.0	31.4	7.5	20.0	5.0	36.0	5.0	* 23
Max Q Clear Time (g_c+I1), s	2.3	16.1	8.9	2.2	2.1	17.3	3.1	3.9
Green Ext Time (p_c), s	0.0	4.9	0.0	0.0	0.0	6.3	0.0	0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	18.2
HCM 7th LOS	B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

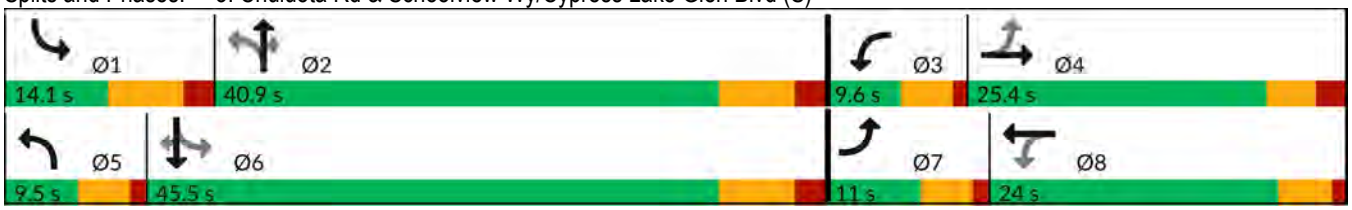
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	14	0	185	8	25	11	973	243	33	1309	15
Future Volume (vph)	120	14	0	185	8	25	11	973	243	33	1309	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	200		200	200		200
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt					0.885				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1845	0	1752	1633	0	1752	3505	1568	1752	3505	1568
Flt Permitted				0.741			0.137			0.177		
Satd. Flow (perm)	1845	1845	0	1367	1633	0	253	3505	1568	327	3505	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					26				256			138
Link Speed (mph)		35			35			50			50	
Link Distance (ft)		706			979			682			553	
Travel Time (s)		13.8			19.1			9.3			7.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	126	15	0	195	8	26	12	1024	256	35	1378	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	126	15	0	195	34	0	12	1024	256	35	1378	16
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		37			37			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

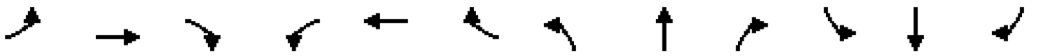
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	5.0		5.0	16.0	16.0	7.0	16.0	16.0
Minimum Split (s)	9.5	25.4		9.5	22.5		9.5	37.1	37.1	14.1	37.1	37.1
Total Split (s)	11.0	25.4		9.6	24.0		9.5	40.9	40.9	14.1	45.5	45.5
Total Split (%)	12.2%	28.2%		10.7%	26.7%		10.6%	45.4%	45.4%	15.7%	50.6%	50.6%
Maximum Green (s)	6.5	20.0		5.1	19.5		5.0	33.8	33.8	7.0	38.4	38.4
Yellow Time (s)	3.5	3.4		3.5	3.5		3.5	5.1	5.1	5.1	5.1	5.1
All-Red Time (s)	1.0	2.0		1.0	1.0		1.0	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)	4.5	5.4		4.5	4.5		4.5	7.1	7.1	7.1	7.1	7.1
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Min	Min	None	Min	Min
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Don't Walk (s)		13.0			11.0			23.0	23.0		23.0	23.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	8.7	11.1		9.7	6.9		33.4	29.1	29.1	32.8	31.8	31.8
Actuated g/C Ratio	0.15	0.20		0.17	0.12		0.59	0.52	0.52	0.58	0.56	0.56
v/c Ratio	0.46	0.04		0.67	0.15		0.04	0.57	0.27	0.09	0.70	0.02
Control Delay (s/veh)	32.1	28.2		37.4	18.0		5.6	13.5	3.0	6.2	12.6	0.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	32.1	28.2		37.4	18.0		5.6	13.5	3.0	6.2	12.6	0.0
LOS	C	C		D	B		A	B	A	A	B	A
Approach Delay (s/veh)		31.6			34.5			11.4			12.3	
Approach LOS		C			C			B			B	
90th %ile Green (s)	6.5	10.0		5.1	9.5		5.0	33.8	33.8	7.0	38.4	38.4
90th %ile Term Code	Max	Min		Max	Hold		Max	Max	Max	Max	Max	Max
70th %ile Green (s)	6.5	0.0		17.7	6.7		0.0	33.8	33.8	7.0	47.9	47.9
70th %ile Term Code	Max	Skip		Hold	Gap		Skip	Max	Max	Max	Hold	Hold
50th %ile Green (s)	6.5	0.0		6.5	0.0		0.0	27.5	27.5	0.0	27.5	27.5
50th %ile Term Code	Max	Skip		Hold	Skip		Skip	Hold	Hold	Skip	Gap	Gap
30th %ile Green (s)	6.5	0.0		6.5	0.0		0.0	24.5	24.5	0.0	24.5	24.5
30th %ile Term Code	Max	Skip		Hold	Skip		Skip	Hold	Hold	Skip	Gap	Gap
10th %ile Green (s)	0.0	0.0		5.5	5.5		0.0	19.9	19.9	0.0	19.9	19.9
10th %ile Term Code	Skip	Skip		Hold	Hold		Skip	Hold	Hold	Skip	Gap	Gap
Stops (vph)	97	14		158	15		6	606	23	12	831	0
Fuel Used(gal)	2	0		4	0		0	16	2	0	21	0
CO Emissions (g/hr)	149	18		273	32		11	1132	109	24	1448	4
NOx Emissions (g/hr)	29	3		53	6		2	220	21	5	282	1
VOC Emissions (g/hr)	34	4		63	7		2	262	25	6	336	1
Dilemma Vehicles (#)	0	1		0	2		0	79	0	0	103	0
Queue Length 50th (ft)	31	3		50	2		1	64	0	3	101	0
Queue Length 95th (ft)	95	24		#167	29		8	282	41	17	387	0
Internal Link Dist (ft)		626			899			602			473	
Turn Bay Length (ft)							200		200	200		200
Base Capacity (vph)	273	722		290	639		296	2319	1124	385	2694	1237

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
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	0.46	0.02		0.67	0.05		0.04	0.44	0.23	0.09	0.51	0.01

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 56.5			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay (s/veh): 14.5		Intersection LOS: B	
Intersection Capacity Utilization 62.8%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 80			
70th %ile Actuated Cycle: 77.2			
50th %ile Actuated Cycle: 45.6			
30th %ile Actuated Cycle: 42.6			
10th %ile Actuated Cycle: 37			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Chuluota Rd & Schoolview Wy/Cypress Lake Glen Blvd (S)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	14	0	185	8	25	11	973	243	33	1309	15
Future Volume (veh/h)	120	14	0	185	8	25	11	973	243	33	1309	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	126	15	0	195	8	26	12	1024	0	35	1378	16
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	397	255	0	409	49	160	178	1403		272	1654	738
Arrive On Green	0.08	0.14	0.00	0.07	0.13	0.13	0.01	0.40	0.00	0.05	0.47	0.47
Sat Flow, veh/h	1767	1856	0	1767	384	1247	1767	3526	1572	1767	3526	1572
Grp Volume(v), veh/h	126	15	0	195	0	34	12	1024	0	35	1378	16
Grp Sat Flow(s),veh/h/ln	1767	1856	0	1767	0	1631	1767	1763	1572	1767	1763	1572
Q Serve(g_s), s	4.3	0.5	0.0	5.1	0.0	1.3	0.3	17.3	0.0	0.8	23.9	0.4
Cycle Q Clear(g_c), s	4.3	0.5	0.0	5.1	0.0	1.3	0.3	17.3	0.0	0.8	23.9	0.4
Prop In Lane	1.00		0.00	1.00		0.76	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	397	255	0	409	0	210	178	1403		272	1654	738
V/C Ratio(X)	0.32	0.06	0.00	0.48	0.00	0.16	0.07	0.73		0.13	0.83	0.02
Avail Cap(c_a), veh/h	416	528	0	409	0	452	278	1695		361	1925	859
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.6	26.4	0.0	25.3	0.0	27.3	14.8	18.0	0.0	13.2	16.3	10.0
Incr Delay (d2), s/veh	0.5	0.1	0.0	0.9	0.0	0.4	0.2	1.3	0.0	0.2	2.9	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.2	0.0	2.8	0.0	0.5	0.1	6.0	0.0	0.3	8.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.1	26.5	0.0	26.2	0.0	27.6	15.0	19.3	0.0	13.5	19.2	10.0
LnGrp LOS	C	C		C		C	B	B		B	B	B
Approach Vol, veh/h		141			229			1036			1429	
Approach Delay, s/veh		24.3			26.4			19.2			18.9	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	35.1	9.6	15.1	5.5	40.1	10.2	14.4
Change Period (Y+Rc), s	7.1	7.1	4.5	5.4	4.5	7.1	4.5	* 5.4
Max Green Setting (Gmax), s	7.0	33.8	5.1	20.0	5.0	38.4	6.5	* 20
Max Q Clear Time (g_c+I1), s	2.8	19.3	7.1	2.5	2.3	25.9	6.3	3.3
Green Ext Time (p_c), s	0.0	5.6	0.0	0.0	0.0	7.1	0.0	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	19.9
HCM 7th LOS	B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	43	297	987	1043
Demand Flow Rate, veh/h	44	306	1017	1074
Vehicles Circulating, veh/h	1309	964	59	257
Vehicles Exiting, veh/h	22	112	1294	960
Ped Vol Crossing Leg, #/h	1	1	1	1
Ped Cap Adj	1.000	1.000	0.999	0.999
Approach Delay, s/veh	9.2	11.3	6.5	8.9
Approach LOS	A	B	A	A

Lane	Left	Left	Bypass	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	LT	TR
Assumed Moves	LTR	LT		LT	TR	LT	TR
RT Channelized			Yield				
Lane Util	1.000	1.000		0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535	2.609	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.976	4.645	4.328	4.645	4.328
A (Intercept)	1420	1420	1380	1350	1420	1350	1420
B (Slope)	8.501e-4	8.501e-4	1.02e-3	9.199e-4	8.501e-4	9.199e-4	8.501e-4
Entry Flow, veh/h	44	253	53	478	539	505	569
Cap Entry Lane, veh/h	467	626	518	1279	1351	1066	1141
Entry HV Adj Factor	0.973	0.971	0.971	0.971	0.971	0.971	0.972
Flow Entry, veh/h	43	246	51	464	523	490	553
Cap Entry, veh/h	454	608	503	1240	1310	1034	1108
V/C Ratio	0.094	0.404	0.101	0.374	0.400	0.474	0.499
Control Delay, s/veh	9.2	11.9	8.5	6.5	6.6	9.0	8.9
LOS	A	B	A	A	A	A	A
95th %tile Queue, veh	0	2	0	2	2	3	3

MOVEMENT SUMMARY

Site: 101 [Chuluota Rd at Schoolview Relocation-Cypress Lake Glen Blvd S AM Design (2048) Build B Roundabout (Site Folder: General)]

Roundabout 2048 Bld B AM

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Chuluota Rd NB															
3	L2	All MCs	4	3.5	4	3.5	0.333	10.4	LOS B	2.4	61.3	0.26	0.35	0.26	36.1
8	T1	All MCs	895	3.5	895	3.5	0.333	4.0	LOS A	2.4	62.5	0.25	0.36	0.25	37.0
18	R2	All MCs	88	3.5	88	3.5	0.333	4.1	LOS A	2.4	62.5	0.25	0.36	0.25	36.7
Approach			987	3.5	987	3.5	0.333	4.0	LOS A	2.4	62.5	0.25	0.36	0.25	37.0
East: Cypress Lake Glen Blvd S WB															
1	L2	All MCs	237	3.5	237	3.5	0.247	11.1	LOS B	1.1	27.5	0.59	0.75	0.59	29.3
6	T1	All MCs	9	3.5	9	3.5	0.247	4.8	LOS A	1.1	27.5	0.59	0.75	0.59	29.8
16	R2	All MCs	51	3.5	51	3.5	0.080	6.5	LOS A	0.3	7.4	0.58	0.69	0.58	31.3
Approach			297	3.5	297	3.5	0.247	10.1	LOS B	1.1	27.5	0.59	0.74	0.59	29.6
North: Chuluota Rd SB															
7	L2	All MCs	15	3.5	15	3.5	0.418	12.9	LOS B	3.1	78.7	0.58	0.53	0.58	35.2
4	T1	All MCs	1019	3.5	1019	3.5	0.418	6.2	LOS A	3.2	82.4	0.56	0.52	0.56	36.1
14	R2	All MCs	9	3.5	9	3.5	0.418	5.9	LOS A	3.2	82.4	0.55	0.51	0.55	35.8
Approach			1043	3.5	1043	3.5	0.418	6.3	LOS A	3.2	82.4	0.56	0.52	0.56	36.1
West: Schoolview Way EB															
5	L2	All MCs	37	3.5	37	3.5	0.096	14.0	LOS B	0.4	9.6	0.69	0.85	0.69	28.8
2	T1	All MCs	6	3.5	6	3.5	0.096	7.7	LOS A	0.4	9.6	0.69	0.85	0.69	29.2
12	R2	All MCs	1	3.5	1	3.5	0.096	8.0	LOS A	0.4	9.6	0.69	0.85	0.69	29.1
Approach			44	3.5	44	3.5	0.096	12.9	LOS B	0.4	9.6	0.69	0.85	0.69	28.8
All Vehicles			2372	3.5	2372	3.5	0.418	6.0	LOS A	3.2	82.4	0.44	0.49	0.44	35.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Intersection	
Intersection Delay, s/veh	11.8
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	141	229	1292	1429
Demand Flow Rate, veh/h	145	236	1331	1471
Vehicles Circulating, veh/h	1656	1197	181	221
Vehicles Exiting, veh/h	36	315	1620	1185
Ped Vol Crossing Leg, #/h	1	1	1	1
Ped Cap Adj	1.000	1.000	0.999	0.999
Approach Delay, s/veh	20.2	13.7	10.0	12.2
Approach LOS	C	B	A	B

Lane	Left	Left	Bypass	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	LT	TR
Assumed Moves	LTR	LT		LT	TR	LT	TR
RT Channelized			Yield				
Lane Util	1.000	1.000		0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535	2.609	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.976	4.645	4.328	4.645	4.328
A (Intercept)	1420	1420	1380	1350	1420	1350	1420
B (Slope)	8.501e-4	8.501e-4	1.02e-3	9.199e-4	8.501e-4	9.199e-4	8.501e-4
Entry Flow, veh/h	145	209	27	626	705	691	780
Cap Entry Lane, veh/h	347	513	412	1143	1218	1102	1177
Entry HV Adj Factor	0.969	0.970	0.971	0.970	0.971	0.972	0.971
Flow Entry, veh/h	141	203	26	607	685	671	757
Cap Entry, veh/h	337	498	400	1108	1182	1069	1141
V/C Ratio	0.417	0.407	0.065	0.548	0.580	0.628	0.663
Control Delay, s/veh	20.2	14.1	9.9	9.9	10.1	12.0	12.5
LOS	C	B	A	A	B	B	B
95th %tile Queue, veh	2	2	0	3	4	5	5

MOVEMENT SUMMARY

Site: 101 [Chuluota Rd at Schoolview Relocation-Cypress Lake Glen Blvd S PM Design (2048) Build B Roundabout (Site Folder: General)]

Roundabout 2048 Bld B PM

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed mph
South: Chuluota Rd NB															
3	L2	All MCs	12	3.5	12	3.5	0.488	11.4	LOS B	4.0	103.3	0.55	0.47	0.55	35.0
8	T1	All MCs	1024	3.5	1024	3.5	0.488	4.9	LOS A	4.2	107.1	0.53	0.46	0.53	36.0
18	R2	All MCs	256	3.5	256	3.5	0.488	4.8	LOS A	4.2	107.1	0.52	0.46	0.52	35.7
Approach			1292	3.5	1292	3.5	0.488	4.9	LOS A	4.2	107.1	0.53	0.46	0.53	35.9
East: Cypress Lake Glen Blvd S WB															
1	L2	All MCs	195	3.5	195	3.5	0.247	11.9	LOS B	1.2	32.0	0.72	0.79	0.72	29.1
6	T1	All MCs	8	3.5	8	3.5	0.247	5.7	LOS A	1.2	32.0	0.72	0.79	0.72	29.5
16	R2	All MCs	26	3.5	26	3.5	0.049	7.3	LOS A	0.2	5.1	0.67	0.74	0.67	31.0
Approach			229	3.5	229	3.5	0.247	11.1	LOS B	1.2	32.0	0.71	0.79	0.71	29.3
North: Chuluota Rd SB															
7	L2	All MCs	35	3.5	35	3.5	0.559	12.9	LOS B	4.9	126.4	0.64	0.54	0.64	34.9
4	T1	All MCs	1378	3.5	1378	3.5	0.559	6.3	LOS A	5.1	131.8	0.62	0.53	0.62	35.8
14	R2	All MCs	16	3.5	16	3.5	0.559	6.0	LOS A	5.1	131.8	0.61	0.52	0.61	35.5
Approach			1428	3.5	1428	3.5	0.559	6.4	LOS A	5.1	131.8	0.62	0.53	0.62	35.8
West: Schoolview Way EB															
5	L2	All MCs	126	3.5	126	3.5	0.386	17.5	LOS B	1.8	45.3	0.82	0.97	0.95	27.5
2	T1	All MCs	15	3.5	15	3.5	0.386	11.2	LOS B	1.8	45.3	0.82	0.97	0.95	27.9
12	R2	All MCs	1	3.5	1	3.5	0.386	11.4	LOS B	1.8	45.3	0.82	0.97	0.95	27.8
Approach			142	3.5	142	3.5	0.386	16.8	LOS B	1.8	45.3	0.82	0.97	0.95	27.6
All Vehicles			3092	3.5	3092	3.5	0.559	6.6	LOS A	5.1	131.8	0.60	0.54	0.61	34.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Chuluota Road at Schoolview Way Relocation/Cypress Lake Glen Boulevard S Design Year 2048 Operational Analysis Results									
	Build Configuration	**Build A (Close Schoolview)**				**Build B (Schoolview RI-RO)**			
	Peak Time	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
	Intersection Control Type	**Traffic Signal**	**Traffic Signal**	**2x1 Roundabout**	**2x1 Roundabout**	**Traffic Signal**	**Traffic Signal**	**2x1 Roundabout**	**2x1 Roundabout**
	Measure of Effectiveness	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**	**Delay (s/veh) (LOS)**
Approach	Eastbound	20.3 (C)	24.5 (C)	9.1 (A)	20.4 (C)	21.9 (C)	31.6 (C)	9.2 (A)	20.2 (C)
	Westbound	22.6 (C)	36.0 (D)	11.3 (B)	13.7 (B)	22.9 (C)	34.5 (C)	11.3 (B)	13.7 (B)
	Northbound	11.8 (B)	11.9 (B)	6.5 (A)	10.0 (A)	11.8 (B)	11.4 (B)	6.5 (A)	10.0 (A)
	Southbound	11.7 (B)	12.0 (B)	9.0 (A)	12.3 (B)	12.4 (B)	12.3 (B)	8.9 (A)	12.2 (B)
	Intersection	13.3 (B)	14.4 (B)	8.2 (A)	11.8 (B)	13.6 (B)	14.5 (B)	8.2 (A)	11.8 (B)

LOS Legend	
	LOS A
	LOS B
	LOS C
	LOS D
	LOS E
	LOS F