

DELAY (CONTROL)

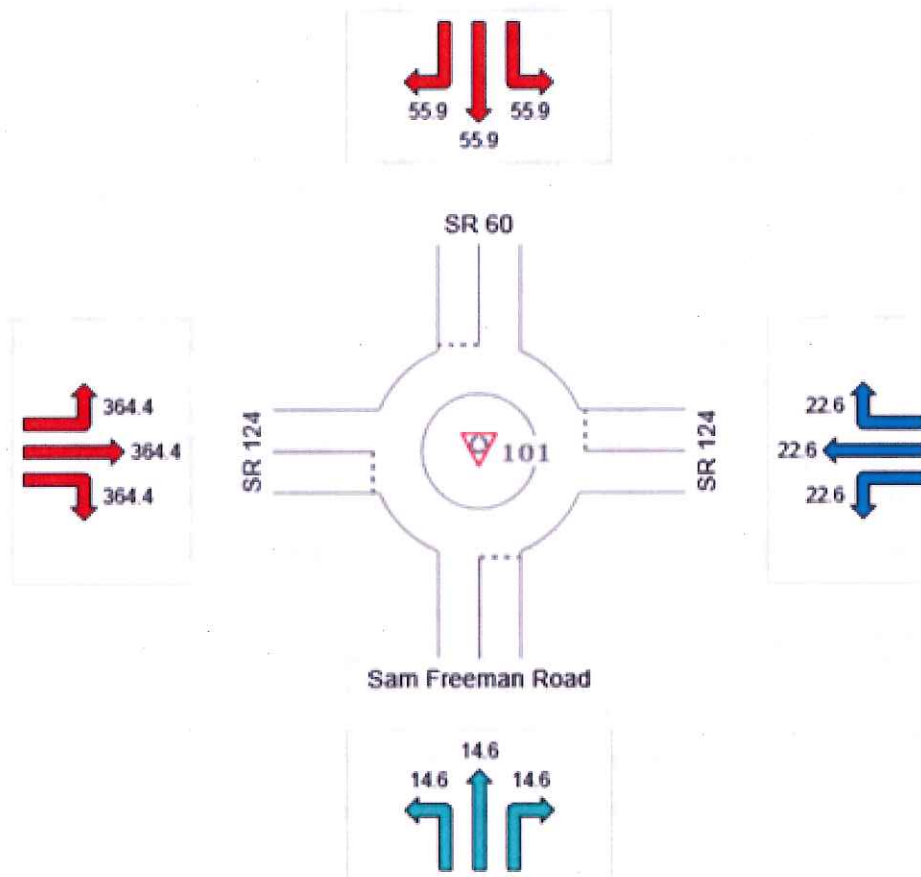
Average control delay per vehicle, or average pedestrian delay (seconds)

Site: 101 [SR124 @ SR60_2041 PM]

New Site
Roundabout

All Movement Classes

	South	East	North	West	Intersection
Delay (Control)	14.6	22.6	55.9	364.4	198.9
LOS	B	C	F	F	F



Colour code based on Level of Service



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

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

Roundabout Level of Service Method: Same as Sign Control

MOVEMENT SUMMARY

Site: 101 [SR124 @ SR60_2041 PM]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph	
South: Sam Freeman Road												
3	L2	3	0.0	0.130	14.6	LOS B	1.0	24.2	1.00	0.91	35.6	
8	T1	33	0.0	0.130	14.6	LOS B	1.0	24.2	1.00	0.91	35.7	
18	R2	3	0.0	0.130	14.6	LOS B	1.0	24.2	1.00	0.91	34.8	
Approach		39	0.0	0.130	14.6	LOS B	1.0	24.2	1.00	0.91	35.6	
East: SR 124												
1	L2	2	3.0	0.858	22.6	LOS C	16.7	427.5	0.99	0.64	31.4	
6	T1	708	3.0	0.858	22.6	LOS C	16.7	427.5	0.99	0.64	31.5	
16	R2	282	3.0	0.858	22.6	LOS C	16.7	427.5	0.99	0.64	30.8	
Approach		992	3.0	0.858	22.6	LOS C	16.7	427.5	0.99	0.64	31.3	
North: SR 60												
7	L2	322	6.2	0.954	55.9	LOS F	20.3	533.2	1.00	1.45	20.8	
4	T1	29	6.2	0.954	55.9	LOS F	20.3	533.2	1.00	1.45	20.9	
14	R2	160	6.2	0.954	55.9	LOS F	20.3	533.2	1.00	1.45	20.6	
Approach		512	6.2	0.954	55.9	LOS F	20.3	533.2	1.00	1.45	20.7	
West: SR 124												
5	L2	157	3.7	1.769	364.4	LOS F	236.9	6097.8	1.00	4.25	5.5	
2	T1	1376	3.7	1.769	364.4	LOS F	236.9	6097.8	1.00	4.25	5.5	
12	R2	8	3.7	1.769	364.4	LOS F	236.9	6097.8	1.00	4.25	5.5	
Approach		1542	3.7	1.769	364.4	LOS F	236.9	6097.8	1.00	4.25	5.5	
All Vehicles		3084	3.8	1.769	198.9	LOS F	236.9	6097.8	1.00	2.58	9.1	

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: Same as Sign Control.
 Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
 LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
 Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
 Roundabout Capacity Model: SIDRA Standard.
 HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
 Gap-Acceptance Capacity: SIDRA Standard (Akcelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

QUEUE DISTANCE (AVER)

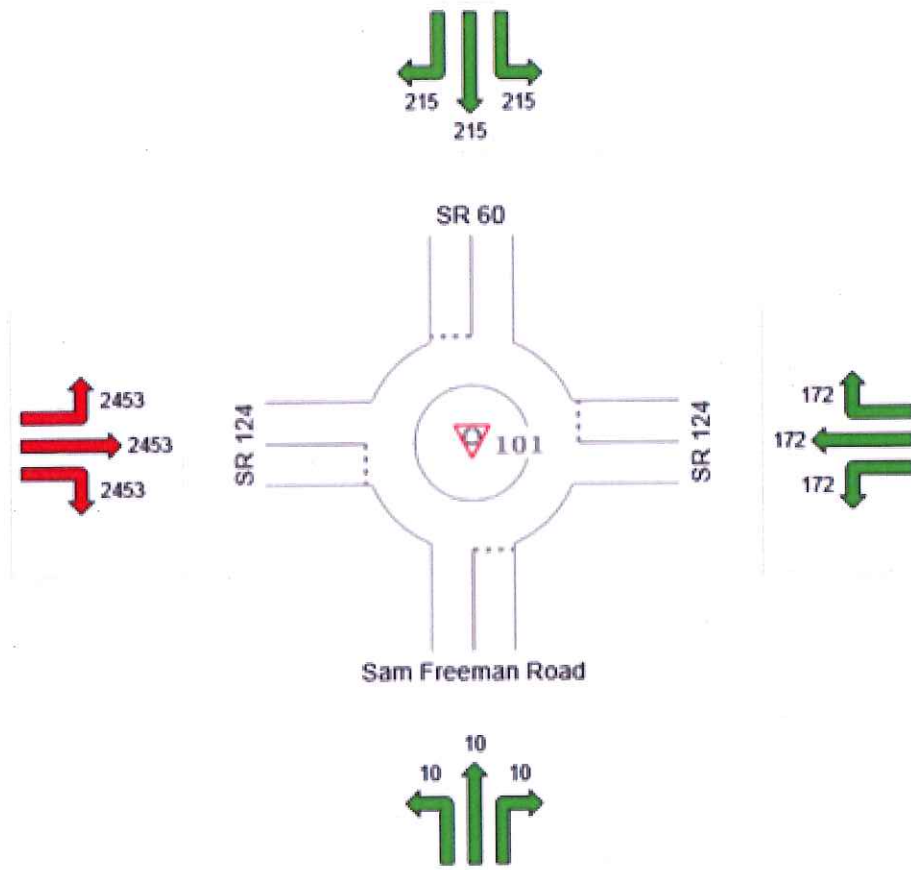
Average Back of Queue Distance for any lane used by movement (feet)

Site: 101 [SR124 @ SR60_2041 PM]

New Site
Roundabout

All Movement Classes

	South	East	North	West	Intersection
Queue Distance (Aver)	10	172	215	2453	2453



Colour code based on Queue Storage Ratio



Multi-Lane Roundabout - 2041

DEGREE OF SATURATION

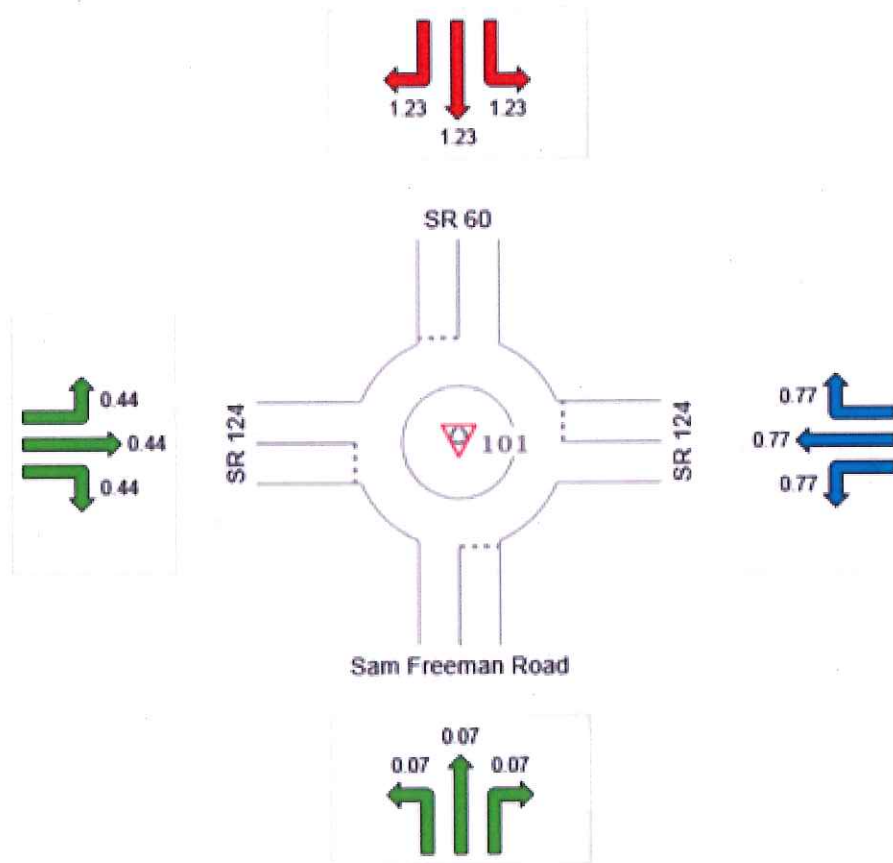
Ratio of Demand Volume to Capacity (v/c ratio)

Site: 101 [SR124 @ SR60_2041 AM - 2lanes]

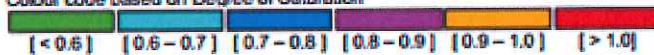
SR 60
Roundabout

All Movement Classes

	South	East	North	West	Intersection
Degree of Saturation	0.07	0.77	1.23	0.44	1.23



Colour code based on Degree of Saturation



SIDRA INTERSECTION 7.0 | Copyright © 2000-2016 Akcelik and Associates Pty Ltd | sidrasolutions.com
 Organisation: ATKINS NORTH AMERICA | Processed: Thursday, June 07, 2018 8:20:31 PM
 Project: M1TP_Projects\2018\GDOT Safety\SR124_SR60\Sidra\SR124@SR60_SpeedData.sip?

DELAY (CONTROL)

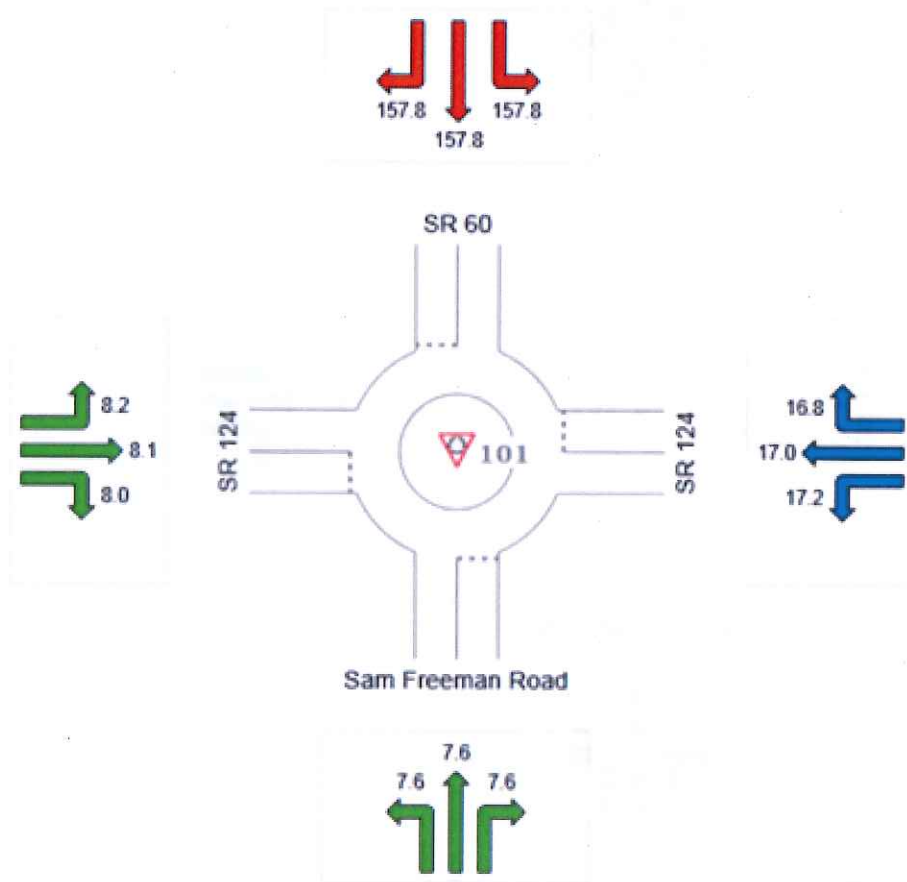
Average control delay per vehicle, or average pedestrian delay (seconds)

Site: 101 [SR124 @ SR60_2041 AM - 2lanes]

SR 60
Roundabout

All Movement Classes

	South	East	North	West	Intersection
Delay (Control)	7.6	17.0	157.8	8.1	34.6
LOS	A	C	F	A	D



Colour code based on Level of Service



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

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

Roundabout Level of Service Method: Same as Sign Control

MOVEMENT SUMMARY

Site: 101 [SR124 @ SR60_2041 AM - 2lanes]

SR 60
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Sam Freeman Road											
3	L2	2	0.0	0.074	7.6	LOS A	0.3	7.9	0.68	0.66	40.0
8	T1	34	0.0	0.074	7.6	LOS A	0.3	7.9	0.68	0.66	40.2
18	R2	4	0.0	0.074	7.6	LOS A	0.3	7.9	0.68	0.66	39.0
Approach		40	0.0	0.074	7.6	LOS A	0.3	7.9	0.68	0.66	40.1
East: SR 124											
1	L2	2	3.7	0.769	17.2	LOS C	10.0	257.0	0.79	0.61	33.9
6	T1	1280	3.7	0.769	17.0	LOS C	10.0	257.0	0.79	0.61	34.1
16	R2	419	3.7	0.769	16.8	LOS C	10.0	256.3	0.78	0.60	33.3
Approach		1701	3.7	0.769	17.0	LOS C	10.0	257.0	0.79	0.61	33.9
North: SR 60											
7	L2	218	6.2	1.234	157.8	LOS F	37.9	994.0	1.00	2.20	10.8
4	T1	7	6.2	1.234	157.8	LOS F	37.9	994.0	1.00	2.20	10.8
14	R2	234	6.2	1.234	157.8	LOS F	37.9	994.0	1.00	2.20	10.7
Approach		459	6.2	1.234	157.8	LOS F	37.9	994.0	1.00	2.20	10.8
West: SR 124											
5	L2	165	3.7	0.439	8.2	LOS A	3.3	84.2	0.54	0.37	37.9
2	T1	781	3.7	0.439	8.1	LOS A	3.3	85.0	0.54	0.36	39.0
12	R2	7	3.7	0.439	8.0	LOS A	3.3	85.0	0.54	0.36	38.3
Approach		954	3.7	0.439	8.1	LOS A	3.3	85.0	0.54	0.37	38.8
All Vehicles		3154	4.0	1.234	34.6	LOS D	37.9	994.0	0.74	0.77	26.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: Same as Sign Control.
 Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
 LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
 Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
 Roundabout Capacity Model: SIDRA Standard.
 HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
 Gap-Acceptance Capacity: SIDRA Standard (Akgelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

QUEUE DISTANCE (AVER)

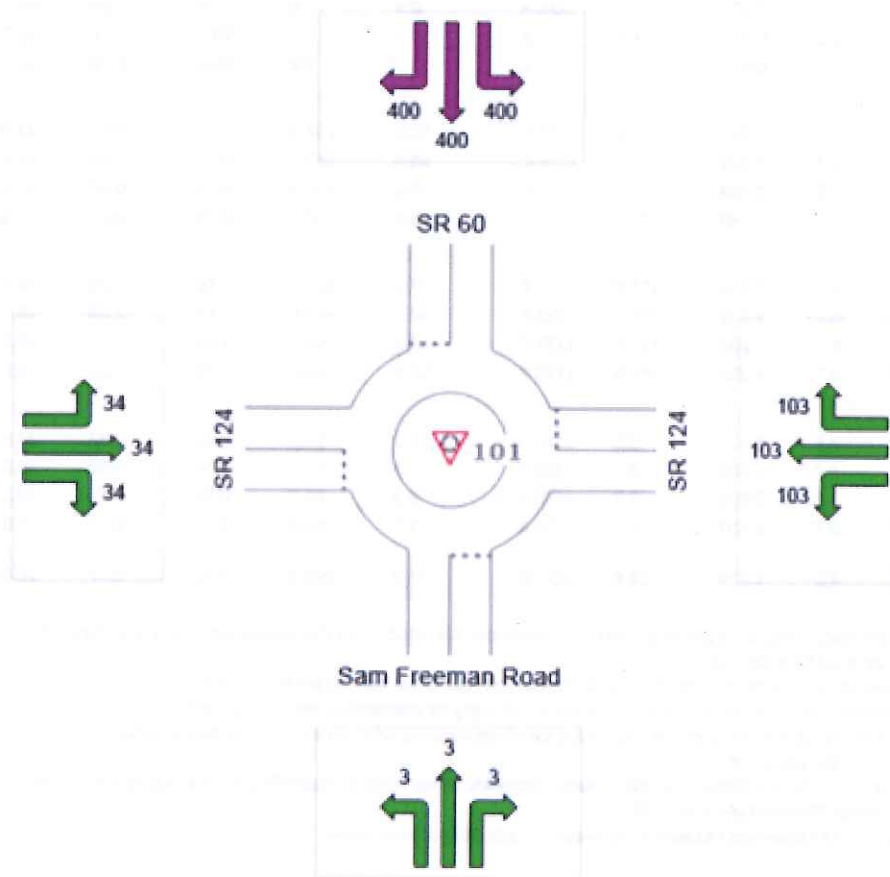
Average Back of Queue Distance for any lane used by movement (feet)

Site: 101 [SR124 @ SR60_2041 AM - 2lanes]

SR 60
Roundabout

All Movement Classes

	South	East	North	West	Intersection
Queue Distance (Aver)	3	103	400	34	400



Colour code based on Queue Storage Ratio



DEGREE OF SATURATION

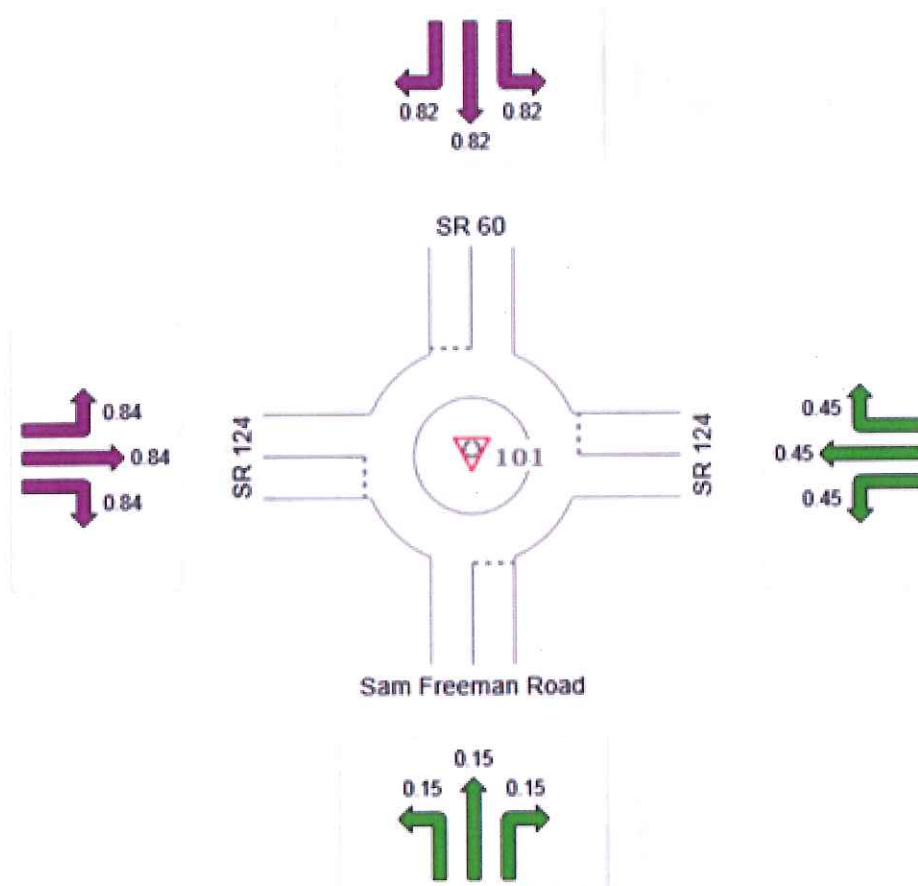
Ratio of Demand Volume to Capacity (v/c ratio)

Site: 101 [SR124 @ SR60_2041 PM - 2lanes]

New Site
Roundabout

All Movement Classes

	South	East	North	West	Intersection
Degree of Saturation	0.15	0.45	0.82	0.84	0.84



Colour code based on Degree of Saturation



SIDRA INTERSECTION 7.0 | Copyright © 2000-2016 Alkcelik and Associates Pty Ltd | sidrasolutions.com
 Organisation: ATKINS NORTH AMERICA | Processed: Monday, June 04, 2018 2:08:33 PM
 Project: M:\TP_Projects\2018\GDOT Safety\SR124_SR60\Sidra\SR124@SR60_SpeedData.sip7

DELAY (CONTROL)

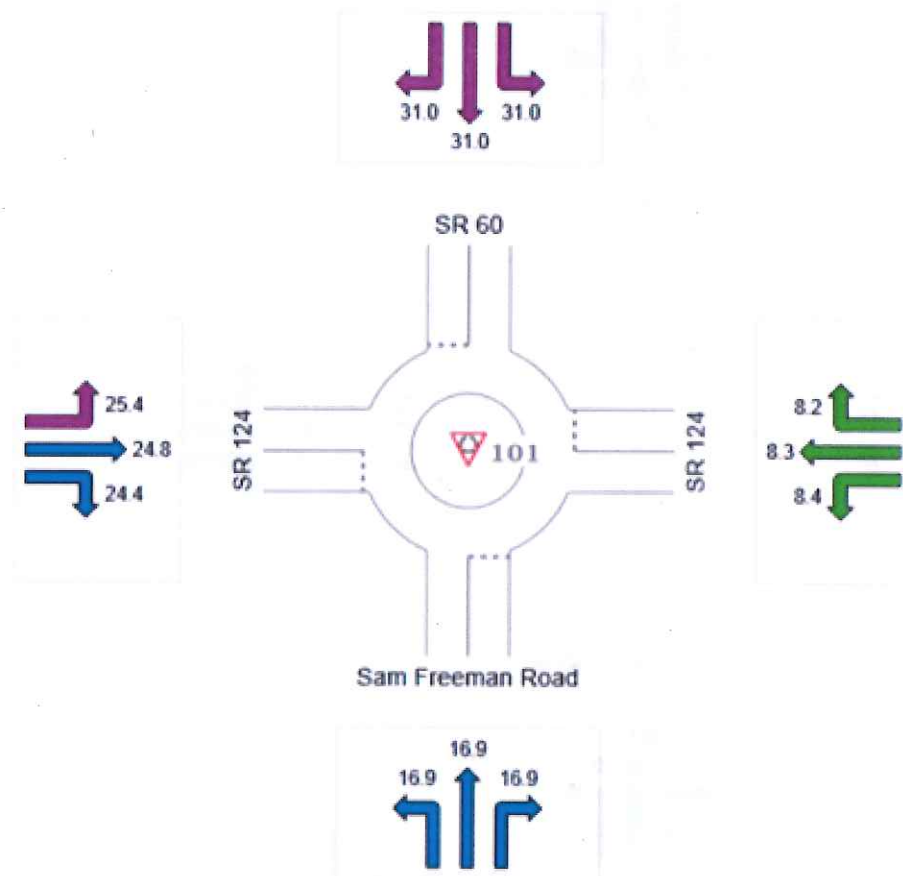
Average control delay per vehicle, or average pedestrian delay (seconds)

Site: 101 [SR124 @ SR60_2041 PM - 2lanes]

New Site
Roundabout

All Movement Classes

	South	East	North	West	Intersection
Delay (Control)	16.9	8.3	31.0	24.9	20.5
LOS	C	A	D	C	C



Colour code based on Level of Service



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

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

Roundabout Level of Service Method: Same as Sign Control

MOVEMENT SUMMARY

Site: 101 [SR124 @ SR60_2041 PM - 2lanes]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph	
South: Sam Freeman Road												
3	L2	3	0.0	0.148	16.9	LOS C	0.7	18.1	0.87	0.87	34.3	
8	T1	33	0.0	0.148	16.9	LOS C	0.7	18.1	0.87	0.87	34.4	
18	R2	3	0.0	0.148	16.9	LOS C	0.7	18.1	0.87	0.87	33.6	
Approach		39	0.0	0.148	16.9	LOS C	0.7	18.1	0.87	0.87	34.3	
East: SR 124												
1	L2	2	3.7	0.454	8.4	LOS A	3.3	85.6	0.54	0.37	39.0	
6	T1	708	3.7	0.454	8.3	LOS A	3.4	86.3	0.54	0.37	39.3	
16	R2	282	3.7	0.454	8.2	LOS A	3.4	86.3	0.53	0.36	38.1	
Approach		992	3.7	0.454	8.3	LOS A	3.4	86.3	0.53	0.36	38.9	
North: SR 60												
7	L2	322	6.2	0.822	31.0	LOS D	8.7	229.2	0.93	1.11	26.8	
4	T1	29	6.2	0.822	31.0	LOS D	8.7	229.2	0.93	1.11	27.0	
14	R2	160	6.2	0.822	31.0	LOS D	8.7	229.2	0.93	1.11	26.5	
Approach		512	6.2	0.822	31.0	LOS D	8.7	229.2	0.93	1.11	26.7	
West: SR 124												
5	L2	157	3.7	0.840	25.4	LOS D	13.7	352.7	1.00	1.03	29.8	
2	T1	1376	3.7	0.840	24.8	LOS C	13.9	358.6	1.00	1.02	30.4	
12	R2	8	3.7	0.840	24.4	LOS C	13.9	358.6	1.00	1.01	30.0	
Approach		1542	3.7	0.840	24.9	LOS C	13.9	358.6	1.00	1.02	30.3	
All Vehicles		3084	4.1	0.840	20.5	LOS C	13.9	358.6	0.84	0.82	31.9	

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

Roundabout LOS Method: Same as Sign Control.

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

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

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

Roundabout Capacity Model: SIDRA Standard.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

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

SIDRA INTERSECTION 7.0 | Copyright © 2000-2016 Alcatel and Associates Pty Ltd | sidrasolutions.com

Organisation: ATKINS NORTH AMERICA | Processed: Monday, June 04, 2018 2:08:33 PM

Project: M:ATP_Projects\2018\IGDOT Safety\SR124_SR60\Sidra\SR124@SR60_SpeedData.sip7

QUEUE DISTANCE (AVER)

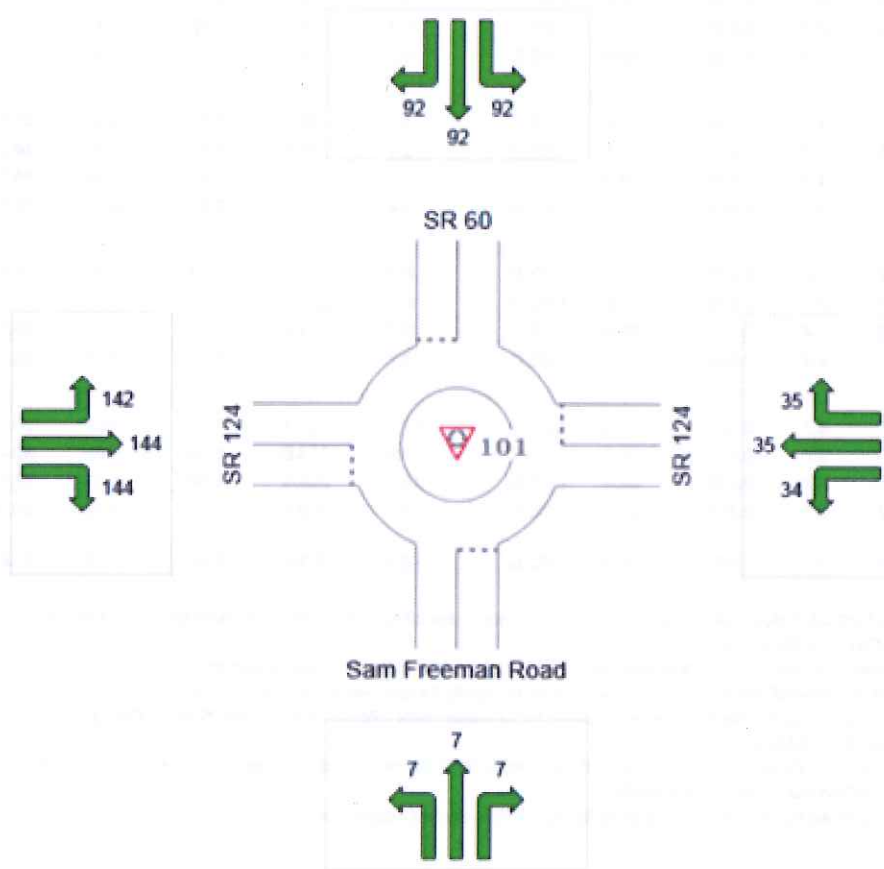
Average Back of Queue Distance for any lane used by movement (feet)

Site: 101 [SR124 @ SR60_2041 PM - 2lanes]

New Site
Roundabout

All Movement Classes

	South	East	North	West	Intersection
Queue Distance (Aver)	7	35	92	144	144



Colour code based on Queue Storage Ratio



Appendix I: Turn Lanes Alternative – Synchro Reports

2041 AM Peak

HCM 2010 TWSC

3: Sam Freeman Rd/SR 60 & SR 124

4/23/2018

Intersection													
Int Delay, s/veh	0.8												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR	
Traffic Vol, veh/h	147	697	6	2	1338	438	0	19	2	204	6	219	
Future Vol, veh/h	147	697	6	2	1338	438	0	19	2	204	6	219	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Yield	
Storage Length	200	-	-	-	-	200	-	-	-	-	-	125	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	160	758	7	2	1454	476	0	21	2	222	7	238	
Major/Minor	Major1			Major2			Minor1			Minor2			
Conflicting Flow All	1454	0	0	764	0	0	2542	2530	761	2551	2543	1454	
Stage 1	-	-	-	-	-	-	1080	1080	-	1459	1459	-	
Stage 2	-	-	-	-	-	-	1462	1459	-	1092	1084	-	
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22	
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-	
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318	
Pot Cap-1 Maneuver	465	-	-	849	-	-	18	27	405	-	18	27	
Stage 1	-	-	-	-	-	-	264	294	-	-	181	194	
Stage 2	-	-	-	-	-	-	160	194	-	-	260	293	
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	
Mov Cap-1 Maneuver	465	-	-	849	-	-	-	-	18	405	-	18	
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	18	-	-	18	
Stage 1	-	-	-	-	-	-	173	193	-	-	106	194	
Stage 2	-	-	-	-	-	-	-	194	-	-	151	192	
Approach	SE			NW			NE			SW			
HCM Control Delay, s	2.9			0									
HCM LOS													
Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1	SWLn2					
Capacity (veh/h)	-	849	-	-	465	-	-	-	160				
HCM Lane V/C Ratio	-	0.003	-	-	0.344	-	-	-	1.488				
HCM Control Delay (s)	-	9.3	0	-	16.7	-	-	-	301.9				
HCM Lane LOS	-	A	A	-	C	-	-	-	F				
HCM 95th %ile Q(veh)	-	0	-	-	1.5	-	-	-	15.5				
Notes													
-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon													

2041 PM Peak

HCM 2010 TWSC

3: Sam Freeman Rd/SR 60 & SR 124

4/23/2018

Intersection												
Int Delay, s/veh	0.6											

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Traffic Vol, veh/h	166	1454	8	2	699	269	2	25	2	305	27	152
Future Vol, veh/h	166	1454	8	2	699	269	2	25	2	305	27	152
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Yield
Storage Length	200	-	-	-	-	200	-	-	-	-	-	125
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	180	1580	9	2	760	292	2	27	2	332	29	165

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	760	0	0	1589
Stage 1	-	-	-	1946
Stage 2	-	-	-	779
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	6.12
Critical Hdwy Stg 2	-	-	-	6.12
Follow-up Hdwy	2.218	-	-	2.218
Pot Cap-1 Maneuver	852	-	-	413
Stage 1	-	-	-	84
Stage 2	-	-	-	389
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	852	-	-	413
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	66
Stage 2	-	-	-	211

Approach	SE	NW	NE	SW
HCM Control Delay, s	1.1	0	-	-
HCM LOS	-	-	-	-

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1	SWLn2
Capacity (veh/h)	-	413	-	-	852	-	-	406
HCM Lane V/C Ratio	-	0.005	-	-	0.212	-	-	0.407
HCM Control Delay (s)	-	13.8	0	-	10.4	-	-	19.8
HCM Lane LOS	-	B	A	-	B	-	-	C
HCM 95th %tile Q(veh)	-	0	-	-	0.8	-	-	1.9

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

Appendix J: Signal Alternative – Synchro Reports

2041 AM Peak

HCM 2010 Signalized Intersection Capacity Analysis

3: Sam Freeman Rd/SR 60 & SR 124

4/23/2018

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↗	↘	↙	↖	↗	↘	↙	↖	↗	↘	↙
Traffic Volume (veh/h)	147	697	6	2	1338	438	0	19	2	204	6	219
Future Volume (veh/h)	147	697	6	2	1338	438	0	19	2	204	6	219
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1900	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	160	758	7	2	1454	476	0	21	2	222	7	0
Adj No. of Lanes	1	1	0	0	1	1	0	1	0	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	72	1345	12	36	1359	1156	0	302	29	300	7	285
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
Prop Arrive On Green	0.73	0.73	0.73	0.73	0.73	0.73	0.00	0.18	0.18	0.18	0.18	0.00
Ln Grp Delay, s/veh	642.2	0.0	6.7	50.7	0.0	5.4	0.0	0.0	34.1	50.8	0.0	0.0
Ln Grp LOS	F		A	F		A			C	D		
Approach Vol, veh/h		925			1932			23				229
Approach Delay, s/veh		116.7			39.5			34.1				50.8
Approach LOS		F			D			C				D
Timer		1	2	3	4	5	6	7	8			
Assigned Phs			2		4		6		8			
Case No			7.0		8.0		6.0		7.0			
Phs Duration (G+Y+Rc), s			77.5		22.5		77.5		22.5			
Change Period (Y+Rc), s			4.5		4.5		4.5		4.5			
Max Green (Gmax), s			73.0		18.0		73.0		18.0			
Max Allow Headway (MAH), s			5.6		5.3		5.6		5.3			
Max Q Clear (q_c+I), s			75.0		3.0		75.0		19.4			
Green Ext Time (g_e), s			0.0		1.2		0.0		0.0			
Prpb of Phs Call (p_c)			1.00		1.00		1.00		1.00			
Prpb of Max Out (p_x)			1.00		0.02		1.00		1.00			
Left-Turn Movement Data												
Assigned Mvmt			5		7		1		3			
Mvmt Sat Flow, veh/h			0		0		230		1273			
Through Movement Data												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			1862		1675		1843		40			
Right-Turn Movement Data												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			1583		160		17		1583			
Left Lane Group Data												
Assigned Mvmt		0	5	0	7	0	1	0	3			
Lane Assignment			L+T						L+T			

HCM 2010 Signalized Intersection Capacity Analysis
3: Sam Freeman Rd/SR 60 & SR 124

4/23/2018

Lanes in Grp	0	1	0	0	0	1	0	1
Grp Vol (v), veh/h	0	1456	0	0	0	160	0	229
Grp Sat Flow (s), veh/h/ln	0	1862	0	0	0	230	0	1313
Q Serve Time (g_s), s	0.0	9.7	0.0	0.0	0.0	0.0	0.0	16.3
Cycle Q Clear Time (g_c), s	0.0	73.0	0.0	0.0	0.0	73.0	0.0	17.4
Perm LT Sat Flow (s_l), veh/h/ln	0	713	0	0	0	230	0	1410
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	73.0	0.0	0.0	0.0	73.0	0.0	18.0
Perm LT Serve Time (g_u), s	0.0	54.1	0.0	0.0	0.0	0.0	0.0	17.0
Perm LT Q Serve Time (g_ps), s	0.0	9.7	0.0	0.0	0.0	0.0	0.0	16.3
Time to First Blk (g_f), s	0.0	63.3	0.0	18.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	63.3	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.97
Lane Grp Cap (c), veh/h	0	1395	0	0	0	72	0	307
V/C Ratio (X)	0.00	1.04	0.00	0.00	0.00	2.22	0.00	0.75
Avail Cap (c_a), veh/h	0	1395	0	0	0	72	0	307
Upstream Filter (f)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	14.4	0.0	0.0	0.0	50.0	0.0	41.3
Incr Delay (d2), s/veh	0.0	36.2	0.0	0.0	0.0	592.2	0.0	9.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	50.7	0.0	0.0	0.0	642.2	0.0	50.8
1st-Term Q (Q1), veh/ln	0.0	38.4	0.0	0.0	0.0	2.0	0.0	6.3
2nd-Term Q (Q2), veh/ln	0.0	14.0	0.0	0.0	0.0	11.8	0.0	0.8
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	52.4	0.0	0.0	0.0	13.8	0.0	7.1
%ile Storage Ratio (RQ%)	0.00	2.00	0.00	0.00	0.00	1.76	0.00	0.51
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	15.1	0.0	0.0	0.0	22.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.6	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (f)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

4/18/2018 Baseline

Synchro 9 Report
Page 2




















HCM 2010 Signalized Intersection Capacity Analysis
3: Sam Freeman Rd/SR 60 & SR 124

4/23/2018

2nd-Term Q (Q2), veh/in	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/in	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/in	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		T+R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	476	0	23	0	765	0	0
Grp Sat Flow (s), veh/h/in	0	1583	0	1835	0	1860	0	1583
Q Serve Time (g_s), s	0.0	11.6	0.0	1.0	0.0	18.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	11.6	0.0	1.0	0.0	18.9	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/in	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.09	0.00	0.01	0.00	1.00
Lane Grp Cap (c), veh/h	0	1156	0	330	0	1358	0	285
V/C Ratio (X)	0.00	0.41	0.00	0.07	0.00	0.56	0.00	0.00
Avail Cap (c_a), veh/h	0	1156	0	330	0	1358	0	285
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.2	0.0	34.0	0.0	6.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.1	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.4	0.0	34.1	0.0	6.7	0.0	0.0
1st-Term Q (Q1), veh/in	0.0	5.0	0.0	0.5	0.0	9.6	0.0	0.0
2nd-Term Q (Q2), veh/in	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/in	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/in	0.0	5.1	0.0	0.5	0.0	9.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.65	0.00	0.05	0.00	0.48	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary								
HCM 2010 Ctrl Delay		63.3						
HCM 2010 LOS		E						

HCM 2010 Signalized Intersection Summary
3: Sam Freeman Rd/SR 60 & SR 124

4/23/2018




















												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	147	697	6	2	1338	438	0	19	2	204	6	219
Future Volume (veh/h)	147	697	6	2	1338	438	0	19	2	204	6	219
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus. Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1900	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	160	758	7	2	1454	476	0	21	2	222	7	0
Adj No. of Lanes	1	1	0	0	1	1	0	1	0	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	72	1345	12	36	1359	1156	0	302	29	300	7	285
Arrive On Green	0.73	0.73	0.73	0.73	0.73	0.73	0.00	0.18	0.18	0.18	0.18	0.00
Sat Flow, veh/h	230	1843	17	0	1862	1583	0	1675	160	1273	40	1583
Grp Volume(v), veh/h	160	0	765	1456	0	476	0	0	23	229	0	0
Grp Sat Flow(s), veh/h/ln	230	0	1860	1862	0	1583	0	0	1835	1313	0	1583
Q Serve(g_s), s	0.0	0.0	18.9	9.7	0.0	11.6	0.0	0.0	1.0	16.3	0.0	0.0
Cycle Q Clear(g_c), s	73.0	0.0	18.9	73.0	0.0	11.6	0.0	0.0	1.0	17.4	0.0	0.0
Prop In Lane	1.00		0.01	0.00		1.00	0.00		0.09	0.97		1.00
Lane Grp Cap(c), veh/h	72	0	1358	1395	0	1156	0	0	330	307	0	285
W/C Ratio(X)	2.22	0.00	0.56	1.04	0.00	0.41	0.00	0.00	0.07	0.75	0.00	0.00
Avail Cap(c_a), veh/h	72	0	1358	1395	0	1156	0	0	330	307	0	285
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	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	50.0	0.0	6.2	14.4	0.0	5.2	0.0	0.0	34.0	41.3	0.0	0.0
Incr Delay (d2), s/veh	592.2	0.0	0.5	36.2	0.0	0.2	0.0	0.0	0.1	9.5	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.8	0.0	9.8	52.4	0.0	5.1	0.0	0.0	0.5	7.1	0.0	0.0
LnGrp Delay(d),s/veh	642.2	0.0	6.7	50.7	0.0	5.4	0.0	0.0	34.1	50.8	0.0	0.0
LnGrp LOS	F		A	F		A			C	D		
Approach Vol, veh/h		925			1932			23				229
Approach Delay, s/veh		116.7			39.5			34.1				50.8
Approach LOS		F			D			C				D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		77.5		22.5		77.5		22.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		73.0		18.0		73.0		18.0				
Max Q Clear Time (g_c+I1), s		75.0		3.0		75.0		19.4				
Green Ext Time (p_c), s		0.0		1.2		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			63.3									
HCM 2010 LOS			E									

2041 PM Peak

Lanes, Volumes, Timings

3: Sam Freeman Rd/SR 60 & SR 124













4/23/2018

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	166	1454	8	2	699	269	2	25	2	305	27	152
Future Volume (vph)	166	1454	8	2	699	269	2	25	2	305	27	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	0		200	0		0	0		125
Storage Lanes	1		0	0		1	0		0	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
Fri		0.999				0.850		0.991				0.850
Flt Protected	0.950							0.997			0.956	
Satd. Flow (prot)	1770	1861	0	0	1863	1583	0	1840	0	0	1781	1583
Flt Permitted	0.286				0.794			0.914			0.746	
Satd. Flow (perm)	533	1861	0	0	1479	1583	0	1687	0	0	1390	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						292		2				84
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		544			698			339			403	
Travel Time (s)		12.4			15.9			7.7			9.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	180	1580	9	2	760	292	2	27	2	332	29	165
Shared Lane Traffic (%)												
Lane Group Flow (vph)	180	1589	0	0	762	292	0	31	0	0	361	165
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			0			0	
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	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100		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	20	6		20	6	20
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+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		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases		6			2			4			8	
Permitted Phases	6			2		2	4			8		8

Lanes, Volumes, Timings

3: Sam Freeman Rd/SR 60 & SR 124

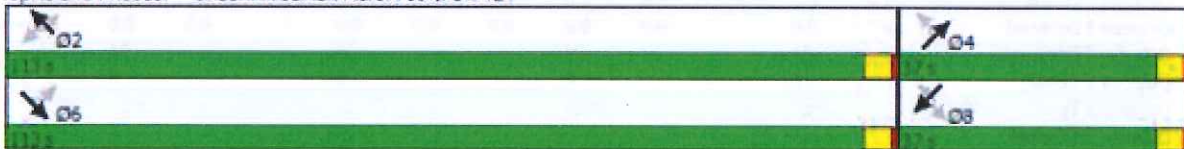
4/23/2018

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Detector Phase	6	6		2	2	2	4	4		8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5		22.5	22.5	22.5
Total Split (s)	113.0	113.0		113.0	113.0	113.0	37.0	37.0		37.0	37.0	37.0
Total Split (%)	75.3%	75.3%		75.3%	75.3%	75.3%	24.7%	24.7%		24.7%	24.7%	24.7%
Maximum Green (s)	108.5	108.5		108.5	108.5	108.5	32.5	32.5		32.5	32.5	32.5
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0			0.0	0.0
Total Lost Time (s)	4.5	4.5			4.5	4.5		4.5			4.5	4.5
Lead/Lag												
Lead-Lag Optimize?												
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	Min	Min		Min	Min	Min	None	None		None	None	None
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		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	0	0
Act Effect Green (s)	108.5	108.5		108.5	108.5			32.5			32.5	32.5
Actuated g/C Ratio	0.72	0.72			0.72	0.72		0.22			0.22	0.22
v/c Ratio	0.47	1.18			0.71	0.24		0.08			1.20	0.40
Control Delay	13.4	111.8			16.5	1.1		45.4			166.1	27.5
Queue Delay	0.0	0.0			0.0	0.0		0.0			0.0	0.0
Total Delay	13.4	111.8			16.5	1.1		45.4			166.1	27.5
LOS	B	F			B	A		D			F	C
Approach Delay		101.8			12.3			45.4			122.6	
Approach LOS		F			B			D			F	

Intersection Summary





















Area Type:	Other
Cycle Length:	150
Actuated Cycle Length:	150
Natural Cycle:	150
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.20
Intersection Signal Delay:	76.6
Intersection Capacity Utilization:	150.1%
Analysis Period (min):	15
Intersection LOS:	E
ICU Level of Service:	H

Splits and Phases: 3: Sam Freeman Rd/SR 60 & SR 124



HCM 2010 Signalized Intersection Capacity Analysis
3: Sam Freeman Rd/SR 60 & SR 124

4/23/2018

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	166	1454	8	2	699	269	2	25	2	305	27	152
Future Volume (veh/h)	166	1454	8	2	699	269	2	25	2	305	27	152
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1863	1900	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	180	1580	9	2	760	292	2	27	2	332	29	0
Adj No. of Lanes	1	1	0	0	1	1	0	1	0	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	48	1338	8	24	1137	1145	36	364	26	331	25	343
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
Prop Arrive On Green	0.72	0.72	0.72	0.72	0.72	0.72	0.22	0.22	0.22	0.22	0.22	0.00
Ln Grp Delay, s/veh	1361.7	0.0	109.9	18.1	0.0	7.2	46.9	0.0	0.0	112.4	0.0	0.0
Ln Grp LOS	F		F	B		A	D			F		
Approach Vol, veh/h		1769			1054			31			361	
Approach Delay, s/veh		237.3			15.1			46.9			112.4	
Approach LOS		F			B			D			F	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs			2		4		6		8			
Case No			7.0		8.0		6.0		7.0			
Phs Duration (G+Y+Rc), s			113.0		37.0		113.0		37.0			
Change Period (Y+Rc), s			4.5		4.5		4.5		4.5			
Max Green (Gmax), s			108.5		32.5		108.5		32.5			
Max Allow Headway (MAH), s			5.3		5.3		5.3		5.3			
Max Q Clear (g_c+I1), s			110.5		4.0		110.5		34.5			
Green Ext Time (g_e), s			0.0		2.6		0.0		0.0			
Prob of Phs Call (p_c)			1.00		1.00		1.00		1.00			
Prob of Max Out (p_x)			1.00		0.00		1.00		1.00			
Left-Turn Movement Data												
Assigned Mvmt			5		7		1		3			
Mvmt Sat Flow, veh/h			0		49		534		1313			
Through Movement Data												
Assigned Mvmt		2		4		6		8				
Mvmt Sat Flow, veh/h		1571		1678		1850		115				
Right-Turn Movement Data												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			1583		119		11		1583			
Left Lane Group Data												
Assigned Mvmt	0	5	0	7	0	1	0	3				
Lane Assignment		L+T		L+T+R				L+T				

HCM 2010 Signalized Intersection Capacity Analysis
3: Sam Freeman Rd/SR 60 & SR 124

4/23/2018

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	762	0	31	0	180	0	361
Grp Sat Flow (s), veh/h/ln	0	1571	0	1846	0	534	0	1428
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.5
Cycle Q Clear Time (g_c), s	0.0	108.5	0.0	2.0	0.0	108.5	0.0	32.5
Perm LT Sat Flow (s_l), veh/h/ln	0	326	0	1403	0	534	0	1403
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1852	0	0	0	1781
Perm LT Eff Green (g_p), s	0.0	108.5	0.0	32.5	0.0	108.5	0.0	32.5
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.5
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.5
Time to First Blk (g_f), s	0.0	91.5	0.0	19.2	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	37.2	0.0	2.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	0.06	0.00	1.00	0.00	0.92
Lane Grp Cap (c), veh/h	0	1161	0	426	0	48	0	355
V/C Ratio (X)	0.00	0.66	0.00	0.07	0.00	3.75	0.00	1.02
Avail Cap (c_a), veh/h	0	1161	0	426	0	48	0	355
Upstream Filter (f)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	16.7	0.0	46.8	0.0	75.0	0.0	60.6
Incr Delay (d2), s/veh	0.0	1.4	0.0	0.1	0.0	1286.7	0.0	51.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Control Delay (d), s/veh	0.0	18.1	0.0	46.9	0.0	1361.7	0.0	112.4
1st-Term Q (Q1), veh/ln	0.0	19.1	0.0	1.0	0.0	2.0	0.0	14.7
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.0	0.0	17.2	0.0	5.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	19.5	0.0	1.0	0.0	19.1	0.0	19.8
%ile Storage Ratio (RQ%)	0.00	0.74	0.00	0.09	0.00	2.43	0.00	1.43
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	33.0	0.0	1.4
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.3
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (f)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

4/18/2018 Baseline

Synchro 9 Report

Page 4