



SAN DIEGO ASSOCIATION OF GOVERNMENTS

# BORDER TO BAYSHORE BIKEWAY TRAFFIC & SAFETY IMPACT ASSESSMENT

## *APPENDICES F-G*

FINAL  
OCTOBER 29, 2018





## APPENDICES

- A DRAFT CONCEPT PLANS
- B EXISTING LEVEL OF TRAFFIC STRESS
- C TRAFFIC COUNTS
- D FUTURE-YEAR TRAFFIC VOLUMES
- E SIGNAL TIMING PLANS
- F ROADWAY NETWORK DESCRIPTION
- G INTERSECTION ANALYSIS RESULTS

# APPENDIX

# F ROADWAY NETWORK DESCRIPTION

**Table F.1 Roadway Network Description**

Project Segment	Segment Start	Segment End	Jurisdiction	Functional Classification	Posted Speed	On-Street Parking	Surrounding Land Use	Cross Streets
<b>13<sup>th</sup> Street</b>	Cypress Avenue	Grove Avenue	Imperial Beach	2 Lane Collector	30-35	Yes	Single & Multi-Family Residential, Commercial	Calla Avenue, Palm Avenue, Donax Avenue, Elm Avenue, Elder Avenue, Ebony Avenue, Imperial Beach Boulevard, Fern Avenue
<b>Grove Avenue</b>	13 <sup>th</sup> Street	15 <sup>th</sup> Street	Imperial Beach	2 Lane Collector	25	Yes	Single-Family Residential	Georgia Street, 14 <sup>th</sup> Street, Granger Street
<b>Grove Avenue/ Halo Street/ Ingrid Avenue</b>	15 <sup>th</sup> Street	Hollister Street	San Diego	2 Lane Collector	25	Yes	Single-Family Residential, School	Gaywood Street, Atwater Street/Triton Avenue, 16 <sup>th</sup> Street, Thalia Street, 17 <sup>th</sup> Street/Thermal Avenue, Transite Avenue, Signal Avenue, 19 <sup>th</sup> Street/Saturn Boulevard, Switzerland Drive, Green Bay Street
<b>Ingrid Avenue</b>	Hollister Street	Oro Vista Road	San Diego	2 Lane Collector	25	Yes	Single-Family Residential	
<b>Oro Vista Road</b>	Ingrid Avenue	Iris Avenue	San Diego	2 Lane Collector	25	Yes	Multi-Family Residential	
<b>Iris Avenue</b>	Oro Vista Road	Beyer Boulevard/SR-905 SB Ramps	San Diego	2 Lane Collector	30	Yes	Single & Multi-Family Residential, School	25 <sup>th</sup> Street, 27 <sup>th</sup> Street, Monterey Pine Drive, Monterey Park Drive, 30 <sup>th</sup> Street, Howard Avenue
<b>Beyer Boulevard</b>	Iris Avenue/SR-905 WB Ramps	Dairy Mart Road/SR-905 EB Ramps	San Diego	4 Lane Major	30-40	No	Commercial	
<b>Beyer Boulevard</b>	Dairy Mart Road/SR-905 EB Ramps	West Park Avenue	San Diego	4 Lane Collector	35-40	Yes	Multi-Family Residential, Commercial, Rail Right-of-Way	Precision Park Lane, Del Sur Boulevard, Smythe Crossing, Smythe Avenue, Cottonwood Road, Caminito de los Niños, North Lane
<b>West Park Avenue</b>	Beyer Boulevard	West Hall Avenue	San Diego	1 Lane Collector	25	Yes	Single & Multi-Family Residential, School, Park	
<b>East Seaward Avenue</b>	West Park Avenue	East Park Avenue	San Diego	2 Lane Collector	25	Yes	Single & Multi-Family Residential, Park	
<b>East Park Avenue</b>	Seaward Avenue	East Hall Avenue	San Diego	1 Lane Collector	25	Yes	Single & Multi-Family Residential, Park	
<b>East Hall Avenue</b>	West Park Avenue	I-805 Pedestrian Bridge	San Diego	Local	25	Yes	Single & Multi-Family Residential, Park	East Park Avenue, Pepper Drive, Olive Drive
<b>East Beyer Boulevard</b>	I-805 Pedestrian Bridge	Center Street/Hill Street	San Diego	2 Lane Collector	30	Yes	Single-Family Residential, Commercial	
<b>East Beyer Boulevard</b>	Center Street/Hill Street	East San Ysidro Boulevard/Camino de la Plaza	San Diego	2 Lane Collector	30	Yes	Single-Family Residential, Commercial, Rail Right-of-Way	Bolton Hall Road
<b>East San Ysidro Boulevard</b>	East Beyer Boulevard/Camino de la Plaza	Rail Court	San Diego	3 Lane Collector	30	No	Commercial, Rail Right-of-Way	

Figure F.1 Average Daily Traffic Volumes, North: Existing Conditions



Figure F.2 Average Daily Traffic Volumes, South: Existing Conditions



Figure F.3 Average Daily Traffic Volumes, North: Opening Day



Figure F.4 Average Daily Traffic Volumes, South: Opening Day





Figure F.5 Average Daily Traffic Volumes, North: Horizon Year



Figure F.6 Average Daily Traffic Volumes, South: Horizon Year



# APPENDIX

# G INTERSECTION ANALYSIS RESULTS









\* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Table with 12 columns: Movement, Lane Configurations, Traffic Volume (vph), Future Volume (vph), Ideal Flow (vphpl), Total Lost time (s), Lane Util. Factor, Frpb, ped/bikes, Flpb, ped/bikes, Flt, Flt Protected, Satd. Flow (prot), Flt Permitted, Satd. Flow (perm), Peak-hour factor, PHF, Adj. Flow (vph), RTOR Reduction (vph), Lane Group Flow (vph), Confl. Peds. (#/hr), Turn Type, Protected Phases, Permitted Phases, Actuated Green, G (s), Effective Green, g (s), Actuated g/C Ratio, Clearance Time (s), Vehicle Extension (s), Lane Grp Cap (vph), v/s Ratio Prot, v/s Ratio Perm, v/c Ratio, Uniform Delay, d1, Progression Factor, Incremental Delay, d2, Delay (s), Level of Service, Approach Delay (s), Approach LOS.

Table with 12 columns: Movement, Lane Configurations, Traffic Volume (vph), Future Volume (vph), Ideal Flow (vphpl), Total Lost time (s), Lane Util. Factor, Frpb, ped/bikes, Flpb, ped/bikes, Flt, Flt Protected, Satd. Flow (prot), Flt Permitted, Satd. Flow (perm), Peak-hour factor, PHF, Adj. Flow (vph), RTOR Reduction (vph), Lane Group Flow (vph), Confl. Peds. (#/hr), Turn Type, Protected Phases, Permitted Phases, Actuated Green, G (s), Effective Green, g (s), Actuated g/C Ratio, Clearance Time (s), Vehicle Extension (s), Lane Grp Cap (vph), v/s Ratio Prot, v/s Ratio Perm, v/c Ratio, Uniform Delay, d1, Progression Factor, Incremental Delay, d2, Delay (s), Level of Service, Approach Delay (s), Approach LOS.

Table with 7 columns: Movement, Lane Configurations, Traffic Volume (veh/h), Future Volume (veh/h), Number, Initial Q (Ob), veh, Ped-Bike Adj(A\_pbT), Parking Bus, Adj, Adj Sat Flow, veh/h/m, Adj Flow Rate, veh/h, Adj No. of Lanes, Peak Hour Factor, Percent Heavy Veh, %, Cap, veh/h, Arrive On Green, Sat Flow, veh/h, Grp Volume(v), veh/h, Grp Sat Flow(s),veh/h/Inl, Q Serve(g\_s), s, Cycle Q Clear(q\_c), s, Prop In Lane, Lane Grp Cap(c), veh/h, V/C Ratio(X), Avail Cap(c\_a), veh/h, HCM Platoon Ratio, Upstream Filter(I), Uniform Delay (d), s/veh, Incr Delay (d2), s/veh, Initial Q Delay(d3),s/veh, %ile BackOfQ(50%),veh/h, LnGrp Delay(d),s/veh, LnGrp LOS, Approach Vol, veh/h, Approach Delay, s/veh, Approach LOS.

Table with 6 columns: Movement, Lane Configurations, Traffic Vol, veh/h, Future Vol, veh/h, Conflicting Peds, #/hr, Sign Control, RT Channelized, Storage Length, Veh in Median Storage, #, Grade, %, Peak Hour Factor, Heavy Vehicles, %, Mvmt Flow.







Intersection summary table for Bolton Hall Road & E Beyer Boulevard. Includes columns for Movement, Major/Minor, and Approach, with various traffic volume and delay metrics.

Intersection summary table for Camino de la Plaza/E Beyer Boulevard & San Ysidro Boulevard. Includes a movement diagram, detailed traffic volume and delay metrics, and an intersection summary section.

User approved volume balancing among the lanes for turning movement.

Intersection summary table for I-5 Northbound Ramps/E San Ysidro Boulevard & San Ysidro Boulevard. Includes a movement diagram, detailed traffic volume and delay metrics, and an intersection summary section.



















Diagram showing intersection movements and a table with columns: Movement, Lane Configurations, Traffic Volume (veh/h), Future Volume (veh/h), Number, Initial Q (Ob), Veh, Ped-Bike Adj, Parking Bus, Adj, Adj Sat Flow, Adj Flow Rate, Adj No. of Lanes, Peak Hour Factor, Percent Heavy Veh, Cap, Arrive On Green, Sat Flow, Grp Volume, Grp Sat Flow, Q Serve, Cycle Q Clear, Prop In Lane, Lane Grp Cap, V/C Ratio, Avail Cap, HCM Platoon Ratio, Upstream Filter, Uniform Delay, Incr Delay, Initial Q Delay, %ile BackOf, LnGrp Delay, LnGrp LOS, Approach Vol, Approach Delay, Approach LOS, Timer, Assigned Phs, Phs Duration, Change Period, Max Green Setting, Max Q Clear Time, Green Ext Time.

Intersection Summary table with columns: HCM 2010 Ctrl Delay, HCM 2010 LOS, Notes.

\* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection table for HCM 2010 TWSC, including columns: Int Delay, Movement, Lane Configurations, Traffic Vol, Future Vol, Conflicting Peds, Sign Control, RT Channelized, Storage Length, Veh in Median Storage, Grade, Peak Hour Factor, Heavy Vehicles, Mvmt Flow, Major/Minor, Platoon blocked, Mov Cap-1 Maneuver, Approach, HCM Control Delay, HCM LOS, Minor Lane/Major Mvmt, Capacity, HCM Lane V/C Ratio, HCM Control Delay, HCM Lane LOS, HCM 95th %ile Q.

Intersection table for HCM 2010 Signalized Intersection Summary, including columns: Movement, Lane Configurations, Traffic Volume, Future Volume, Number, Initial Q, Ped-Bike Adj, Parking Bus, Adj, Adj Sat Flow, Adj Flow Rate, Adj No. of Lanes, Peak Hour Factor, Percent Heavy Veh, Cap, Arrive On Green, Sat Flow, Grp Volume, Grp Sat Flow, Q Serve, Cycle Q Clear, Prop In Lane, Lane Grp Cap, V/C Ratio, Avail Cap, HCM Platoon Ratio, Upstream Filter, Uniform Delay, Incr Delay, Initial Q Delay, %ile BackOf, LnGrp Delay, LnGrp LOS, Approach Vol, Approach Delay, Approach LOS, Timer, Assigned Phs, Phs Duration, Change Period, Max Green Setting, Max Q Clear Time, Green Ext Time, Intersection Summary.











HCM 2010 Signalized Intersection Summary Opening Day Conditions (2020) W/O Project  
 19: Beyer Boulevard & Smythe Avenue E AM Peak Hour

Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↔	↕	↕		↕	↕		
Traffic Volume (veh/h)	231	319	249	211	320	291		
Future Volume (veh/h)	231	319	249	211	320	291		
Number	1	6	2	12	3	18		
Initial Q (Ob), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/hln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	251	347	377	320	390	355		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	0.92	0.92	0.66	0.66	0.82	0.82		
Percent Heavy Veh. %	2	2	2	2	2	2		
Cap, veh/h	299	2018	590	494	467	417		
Arrive On Green	0.17	0.57	0.33	0.33	0.26	0.26		
Sat Flow, veh/h	1774	3632	1899	1512	1774	1583		
Grp Volume(v), veh/h	251	347	369	328	390	355		
Grp Sat Flow(s), veh/hln	1774	1770	1770	1548	1774	1583		
Q Serve(g_s), s	8.1	2.7	10.4	10.6	12.2	12.5		
Cycle Q Clear(q_c), s	8.1	2.7	10.4	10.6	12.2	12.5		
Prop In Lane	1.00			0.98	1.00	1.00		
Lane Grp Cap(c), veh/h	299	2018	578	506	467	417		
V/C Ratio(X)	0.84	0.17	0.64	0.65	0.84	0.85		
Avail Cap(c_a), veh/h	320	2300	698	611	664	593		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	23.7	6.0	16.8	16.9	20.5	20.6		
Incr Delay (d2), s/veh	15.6	0.0	1.9	2.3	4.4	6.0		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%), veh/h	5.2	1.3	5.3	4.8	6.5	6.1		
LnGrp Delay(d), s/veh	39.2	6.1	18.7	19.2	24.9	26.5		
LnGrp LOS	D	A	B	B	C	C		
Approach Vol, veh/h	598	697			745			
Approach Delay, s/veh	20.0	19.0			25.7			
Approach LOS	B	B			C			
<b>Timer</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
Assigned Phs	1	2			6		8	
Phs Duration (G+Y+R), s	14.3	24.1			38.4		20.4	
Change Period (Y+R), s	4.4	4.9			4.9		4.9	
Max Green Setting (Gmax), s	10.6	23.2			38.2		22.0	
Max Q Clear Time (g_c+H), s	10.1	12.6			4.7		14.5	
Green Ext Time (p_c), s	0.0	6.0			11.4		1.0	
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay	21.7							
HCM 2010 LOS	C							

5:00 pm 04/27/2018 Baseline

HCM 2010 Signalized Intersection Summary Opening Day Conditions (2020) W/O Project  
 20: Private Driveway/Caminitos De Los Ninos & Beyer Boulevard AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↕	↕	↕	↕				↕	↕	↕
Traffic Volume (veh/h)	47	486	4	19	421	12	14	2	22	1	0	9
Future Volume (veh/h)	47	486	4	19	421	12	14	2	22	1	0	9
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.96	0.91		0.90	0.91		0.90
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/hln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	56	579	5	28	628	18	23	3	35	2	0	18
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	0	1
Peak Hour Factor	0.84	0.84	0.84	0.67	0.67	0.67	0.62	0.62	0.62	0.50	0.50	0.50
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	79	1417	12	46	1320	38	213	60	223	97	28	355
Arrive On Green	0.04	0.39	0.39	0.03	0.38	0.38	0.27	0.27	0.27	0.27	0.00	0.27
Sat Flow, veh/h	1774	3594	31	1774	3510	101	390	220	820	43	102	1304
Grp Volume(v), veh/h	56	285	299	28	316	330	61	0	0	20	0	0
Grp Sat Flow(s), veh/hln	1774	1770	1770	1770	1841	1430	0	0	1449	0	0	0
Q Serve(g_s), s	1.4	5.4	5.4	0.7	6.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(q_c), s	1.4	5.4	5.4	0.7	6.3	6.3	1.3	0.0	0.0	0.5	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.05	0.38		0.57	0.10		0.90
Lane Grp Cap(c), veh/h	79	698	732	46	666	692	496	0	0	480	0	0
V/C Ratio(X)	0.71	0.41	0.41	0.60	0.48	0.48	0.12	0.00	0.00	0.04	0.00	0.00
Avail Cap(c_a), veh/h	253	808	847	215	770	801	840	0	0	832	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.8	10.1	10.1	22.3	10.9	11.0	12.7	0.0	0.0	12.4	0.0	0.0
Incr Delay (d2), s/veh	4.4	0.9	0.9	4.6	1.9	1.8	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/h	2.8	2.9	0.4	3.3	3.5	3.5	0.6	0.0	0.0	0.2	0.0	0.0
LnGrp Delay(d), s/veh	26.1	11.0	11.0	26.9	12.9	12.8	12.8	0.0	0.0	12.4	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	B			B		
Approach Vol, veh/h	640				674			61		20		
Approach Delay, s/veh	12.3				13.4			12.8		12.4		
Approach LOS	B				B			B		B		
<b>Timer</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>				
Assigned Phs	1	2			4	5	6	8				
Phs Duration (G+Y+R), s	17.5	6.5	23.1		17.5	6.5	22.3	17.5				
Change Period (Y+R), s	4.4	4.9			4.9	4.4	4.9	4.9				
Max Green Setting (Gmax), s	21.1	24.1			6.6	20.1	24.1					
Max Q Clear Time (g_c+H), s	7.4	2.5	3.4		8.3		3.3					
Green Ext Time (p_c), s	0.0	10.3			0.3	0.0	9.1					
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay	12.9											
HCM 2010 LOS	B											

5:00 pm 04/27/2018 Baseline

HCM 2010 Signalized Intersection Summary Opening Day Conditions (2020) W/O Project  
 21: W Park Avenue/Alaquinas Drive & Beyer Boulevard AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↕	↕	↕	↕				↕	↕	↕
Traffic Volume (veh/h)	74	340	107	75	271	65	109	70	106	70	64	52
Future Volume (veh/h)	74	340	107	75	271	65	109	70	106	70	64	52
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.93	1.00		0.93	0.97	0.96	0.98		0.95		0.95
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/hln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	87	400	126	109	393	94	128	82	125	74	68	55
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	0	1
Peak Hour Factor	0.85	0.85	0.85	0.69	0.69	0.85	0.85	0.85	0.94	0.94	0.94	0.94
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	111	858	266	140	966	228	255	168	202	247	221	149
Arrive On Green	0.06	0.33	0.33	0.08	0.35	0.35	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	1774	2609	808	1774	2799	660	484	473	569	464	622	420
Grp Volume(v), veh/h	87	269	257	109	246	241	335	0	0	197	0	0
Grp Sat Flow(s), veh/hln	1770	1647	1774	1770	1690	1526	0	0	1506	0	0	0
Q Serve(g_s), s	2.9	7.2	7.4	3.6	6.3	6.5	5.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(q_c), s	2.9	7.2	7.4	3.6	6.3	6.5	10.2	0.0	0.0	5.2	0.0	0.0
Prop In Lane	1.00		0.49	1.00		0.39	0.38		0.37	0.38		0.28
Lane Grp Cap(c), veh/h	111	582	542	140	611	583	625	0	0	618	0	0
V/C Ratio(X)	0.78	0.46	0.47	0.78	0.40	0.41	0.54	0.00	0.00	0.32	0.00	0.00
Avail Cap(c_a), veh/h	195	685	638	225	715	683	958	0	0	945	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.9	16.0	27.1	14.9	15.0	15.6	0.0	0.0	14.1	0.0	0.0	0.0
Incr Delay (d2), s/veh	4.5	1.7	1.9	3.5	1.3	1.4	0.3	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/h	3.8	3.6	1.9	3.3	3.2	4.5	0.0	0.0	2.4	0.0	0.0	0.0
LnGrp Delay(d), s/veh	32.1	17.6	17.8	30.6	16.2							

Intersection						
Intersection Delay, s/veh	11.1					
Intersection LOS	B					

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	↑
Traffic Vol, veh/h	11	0	0	23	267	5
Future Vol, veh/h	11	0	0	23	267	5
Peak Hour Factor	0.42	0.42	0.66	0.66	0.64	0.64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	0	0	35	417	8
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB	WB	
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.2	8.2	11.5
HCM LOS	A	A	B

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	98%	0%	0%
Vol Thru, %	0%	100%	100%
Vol Right, %	2%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	272	11	23
LT Vol	267	0	0
Through Vol	0	11	23
RT Vol	5	0	0
Lane Flow Rate	425	26	35
Geometry Grp	1	1	1
Degree of Util (X)	0.499	0.036	0.048
Departure Headway (Hd)	4.224	4.967	4.954
Convergence, Y/N	Yes	Yes	Yes
Cap	846	725	727
Service Time	2.282	2.969	2.956
HCM Lane V/C Ratio	0.502	0.036	0.048
HCM Control Delay	11.5	8.2	8.2
HCM Lane LOS	B	A	A
HCM 95th-tile Q	2.8	0.1	0.2

Intersection												
Intersection Delay, s/veh	8.8											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑			↑						↑	↑
Traffic Vol, veh/h	0	52	12	6	23	0	0	0	0	88	106	16
Future Vol, veh/h	0	52	12	6	23	0	0	0	0	88	106	16
Peak Hour Factor	0.81	0.81	0.81	0.56	0.56	0.56	0.92	0.92	0.92	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	64	15	11	41	0	0	0	0	110	133	20
Number of Lanes	0	1	0	0	1	0	0	0	0	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB		EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	8	8	9.2
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	21%	42%
Vol Thru, %	81%	79%	50%
Vol Right, %	19%	0%	8%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	64	29	210
LT Vol	0	6	88
Through Vol	52	23	106
RT Vol	12	0	16
Lane Flow Rate	79	52	262
Geometry Grp	1	1	1
Degree of Util (X)	0.098	0.067	0.306
Departure Headway (Hd)	4.487	4.671	4.197
Convergence, Y/N	Yes	Yes	Yes
Cap	803	771	843
Service Time	2.489	2.674	2.29
HCM Lane V/C Ratio	0.098	0.067	0.311
HCM Control Delay	8	8	9.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.3	0.2	1.3

Intersection						
Intersection Delay, s/veh	9.8					
Intersection LOS	A					

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑			↑			↑				
Traffic Vol, veh/h	40	101	0	0	15	69	12	167	12	0	0	0
Future Vol, veh/h	40	101	0	0	15	69	12	167	12	0	0	0
Peak Hour Factor	0.80	0.80	0.80	0.85	0.85	0.61	0.61	0.61	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	50	126	0	0	18	81	20	274	20	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB	WB	
Conflicting Lanes Right	1	0	1
HCM Control Delay	9.4	8.1	10.6
HCM LOS	A	A	B

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	6%	28%	0%
Vol Thru, %	87%	72%	18%
Vol Right, %	6%	0%	82%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	191	141	84
LT Vol	12	40	0
Through Vol	167	101	15
RT Vol	12	0	69
Lane Flow Rate	313	176	99
Geometry Grp	1	1	1
Degree of Util (X)	0.396	0.238	0.121
Departure Headway (Hd)	4.555	4.856	4.413
Convergence, Y/N	Yes	Yes	Yes
Cap	789	738	809
Service Time	2.59	2.894	2.456
HCM Lane V/C Ratio	0.397	0.238	0.122
HCM Control Delay	10.6	9.4	8.1
HCM Lane LOS	B	A	A
HCM 95th-tile Q	1.9	0.9	0.4

Intersection												
Intersection Delay, s/veh	14.6											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑			↑			↑			↑	↑
Traffic Vol, veh/h	1	78	270	21	46	0	233	4	12	0	12	6
Future Vol, veh/h	1	78	270	21	46	0	233	4	12	0	12	6
Peak Hour Factor	0.67	0.67	0.67	0.83	0.83	0.83	0.82	0.82	0.82	0.64	0.64	0.64
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	116	403	25	55	0	284	5	15	0	19	9
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	SB	WB	EB	SB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	16.3	9.5	13.6	9.1
HCM LOS	C	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	94%	0%	31%	0%
Vol Thru, %	2%	22%	69%	67%
Vol Right, %	5%	77%	0%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	249	349	67	18
LT Vol	233	1	21	0
Through Vol	4	78	46	12
RT Vol	12	270	0	6
Lane Flow Rate	304	521	81	28
Geometry Grp	1	1	1	1
Degree of Util (X)	0.473	0.666	0.127	0.045
Departure Headway (Hd)	5.613	4.604	5.675	5.771
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	641	792	630	619
Service Time	3.647	2.604	3.718	3.823
HCM Lane V/C Ratio	0.474	0.658	0.129	0.045
HCM Control Delay	13.6	16.3	9.5	9.1
HCM Lane LOS	B	C	A	A
HCM 95th-tile Q	2.5	5.2	0.4	0.1

Intersection						
Int Delay, s/veh	0.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	T	T	T	T	T	T
Traffic Vol, veh/h	70	37	2	50	5	2
Future Vol, veh/h	70	37	2	50	5	2
Conflicting Peds, #/hr	0	6	6	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	- None	- None	- None	- None	- None	- None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	72	72	82	82	58	58
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	97	51	2	61	9	3
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	155	0	195	129
Stage 1	-	-	-	-	129	-
Stage 2	-	-	-	-	66	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1425	-	794	921
Stage 1	-	-	-	-	897	-
Stage 2	-	-	-	-	957	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1425	-	789	916
Mov Cap-2 Maneuver	-	-	-	-	789	-
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	956	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	0.3	9.4			
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	822	-	-	1425	-	-
HCM Lane V/C Ratio	0.015	-	-	0.002	-	-
HCM Control Delay (s)	9.4	-	-	7.5	0	-
HCM Lane LOS	A	-	-	A	A	-
HCM 95th %ile Q(veh)	0	-	-	0	-	-

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User approved volume balancing among the lanes for turning movement.

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	T	T	T	T	T	T	T	T	T	T	T	T
Traffic Volume (veh/h)	3	91	161	95	86	7	129	31	308	17	34	27
Future Volume (veh/h)	3	91	161	95	86	7	129	31	308	17	34	27
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	0.71	1.00	1.00	0.87	1.00	1.00	0.97	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/hln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	3	102	181	120	109	9	84	105	324	20	40	0
Adj No. of Lanes	1	2	2	2	2	0	1	1	1	0	1	1
Peak Hour Factor	0.89	0.89	0.89	0.79	0.79	0.95	0.95	0.95	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	6	979	1200	176	1063	86	416	437	362	163	325	422
Arrive On Green	0.00	0.28	0.28	0.05	0.32	0.32	0.23	0.23	0.23	0.27	0.27	0.00
Sat Flow, veh/h	1774	3539	1975	3442	3274	265	1774	1863	1543	611	1221	1583
Grp Volume(v), veh/h	3	102	181	120	58	60	84	105	324	60	0	0
Grp Sat Flow(s),veh/hln	1774	1770	987	1721	1770	1769	1774	1863	1543	1832	0	1583
Q Serve(g_s), s	0.2	2.4	5.6	3.9	2.6	2.7	4.3	5.1	22.9	2.8	0.0	0.0
Cycle Q Clear(q_c), s	0.2	2.4	5.6	3.9	2.6	2.7	4.3	5.1	22.9	2.8	0.0	0.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	1.00	1.00
Lane Grp Cap(c), veh/h	6	979	1200	176	574	574	416	437	362	488	0	422
V/C Ratio(X)	0.53	0.10	0.15	0.68	0.10	0.10	0.20	0.24	0.90	0.12	0.00	0.00
Avail Cap(c_a), veh/h	80	1040	1234	263	575	575	457	480	397	488	0	422
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	56.1	30.4	14.8	52.5	26.6	26.6	34.6	35.0	41.8	31.3	0.0	0.0
Incr Delay (d2), s/veh	25.9	0.1	0.2	1.7	0.1	0.1	0.1	0.1	19.8	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	0.0	0.0	0.0	0.0
%ile BackOf(50%),veh/h	0.1	1.2	2.3	1.9	1.3	1.3	2.1	2.7	11.7	1.5	0.0	0.0
LnGrp Delay(d),s/veh	81.9	30.5	15.0	54.3	26.7	26.7	34.7	35.1	61.6	31.9	0.0	0.0
LnGrp LOS	F	C	B	D	C	C	C	D	E	C		
Approach Vol, veh/h	286				238				513			
Approach Delay, s/veh	21.2				40.6				51.7			
Approach LOS	C				D				D			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6	8						
Pbs Duration (G+Y+Rc), s	10.2	36.0	31.3	4.8	41.5	35.1						
Change Period (Y+Rc), s	4.4	4.9	4.9	4.4	4.9	5.1						
Max Green Setting (Gmax), s	8.6	33.1	29.0	5.1	36.6	30.0						
Max Q Clear Time (g_c+H1), s	5.9	7.6	24.9	2.2	4.7	4.8						
Green Ext Time (g_c), s	0.0	4.5	0.5	0.0	4.8	0.2						
Intersection Summary												
HCM 2010 Ctrl Delay	40.3											
HCM 2010 LOS	D											
Notes												

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	T	T	T	T	T	T	T	T	T	T	T	T
Traffic Volume (veh/h)	111	38	247	10	21	4	123	7	0	0	60	44
Future Volume (veh/h)	111	38	247	10	21	4	123	7	0	0	60	44
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	0.54	1.00	1.00	0.44	0.72	1.00	1.00	1.00	0.57	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/hln	1900	1863	1863	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	126	43	281	11	23	4	158	9	0	0	91	67
Adj No. of Lanes	0	1	1	0	1	0	1	0	1	0	1	0
Peak Hour Factor	0.88	0.88	0.88	0.92	0.92	0.92	0.78	0.78	0.78	0.66	0.66	0.66
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	382	130	244	104	218	38	288	14	0	0	236	174
Arrive On Green	0.29	0.29	0.29	0.23	0.23	0.23	0.32	0.32	0.00	0.00	0.32	0.32
Sat Flow, veh/h	1339	457	854	454	949	165	599	43	0	0	742	546
Grp Volume(v), veh/h	169	0	281	38	0	0	167	0	0	0	0	158
Grp Sat Flow(s),veh/hln	0	854	1568	0	0	642	0	0	0	0	0	1288
Q Serve(g_s), s	5.3	0.0	20.5	1.4	0.0	0.0	12.4	0.0	0.0	0.0	0.0	6.8
Cycle Q Clear(q_c), s	5.3	0.0	20.5	1.4	0.0	0.0	19.2	0.0	0.0	0.0	0.0	6.8
Prop In Lane	0.75	1.00	0.29	0.11	0.95	0.00	0.00	0.00	0.00	0.00	0.42	0.42
Lane Grp Cap(c), veh/h	512	0	244	360	0	0	302	0	0	0	0	410
V/C Ratio(X)	0.33	0.00	1.15	0.11	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.39
Avail Cap(c_a), veh/h	512	0	244	404	0	0	316	0	0	0	0	430
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	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	20.3	0.0	25.7	21.9	0.0	0.0	26.3	0.0	0.0	0.0	0.0	19.0
Incr Delay (d2), s/veh	0.8	0.0	105.3	0.3	0.0	0.0	1.0	0.0	0.0	0.0	0.0	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 BackOf(50%),veh/h	0.0	0.0	11.9	0.6	0.0	0.0	3.2	0.0	0.0	0.0	0.0	2.4
LnGrp Delay(d),s/veh	21.1	0.0	131.0	22.1	0.0	0.0	27.3	0.0	0.0	0.0	0.0	19.3
LnGrp LOS	C		F	C			C					B
Approach Vol, veh/h	450				38				167			
Approach Delay, s/veh	89.7				22.1				27.3			
Approach LOS	F				C				C			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2	4	6	8								
Pbs Duration (G+Y+Rc), s	24.5	26.9	20.5	26.9								
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0								
Max Green Setting (Gmax), s	20.5	24.0	18.5	24.0								
Max Q Clear Time (g_c+H1), s	22.5	21.2	3.4	8.8								
Green Ext Time (g_c), s	0.0	0.5	0.2</									



Intersection														
Int Delay, s/veh		5.4												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations														
Traffic Vol, veh/h	14	11	13	9	24	101	36	283	5	18	271	12		
Future Vol, veh/h	14	11	13	9	24	101	36	283	5	18	271	12		
Conflicting Peds, #/hr	32	0	3	3	0	32	7	0	12	12	0	7		
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free		
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None		
Storage Length	-	-	-	-	-	-	100	-	60	100	-	60		
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	-	0		
Grade, %	-	0	-	-	0	-	-	0	-	-	-	0		
Peak Hour Factor	59	59	59	68	68	84	84	84	84	92	92	92		
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2		
Mvmt Flow	24	19	22	13	35	149	43	337	6	20	295	13		

Major/Minor	Minor2	Minor1	Major1	Major2								
Conflicting Flow All	888	776	305	792	776	381	302	0	0	349	0	0
Stage 1	341	341	-	435	435	-	-	-	-	-	-	-
Stage 2	547	435	-	357	341	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	264	328	735	307	328	666	1259	-	-	1210	-	-
Stage 1	674	639	-	600	580	-	-	-	-	-	-	-
Stage 2	521	580	-	661	639	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	171	306	728	269	306	638	1255	-	-	1173	-	-
Mov Cap-2 Maneuver	171	306	-	269	306	-	-	-	-	-	-	-
Stage 1	647	624	-	573	554	-	-	-	-	-	-	-
Stage 2	350	554	-	609	624	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.7	17	0.9	0.5
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBL	WBL	SBL	SBT	SBR
Capacity (veh/h)	1255	-	-	280	496	1173	-	-
HCM Lane V/C Ratio	0.034	-	-	0.23	0.397	0.017	-	-
HCM Control Delay (s)	8	-	-	21.7	17	8.1	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.9	1.9	0.1	-	-

Intersection #5

MOVEMENT SUMMARY - Typical Neighborhood Traffic Circle

Site: 101 [2020 AM]

New Site  
Roundabout

Movement Performance - Vehicles																				
Mov ID	OO Mov	Demand Total	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph									
South: Green Bay St																				
3	L2	48	2.0	0.447	4.8	LOS A	3.1	79.5	0.61	0.54	24.2									
8	T1	148	2.0	0.447	4.5	LOS A	3.1	79.5	0.61	0.54	22.5									
18	R2	114	2.0	0.447	4.2	LOS A	3.1	79.5	0.61	0.54	23.3									
Approach											310	2.0	0.447	4.4	LOS A	3.1	79.5	0.61	0.54	23.2
East: Grove Ave																				
1	L2	43	2.0	0.411	5.1	LOS A	2.8	70.4	0.63	0.58	24.2									
6	T1	116	2.0	0.411	4.8	LOS A	2.8	70.4	0.63	0.58	24.0									
16	R2	114	2.0	0.411	4.5	LOS A	2.8	70.4	0.63	0.58	23.0									
Approach											274	2.0	0.411	4.7	LOS A	2.8	70.4	0.63	0.58	23.6
North: Green Bay St																				
7	L2	57	2.0	0.286	4.5	LOS A	1.7	44.1	0.56	0.52	24.3									
4	T1	109	2.0	0.286	4.3	LOS A	1.7	44.1	0.56	0.52	22.6									
14	R2	28	2.0	0.286	4.0	LOS A	1.7	44.1	0.56	0.52	22.9									
Approach											193	2.0	0.286	4.3	LOS A	1.7	44.1	0.56	0.52	23.3
West: Grove Ave																				
5	L2	23	2.0	0.215	4.3	LOS A	1.2	31.0	0.52	0.49	24.4									
2	T1	99	2.0	0.215	4.0	LOS A	1.2	31.0	0.52	0.49	24.2									
12	R2	25	2.0	0.215	3.7	LOS A	1.2	31.0	0.52	0.49	23.2									
Approach											147	2.0	0.215	4.0	LOS A	1.2	31.0	0.52	0.49	24.1
All Vehicles											924	2.0	0.447	4.4	LOS A	3.1	79.5	0.59	0.54	23.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Roundabout LOS Method: Same as Signalised Intersections. 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 2010). Roundabout Capacity Model: SIDRA Standard. SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay. Gap-Acceptance Capacity: SIDRA Standard (Akpolik M3D). HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection #6

MOVEMENT SUMMARY - Typical Neighborhood Traffic Circle

Site: 101 [2020 AM]

New Site  
Roundabout

Movement Performance - Vehicles																				
Mov ID	OO Mov	Demand Total	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph									
South: Green Bay St																				
3	L2	48	2.0	0.447	4.8	LOS A	3.1	79.5	0.61	0.54	24.2									
8	T1	148	2.0	0.447	4.5	LOS A	3.1	79.5	0.61	0.54	22.5									
18	R2	114	2.0	0.447	4.2	LOS A	3.1	79.5	0.61	0.54	23.3									
Approach											310	2.0	0.447	4.4	LOS A	3.1	79.5	0.61	0.54	23.2
East: Grove Ave																				
1	L2	43	2.0	0.411	5.1	LOS A	2.8	70.4	0.63	0.58	24.2									
6	T1	116	2.0	0.411	4.8	LOS A	2.8	70.4	0.63	0.58	24.0									
16	R2	114	2.0	0.411	4.5	LOS A	2.8	70.4	0.63	0.58	23.0									
Approach											274	2.0	0.411	4.7	LOS A	2.8	70.4	0.63	0.58	23.6
North: Green Bay St																				
7	L2	57	2.0	0.286	4.5	LOS A	1.7	44.1	0.56	0.52	24.3									
4	T1	109	2.0	0.286	4.3	LOS A	1.7	44.1	0.56	0.52	22.6									
14	R2	28	2.0	0.286	4.0	LOS A	1.7	44.1	0.56	0.52	22.9									
Approach											193	2.0	0.286	4.3	LOS A	1.7	44.1	0.56	0.52	23.3
West: Grove Ave																				
5	L2	23	2.0	0.215	4.3	LOS A	1.2	31.0	0.52	0.49	24.4									
2	T1	99	2.0	0.215	4.0	LOS A	1.2	31.0	0.52	0.49	24.2									
12	R2	25	2.0	0.215	3.7	LOS A	1.2	31.0	0.52	0.49	23.2									
Approach											147	2.0	0.215	4.0	LOS A	1.2	31.0	0.52	0.49	24.1
All Vehicles											924	2.0	0.447	4.4	LOS A	3.1	79.5	0.59	0.54	23.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Roundabout LOS Method: Same as Signalised Intersections. 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 2010). Roundabout Capacity Model: SIDRA Standard. SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay. Gap-Acceptance Capacity: SIDRA Standard (Akpolik M3D). HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection #7

MOVEMENT SUMMARY - Typical Neighborhood Traffic Circle

Site: 101 [2020 AM]

New Site  
Roundabout

Movement Performance - Vehicles																				
Mov ID	OO Mov	Demand Total	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph									
South: Green Bay St																				
3	L2	48	2.0	0.447	4.8	LOS A	3.1	79.5	0.61	0.54	24.2									
8	T1	148	2.0	0.447	4.5	LOS A	3.1	79.5	0.61	0.54	22.5									
18	R2	114	2.0	0.447	4.2	LOS A	3.1	79.5	0.61	0.54	23.3									
Approach											310	2.0	0.447	4.4	LOS A	3.1	79.5	0.61	0.54	23.2
East: Grove Ave																				
1	L2	43	2.0	0.411	5.1	LOS A	2.8	70.4	0.63	0.58	24.2									
6	T1	116	2.0	0.411	4.8	LOS A	2.8	70.4	0.63	0.58	24.0									
16	R2	114	2.0	0.411	4.5	LOS A	2.8	70.4	0.63	0.58	23.0									
Approach											274	2.0	0.411	4.7	LOS A	2.8	70.4	0.63	0.58	23.6
North: Green Bay St																				
7	L2	57	2.0	0.286	4.5	LOS A	1.7	44.1	0.56	0.52	24.3									
4	T1	109	2.0	0.286	4.3	LOS A	1.7	44.1	0.56	0.52	22.6									
14	R2	28	2.0	0.286	4.0	LOS A	1.7	44.1	0.56	0.52	22.9									
Approach											193	2.0	0.286	4.3	LOS A	1.7	44.1	0.56	0.52	23.3
West: Grove Ave																				
5	L2	23	2.0	0.215	4.3	LOS A	1.2	31.0	0.52	0.49	24.4									
2	T1	99	2.0	0.215	4.0	LOS A	1.2	31.0	0.52	0.49	24.2									
12	R2	25	2.0	0.215	3.7	LOS A	1.2	31.0	0.52	0.49	23.2									
Approach											147	2.0	0.215	4.0	LOS A	1.2	31.0	0.52	0.49	24.1
All Vehicles											924	2.0	0.447	4.4	LOS A	3.1	79.5	0.59	0.54	23.6</

Intersection	
Intersection Delay, s/veh	11.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔		↔	↔		↔	↔	
Traffic Vol, veh/h	34	113	11	24	75	110	4	79	18	96	62	36
Future Vol, veh/h	34	113	11	24	75	110	4	79	18	96	62	36
Peak Hour Factor	0.84	0.84	0.84	0.63	0.63	0.63	0.85	0.85	0.85	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	40	135	13	38	119	175	5	93	21	122	78	46
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.7	12.2	10	11.8
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	22%	11%	49%
Vol Thru, %	78%	72%	36%	32%
Vol Right, %	18%	7%	53%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	101	158	209	194
LT Vol	4	34	24	96
Through Vol	79	113	75	62
RT Vol	18	11	110	36
Lane Flow Rate	119	188	332	246
Geometry Grp	1	1	1	1
Degree of Util (X)	0.186	0.286	0.459	0.374
Departure Headway (Hd)	5.632	5.465	4.976	5.485
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	636	656	723	656
Service Time	3.684	3.51	3.015	3.53
HCM Lane V/C Ratio	0.187	0.287	0.459	0.375
HCM Control Delay	10	10.7	12.2	11.8
HCM Lane LOS	A	B	B	B
HCM 95th-ile Q	0.7	1.2	2.4	1.7

Intersection	
Intersection Delay, s/veh	44.6
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	130	62	27	24	90	168	36	240	32	45	156	97
Future Vol, veh/h	130	62	27	24	90	168	36	240	32	45	156	97
Peak Hour Factor	0.79	0.79	0.69	0.69	0.69	0.80	0.80	0.80	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	165	78	34	35	130	243	45	300	40	56	193	120
Number of Lanes	0	1	1	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	25.6	62.8	60.6	22.1
HCM LOS	D	F	F	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	12%	68%	0%	9%	22%	0%
Vol Thru, %	78%	32%	0%	32%	78%	0%
Vol Right, %	10%	0%	100%	60%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	308	192	27	282	201	97
LT Vol	36	130	0	24	45	0
Through Vol	240	62	0	90	156	0
RT Vol	32	0	27	168	0	97
Lane Flow Rate	385	243	34	409	248	120
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.938	0.637	0.079	0.956	0.625	0.273
Departure Headway (Hd)	8.773	9.431	8.348	8.423	9.065	8.219
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	412	382	428	429	397	436
Service Time	6.841	7.202	6.119	6.489	6.837	5.991
HCM Lane V/C Ratio	0.934	0.636	0.079	0.953	0.625	0.275
HCM Control Delay	60.6	27.5	11.8	62.8	25.9	14.1
HCM Lane LOS	F	D	B	F	D	B
HCM 95th-ile Q	10.5	4.2	0.3	11.2	4.1	1.1

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Intersection #10  
**MOVEMENT SUMMARY** - Typical Neighborhood Traffic Circle

Site: 101 [2020 AM]

New Site  
Roundabout

Mov ID	OD Mov	Demand Total	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Veh/len	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Green Bay St											
3	L2	48	2.0	0.447	4.8	LOS A	3.1	79.5	0.61	0.54	24.2
8	T1	148	2.0	0.447	4.5	LOS A	3.1	79.5	0.61	0.54	22.5
18	R2	114	2.0	0.447	4.2	LOS A	3.1	79.5	0.61	0.54	23.3
Approach		310	2.0	0.447	4.4	LOS A	3.1	79.5	0.61	0.54	23.2
East: Grove Ave											
1	L2	43	2.0	0.411	5.1	LOS A	2.8	70.4	0.63	0.58	24.2
6	T1	116	2.0	0.411	4.8	LOS A	2.8	70.4	0.63	0.58	24.0
16	R2	114	2.0	0.411	4.5	LOS A	2.8	70.4	0.63	0.58	23.0
Approach		274	2.0	0.411	4.7	LOS A	2.8	70.4	0.63	0.58	23.6
North: Green Bay St											
7	L2	57	2.0	0.286	4.5	LOS A	1.7	44.1	0.56	0.52	24.3
4	T1	109	2.0	0.286	4.3	LOS A	1.7	44.1	0.56	0.52	22.6
14	R2	28	2.0	0.286	4.0	LOS A	1.7	44.1	0.56	0.52	22.9
Approach		193	2.0	0.286	4.3	LOS A	1.7	44.1	0.56	0.52	23.3
West: Grove Ave											
5	L2	23	2.0	0.215	4.3	LOS A	1.2	31.0	0.52	0.49	24.4
2	T1	99	2.0	0.215	4.0	LOS A	1.2	31.0	0.52	0.49	24.2
12	R2	25	2.0	0.215	3.7	LOS A	1.2	31.0	0.52	0.49	23.2
Approach		147	2.0	0.215	4.0	LOS A	1.2	31.0	0.52	0.49	24.1
All Vehicles		924	2.0	0.447	4.4	LOS A	3.1	79.5	0.59	0.54	23.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Roundabout LOS Method: Same as Signalised Intersections.  
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 2010).  
Roundabout Capacity Model: SIDRA Standard.  
SIDRA Standard Delay Model is used, Control Delay includes Geometric Delay.  
Gap-Acceptance Capacity: SIDRA Standard (Akapelk M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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HCM 2010 Signalized Intersection Summary Opening Day Conditions (2020) W/ Project  
11: Hollister Street & Ingrid Avenue/Grove Avenue AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	117	53	18	150	117	111	26	351	111	41	286	57
Future Volume (veh/h)	117	53	18	150	117	111	26	351	111	41	286	57
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.96	1.00	0.97	0.99	0.95	1.00	0.95	1.00	0.97	0.97	0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	186	84	29	181	141	134	32	433	137	47	325	65
Adj No. of Lanes	0	1	0	0	1	1	1	1	1	0	1	1
Peak Hour Factor	0.63	0.63	0.63	0.83	0.83	0.81	0.81	0.81	0.81	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	243	110	38	249	194	374	244	444	141	110	498	100
Arrive On Green	0.22	0.22	0.22	0.24	0.24	0.24	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1101	497	172	1018	793	1528	979	1337	423	838	1498	300
Grp Volume(v), veh/h	299	0	0	322	0	134	32	0	570	47	0	390
Grp Sat Flow(s), veh/h/ln	769	0	0	1812	0	1528	979	0	1759	838	0	1798
Q Serve(g_s), s	11.5	0.0	0.0	11.9	0.0	5.3	2.1	0.0	23.3	0.9	0.0	13.5
Cycle Q Clear(q_c), s	11.5	0.0	0.0	11.9	0.0	5.3	15.6	0.0	23.3	24.2	0.0	13.5
Prop In Lane	0.62	0.10	0.56	1.00	1.00	1.00	0.24	1.00	0.24	1.00	0.17	0.17
Lane Grp Cap(c), veh/h	391	0	0	443	0	374	244	0	585	110	0	598
V/C Ratio(X)	0.77	0.00	0.00	0.73	0.00	0.36	0.13	0.00	0.97	0.43	0.00	0.65
Avail Cap(c_a), veh/h	586	0	0	672	0	567	244	0	585	110	0	598
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	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.6	0.0	0.0	25.2	0.0	22.8	27.3	0.0	24.0	36.3	0.0	20.7
Incr Delay (d2), s/veh	4.4	0.0	0.0	3.0	0.0	0.8	0.3	0.0	30.6	2.9	0.0	2.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0									

Intersection #12

MOVEMENT SUMMARY

Site: 101 [2020 AM]

New Site Roundabout

Table with 11 columns: Mov ID, OD Mov, Demand Total, Demand HV %, Delay Satn, Average Delay, Level of Service, 95% Back of Queue, Prop. Queued, Effective Stop Rate, Average Speed. Rows include East: Iris Ave, North: Oro Vista Rd, SouthWest: Oro Vista Rd, and All Vehicles.

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Roundabout LOS Method: Same as Signalised Intersections. Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

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HCM Signalized Intersection Capacity Analysis Opening Day Conditions (2020) W/ Project 13: Iris Avenue & 25th Street & 27th Street AM Peak Hour

Table with 13 columns: Movement, EBL2, EBL, EBT, WBT, WBR, WBR2, SBL2, SBL, SBR, SWL, SWR, SWR2. Includes Lane Configurations, Traffic Volume, Future Volume, Ideal Flow, Total Lost Time, Lane Util. Factor, Frpb, ped/bikes, Flt Protected, Satd. Flow, Flt Permitted, Peak-hour factor, Adj. Flow, RTOR Reduction, Lane Group Flow, Confl. Peds, Confl. Bikes, Turn Type, Protected Phases, Permitted Phases, Actuated Green, Effective Green, Actuated g/C Ratio, Clearance Time, Vehicle Extension, Lane Grp Cap, v/s Ratio Prot, v/s Ratio Perm, v/c Ratio, Uniform Delay, Progression Factor, Incremental Delay, Delay, Level of Service, Approach Delay, Approach LOS, Intersection Summary.

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HCM 2010 Signalized Intersection Summary Opening Day Conditions (2020) W/ Project 14: Howard Avenue & Iris Avenue AM Peak Hour

Table with 13 columns: Movement, EBL, EBT, EBR, WBL, WBT, WBR, NBL, NBT, NBR, SBL, SBT, SBR. Includes Lane Configurations, Traffic Volume, Future Volume, Number, Initial Q, Ped-Bike Adj, Parking Bus, Adj Sat Flow, Adj Flow Rate, Adj No. of Lanes, Peak Hour Factor, Percent Heavy Veh, Cap, Arrive On Green, Sat Flow, Grp Volume, Grp Sat Flow, Q Serve, Cycle Q Clear, Prop In Lane, Lane Grp Cap, V/C Ratio, Avail Cap, HCM Platoon Ratio, Upstream Filter, Uniform Delay, Incr Delay, Initial Q Delay, %ile BackOfQ, LnGrp Delay, LnGrp LOS, Approach Vol, Approach Delay, Approach LOS, Timer, Assigned Phs, Phs Duration, Change Period, Max Green Setting, Max Q Clear Time, Green Ext Time, Intersection Summary.

5:00 pm 04/27/2018 Baseline

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HCM 2010 Signalized Intersection Summary Opening Day Conditions (2020) W/ Project 15: Beyer Boulevard & Iris Avenue/SR-905 WB Ramps AM Peak Hour

Table with 13 columns: Movement, EBL, EBT, EBR, WBL, WBT, WBR, NBL, NBT, NBR, SBL, SBT, SBR. Includes Lane Configurations, Traffic Volume, Future Volume, Number, Initial Q, Ped-Bike Adj, Parking Bus, Adj Sat Flow, Adj Flow Rate, Adj No. of Lanes, Peak Hour Factor, Percent Heavy Veh, Cap, Arrive On Green, Sat Flow, Grp Volume, Grp Sat Flow, Q Serve, Cycle Q Clear, Prop In Lane, Lane Grp Cap, V/C Ratio, Avail Cap, HCM Platoon Ratio, Upstream Filter, Uniform Delay, Incr Delay, Initial Q Delay, %ile BackOfQ, LnGrp Delay, LnGrp LOS, Approach Vol, Approach Delay, Approach LOS, Timer, Assigned Phs, Phs Duration, Change Period, Max Green Setting, Max Q Clear Time, Green Ext Time, Intersection Summary.

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\* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.  
 Bicycles move continuously around the Iris/Beyer bend. Will yield to crossing bikes and pedestrians.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←	←	←	←	←	←	←	←	←	←	←	←
Traffic Volume (vph)	275	260	220	25	250	80	170	170	65	70	20	95
Future Volume (vph)	275	260	220	25	250	80	170	170	65	70	20	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.9	5.1	4.7	4.9		5.1	5.1	5.1			
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95		0.95	0.95	1.00			
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.96			
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00			
Frt	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00			
Satd. Flow (prot)	1770	1863	1583	1770	3411		1681	1762	1527			
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00			
Satd. Flow (perm)	1770	1863	1583	1770	3411		1681	1762	1527			
Peak-hour factor, PHF	0.88	0.88	0.88	0.83	0.83	0.83	0.93	0.93	0.93	0.75	0.75	0.75
Adj. Flow (vph)	312	295	250	30	301	96	183	183	70	93	27	127
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	77
Lane Group Flow (vph)	313	295	250	30	397	0	165	201	70	0	120	50
Confl. Peds. (#/hr)			2	2			14		9	9		14
Turn Type	Prot	NA	Over	Prot	NA		Split	NA	Perm	Split	NA	pm-ov
Protected Phases	1	6	4	5	2		4	4		8	8	1
Permitted Phases												8
Actuated Green, G (s)	27.6	46.5	22.7	3.6	22.5		22.7	22.7	22.7		15.3	42.9
Effective Green, g (s)	27.6	46.5	22.7	3.6	22.5		22.7	22.7	22.7		15.3	42.9
Actuated g/C Ratio	0.26	0.43	0.21	0.03	0.21		0.21	0.21	0.21		0.14	0.40
Clearance Time (s)	4.7	4.9	5.1	4.7	4.9		5.1	5.1	5.1		5.1	4.7
Vehicle Extension (s)	2.0	4.3	2.0	2.0	4.3		2.0	2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	452	802	333	59	711		353	370	321		254	623
v/s Ratio Prot	0.18	0.16	0.16	0.02	0.12		0.10	0.11			0.07	0.02
v/s Ratio Perm									0.05			0.01
v/c Ratio	0.69	0.37	0.75	0.51	0.56		0.47	0.54	0.22		0.47	0.08
Uniform Delay, d1	36.3	20.8	39.9	51.3	38.2		37.3	38.0	35.3		42.6	20.2
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	3.7	0.5	8.2	2.5	1.3		0.4	0.9	0.1		0.5	0.0
Delay (s)	40.0	21.2	48.1	53.8	39.6		37.7	38.9	35.4		43.1	20.3
Level of Service	D	C	D	D	D		D	D	D		D	C
Approach Delay (s)		35.9			40.6			37.8				31.3
Approach LOS		D			D			D				C
<b>Intersection Summary</b>												
HCM 2000 Control Delay	36.8					HCM 2000 Level of Service		D				
HCM 2000 Volume to Capacity ratio	0.63											
Actuated Cycle Length (s)	107.9					Sum of lost time (s)		19.8				
Intersection Capacity Utilization	66.0%											
ICU Level of Service	C											
Analysis Period (min)	15											
c Critical Lane Group												

Bicycles cross with the through movement (Phase 6) no special phasing required.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	←	←	←	←	←	←
Traffic Volume (veh/h)	50	224	220	101	88	68
Future Volume (veh/h)	50	224	220	101	88	68
Number	5	2	6	16	7	14
Initial Q (Ob), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pb1)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/m	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	56	252	239	110	106	82
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.89	0.89	0.92	0.92	0.83	0.83
Percent Heavy Veh. %	2	2	2	2	2	2
Cap. veh/h	86	1057	469	216	218	194
Arrive On Green	0.05	0.57	0.39	0.39	0.12	0.12
Sat Flow, veh/h	1774	1863	1208	556	1774	1583
Grp Volume(v), veh/h	56	252	0	349	106	82
Grp Sat Flow(s),veh/h/m	1774	1863	0	1765	1774	1583
Q Serve(g_s), s	1.0	2.3	0.0	5.1	1.9	1.6
Cycle Q Clear(q_c), s	1.0	2.3	0.0	5.1	1.9	1.6
Prop In Lane	1.00			0.32	1.00	1.00
Lane Grp Cap(c), veh/h	86	1057	0	685	218	194
V/C Ratio(X)	0.65	0.24	0.00	0.51	0.49	0.42
Avail Cap(c_a), veh/h	296	1865	0	1241	1110	991
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.7	3.6	0.0	7.8	13.7	13.6
Incr Delay (d2), s/veh	3.1	0.2	0.0	1.3	0.6	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/m	6	1.2	0.0	2.7	1.0	1.5
LnGrp Delay(d),s/veh	18.8	3.9	0.0	9.1	14.4	14.2
LnGrp LOS	B	A		A	B	B
Approach Vol, veh/h	308		349		188	
Approach Delay, s/veh	6.6		9.1		14.3	
Approach LOS	A		A		B	
<b>Timer</b>						
Assigned Phs	1	2	3	4	5	6
Phs Duration (G+Y+R), s	2	4	4	5	6	
Change Period (Y+R), s	24.5	9.0	6.0	18.5		
Max Green Setting (Gmax), s	5.5	4.9	4.4	5.5		
Max Q Clear Time (g_c+H1), s	33.6	21.0	5.6	23.6		
Green Ext Time (g_e), s	4.3	3.9	3.0	7.1		
	7.8	0.2	0.0	6.0		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay	9.3					
HCM 2010 LOS	A					

Intersection	EBT	EBR	WBL	WBT	NBL	NBR
Intersection Delay, s/veh	16.4					
Intersection LOS	C					
<b>Movement</b>						
Lane Configurations	←	←	←	←	←	←
Traffic Vol, veh/h	263	71	290	249	64	266
Future Vol, veh/h	263	71	290	249	64	266
Peak Hour Factor	0.89	0.89	0.88	0.88	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	296	80	330	283	67	280
Number of Lanes	1	1	1	1	1	0
<b>Approach</b>						
Opposing Approach	WB	EB				
Opposing Lanes	2	2	0			
Conflicting Approach Left		NB	EB			
Conflicting Lanes Left	0	1	2			
Conflicting Approach Right	NB	WB				
Conflicting Lanes Right	1	0	2			
HCM Control Delay	15.2	17.4	16.1			
HCM LOS	C	C	C			
<b>Lane</b>						
Vol Left, %	19%	0%	0%	100%	0%	
Vol Thru, %	0%	100%	0%	0%	100%	
Vol Right, %	81%	0%	100%	0%	0%	
Sign Control	Stop	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	330	263	71	290	249	
LT Vol	64	0	0	290	0	
Through Vol	0	263	0	0	249	
RT Vol	266	0	71	0	0	
Lane Flow Rate	347	296	80	330	283	
Geometry Grp	2	7	7	7	7	
Degree of Util (X)	0.56	0.537	0.129	0.615	0.488	
Departure Headway (Hd)	5.804	6.538	5.824	6.713	6.204	
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	
Cap	618	550	613	537	580	
Service Time	3.863	4.305	3.59	4.472	3.962	
HCM Lane V/C Ratio	0.561	0.538	0.131	0.615	0.488	
HCM Control Delay	16.1	16.7	9.5	19.7	14.8	
HCM Lane LOS	C	C	A	C	B	
HCM 95th-ile Q	3.5	3.2	0.4	4.1	2.7	



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↔	↕	↕	↕	↕	↕		
Traffic Volume (veh/h)	231	319	249	211	320	291		
Future Volume (veh/h)	231	319	249	211	320	291		
Number	1	6	2	12	3	18		
Initial Q (Ob), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pb1)	1.00			0.97	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	251	347	377	320	390	355		
Adj No. of Lanes	1	1	1	1	1	1		
Peak Hour Factor	0.92	0.92	0.66	0.66	0.82	0.82		
Percent Heavy Veh. %	2	2	2	2	2	2		
Cap. veh/h	301	1056	596	906	463	681		
Arrive On Green	0.17	0.57	0.32	0.32	0.26	0.26		
Sat Flow, veh/h	1774	1863	1863	1541	1774	1583		
Grp Volume(v), veh/h	251	347	377	320	390	355		
Grp Sat Flow(s),veh/h/ln/774	1863	1863	1863	1541	1774	1583		
Q Serve(g_s), s	7.8	5.6	9.8	6.2	11.8	9.4		
Cycle Q Clear(q_c), s	7.8	5.6	9.8	6.2	11.8	9.4		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	301	1056	596	906	463	681		
V/C Ratio(X)	0.83	0.33	0.63	0.35	0.84	0.52		
Avail Cap(c_a), veh/h	331	1252	760	1042	687	881		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	22.8	6.6	16.5	6.3	19.9	11.9		
Incr Delay (d2), s/veh	14.1	0.2	1.6	0.3	4.0	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	9	3.0	5.3	4.4	6.3	4.1		
LnGrp Delay(d),s/veh	37.0	6.8	18.1	6.6	23.9	12.1		
LnGrp LOS	D	A	B	A	C	B		
Approach Vol, veh/h	598	697			745			
Approach Delay, s/veh	19.5	12.8			18.3			
Approach LOS	B	B			B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2			6	8		
Phs Duration (G+Y+R), s	23.1				37.1	19.7		
Change Period (Y+R), s	4.4	4.9			4.9	4.9		
Max Green Setting (Gmax), s	23.2				38.2	22.0		
Max Q Clear Time (g_c+I), s	11.8				7.6	13.8		
Green Ext Time (g_e), s	0.0	5.7			9.3	1.0		
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay	16.8							
HCM 2010 LOS	B							

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕
Traffic Volume (veh/h)	47	486	4	19	421	12	14	2	22	1	0	9
Future Volume (veh/h)	47	486	4	19	421	12	14	2	22	1	0	9
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pb1)	1.00	0.95	1.00		0.97	0.90		0.89	0.90			0.89
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/hln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	56	579	5	28	628	18	23	3	35	2	0	18
Adj No. of Lanes	1	1	0	1	2	2	0	1	0	1	0	1
Peak Hour Factor	0.84	0.84	0.84	0.67	0.67	0.62	0.62	0.62	0.62	0.50	0.50	0.50
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	71	749	6	44	1373	39	178	48	195	76	23	310
Arrive On Green	0.04	0.41	0.41	0.02	0.39	0.39	0.24	0.24	0.24	0.24	0.00	0.24
Sat Flow, veh/h	1774	1843	16	1774	3510	101	402	197	807	48	95	1285
Grp Volume(v), veh/h	56	0	584	28	316	330	61	0	0	20	0	0
Grp Sat Flow(s),veh/h/ln/774	0	1859	1774	1770	1841	1406	0	0	1428	0	0	0
Q Serve(g_s), s	1.9	0.0	16.8	1.0	8.2	8.2	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(q_c), s	1.9	0.0	16.8	1.0	8.2	8.2	1.9	0.0	0.0	0.7	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.05	0.38		0.57	0.10		0.90
Lane Grp Cap(c), veh/h	71	0	756	44	692	720	420	0	0	409	0	0
V/C Ratio(X)	0.79	0.00	0.77	0.64	0.46	0.46	0.15	0.00	0.00	0.05	0.00	0.00
Avail Cap(c_a), veh/h	190	0	798	121	692	720	623	0	0	616	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	29.4	0.0	15.8	29.8	13.9	13.9	18.5	0.0	0.0	18.0	0.0	0.0
Incr Delay (d2), s/veh	7.1	0.0	5.7	5.6	1.7	1.6	0.1	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1	0.0	9.8	0.5	4.3	4.4	0.8	0.0	0.0	0.3	0.0	0.0
LnGrp Delay(d),s/veh	36.5	0.0	21.5	35.5	15.6	15.6	18.5	0.0	0.0	18.0	0.0	0.0
LnGrp LOS	D	C	D	B	B	B	B			B		B
Approach Vol, veh/h	640		674			61				20		
Approach Delay, s/veh	22.8		16.4			18.5				18.0		
Approach LOS	C		B			B				B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	8					
Phs Duration (G+Y+R), s	38.9			22.8	9.9	29.0	22.8					
Change Period (Y+R), s	7.4	4.9		7.9	7.4	4.9	7.9					
Max Green Setting (Gmax), s	26.5			24.1	6.6	24.1	24.1					
Max Q Clear Time (g_c+I), s	18.8			2.7	3.9	10.2	3.9					
Green Ext Time (g_e), s	0.0	6.3		0.3	0.0	10.7	0.3					
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay	19.5											
HCM 2010 LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕
Traffic Volume (veh/h)	74	340	107	75	271	65	109	70	106	70	64	52
Future Volume (veh/h)	74	340	107	75	271	65	109	70	106	70	64	52
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pb1)	1.00	0.93	1.00		0.93	0.97		0.96	0.98			0.95
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/hln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	87	400	126	109	393	94	128	82	125	74	68	55
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.85	0.85	0.85	0.69	0.69	0.85	0.85	0.85	0.94	0.94	0.94	0.94
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	111	858	266	140	966	228	255	168	202	247	221	149
Arrive On Green	0.06	0.33	0.33	0.08	0.35	0.35	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	1774	2609	808	1774	2799	660	484	473	569	464	622	420
Grp Volume(v), veh/h	87	269	257	109	246	241	335	0	0	197	0	0
Grp Sat Flow(s),veh/h/ln/774	1770	1647	1774	1770	1690	1526	0	0	1506	0	0	0
Q Serve(g_s), s	2.9	7.2	7.4	3.6	6.3	6.5	5.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(q_c), s	2.9	7.2	7.4	3.6	6.3	6.5	10.2	0.0	0.0	5.2	0.0	0.0
Prop In Lane	1.00		0.49	1.00		0.39	0.38		0.37	0.38		0.28
Lane Grp Cap(c), veh/h	111	582	542	140	611	583	625	0	0	618	0	0
V/C Ratio(X)	0.78	0.46	0.47	0.78	0.40	0.41	0.54	0.00	0.00	0.32	0.00	0.00
Avail Cap(c_a), veh/h	195	685	638	225	715	683	958	0	0	945	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	27.7	15.9	16.0	27.1	14.9	15.0	15.6	0.0	0.0	14.1	0.0	0.0
Incr Delay (d2), s/veh	4.5	1.7	1.9	3.5	1.3	1.4	0.3	0.0	0.0	0.1	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	6	3.8	3.6	1.9	3.3	3.2	4.5	0.0	0.0	2.4	0.0	0.0
LnGrp Delay(d),s/veh												

Intersection							
Int Delay, s/veh	10.4						
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↑			↑	↓		
Traffic Vol, veh/h	11	0	0	23	267	5	
Future Vol, veh/h	11	0	0	23	267	5	
Conflicting Peds, #/hr	0	1	1	0	2	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	-	-	-	0	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	42	42	66	66	64	64	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	26	0	0	35	417	8	

Major/Minor	Major1	Major2	Minor1	
Conflicting Flow All	0	-	-	63 26
Stage 1	-	-	-	26
Stage 2	-	-	-	37
Critical Hdwy	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	5.42
Follow-up Hdwy	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	0	0	0	943 1050
Stage 1	-	0	0	997
Stage 2	-	0	0	985
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	941 1050
Mov Cap-2 Maneuver	-	-	-	941
Stage 1	-	-	-	997
Stage 2	-	-	-	983

Approach	EB	WB	NB
HCM Control Delay, s	0	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	943	-	-
HCM Lane V/C Ratio	0.451	-	-
HCM Control Delay (s)	11.9	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	2.4	-	-

Intersection													
Int Delay, s/veh	4.2												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↑			↑							↑	
Traffic Vol, veh/h	0	52	12	6	23	0	0	0	0	88	106	16	
Future Vol, veh/h	0	52	12	6	23	0	0	0	0	88	106	16	
Conflicting Peds, #/hr	3	0	0	0	0	3	32	0	0	0	0	0	
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	-	None	-	None	-	None	
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	-	0	
Grade, %	-	0	-	-	0	-	-	-	-	0	-	0	
Peak Hour Factor	81	81	81	56	56	56	92	92	92	80	80	80	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	64	15	11	41	0	0	0	0	110	133	20	

Major/Minor	Minor2	Minor1	Major2	
Conflicting Flow All	- 395	175 402 405	-	0 0 0
Stage 1	- 395	- 0 0	-	- - -
Stage 2	- 0	- 402 405	-	- - -
Critical Hdwy	- 6.52	6.22 7.12 6.52	-	4.12 - -
Critical Hdwy Stg 1	- 5.52	- - -	-	- - -
Critical Hdwy Stg 2	- -	- 6.12 5.52	-	- - -
Follow-up Hdwy	- 4.018	3.318 3.518 4.018	-	2.218 - -
Pot Cap-1 Maneuver	0	542 868 559 535	0	- - -
Stage 1	0	605 - -	0	- - -
Stage 2	0	- 625 598	0	- - -
Platoon blocked, %	-	-	-	- - -
Mov Cap-1 Maneuver	- 525	842 498 519	-	- - -
Mov Cap-2 Maneuver	- 525	- 498 519	-	- - -
Stage 1	- 587	- - -	-	- - -
Stage 2	- -	- 547 580	-	- - -

Approach	EB	WB	SB
HCM Control Delay, s	12.4	12.8	
HCM LOS	B	B	

Minor Lane/Major Mvmt	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	565	515	-	-	-
HCM Lane V/C Ratio	0.14	0.101	-	-	-
HCM Control Delay (s)	12.4	12.8	-	-	-
HCM Lane LOS	B	B	-	-	-
HCM 95th %tile Q(veh)	0.5	0.3	-	-	-

Intersection													
Int Delay, s/veh	7.4												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↑			↑			↑				↑	
Traffic Vol, veh/h	40	101	0	0	15	69	12	167	12	0	0	0	
Future Vol, veh/h	40	101	0	0	15	69	12	167	12	0	0	0	
Conflicting Peds, #/hr	13	0	0	0	0	13	5	0	2	2	0	5	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free	
RT Channelized	-	None	-	-	None	-	-	None	-	-	-	None	
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	-	0	
Grade, %	-	0	-	-	0	-	-	0	-	-	-	0	
Peak Hour Factor	80	80	80	85	85	85	61	61	61	92	92	92	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	50	126	0	0	18	81	20	274	20	0	0	0	

Major/Minor	Major1	Major2	Minor1	
Conflicting Flow All	112	0	-	289 338 128
Stage 1	-	-	-	226 226
Stage 2	-	-	-	63 112
Critical Hdwy	4.12	-	-	6.42 6.52 6.22
Critical Hdwy Stg 1	-	-	-	5.42 5.52
Critical Hdwy Stg 2	-	-	-	5.42 5.52
Follow-up Hdwy	2.218	-	-	3.518 4.018 3.318
Pot Cap-1 Maneuver	1478	0	0	702 583 922
Stage 1	-	0	0	812 717
Stage 2	-	0	0	960 803
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1471	-	-	673 0 920
Mov Cap-2 Maneuver	-	-	-	673 0
Stage 1	-	-	-	782 0
Stage 2	-	-	-	955 0

Approach	EB	WB	NB
HCM Control Delay, s	2.1	0	12.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBLn1	WBLn1	WBLn1
Capacity (veh/h)	777	1471	-	-
HCM Lane V/C Ratio	0.403	0.034	-	-
HCM Control Delay (s)	12.7	7.5	0	-
HCM Lane LOS	B	A	A	-
HCM 95th %tile Q(veh)	2	0.1	-	-

Intersection													
Intersection Delay, s/veh	14.6												
Intersection LOS	B												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↑			↑			↑				↑	
Traffic Vol, veh/h	1	78	270	21	46	0	233	4	12	0	12	6	
Future Vol, veh/h	1	78	270	21	46	0	233	4	12	0	12	6	
Conflicting Peds, #/hr	0.67	0.67	0.67	0.83	0.83	0.83	0.82	0.82	0.64	0.64	0.64	0.64	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	1	116	403	25	55	0	284	5	15	0	19	9	
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0	

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	16.3	9.5	13.6	9.1
HCM LOS	C	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	94%	0%	31%	0%
Vol Thru, %	2%	22%	69%	67%
Vol Right, %	5%	77%	0%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	249	349	67	18
LT Vol	233	1	21	0
Through Vol	4	78	46	12
RT Vol	12	270	0	6
Lane Flow Rate	304	521	81	28
Geometry Grp	1	1	1	1
Degree of Util (X)	0.473	0.666	0.127	0.045
Departure Headway (Hd)	5.613	4.604	5.675	5.771
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	641	792	630	619
Service Time	3.647	2.604	3.718	3.823
HCM Lane V/C Ratio	0.474	0.658	0.129	0.045
HCM Control Delay	13.6	16.3	9.5	9.1
HCM Lane LOS	B	C	A	A
HCM 95th %tile Q	2.5	5.2	0.4	0.1

Intersection						
Int Delay, s/veh	0.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	70	37	2	50	5	2
Future Vol, veh/h	70	37	2	50	5	2
Conflicting Peds, #/hr	0	6	6	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	72	72	82	82	58	58
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	97	51	2	61	9	3

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	155
Stage 1	-	-	129
Stage 2	-	-	66
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1425	794
Stage 1	-	-	897
Stage 2	-	-	957
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1425	789
Mov Cap-2 Maneuver	-	-	789
Stage 1	-	-	892
Stage 2	-	-	956

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	9.4
HCM LOS	-	-	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	822	-	-	1425	-
HCM Lane V/C Ratio	0.015	-	-	0.002	-
HCM Control Delay (s)	9.4	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %ile Q(veh)	0	-	-	0	-

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	3	91	161	95	86	7	129	31	308	17	34	27
Future Volume (veh/h)	3	91	161	95	86	7	129	31	308	17	34	27
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.71	1.00	0.87	1.00	0.97	1.00	0.97	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/hln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	3	102	181	120	109	9	84	105	324	20	40	0
Adj No. of Lanes	1	2	2	2	2	0	1	1	1	0	1	1
Peak Hour Factor	0.89	0.89	0.89	0.79	0.79	0.95	0.95	0.95	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	6	979	1200	176	1063	86	416	437	362	163	325	422
Arrive On Green	0.00	0.28	0.28	0.05	0.32	0.32	0.23	0.23	0.23	0.27	0.27	0.00
Sat Flow, veh/h	1774	3539	1975	3442	3274	265	1774	1863	1543	611	1221	1583
Grp Volume(v), veh/h	3	102	181	120	58	60	84	105	324	60	0	0
Grp Sat Flow(s),veh/hln	1774	1770	987	1721	1770	1769	1774	1863	1543	1832	0	1583
Q Serve(g_s), s	0.2	2.4	5.6	3.9	2.6	2.7	4.3	5.1	22.9	2.8	0.0	0.0
Cycle Q Clear(g_c), s	0.2	2.4	5.6	3.9	2.6	2.7	4.3	5.1	22.9	2.8	0.0	0.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	1.00	1.00
Lane Grp Cap(c), veh/h	6	979	1200	176	574	574	416	437	362	488	0	422
V/C Ratio(X)	0.53	0.10	0.15	0.68	0.10	0.10	0.20	0.24	0.90	0.12	0.00	0.00
Avail Cap(c_a), veh/h	80	1040	1234	263	575	575	457	480	397	488	0	422
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	56.1	30.4	14.8	52.5	26.6	26.6	34.6	35.0	41.8	31.3	0.0	0.0
Incr Delay (d2), s/veh	25.9	0.1	0.2	1.7	0.1	0.1	0.1	0.1	19.8	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	0.0	0.0	0.0	0.0
%ile BackOf(50%),veh/ln	0.1	1.2	2.3	1.9	1.3	1.3	2.1	2.7	11.7	1.5	0.0	0.0
LnGrp Delay(d),s/veh	81.9	30.5	15.0	54.3	26.7	26.7	34.7	35.1	61.6	31.9	0.0	0.0
LnGrp LOS	F	C	B	D	C	C	D	E	E	C	-	-
Approach Vol, veh/h	286	238				513				60		
Approach Delay, s/veh	21.2	40.6				51.7				31.9		
Approach LOS	C	D				D				C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6	8						
Phs Duration (G+Y+Rc), s	10.2	36.0	31.3	4.8	41.5	35.1						
Change Period (Y+Rc), s	4.4	4.9	4.9	4.4	4.9	5.1						
Max Green Setting (Gmax), s	8.6	33.1	29.0	5.1	36.6	30.0						
Max Q Clear Time (g_c+H), s	5.9	7.6	24.9	2.2	4.7	4.8						
Green Ext Time (g_c), s	0.0	4.5	0.5	0.0	4.8	0.2						

Intersection Summary			
HCM 2010 Ctrl Delay	40.3		
HCM 2010 LOS	D		

Notes			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	111	38	247	10	21	4	123	7	0	0	60	44
Future Volume (veh/h)	111	38	247	10	21	4	123	7	0	0	60	44
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.54	1.00	0.44	0.72	1.00	1.00	1.00	1.00	1.00	0.57	0.57
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/hln	1900	1863	1863	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	126	43	281	11	23	4	158	9	0	0	91	67
Adj No. of Lanes	0	1	1	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.88	0.88	0.88	0.92	0.92	0.78	0.78	0.78	0.66	0.66	0.66	0.66
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	382	130	244	104	218	38	288	14	0	0	236	174
Arrive On Green	0.29	0.29	0.29	0.23	0.23	0.23	0.32	0.32	0.00	0.00	0.32	0.32
Sat Flow, veh/h	1339	457	854	454	949	165	599	43	0	0	742	546
Grp Volume(v), veh/h	169	0	281	38	0	0	167	0	0	0	0	158
Grp Sat Flow(s),veh/hln	1796	0	854	1568	0	0	642	0	0	0	0	1288
Q Serve(g_s), s	5.3	0.0	20.5	1.4	0.0	0.0	12.4	0.0	0.0	0.0	0.0	6.8
Cycle Q Clear(g_c), s	5.3	0.0	20.5	1.4	0.0	0.0	19.2	0.0	0.0	0.0	0.0	6.8
Prop In Lane	0.75	1.00	0.29	0.11	0.95	0.00	0.00	0.00	0.00	0.00	0.42	0.42
Lane Grp Cap(c), veh/h	512	0	244	360	0	0	302	0	0	0	0	410
V/C Ratio(X)	0.33	0.00	1.15	0.11	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.39
Avail Cap(c_a), veh/h	512	0	244	404	0	0	316	0	0	0	0	430
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	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	20.3	0.0	25.7	21.9	0.0	0.0	26.3	0.0	0.0	0.0	0.0	19.0
Incr Delay (d2), s/veh	0.8	0.0	105.3	0.3	0.0	0.0	1.0	0.0	0.0	0.0	0.0	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 BackOf(50%),veh/ln	2.7	0.0	11.9	0.6	0.0	0.0	3.2	0.0	0.0	0.0	0.0	2.4
LnGrp Delay(d),s/veh	21.1	0.0	131.0	22.1	0.0	0.0	27.3	0.0	0.0	0.0	0.0	19.3
LnGrp LOS	C	-	F	C	-	-	C	-	-	-	-	B
Approach Vol, veh/h	450	38				167				158		
Approach Delay, s/veh	89.7	22.1				27.3				19.3		
Approach LOS	F	C				C				B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2	4	6	8								
Phs Duration (G+Y+Rc), s	24.5	26.9	20.5	26.9								
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0								
Max Green Setting (Gmax), s	20.5	24.0	18.5	24.0								
Max Q Clear Time (g_c+H), s	22.5	21.2	3.4	8.8								
Green Ext Time (g_c), s	0.0	0.5	0.2	1.7								

Intersection Summary			
HCM 2010 Ctrl Delay	60.0		
HCM 2010 LOS	E		

**HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.**

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	36	1318	247	146	1071	133	118	49	82	212	99	49
Future Volume (veh/h)	36	1318	247	146	1071	133	118	49	82	212	99	49
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.99	1.00	1.00	0.99	1.00	1.00	0.95	1.00	1.00	0.96	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	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	37	1359	255	160	1177	146	133	55	92	223	104	52
Adj No. of Lanes	1	3	1	1	3	1	0	1	1	0	2	0
Peak Hour Factor	0.97	0.97	0.97	0.91	0.91	0.89	0.89	0.89	0.89	0.95	0.95	0.95
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	108	1699	521	188	1927	592	229	95	271	353	229	115
Arrive On Green	0.06	0.33	0.33	0.11	0.38	0.38	0.18	0.18	0.18	0.20	0.20	0.20
Sat Flow, veh/h	1774	5085	1560	1774	5085	1562	1273	526	1507	1774	1154	577
Grp Volume(v), veh/h	37	1359	255	160	1177	146	188	0	92	223	0	156
Grp Sat Flow(s), veh/h	1774	1695	1560	1774	1695	1562	1799	0	1507	1774	0	1731
Q Serve(g_s), s	2.2	27.2	14.6	9.9	20.9	7.2	10.7	0.0	6.0	12.9	0.0	8.9
Cycle Q Clear(g_c), s	2.2	27.2	14.6	9.9	20.9	7.2	10.7	0.0	6.0	12.9	0.0	8.9
Prop In Lane	1.00	1.00	1.00	1.00	1.00	0.71	1.00	1.00	1.00	1.00	0.33	1.00
Lane Grp Cap(c), veh/h	108	1699	521	188	1927	592	324	0	271	353	0	344
V/C Ratio(X)	0.34	0.80	0.49	0.85	0.61	0.25	0.58	0.00	0.34	0.63	0.00	0.45
Avail Cap(c_a), veh/h	158	1699	521	195	1927	592	643	0	538	634	0	619
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.4	33.9	29.7	49.2	28.1	23.8	42.0	0.0	40.1	41.1	0.0	39.5
Incr Delay (d2), s/veh	0.7	4.1	3.3	26.5	1.5	1.0	0.6	0.0	0.3	0.7	0.0	0.3
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/h	1.1	13.3	6.7	6.2	10.1	3.2	5.4	0.0	2.5	6.4	0.0	4.3
LnGrp Delay(d), s/veh	51.1	37.9	32.9	75.7	29.6	24.8	42.7	0.0	40.4	41.8	0.0	39.8
LnGrp LOS	D	D	C	E	C	C	D		D	D		D
Approach Vol, veh/h	1651			1483			280			379		
Approach Delay, s/veh	37.5			34.1			41.9			41.0		
Approach LOS	D			C			D			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+R), s	11.5	47.8		27.4	16.5	42.8		25.2				
Change Period (Y+R), s	4.7	5.4		5.1	4.7	5.4		5.1				
Max Green Setting (Gmax), s	10	39.7		40.0	12	37.4		40.0				
Max Q Clear Time (g_c+H1), s	4.2	22.9		14.9	11.9	29.2		12.7				
Green Ext Time (p_c), s	0.0	14.8		1.5	0.0	7.6		0.9				
Intersection Summary												
HCM 2010 Ctrl Delay	36.8											
HCM 2010 LOS	D											
Notes												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	33	632	91	91	591	79	100	155	104	174	193	45
Future Volume (veh/h)	33	632	91	91	591	79	100	155	104	174	193	45
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.96	1.00	1.00	0.97	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	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	35	665	96	96	622	83	118	182	122	185	205	48
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.85	0.85	0.85	0.85	0.94	0.94	0.94
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	63	778	112	123	892	119	150	581	365	226	926	211
Arrive On Green	0.04	0.25	0.25	0.07	0.29	0.29	0.08	0.28	0.28	0.13	0.33	0.33
Sat Flow, veh/h	1774	3082	444	1774	3120	415	1774	2053	1289	1774	2844	649
Grp Volume(v), veh/h	35	381	380	96	352	353	118	155	149	185	126	127
Grp Sat Flow(s), veh/h	1774	1770	1756	1774	1770	1766	1774	1770	1573	1774	1770	1723
Q Serve(g_s), s	1.3	13.8	13.8	3.6	11.9	12.0	4.4	4.6	5.0	6.8	3.5	3.6
Cycle Q Clear(g_c), s	1.3	13.8	13.8	3.6	11.9	12.0	4.4	4.6	5.0	6.8	3.5	3.6
Prop In Lane	1.00	1.00	0.25	1.00	1.00	0.24	1.00	0.82	1.00	1.00	0.38	1.00
Lane Grp Cap(c), veh/h	63	447	443	123	506	505	150	501	445	226	576	561
V/C Ratio(X)	0.55	0.85	0.86	0.78	0.70	0.70	0.78	0.31	0.33	0.82	0.22	0.23
Avail Cap(c_a), veh/h	132	474	471	145	506	505	195	501	445	251	576	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	23.9	24.0	30.8	21.4	21.4	30.1	18.9	19.1	28.5	16.4	16.5
Incr Delay (d2), s/veh	7.3	13.6	13.9	20.4	4.1	4.2	14.3	1.6	2.0	17.2	0.9	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/h	0.8	8.4	8.4	2.5	6.4	6.4	2.7	2.5	2.4	4.4	1.8	1.8
LnGrp Delay(d), s/veh	39.2	37.5	37.8	51.2	25.5	25.6	44.5	20.5	21.1	45.8	17.3	17.4
LnGrp LOS	D	D	D	D	C	C	D	C	C	D	B	B
Approach Vol, veh/h	796			801			422			438		
Approach Delay, s/veh	37.7			28.7			27.4			29.4		
Approach LOS	D			C			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		3	4	5	6	7	8			
Phs Duration (G+Y+R), s	13.1	23.5	9.1	21.5	10.2	26.4	6.9	23.7				
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	9.5	19.0	5.0	18.0	7.4	21.1	5.0	18.5				
Max Q Clear Time (g_c+H1), s	8.8	7.0	5.6	15.8	6.4	5.6	3.3	14.0				
Green Ext Time (p_c), s	0.0	2.7	0.0	1.0	0.0	3.0	0.0	3.2				
Intersection Summary												
HCM 2010 Ctrl Delay	31.5											
HCM 2010 LOS	C											

Intersection												
Int Delay, s/veh	11.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Vol, veh/h	14	107	30	38	58	40	19	223	26	74	343	11
Future Vol, veh/h	14	107	30	38	58	40	19	223	26	74	343	11
Conflicting Peds, #/hr	1	0	3	3	0	1	2	0	11	11	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	-	-	-	-	-	-	-	-	-	-
Storage Length	-	-	-	-	-	-	100	-	60	100	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0
Peak Hour Factor	92	92	92	83	83	83	82	82	82	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	116	33	46	70	48	23	272	32	79	365	12
Major/Minor	Minor2	Minor1	Major1	Major2								
Conflicting Flow All	902	853	370	929								

Intersection												
Int Delay, s/veh 2.7												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	6	18	5	5	40	9	274	6	32	310	17
Future Vol, veh/h	13	6	18	5	5	40	9	274	6	32	310	17
Conflicting Peds, #/hr	4	0	1	1	0	4	12	0	10	10	0	12
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	60	100	-	60
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-	-	-	0	-	-	-	0
Peak Hour Factor	62	62	62	61	61	61	80	80	80	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	10	29	8	8	66	11	343	8	40	383	21

Major/Minor	Minor2	Minor1	Major1	Major2
Conflicting Flow All	880	849	396	857
Stage 1	474	474	-	375
Stage 2	406	375	-	482
Critical Hdwy	7.12	6.52	6.22	7.12
Critical Hdwy Stg 1	6.12	5.52	-	6.12
Critical Hdwy Stg 2	6.12	5.52	-	6.12
Follow-up Hdwy	3.518	4.018	3.318	3.518
Pot Cap-1 Maneuver	268	298	653	277
Stage 1	571	558	-	646
Stage 2	622	617	-	565
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	226	279	645	247
Mov Cap-2 Maneuver	226	279	-	247
Stage 1	559	533	-	634
Stage 2	547	605	-	512

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.6	13.3	0.3	0.7
HCM LOS	C	B	-	-

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBLn1	SBTn1	SBRn1
Capacity (veh/h)	1163	-	-	346	515	1201	-	-
HCM Lane V/C Ratio	0.01	-	-	0.172	0.159	0.033	-	-
HCM Control Delay (s)	8.1	-	-	17.6	13.3	8.1	-	-
HCM Lane LOS	A	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0.6	0.1	-	-

Intersection												
Intersection Delay, s/veh 8.7												
Intersection LOS A												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	92	12	11	80	30	18	46	18	38	59	24
Future Vol, veh/h	7	92	12	11	80	30	18	46	18	38	59	24
Peak Hour Factor	0.83	0.83	0.83	0.85	0.85	0.73	0.73	0.73	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	111	14	13	94	35	25	63	25	48	74	30
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB	NB	EB	WB	SB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB	SB	WB	EB	NB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.7	8.6	8.5	8.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	6%	9%	31%
Vol Thru, %	56%	83%	66%	49%
Vol Right, %	22%	11%	25%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	82	111	121	121
LT Vol	18	7	11	38
Through Vol	46	92	80	59
RT Vol	18	12	30	24
Lane Flow Rate	112	134	142	151
Geometry Grp	1	1	1	1
Degree of Util (X)	0.146	0.174	0.181	0.196
Departure Headway (Hd)	4.677	4.676	4.589	4.66
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	765	765	780	768
Service Time	2.719	2.715	2.629	2.7
HCM Lane V/C Ratio	0.146	0.175	0.182	0.197
HCM Control Delay	8.5	8.7	8.6	8.8
HCM Lane LOS	A	A	A	A
HCM 95th %tile Q	0.5	0.6	0.7	0.7

Intersection												
Intersection Delay, s/veh 8.7												
Intersection LOS A												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	92	12	11	80	30	18	46	18	38	59	24
Future Vol, veh/h	7	92	12	11	80	30	18	46	18	38	59	24
Peak Hour Factor	0.83	0.83	0.83	0.85	0.85	0.73	0.73	0.73	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	111	14	13	94	35	25	63	25	48	74	30
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB	NB	EB	WB	SB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB	SB	WB	EB	NB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.7	8.6	8.5	8.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	6%	9%	31%
Vol Thru, %	56%	83%	66%	49%
Vol Right, %	22%	11%	25%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	82	111	121	121
LT Vol	18	7	11	38
Through Vol	46	92	80	59
RT Vol	18	12	30	24
Lane Flow Rate	112	134	142	151
Geometry Grp	1	1	1	1
Degree of Util (X)	0.146	0.174	0.181	0.196
Departure Headway (Hd)	4.677	4.676	4.589	4.66
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	765	765	780	768
Service Time	2.719	2.715	2.629	2.7
HCM Lane V/C Ratio	0.146	0.175	0.182	0.197
HCM Control Delay	8.5	8.7	8.6	8.8
HCM Lane LOS	A	A	A	A
HCM 95th %tile Q	0.5	0.6	0.7	0.7

Intersection												
Intersection Delay, s/veh 8.7												
Intersection LOS A												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	92	12	11	80	30	18	46	18	38	59	24
Future Vol, veh/h	7	92	12	11	80	30	18	46	18	38	59	24
Peak Hour Factor	0.83	0.83	0.83	0.85	0.85	0.73	0.73	0.73	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	111	14	13	94	35	25	63	25	48	74	30
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB	NB	EB	WB	SB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB	SB	WB	EB	NB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.7	8.6	8.5	8.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	6%	9%	31%
Vol Thru, %	56%	83%	66%	49%
Vol Right, %	22%	11%	25%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	82	111	121	121
LT Vol	18	7	11	38
Through Vol	46	92	80	59
RT Vol	18	12	30	24
Lane Flow Rate	112	134	142	151
Geometry Grp	1	1	1	1
Degree of Util (X)	0.146	0.174	0.181	0.196
Departure Headway (Hd)	4.677	4.676	4.589	4.66
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	765	765	780	768
Service Time	2.719	2.715	2.629	2.7
HCM Lane V/C Ratio	0.146	0.175	0.182	0.197
HCM Control Delay	8.5	8.7	8.6	8.8
HCM Lane LOS	A	A	A	A
HCM 95th %tile Q	0.5	0.6	0.7	0.7

Intersection												
Intersection Delay, s/veh 8.6												
Intersection LOS A												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔		↔		↔		↔		↔		↔	
Traffic Vol, veh/h	10	43	6	10	60	30	15	51	4	41	103	11
Future Vol, veh/h	10	43	6	10	60	30	15	51	4	41	103	11
Peak Hour Factor	0.97	0.97	0.97	0.88	0.88	0.88	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	44	6	11	68	34	20	68	5	55	137	15
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB	WB	NB	SB								
Opposing Approach	WB	EB	SB	NB								
Opposing Lanes	1	1	1	1								
Conflicting Approach Left SB	NB	EB	WB	SB								
Conflicting Lanes Left	1	1	1	1								
Conflicting Approach Right NB	SB	WB	EB	NB								
Conflicting Lanes Right	1	1	1	1								
HCM Control Delay	8.2	8.3	8.2	9								
HCM LOS	A	A	A	A								

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	17%	10%	26%
Vol Thru, %	73%	73%	60%	66%
Vol Right, %	6%	10%	30%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	59	100	155
LT Vol	15	10	10	41
Through Vol	51	43	60	103
RT Vol	4	6	30	11
Lane Flow Rate	93	61	114	207
Geometry Grp	1	1	1	1
Degree of Util (X)	0.119	0.08	0.143	0.256
Departure Headway (Hd)	4.585	4.736	4.54	4.461
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	782	756	790	806
Service Time	2.613	2.768	2.569	2.486
HCM Lane V/C Ratio	0.119	0.081	0.144	0.257
HCM Control Delay	8.2	8.2	8.3	9
HCM Lane LOS	A	A	A	A
HCM 95th-ile Q	0.4	0.3	0.5	1

Intersection												
Intersection Delay, s/veh 14.1												
Intersection LOS B												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔		↔		↔		↔		↔		↔	
Traffic Vol, veh/h	27	52	27	34	60	63	15	249	45	56	186	46
Future Vol, veh/h	27	52	27	34	60	63	15	249	45	56	186	46
Peak Hour Factor	0.95	0.95	0.95	0.80	0.80	0.80	0.93	0.93	0.93	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	55	28	43	75	79	16	268	48	64	211	52
Number of Lanes	0	1	1	0	1	0	0	1	0	0	1	1
Approach	EB	WB	NB	SB								
Opposing Approach	WB	EB	SB	NB								
Opposing Lanes	1	2	2	1								
Conflicting Approach Left SB	NB	EB	WB	SB								
Conflicting Lanes Left	2	1	2	1								
Conflicting Approach Right NB	SB	WB	EB	NB								
Conflicting Lanes Right	1	2	1	2								
HCM Control Delay	10.7	13.1	16.5	13.5								
HCM LOS	B	B	C	B								


Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	5%	34%	0%	22%	23%	0%
Vol Thru, %	81%	66%	0%	38%	77%	0%
Vol Right, %	15%	0%	100%	40%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	309	79	27	157	242	46
LT Vol	15	27	0	34	56	0
Through Vol	249	52	0	60	186	0
RT Vol	45	0	27	63	0	46
Lane Flow Rate	332	83	28	196	275	52
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.557	0.162	0.048	0.354	0.472	0.078
Departure Headway (Hd)	6.033	7.029	6.14	6.493	6.174	5.346
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	595	507	579	551	583	667
Service Time	4.089	4.81	3.92	4.562	3.931	3.102
HCM Lane V/C Ratio	0.558	0.164	0.048	0.356	0.472	0.078
HCM Control Delay	16.5	11.2	9.2	13.1	14.4	8.6
HCM Lane LOS	C	B	A	B	B	A
HCM 95th-ile Q	3.4	0.6	0.2	1.6	2.5	0.3

Intersection												
Intersection Delay, s/veh 8.7												
Intersection LOS A												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔		↔		↔		↔		↔		↔	
Traffic Vol, veh/h	7	92	12	11	80	30	18	46	18	38	59	24
Future Vol, veh/h	7	92	12	11	80	30	18	46	18	38	59	24
Peak Hour Factor	0.83	0.83	0.83	0.85	0.85	0.73	0.73	0.73	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	111	14	13	94	35	25	63	25	48	74	30
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB	WB	NB	SB								
Opposing Approach	WB	EB	SB	NB								
Opposing Lanes	1	1	1	1								
Conflicting Approach Left SB	NB	EB	WB	SB								
Conflicting Lanes Left	1	1	1	1								
Conflicting Approach Right NB	SB	WB	EB	NB								
Conflicting Lanes Right	1	1	1	1								
HCM Control Delay	8.7	8.6	8.5	8.8								
HCM LOS	A	A	A	A								

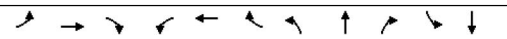
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	6%	9%	31%
Vol Thru, %	56%	83%	66%	49%
Vol Right, %	22%	11%	25%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	82	111	121	121
LT Vol	18	7	11	38
Through Vol	46	92	80	59
RT Vol	18	12	30	24
Lane Flow Rate	112	134	142	151
Geometry Grp	1	1	1	1
Degree of Util (X)	0.146	0.174	0.181	0.196
Departure Headway (Hd)	4.677	4.676	4.589	4.66
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	765	765	780	768
Service Time	2.719	2.715	2.629	2.7
HCM Lane V/C Ratio	0.146	0.175	0.182	0.197
HCM Control Delay	8.5	8.7	8.6	8.8
HCM Lane LOS	A	A	A	A
HCM 95th-ile Q	0.5	0.6	0.7	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔		↔		↔		↔		↔		↔	
Traffic Volume (veh/h)	75	78	18	35	67	81	39	198	31	116	264	38
Future Volume (veh/h)	75	78	18	35	67	81	39	198	31	116	264	38
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.96	0.98		0.95	0.98		0.95
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	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	85	89	20	37	71	86	42	213	33	121	275	40
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	2	0
Peak Hour Factor	0.88	0.88	0.88	0.94	0.94	0.94	0.93	0.93	0.93	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	493	436	98	542	224	271	577	627	97	561	1237	177
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1212	1466	329	1270	752	910	1042	1563	242	1109	3085	442
Grp Volume(v), veh/h	85	0	109	37	0	157	42	0	246	121	156	159
Grp Sat Flow(s), veh/h/ln/212	0	1795	1270	0	1662	1042	0	1805	1109	1770	1758	
Q Serve(g_s), s	1.9	0.0	1.5	0.7	0.0	2.4	0.9	0.0	3.1	2.8	1.9	1.9
Cycle Q Clear(g_c), s	4.3	0.0	1.5	2.2	0.0	2.4	2.8	0.0	3.1	5.8	1.9	1.9
Prop In Lane	1.00		0.18	1.00		0.55	1.00		0.13	1.00		0.25
Lane Grp Cap(c), veh/h	493		534	542		494	577		724	561		709
V/C Ratio(X)	0.17	0.00	0.20	0.07	0.00	0.32	0.07	0.00	0.34	0.22	0.22	0.23
Avail Cap(c_a), veh/h	1181		1553	1262		1438	1029		1506	1042		1476
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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.5	0.0	8.5	9.4	0.0	8.9	7.3	0.0	6.8	8.8	6.4	6.4
Incr Delay (d2), s/veh	0.2	0.0	0.2	0.1	0.0	0.5	0.1	0.0	0.3	0.2	0.2	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/h	0.0	0.8	0.3	0.0	1.2	0.3	0.0	1.6	0.9	0.9	1.0	1.0
LnGrp Delay(d), s/veh	10.7	0.0	8.8	9.4	0.0	9.3	7.4	0.0	7.1	9.0	6.6	6.6
LnGrp LOS	B	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h	194			194			288			436		
Approach Delay, s/veh	9.6			9.4			7.1			7.2		
Approach LOS	A											

Intersection							
Int Delay, s/veh 5.6							
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		↔	↔	↔	↔	↔	
Traffic Vol, veh/h	114	220	250	86	95	110	
Future Vol, veh/h	114	220	250	86	95	110	
Conflicting Peds, #/hr	23	0	0	23	1	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	Stop	
Storage Length	-	-	-	-	150	0	
Veh in Median Storage, #	-	0	0	-	0	-	
Grade, %	-	0	0	-	0	-	
Peak Hour Factor	87	87	85	85	87	87	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	131	253	294	101	109	126	
Major/Minor							
Major1	Major2	Minor2					
Conflicting Flow All	418	0	-	0	884	368	
Stage 1	-	-	-	-	368	-	
Stage 2	-	-	-	-	516	-	
Critical Hdwy	4.12	-	-	-	6.42	6.22	
Critical Hdwy Stg 1	-	-	-	-	5.42	-	
Critical Hdwy Stg 2	-	-	-	-	5.42	-	
Follow-up Hdwy	2.218	-	-	-	3.518	3.318	
Pot Cap-1 Maneuver	1141	-	-	-	316	677	
Stage 1	-	-	-	-	700	-	
Stage 2	-	-	-	-	599	-	
Platoon blocked, %	-	-	-	-	-	-	
Mov Cap-1 Maneuver	1141	-	-	-	262	662	
Mov Cap-2 Maneuver	-	-	-	-	262	-	
Stage 1	-	-	-	-	685	-	
Stage 2	-	-	-	-	507	-	
Approach							
EB	WB	SB					
HCM Control Delay, s	2.9	0	19.3				
HCM LOS			C				
Minor Lane/Major Mvmt							
EBL	EBT	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	1141	-	-	-	262	662	
HCM Lane V/C Ratio	0.115	-	-	-	0.417	0.191	
HCM Control Delay (s)	8.6	0	-	-	28.2	11.7	
HCM Lane LOS	A	A	-	-	D	B	
HCM 95th %tile Q (veh)	0.4	-	-	-	1.9	0.7	




Movement	EBL2	EBL	EBT	WBT	WBR	WBR2	SBL2	SBL	SBR	SWL	SWR	SWR2			
Lane Configurations			↔	↔	↔	↔	↔	↔	↔	↔	↔	↔			
Traffic Volume (vph)	20	67	232	198	18	82	15	53	52	59	89	8			
Future Volume (vph)	20	67	232	198	18	82	15	53	52	59	89	8			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900			
Total Lost time (s)	-	-	4.9	4.9	-	-	-	4.9	4.9	-	-	-			
Lane Util. Factor	-	-	1.00	1.00	-	-	-	1.00	1.00	-	-	-			
Flpb, ped/bikes	-	-	1.00	0.96	-	-	-	1.00	1.00	-	-	-			
Flpb, ped/bikes	-	-	0.98	1.00	-	-	-	1.00	1.00	-	-	-			
Frt	-	-	1.00	0.95	-	-	-	1.00	0.85	-	-	-			
Fit Protected	-	-	0.99	1.00	-	-	-	0.95	1.00	-	-	-			
Satd. Flow (prot)	-	-	1809	1705	-	-	-	1770	1583	-	-	-			
Fit Permitted	-	-	0.82	1.00	-	-	-	0.95	1.00	-	-	-			
Satd. Flow (perm)	-	-	1505	1705	-	-	-	1770	1583	-	-	-			
Peak-hour factor, PHF	0.87	0.87	0.87	0.88	0.88	0.88	0.92	0.92	0.92	0.89	0.89	0.89			
Adj. Flow (vph)	23	77	267	225	20	93	16	58	57	66	100	9			
RTOR Reduction (vph)	0	0	0	13	0	0	0	0	50	78	0	0			
Lane Group Flow (vph)	0	0	367	325	0	0	0	74	7	97	0	0			
Confl. Peds. (#/hr)	29	32	-	-	29	32	32	9	4	9	29	4			
Confl. Bikes (#/hr)	-	-	-	-	2	8	-	1	-	-	2	1			
Turn Type							Perm	Perm	NA	NA	Prot	Prot	Prot	Prot	
Protected Phases	-	-	2	6	-	-	3	3	3	4	-	-	-	-	-
Permitted Phases							2	2	-	-	-	-	-	-	-
Actuated Green, G (s)	-	-	27.3	27.3	-	-	7.0	7.0	9.3	-	-	-			
Effective Green, g (s)	-	-	27.3	27.3	-	-	7.0	7.0	9.3	-	-	-			
Actuated g/C Ratio	-	-	0.47	0.47	-	-	0.12	0.12	0.16	-	-	-			
Clearance Time (s)	-	-	4.9	4.9	-	-	4.9	4.9	4.9	-	-	-			
Vehicle Extension (s)	-	-	2.6	2.6	-	-	2.0	2.0	2.0	-	-	-			
Lane Grp Cap (vph)	-	-	704	798	-	-	212	190	256	-	-	-			
v/s Ratio Prot	-	-	0.19	-	-	-	c0.04	0.00	c0.06	-	-	-			
v/s Ratio Perm	-	-	-	c0.24	-	-	-	-	-	-	-	-			
v/c Ratio	-	-	0.52	0.41	-	-	0.35	0.04	0.38	-	-	-			
Uniform Delay, d1	-	-	10.9	10.2	-	-	23.6	22.7	21.9	-	-	-			
Progression Factor	-	-	1.00	1.00	-	-	1.00	1.00	1.00	-	-	-			
Incremental Delay, d2	-	-	0.6	0.3	-	-	0.4	0.0	0.3	-	-	-			
Delay (s)	-	-	11.5	10.5	-	-	23.9	22.7	22.3	-	-	-			
Level of Service	-	-	B	B	-	-	C	C	C	-	-	-			
Approach Delay (s)	-	-	11.5	10.5	-	-	23.4	22.3	22.3	-	-	-			
Approach LOS	-	-	B	B	-	-	C	C	C	-	-	-			
Intersection Summary															
HCM 2000 Control Delay	14.5			HCM 2000 Level of Service			B								
HCM 2000 Volume to Capacity ratio	0.46														
Actuated Cycle Length (s)	58.3			Sum of lost time (s)			14.7								
Intersection Capacity Utilization	72.5%			ICU Level of Service			C								
Analysis Period (min)	15														
c Critical Lane Group															




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔		↔	↔		↔	↔		↔	↔
Traffic Volume (veh/h)	0	134	56	143	207	24	66	6	141	5	12	4
Future Volume (veh/h)	0	134	56	143	207	24	66	6	141	5	12	4
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.97	1.00	1.00	0.98	0.96	1.00	0.93	0.98	1.00	0.95	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/hln	1900	1863	1900	1900	1863	1900	1863	1900	1863	1900	1863	1900
Adj Flow Rate, veh/h	0	168	70	170	246	29	88	8	188	9	21	7
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.80	0.80	0.80	0.84	0.84	0.84	0.75	0.75	0.75	0.58	0.58	0.58
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	236	99	203	294	35	172	35	235	142	279	79
Arrive On Green	0.00	0.19	0.19	0.30	0.30	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	0	1237	515	689	998	118	352	143	969	246	1148	325
Grp Volume(v), veh/h	0	0	238	445	0	0	284	0	0	37	0	0
Grp Sat Flow(s), veh/hln	0	0	1752	1805	0	0	1464	0	0	1719	0	0
Q Serve(g_s), s	0.0	0.0	6.9	12.5	0.0	0.0	7.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	6.9	12.5	0.0	0.0	9.8	0.0	0.0	0.9	0.0	0.0
Prop In Lane	0.00	0.29	0.38	0.07	0.31	0.66	0.24	0.19				
Lane Grp Cap(c), veh/h	0	0	335	532	0	0	442	0	0	500	0	0
V/C Ratio(X)	0.00	0.00	0.71	0.84	0.00	0.00	0.64	0.00	0.00	0.07	0.00	0.00
Avail Cap(c_a), veh/h	0	0	572	663	0	0	562	0	0	631	0	0
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	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	20.5	17.9	0.0	0.0	19.2	0.0	0.0	15.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	3.0	7.7	0.0	0.0	0.7	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/h	0.0	0.0	3.6	7.3	0.0	0.0	4.0	0.0	0.0	0.4	0.0	0.0
LnGrp Delay(d), s/veh	0.0	0.0	23.5	25.6	0.0	0.0	19.8	0.0	0.0	15.9	0.0	0.0
LnGrp LOS			C	C			B			B		
Approach Vol, veh/h	238			445			284			37		
Approach Delay, s/veh	23.5			25.6			19.8			15.9		
Approach LOS	C			C			B			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2	4	6	8								
Phs Duration (G+Y+R), s	20.9	18.1	15.3	18.1								
Change Period (Y+R), s	4.9	4.9	4.9	4.9								
Max Green Setting (Gmax), s	19.9	17.7	17.7	17.7								
Max Q Clear Time (g_c+H1), s	14.5	11.8	8.9	2.9								
Green Ext Time (g_c), s	1.4	0.7	0.9	1.2								
Intersection Summary												
HCM 2010 Ctrl Delay	23.1											
HCM 2010 LOS	C											

\* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	←	←↑	←↓	←	←↑	←↓	←	←↑	←↓	←	←↑	←↓	
Traffic Volume (vph)	235	285	495	45	260	90	185	135	60	50	45	125	
Future Volume (vph)	235	285	495	45	260	90	185	135	60	50	45	125	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.7	4.9	5.1	4.7	4.9	5.1	4.7	4.9	5.1	4.7	4.9	5.1	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	
Frb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	0.98	1.00	
Fpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	0.98	1.00	
Ft	1.00	1.00	0.85	1.00	0.96	1.00	1.00	0.85	1.00	0.85	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	0.95	0.99	1.00	0.97	1.00	0.97	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3403	1681	1755	1563	1815	1558	1815	1558	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	0.95	0.99	1.00	0.97	1.00	0.97	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3403	1681	1755	1563	1815	1558	1815	1558	
Peak-hour factor, PHF	0.96	0.96	0.96	0.79	0.79	0.79	0.80	0.80	0.80	0.94	0.94	0.94	
Adj. Flow (vph)	245	297	516	57	329	114	231	169	75	53	48	133	
RTOR Reduction (vph)	0	0	212	0	21	0	0	0	59	0	0	115	
Lane Group Flow (vph)	245	297	304	57	422	0	196	204	16	0	101	18	
Confl. Peds. (#/hr)							5					5	
Confl. Bikes (#/hr)								1					
Turn Type	Prot	NA	pm+ov	Prot	NA	Split	NA	Perm	Split	NA	Perm		
Protected Phases	1	6	4	5	2	4	4		8	8			
Permitted Phases			6						4			8	
Actuated Green, G (s)	19.2	35.2	54.7	5.6	21.6	19.5	19.5	19.5	12.7	12.7	12.7	12.7	
Effective Green, g (s)	19.2	35.2	54.7	5.6	21.6	19.5	19.5	19.5	12.7	12.7	12.7	12.7	
Actuated g/C Ratio	0.21	0.38	0.59	0.06	0.23	0.21	0.21	0.21	0.14	0.14	0.14	0.14	
Clearance Time (s)	4.7	4.9	5.1	4.7	4.9	5.1	5.1	5.1	5.1	5.1	5.1	5.1	
Vehicle Extension (s)	2.0	4.3	2.0	2.0	4.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	366	1342	933	106	792	353	368	328	248	213	248	213	
v/s Ratio Prot	c0.14	0.08	0.07	0.03	c0.12	c0.12	0.12		c0.06				
v/s Ratio Perm			0.12					0.01				0.01	
v/c Ratio	0.67	0.22	0.33	0.54	0.53	0.56	0.55	0.05	0.41	0.09	0.41	0.09	
Uniform Delay, d1	33.9	19.5	9.7	42.3	31.2	32.8	32.8	29.2	36.6	35.0	36.6	35.0	
Progression 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	
Incremental Delay, d2	3.6	0.1	0.1	2.6	1.0	1.1	1.0	0.0	0.4	0.1	0.4	0.1	
Delay (s)	37.5	19.6	9.8	45.0	32.2	33.8	33.8	29.3	37.0	35.0	37.0	35.0	
Level of Service	D	B	A	D	C	C	C	C	D	D	D	D	
Approach Delay (s)	18.9			33.6			33.1		35.9				
Approach LOS	B			C			C		D				
<b>Intersection Summary</b>													
HCM 2000 Control Delay	26.9			HCM 2000 Level of Service				C					
HCM 2000 Volume to Capacity ratio	0.55												
Actuated Cycle Length (s)	92.8						Sum of lost time (s)						19.8
Intersection Capacity Utilization	57.4%			ICU Level of Service				B					
Analysis Period (min)	15												
c Critical Lane Group													



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	←	←↑	←↓	←	←↑	←↓
Traffic Volume (veh/h)	52	302	224	72	76	87
Future Volume (veh/h)	52	302	224	72	76	87
Number	5	2	6	16	7	14
Initial Q (Ob), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/m	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	60	347	243	78	78	90
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	0.87	0.87	0.92	0.92	0.97	0.97
Percent Heavy Veh. %	2	2	2	2	2	2
Cap, veh/h	92	1951	960	301	221	197
Arrive On Green	0.05	0.55	0.36	0.36	0.12	0.12
Sat Flow, veh/h	1774	3632	2742	829	1774	1583
Grp Volume(v), veh/h	60	347	160	161	78	90
Grp Sat Flow(s),veh/h/m	1774	1770	1770	1708	1774	1583
Q Serve(g_s), s	1.1	1.6	2.0	2.1	1.3	1.7
Cycle Q Clear(g_c), s	1.1	1.6	2.0	2.1	1.3	1.7
Prop In Lane	1.00		0.49	1.00	1.00	
Lane Grp Cap(c), veh/h	92	1951	642	619	221	197
V/C Ratio(X)	0.66	0.18	0.25	0.26	0.35	0.46
Avail Cap(c_a), veh/h	310	3706	1301	1256	1161	1036
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.9	3.6	7.2	7.2	12.9	13.0
Incr Delay (d2), s/veh	2.9	0.1	0.4	0.5	0.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/m	0.7	1.1	1.1	1.1	0.7	1.5
LnGrp Delay(d),s/veh	17.9	3.7	7.6	7.7	13.2	13.6
LnGrp LOS	B	A	A	A	B	B
Approach Vol, veh/h	407		321		168	
Approach Delay, s/veh	5.8		7.6		13.4	
Approach LOS	A		A		B	
<b>Timer</b>						
Assigned Phs	1	2	3	4	5	6
Phs Duration (G+Y+R), s	2	4	4	5	6	7
Change Period (Y+R), s	23.2	8.9	6.1	17.1		
Max Green Setting (Gmax), s	5.5	4.9	4.4	5.5		
Max Q Clear Time (g_c+H1), s	33.6	21.0	5.6	23.6		
Green Ext Time (g_e), s	3.6	3.7	3.1	4.1		
Max Ext Time (p_e), s	8.8	0.2	0.0	7.2		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay	7.9					
HCM 2010 LOS	A					

<b>Intersection</b>						
Int Delay, s/veh	11.9					
<b>Movement</b>						
	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	←↑	←↓	←↑	←↓	←↑	←↓
Traffic Vol, veh/h	295	132	246	199	78	156
Future Vol, veh/h	295	132	246	199	78	156
Conflicting Peds, #/hr	0	8	8	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	- None	- None	- None	- None	- None	- None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	90	90	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	351	157	273	221	82	164
<b>Major/Minor</b>						
	Major1	Major2	Minor1			
Conflicting Flow All	0	0	516	0	1096	262
Stage 1	-	-	-	-	438	-
Stage 2	-	-	-	-	658	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1046	-	208	737
Stage 1	-	-	-	-	617	-
Stage 2	-	-	-	-	478	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1046	-	145	731
Mov Cap-2 Maneuver	-	-	-	-	145	-
Stage 1	-	-	-	-	613	-
Stage 2	-	-	-	-	335	-
<b>Approach</b>						
	EB	WB	NB			
HCM Control Delay, s	0	5.5	49.2			
HCM LOS			E			
<b>Minor Lane/Major Mvmt</b>						
	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	311	-	-	1046	-	
HCM Lane V/C Ratio	0.792	-	-	0.261	-	
HCM Control Delay (s)	49.2	-	-	9.7	0.4	
HCM Lane LOS	E	-	-	A	A	
HCM 95th %tile Q(veh)	6.4	-	-	1.1	-	





Intersection						
Intersection Delay, s/veh	8					
Intersection LOS	A					

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	↑
Traffic Vol, veh/h	14	0	0	16	135	7
Future Vol, veh/h	14	0	0	16	135	7
Peak Hour Factor	0.46	0.46	0.75	0.75	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	0	0	21	153	8
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB	WB	
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.5	7.4	8.2
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	95%	0%	0%
Vol Thru, %	0%	100%	100%
Vol Right, %	5%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	142	14	16
LT Vol	135	0	0
Through Vol	0	14	16
RT Vol	7	0	0
Lane Flow Rate	161	30	21
Geometry Grp	1	1	1
Degree of Util (X)	0.188	0.036	0.025
Departure Headway (Hd)	4.184	4.233	4.24
Convergence, Y/N	Yes	Yes	Yes
Cap	857	832	830
Service Time	2.213	2.328	2.338
HCM Lane V/C Ratio	0.188	0.036	0.025
HCM Control Delay	8.2	7.5	7.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.7	0.1	0.1

Intersection												
Intersection Delay, s/veh	8.5											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑			↑						↑	↑
Traffic Vol, veh/h	0	47	9	14	28	0	0	0	0	87	72	28
Future Vol, veh/h	0	47	9	14	28	0	0	0	0	87	72	28
Peak Hour Factor	0.85	0.85	0.85	0.75	0.75	0.75	0.92	0.92	0.92	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	55	11	19	37	0	0	0	0	107	89	35
Number of Lanes	0	1	0	0	1	0	0	0	0	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB		EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	7.8	8	8.8
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	33%	47%
Vol Thru, %	84%	67%	39%
Vol Right, %	16%	0%	15%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	56	42	187
LT Vol	0	14	87
Through Vol	47	28	72
RT Vol	9	0	28
Lane Flow Rate	66	56	231
Geometry Grp	1	1	1
Degree of Util (X)	0.081	0.072	0.266
Departure Headway (Hd)	4.427	4.6	4.148
Convergence, Y/N	Yes	Yes	Yes
Cap	814	783	854
Service Time	2.43	2.603	2.232
HCM Lane V/C Ratio	0.081	0.072	0.27
HCM Control Delay	7.8	8	8.8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.3	0.2	1.1

Intersection												
Intersection Delay, s/veh	8											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑			↑			↑	↑			
Traffic Vol, veh/h	24	113	0	0	25	44	16	77	13	0	0	0
Future Vol, veh/h	24	113	0	0	25	44	16	77	13	0	0	0
Peak Hour Factor	0.89	0.89	0.89	0.80	0.80	0.80	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	127	0	0	31	55	17	84	14	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB	WB	
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.3	7.4	8.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	15%	18%	0%
Vol Thru, %	73%	82%	36%
Vol Right, %	12%	0%	64%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	106	137	69
LT Vol	16	24	0
Through Vol	77	113	25
RT Vol	13	0	44
Lane Flow Rate	115	154	86
Geometry Grp	1	1	1
Degree of Util (X)	0.141	0.181	0.095
Departure Headway (Hd)	4.414	4.238	3.983
Convergence, Y/N	Yes	Yes	Yes
Cap	817	833	904
Service Time	2.418	2.332	1.989
HCM Lane V/C Ratio	0.141	0.185	0.095
HCM Control Delay	8.1	8.3	7.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0.7	0.3

Intersection												
Intersection Delay, s/veh	10.8											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑			↑			↑	↑			↑
Traffic Vol, veh/h	9	155	125	34	43	1	170	11	50	6	8	6
Future Vol, veh/h	9	155	125	34	43	1	170	11	50	6	8	6
Peak Hour Factor	0.77	0.77	0.77	0.86	0.86	0.86	0.95	0.95	0.95	0.62	0.62	0.62
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	201	162	40	50	1	179	12	53	10	13	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB	NB	EB	WB	
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	SB	WB	EB	
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.5	9	10.8	8.6
HCM LOS	B	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	74%	3%	44%	30%
Vol Thru, %	5%	54%	55%	40%
Vol Right, %	22%	43%	1%	30%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	231	289	78	20
LT Vol	170	9	34	6
Through Vol	11	155	43	8
RT Vol	50	125	1	6
Lane Flow Rate	243	375	91	32
Geometry Grp	1	1	1	1
Degree of Util (X)	0.342	0.47	0.13	0.047
Departure Headway (Hd)	5.065	4.508	5.166	5.242
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	705	796	687	675
Service Time	3.14	2.563	3.245	3.341
HCM Lane V/C Ratio	0.345	0.471	0.132	0.047
HCM Control Delay	10.8	11.5	9	8.6
HCM Lane LOS	B	B	A	A
HCM 95th-tile Q	1.5	2.5	0.4	0.1

Table with columns: Intersection, Int Delay, Movement (EBT, EBR, WBL, WBT, NBL, NBR), Lane Configurations, Traffic Vol, Future Vol, Conflicting Peds, Sign Control, RT Channelized, Storage Length, Veh in Median Storage, Grade, Peak Hour Factor, Heavy Vehicles, Mvmt Flow, Major/Minor, Conflicting Flow, Critical Hdwy, Follow-up Hdwy, Pot Cap-1 Maneuver, Platoon blocked, Mov Cap-1 Maneuver, Mov Cap-2 Maneuver, Approach, HCM Control Delay, HCM LOS, Minor Lane/Major Mvmt, Capacity, HCM Lane V/C Ratio, HCM Control Delay, HCM Lane LOS, HCM 95th %ile Q(veh).

Table with columns: Movement, Lane Configurations, Traffic Volume, Future Volume, Number, Initial Q, Ped-Bike Adj, Parking Bus, Adj Sat Flow, Adj Flow Rate, Adj No. of Lanes, Peak Hour Factor, Percent Heavy Veh, Cap, Arrive On Green, Sat Flow, Grp Volume, Grp Sat Flow, Q Serve, Cycle Q Clear, Prop In Lane, Lane Grp Cap, V/C Ratio, Avail Cap, HCM Platoon Ratio, Upstream Filter, Uniform Delay, Incr Delay, Initial Q Delay, %ile BackOf, LnGrp Delay, LnGrp LOS, Approach Vol, Approach Delay, Approach LOS, Timer, Assigned Phs, Phs Duration, Change Period, Max Green Setting, Max Q Clear Time, Green Ext Time.

User approved volume balancing among the lanes for turning movement.

Table with columns: Movement, Lane Configurations, Traffic Volume, Future Volume, Number, Initial Q, Ped-Bike Adj, Parking Bus, Adj Sat Flow, Adj Flow Rate, Adj No. of Lanes, Peak Hour Factor, Percent Heavy Veh, Cap, Arrive On Green, Sat Flow, Grp Volume, Grp Sat Flow, Q Serve, Cycle Q Clear, Prop In Lane, Lane Grp Cap, V/C Ratio, Avail Cap, HCM Platoon Ratio, Upstream Filter, Uniform Delay, Incr Delay, Initial Q Delay, %ile BackOf, LnGrp Delay, LnGrp LOS, Approach Vol, Approach Delay, Approach LOS, Timer, Assigned Phs, Phs Duration, Change Period, Max Green Setting, Max Q Clear Time, Green Ext Time.

Diagram showing intersection layout with arrows for movements. Table with columns: Movement, EBL, EBT, EBR, WBL, WBT, WBR, NBL, NBT, NBR, SBL, SBT, SBR. Rows include Lane Configurations, Traffic Volume, Future Volume, Number, Initial Q, Ped-Bike Adj, Parking Bus, Adj Sat Flow, Adj Flow Rate, Adj No. of Lanes, Peak Hour Factor, Percent Heavy Veh, Cap, Arrive On Green, Sat Flow, Grp Volume, Grp Sat Flow, Q Serve, Cycle Q Clear, Prop In Lane, Lane Grp Cap, V/C Ratio, Avail Cap, HCM Platoon Ratio, Upstream Filter, Uniform Delay, Incr Delay, Initial Q Delay, %ile BackOfQ, LnGrp Delay, LnGrp LOS, Approach Vol, Approach Delay, Approach LOS, Timer, Assigned Phs, Phs Duration, Change Period, Max Green Setting, Max Q Clear Time, Green Ext Time.

Intersection Summary table. Columns: Movement, EBL, EBT, EBR, WBL, WBT, WBR, NBL, NBT, NBR, SBL, SBT, SBR. Rows include Lane Configurations, Traffic Vol, Future Volume, Conflicting Peds, Sign Control, RT Channelized, Storage Length, Veh in Median Storage, Grade, Peak Hour Factor, Heavy Vehicles, Mvmt Flow, Major/Minor, Conflicting Flow All, Stage 1, Stage 2, Critical Hdwy, Critical Hdwy Stg 1, Critical Hdwy Stg 2, Follow-up Hdwy, Pot Cap-1 Maneuver, Stage 1, Stage 2, Platoon blocked, Mov Cap-1 Maneuver, Mov Cap-2 Maneuver, Stage 1, Stage 2, Approach, HCM Control Delay, HCM LOS, Minor Lane/Major Mvmt, Capacity, HCM Lane V/C Ratio, HCM Control Delay, HCM Lane LOS, HCM 95th %ile Q(veh).

Table with columns: Movement, EBL, EBT, EBR, WBL, WBT, WBR, NBL, NBT, NBR, SBL, SBT, SBR. Rows include Lane Configurations, Traffic Volume, Future Volume, Number, Initial Q, Ped-Bike Adj, Parking Bus, Adj Sat Flow, Adj Flow Rate, Adj No. of Lanes, Peak Hour Factor, Percent Heavy Veh, Cap, Arrive On Green, Sat Flow, Grp Volume, Grp Sat Flow, Q Serve, Cycle Q Clear, Prop In Lane, Lane Grp Cap, V/C Ratio, Avail Cap, HCM Platoon Ratio, Upstream Filter, Uniform Delay, Incr Delay, Initial Q Delay, %ile BackOfQ, LnGrp Delay, LnGrp LOS, Approach Vol, Approach Delay, Approach LOS, Timer, Assigned Phs, Phs Duration, Change Period, Max Green Setting, Max Q Clear Time, Green Ext Time.

Table with columns: Movement, EBL, EBT, EBR, WBL, WBT, WBR, NBL, NBT, NBR, SBL, SBT, SBR. Rows include Lane Configurations, Traffic Volume, Future Volume, Number, Initial Q, Ped-Bike Adj, Parking Bus, Adj Sat Flow, Adj Flow Rate, Adj No. of Lanes, Peak Hour Factor, Percent Heavy Veh, Cap, Arrive On Green, Sat Flow, Grp Volume, Grp Sat Flow, Q Serve, Cycle Q Clear, Prop In Lane, Lane Grp Cap, V/C Ratio, Avail Cap, HCM Platoon Ratio, Upstream Filter, Uniform Delay, Incr Delay, Initial Q Delay, %ile BackOfQ, LnGrp Delay, LnGrp LOS, Approach Vol, Approach Delay, Approach LOS, Timer, Assigned Phs, Phs Duration, Change Period, Max Green Setting, Max Q Clear Time, Green Ext Time.





MOVEMENT SUMMARY

Site: 101 [2020 PM]

New Site Roundabout

Table with 10 columns: Mov ID, OD Mov, Demand Total, Flows HV %, Deg. Sat'n v/c, Average Delay, Level of Service, 95% Back of Queue Veh/den, Prop. Queued, Effective Stop Rate, Average Speed. Rows include East Iris Ave, North Oro Vista Rd, South West Oro Vista Rd, and All Vehicles.

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Roundabout LOS Method: Same as Signalised Intersections.

SIDRAINTERSECTION 7.0 | Copyright © 2000-2017 Aekedj and Associates Pty Ltd | sidrasolutions.com Organisation: PARSONS BRINCKERHOFF | Processed: Monday, August 13, 2018 5:04:48 PM Project: C:\Users\USY\H66875\AppData\Local\Microsoft\Windows\InetCache\Content\Outlook\33068178\His Ave - Oro vista.sip7



Table with 14 columns for movements and 14 columns for metrics. Rows include Lane Configurations, Traffic Volume (vph), Future Volume (vph), Ideal Flow (vphpl), Total Lost time (s), Lane Util. Factor, Frp, ped/bikes, Flt, Sat. Flow (prot), Flt Permitted, Sat. Flow (perm), Peak-hour Adj, PHF, Adj. Flow (vph), RTOR Reduction (vph), Lane Group Flow (vph), Confl. Peds. (#/hr), Confl. Bikes (#/hr), Turn Type, Protected Phases, Permitted Phases, Actuated Green, G (s), Effective Green, g (s), Actuated g/C Ratio, Clearance Time (s), Vehicle Extension (s), Lane Grp Cap (vph), v/s Ratio Prot, v/s Ratio Perm, v/c Ratio, Uniform Delay, d1, Progression Factor, Incremental Delay, d2, Delay (s), Level of Service, Approach Delay (s), Approach LOS.

Intersection Summary table with 4 columns: Metric, Value, HCM 2000 Level of Service, and HCM 2000 Volume to Capacity ratio. Rows include HCM 2000 Control Delay, HCM 2000 Volume to Capacity ratio, Actuated Cycle Length (s), Intersection Capacity Utilization, and Analysis Period (min).

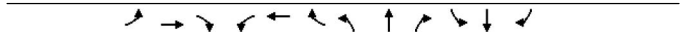


Table with 12 columns for movements and 12 columns for metrics. Rows include Lane Configurations, Traffic Volume (veh/h), Future Volume (veh/h), Number, Initial Q (Ob), Veh, Ped-Bike Adj(A\_pbT), Parking Bus, Adj, Adj Sat Flow, veh/hln, Adj Flow Rate, veh/h, Adj No. of Lanes, Peak Hour Factor, Percent Heavy Veh, %, Cap, veh/h, Arrive On Green, Sat Flow, veh/h, Grp Volume(v), veh/h, Grp Sat Flow(s), veh/hln, Q Serve(g\_s), s, Cycle Q Clear(g\_c), s, Prop In Lane, Lane Grp Cap(c), veh/h, V/C Ratio(X), Avail Cap(c\_a), veh/h, HCM Platoon Ratio, Upstream Filter(I), Uniform Delay (d), s/veh, Incr Delay (d2), s/veh, Initial Q Delay(d3), s/veh, %ile BackOfQ(50%), veh/h, LnGrp Delay(d), s/veh, LnGrp LOS, Approach Vol, veh/h, Approach Delay, s/veh, Approach LOS, Timer, Assigned Phs, Phs Duration (G+Y+Rc), s, Change Period (Y+Rc), s, Max Green Setting (Gmax), s, Max Q Clear Time (g\_c+H1), s, Green Ext Time (g\_c), s.

Intersection Summary table with 4 columns: Metric, Value, HCM 2010 Ctrl Delay, and HCM 2010 LOS.

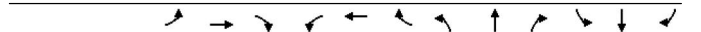


Table with 12 columns for movements and 12 columns for metrics. Rows include Lane Configurations, Traffic Volume (veh/h), Future Volume (veh/h), Number, Initial Q (Ob), Veh, Ped-Bike Adj(A\_pbT), Parking Bus, Adj, Adj Sat Flow, veh/hln, Adj Flow Rate, veh/h, Adj No. of Lanes, Peak Hour Factor, Percent Heavy Veh, %, Cap, veh/h, Arrive On Green, Sat Flow, veh/h, Grp Volume(v), veh/h, Grp Sat Flow(s), veh/hln, Q Serve(g\_s), s, Cycle Q Clear(g\_c), s, Prop In Lane, Lane Grp Cap(c), veh/h, V/C Ratio(X), Avail Cap(c\_a), veh/h, HCM Platoon Ratio, Upstream Filter(I), Uniform Delay (d), s/veh, Incr Delay (d2), s/veh, Initial Q Delay(d3), s/veh, %ile BackOfQ(50%), veh/h, LnGrp Delay(d), s/veh, LnGrp LOS, Approach Vol, veh/h, Approach Delay, s/veh, Approach LOS, Timer, Assigned Phs, Phs Duration (G+Y+Rc), s, Change Period (Y+Rc), s, Max Green Setting (Gmax), s, Max Q Clear Time (g\_c+H1), s, Green Ext Time (g\_c), s.

Intersection Summary table with 4 columns: Metric, Value, HCM 2010 Ctrl Delay, and HCM 2010 LOS.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↗	↖	↗	↖	↗
Traffic Volume (veh/h)	132	318	214	161	270	231
Future Volume (veh/h)	132	318	214	161	270	231
Number	1	6	2	12	3	18
Initial Q (Ob), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pb1)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	163	393	319	240	290	248
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.81	0.81	0.67	0.67	0.93	0.93
Percent Heavy Veh. %	2	2	2	2	2	2
Cap. veh/h	207	1034	627	872	386	529
Arrive On Green	0.12	0.56	0.34	0.34	0.22	0.22
Sat Flow, veh/h	1774	1863	1863	1567	1774	1583
Grp Volume(v), veh/h	163	393	319	240	290	248
Grp Sat Flow(s),veh/h/ln	1774	1863	1863	1567	1774	1583
Q Serve(g_s), s	3.9	5.1	5.9	3.5	6.6	5.3
Cycle Q Clear(q_c), s	3.9	5.1	5.9	3.5	6.6	5.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	207	1034	627	872	386	529
V/C Ratio(X)	0.79	0.38	0.51	0.28	0.75	0.47
Avail Cap(c_a), veh/h	230	1435	1002	1188	905	992
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.5	5.4	11.4	5.1	15.8	11.3
Incr Delay (d2), s/veh	13.2	0.3	0.9	0.2	1.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%),veh/ln	6	2.7	3.2	2.3	3.3	2.4
LnGrp Delay(d),s/veh	31.7	5.7	12.4	5.3	16.9	11.6
LnGrp LOS	C	A	B	A	B	B
Approach Vol, veh/h	556	559			538	
Approach Delay, s/veh	13.3	9.3			14.4	
Approach LOS	B	A			B	
<b>Timer</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
Assigned Phs	1	2			6	7
Phs Duration (G+Y+R), s	19.4	28.8			14.3	8
Change Period (Y+R), s	4.4	4.9			4.9	4.9
Max Green Setting (Gmax), s	23.2	33.2			22.0	22.0
Max Q Clear Time (g_c+H), s	7.9	7.1			8.6	8.6
Green Ext Time (g_c), s	0.0	6.2			7.9	0.8
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay	12.3					
HCM 2010 LOS	B					

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘				↖	↗	↘
Traffic Volume (veh/h)	9	546	4	9	245	2	54	1	24	1	1	16
Future Volume (veh/h)	9	546	4	9	245	2	54	1	24	1	1	16
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pb1)	1.00		0.98	1.00		0.95	0.94		0.93	0.95		0.92
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/hln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	11	650	5	9	255	2	104	2	46	3	3	50
Adj No. of Lanes	1	1	0	1	2	0	0	1	0	1	0	1
Peak Hour Factor	0.84	0.84	0.96	0.96	0.96	0.52	0.52	0.52	0.32	0.32	0.32	0.32
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	20	825	6	16	1602	13	287	21	92	66	30	290
Arrive On Green	0.01	0.45	0.45	0.01	0.45	0.45	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1774	1846	14	1774	3598	28	866	98	418	21	138	1323
Grp Volume(v), veh/h	11	655	9	125	132	152	0	0	56	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1860	1774	1770	1856	1382	0	0	1482	0	0	0
Q Serve(g_s), s	0.4	0.0	18.7	0.3	2.6	2.6	3.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(q_c), s	0.4	0.0	18.7	0.3	2.6	2.6	5.7	0.0	0.0	1.9	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.02	0.68		0.30	0.05		0.89
Lane Grp Cap(c), veh/h	20	832	16	788	827	401	0	0	386	0	0	0
V/C Ratio(X)	0.56	0.00	0.79	0.55	0.16	0.16	0.38	0.00	0.00	0.15	0.00	0.00
Avail Cap(c_a), veh/h	117	0	943	117	897	941	623	0	0	630	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	30.7	0.0	14.7	30.7	10.3	10.3	21.0	0.0	0.0	19.7	0.0	0.0
Incr Delay (d2), s/veh	8.8	0.0	5.3	10.1	0.3	0.3	0.2	0.0	0.0	0.1	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 BackOf(50%),veh/ln	0.2	0.0	10.7	0.2	1.4	1.4	2.3	0.0	0.0	0.8	0.0	0.0
LnGrp Delay(d),s/veh	39.5	0.0	20.0	40.9	10.7	10.6	21.3	0.0	0.0	19.8	0.0	0.0
LnGrp LOS	D		C	D	B	B	C			B		
Approach Vol, veh/h	666		266		152				56			
Approach Delay, s/veh	20.3		11.7		21.3				19.8			
Approach LOS	C		B		C				B			
<b>Timer</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>				
Assigned Phs	1	2		4	5	6			8			
Phs Duration (G+Y+R), s	32.8	32.8		21.6	8.1	32.7			21.6			
Change Period (Y+R), s	7.4	4.9		7.9	7.4	4.9			7.9			
Max Green Setting (Gmax), s	31.6	24.1		4.1	31.6	24.1			31.6			
Max Q Clear Time (g_c+H), s	20.7	3.9		2.4	4.6	7.7			20.7			
Green Ext Time (g_c), s	0.0	7.1		0.8	0.0	13.6			0.8			
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay	18.4											
HCM 2010 LOS	B											

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘				↖	↗	↘
Traffic Volume (veh/h)	65	324	134	22	148	34	73	48	29	49	41	35
Future Volume (veh/h)	65	324	134	22	148	34	73	48	29	49	41	35
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pb1)	1.00		0.94	1.00		0.96	0.98		0.96	0.98		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	76	381	158	28	190	44	100	66	40	55	46	39
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.85	0.85	0.85	0.78	0.78	0.73	0.73	0.73	0.89	0.89	0.89	0.89
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	97	932	379	47	1020	230	279	172	79	234	185	118
Arrive On Green	0.05	0.39	0.39	0.03	0.36	0.36	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1774	2409	980	1774	2847	641	597	649	300	456	697	445
Grp Volume(v), veh/h	76	278	261	28	116	118	206	0	0	140	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1619	1774	1770	1718	1546	0	0	1598	0	0
Q Serve(g_s), s	1.9	5.0	5.2	0.7	2.0	2.1	1.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(q_c), s	1.9	5.0	5.2	0.7	2.0	2.1	4.6	0.0	0.0	2.8	0.0	0.0
Prop In Lane	1.00		0.61	1.00		0.37	0.49		0.19	0.39		0.28
Lane Grp Cap(c), veh/h	97	685	627	47	634	616	531	0	0	537	0	0
V/C Ratio(X)	0.78	0.41	0.42	0.60	0.18	0.19	0.39	0.00	0.00	0.26	0.00	0.00
Avail Cap(c_a), veh/h	265	1015	928	221	970	942	1307	0	0	1322	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.6	9.8	9.9	21.3	9.7	9.8	13.5	0.0	0.0	13.0	0.0	0.0
Incr Delay (d2), s/veh	5.0	1.1	1.3	4.5	0.4	0.5	0.2	0.0	0.0	0.1	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 BackOf(50%),veh/ln	0	2.6	2.5	0.4	1.0	1.1	2.1	0.0	0.0			

Intersection						
Int Delay, s/veh	7.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Vol, veh/h	14	0	0	16	135	7
Future Vol, veh/h	14	0	0	16	135	7
Conflicting Peds, #/hr	0	1	1	0	6	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	46	46	75	75	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	0	0	21	153	8

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	-	57
Stage 1	-	-	30
Stage 2	-	-	27
Critical Hdwy	-	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	-	3.518
Pot Cap-1 Maneuver	0	0	950
Stage 1	0	0	993
Stage 2	0	0	996
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	945
Mov Cap-2 Maneuver	-	-	945
Stage 1	-	-	993
Stage 2	-	-	990

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	949	-	-
HCM Lane V/C Ratio	0.17	-	-
HCM Control Delay (s)	9.6	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0.6	-	-

Intersection												
Int Delay, s/veh	6.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑			↑						↑	↑
Traffic Vol, veh/h	0	47	9	14	28	0	0	0	0	87	72	28
Future Vol, veh/h	0	47	9	14	28	0	0	0	0	87	72	28
Conflicting Peds, #/hr	3	0	1	1	0	3	17	0	12	12	0	17
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	75	75	75	92	92	92	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	55	11	19	37	0	0	0	0	107	89	35

Major/Minor	Minor2	Minor1	Major2
Conflicting Flow All	- 350	124	367
Stage 1	- 338	- 12	12
Stage 2	- 12	- 355	355
Critical Hdwy	- 6.52	6.22	7.12
Critical Hdwy Stg 1	- 5.52	-	-
Critical Hdwy Stg 2	-	- 6.12	5.52
Follow-up Hdwy	- 4.018	3.318	3.518
Pot Cap-1 Maneuver	0	574	927
Stage 1	0	641	-
Stage 2	0	-	662
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	- 518	912	500
Mov Cap-2 Maneuver	- 518	-	500
Stage 1	- 585	-	-
Stage 2	-	-	550

Approach	EB	WB	SB
HCM Control Delay, s	12.3	13	3.4
HCM LOS	B	B	

Minor Lane/Major Mvmt	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	557	505	1607	-	-
HCM Lane V/C Ratio	0.118	0.111	0.067	-	-
HCM Control Delay (s)	12.3	13	7.4	0	-
HCM Lane LOS	B	B	A	A	-
HCM 95th %tile Q(veh)	0.4	0.4	0.2	-	-

Intersection						
Int Delay, s/veh	3.9					
Movement	EBL	EBT	EBR	WBL	WBT	WBR
Lane Configurations		↑			↑	↑
Traffic Vol, veh/h	24	113	0	0	25	44
Future Vol, veh/h	24	113	0	0	25	44
Conflicting Peds, #/hr	10	0	2	2	0	10
Sign Control	Free	Free	Free	Free	Free	Stop
RT Channelized	-	None	-	-	None	-
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-
Peak Hour Factor	89	89	89	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	127	0	0	31	55

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	96	0	249
Stage 1	-	-	181
Stage 2	-	-	68
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1498	0	739
Stage 1	-	0	850
Stage 2	-	0	955
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1485	-	718
Mov Cap-2 Maneuver	-	-	718
Stage 1	-	-	833
Stage 2	-	-	947

Approach	EB	WB	NB
HCM Control Delay, s	1.3	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBLn1	WBLn1	WBR
Capacity (veh/h)	791	1485	-	-
HCM Lane V/C Ratio	0.146	0.018	-	-
HCM Control Delay (s)	10.3	7.5	0	-
HCM Lane LOS	B	A	A	-
HCM 95th %tile Q(veh)	0.5	0.1	-	-

Intersection												
Intersection Delay, s/veh	10.8											
Intersection LOS	B											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑			↑						↑	↑
Traffic Vol, veh/h	9	155	125	34	43	1	170	11	50	6	8	6
Future Vol, veh/h	9	155	125	34	43	1	170	11	50	6	8	6
Conflicting Peds, #/hr	0.77	0.77	0.77	0.86	0.86	0.86	0.95	0.95	0.62	0.62	0.62	0.62
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	-	None	-	-	None	-
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	80	80	80	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	201	162	40	50	1	179	12	53	10	13	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.5	9	10.8	8.6
HCM LOS	B	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	74%	3%	44%	30%
Vol Thru, %	5%	54%	55%	40%
Vol Right, %	22%	43%	1%	30%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	231	289	78	20
LT Vol	170	9	34	6
Through Vol	11	155	43	8
RT Vol	50	125	1	6
Lane Flow Rate	243	375	91	32
Geometry Grp	1	1	1	1
Degree of Util (X)	0.342	0.47	0.13	0.047
Departure Headway (Hd)	5.065	4.508	5.166	5.242
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	705	796	687	675
Service Time	3.14	2.563	3.245	3.341
HCM Lane V/C Ratio	0.345	0.471	0.132	0.047
HCM Control Delay	10.8	11.5	9	8.6
HCM Lane LOS	B	B	A	A
HCM 95th %tile Q	1.5	2.5	0.4	0.1

Intersection						
Int Delay, s/veh	1.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	173	46	9	71	18	9
Future Vol, veh/h	173	46	9	71	18	9
Conflicting Peds, #/hr	0	6	6	0	0	3
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	85	85	52	52
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	192	51	11	84	35	17
Major/Minor						
Conflicting Flow All	0	0	249	0	329	227
Stage 1	-	-	-	-	224	-
Stage 2	-	-	-	-	105	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1317	-	665	812
Stage 1	-	-	-	-	813	-
Stage 2	-	-	-	-	919	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1313	-	655	805
Mov Cap-2 Maneuver	-	-	-	-	655	-
Stage 1	-	-	-	-	808	-
Stage 2	-	-	-	-	911	-
Approach						
EB	WB	NB				
HCM Control Delay, s	0	0.9	10.6			
HCM LOS			B			
Minor Lane/Major Mvmt						
NBLn1	EBT	EBR	WBL	WBT		
Capacity (veh/h)	698	-	-	1313		
HCM Lane V/C Ratio	0.074	-	-	0.008		
HCM Control Delay (s)	10.6	-	-	7.8	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %ile Q(veh)	0.2	-	-	0		

User approved volume balancing among the lanes for turning movement.

Movement												
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	19	215	457	82	122	18	201	53	378	81	95	57
Future Volume (veh/h)	19	215	457	82	122	18	201	53	378	81	95	57
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.05	1.00	1.00	0.85	1.00	1.00	0.93	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/hln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	20	226	481	89	133	20	160	198	478	95	112	0
Adj No. of Lanes	1	2	2	2	2	0	1	1	1	0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.79	0.79	0.79	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	29	993	1176	139	922	133	457	480	377	214	253	406
Arrive On Green	0.02	0.28	0.28	0.04	0.30	0.30	0.26	0.26	0.26	0.26	0.26	0.00
Sat Flow, veh/h	1774	3539	1634	3442	3027	438	1774	1863	1465	836	985	1583
Grp Volume(v), veh/h	20	226	481	89	76	77	160	198	478	207	0	0
Grp Sat Flow(s),veh/hln	1774	1770	817	1721	1770	1695	1774	1863	1465	1821	0	1583
Q Serve(g_s), s	1.3	5.7	22.5	3.0	3.6	3.9	8.6	10.3	30.1	11.1	0.0	0.0
Cycle Q Clear(g_c), s	1.3	5.7	22.5	3.0	3.6	3.9	8.6	10.3	30.1	11.1	0.0	0.0
Prop In Lane	1.00	1.00	1.00	1.00	0.26	1.00	1.00	1.00	0.46	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	29	993	1176	139	539	516	457	480	377	467	0	406
V/C Ratio(X)	0.69	0.23	0.41	0.64	0.14	0.15	0.35	0.41	1.27	0.44	0.00	0.00
Avail Cap(c_a), veh/h	85	1059	1206	165	539	516	457	480	377	467	0	406
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	57.2	32.3	17.7	55.3	29.5	29.6	35.4	36.1	43.4	36.5	0.0	0.0
Incr Delay (d2), s/veh	10.3	0.3	0.6	3.5	0.1	0.2	0.2	0.2	139.7	3.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%),veh/hln	0.7	2.8	7.9	1.5	1.8	1.9	4.2	5.4	26.8	6.0	0.0	0.0
LnGrp Delay(d),s/veh	67.5	32.6	18.3	58.8	29.7	29.8	35.6	36.3	183.2	39.5	0.0	0.0
LnGrp LOS	E	C	B	E	C	C	D	F	F	D		
Approach Vol, veh/h	727	242				836				207		
Approach Delay, s/veh	24.1	40.4				120.1				39.5		
Approach LOS	C	D				F				D		
Timer												
1	2	3	4	5	6	7	8					
Assigned Phs	1	2	4	5	6	8						
Phs Duration (G+Y+R), s	9.1	37.7	35.0	6.3	40.5	35.1						
Change Period (Y+R), s	4.4	4.9	4.9	4.4	4.9	5.1						
Max Green Setting (Gmax), s	5.6	35.0	30.1	5.6	35.0	30.0						
Max Q Clear Time (g_c+H1), s	5.0	24.5	32.1	3.3	5.9	13.1						
Green Ext Time (g_c), s	0.0	6.3	0.0	0.0	12.5	0.7						
Intersection Summary												
HCM 2010 Ctrl Delay	67.6											
HCM 2010 LOS	E											
Notes												

Movement												
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	178	22	457	6	18	1	132	22	0	1	95	58
Future Volume (veh/h)	178	22	457	6	18	1	132	22	0	1	95	58
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.45	1.00	1.00	0.30	0.64	1.00	0.80	0.43	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/hln	1900	1863	1863	1900	1863	1900	1900	1863	1900	1863	1900	1863
Adj Flow Rate, veh/h	185	23	476	8	24	1	163	27	0	1	103	63
Adj No. of Lanes	0	1	1	0	1	0	1	0	0	1	0	1
Peak Hour Factor	0.96	0.96	0.96	0.75	0.75	0.75	0.81	0.81	0.81	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	464	58	209	95	284	12	288	41	0	50	220	133
Arrive On Green	0.29	0.29	0.29	0.23	0.23	0.23	0.31	0.31	0.00	0.31	0.31	0.31
Sat Flow, veh/h	1586	197	714	410	1229	51	631	131	0	1	702	426
Grp Volume(v), veh/h	208	0	476	33	0	0	190	0	0	167	0	0
Grp Sat Flow(s),veh/hln	783	0	714	1690	0	0	762	0	0	1129	0	0
Q Serve(g_s), s	6.9	0.0	21.5	1.1	0.0	0.0	8.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.9	0.0	21.5	1.1	0.0	0.0	17.6	0.0	0.0	8.8	0.0	0.0
Prop In Lane	0.89	1.00	0.24	0.03	0.86	0.00	0.01	0.01	0.38	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	522	0	209	391	0	0	329	0	0	403	0	0
V/C Ratio(X)	0.40	0.00	2.28	0.08	0.00	0.00	0.58	0.00	0.00	0.41	0.00	0.00
Avail Cap(c_a), veh/h	522	0	209	426	0	0	330	0	0	403	0	0
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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.8	0.0	26.0	22.1	0.0	0.0	23.9	0.0	0.0	20.4	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	590.0	0.2	0.0	0.0	1.6	0.0	0.0	0.3	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 BackOf(50%),veh/hln	0.0	0.0	38.4	0.5	0.0	0.0	3.7	0.0	0.0	2.8	0.0	0.0
LnGrp Delay(d),s/veh	21.9	0.0	616.0	22.3	0.0	0.0	25.5	0.0	0.0	20.6	0.0	0.0
LnGrp LOS	C		F	C			C			C		
Approach Vol, veh/h	684	33				190				167		
Approach Delay, s/veh	435.3	22.3				25.5				20.6		
Approach LOS	F	C				C				C		
Timer												
1	2	3	4	5	6	7	8					
Assigned Phs	2	4	6	8								
Phs Duration (G+Y+R), s	25.5	27.0	21.0	27.0								



Intersection												
Int Delay, s/veh 4.5												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔		↔		↔		↔		↔		↔	
Traffic Vol, veh/h	17	14	16	11	29	123	37	288	5	18	276	12
Future Vol, veh/h	17	14	16	11	29	123	37	288	5	18	276	12
Conflicting Peds, #/hr	32	0	3	3	0	32	7	0	12	12	0	7
Sign Control	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	-	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	100	-	60	100	-	60	-
Veh in Median Storage, #	-	0	-	0	-	0	-	0	-	0	-	0
Grade, %	-	0	-	0	-	0	-	0	-	0	-	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	15	17	12	31	129	39	303	5	19	291	13

Major/Minor	Minor2	Minor1	Major1	Major2
Conflicting Flow All	828	728	301	740
Stage 1	335	335	-	393
Stage 2	493	393	-	347
Critical Hdwy	7.12	6.52	6.22	7.12
Critical Hdwy Stg 1	6.12	5.52	-	6.12
Critical Hdwy Stg 2	6.12	5.52	-	6.12
Follow-up Hdwy	3.518	4.018	3.318	3.518
Pot Cap-1 Maneuver	290	350	739	333
Stage 1	679	643	-	632
Stage 2	558	606	-	669
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	202	328	732	299
Mov Cap-2 Maneuver	202	328	-	299
Stage 1	654	629	-	605
Stage 2	400	581	-	626

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.5	15.1	0.9	0.5
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBLn1	SBTn1	SBRn1
Capacity (veh/h)	1259	-	-	316	526	1207	-	-
HCM Lane V/C Ratio	0.031	-	-	0.157	0.326	0.016	-	-
HCM Control Delay (s)	8	-	-	18.5	15.1	8	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	1.4	0	-	-

Intersection												
Intersection Delay, s/veh12.4												
Intersection LOS B												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔		↔		↔		↔		↔		↔	
Traffic Vol, veh/h	25	107	28	47	126	123	44	137	106	52	101	26
Future Vol, veh/h	25	107	28	47	126	123	44	137	106	52	101	26
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	113	29	49	133	129	46	144	112	55	106	27
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB	NB	EB	WB	
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB	SB	WB	EB	
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11	13.1	13	11.4
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	16%	16%	29%
Vol Thru, %	48%	67%	43%	56%
Vol Right, %	37%	17%	42%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	287	160	296	179
LT Vol	44	25	47	52
Through Vol	137	107	126	101
RT Vol	106	28	123	26
Lane Flow Rate	302	168	312	188
Geometry Grp	1	1	1	1
Degree of Util (X)	0.455	0.271	0.467	0.302
Departure Headway (Hd)	5.424	5.782	5.392	5.774
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	662	618	664	618
Service Time	3.485	3.853	3.453	3.845
HCM Lane V/C Ratio	0.456	0.272	0.47	0.304
HCM Control Delay	13	11	13.1	11.4
HCM Lane LOS	B	B	B	B
HCM 95th %tile Q	2.4	1.1	2.5	1.3

Intersection												
Intersection Delay, s/veh12.4												
Intersection LOS B												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔		↔		↔		↔		↔		↔	
Traffic Vol, veh/h	25	107	28	47	126	123	44	137	106	52	101	26
Future Vol, veh/h	25	107	28	47	126	123	44	137	106	52	101	26
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	113	29	49	133	129	46	144	112	55	106	27
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB	NB	EB	WB	
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB	SB	WB	EB	
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11	13.1	13	11.4
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	16%	16%	29%
Vol Thru, %	48%	67%	43%	56%
Vol Right, %	37%	17%	42%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	287	160	296	179
LT Vol	44	25	47	52
Through Vol	137	107	126	101
RT Vol	106	28	123	26
Lane Flow Rate	302	168	312	188
Geometry Grp	1	1	1	1
Degree of Util (X)	0.455	0.271	0.467	0.302
Departure Headway (Hd)	5.424	5.782	5.392	5.774
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	662	618	664	618
Service Time	3.485	3.853	3.453	3.845
HCM Lane V/C Ratio	0.456	0.272	0.47	0.304
HCM Control Delay	13	11	13.1	11.4
HCM Lane LOS	B	B	B	B
HCM 95th %tile Q	2.4	1.1	2.5	1.3

Intersection												
Intersection Delay, s/veh12.4												
Intersection LOS B												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔		↔		↔		↔		↔		↔	
Traffic Vol, veh/h	25	107	28	47	126	123	44	137	106	52	101	26
Future Vol, veh/h	25	107	28	47	126	123	44	137	106	52	101	26
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	113	29	49	133	129	46	144	112	55	106	27
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB	NB	EB	WB	
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB	SB	WB	EB	
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11	13.1	13	11.4
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	16%	16%	29%
Vol Thru, %	48%	67%	43%	56%
Vol Right, %	37%	17%	42%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	287	160	296	179
LT Vol	44	25	47	52
Through Vol	137	107	126	101
RT Vol	106	28	123	26
Lane Flow Rate	302	168	312	188
Geometry Grp	1	1	1	1
Degree of Util (X)	0.455	0.271	0.467	0.302
Departure Headway (Hd)	5.424	5.782	5.392	5.774
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	662	618	664	618
Service Time	3.485	3.853	3.453	3.845
HCM Lane V/C Ratio	0.456	0.272	0.47	0.304
HCM Control Delay	13	11	13.1	11.4
HCM Lane LOS	B	B	B	B
HCM 95th %tile Q	2.4	1.1	2.5	1.3

Intersection												
Intersection Delay, s/veh10.9												
Intersection LOS B												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔		↔				↔		↔			
Traffic Vol, veh/h	41	138	14	29	91	134	5	95	22	116	75	43
Future Vol, veh/h	41	138	14	29	91	134	5	95	22	116	75	43
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	43	145	15	31	96	141	5	100	23	122	79	45
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB	WB	WB	NB	SB							
Opposing Approach	WB	EB	SB	NB	WB							
Opposing Lanes	1	1	1	1	1							
Conflicting Approach Left SB		NB	EB	WB								
Conflicting Lanes Left	1	1	1	1	1							
Conflicting Approach RightNB		SB	WB	EB								
Conflicting Lanes Right	1	1	1	1	1							
HCM Control Delay	10.8	11	9.9	11.5								
HCM LOS	B	B	A	B								

Lane	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	4%	21%	11%	50%								
Vol Thru, %	78%	72%	36%	32%								
Vol Right, %	18%	7%	53%	18%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	122	193	254	234								
LT Vol	5	41	29	116								
Through Vol	95	138	91	75								
RT Vol	22	14	134	43								
Lane Flow Rate	128	203	267	246								
Geometry Grp	1	1	1	1								
Degree of Util (X)	0.196	0.303	0.372	0.368								
Departure Headway (Hd)	5.49	5.377	5.005	5.374								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	652	668	719	670								
Service Time	3.533	3.416	3.04	3.411								
HCM Lane V/C Ratio	0.196	0.304	0.371	0.367								
HCM Control Delay	9.9	10.8	11	11.5								
HCM Lane LOS	A	B	B	B								
HCM 95th-tile Q	0.7	1.3	1.7	1.7								

Intersection												
Intersection Delay, s/veh23.9												
Intersection LOS C												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔		↔				↔		↔			
Traffic Vol, veh/h	158	76	32	29	109	204	36	242	32	45	157	98
Future Vol, veh/h	158	76	32	29	109	204	36	242	32	45	157	98
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	166	80	34	31	115	215	38	255	34	47	165	103
Number of Lanes	0	1	1	0	1	0	0	1	0	0	1	1
Approach	EB	WB	WB	NB	SB							
Opposing Approach	WB	EB	SB	NB	WB							
Opposing Lanes	1	2	2	2	1							
Conflicting Approach Left SB		NB	EB	WB								
Conflicting Lanes Left	2	1	2	2	1							
Conflicting Approach RightNB		SB	WB	EB								
Conflicting Lanes Right	1	2	1	2	1							
HCM Control Delay	20.1	29.8	28.4	16								
HCM LOS	C	D	D	C								

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2						
Vol Left, %	12%	68%	0%	8%	22%	0%						
Vol Thru, %	78%	32%	0%	32%	78%	0%						
Vol Right, %	10%	0%	100%	60%	0%	100%						
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop						
Traffic Vol by Lane	310	234	32	342	202	98						
LT Vol	36	158	0	29	45	0						
Through Vol	242	76	0	109	157	0						
RT Vol	32	0	32	204	0	98						
Lane Flow Rate	326	246	34	360	213	103						
Geometry Grp	6	7	7	6	7	7						
Degree of Util (X)	0.714	0.567	0.067	0.749	0.477	0.207						
Departure Headway (Hd)	7.874	8.281	7.21	7.486	8.078	7.24						
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes						
Cap	460	436	496	482	444	494						
Service Time	5.933	6.039	4.968	5.541	5.84	5.002						
HCM Lane V/C Ratio	0.709	0.564	0.069	0.747	0.48	0.209						
HCM Control Delay	28.4	21.4	10.5	29.8	18	11.9						
HCM Lane LOS	D	C	B	D	C	B						
HCM 95th-tile Q	5.6	3.4	0.2	6.3	2.5	0.8						

Intersection												
Intersection Delay, s/veh12.4												
Intersection LOS B												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔		↔				↔		↔			
Traffic Vol, veh/h	25	107	28	47	126	123	44	137	106	52	101	26
Future Vol, veh/h	25	107	28	47	126	123	44	137	106	52	101	26
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	113	29	49	133	129	46	144	112	55	106	27
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB	WB	WB	NB	SB							
Opposing Approach	WB	EB	SB	NB	WB							
Opposing Lanes	1	1	1	1	1							
Conflicting Approach Left SB		NB	EB	WB								
Conflicting Lanes Left	1	1	1	1	1							
Conflicting Approach RightNB		SB	WB	EB								
Conflicting Lanes Right	1	1	1	1	1							
HCM Control Delay	11	13.1	13	11.4								
HCM LOS	B	B	B	B								

Lane	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	15%	16%	16%	29%								
Vol Thru, %	48%	67%	43%	56%								
Vol Right, %	37%	17%	42%	15%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	287	160	296	179								
LT Vol	44	25	47	52								
Through Vol	137	107	126	101								
RT Vol	106	28	123	26								
Lane Flow Rate	302	168	312	188								
Geometry Grp	1	1	1	1								
Degree of Util (X)	0.455	0.271	0.467	0.302								
Departure Headway (Hd)	5.424	5.782	5.392	5.774								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	662	618	664	618								
Service Time	3.485	3.853	3.453	3.845								
HCM Lane V/C Ratio	0.456	0.272	0.47	0.304								
HCM Control Delay	13	11	13.1	11.4								
HCM Lane LOS	B	B	B	B								
HCM 95th-tile Q	2.4	1.1	2.5	1.3								

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔		↔				↔		↔			
Traffic Volume (veh/h)	138	62	22	176	138	131	40	532	168	50	347	69
Future Volume (veh/h)	138	62	22	176	138	131	40	532	168	50	347	69
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99	0.99	0.99	0.98	0.99	0.96	1.00	0.98	0.99	0.98	0.98	0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	145	65	23	185	145	138	42	560	177	53	365	73
Adj No. of Lanes	1	1	0	1	1	0	1	1	1	0	1	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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	360	458	162	530	303	289	505	646	204	203	1414	279
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	1077	1310	463	1288	867	826	937	1341	424	718	2934	580
Grp Volume(v), veh/h	145	0	88	185	0	283	42	0	737	53	218	220
Grp Sat Flow(s), veh/h/ln/0.77	0	1773	1288	0	1693	937	0	1765	718	1770	1744	0
Q Serve(g_s), s	7.1	0.0	2.0	6.7	0.0	7.6	1.6	0.0	21.6	4.1	4.2	4.3
Cycle Q Clear(g_c), s	14.7	0.0	2.0	8.7	0.0	7.6	6.0	0.0	21.6	25.7	4.2	4.3
Prop In Lane	1.00	0.26	1.00	0.49	1.00	0.24	1.00	0.24	1.00	0.33	0.33	0.33
Lane Grp Cap(c), veh/h	360	0	620	530	0	592	505	0	850	203	853	840
V/C Ratio(X)	0.40	0.00	0.14	0.35	0.00	0.48	0.08	0.00	0.87	0.26	0.26	0.26
Avail Cap(c_a), veh/h	485	0	826	680	0	789	507	0	853	204	855	843
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	1.00	1.00	1.00		

Intersection						
Int Delay, s/veh	12.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔	↔	↔	↔
Traffic Vol, veh/h	139	244	306	141	170	128
Future Vol, veh/h	139	244	306	141	170	128
Conflicting Peds, #/hr	31	0	0	31	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	150	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	146	257	322	148	179	135

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	502	0	0
Stage 1	-	-	427
Stage 2	-	-	549
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1062	-	279
Stage 1	-	-	658
Stage 2	-	-	579
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1062	-	221
Mov Cap-2 Maneuver	-	-	221
Stage 1	-	-	639
Stage 2	-	-	472

Approach	EB	WB	SB
HCM Control Delay, s	3.2	0	43.4
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1062	-	-	-	221	609
HCM Lane V/C Ratio	0.138	-	-	-	0.81	0.221
HCM Control Delay (s)	8.9	0	-	-	66.6	12.6
HCM Lane LOS	A	A	-	-	F	B
HCM 95th %tile Q(veh)	0.5	-	-	-	6	0.8

Movement	EBL2	EBL	EBT	WBT	WBR	WBR2	SBL2	SBL	SBR	SWL	SWR	SWR2
Lane Configurations			↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	21	183	233	318	31	157	69	89	119	71	102	10
Future Volume (vph)	21	183	233	318	31	157	69	89	119	71	102	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	-	-	4.9	4.9	-	-	-	4.9	4.9	-	-	-
Lane Util. Factor	-	-	1.00	1.00	-	-	-	1.00	1.00	-	-	-
Frpb, ped/bikes	-	-	1.00	0.88	-	-	-	1.00	1.00	-	-	-
Flpb, ped/bikes	-	-	0.96	1.00	-	-	-	1.00	1.00	-	-	-
Frt	-	-	1.00	0.95	-	-	-	1.00	0.85	-	-	-
Fit Protected	-	-	0.98	1.00	-	-	-	0.95	1.00	-	-	-
Satd. Flow (prot)	-	-	1744	1564	-	-	-	1770	1583	-	-	-
Fit Permitted	-	-	0.49	1.00	-	-	-	0.95	1.00	-	-	-
Satd. Flow (perm)	-	-	866	1564	-	-	-	1770	1583	-	-	-
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	22	193	245	335	33	165	73	94	125	75	107	11
RTOR Reduction (vph)	0	0	0	11	0	0	0	0	109	54	0	0
Lane Group Flow (vph)	0	0	460	522	0	0	0	167	16	139	0	0
Confl. Peds. (#/hr)	36	64	-	-	36	64	-	10	10	10	36	10
Confl. Bikes (#/hr)	-	-	-	-	4	3	-	-	-	-	-	-
Turn Type	Perm	Perm	NA	NA	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot
Protected Phases	-	-	2	6	3	3	3	4	-	-	-	-
Permitted Phases	2	2	-	-	-	-	-	-	-	-	-	-
Actuated Green, G (s)	-	-	63.8	63.8	-	-	-	13.7	13.7	-	-	-
Effective Green, g (s)	-	-	63.8	63.8	-	-	-	13.7	13.7	-	-	-
Actuated C/G Ratio	-	-	0.60	0.60	-	-	-	0.13	0.13	-	-	-
Clearance Time (s)	-	-	4.9	4.9	-	-	-	4.9	4.9	-	-	-
Vehicle Extension (s)	-	-	2.6	2.6	-	-	-	2.0	2.0	-	-	-
Lane Grp Cap (vph)	-	-	520	939	-	-	-	228	204	-	-	-
v/s Ratio Prot	-	-	0.33	-	-	-	-	c0.09	0.01	-	-	-
v/s Ratio Perm	-	-	c0.53	-	-	-	-	-	-	-	-	-
v/c Ratio	-	-	0.88	0.56	-	-	-	0.73	0.08	-	-	-
Uniform Delay, d1	-	-	18.1	12.7	-	-	-	44.5	40.7	-	-	-
Progression Factor	-	-	1.00	1.00	-	-	-	1.00	1.00	-	-	-
Incremental Delay, d2	-	-	16.3	0.6	-	-	-	10.0	0.1	-	-	-
Delay (s)	-	-	34.3	13.3	-	-	-	54.5	40.8	-	-	-
Level of Service	-	-	C	B	-	-	-	D	D	-	-	-
Approach Delay (s)	-	-	34.3	13.3	-	-	-	48.6	51.3	-	-	-
Approach LOS	-	-	C	B	-	-	-	D	D	-	-	-

Intersection Summary			
HCM 2000 Control Delay	31.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	106.2	Sum of lost time (s)	14.7
Intersection Capacity Utilization	98.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	1	224	65	142	162	16	88	9	248	8	3	4
Future Volume (veh/h)	1	224	65	142	162	16	88	9	248	8	3	4
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.97	1.00	0.98	0.95	0.92	0.99	0.95	0.95	0.95	0.95	0.95
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/hln	1900	1863	1900	1900	1863	1900	1863	1900	1863	1900	1863	1900
Adj Flow Rate, veh/h	1	236	68	149	171	17	93	9	261	8	3	4
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1	302	87	192	220	22	161	34	299	245	95	89
Arrive On Green	0.22	0.22	0.22	0.24	0.24	0.24	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	6	1377	397	798	915	91	290	120	1050	523	332	311
Grp Volume(v), veh/h	305	0	0	337	0	0	363	0	0	15	0	0
Grp Sat Flow(s),veh/hln	1779	0	0	1804	0	0	1460	0	0	1166	0	0
Q Serve(g_s), s	9.3	0.0	0.0	10.1	0.0	0.0	10.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	9.3	0.0	0.0	10.1	0.0	0.0	13.6	0.0	0.0	0.4	0.0	0.0
Prop In Lane	0.00	0.22	0.44	0.05	0.26	0.72	0.53	0.27	0.27	0.27	0.27	0.27
Lane Grp Cap(c), veh/h	391	0	0	433	0	0	494	0	0	428	0	0
V/C Ratio(X)	0.78	0.00	0.00	0.78	0.00	0.00	0.73	0.00	0.00	0.04	0.00	0.00
Avail Cap(c_a), veh/h	547	0	0	673	0	0	611	0	0	533	0	0
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	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.2	0.0	0.0	20.4	0.0	0.0	19.5	0.0	0.0	14.9	0.0	0.0
Incr Delay (d2), s/veh	5.0	0.0	0.0	3.3	0.0	0.0	2.5	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/hln	5.1	0.0	0.0	5.4	0.0	0.0	5.8	0.0	0.0	0.2	0.0	0.0
LnGrp Delay(d),s/veh	26.2	0.0	0.0	23.7	0.0	0.0	22.0	0.0	0.0	14.9	0.0	0.0
LnGrp LOS	C			C			C			B		
Approach Vol, veh/h	305			337			363			15		
Approach Delay, s/veh	26.2			23.7			22.0			14.9		
Approach LOS	C			C			C			B		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	2	4	6	8				
Phs Duration (G+Y+R), s	18.7	21.3	17.5	21.3				
Change Period (Y+R), s	4.9	4.9	4.9	4.9				
Max Green Setting (Gmax), s	21.5	21.1	17.7	21.1				
Max Q Clear Time (g_c+H1), s	12.1	15.6	11.3	2.4				
Green Ext Time (g_e), s	1.5	0.9	1.0	1.7				

Intersection Summary		
HCM 2010 Ctrl Delay	23.7	
HCM 2010 LOS	C	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔										

\* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	←	←	←	←	←	←	←	←	←	←	←	←	
Traffic Volume (vph)	340	305	235	30	295	100	185	210	70	75	20	100	
Future Volume (vph)	340	305	235	30	295	100	185	210	70	75	20	100	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.7	4.9	5.1	4.7	4.9		5.1	5.1	5.1		5.1	5.1	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	1.00	
Frb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.98		1.00	0.98	
Frb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85		1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.96	1.00	
Satd. Flow (prot)	1770	3539	1561	1770	3405		1681	1762	1555		1792	1546	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.96	1.00	
Satd. Flow (perm)	1770	3539	1561	1770	3405		1681	1762	1555		1792	1546	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Adj. Flow (vph)	358	321	247	32	311	105	195	221	74	79	21	105	
RTOR Reduction (vph)	0	0	98	0	22	0	0	0	58	0	0	88	
Lane Group Flow (vph)	358	321	149	32	394	0	175	241	16	0	100	17	
Confl. Peds. (#/hr)			2	2			14		9		9	14	
Turn Type	Prot	NA	pm-ov	Prot	NA		Split	NA	Perm	Split	NA	Perm	
Protected Phases	1	6	4	5	2		4	4		8	8		
Permitted Phases			6							4		8	
Actuated Green, G (s)	18.0	38.4	59.3	2.7	23.1		20.9	20.9	20.9		16.2	16.2	
Effective Green, g (s)	18.0	38.4	59.3	2.7	23.1		20.9	20.9	20.9		16.2	16.2	
Actuated g/C Ratio	0.18	0.39	0.61	0.03	0.24		0.21	0.21	0.21		0.17	0.17	
Clearance Time (s)	4.7	4.9	5.1	4.7	4.9		5.1	5.1	5.1		5.1	5.1	
Vehicle Extension (s)	2.0	4.3	2.0	2.0	4.3		2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	325	1386	944	48	802		358	375	331		296	255	
v/s Ratio Prot	c0.20	0.09	0.03	0.02	c0.12		0.10	c0.14			c0.06		
v/s Ratio Perm			0.06						0.01			0.01	
v/c Ratio	1.10	0.23	0.16	0.67	0.49		0.49	0.64	0.05		0.34	0.07	
Uniform Delay, d1	40.0	19.9	8.5	47.2	32.4		33.9	35.1	30.6		36.2	34.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	80.0	0.1	0.0	23.8	0.8		0.4	2.8	0.0		0.2	0.0	
Delay (s)	120.0	20.1	8.5	71.0	33.1		34.2	38.0	30.7		36.4	34.6	
Level of Service	F	C	A	E	C		C	D	C		D	C	
Approach Delay (s)		55.6			35.8			35.5				35.5	
Approach LOS		E			D			D				D	
<b>Intersection Summary</b>													
HCM 2000 Control Delay	44.6					HCM 2000 Level of Service			D				
HCM 2000 Volume to Capacity ratio	0.64												
Actuated Cycle Length (s)	98.0					Sum of lost time (s)			19.8				
Intersection Capacity Utilization	78.0%												
ICU Level of Service	D												
Analysis Period (min)	15												
c Critical Lane Group													

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	←	←	←	←	←	←
Traffic Volume (veh/h)	64	285	280	128	128	99
Future Volume (veh/h)	64	285	280	128	128	99
Number	5	2	6	16	7	14
Initial Q (Ob), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/m	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	67	300	295	135	135	104
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh. %	2	2	2	2	2	2
Cap, veh/h	98	1971	888	397	246	220
Arrive On Green	0.06	0.56	0.37	0.37	0.14	0.14
Sat Flow, veh/h	1774	3632	2474	1064	1774	1583
Grp Volume(v), veh/h	67	300	217	213	135	104
Grp Sat Flow(s),veh/h/m	1774	1770	1770	1675	1774	1583
Q Serve(g_s), s	1.3	1.4	3.0	3.1	2.4	2.1
Cycle Q Clear(q_c), s	1.3	1.4	3.0	3.1	2.4	2.1
Prop In Lane	1.00			0.64	1.00	1.00
Lane Grp Cap(c), veh/h	98	1971	660	625	246	220
V/C Ratio(X)	0.69	0.15	0.33	0.34	0.55	0.47
Avail Cap(c_a), veh/h	291	3479	1222	1156	1090	973
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.9	3.7	7.7	7.7	13.7	13.6
Incr Delay (d2), s/veh	3.2	0.1	0.6	0.7	0.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/m	0.7	1.6	1.5	1.2	1.9	
LnGrp Delay(d),s/veh	19.0	3.7	8.3	8.4	14.4	14.2
LnGrp LOS	B	A	A	A	B	B
Approach Vol, veh/h	367		430		239	
Approach Delay, s/veh	6.5		8.3		14.3	
Approach LOS	A		A		B	
<b>Timer</b>						
Assigned Phs	1	2	3	4	5	6
Phs Duration (G+Y+R), s	2	4	4	5	6	
Change Period (Y+R), s	24.5	9.6	6.3	18.3		
Max Green Setting (Gmax), s	5.5	4.9	4.4	5.5		
Max Q Clear Time (g_c+H1), s	33.6	21.0	5.6	23.6		
Green Ext Time (g_e), s	3.4	4.4	3.3	5.1		
Green Ext Time (p_e), s	9.7	0.3	0.0	7.6		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay	9.1					
HCM 2010 LOS	A					

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	←	←	←	←	←	←
Traffic Vol, veh/h	505	129	529	479	79	331
Future Vol, veh/h	505	129	529	479	79	331
Conflicting Peds, #/hr	0	5	0	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	532	136	557	504	83	348
<b>Major/Minor</b>						
Major1	Major2		Minor1			
Conflicting Flow All	0	0	672	0	1971	339
Stage 1	-	-	-	-	604	-
Stage 2	-	-	-	-	1367	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	915	-	55	657
Stage 1	-	-	-	-	508	-
Stage 2	-	-	-	-	202	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	915	-	8	654
Mov Cap-2 Maneuver	-	-	-	-	8	-
Stage 1	-	-	-	-	506	-
Stage 2	-	-	-	-	31	-
<b>Approach</b>						
EB	WB		NB			
HCM Control Delay, s	0	8.7	\$ 4726.4			
HCM LOS	F					
<b>Minor Lane/Major Mvmt</b>						
NBLn1	EBT	EBR	WBL	WBT		
Capacity (veh/h)	39	-	-	915		
HCM Lane V/C Ratio	11.066	-	-	0.609		
HCM Control Delay (s)	\$ 4726.4	-	-	14.9	2	
HCM Lane LOS	F	-	-	B	A	
HCM 95th %ile Q(veh)	52.2	-	-	4.3		
<b>Notes</b>						
-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						



HCM 2010 Signalized Intersection Summary Horizon Year Conditions (2040) W/O Project  
 19: Beyer Boulevard & Smythe Avenue E AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕
Traffic Volume (veh/h)	422	608	479	511	847	544						
Future Volume (veh/h)	422	608	479	511	847	544						
Number	1	6	2	12	3	18						
Initial Q (Ob), veh	0	0	0	0	0	0						
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00						
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00						
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863						
Adj Flow Rate, veh/h	444	640	504	538	892	573						
Adj No. of Lanes	1	2	2	0	1	1						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95						
Percent Heavy Veh. %	2	2	2	2	2	2						
Cap, veh/h	348	1738	444	384	729	651						
Arrive On Green	0.20	0.49	0.25	0.25	0.41	0.41						
Sat Flow, veh/h	1774	3632	1863	1530	1774	1583						
Grp Volume(v), veh/h	444	640	504	538	892	573						
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1530	1774	1583						
Q Serve(g_s), s	19.6	11.2	25.1	25.1	41.1	33.4						
Cycle Q Clear(q_c), s	19.6	11.2	25.1	25.1	41.1	33.4						
Prop In Lane	1.00			1.00	1.00	1.00						
Lane Grp Cap(c), veh/h	348	1738	444	384	729	651						
V/C Ratio(X)	1.28	0.37	1.13	1.40	1.22	0.88						
Avail Cap(c_a), veh/h	348	1738	444	384	729	651						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00						
Uniform Delay (d), s/veh	40.2	15.8	37.5	37.5	29.5	27.2						
Incr Delay (d2), s/veh	145.1	0.2	85.0	195.6	112.6	12.8						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	23.6	5.5	22.7	31.4	42.9	16.8						
LnGrp Delay(d),s/veh	185.3	16.0	122.4	233.1	142.0	40.0						
LnGrp LOS	F	B	F	F	F	D						
Approach Vol, veh/h	1084	1042		1465								
Approach Delay, s/veh	85.3	179.6		102.1								
Approach LOS	F	F		F								
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			6		8					
Phs Duration (G+Y+R), s	24.0	30.0			54.0		46.0					
Change Period (Y+R), s	4.4	4.9			4.9		4.9					
Max Green Setting (Gmax), s	19.6	25.1			49.1		41.1					
Max Q Clear Time (g_c+H), s	21.6	27.1			13.2		43.1					
Green Ext Time (g_e), s	0.0	0.0			21.4		0.0					
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			119.5									
HCM 2010 LOS			F									

HCM 2010 Signalized Intersection Summary Horizon Year Conditions (2040) W/O Project  
 20: Private Driveway/Caminitos De Los Ninos & Beyer Boulevard AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕
Traffic Volume (veh/h)	86	1188	8	84	993	47	24	4	87	26	0	10
Future Volume (veh/h)	86	1188	8	84	993	47	24	4	87	26	0	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.95	1.00	0.97	0.90	0.89	0.92	0.89		
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	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	91	1251	8	88	1045	49	25	4	92	27	0	11
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	117	1695	11	113	1609	75	109	43	270	320	15	98
Arrive On Green	0.07	0.47	0.47	0.06	0.47	0.47	0.25	0.25	0.25	0.25	0.00	0.25
Sat Flow, veh/h	1774	3604	23	1774	3437	161	171	173	1092	910	62	396
Grp Volume(v), veh/h	91	614	645	88	538	556	121	0	0	38	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1530	1774	1583	1436	0	0	1368	0	0
Q Serve(g_s), s	3.3	18.2	18.2	3.2	15.0	15.1	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(q_c), s	3.3	18.2	18.2	3.2	15.0	15.1	4.3	0.0	0.0	1.1	0.0	0.0
Prop In Lane	1.00			0.01	1.00	0.09	0.21		0.76	0.71		0.29
Lane Grp Cap(c), veh/h	117	833	874	113	828	856	422	0	0	433	0	0
V/C Ratio(X)	0.78	0.74	0.74	0.78	0.65	0.65	0.29	0.00	0.00	0.09	0.00	0.00
Avail Cap(c_a), veh/h	186	850	892	153	828	856	596	0	0	589	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	29.8	13.9	13.9	29.9	13.2	13.2	20.0	0.0	0.0	18.8	0.0	0.0
Incr Delay (d2), s/veh	4.2	4.3	4.1	11.1	3.3	3.2	0.1	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7	9.9	10.3	1.9	8.1	8.3	1.8	0.0	0.0	0.5	0.0	0.0
LnGrp Delay(d),s/veh	34.0	18.2	18.0	41.0	16.5	16.4	20.1	0.0	0.0	18.8	0.0	0.0
LnGrp LOS	C	B	B	D	B	B	C			B		
Approach Vol, veh/h	1350			1182			121			38		
Approach Delay, s/veh	19.2			18.3			20.1			18.8		
Approach LOS	B			B			C			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	8					
Phs Duration (G+Y+R), s	20.9	35.4		20.9	8.7	35.2	20.9					
Change Period (Y+R), s	4.4	4.9		4.9	4.4	4.9	4.9					
Max Green Setting (Gmax), s	31.1	24.1		6.8	29.9	24.1						
Max Q Clear Time (g_c+H), s	20.2	3.1		5.3	17.1	6.3						
Green Ext Time (g_e), s	0.0	10.2		0.6	0.0	12.5	0.6					
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay						18.8						
HCM 2010 LOS						B						

HCM 2010 Signalized Intersection Summary Horizon Year Conditions (2040) W/O Project  
 21: W Park Avenue/Alaquinas Drive & Beyer Boulevard AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕
Traffic Volume (veh/h)	135	1021	195	137	821	119	181	115	176	107	99	80
Future Volume (veh/h)	135	1021	195	137	821	119	181	115	176	107	99	80
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.94	1.00	0.94	0.98	0.96	1.00	0.95		
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	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	142	1075	205	144	864	125	191	121	185	113	104	84
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	172	1124	213	164	1163	168	236	132	189	204	184	131
Arrive On Green	0.10	0.38	0.38	0.09	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1774	2934	557	1774	3074	445	487	345	493	403	481	342
Grp Volume(v), veh/h	142	646	634	144	497	492	497	0	0	301	0	0
Grp Sat Flow(s),veh/h/ln	1770	1772	1774	1770	1750	1326	0	0	1227	0	0	0
Q Serve(g_s), s	7.8	35.4	35.8	8.0	24.2	24.2	18.0	0.0				

Intersection						
Intersection Delay, s/veh11.7						
Intersection LOS B						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	↑
Traffic Vol, veh/h	21	0	0	40	428	9
Future Vol, veh/h	21	0	0	40	428	9
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	0	0	42	451	9
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	WB	NB		
Opposing Approach	WB	EB				
Opposing Lanes	1		1	0		
Conflicting Approach Left			NB	EB		
Conflicting Lanes Left	0		1	1		
Conflicting Approach Right	NB	WB				
Conflicting Lanes Right	1		0	1		
HCM Control Delay	8.2		8.3	12.2		
HCM LOS	A		A	B		

Lane	NBLn1	EBLn1	WBLn1	NBLn1
Vol Left, %	98%	0%	0%	
Vol Thru, %	0%	100%	100%	
Vol Right, %	2%	0%	0%	
Sign Control	Stop	Stop	Stop	
Traffic Vol by Lane	437	21	40	
LT Vol	428	0	0	
Through Vol	0	21	40	
RT Vol	9	0	0	
Lane Flow Rate	460	22	42	
Geometry Grp	1	1	1	
Degree of Util (X)	0.54	0.031	0.059	
Departure Headway (Hd)	4.229	5.059	5.03	
Convergence, Y/N	Yes	Yes	Yes	
Cap	846	712	716	
Service Time	2.292	3.062	3.032	
HCM Lane V/C Ratio	0.544	0.031	0.059	
HCM Control Delay	12.2	8.2	8.3	
HCM Lane LOS	B	A	A	
HCM 95th-tile Q	3.3	0.1	0.2	

Intersection												
Intersection Delay, s/veh10.1												
Intersection LOS B												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑			↑						↑	↑
Traffic Vol, veh/h	0	99	23	11	40	0	0	0	0	141	170	26
Future Vol, veh/h	0	99	23	11	40	0	0	0	0	141	170	26
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	104	24	12	42	0	0	0	0	148	179	27
Number of Lanes	0	1	0	0	1	0	0	0	0	0	1	0
Approach	EB	WB	WB	NB	SB							
Opposing Approach	WB	EB										
Opposing Lanes	1		1		0							
Conflicting Approach Left	SB				WB							
Conflicting Lanes Left	1		0		1							
Conflicting Approach Right		SB			EB							
Conflicting Lanes Right	0		1		1							
HCM Control Delay	8.7		8.4		10.8							
HCM LOS	A		A		B							

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	22%	42%
Vol Thru, %	81%	78%	50%
Vol Right, %	19%	0%	8%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	122	51	337
LT Vol	0	11	141
Through Vol	99	40	170
RT Vol	23	0	26
Lane Flow Rate	128	54	355
Geometry Grp	1	1	1
Degree of Util (X)	0.168	0.074	0.435
Departure Headway (Hd)	4.723	4.972	4.413
Convergence, Y/N	Yes	Yes	Yes
Cap	759	720	816
Service Time	2.753	3.007	2.436
HCM Lane V/C Ratio	0.169	0.075	0.435
HCM Control Delay	8.7	8.4	10.8
HCM Lane LOS	A	A	B
HCM 95th-tile Q	0.6	0.2	2.2

Intersection												
Intersection Delay, s/veh11.1												
Intersection LOS B												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑			↑			↑				↑
Traffic Vol, veh/h	76	193	0	0	27	122	19	268	19	0	0	0
Future Vol, veh/h	76	193	0	0	27	122	19	268	19	0	0	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	80	203	0	0	28	128	20	282	20	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	0	0
Approach	EB	WB	WB	NB								
Opposing Approach	WB	EB										
Opposing Lanes	1		1	0								
Conflicting Approach Left			NB	EB								
Conflicting Lanes Left	0		1	1								
Conflicting Approach Right				WB								
Conflicting Lanes Right	1		0	1								
HCM Control Delay	11.3		8.9	11.9								
HCM LOS	B		A	B								

Lane	NBLn1	EBLn1	WBLn1	NBLn1
Vol Left, %	6%	28%	0%	
Vol Thru, %	88%	72%	18%	
Vol Right, %	6%	0%	82%	
Sign Control	Stop	Stop	Stop	
Traffic Vol by Lane	306	269	149	
LT Vol	19	76	0	
Through Vol	268	193	27	
RT Vol	19	0	122	
Lane Flow Rate	322	283	157	
Geometry Grp	1	1	1	
Degree of Util (X)	0.442	0.393	0.202	
Departure Headway (Hd)	4.945	4.999	4.63	
Convergence, Y/N	Yes	Yes	Yes	
Cap	722	714	767	
Service Time	3.017	3.069	2.71	
HCM Lane V/C Ratio	0.446	0.396	0.205	
HCM Control Delay	11.9	11.3	8.9	
HCM Lane LOS	B	B	A	
HCM 95th-tile Q	2.3	1.9	0.8	

Intersection												
Intersection Delay, s/veh 164.8												
Intersection LOS F												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑			↑			↑				↑
Traffic Vol, veh/h	2	193	681	46	125	0	555	9	24	0	12	6
Future Vol, veh/h	2	193	681	46	125	0	555	9	24	0	12	6
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	203	717	48	132	0	584	9	25	0	13	6
Number of Lanes	0	1	0	0	1	0	0	1	0	0	0	1
Approach	EB	WB	WB	NB	SB							
Opposing Approach	WB	EB	SB									
Opposing Lanes	1		1		1							
Conflicting Approach Left	SB		NB	EB	WB							
Conflicting Lanes Left	1		1	1	1							
Conflicting Approach Right		NB		WB	EB							
Conflicting Lanes Right	1		1	1	1							
HCM Control Delay	241.9		15.8	97.9	12.7							
HCM LOS	F		C	F	B							

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	94%	0%	27%	0%
Vol Thru, %	2%	22%	73%	67%
Vol Right, %	4%	78%	0%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	588	876	171	18
LT Vol	555	2	46	0
Through Vol	9	193	125	12
RT Vol	24	681	0	6
Lane Flow Rate	619	922	180	19
Geometry Grp	1	1	1	1
Degree of Util (X)	1.101	1.478	0.359	0.041
Departure Headway (Hd)	7.427	6.158	8.232	9.319
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	495	599	439	387
Service Time	5.427	4.158	6.232	7.319
HCM Lane V/C Ratio	1.251	1.539	0.41	0.049
HCM Control Delay	97.9	241.9	15.8	12.7
HCM Lane LOS	F	F	C	B
HCM 95th-tile Q	17.5	42.5	1.6	0.1

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	149	79	5	106	5	2
Future Vol, veh/h	149	79	5	106	5	2
Conflicting Peds, #/hr	0	6	6	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	157	83	5	112	5	2

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	246	0	326	204
Stage 1	-	-	-	-	204	-
Stage 2	-	-	-	-	122	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1320	-	668	837
Stage 1	-	-	-	-	830	-
Stage 2	-	-	-	-	903	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1320	-	662	832
Mov Cap-2 Maneuver	-	-	-	-	662	-
Stage 1	-	-	-	-	825	-
Stage 2	-	-	-	-	899	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	10.2
HCM LOS	-	-	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	703	-	-	1320	-
HCM Lane V/C Ratio	0.01	-	-	0.004	-
HCM Control Delay (s)	10.2	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %ile Q (veh)	0	-	-	0	-

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	5	145	256	150	136	12	290	69	693	52	107	84
Future Volume (veh/h)	5	145	256	150	136	12	290	69	693	52	107	84
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.70	1.00	0.87	1.00	0.87	1.00	0.98	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/hln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	5	153	269	158	143	13	189	235	729	55	113	0
Adj No. of Lanes	1	2	2	2	2	2	0	1	1	0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	9	941	1233	194	1028	92	456	479	397	154	316	405
Arrive On Green	0.01	0.27	0.27	0.06	0.32	0.32	0.26	0.26	0.26	0.26	0.26	0.00
Sat Flow, veh/h	1774	3539	1945	3442	3242	289	1774	1863	1546	600	1233	1583
Grp Volume(v), veh/h	5	153	269	158	77	79	189	235	729	168	0	0
Grp Sat Flow(s),veh/hln	1774	1770	972	1721	1770	1761	1774	1863	1546	1833	0	1583
Q Serve(g_s), s	0.3	3.9	9.0	5.3	3.6	3.8	10.4	12.6	30.1	8.8	0.0	0.0
Cycle Q Clear(g_c), s	0.3	3.9	9.0	5.3	3.6	3.8	10.4	12.6	30.1	8.8	0.0	0.0
Prop In Lane	1.00	1.00	1.00	1.00	0.16	1.00	1.00	1.00	0.33	1.00	0.00	1.00
Lane Grp Cap(c), veh/h	9	941	1233	194	561	559	456	479	397	469	0	405
V/C Ratio(X)	0.55	0.16	0.22	0.81	0.14	0.14	0.41	0.49	1.83	0.36	0.00	0.00
Avail Cap(c_a), veh/h	77	1027	1280	194	561	559	456	479	397	469	0	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	58.1	33.0	15.5	54.7	28.6	28.6	36.2	37.0	43.5	35.7	0.0	0.0
Incr Delay (d2), s/veh	17.8	0.2	0.2	21.4	0.1	0.1	0.2	0.3	385.3	2.1	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 BackOf(50%),veh/h	0.2	1.9	3.7	3.1	1.8	1.9	5.1	6.5	55.3	4.7	0.0	0.0
LnGrp Delay(d),s/veh	76.0	33.2	15.7	76.1	28.7	28.7	36.4	37.3	428.9	37.8	0.0	0.0
LnGrp LOS	E	C	B	E	C	C	D	F	D	F	D	D
Approach Vol, veh/h	427	-	-	-	-	314	-	-	1153	-	-	168
Approach Delay, s/veh	22.7	-	-	-	-	52.6	-	-	284.7	-	-	37.8
Approach LOS	C	-	-	-	-	D	-	-	F	-	-	D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	-	4	5	6	-	8				
Phs Duration (G+Y+R), s	11.0	36.0	-	35.0	5.0	42.0	-	35.1				
Change Period (Y+R), s	4.4	4.9	-	4.9	4.4	4.9	-	5.1				
Max Green Setting (Gmax), s	6.6	34.0	-	30.1	5.1	35.5	-	30.0				
Max Q Clear Time (g_c+H1), s	7.3	11.0	-	32.1	2.3	5.8	-	10.8				
Green Ext Time (g_c), s	0.0	5.9	-	0.0	0.0	7.1	-	0.5				

Intersection Summary		
HCM 2010 Ctrl Delay	175.0	
HCM 2010 LOS	F	

Notes		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	182	63	404	16	35	7	201	12	0	0	98	72
Future Volume (veh/h)	182	63	404	16	35	7	201	12	0	0	98	72
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.47	1.00	0.44	0.75	1.00	1.00	0.59				
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/hln	1900	1863	1863	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	192	66	425	17	37	7	212	13	0	0	103	76
Adj No. of Lanes	0	1	1	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	375	129	209	98	213	40	288	15	0	0	246	182
Arrive On Green	0.28	0.28	0.28	0.23	0.23	0.23	0.33	0.33	0.00	0.00	0.33	0.33
Sat Flow, veh/h	1336	459	745	431	939	178	587	46	0	0	751	554
Grp Volume(v), veh/h	258	0	425	61	0	0	225	0	0	0	0	179
Grp Sat Flow(s),veh/hln	796	0	745	1547	0	0	632	0	0	0	0	1305
Q Serve(g_s), s	8.8	0.0	20.5	2.3	0.0	0.0	16.2	0.0	0.0	0.0	0.0	7.8
Cycle Q Clear(g_c), s	8.8	0.0	20.5	2.3	0.0	0.0	24.0	0.0	0.0	0.0	0.0	7.8
Prop In Lane	0.74	1.00	0.28	0.11	0.94	0.00	0.00	0.00	0.00	0.00	0.42	0.42
Lane Grp Cap(c), veh/h	504	0	209	352	0	0	303	0	0	0	0	428
V/C Ratio(X)	0.51	0.00	2.03	0.17	0.00	0.00	0.74	0.00	0.00	0.00	0.00	0.42
Avail Cap(c_a), veh/h	504	0	209	392	0	0	303	0	0	0	0	428
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	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	22.1	0.0	26.3	22.7	0.0	0.0	28.9	0.0	0.0	0.0	0.0	19.1
Incr Delay (d2), s/veh	1.8	0.0	481.7	0.5	0.0	0.0	8.4	0.0	0.0	0.0	0.0	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 BackOf(50%),veh/h	0.0	0.0	32.1	1.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	2.8
LnGrp Delay(d),s/veh	23.9	0.0	508.0	23.2	0.0	0.0	37.2	0.0	0.0	0.0	0.0	19.4
LnGrp LOS	C	F	C	C	D	D	D	D	D	D	D	B
Approach Vol, veh/h	683	-	-	-								

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	
Traffic Volume (veh/h)	18	794	81	66	1834	85	261	33	102	289	60	24	
Future Volume (veh/h)	18	794	81	66	1834	85	261	33	102	289	60	24	
Number	1	6	16	5	2	12	3	8	18	7	4	14	
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	0.97	1.00	1.00	0.97	1.00	0.95	1.00	0.95	1.00	0.97	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/hln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	
Adj Flow Rate, veh/h	19	836	85	69	1931	89	275	35	107	304	63	25	
Adj No. of Lanes	1	3	1	1	3	1	1	1	0	1	1	0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap. veh/h	71	1691	510	141	1893	572	307	73	222	336	256	101	
Arrive On Green	0.04	0.33	0.33	0.08	0.37	0.37	0.17	0.19	0.19	0.19	0.20	0.20	
Sat Flow, veh/h	1774	5085	1535	1774	5085	1537	1774	388	1185	1774	1256	499	
Grp Volume(v), veh/h	19	836	85	69	1931	89	275	0	142	304	0	88	
Grp Sat Flow(s), veh/hln	1774	1695	1535	1774	1695	1537	1774	0	1573	1774	0	1755	
Q Serve(g_s), s	1.1	14.5	4.3	4.1	41.1	4.3	16.7	0.0	8.9	18.5	0.0	4.6	
Cycle Q Clear(q_c), s	1.1	14.5	4.3	4.1	41.1	4.3	16.7	0.0	8.9	18.5	0.0	4.6	
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	0.75	1.00	0.75	1.00	0.28	1.00	
Lane Grp Cap(c), veh/h	71	1691	510	141	1893	572	307	0	295	336	0	357	
V/C Ratio(X)	0.27	0.49	0.17	0.49	1.02	0.16	0.90	0.00	0.48	0.90	0.00	0.25	
Avail Cap(c_a), veh/h	161	1691	510	161	1893	572	595	0	613	595	0	684	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	
Uniform Delay (d), s/veh	51.4	29.4	26.0	48.6	34.6	23.1	44.7	0.0	40.1	43.8	0.0	36.9	
Incr Delay (d2), s/veh	0.7	1.0	0.7	1.0	25.9	0.6	3.7	0.0	0.5	4.6	0.0	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 BackOQ(50%), veh/hln	0.6	7.0	1.9	2.1	23.6	1.9	8.5	0.0	3.9	9.5	0.0	2.3	
LnGrp Delay(d), s/veh	52.2	30.5	26.7	49.6	60.6	23.7	48.4	0.0	40.5	48.4	0.0	37.0	
LnGrp LOS	D	C	C	D	F	C	D	D	D	D	D	D	
Approach Vol, veh/h	940			2089				417			392		
Approach Delay, s/veh	30.6			58.6				45.7			45.8		
Approach LOS	C			E				D			D		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+R), s	9.1	46.5	27.2	27.6	13.5	42.1	29.0	25.8
Change Period (Y+R), s	4.7	5.4	8.1	5.1	4.7	5.4	8.1	5.1
Max Green Setting (Gmax), s	10	36.7	37	43.0	10	36.7	37	43.0
Max Q Clear Time (g_c+H1), s	3.1	43.1	18.7	6.6	6.1	16.5	20.5	10.9
Green Ext Time (p_c), s	0.0	0.0	0.4	1.0	0.0	18.0	0.4	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	49.0
HCM 2010 LOS	D

\* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.  
 Leading Pedestrian Indicator approximated using increased All Red Time on appropriate phase

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	
Traffic Volume (veh/h)	43	667	88	74	721	103	154	203	95	123	119	24	
Future Volume (veh/h)	43	667	88	74	721	103	154	203	95	123	119	24	
Number	7	4	14	3	8	18	5	2	12	1	6	16	
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	0.96	1.00	1.00	0.94	1.00	0.94	1.00	0.94	1.00	0.95	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/hln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900	
Adj Flow Rate, veh/h	45	702	93	78	759	108	162	214	100	129	125	25	
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap. veh/h	73	839	111	100	874	124	199	346	162	162	409	82	
Arrive On Green	0.04	0.27	0.27	0.06	0.28	0.28	0.11	0.29	0.29	0.09	0.27	0.27	
Sat Flow, veh/h	1774	3127	414	1774	3085	439	1774	1174	549	1774	1493	299	
Grp Volume(v), veh/h	45	397	398	78	435	432	162	0	314	129	0	150	
Grp Sat Flow(s), veh/hln	1774	1770	1772	1774	1770	1754	1774	0	1722	1774	0	1792	
Q Serve(g_s), s	1.8	15.4	15.4	3.2	17.0	17.0	6.5	0.0	11.4	5.2	0.0	4.8	
Cycle Q Clear(q_c), s	1.8	15.4	15.4	3.2	17.0	17.0	6.5	0.0	11.4	5.2	0.0	4.8	
Prop In Lane	1.00	1.00	0.23	1.00	0.25	1.00	0.32	1.00	0.32	1.00	0.17	1.00	
Lane Grp Cap(c), veh/h	73	475	475	100	502	497	199	0	508	162	0	491	
V/C Ratio(X)	0.62	0.84	0.84	0.78	0.87	0.87	0.81	0.00	0.62	0.79	0.00	0.31	
Avail Cap(c_a), veh/h	125	490	490	134	502	497	208	0	508	183	0	491	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	
Uniform Delay (d), s/veh	34.3	25.1	25.1	33.8	24.7	24.7	31.5	0.0	22.1	32.3	0.0	20.9	
Incr Delay (d2), s/veh	8.2	11.7	11.9	18.5	14.9	15.1	20.7	0.0	5.6	19.0	0.0	1.6	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOQ(50%), veh/hln	1.1	9.0	9.1	2.1	10.3	10.2	4.3	0.0	6.2	3.4	0.0	2.6	
LnGrp Delay(d), s/veh	42.5	36.8	36.9	52.4	39.7	39.8	52.2	0.0	27.7	51.3	0.0	22.5	
LnGrp LOS	D	D	D	D	D	D	D	D	C	D	D	C	
Approach Vol, veh/h	840			945				476			279		
Approach Delay, s/veh	37.2			40.8				36.0			35.8		
Approach LOS	D			D				D			D		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+R), s	14.2	25.9	8.6	24.0	15.7	24.4	7.5	25.1
Change Period (Y+R), s	7.5	4.5	4.5	4.5	7.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	7.5	20.9	5.5	20.1	8.5	19.9	5.1	20.5
Max Q Clear Time (g_c+H1), s	7.2	13.4	5.2	17.4	8.5	6.8	3.8	19.0
Green Ext Time (p_c), s	0.0	1.7	0.0	2.1	0.0	2.4	0.0	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	38.1
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	10.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	20	79	25	70	79	70	20	275	26	28	220	9
Future Vol, veh/h	20	79	25	70	79	70	20	275	26	28	220	9
Conflicting Peds, #/hr	2	0	1	1	0	2	23	0	20	0	23	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	-	-	-	-	-	-	-	-	-	-
Storage Length	-	-	-	-	-	-	100	-	60	100	-	60
Veh in Median Storage, #	-	0	-	0	-	0	-	0	-	0	-	0
Grade, %	-	0	-	0	-	0	-	0	-	0	-	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	83	26	74	83	74	21	289	27	29	232	9

Major/Minor	Minor2	Minor1	Major1	Major2
Conflicting Flow All	726	666	698</	

MOVEMENT SUMMARY - Typical Neighborhood Traffic Circle

Site: 101 [2040 AM]

New Site  
Roundabout

Table with columns: Intersection, Int Delay, s/veh, Movement, Lane Configurations, Traffic Vol, etc.

Table with columns: Major/Minor, Minor2, Minor1, Major1, Major2, Conflicting Flow All, etc.

Table with columns: Approach, EB, WB, NB, SB, HCM Control Delay, s, HCM LOS

Table with columns: Minor Lane/Major Mvmt, NBL, NBT, NBR, EBL, EBLn1, WBLn1, SBL, SBT, SBR, Capacity, HCM Lane V/C Ratio, etc.

Intersection #6

MOVEMENT SUMMARY - Typical Neighborhood Traffic Circle

Site: 101 [2040 AM]

New Site  
Roundabout

Table with columns: Movement Performance - Vehicles, Mov ID, OD Mov, Demand Flows, etc.

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Roundabout LOS Method: Same as Signalised Intersections. 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 2010). Roundabout Capacity Model: SIDRA Standard. SIDRA Standard Delay Model is used, Control Delay includes Geometric Delay. Gap-Acceptance Capacity: SIDRA Standard (Akpelik M3D). HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection #7

MOVEMENT SUMMARY - Typical Neighborhood Traffic Circle

Site: 101 [2040 AM]

New Site  
Roundabout

Table with columns: Movement Performance - Vehicles, Mov ID, OD Mov, Demand Flows, etc.

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Roundabout LOS Method: Same as Signalised Intersections. 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 2010). Roundabout Capacity Model: SIDRA Standard. SIDRA Standard Delay Model is used, Control Delay includes Geometric Delay. Gap-Acceptance Capacity: SIDRA Standard (Akpelik M3D). HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection												
Intersection Delay, s/veh 10.9												
Intersection LOS B												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	
Lane Configurations		↔		↔			↔			↔		
Traffic Vol, veh/h	41	138	14	29	91	134	5	95	22	116	43	
Future Vol, veh/h	41	138	14	29	91	134	5	95	22	116	43	
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	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	43	145	15	31	96	141	5	100	23	122	79	
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	10.8			11			9.9			11.5		
HCM LOS	B			B			A			B		

Intersection												
Intersection Delay, s/veh 23.9												
Intersection LOS C												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	
Lane Configurations		↔	↔	↔	↔		↔	↔	↔	↔	↔	
Traffic Vol, veh/h	158	76	32	29	109	204	36	242	32	45	157	
Future Vol, veh/h	158	76	32	29	109	204	36	242	32	45	157	
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	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	166	80	34	31	115	215	38	255	34	47	165	
Number of Lanes	0	1	1	0	1	0	0	1	0	0	1	
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			2			2			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	2			1			2			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			2			1			2		
HCM Control Delay	20.1			29.8			28.4			16		
HCM LOS	C			D			D			C		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	21%	11%	50%
Vol Thru, %	78%	72%	36%	32%
Vol Right, %	18%	7%	53%	18%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	122	193	254	234
LT Vol	5	41	29	116
Through Vol	95	138	91	75
RT Vol	22	14	134	43
Lane Flow Rate	128	203	267	246
Geometry Grp	1	1	1	1
Degree of Util (X)	0.196	0.303	0.372	0.368
Departure Headway (Hd)	5.49	5.377	5.005	5.374
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	652	668	719	670
Service Time	3.533	3.416	3.04	3.411
HCM Lane V/C Ratio	0.196	0.304	0.371	0.367
HCM Control Delay	9.9	10.8	11	11.5
HCM Lane LOS	A	B	B	B
HCM 95th-ile Q	0.7	1.3	1.7	1.7

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	12%	68%	0%	8%	22%	0%
Vol Thru, %	78%	32%	0%	32%	78%	0%
Vol Right, %	10%	0%	100%	60%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	310	234	32	342	202	98
LT Vol	36	158	0	29	45	0
Through Vol	242	76	0	109	157	0
RT Vol	32	0	32	204	0	98
Lane Flow Rate	326	246	34	360	213	103
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.714	0.567	0.067	0.749	0.477	0.207
Departure Headway (Hd)	7.874	8.281	7.21	7.486	8.078	7.24
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	460	436	496	482	444	494
Service Time	5.933	6.039	4.968	5.541	5.84	5.002
HCM Lane V/C Ratio	0.709	0.564	0.069	0.747	0.48	0.209
HCM Control Delay	28.4	21.4	10.5	29.8	18	11.9
HCM Lane LOS	D	C	B	D	C	B
HCM 95th-ile Q	5.6	3.4	0.2	6.3	2.5	0.8

Intersection #10  
 MOVEMENT SUMMARY - Typical Neighborhood Traffic Circle

Site: 101 [2040 AM]  
 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 Veh/veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
<b>South: Green Bay St</b>											
3	L2	48	2.0	0.410	4.4	LOS A	2.8	70.9	0.59	0.53	24.4
8	T1	149	2.0	0.410	4.1	LOS A	2.8	70.9	0.59	0.53	22.7
18	R2	115	2.0	0.410	3.8	LOS A	2.8	70.9	0.59	0.53	23.4
<b>Approach</b>											
		312	2.0	0.410	4.0	LOS A	2.8	70.9	0.59	0.53	23.3
<b>East: Grove Ave</b>											
1	L2	51	2.0	0.427	4.6	LOS A	3.0	76.0	0.63	0.57	24.3
6	T1	137	2.0	0.427	4.3	LOS A	3.0	76.0	0.63	0.57	24.1
16	R2	134	2.0	0.427	4.0	LOS A	3.0	76.0	0.63	0.57	23.1
<b>Approach</b>											
		322	2.0	0.427	4.3	LOS A	3.0	76.0	0.63	0.57	23.8
<b>North: Green Bay St</b>											
7	L2	57	2.0	0.263	4.3	LOS A	1.6	40.3	0.56	0.52	24.3
4	T1	110	2.0	0.263	4.0	LOS A	1.6	40.3	0.56	0.52	22.9
14	R2	28	2.0	0.263	3.7	LOS A	1.6	40.3	0.56	0.52	22.9
<b>Approach</b>											
		195	2.0	0.263	4.0	LOS A	1.6	40.3	0.56	0.52	23.4
<b>West: Grove Ave</b>											
5	L2	27	2.0	0.227	4.0	LOS A	1.3	33.6	0.52	0.48	24.4
2	T1	116	2.0	0.227	3.7	LOS A	1.3	33.6	0.52	0.48	24.2
12	R2	30	2.0	0.227	3.4	LOS A	1.3	33.6	0.52	0.48	23.3
<b>Approach</b>											
		174	2.0	0.227	3.7	LOS A	1.3	33.6	0.52	0.48	24.1
<b>All Vehicles</b>											
		1002	2.0	0.427	4.0	LOS A	3.0	76.0	0.58	0.53	23.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Roundabout LOS Method: Same as Signalised Intersections.  
 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 2010).  
 Roundabout Capacity Model: SIDRA Standard.  
 SIDRA Standard Delay Model is used, Control Delay includes Geometric Delay.  
 Gap-Acceptance Capacity: SIDRA Standard (Akpelik M3D).  
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

HCM 2010 Signalized Intersection Summary  
 11: Hollister Street & Ingrid Avenue/Grove Avenue AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	138	62	22	176	138	131	40	532	168	50	347	69
Future Volume (veh/h)	138	62	22	176	138	131	40	532	168	50	347	69
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.95	1.00	0.96	1.00	0.95	1.00	0.95	1.00	0.98	1.00	0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1863	1863	1900	1863	1900	1863
Adj Flow Rate, veh/h	145	65	23	185	145	138	42	560	177	53	365	73
Adj No. of Lanes	0	1	0	0	1	1	1	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	187	84	30	227	178	340	338	609	192	119	682	136
Arrive On Green	0.17	0.17	0.17	0.22	0.22	0.22	0.45	0.45	0.45	0.45	0.45	0.45
Sat Flow, veh/h	1099	493	174	1016	796	1523	945	1341	424	718	1501	300
Grp Volume(v), veh/h	233	0	0	330	0	138	42	0	737	53	0	438
Grp Sat Flow(s), veh/h/ln/766	0	0	0	1812	0	1523	945	0	1764	718	0	1801
Q Serve(g_s), s	12.2	0.0	0.0	16.7	0.0	7.5	3.2	0.0	37.9	6.0	0.0	17.0
Cycle Q Clear(q_c), s	12.2	0.0	0.0	16.7	0.0	7.5	20.2	0.0	37.9	43.9	0.0	17.0
Prop In Lane	0.62	0.10	0.56	1.00	1.00	1.00	0.24	1.00	0.24	1.00	0.17	0.17
Lane Grp Cap(c), veh/h	301	0	0	405	0	340	338	0	801	119	0	818
V/C Ratio(X)	0.77	0.00	0.00	0.82	0.00	0.41	0.12	0.00	0.92	0.44	0.00	0.54
Avail Cap(c_a), veh/h	440	0	0	512	0	430	338	0	801	119	0	818
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	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.3	0.0	0.0	35.7	0.0	32.1	26.3	0.0	24.7	45.8	0.0	19.0
Incr Delay (d2), s/veh	6.3	0.0	0.0	8.8	0.0	1.0	0.2	0.0	15.8	2.8	0.0	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/h	6.5	0.0	0.0	9.3	0.0							

MOVEMENT SUMMARY

Site: 101 [2040 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 Veh/ds	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
<b>East: Iris Ave</b>											
7a	L1	304	0.0	0.382	7.4	LOS A	2.9	73.3	0.49	0.59	27.7
14	R2	105	0.0	0.382	4.2	LOS A	2.9	73.3	0.49	0.59	27.3
Approach		409	0.0	0.382	6.6	LOS A	2.9	73.3	0.49	0.59	27.6
<b>North: Oro Vista Rd</b>											
5	L2	130	0.0	0.296	9.1	LOS A	2.0	50.6	0.60	0.65	27.9
12a	R1	152	2.0	0.296	4.9	LOS A	2.0	50.6	0.60	0.65	27.6
Approach		283	1.1	0.296	6.8	LOS A	2.0	50.6	0.60	0.65	27.7
<b>SouthWest: Oro Vista Rd</b>											
3ax	L1	144	2.0	0.367	7.2	LOS A	2.9	72.9	0.46	0.51	28.1
18ax	R1	276	0.0	0.367	3.6	LOS A	2.9	72.9	0.46	0.51	28.2
Approach		419	0.7	0.367	4.8	LOS A	2.9	72.9	0.46	0.51	28.1
All Vehicles		1111	0.5	0.382	6.0	LOS A	2.9	73.3	0.51	0.57	27.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).  
 Roundabout LOS Method: Same as Signalised Intersections.  
 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 2010).  
 Roundabout Capacity Model: SIDRA Standard.  
 SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.  
 Gap-Acceptance Capacity: SIDRA Standard (Akpelik M3D).  
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Movement	EBL2	EBL	EBT	WBT	WBR	WBR2	SBL2	SBL	SBR	SWL	SWR	SWR2
Lane Configurations												
Traffic Volume (vph)	21	183	233	318	31	157	69	89	119	71	102	10
Future Volume (vph)	21	183	233	318	31	157	69	89	119	71	102	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.9	4.9				4.9	4.9			
Lane Util. Factor			1.00	1.00				1.00	1.00			
Flpb. ped/bikes			1.00	0.88				1.00	1.00		0.93	
Flpb. ped/bikes			0.96	1.00				1.00	1.00		1.00	
Frt			1.00	0.95				1.00	0.85		0.92	
Flt Protected			0.98	1.00				0.95	1.00		0.98	
Satd. Flow (prot)			1744	1564				1770	1583		1554	
Flt Permitted			0.49	1.00				0.95	1.00		0.98	
Satd. Flow (perm)			866	1564				1770	1583		1554	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	22	193	245	335	33	165	73	94	125	75	107	11
RTOR Reduction (vph)	0	0	0	11	0	0	0	0	109	54	0	0
Lane Group Flow (vph)	0	0	460	522	0	0	0	167	16	139	0	0
Confl. Peds. (#/hr)	36	64			36	64		10	10	10	36	10
Confl. Bikes (#/hr)					4	3						
Turn Type	Perm	Perm	NA	NA			Prot	Prot	Prot	Prot		
Protected Phases			2	6			3	3	3			
Permitted Phases	2	2										
Actuated Green, G (s)			63.8	63.8			13.7	13.7	14.0			
Effective Green, g (s)			63.8	63.8			13.7	13.7	14.0			
Actuated g/C Ratio			0.60	0.60			0.13	0.13	0.13			
Clearance Time (s)			4.9	4.9			4.9	4.9	4.9			
Vehicle Extension (s)			2.6	2.6			2.0	2.0	2.0			
Lane Grp Cap (vph)	520	939					228	204	204			
v/s Ratio Prot			0.33				c0.09	0.01	c0.09			
v/s Ratio Perm			c0.53									
v/c Ratio			0.88	0.56			0.73	0.08	0.68			
Uniform Delay, d1			18.1	12.7			44.5	40.7	44.0			
Progression Factor			1.00	1.00			1.00	1.00	1.00			
Incremental Delay, d2			16.3	0.6			10.0	0.1	7.3			
Delay (s)			34.3	13.3			54.5	40.8	51.3			
Level of Service			C	B			D	D	D			
Approach Delay (s)			34.3	13.3			48.6		51.3			
Approach LOS			C	B			D		D			
<b>Intersection Summary</b>												
HCM 2000 Control Delay	31.8			HCM 2000 Level of Service			C					
HCM 2000 Volume to Capacity ratio	0.83											
Actuated Cycle Length (s)	106.2			Sum of lost time (s)			14.7					
Intersection Capacity Utilization	98.2%			ICU Level of Service			F					
Analysis Period (min)	15											
c Critical Lane Group												

HCM 2010 Signalized Intersection Summary Horizon Year Conditions (2040) W/ Project  
 14: Howard Avenue & Iris Avenue AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	224	65	142	162	16	88	9	248	8	3	4
Future Volume (veh/h)	1	224	65	142	162	16	88	9	248	8	3	4
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Ob). veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.97	1.00		0.97	0.95		0.95	0.99		0.94	
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/hln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	1	236	68	149	171	17	93	9	261	8	3	4
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	1	306	88	191	219	22	163	34	297	244	95	87
Arrive On Green	0.22	0.22	0.22	0.24	0.24	0.24	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	6	1377	397	798	915	91	297	122	1073	527	342	316
Grp Volume(v), veh/h	305	0	0	337	0	0	363	0	0	15	0	0
Grp Sat Flow(s), veh/hln	779	0	0	1804	0	0	1492	0	0	1185	0	0
Q Serve(g_s), s	9.0	0.0	0.0	9.8	0.0	0.0	9.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(q_c), s	9.0	0.0	0.0	9.8	0.0	0.0	13.0	0.0	0.0	0.4	0.0	0.0
Prop In Lane	0.00	0.22	0.44	0.05	0.26	0.72	0.53	0.27				
Lane Grp Cap(c), veh/h	395	0	0	431	0	0	493	0	0	426	0	0
V/C Ratio(X)	0.77	0.00	0.00	0.78	0.00	0.00	0.74	0.00	0.00	0.04	0.00	0.00
Avail Cap(c_a), veh/h	575	0	0	615	0	0	562	0	0	487	0	0
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	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.5	0.0	0.0	19.9	0.0	0.0	19.2	0.0	0.0	14.8	0.0	0.0
Incr Delay (d2), s/veh	4.2	0.0	0.0	4.4	0.0	0.0	3.4	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	4.9	0.0	0.0	5.4	0.0	0.0	5.8	0.0	0.0	0.2	0.0	0.0
LnGrp Delay(d), s/veh	24.6	0.0	0.0	24.3	0.0	0.0	22.7	0.0	0.0	14.8	0.0	0.0
LnGrp LOS	C			C			C			B		
Approach Vol, veh/h	305			337			363			15		
Approach Delay, s/veh	24.6			24.3			22.7			14.8		
Approach LOS	C			C			C			B		
<b>Timer</b>												
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	2	4		6		8						
Change Period (Y+R), s	18.3	20.4		17.3		20.4						
Max Green Setting (Gmax), s	4.9	4.9		4.9		4.9						
Max Q Clear Time (g_c+H1), s	19.1	18.1		18.1		18.1						
Green Ext Time (g_e), s	11.8	15.0		11.0		2.4						
	1.2	0.5		1.1		1.6						
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay	23.7											
HCM 2010 LOS	C											

HCM 2010 Signalized Intersection Summary Horizon Year Conditions (2040) W/ Project  
 15: Beyer Boulevard & Iris Avenue/SR-905 WB Ramps AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	105	250	215	220	205	115	315	175	95	430	85
Future Volume (veh/h)	110	105	250	215	220	205	115	315	175	95	430	85
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Ob). 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.								

HCM 2010 Signalized Intersection Summary Horizon Year Conditions (2040) W/ Project  
15: Beyer Boulevard & Iris Avenue/SR-905 WB Ramps AM Peak Hour

\* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.  
User approved changes to right turn type.  
Bicycles move continuously around the Iris/Beyer bend. Will yield to crossing bikes and pedestrians.

HCM Signalized Intersection Capacity Analysis Horizon Year Conditions (2040) W/ Project  
16: Dairy Mart Road/SR-905 EB Ramps & Beyer Boulevard AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	340	305	235	30	295	100	185	210	70	75	20	100
Future Volume (vph)	340	305	235	30	295	100	185	210	70	75	20	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.9	5.1	4.7	4.9		5.1	5.1	5.1		5.1	4.7
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95		0.95	0.95	1.00		1.00	1.00
Frbp, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.97		1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
Ft	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.96	1.00
Satd. Flow (prot)	1770	1863	1560	1770	3405		1681	1762	1530		1792	1565
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.96	1.00
Satd. Flow (perm)	1770	1863	1560	1770	3405		1681	1762	1530		1792	1565
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	358	321	247	32	311	105	195	221	74	79	21	105
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	69
Lane Group Flow (vph)	358	321	247	32	416	0	175	241	74	0	100	36
Confl. Peds. (#/hr)			2	2			14		9		9	14
Turn Type	Prot	NA	pm-ov	Prot	NA		Split	NA	Perm	Split	NA	pm-ov
Protected Phases	1	6	4	5	2		4	4		8	8	1
Permitted Phases			6						4			8
Actuated Green, G (s)	17.2	33.1	51.9	5.5	21.4		18.8	18.8	18.8		14.2	31.4
Effective Green, g (s)	17.2	33.1	51.9	5.5	21.4		18.8	18.8	18.8		14.2	31.4
Actuated g/C Ratio	0.19	0.36	0.57	0.06	0.23		0.21	0.21	0.21		0.16	0.34
Clearance Time (s)	4.7	4.9	5.1	4.7	4.9		5.1	5.1	5.1		5.1	4.7
Vehicle Extension (s)	2.0	4.3	2.0	2.0	4.3		2.0	2.0	2.0		2.0	2.0
Lane Grp Cap (vph)	333	674	885	106	797		345	362	314		278	537
v/s Ratio Prot	c0.20	0.17	0.06	0.02	c0.12		0.10	c0.14			c0.06	0.01
v/s Ratio Perm			0.10					0.05				0.01
v/c Ratio	1.08	0.48	0.28	0.30	0.52		0.51	0.67	0.24		0.36	0.07
Uniform Delay, d1	37.1	22.5	10.1	41.1	30.5		32.2	33.4	30.3		34.5	20.2
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	70.7	0.8	0.1	0.6	0.9		0.4	3.6	0.1		0.3	0.0
Delay (s)	107.8	23.3	10.2	41.7	31.5		32.6	37.0	30.4		34.8	20.2
Level of Service	F	C	B	D	C		C	D	C		C	C
Approach Delay (s)		52.5			32.2			34.4				27.3
Approach LOS		D			C			C				C

Bicycles cross with the through movement (Phase 6) no special phasing required.

HCM 2010 Signalized Intersection Summary Horizon Year Conditions (2040) W/ Project  
17: Beyer Boulevard & Del Sur Boulevard AM Peak Hour

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	64	285	280	128	128	99
Future Volume (veh/h)	64	285	280	128	128	99
Number	5	2	6	16	7	14
Initial Q (Ob), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pb1)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	67	300	295	135	135	104
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh. %	2	2	2	2	2	2
Cap, veh/h	95	1099	508	233	236	211
Arrive On Green	0.05	0.59	0.42	0.42	0.13	0.13
Sat Flow, veh/h	1774	1863	1211	554	1774	1583
Grp Volume(v), veh/h	67	300	0	430	135	104
Grp Sat Flow(s),veh/hln1774	1863	0	1765	1774	1583	
Q Serve(g_s), s	1.4	3.0	0.0	7.0	2.7	2.3
Cycle Q Clear(q_c), s	1.4	3.0	0.0	7.0	2.7	2.3
Prop In Lane	1.00			0.31	1.00	1.00
Lane Grp Cap(c), veh/h	95	1099	0	741	236	211
V/C Ratio(X)	0.71	0.27	0.00	0.58	0.57	0.49
Avail Cap(c_a), veh/h	264	1665	0	1108	991	884
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.5	3.8	0.0	8.4	15.3	15.1
Incr Delay (d2), s/veh	3.5	0.3	0.0	1.5	0.8	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.0	3.7	1.4	2.0
LnGrp Delay(d),s/veh	21.0	4.0	0.0	9.9	16.1	15.8
LnGrp LOS	C	A		A	B	B
Approach Vol, veh/h	367	430		239		
Approach Delay, s/veh	7.1	9.9		16.0		
Approach LOS	A	A		B		

HCM 2010 AWSC Horizon Year Conditions (2040) W/ Project  
18: Smythe Avenue W & Beyer Boulevard AM Peak Hour

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	505	129	529	479	79	331
Future Vol, veh/h	505	129	529	479	79	331
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	532	136	557	504	83	348
Number of Lanes	1	1	1	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	2
HCM Control Delay	82.9	102.7	30.5
HCM LOS	F	F	D

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	19%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%
Vol Right, %	81%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	410	505	129	529	479
LT Vol	79	0	0	529	0
Through Vol	0	505	0	0	479
RT Vol	331	0	129	0	0
Lane Flow Rate	432	532	136	557	504
Geometry Grp	2	7	7	7	7
Degree of Util (X)	0.788	1.107	0.256	1.192	1.009
Departure Headway (Hd)	6.793	7.721	6.999	7.949	7.433
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	535	473	516	462	494
Service Time	4.793	5.421	4.699	5.649	5.133
HCM Lane V/C Ratio	0.807	1.125	0.264	1.206	1.02
HCM Control Delay	30.5	101	12.1	132.1	70.3
HCM Lane LOS	D	F	B	F	F
HCM 95th-ile Q	7.3	17.4	1	20.7	13.8



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↔	↕	↕	↕	↕	↕		
Traffic Volume (veh/h)	422	608	479	511	847	544		
Future Volume (veh/h)	422	608	479	511	847	544		
Number	1	6	2	12	3	18		
Initial Q (Ob), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pb1)	1.00			0.97	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863		
Adj Flow Rate, veh/h	444	640	504	538	892	573		
Adj No. of Lanes	1	1	1	1	1	1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh. %	2	2	2	2	2	2		
Cap. veh/h	375	919	467	1075	774	1026		
Arrive On Green	0.21	0.49	0.25	0.25	0.44	0.44		
Sat Flow, veh/h	1774	1863	1863	1530	1774	1583		
Grp Volume(v), veh/h	444	640	504	538	892	573		
Grp Sat Flow(s),veh/h/ln/774	1863	1863	1863	1530	1774	1583		
Q Serve(g_s), s	29.6	37.1	35.1	23.8	61.1	28.0		
Cycle Q Clear(q_c), s	29.6	37.1	35.1	23.8	61.1	28.0		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	375	919	467	1075	774	1026		
V/C Ratio(X)	1.18	0.70	1.08	0.50	1.15	0.56		
Avail Cap(c_a), veh/h	375	919	467	1075	774	1026		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	55.2	27.3	52.5	10.6	39.4	13.6		
Incr Delay (d2), s/veh	106.7	2.4	64.6	0.5	83.0	0.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/d	25.6	19.6	26.4	20.9	47.7	12.3		
LnGrp Delay(d),s/veh	161.9	29.8	117.1	11.1	122.4	14.0		
LnGrp LOS	F	C	F	B	F	B		
Approach Vol, veh/h	1084	1042			1465			
Approach Delay, s/veh	83.9	62.3			80.0			
Approach LOS	F	E			F			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2			6	8		
Phs Duration (G+Y+R), s	34.0	40.0			74.0	66.0		
Change Period (Y+R), s	4.4	4.9			4.9	4.9		
Max Green Setting (Gmax), s	35.1	35.1			69.1	61.1		
Max Q Clear Time (g_c+I0), s	37.1	37.1			39.1	63.1		
Green Ext Time (g_c), s	0.0	0.0			17.0	0.0		
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay	76.1							
HCM 2010 LOS	E							

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕
Traffic Volume (veh/h)	86	1188	8	84	993	47	24	4	87	26	0	10
Future Volume (veh/h)	86	1188	8	84	993	47	24	4	87	26	0	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pb1)	1.00	0.96	1.00		0.98	0.85		0.83	0.89			0.83
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/hln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1900	1863
Adj Flow Rate, veh/h	91	1251	8	88	1045	49	25	4	92	27	0	11
Adj No. of Lanes	1	1	0	1	2	0	0	1	0	1	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	112	1216	8	97	2234	105	57	21	153	144	6	44
Arrive On Green	0.06	0.66	0.66	0.05	0.65	0.65	0.15	0.15	0.15	0.15	0.00	0.15
Sat Flow, veh/h	1774	1848	12	1774	3439	161	183	136	1013	678	43	294
Grp Volume(v), veh/h	91	0	1259	88	538	556	121	0	0	38	0	0
Grp Sat Flow(s),veh/h/ln/774	0	1860	1774	1770	1830	1332	0	0	1014	0	0	0
Q Serve(g_s), s	7.5	0.0	97.7	7.3	22.7	22.7	5.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(q_c), s	7.5	0.0	97.7	7.3	22.7	22.7	12.3	0.0	0.0	5.3	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.09	0.21		0.76	0.71		0.29
Lane Grp Cap(c), veh/h	112	0	1224	97	1149	1189	231	0	0	195	0	0
V/C Ratio(X)	0.82	0.00	1.03	0.91	0.47	0.47	0.52	0.00	0.00	0.19	0.00	0.00
Avail Cap(c_a), veh/h	182	0	1224	97	1149	1189	244	0	0	207	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	68.7	0.0	25.4	69.8	13.1	13.1	58.5	0.0	0.0	55.4	0.0	0.0
Incr Delay (d2), s/veh	5.5	0.0	33.4	61.8	1.1	1.0	0.7	0.0	0.0	0.2	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/d	9	0.0	61.0	5.3	11.4	11.8	4.7	0.0	0.0	1.4	0.0	0.0
LnGrp Delay(d),s/veh	74.2	0.0	58.8	131.7	14.2	14.1	59.2	0.0	0.0	55.6	0.0	0.0
LnGrp LOS	E		F	F	B	B	E		E			E
Approach Vol, veh/h	1350		1182				121			38		
Approach Delay, s/veh	59.8		22.9				59.2			55.6		
Approach LOS	E		C				E			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	8					
Phs Duration (G+Y+R), s	35.5	102.6		30.4	16.7	101.4	30.4					
Change Period (Y+R), s	7.4	4.9		7.9	7.4	4.9	7.9					
Max Green Setting (Gmax), s	37.7	24.0		15.2	90.6	24.0						
Max Q Clear Time (g_c+I0), s	99.7	7.3		9.5	24.7	14.3						
Green Ext Time (g_c), s	0.0	0.0		0.6	0.0	62.6	0.4					
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay	43.5											
HCM 2010 LOS	D											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕
Traffic Volume (veh/h)	135	1021	195	137	821	119	181	115	176	107	99	80
Future Volume (veh/h)	135	1021	195	137	821	119	181	115	176	107	99	80
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pb1)	1.00	0.94	1.00		0.94	0.98		0.96	1.00			0.95
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/hln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	142	1075	205	144	864	125	191	121	185	113	104	84
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	172	1124	213	164	1163	168	236	132	189	204	184	131
Arrive On Green	0.10	0.38	0.38	0.09	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1774	2934	557	1774	3074	445	487	345	493	403	481	342
Grp Volume(v), veh/h	142	646	634	144	497	492	497	0	0	301	0	0
Grp Sat Flow(s),veh/h/ln/774	1770	1722	1774	1770	1750	1326	0	0	1227	0	0	0
Q Serve(g_s), s	7.8	35.4	35.8	8.0	24.2	24.2	18.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(q_c), s	7.8	35.4	35.8	8.0	24.2	24.2	37.1	0.0	0.0	19.1	0.0	0.0
Prop In Lane	1.00		0.32	1.00		0.25	0.38		0.37	0.38		0.28
Lane Grp Cap(c), veh/h	172	678	660	164	670	662	557	0	0	518	0	0
V/C Ratio(X)	0.82	0.95	0.96	0.88	0.74	0.74	0.89	0.00	0.00	0.58	0.00	0.00
Avail Cap(c_a), veh/h	210	683	665	164	670	662	557	0	0	518	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	44.2	29.9	30.0	44.7	26.8	26.8	31.0	0.0	0.0	24.4	0.0	0.0
Incr Delay (d2), s/veh	16.5	24.2	26.0	37.1	6.1	6.2	16.2	0.0	0.0	1.1	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/d	6	21.8</										

Intersection							
Int Delay, s/veh	11						
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↑			↑	↓		
Traffic Vol, veh/h	21	0	0	40	428	9	
Future Vol, veh/h	21	0	0	40	428	9	
Conflicting Peds, #/hr	0	1	1	0	2	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	-	-	-	0	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	95	95	95	95	95	95	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	22	0	0	42	451	9	

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	-	-	66	22
Stage 1	-	-	-	22	-
Stage 2	-	-	-	44	-
Critical Hdwy	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	0	0	0	939	1055
Stage 1	-	0	0	1001	-
Stage 2	-	0	0	978	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	937	1055
Mov Cap-2 Maneuver	-	-	-	937	-
Stage 1	-	-	-	1001	-
Stage 2	-	-	-	976	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	939	-	-
HCM Lane V/C Ratio	0.49	-	-
HCM Control Delay (s)	12.5	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	2.8	-	-

Intersection													
Int Delay, s/veh	5.1												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↑			↑							↑	
Traffic Vol, veh/h	0	99	23	11	40	0	0	0	0	141	170	26	
Future Vol, veh/h	0	99	23	11	40	0	0	0	0	141	170	26	
Conflicting Peds, #/hr	3	0	0	0	0	3	32	0	0	0	0	0	32
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None	-	None	-	None	-	None	-
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	-	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	104	24	12	42	0	0	0	0	148	179	27	

Major/Minor	Minor2	Minor1	Major2		
Conflicting Flow All	-	521	225	554	535
Stage 1	-	521	-	0	0
Stage 2	-	0	-	554	535
Critical Hdwy	-	6.52	6.22	7.12	6.52
Critical Hdwy Stg 1	-	5.52	-	-	-
Critical Hdwy Stg 2	-	-	-	6.12	5.52
Follow-up Hdwy	-	4.018	3.318	3.518	4.018
Pot Cap-1 Maneuver	0	460	814	443	452
Stage 1	0	532	-	-	0
Stage 2	0	-	-	517	524
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	446	789	352	438
Mov Cap-2 Maneuver	-	446	-	352	438
Stage 1	-	516	-	-	-
Stage 2	-	-	-	400	508

Approach	EB	WB	SB
HCM Control Delay, s	15	14.9	-
HCM LOS	C	B	-

Minor Lane/Major Mvmt	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	486	416	-	-	-
HCM Lane V/C Ratio	0.264	0.129	-	-	-
HCM Control Delay (s)	15	14.9	-	-	-
HCM Lane LOS	C	B	-	-	-
HCM 95th %tile Q(veh)	1.1	0.4	-	-	-

Intersection													
Int Delay, s/veh	7.7												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↑			↑				↑			↑	
Traffic Vol, veh/h	76	193	0	0	27	122	19	268	19	0	0	0	
Future Vol, veh/h	76	193	0	0	27	122	19	268	19	0	0	0	
Conflicting Peds, #/hr	13	0	0	0	0	13	5	0	2	2	0	5	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	-	None	-	-	None	-	
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	
Veh in Median Storage, #	-	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, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	80	203	0	0	28	128	20	282	20	0	0	0	

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	170	0	-	461	533
Stage 1	-	-	-	363	363
Stage 2	-	-	-	98	170
Critical Hdwy	4.12	-	-	6.42	6.52
Critical Hdwy Stg 1	-	-	-	5.42	5.52
Critical Hdwy Stg 2	-	-	-	5.42	5.52
Follow-up Hdwy	2.218	-	-	3.518	4.018
Pot Cap-1 Maneuver	1407	-	0	559	453
Stage 1	-	0	0	704	625
Stage 2	-	0	0	926	758
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1400	-	-	521	0
Mov Cap-2 Maneuver	-	-	-	521	0
Stage 1	-	-	-	659	0
Stage 2	-	-	-	922	0

Approach	EB	WB	NB
HCM Control Delay, s	2.2	0	16.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBLn1	WBLn1	WBLn1
Capacity (veh/h)	641	1400	-	-
HCM Lane V/C Ratio	0.503	0.057	-	-
HCM Control Delay (s)	16.2	7.7	0	-
HCM Lane LOS	C	A	A	-
HCM 95th %tile Q(veh)	2.8	0.2	-	-

Intersection													
Intersection Delay, s/veh	164.8												
Intersection LOS	F												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↑			↑				↑			↑	
Traffic Vol, veh/h	2	193	681	46	125	0	555	9	24	0	12	6	
Future Vol, veh/h	2	193	681	46	125	0	555	9	24	0	12	6	
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	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	2	203	717	48	132	0	584	9	25	0	13	6	
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0	

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	241.9	15.8	97.9	12.7
HCM LOS	F	C	F	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	94%	0%	27%	0%
Vol Thru, %	2%	22%	73%	67%
Vol Right, %	4%	78%	0%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	588	876	171	18
LT Vol	555	2	46	0
Through Vol	9	193	125	12
RT Vol	24	681	0	6
Lane Flow Rate	619	922	180	19
Geometry Grp	1	1	1	1
Degree of Util (X)	1.101	1.478	0.359	0.041
Departure Headway (Hd)	7.427	6.158	8.232	9.319
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	495	599	439	387
Service Time	5.427	4.158	6.232	7.319
HCM Lane V/C Ratio	1.251	1.539	0.41	0.049
HCM Control Delay	97.9	241.9	15.8	12.7
HCM Lane LOS	F	F	C	B
HCM 95th %tile Q	17.5	42.5	1.6	0.1

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	149	79	5	106	5	2
Future Vol, veh/h	149	79	5	106	5	2
Conflicting Peds, #/hr	0	6	6	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	157	83	5	112	5	2

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	246	0	326	204
Stage 1	-	-	-	-	204	-
Stage 2	-	-	-	-	122	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1320	-	668	837
Stage 1	-	-	-	-	830	-
Stage 2	-	-	-	-	903	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1320	-	662	832
Mov Cap-2 Maneuver	-	-	-	-	662	-
Stage 1	-	-	-	-	825	-
Stage 2	-	-	-	-	899	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	703	-	-	1320	-
HCM Lane V/C Ratio	0.01	-	-	0.004	-
HCM Control Delay (s)	10.2	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %ile Q(veh)	0	-	-	0	-

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	5	145	256	150	136	12	290	69	693	52	107	84
Future Volume (veh/h)	5	145	256	150	136	12	290	69	693	52	107	84
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	0.70	1.00	1.00	0.87	1.00	1.00	0.98	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/hln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	5	153	269	158	143	13	189	235	729	55	113	0
Adj No. of Lanes	1	2	2	2	2	2	0	1	1	0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	9	941	1233	194	1028	92	456	479	397	154	316	405
Arrive On Green	0.01	0.27	0.27	0.06	0.32	0.32	0.26	0.26	0.26	0.26	0.26	0.00
Sat Flow, veh/h	1774	3539	1945	3442	3242	289	1774	1863	1546	600	1233	1583
Grp Volume(v), veh/h	5	153	269	158	143	13	189	235	729	168	0	0
Grp Sat Flow(s),veh/hln	1774	1770	972	1721	1770	1761	1774	1863	1546	1833	0	1583
Q Serve(g_s), s	0.3	3.9	9.0	5.3	3.6	3.8	10.4	12.6	30.1	8.8	0.0	0.0
Cycle Q Clear(g_c), s	0.3	3.9	9.0	5.3	3.6	3.8	10.4	12.6	30.1	8.8	0.0	0.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	1.00	1.00
Lane Grp Cap(c), veh/h	9	941	1233	194	561	559	456	479	397	469	0	405
V/C Ratio(X)	0.55	0.16	0.22	0.81	0.14	0.14	0.41	0.49	1.83	0.36	0.00	0.00
Avail Cap(c_a), veh/h	77	1027	1280	194	561	559	456	479	397	469	0	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	58.1	33.0	15.5	54.7	28.6	28.6	36.2	37.0	43.5	35.7	0.0	0.0
Incr Delay (d2), s/veh	17.8	0.2	0.2	21.4	0.1	0.1	0.2	0.3	385.3	2.1	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 BackOf(50%),veh/h	0.2	1.9	3.7	3.1	1.8	1.9	5.1	6.5	55.3	4.7	0.0	0.0
LnGrp Delay(d),s/veh	76.0	33.2	15.7	76.1	28.7	28.7	36.4	37.3	428.9	37.8	0.0	0.0
LnGrp LOS	E	C	B	E	C	C	D	F	F	D		
Approach Vol, veh/h	427			314				1153			168	
Approach Delay, s/veh	22.7			52.6				284.7			37.8	
Approach LOS	C			D				F			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	36.0		35.0	5.0	42.0		35.1				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		5.1				
Max Green Setting (Gmax), s	6.6	34.0		30.1	5.1	35.5		30.0				
Max Q Clear Time (g_c+H1), s	7.3	11.0		32.1	2.3	5.8		10.8				
Green Ext Time (g_c), s	0.0	5.9		0.0	0.0	7.1		0.5				

Intersection Summary		
HCM 2010 Ctrl Delay	175.0	
HCM 2010 LOS	F	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	182	63	404	16	35	7	201	12	0	0	98	72
Future Volume (veh/h)	182	63	404	16	35	7	201	12	0	0	98	72
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	0.47	1.00	1.00	0.44	0.75	1.00	1.00	1.00	0.59	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/hln	1900	1863	1863	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	192	66	425	17	37	7	212	13	0	0	103	76
Adj No. of Lanes	0	1	1	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	375	129	209	98	213	40	288	15	0	0	246	182
Arrive On Green	0.28	0.28	0.28	0.23	0.23	0.23	0.33	0.33	0.00	0.00	0.33	0.33
Sat Flow, veh/h	1336	459	745	431	939	178	587	46	0	0	751	554
Grp Volume(v), veh/h	258	0	425	61	0	0	225	0	0	0	0	179
Grp Sat Flow(s),veh/hln	1796	0	745	1547	0	0	632	0	0	0	0	1305
Q Serve(g_s), s	8.8	0.0	20.5	2.3	0.0	0.0	16.2	0.0	0.0	0.0	0.0	7.8
Cycle Q Clear(g_c), s	8.8	0.0	20.5	2.3	0.0	0.0	24.0	0.0	0.0	0.0	0.0	7.8
Prop In Lane	0.74	1.00	0.28	0.11	0.94	0.00	0.00	0.00	0.00	0.00	0.42	0.42
Lane Grp Cap(c), veh/h	504	0	209	352	0	0	303	0	0	0	0	428
V/C Ratio(X)	0.51	0.00	2.03	0.17	0.00	0.00	0.74	0.00	0.00	0.00	0.00	0.42
Avail Cap(c_a), veh/h	504	0	209	392	0	0	303	0	0	0	0	428
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	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	22.1	0.0	26.3	22.7	0.0	0.0	28.9	0.0	0.0	0.0	0.0	19.1
Incr Delay (d2), s/veh	1.8	0.0	481.7	0.5	0.0	0.0	8.4	0.0	0.0	0.0	0.0	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 BackOf(50%),veh/h	4.6	0.0	32.1	1.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	2.8
LnGrp Delay(d),s/veh	23.9	0.0	508.0	23.2	0.0	0.0	37.2	0.0	0.0	0.0	0.0	19.4
LnGrp LOS	C		F	C			D					B
Approach Vol, veh/h	683			61				225			179	
Approach Delay, s/veh	325.1			23.2				3				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔↔	↔	↔	↔↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	39	1402	262	157	1153	143	163	68	114	294	137	68
Future Volume (veh/h)	39	1402	262	157	1153	143	163	68	114	294	137	68
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.95	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	41	1476	276	165	1214	151	172	72	120	309	144	72
Adj No. of Lanes	1	3	1	1	3	1	0	1	1	0	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	109	1552	475	178	1750	537	252	105	300	409	266	133
Arrive On Green	0.06	0.31	0.31	0.10	0.34	0.34	0.20	0.20	0.20	0.23	0.23	0.23
Sat Flow, veh/h	1774	5085	1557	1774	5085	1560	1268	531	1512	1774	1156	578
Grp Volume(v), veh/h	41	1476	276	165	1214	151	244	0	120	309	0	216
Grp Sat Flow(s), veh/hln	1774	1695	1557	1774	1695	1560	1799	0	1512	1774	0	1734
Q Serve(g_s), s	2.7	34.8	18.3	11.3	25.2	8.6	15.4	0.0	8.5	19.9	0.0	13.4
Cycle Q Clear(g_c), s	2.7	34.8	18.3	11.3	25.2	8.6	15.4	0.0	8.5	19.9	0.0	13.4
Prop In Lane	1.00		1.00	1.00		1.00	0.70		1.00	1.00		0.33
Lane Grp Cap(c), veh/h	109	1552	475	178	1750	537	357	0	300	409	0	400
V/C Ratio(X)	0.38	0.95	0.58	0.93	0.69	0.28	0.68	0.00	0.40	0.76	0.00	0.54
Avail Cap(c_a), veh/h	145	1552	475	178	1750	537	587	0	494	579	0	566
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.3	41.7	35.9	54.7	34.6	29.2	45.6	0.0	42.8	43.9	0.0	41.4
Incr Delay (d2), s/veh	0.8	13.8	5.1	46.1	2.3	1.3	0.9	0.0	0.3	1.9	0.0	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/hln	1.4	18.3	8.6	7.8	12.2	3.9	7.7	0.0	3.6	9.9	0.0	6.5
LnGrp Delay(d), s/veh	56.1	55.5	41.1	100.7	36.9	30.5	46.4	0.0	43.1	45.8	0.0	41.9
LnGrp LOS	E	E	D	F	D	C	D		D	D		D
Approach Vol, veh/h		1793			1530			364				525
Approach Delay, s/veh		53.3			43.2			45.3				44.2
Approach LOS		D			D			D				D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+R), s	12.2	47.6		33.3	17.0	42.8		29.4				
Change Period (Y+R), s	4.7	5.4		5.1	4.7	5.4		5.1				
Max Green Setting (Gmax), s	10	39.7		40.0	12	37.4		40.0				
Max Q Clear Time (g_c+H1), s	4.7	27.2		21.9	13.3	36.8		17.4				
Green Ext Time (p_c), s	0.0	11.6		2.0	0.0	0.6		1.1				

Intersection Summary	
HCM 2010 Ctrl Delay	47.8
HCM 2010 LOS	D

Notes

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\* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

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Intersection	
Int Delay, s/veh	19.4
Movement	EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR
Lane Configurations	↔↔ ↔↔ ↔↔ ↔↔ ↔↔ ↔↔ ↔↔ ↔↔ ↔↔ ↔↔ ↔↔ ↔↔
Traffic Vol, veh/h	18 137 38 56 85 59 19 228 27 76 350 11
Future Vol, veh/h	18 137 38 56 85 59 19 228 27 76 350 11
Conflicting Peds, #/hr	1 0 3 3 0 1 2 0 11 11 0 2
Sign Control	Stop Stop Stop Stop Stop Free Free Free Free Free Free
RT Channelized	- None - - None - - None - - None - - None -
Storage Length	- - - - - 100 - - 60 100 - - 60
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, %	2 2 2 2 2 2 2 2 2 2 2 2
Mvmt Flow	19 144 40 59 89 62 20 240 28 80 368 12
Major/Minor	Minor2 Minor1 Major1 Major2
Conflicting Flow All	887 821 373 915 821 252 370 0 0 251 0 0
Stage 1	530 530 - 291 291 - - - - - - -
Stage 2	357 291 - 624 530 - - - - - - -
Critical Hdwy	7.12 6.52 6.22 7.12 6.52 6.22 4.12 - - - - -
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	3.518 4.018 3.318 3.518 4.018 3.318 2.218 - - 2.218 - -
Pot Cap-1 Maneuver	265 309 673 253 309 787 1189 - - 1314 - -
Stage 1	533 527 - 717 672 - - - - - - -
Stage 2	661 672 - 473 527 - - - - - - -
Platoon blocked, %	- - - - - - - - - - - - -
Mov Cap-1 Maneuver	173 282 670 133 282 778 1186 - - 1313 - -
Mov Cap-2 Maneuver	173 282 - 133 282 - - - - - - -
Stage 1	523 494 - 698 654 - - - - - - -
Stage 2	516 654 - 295 494 - - - - - - -
Approach	EB WB NB SB
HCM Control Delay, s	39.5 65.1 0.6 1.4
HCM LOS	E F
Minor Lane/Major Mvmt	NBL NBT NBR EBL1 WBL1 SBL SBT SBR
Capacity (veh/h)	1186 - - 298 251 1313 - -
HCM Lane V/C Ratio	0.017 - - 0.682 0.839 0.061 - -
HCM Control Delay (s)	8.1 - - 39.5 65.1 7.9 - -
HCM Lane LOS	A - - E F A - -
HCM 95th %ile Q(veh)	0.1 - - 4.6 6.7 0.2 - -

Intersection Summary	
HCM 2010 Ctrl Delay	35.3
HCM 2010 LOS	D

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔↔	↔	↔	↔↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	36	687	99	104	675	90	102	158	106	178	197	46
Future Volume (veh/h)	36	687	99	104	675	90	102	158	106	178	197	46
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.96	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	38	723	104	109	711	95	107	166	112	187	207	48
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	66	804	116	139	942	126	138	582	366	227	953	215
Arrive On Green	0.04	0.26	0.26	0.08	0.30	0.30	0.08	0.28	0.28	0.13	0.33	0.33
Sat Flow, veh/h	1774	3083	443	1774	3119	416	1774	2052	1290	1774	2850	644
Grp Volume(v), veh/h	38	415	412	109	403	403	107	141	137	187	127	128
Grp Sat Flow(s), veh/hln	1774	1770	1757	1774	1770	1766	1774	1770	1573	1774	1770	1724
Q Serve(g_s), s	1.5	16.3	16.4	4.4	14.9	14.9	4.3	4.5	4.9	7.4	3.7	3.9
Cycle Q Clear(g_c), s	1.5	16.3	16.4	4.4	14.9	14.9	4.3	4.5	4.9	7.4	3.7	3.9
Prop In Lane	1.00		0.25	1.00		0.24	1.00		0.82	1.00		0.37
Lane Grp Cap(c), veh/h	66	462	458	139	535	534	138	502	446	227	592	576
V/C Ratio(X)	0.58	0.90	0.90	0.79	0.75	0.76	0.78	0.28	0.31	0.82	0.21	0.22
Avail Cap(c_a), veh/h	125	478	474	160	535	534	238	502	446	258	592	576
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.2	25.8	25.8	32.7	22.8	22.8	32.7	20.1	20.3	30.7	17.2	17.3
Incr Delay (d2), s/veh	7.9	19.3	19.5	19.9	6.0	6.1	9.1	1.4	1.8	17.2	0.8	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/hln	0.9	10.4	10.4	2.9	8.2	8.2	2.4	2.4	2.3	4.7	1.9	2.0
LnGrp Delay(d), s/veh	42.1	45.0	45.3	52.6	28.8	28.9	41.8	21.5	22.1	47.9	18.1	18.2
LnGrp LOS	D	D	D	D	C	C	D	C	C	D	B	B
Approach Vol, veh/h		865			915			385				442
Approach Delay, s/veh		45.0			31.7			27.4				30.7
Approach LOS		D			C			C				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	13.8	25.0	10.1	23.3	10.1	2						

Intersection																									
Int Delay, s/veh 2.2																									
Intersection LOS A																									
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR													
Lane Configurations	<table border="0"> <tr> <td></td><td>↔</td><td></td><td>↔</td><td></td><td></td><td></td><td>↔</td><td>↔</td><td>↔</td><td>↔</td><td>↔</td><td>↔</td> </tr> </table>													↔		↔				↔	↔	↔	↔	↔	↔
	↔		↔				↔	↔	↔	↔	↔	↔													
Traffic Vol, veh/h	16	7	22	6	6	48	9	279	6	33	316	17													
Future Vol, veh/h	16	7	22	6	6	48	9	279	6	33	316	17													
Conflicting Peds, #/hr	4	0	1	1	0	4	12	0	10	10	0	12													
Sign Control	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free													
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None													
Storage Length	-	-	-	-	-	100	-	60	100	-	60	-													
Veh in Median Storage, #	-	0	-	-	0	-	0	-	0	-	0	-													
Grade, %	-	0	-	-	0	-	0	-	0	-	0	-													
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, %	2	2	2	2	2	2	2	2	2	2	2	2													
Mvmt Flow	17	7	23	6	6	51	9	294	6	35	333	18													
Major/Minor	Minor2	Minor1		Major1		Major2																			
Conflicting Flow All	759	737	346	741	737	308	345	0	0	304	0	0													
Stage 1	414	414	-	323	323	-	-	-	-	-	-	-													
Stage 2	345	323	-	418	414	-	-	-	-	-	-	-													
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-													
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-													
Pot Cap-1 Maneuver	323	346	697	332	346	732	1214	-	-	1257	-	-													
Stage 1	616	593	-	689	650	-	-	-	-	-	-	-													
Stage 2	671	650	-	612	593	-	-	-	-	-	-	-													
Platoon blocked, %	-																								
Mov Cap-1 Maneuver	284	327	688	304	327	722	1213	-	-	1252	-	-													
Mov Cap-2 Maneuver	284	327	-	304	327	-	-	-	-	-	-	-													
Stage 1	604	570	-	677	639	-	-	-	-	-	-	-													
Stage 2	611	639	-	567	570	-	-	-	-	-	-	-													
Approach	EB	WB		NB		SB																			
HCM Control Delay, s	14.9	12		0.2		0.7																			
HCM LOS	B	B																							
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR																	
Capacity (veh/h)	1213	-	-	410	574	1252	-	-																	
HCM Lane V/C Ratio	0.008	-	-	0.116	0.11	0.028	-	-																	
HCM Control Delay (s)	8	-	-	14.9	12	8	-	-																	
HCM Lane LOS	A	-	-	B	B	A	-	-																	
HCM 95th-tile Q(veh)	0	-	-	0.4	0.4	0.1	-	-																	

Intersection																									
Intersection Delay, s/veh 8.5																									
Intersection LOS A																									
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR													
Lane Configurations	<table border="0"> <tr> <td></td><td>↔</td><td></td><td>↔</td><td></td><td></td><td></td><td>↔</td><td>↔</td><td>↔</td><td>↔</td><td>↔</td><td>↔</td> </tr> </table>													↔		↔				↔	↔	↔	↔	↔	↔
	↔		↔				↔	↔	↔	↔	↔	↔													
Traffic Vol, veh/h	8	108	14	13	95	35	18	46	18	38	59	24													
Future Vol, veh/h	8	108	14	13	95	35	18	46	18	38	59	24													
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, %	2	2	2	2	2	2	2	2	2	2	2	2													
Mvmt Flow	8	114	15	14	100	37	19	48	19	40	62	25													
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0													
Approach	EB	WB		NB		SB																			
Opposing Approach	WB	EB		SB		NB																			
Opposing Lanes	1	1		1		1																			
Conflicting Approach Left SB		NB		EB		WB																			
Conflicting Lanes Left	1	1		1		1																			
Conflicting Approach Right NB		SB		WB		EB																			
Conflicting Lanes Right	1	1		1		1																			
HCM Control Delay	8.5	8.5		8.3		8.6																			
HCM LOS	A	A		A		A																			
Lane	NBLn1	EBLn1	WBLn1	SBLn1																					
Vol Left, %	22%	6%	9%	31%																					
Vol Thru, %	56%	83%	66%	49%																					
Vol Right, %	22%	11%	24%	20%																					
Sign Control	Stop	Stop	Stop	Stop																					
Traffic Vol by Lane	82	130	143	121																					
LT Vol	18	8	13	38																					
Through Vol	46	108	95	59																					
RT Vol	18	14	35	24																					
Lane Flow Rate	86	137	151	127																					
Geometry Grp	1	1	1	1																					
Degree of Util (X)	0.112	0.173	0.187	0.164																					
Departure Headway (Hd)	4.66	4.56	4.471	4.642																					
Convergence, Y/N	Yes	Yes	Yes	Yes																					
Cap	768	787	802	772																					
Service Time	2.696	2.591	2.501	2.675																					
HCM Lane V/C Ratio	0.112	0.174	0.188	0.165																					
HCM Control Delay	8.3	8.5	8.5	8.6																					
HCM Lane LOS	A	A	A	A																					
HCM 95th-tile Q	0.4	0.6	0.7	0.6																					

Intersection																									
Intersection Delay, s/veh 8.5																									
Intersection LOS A																									
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR													
Lane Configurations	<table border="0"> <tr> <td></td><td>↔</td><td></td><td>↔</td><td></td><td></td><td></td><td>↔</td><td>↔</td><td>↔</td><td>↔</td><td>↔</td><td>↔</td> </tr> </table>													↔		↔				↔	↔	↔	↔	↔	↔
	↔		↔				↔	↔	↔	↔	↔	↔													
Traffic Vol, veh/h	8	108	14	13	95	35	18	46	18	38	59	24													
Future Vol, veh/h	8	108	14	13	95	35	18	46	18	38	59	24													
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, %	2	2	2	2	2	2	2	2	2	2	2	2													
Mvmt Flow	8	114	15	14	100	37	19	48	19	40	62	25													
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0													
Approach	EB	WB		NB		SB																			
Opposing Approach	WB	EB		SB		NB																			
Opposing Lanes	1	1		1		1																			
Conflicting Approach Left SB		NB		EB		WB																			
Conflicting Lanes Left	1	1		1		1																			
Conflicting Approach Right NB		SB		WB		EB																			
Conflicting Lanes Right	1	1		1		1																			
HCM Control Delay	8.5	8.5		8.3		8.6																			
HCM LOS	A	A		A		A																			
Lane	NBLn1	EBLn1	WBLn1	SBLn1																					
Vol Left, %	22%	6%	9%	31%																					
Vol Thru, %	56%	83%	66%	49%																					
Vol Right, %	22%	11%	24%	20%																					
Sign Control	Stop	Stop	Stop	Stop																					
Traffic Vol by Lane	82	130	143	121																					
LT Vol	18	8	13	38																					
Through Vol	46	108	95	59																					
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Intersection																									
Intersection Delay, s/veh 8.5																									
Intersection LOS A																									
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR													
Lane Configurations	<table border="0"> <tr> <td></td><td>↔</td><td></td><td>↔</td><td></td><td></td><td></td><td>↔</td><td>↔</td><td>↔</td><td>↔</td><td>↔</td><td>↔</td> </tr> </table>													↔		↔				↔	↔	↔	↔	↔	↔
	↔		↔				↔	↔	↔	↔	↔	↔													
Traffic Vol, veh/h	8	108	14	13	95	35	18	46	18	38	59	24													
Future Vol, veh/h	8	108	14	13	95	35	18	46	18	38	59	24													
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, %	2	2	2	2	2	2	2	2	2	2	2	2													
Mvmt Flow	8	114	15	14	100	37	19	48	19	40	62	25													
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0													
Approach	EB	WB		NB		SB																			
Opposing Approach	WB	EB		SB		NB																			
Opposing Lanes	1	1		1		1																			
Conflicting Approach Left SB		NB		EB		WB																			
Conflicting Lanes Left	1	1		1		1																			
Conflicting Approach Right NB		SB		WB		EB																			
Conflicting Lanes Right	1	1		1		1																			
HCM Control Delay	8.5	8.5		8.3		8.6																			
HCM LOS	A	A		A		A																			
Lane	NBLn1	EBLn1	WBLn1	SBLn1																					
Vol Left, %	22%	6%	9%	31%																					
Vol Thru, %	56%	83%	66%	49%																					
Vol Right, %	22%	11%	24%	20%																					
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HCM Lane V/C Ratio	0.112	0.174	0.188	0.165																					
HCM Control Delay	8.3	8.5	8.5	8.6																					
HCM Lane LOS	A	A	A	A																					
HCM 95th-tile Q	0.4	0.6	0.7	0.6																					

Intersection												
Intersection Delay, s/veh 8.6												
Intersection LOS A												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔		↔		↔		↔		↔		↔	
Traffic Vol, veh/h	12	52	7	12	73	36	19	62	5	49	125	14
Future Vol, veh/h	12	52	7	12	73	36	19	62	5	49	125	14
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	55	7	13	77	38	20	65	5	52	132	15
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left SB	1			1			1			1		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right NB	1			1			1			1		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	8.3			8.4			8.3			9.1		
HCM LOS	A			A			A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	17%	10%	26%
Vol Thru, %	72%	73%	60%	66%
Vol Right, %	6%	10%	30%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	86	71	121	188
LT Vol	19	12	12	49
Through Vol	62	52	73	125
RT Vol	5	7	36	14
Lane Flow Rate	91	75	127	198
Geometry Grp	1	1	1	1
Degree of Util (X)	0.117	0.098	0.161	0.249
Departure Headway (Hd)	4.647	4.735	4.541	4.523
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	770	756	790	794
Service Time	2.68	2.77	2.572	2.551
HCM Lane V/C Ratio	0.118	0.099	0.161	0.249
HCM Control Delay	8.3	8.3	8.4	9.1
HCM Lane LOS	A	A	A	A
HCM 95th-ile Q	0.4	0.3	0.6	1

Intersection												
Intersection Delay, s/veh 14												
Intersection LOS B												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔		↔		↔		↔		↔		↔	
Traffic Vol, veh/h	32	63	32	41	73	77	15	251	45	56	187	46
Future Vol, veh/h	32	63	32	41	73	77	15	251	45	56	187	46
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	34	66	34	43	77	81	16	264	47	59	197	48
Number of Lanes	0	1	1	0	1	0	0	1	0	0	1	1
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			2			2			1		
Conflicting Approach Left SB	1			1			2			1		
Conflicting Lanes Left	1			1			2			1		
Conflicting Approach Right NB	1			1			2			1		
Conflicting Lanes Right	1			1			2			1		
HCM Control Delay	10.9			13.2			16.5			13.1		
HCM LOS	B			B			C			B		

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	5%	34%	0%	21%	23%	0%
Vol Thru, %	81%	66%	0%	38%	77%	0%
Vol Right, %	14%	0%	100%	40%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	311	95	32	191	243	46
LT Vol	15	32	0	41	56	0
Through Vol	251	63	0	73	187	0
RT Vol	45	0	32	77	0	46
Lane Flow Rate	327	100	34	201	256	48
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.554	0.194	0.057	0.362	0.445	0.073
Departure Headway (Hd)	6.093	6.978	6.091	6.49	6.265	5.437
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	589	511	584	551	573	656
Service Time	4.154	4.759	3.872	4.564	4.028	3.199
HCM Lane V/C Ratio	0.555	0.196	0.058	0.365	0.447	0.073
HCM Control Delay	16.5	11.5	9.2	13.2	14	8.6
HCM Lane LOS	C	B	A	B	B	A
HCM 95th-ile Q	3.4	0.7	0.2	1.6	2.3	0.2

Intersection												
Intersection Delay, s/veh 8.5												
Intersection LOS A												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔		↔		↔		↔		↔		↔	
Traffic Vol, veh/h	8	108	14	13	95	35	18	46	18	38	59	24
Future Vol, veh/h	8	108	14	13	95	35	18	46	18	38	59	24
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	114	15	14	100	37	19	48	19	40	62	25
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left SB	1			1			1			1		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right NB	1			1			1			1		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	8.5			8.5			8.3			8.6		
HCM LOS	A			A			A			A		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	6%	9%	31%
Vol Thru, %	56%	83%	66%	49%
Vol Right, %	22%	11%	24%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	82	130	143	121
LT Vol	18	8	13	38
Through Vol	46	108	95	59
RT Vol	18	14	35	24
Lane Flow Rate	86	137	151	127
Geometry Grp	1	1	1	1
Degree of Util (X)	0.112	0.173	0.187	0.164
Departure Headway (Hd)	4.66	4.56	4.471	4.642
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	768	787	802	772
Service Time	2.696	2.591	2.501	2.675
HCM Lane V/C Ratio	0.112	0.174	0.188	0.165
HCM Control Delay	8.3	8.5	8.5	8.6
HCM Lane LOS	A	A	A	A
HCM 95th-ile Q	0.4	0.6	0.7	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔		↔		↔		↔		↔		↔	
Traffic Volume (veh/h)	89	92	22	41	79	96	59	300	46	141	319	46
Future Volume (veh/h)	89	92	22	41	79	96	59	300	46	141	319	46
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99	0.98	0.99	0.96	0.99	0.95	0.99	0.95	0.99	0.95	0.99	0.95
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	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	94	97	23	43	83	101	62	316	48	148	336	48
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	435	438	104	497	227	276	558	710	108	495	1399	198
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.45	0.45	0.45	0.45	0.45	0.45
Sat Flow, veh/h	1183	1449	344	1258	750	912	981	1569	238	1001	3094	437
Grp Volume(v), veh/h	94	0	120	43	0	184	62	0	364	148	191	193
Grp Sat Flow(s), veh/h/ln	183	0	1793	1258	0	1662	981	0	1807	1001	1770	1761
Q Serve(g_s), s	2.7	0.0	2.0	1.1	0.0	3.5	1.7	0.0	5.5	4.8	2.6	2.7
Cycle Q Clear(g_c), s	6.2	0.0	2.0	3.1	0.0	3.5	4.4	0.0	5.5	10.3	2.6	2.7
Prop In Lane	1.00	0.19	1.00	0.55	1.00	0.13	1.00	0.13	1.00	0.25	0.25	0.25
Lane Grp Cap(c), veh/h	435	0	542	497	0	502	558	0	817	495	800	797
V/C Ratio(X)	0.22	0.00	0.22	0.09	0.00	0.37	0.11	0.00	0.45	0.30	0.24	0.24
Avail Cap(c_a), veh/h	910	0	1262	1003	0	1170	780	0	1227	722	1201	1196
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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.3	0.0	10.4	11.6	0.0	10.9	8.1	0.0	7.5	11.0	6.7	6.7
Incr Delay (d2), s/veh	0.3	0.0	0.3	0.1	0.0	0.6	0.1	0.0	0.4	0.4	0.2	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/h	0.0	1.0	0.4	0.0	1.7	0.5	0.0	2.8	1.3	1.3	1.3	1.3
LnGrp Delay(d),												

Intersection						
Int Delay, s/veh	6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	↔
Traffic Vol, veh/h	125	240	257	89	113	132
Future Vol, veh/h	125	240	257	89	113	132
Conflicting Peds, #/hr	23	0	0	23	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	150	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	132	253	271	94	119	139

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	387	0	0
Stage 1	-	-	340
Stage 2	-	-	517
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1171	-	328
Stage 1	-	-	721
Stage 2	-	-	598
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1171	-	273
Mov Cap-2 Maneuver	-	-	273
Stage 1	-	-	705
Stage 2	-	-	508

Approach	EB	WB	SB
HCM Control Delay, s	2.9	0	19.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1171	-	-	-	273	687
HCM Lane V/C Ratio	0.112	-	-	-	0.436	0.202
HCM Control Delay (s)	8.5	0	-	-	28	11.6
HCM Lane LOS	A	A	-	-	D	B
HCM 95th %tile Q(veh)	0.4	-	-	-	2.1	0.8

Movement	EBL2	EBL	EBT	WBT	WBR	WBR2	SBL2	SBL	SBR	SWL	SWR	SWR2
Lane Configurations			↔	↔				↔	↔	↔	↔	
Traffic Volume (vph)	24	81	277	237	22	100	19	65	64	72	109	10
Future Volume (vph)	24	81	277	237	22	100	19	65	64	72	109	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)			4.9	4.9				4.9	4.9			
Lane Util. Factor			1.00	1.00				1.00	1.00			
Frpb, ped/bikes			1.00	0.95				1.00	1.00			
Flpb, ped/bikes			0.98	1.00				1.00	1.00			
Frt			1.00	0.95				1.00	0.85			
Flt Protected			0.99	1.00				0.95	1.00			
Sat. Flow (prot)			1807	1692				1770	1583			
Flt Permitted			0.81	1.00				0.95	1.00			
Sat. Flow (perm)			1475	1692				1770	1583			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	25	85	292	249	23	105	20	68	67	76	115	11
RTOR Reduction (vph)	0	0	0	12	0	0	0	0	60	69	0	0
Lane Group Flow (vph)	0	0	402	365	0	0	0	88	7	133	0	0
Confl. Peds. (#/hr)	29	32			29	32	32	9	4	9	29	4
Confl. Bikes (#/hr)					2	8		1			2	1
Turn Type	Perm	Perm	NA	NA	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot
Protected Phases			2	6	3	3	3	4				
Permitted Phases	2	2										
Actuated Green, G (s)			35.9	35.9				7.5	7.5	10.8		
Effective Green, g (s)			35.9	35.9				7.5	7.5	10.8		
Actuated g/C Ratio			0.52	0.52				0.11	0.11	0.16		
Clearance Time (s)			4.9	4.9				4.9	4.9	4.9		
Vehicle Extension (s)			2.6	2.6				2.0	2.0	2.0		
Lane Grp Cap (vph)			768	881				192	172	250		
v/s Ratio Prot			0.22					c0.05	0.00	c0.08		
v/s Ratio Perm			c0.27									
v/c Ratio			0.52	0.41				0.46	0.04	0.53		
Uniform Delay, d1			10.9	10.1				28.8	27.5	26.7		
Progression Factor			1.00	1.00				1.00	1.00	1.00		
Incremental Delay, d2			0.5	0.2				0.6	0.0	1.1		
Delay (s)			11.4	10.3				29.4	27.5	27.8		
Level of Service			B	B				C	C	C		
Approach Delay (s)			11.4	10.3				28.6		27.8		
Approach LOS			B	B				C		C		

Intersection Summary			
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	68.9	Sum of lost time (s)	14.7
Intersection Capacity Utilization	80.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔		↔	↔		↔	↔		↔	↔
Traffic Volume (veh/h)	0	160	67	171	248	29	72	7	154	6	13	4
Future Volume (veh/h)	0	160	67	171	248	29	72	7	154	6	13	4
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.97	1.00		0.98	0.95		0.93	0.97		0.95	
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/hln	1900	1863	1900	1900	1863	1900	1863	1900	1863	1900	1863	1900
Adj Flow Rate, veh/h	0	168	71	180	261	31	76	7	162	6	14	4
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	238	101	212	308	37	165	34	216	140	267	64
Arrive On Green	0.00	0.19	0.19	0.31	0.31	0.31	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	0	1231	520	688	998	119	343	154	968	249	1196	289
Grp Volume(v), veh/h	0	0	239	472	0	0	245	0	0	24	0	0
Grp Sat Flow(s), veh/hln	0	0	1751	1805	0	0	1465	0	0	1734	0	0
Q Serve(g_s), s	0.0	0.0	6.8	13.1	0.0	0.0	5.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(q_c), s	0.0	0.0	6.8	13.1	0.0	0.0	8.2	0.0	0.0	0.6	0.0	0.0
Prop In Lane	0.00	0.30	0.38		0.07	0.31		0.66	0.25		0.17	
Lane Grp Cap(c), veh/h	0	0	339	557	0	0	415	0	0	471	0	0
V/C Ratio(X)	0.00	0.00	0.71	0.85	0.00	0.00	0.59	0.00	0.05	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	0	580	671	0	0	569	0	0	641	0	0
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	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	20.1	17.3	0.0	0.0	19.3	0.0	0.0	16.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	2.9	8.7	0.0	0.0	0.5	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/hln	0.0	0.0	3.5	7.8	0.0	0.0	3.4	0.0	0.0	0.3	0.0	0.0
LnGrp Delay(d), s/veh	0.0	0.0	23.1	26.0	0.0	0.0	19.8	0.0	0.0	16.4	0.0	0.0
LnGrp LOS			C	C			B			B		
Approach Vol, veh/h		239		472		245			471		24	
Approach Delay, s/veh		23.1		26.0		19.8			16.4		16.4	
Approach LOS		C		C		B			B		B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+R), s		21.4		16.8		15.2		16.8				
Change Period (Y+R), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		19.9		17.7		17.7		17.7				
Max Q Clear Time (g_c+H1), s		15.1		10.2		8.8		2.6				
Green Ext Time (g_e), s		1.4		0.7		0.9		1.0				

Intersection Summary			
HCM 2010 Ctrl Delay	23.5		
HCM 2010 LOS	C		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔		↔	↔		↔	↔		↔	↔
Traffic Volume (veh/h)	90	105	255	315	220	290	115	405	170	165		

\* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	←	←	←	←	←	←	←	←	←	←	←	←	
Traffic Volume (vph)	290	340	540	50	315	110	200	170	65	55	50	150	
Future Volume (vph)	290	340	540	50	315	110	200	170	65	55	50	150	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.7	4.9	5.1	4.7	4.9			5.1	5.1		5.1	5.1	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.95	0.95	1.00		1.00	1.00	
Frb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.99		1.00	0.98	
Frb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	
Ft	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85		1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00		0.97	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3402		1681	1760	1562		1815	1557	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00		0.97	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3402		1681	1760	1562		1815	1557	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Adj. Flow (vph)	305	358	568	53	332	116	211	179	68	58	53	158	
RTOR Reduction (vph)	0	0	217	0	22	0	0	0	55	0	0	137	
Lane Group Flow (vph)	305	358	351	53	426	0	190	200	13	0	111	21	
Confl. Peds. (#/hr)							5					5	
Confl. Bikes (#/hr)								1					
Turn Type	Prot	NA	pm+ov	Prot	NA		Split	NA	Perm	Split	NA	Perm	
Protected Phases	1	6	4	5	2		4	4		8	8		
Permitted Phases			6						4			8	
Actuated Green, G (s)	27.0	43.2	62.6	5.6	21.8		19.4	19.4	19.4		13.3	13.3	
Effective Green, g (s)	27.0	43.2	62.6	5.6	21.8		19.4	19.4	19.4		13.3	13.3	
Actuated g/C Ratio	0.27	0.43	0.62	0.06	0.22		0.19	0.19	0.19		0.13	0.13	
Clearance Time (s)	4.7	4.9	5.1	4.7	4.9		5.1	5.1	5.1		5.1	5.1	
Vehicle Extension (s)	2.0	4.3	2.0	2.0	4.3		2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	471	1509	978	97	732		321	337	299		238	204	
v/s Ratio Prot	c0.17	0.10	0.07	0.03	c0.13		0.11	c0.11			c0.06		
v/s Ratio Perm			0.15						0.01			0.01	
v/c Ratio	0.65	0.24	0.36	0.55	0.58		0.59	0.59	0.04		0.47	0.10	
Uniform Delay, d1	32.9	18.5	9.5	46.6	35.7		37.3	37.4	33.4		40.7	38.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.3	0.1	0.1	3.3	1.5		1.9	1.9	0.0		0.5	0.1	
Delay (s)	35.2	18.7	9.6	50.0	37.2		39.3	39.2	33.4		41.2	38.8	
Level of Service	D	B	A	D	D		D	D	C		D	D	
Approach Delay (s)	18.6				38.5			38.4				39.8	
Approach LOS	B				D			D				D	
<b>Intersection Summary</b>													
HCM 2000 Control Delay	28.7					HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio	0.59												
Actuated Cycle Length (s)	101.3					Sum of lost time (s)			19.8				
Intersection Capacity Utilization	63.9%					ICU Level of Service			B				
Analysis Period (min)	15												
c Critical Lane Group													

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	←	←	←	←	←	←
Traffic Volume (veh/h)	67	385	285	92	111	126
Future Volume (veh/h)	67	385	285	92	111	126
Number	5	2	6	16	7	14
Initial Q (Ob), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/m	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	71	405	300	97	117	133
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh. %	2	2	2	2	2	2
Cap, veh/h	101	1994	1011	320	256	229
Arrive On Green	0.06	0.56	0.38	0.38	0.14	0.14
Sat Flow, veh/h	1774	3632	2733	837	1774	1583
Grp Volume(v), veh/h	71	405	199	198	117	133
Grp Sat Flow(s),veh/h/m	1774	1770	1770	1707	1774	1583
Q Serve(g_s), s	1.4	2.0	2.8	2.9	2.1	2.8
Cycle Q Clear(g_c), s	1.4	2.0	2.8	2.9	2.1	2.8
Prop In Lane	1.00			0.49	1.00	1.00
Lane Grp Cap(c), veh/h	101	1994	678	654	256	229
V/C Ratio(X)	0.71	0.20	0.29	0.30	0.46	0.58
Avail Cap(c_a), veh/h	279	3343	1174	1133	1047	935
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.5	3.8	7.6	7.7	13.9	14.2
Incr Delay (d2), s/veh	3.4	0.1	0.5	0.6	0.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/m	1.0	1.4	1.4	1.1	2.5	
LnGrp Delay(d),s/veh	19.8	3.9	8.1	8.2	14.4	15.1
LnGrp LOS	B	A	A	A	B	B
Approach Vol, veh/h	476	397			250	
Approach Delay, s/veh	6.3	8.2			14.8	
Approach LOS	A	A			B	
<b>Timer</b>						
Assigned Phs	1	2	3	4	5	6
Phs Duration (G+Y+R), s	2			4	5	6
Change Period (Y+R), s	25.5			10.0	6.4	19.1
Max Green Setting (Gmax), s	5.5			4.9	4.4	5.5
Max Green Setting (Gmax), s	33.6			21.0	5.6	23.6
Max Q Clear Time (g_c+H1), s	4.0			4.8	3.4	4.9
Green Ext Time (p_c), s	10.7			0.3	0.0	8.5
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay	8.9					
HCM 2010 LOS	A					

Intersection	EBT	EBR	WBL	WBT	NBL	NBR
Int Delay, s/veh	524.9					
Lane Configurations	←	←	←	←	←	←
Traffic Vol, veh/h	564	241	450	389	97	193
Future Vol, veh/h	564	241	450	389	97	193
Conflicting Peds, #/hr	0	8	8	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	- None	- None	- None	- None	- None	- None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	594	254	474	409	102	203
<b>Major/Minor</b>						
Major1	Major2		Minor1			
Conflicting Flow All	0	0	855	0	1882	432
Stage 1	-	-	-	-	729	-
Stage 2	-	-	-	-	1153	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	781	-	-63	572
Stage 1	-	-	-	-	438	-
Stage 2	-	-	-	-	263	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	781	-	-13	568
Mov Cap-2 Maneuver	-	-	-	-	-13	-
Stage 1	-	-	-	-	435	-
Stage 2	-	-	-	-	56	-
<b>Approach</b>						
EB	WB		NB			
HCM Control Delay, s	0	9.8	\$ 3472.2			
HCM LOS	F					
<b>Minor Lane/Major Mvmt</b>						
NBLn1	EBT	EBR	WBL	WBT		
Capacity (veh/h)	37	-	-	781		
HCM Lane V/C Ratio	8.25	-	-	0.607		
HCM Control Delay (s)	\$ 3472.2	-	-	16.4	2	
HCM Lane LOS	F	-	-	C	A	
HCM 95th %ile Q(veh)	36.7	-	-	4.2		
<b>Notes</b>						
-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						



Table with columns: Movement, Lane Configurations, Traffic Volume (veh/h), Future Volume (veh/h), Number, Initial Q (Ob), Veh, Ped-Bike Adj(A\_pbT), Parking Bus, Adj, Adj Sat Flow, veh/hln, Adj Flow Rate, veh/h, Adj No. of Lanes, Peak Hour Factor, Percent Heavy Veh, %, Cap, veh/h, Arrive On Green, Sat Flow, veh/h, Grp Volume(v), veh/h, Grp Sat Flow(s), veh/hln, Q Serve(g\_s), s, Cycle Q Clear(q\_c), s, Prop In Lane, Lane Grp Cap(c), veh/h, V/C Ratio(X), Avail Cap(c\_a), veh/h, HCM Platoon Ratio, Upstream Filter(I), Uniform Delay (d), s/veh, Incr Delay (d2), s/veh, Initial Q Delay(d3), s/veh, %ile BackOfQ(50%), veh/hln, LnGrp Delay(d), s/veh, LnGrp LOS, Approach Vol, veh/h, Approach Delay, s/veh, Approach LOS, Timer, Assigned Phs, Phs Duration (G+Y+Rc), s, Change Period (Y+Rc), s, Max Green Setting (Gmax), s, Max Q Clear Time (g\_c+H), s, Green Ext Time (p\_c), s, Intersection Summary, HCM 2010 Ctrl Delay, HCM 2010 LOS

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Table with columns: Movement, Lane Configurations, Traffic Volume (veh/h), Future Volume (veh/h), Number, Initial Q (Ob), Veh, Ped-Bike Adj(A\_pbT), Parking Bus, Adj, Adj Sat Flow, veh/hln, Adj Flow Rate, veh/h, Adj No. of Lanes, Peak Hour Factor, Percent Heavy Veh, %, Cap, veh/h, Arrive On Green, Sat Flow, veh/h, Grp Volume(v), veh/h, Grp Sat Flow(s), veh/hln, Q Serve(g\_s), s, Cycle Q Clear(q\_c), s, Prop In Lane, Lane Grp Cap(c), veh/h, V/C Ratio(X), Avail Cap(c\_a), veh/h, HCM Platoon Ratio, Upstream Filter(I), Uniform Delay (d), s/veh, Incr Delay (d2), s/veh, Initial Q Delay(d3), s/veh, %ile BackOfQ(50%), veh/hln, LnGrp Delay(d), s/veh, LnGrp LOS, Approach Vol, veh/h, Approach Delay, s/veh, Approach LOS, Timer, Assigned Phs, Phs Duration (G+Y+Rc), s, Change Period (Y+Rc), s, Max Green Setting (Gmax), s, Max Q Clear Time (g\_c+H), s, Green Ext Time (p\_c), s, Intersection Summary, HCM 2010 Ctrl Delay, HCM 2010 LOS

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Table with columns: Movement, Lane Configurations, Traffic Volume (veh/h), Future Volume (veh/h), Number, Initial Q (Ob), Veh, Ped-Bike Adj(A\_pbT), Parking Bus, Adj, Adj Sat Flow, veh/hln, Adj Flow Rate, veh/h, Adj No. of Lanes, Peak Hour Factor, Percent Heavy Veh, %, Cap, veh/h, Arrive On Green, Sat Flow, veh/h, Grp Volume(v), veh/h, Grp Sat Flow(s), veh/hln, Q Serve(g\_s), s, Cycle Q Clear(q\_c), s, Prop In Lane, Lane Grp Cap(c), veh/h, V/C Ratio(X), Avail Cap(c\_a), veh/h, HCM Platoon Ratio, Upstream Filter(I), Uniform Delay (d), s/veh, Incr Delay (d2), s/veh, Initial Q Delay(d3), s/veh, %ile BackOfQ(50%), veh/hln, LnGrp Delay(d), s/veh, LnGrp LOS, Approach Vol, veh/h, Approach Delay, s/veh, Approach LOS, Timer, Assigned Phs, Phs Duration (G+Y+Rc), s, Change Period (Y+Rc), s, Max Green Setting (Gmax), s, Max Q Clear Time (g\_c+H), s, Green Ext Time (p\_c), s, Intersection Summary, HCM 2010 Ctrl Delay, HCM 2010 LOS

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Table with columns: Intersection, Intersection Delay, s/veh, Intersection LOS, Movement, Lane Configurations, Traffic Vol, veh/h, Future Vol, veh/h, Peak Hour Factor, Heavy Vehicles, %, Mvmt Flow, Number of Lanes, Approach, Opposing Approach, Opposing Lanes, Conflicting Approach Left, Conflicting Lanes Left, Conflicting Approach Right, Conflicting Lanes Right, HCM Control Delay, HCM LOS, Lane, Vol Left, %, Vol Thru, %, Vol Right, %, Sign Control, Traffic Vol by Lane, LT Vol, Through Vol, RT Vol, Lane Flow Rate, Geometry Grp, Degree of Util (X), Departure Headway (Hd), Convergence, Y/N, Cap, Service Time, HCM Lane V/C Ratio, HCM Control Delay, HCM Lane LOS, HCM 95th-ile Q

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Intersection						
Intersection Delay, s/veh	8.7					
Intersection LOS	A					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	↑
Traffic Vol, veh/h	27	0	0	29	216	12
Future Vol, veh/h	27	0	0	29	216	12
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	0	0	31	227	13
Number of Lanes	1	0	0	1	1	0
Approach	EB	WB	NB			
Opposing Approach	WB	EB				
Opposing Lanes	1		1	0		
Conflicting Approach Left			NB	EB		
Conflicting Lanes Left	0		1	1		
Conflicting Approach Right	NB	WB				
Conflicting Lanes Right	1		0	1		
HCM Control Delay	7.7		7.7	8.9		
HCM LOS	A		A	A		

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	95%	0%	0%
Vol Thru, %	0%	100%	100%
Vol Right, %	5%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	228	27	29
LT Vol	216	0	0
Through Vol	0	27	29
RT Vol	12	0	0
Lane Flow Rate	240	28	31
Geometry Grp	1	1	1
Degree of Util (X)	0.28	0.036	0.038
Departure Headway (Hd)	4.193	4.522	4.52
Convergence, Y/N	Yes	Yes	Yes
Cap	854	796	797
Service Time	2.236	2.523	2.521
HCM Lane V/C Ratio	0.281	0.035	0.039
HCM Control Delay	8.9	7.7	7.7
HCM Lane LOS	A	A	A
HCM 95th-ile Q	1.1	0.1	0.1

Intersection												
Intersection Delay, s/veh	9.6											
Intersection LOS	A											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑			↑						↑	↑
Traffic Vol, veh/h	0	90	17	25	49	0	0	0	0	140	116	44
Future Vol, veh/h	0	90	17	25	49	0	0	0	0	140	116	44
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	95	18	26	52	0	0	0	0	147	122	46
Number of Lanes	0	1	0	0	1	0	0	0	0	0	1	0
Approach	EB	WB	SB									
Opposing Approach	WB	EB										
Opposing Lanes	1	1	0									
Conflicting Approach Left	SB		WB									
Conflicting Lanes Left	1	0	1									
Conflicting Approach Right	SB		EB									
Conflicting Lanes Right	0	1	1									
HCM Control Delay	8.5	8.5	10.2									
HCM LOS	A	A	B									

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	34%	47%
Vol Thru, %	84%	66%	39%
Vol Right, %	16%	0%	15%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	107	74	300
LT Vol	0	25	140
Through Vol	90	49	116
RT Vol	17	0	44
Lane Flow Rate	113	78	316
Geometry Grp	1	1	1
Degree of Util (X)	0.146	0.106	0.386
Departure Headway (Hd)	4.676	4.878	4.399
Convergence, Y/N	Yes	Yes	Yes
Cap	767	735	818
Service Time	2.705	2.909	2.421
HCM Lane V/C Ratio	0.147	0.106	0.386
HCM Control Delay	8.5	8.5	10.2
HCM Lane LOS	A	A	B
HCM 95th-ile Q	0.5	0.4	1.8

Intersection												
Intersection Delay, s/veh	9.4											
Intersection LOS	A											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑			↑			↑				
Traffic Vol, veh/h	46	216	0	0	44	78	26	123	20	0	0	0
Future Vol, veh/h	46	216	0	0	44	78	26	123	20	0	0	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	227	0	0	46	82	27	129	21	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	0	0
Approach	EB	WB	NB									
Opposing Approach	WB	EB										
Opposing Lanes	1		1	0								
Conflicting Approach Left			NB	EB								
Conflicting Lanes Left	0		1	1								
Conflicting Approach Right	NB	WB										
Conflicting Lanes Right	1		0	1								
HCM Control Delay	10		8.1	9.3								
HCM LOS	A		A	A								

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	15%	18%	0%
Vol Thru, %	73%	82%	36%
Vol Right, %	12%	0%	64%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	169	262	122
LT Vol	26	46	0
Through Vol	123	216	44
RT Vol	20	0	78
Lane Flow Rate	178	276	128
Geometry Grp	1	1	1
Degree of Util (X)	0.237	0.349	0.154
Departure Headway (Hd)	4.802	4.551	4.306
Convergence, Y/N	Yes	Yes	Yes
Cap	747	789	831
Service Time	2.839	2.581	2.341
HCM Lane V/C Ratio	0.238	0.35	0.154
HCM Control Delay	9.3	10	8.1
HCM Lane LOS	A	A	A
HCM 95th-ile Q	0.9	1.6	0.5

Intersection												
Intersection Delay, s/veh	114.8											
Intersection LOS	F											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑			↑				↑			↑
Traffic Vol, veh/h	19	358	345	73	117	2	457	22	97	6	8	6
Future Vol, veh/h	19	358	345	73	117	2	457	22	97	6	8	6
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	377	363	77	123	2	481	23	102	6	8	6
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB	WB	NB	SB								
Opposing Approach	WB	EB	SB	NB								
Opposing Lanes	1	1	1	1								
Conflicting Approach Left	SB	NB	EB	WB								
Conflicting Lanes Left	1	1	1	1								
Conflicting Approach Right	NB	SB	WB	EB								
Conflicting Lanes Right	1	1	1	1								
HCM Control Delay	163.1		16.3	90.6								
HCM LOS	F		C	F								

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	79%	3%	38%	30%
Vol Thru, %	4%	50%	61%	40%
Vol Right, %	17%	48%	1%	30%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	576	722	192	20
LT Vol	457	19	73	6
Through Vol	22	358	117	8
RT Vol	97	345	2	6
Lane Flow Rate	606	760	202	21
Geometry Grp	1	1	1	1
Degree of Util (X)	1.084	1.288	0.405	0.046
Departure Headway (Hd)	7.048	6.383	7.959	9.013
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	521	578	455	400
Service Time	5.048	4.383	5.959	7.013
HCM Lane V/C Ratio	1.163	1.315	0.444	0.052
HCM Control Delay	90.6	163.1	16.3	12.4
HCM Lane LOS	F	F	C	B
HCM 95th-ile Q	17.3	29.5	1.9	0.1

Intersection						
Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	368	99	19	152	18	9
Future Vol, veh/h	368	99	19	152	18	9
Conflicting Peds, #/hr	0	6	6	0	0	3
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	387	104	20	160	19	9

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	498	0	645	448
Stage 1	-	-	-	-	445	-
Stage 2	-	-	-	-	200	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1066	-	437	611
Stage 1	-	-	-	-	646	-
Stage 2	-	-	-	-	834	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1063	-	425	606
Mov Cap-2 Maneuver	-	-	-	-	425	-
Stage 1	-	-	-	-	642	-
Stage 2	-	-	-	-	816	-


  

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	13.1
HCM LOS	-	-	B

Minor Lane	Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	472	-	-	1063	-	-
HCM Lane V/C Ratio	0.06	-	-	0.019	-	-
HCM Control Delay (s)	13.1	-	-	8.5	0	-
HCM Lane LOS	B	-	-	A	A	-
HCM 95th %ile Q(veh)	0.2	-	-	0.1	-	-

User approved volume balancing among the lanes for turning movement.




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	340	723	130	193	29	452	118	850	255	298	179
Future Volume (veh/h)	30	340	723	130	193	29	452	118	850	255	298	179
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.52	1.00	0.84	1.00	0.94	1.00	0.94	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/hln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	32	358	761	137	203	31	300	370	895	268	314	0
Adj No. of Lanes	1	2	2	2	2	2	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	828	1267	128	748	111	593	622	498	223	261	421
Arrive On Green	0.02	0.23	0.23	0.04	0.25	0.25	0.33	0.33	0.33	0.27	0.27	0.00
Sat Flow, veh/h	1774	3539	1439	3442	3012	445	1774	1863	1492	838	982	1583
Grp Volume(v), veh/h	32	358	761	137	117	117	300	370	895	582	0	0
Grp Sat Flow(s),veh/hln	1774	1770	719	1721	1770	1688	1774	1863	1492	1821	0	1583
Q Serve(g_s), s	2.7	12.9	35.1	5.6	7.9	8.4	20.3	24.8	50.1	39.9	0.0	0.0
Cycle Q Clear(g_c), s	2.7	12.9	35.1	5.6	7.9	8.4	20.3	24.8	50.1	39.9	0.0	0.0
Prop In Lane	1.00	1.00	1.00	1.00	0.26	1.00	1.00	0.46	1.00	0.46	1.00	1.00
Lane Grp Cap(c), veh/h	41	828	1267	128	439	419	593	622	498	484	0	421
V/C Ratio(X)	0.78	0.43	0.60	1.07	0.27	0.28	0.51	0.59	1.80	1.20	0.00	0.00
Avail Cap(c_a), veh/h	82	828	1267	128	439	419	593	622	498	484	0	421
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	72.9	49.0	21.6	72.2	45.4	45.4	40.0	41.5	49.9	55.1	0.0	0.0
Incr Delay (d2), s/veh	11.4	1.0	1.4	98.2	0.4	0.4	0.3	1.1	366.0	109.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%),veh/lt	1.5	6.4	16.0	4.4	3.9	4.0	10.0	12.9	71.3	34.7	0.0	0.0
LnGrp Delay(d),s/veh	84.3	49.9	23.0	170.5	45.8	46.0	40.3	42.6	416.0	164.2	0.0	0.0
LnGrp LOS	F	D	C	F	D	D	D	D	F	F	F	F
Approach Vol, veh/h	1151			371			1565			582		
Approach Delay, s/veh	33.1			91.9			255.7			164.2		
Approach LOS	C			F			F			F		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6	8						
Phs Duration (G+Y+R), s	10.0	40.0	55.0	7.9	42.1	45.0						
Change Period (Y+R), s	4.4	4.9	4.9	4.4	4.9	5.1						
Max Green Setting (Gmax), s	5.6	35.1	50.1	6.9	33.8	39.9						
Max Q Clear Time (g_c+H1), s	7.6	37.1	52.1	4.7	10.4	41.9						
Green Ext Time (g_c), s	0.0	0.0	0.0	0.0	17.4	0.0						

Intersection Summary		
HCM 2010 Ctrl Delay	154.8	
HCM 2010 LOS	F	

Notes		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	292	37	748	10	30	2	216	37	0	2	155	94
Future Volume (veh/h)	292	37	748	10	30	2	216	37	0	2	155	94
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.42	1.00	0.20	0.89	1.00	1.00	0.56				
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/hln	1900	1863	1863	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	307	39	787	11	32	2	227	39	0	2	163	99
Adj No. of Lanes	0	1	1	0	1	0	1	0	1	0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	586	74	244	64	186	12	281	40	0	38	297	179
Arrive On Green	0.37	0.37	0.37	0.17	0.17	0.17	0.34	0.34	0.00	0.34	0.34	0.34
Sat Flow, veh/h	1583	201	659	370	1076	67	635	120	0	3	887	534
Grp Volume(v), veh/h	346	0	787	45	0	0	266	0	0	264	0	0
Grp Sat Flow(s),veh/hln	784	0	659	1512	0	0	755	0	0	1423	0	0
Q Serve(g_s), s	14.9	0.0	36.5	2.5	0.0	0.0	16.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	14.9	0.0	36.5	2.5	0.0	0.0	33.0	0.0	0.0	16.4	0.0	0.0
Prop In Lane	0.89	1.00	0.24	0.04	0.85	0.00	0.01	0.01	0.37			
Lane Grp Cap(c), veh/h	661	0	244	261	0	0	321	0	0	514	0	0
V/C Ratio(X)	0.52	0.00	3.22	0.17	0.00	0.00	0.83	0.00	0.00	0.51	0.00	0.00
Avail Cap(c_a), veh/h	661	0	244	284	0	0	321	0	0	514	0	0
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	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.2	0.0	31.0	34.8	0.0	0.0	36.7	0.0	0.0	27.2	0.0	0.0
Incr Delay (d2), s/veh	1.4	0.0	0.101018	0.7	0.0	0.0	15.6	0.0	0.0	0.4	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 BackOf(50%),veh/lt	6	0.0	75.1	1.1	0.0	0.0	8.6	0.0	0.0	6.0	0.0	0.0
LnGrp Delay(d),s/veh	25.7	0.0	104.18	35.4	0.0	0.0	52.3	0.0	0.0	27.6	0.0	0.0
LnGrp LOS	C		F	D			D			C		
Approach Vol, veh/h	1133			45			266			264		
Approach Delay, s/veh	731.5			35.4			52.3			27.6		
Approach LOS	F			D			D			C		
Timer	1	2	3	4	5	6	7</					



Intersection #5

MOVEMENT SUMMARY - Typical Neighborhood Traffic Circle

Site: 101 [2040 PM]

New Site  
Roundabout

Intersection												
Int Delay, s/veh											2.2	
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	
Lane Configurations	↔		↔		↔		↔		↔		↔	
Traffic Vol, veh/h	16	7	22	6	6	48	9	279	6	33	316	17
Future Vol, veh/h	16	7	22	6	6	48	9	279	6	33	316	17
Conflicting Peds, #/hr	4	0	1	1	0	4	12	0	10	10	0	12
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	60	100	-	60
Veh in Median Storage, #	-	0	-	-	-	-	0	-	0	-	-	0
Grade, %	-	0	-	-	0	-	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	7	23	6	6	51	9	294	6	35	333	18

Major/Minor	Minor2	Minor1	Major1	Major2
Conflicting Flow All	759	737	346	741
Stage 1	414	414	-	323
Stage 2	345	323	-	414
Critical Hdwy	7.12	6.52	6.22	7.12
Critical Hdwy Stg 1	6.12	5.52	-	6.12
Critical Hdwy Stg 2	6.12	5.52	-	6.12
Follow-up Hdwy	3.518	4.018	3.318	3.518
Pot Cap-1 Maneuver	323	346	697	332
Stage 1	616	593	-	689
Stage 2	671	650	-	612
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	284	327	688	304
Mov Cap-2 Maneuver	284	327	-	304
Stage 1	604	570	-	677
Stage 2	611	639	-	567

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.9	12	0.2	0.7
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1213	-	-	410	574	1252	-	-
HCM Lane V/C Ratio	0.008	-	-	0.116	0.11	0.028	-	-
HCM Control Delay (s)	8	-	-	14.9	12	8	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.4	0.1	-	-

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Disp. Sftn 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: Green Bay St											
3	L2	20	2.0	0.125	3.7	LOS A	0.7	16.9	0.44	0.41	24.7
8	T1	50	2.0	0.125	3.4	LOS A	0.7	16.9	0.44	0.41	23.3
18	R2	20	2.0	0.125	3.1	LOS A	0.7	16.9	0.44	0.41	23.7
Approach											
		89	2.0	0.125	3.4	LOS A	0.7	16.9	0.44	0.41	23.8
East: Grove Ave											
1	L2	14	2.0	0.189	2.6	LOS A	1.1	28.2	0.33	0.31	25.1
6	T1	103	2.0	0.189	2.3	LOS A	1.1	28.2	0.33	0.31	24.6
16	R2	38	2.0	0.189	2.1	LOS A	1.1	28.2	0.33	0.31	23.9
Approach											
		155	2.0	0.189	2.3	LOS A	1.1	28.2	0.33	0.31	24.5
North: Green Bay St											
7	L2	41	2.0	0.174	3.4	LOS A	1.0	24.6	0.42	0.39	24.8
4	T1	64	2.0	0.174	3.1	LOS A	1.0	24.6	0.42	0.39	23.4
14	R2	26	2.0	0.174	2.8	LOS A	1.0	24.6	0.42	0.39	23.3
Approach											
		132	2.0	0.174	3.1	LOS A	1.0	24.6	0.42	0.39	23.9
West: Grove Ave											
5	L2	9	2.0	0.182	3.1	LOS A	1.0	26.3	0.40	0.37	24.9
2	T1	117	2.0	0.182	2.8	LOS A	1.0	26.3	0.40	0.37	24.5
12	R2	15	2.0	0.182	2.6	LOS A	1.0	26.3	0.40	0.37	23.6
Approach											
		141	2.0	0.182	2.8	LOS A	1.0	26.3	0.40	0.37	24.4
All Vehicles											
		517	2.0	0.189	2.8	LOS A	1.1	28.2	0.39	0.36	24.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).  
Roundabout LOS Method: Same as Signalised Intersections.  
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 2010).  
Roundabout Capacity Model: SIDRA Standard.  
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.  
Gap-Acceptance Capacity: SIDRA Standard (Arkelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection #6

MOVEMENT SUMMARY - Typical Neighborhood Traffic Circle

Site: 101 [2040 PM]

New Site  
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Disp. Sftn 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: Green Bay St											
3	L2	20	2.0	0.125	3.7	LOS A	0.7	16.9	0.44	0.41	24.7
8	T1	50	2.0	0.125	3.4	LOS A	0.7	16.9	0.44	0.41	23.3
18	R2	20	2.0	0.125	3.1	LOS A	0.7	16.9	0.44	0.41	23.7
Approach											
		89	2.0	0.125	3.4	LOS A	0.7	16.9	0.44	0.41	23.8
East: Grove Ave											
1	L2	14	2.0	0.189	2.6	LOS A	1.1	28.2	0.33	0.31	25.1
6	T1	103	2.0	0.189	2.3	LOS A	1.1	28.2	0.33	0.31	24.6
16	R2	38	2.0	0.189	2.1	LOS A	1.1	28.2	0.33	0.31	23.9
Approach											
		155	2.0	0.189	2.3	LOS A	1.1	28.2	0.33	0.31	24.5
North: Green Bay St											
7	L2	41	2.0	0.174	3.4	LOS A	1.0	24.6	0.42	0.39	24.8
4	T1	64	2.0	0.174	3.1	LOS A	1.0	24.6	0.42	0.39	23.4
14	R2	26	2.0	0.174	2.8	LOS A	1.0	24.6	0.42	0.39	23.3
Approach											
		132	2.0	0.174	3.1	LOS A	1.0	24.6	0.42	0.39	23.9
West: Grove Ave											
5	L2	9	2.0	0.182	3.1	LOS A	1.0	26.3	0.40	0.37	24.9
2	T1	117	2.0	0.182	2.8	LOS A	1.0	26.3	0.40	0.37	24.5
12	R2	15	2.0	0.182	2.6	LOS A	1.0	26.3	0.40	0.37	23.6
Approach											
		141	2.0	0.182	2.8	LOS A	1.0	26.3	0.40	0.37	24.4
All Vehicles											
		517	2.0	0.189	2.8	LOS A	1.1	28.2	0.39	0.36	24.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).  
Roundabout LOS Method: Same as Signalised Intersections.  
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 2010).  
Roundabout Capacity Model: SIDRA Standard.  
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.  
Gap-Acceptance Capacity: SIDRA Standard (Arkelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection #7

MOVEMENT SUMMARY - Typical Neighborhood Traffic Circle

Site: 101 [2040 PM]

New Site  
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Disp. Sftn 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: Green Bay St											
3	L2	20	2.0	0.125	3.7	LOS A	0.7	16.9	0.44	0.41	24.7
8	T1	50	2.0	0.125	3.4	LOS A	0.7	16.9	0.44	0.41	23.3
18	R2	20	2.0	0.125	3.1	LOS A	0.7	16.9	0.44	0.41	23.7
Approach											
		89	2.0	0.125	3.4	LOS A	0.7	16.9	0.44	0.41	23.8
East: Grove Ave											
1	L2	14	2.0	0.189	2.6	LOS A	1.1	28.2	0.33	0.31	25.1
6	T1	103	2.0	0.189	2.3	LOS A	1.1	28.2	0.33	0.31	24.6
16	R2	38	2.0	0.189	2.1	LOS A	1.1	28.2	0.33	0.31	23.9
Approach											
		155	2.0	0.189	2.3	LOS A	1.1	28.2	0.33	0.31	24.5
North: Green Bay St											
7	L2	41	2.0	0.174	3.4	LOS A	1.0	24.6	0.42	0.39	24.8
4	T1	64	2.0	0.174	3.1	LOS A	1.0	24.6	0.42	0.39	23.4
14	R2	26	2.0	0.174	2.8	LOS A	1.0	24.6	0.42	0.39	23.3
Approach											
		132	2.0	0.174	3.1	LOS A	1.0	24.6	0.42	0.39	23.9
West: Grove Ave											
5	L2	9	2.0	0.182	3.1	LOS A	1.0	26.3	0.40	0.37	24.9
2	T1	117	2.0	0.182	2.8	LOS A	1.0	26.3	0.40	0.37	24.5
12	R2	15	2.0	0.182	2.6	LOS A	1.0	26.3	0.40	0.37	23.6
Approach											
		141	2.0	0.182	2.8	LOS A	1.0	26.3	0.40	0.37	24.4
All Vehicles											
		517	2.0	0.189	2.8	LOS A	1.1	28.2	0.39	0.36	24.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).  
Roundabout LOS Method: Same as Signalised Intersections.  
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 2010).  
Roundabout Capacity Model: SIDRA Standard.  
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.  
Gap-Acceptance Capacity: SIDRA Standard (Arkelik M3D).  
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



### MOVEMENT SUMMARY

Site: 101 [2040 PM]

New Site  
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Sat'n	Average Delay sec	Level of Service	95% Back of Queue Veh/veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: Iris Ave											
7a	L1	304	0.0	0.382	7.4	LOS A	2.9	73.3	0.49	0.59	27.7
14	R2	105	0.0	0.382	4.2	LOS A	2.9	73.3	0.49	0.59	27.3
Approach											
		409	0.0	0.382	6.6	LOS A	2.9	73.3	0.49	0.59	27.6
North: Oro Vista Rd											
5	L2	130	0.0	0.296	9.1	LOS A	2.0	50.6	0.60	0.65	27.9
12a	R1	152	2.0	0.296	4.9	LOS A	2.0	50.6	0.60	0.65	27.6
Approach											
		283	1.1	0.296	6.8	LOS A	2.0	50.6	0.60	0.65	27.7
SouthWest: Oro Vista Rd											
3ax	L1	144	2.0	0.367	7.2	LOS A	2.9	72.9	0.46	0.51	28.1
18ax	R1	276	0.0	0.367	3.6	LOS A	2.9	72.9	0.46	0.51	28.2
Approach											
		419	0.7	0.367	4.8	LOS A	2.9	72.9	0.46	0.51	28.1
All Vehicles											
		1111	0.5	0.382	6.0	LOS A	2.9	73.3	0.51	0.57	27.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).  
 Roundabout LOS Method: Same as Signalised Intersections.  
 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 2010).  
 Roundabout Capacity Model: SIDRA Standard.  
 SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.  
 Gap-Acceptance Capacity: SIDRA Standard (Akpolik M3D).  
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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### HCM Signalized Intersection Capacity Analysis Horizon Year Conditions (2040) W/ Project 13: Iris Avenue & 25th Street & 27th Street

PM Peak Hour



Movement	EBL2	EBL	EBT	WBT	WBR	WBR2	SBL2	SBL	SBR	SWL	SWR	SWR2
Lane Configurations												
Traffic Volume (vph)	24	81	277	237	22	100	19	65	64	72	109	10
Future Volume (vph)	24	81	277	237	22	100	19	65	64	72	109	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.9	4.9				4.9	4.9			
Lane Util. Factor			1.00	1.00				1.00	1.00	1.00		
Frbp, ped/bikes			1.00	0.95				1.00	1.00	0.95		
Frbp, ped/bikes			0.98	1.00				1.00	1.00	1.00		
Frt			1.00	0.95				1.00	0.85	0.92		
Flt Protected			0.99	1.00				0.95	1.00	0.98		
Satd. Flow (prot)			1807	1692				1770	1583	1598		
Flt Permitted			0.81	1.00				0.95	1.00	0.98		
Satd. Flow (perm)			1475	1692				1770	1583	1598		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	25	85	292	249	23	105	20	68	67	76	115	11
RTOR Reduction (vph)	0	0	0	12	0	0	0	0	60	69	0	0
Lane Group Flow (vph)	0	0	402	365	0	0	0	88	7	133	0	0
Confl. Peds. (#/hr)	29	32			29	32	32	9	4	9	29	4
Confl. Bikes (#/hr)								1				2
Turn Type	Perm	Perm	NA	NA			Prot	Prot	Prot	Prot		
Protected Phases			2	6			3	3	3	4		
Permitted Phases	2	2										
Actuated Green, G (s)			35.9	35.9				7.5	7.5	10.8		
Effective Green, g (s)			35.9	35.9				7.5	7.5	10.8		
Actuated g/C Ratio			0.52	0.52				0.11	0.11	0.16		
Clearance Time (s)			4.9	4.9				4.9	4.9	4.9		
Vehicle Extension (s)			2.6	2.6				2.0	2.0	2.0		
Lane Grp Cap (vph)			768	881				192	172	250		
v/s Ratio Prot				0.22				c0.05	0.00	c0.08		
v/s Ratio Perm			c0.27									
v/c Ratio			0.52	0.41				0.46	0.04	0.53		
Uniform Delay, d1			10.9	10.1				28.8	27.5	26.7		
Progression Factor			1.00	1.00				1.00	1.00	1.00		
Incremental Delay, d2			0.5	0.2				0.6	0.0	1.1		
Delay (s)			11.4	10.3				29.4	27.5	27.8		
Level of Service	B	B						C	C	C		
Approach Delay (s)			11.4	10.3				28.6		27.8		
Approach LOS	B	B						C		C		

Intersection Summary		
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service: B
HCM 2000 Volume to Capacity ratio	0.52	
Actuated Cycle Length (s)	68.9	Sum of lost time (s) 14.7
Intersection Capacity Utilization	80.9%	ICU Level of Service: D
Analysis Period (min)	15	

c Critical Lane Group

### HCM 2010 Signalized Intersection Summary 14: Howard Avenue & Iris Avenue

Horizon Year Conditions (2040) W/ Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	160	67	171	248	29	72	7	154	6	13	4
Future Volume (veh/h)	0	160	67	171	248	29	72	7	154	6	13	4
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.97	1.00		0.98	0.95		0.96	0.98		0.95	
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/hln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	168	71	180	261	31	76	7	162	6	14	4
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	239	101	213	308	37	166	35	218	139	265	64
Arrive On Green	0.00	0.19	0.19	0.31	0.31	0.31	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	0	1231	520	688	998	119	350	156	988	247	1198	289
Grp Volume(v), veh/h	0	0	239	472	0	0	245	0	0	24	0	0
Grp Sat Flow(s), veh/hln	0	0	1751	1805	0	0	1493	0	0	1735	0	0
Q Serve(g_s), s	0.0	0.0	6.8	13.0	0.0	0.0	5.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(q_c), s	0.0	0.0	6.8	13.0	0.0	0.0	8.0	0.0	0.0	0.6	0.0	0.0
Prop In Lane	0.00	0.30	0.38		0.07	0.31		0.66	0.25		0.17	
Lane Grp Cap(c), veh/h	0	0	340	558	0	0	419	0	0	468	0	0
V/C Ratio(X)	0.00	0.00	0.70	0.85	0.00	0.00	0.59	0.00	0.00	0.05	0.00	0.00
Avail Cap(c_a), veh/h	0	0	582	674	0	0	581	0	0	643	0	0
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	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	20.0	17.2	0.0	0.0	19.2	0.0	0.0	16.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	2.9	8.6	0.0	0.0	0.5	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/h	0.0	0.0	3.5	7.8	0.0	0.0	3.4	0.0	0.0	0.3	0.0	0.0
LnGrp Delay(d), s/veh	0.0	0.0	22.9	25.8	0.0	0.0	19.7	0.0	0.0	16.4	0.0	0.0
LnGrp LOS			C	C			B			B		
Approach Vol, veh/h		239			472		245			24		
Approach Delay, s/veh		22.9			25.8		19.7			16.4		
Approach LOS		C			C		B			B		

Timer								
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+R), s	21.4	16.7	15.2	16.7				
Change Period (Y+R), s	4.9	4.9	4.9	4.9				
Max Green Setting (Gmax), s	19.9	17.7	17.7	17.7				
Max Q Clear Time (g_c+H1), s	15.0	10.0	8.8	2.6				
Green Ext Time (g_c), s	1.4	0.7	0.9	1.0				

Intersection Summary	
HCM 2010 Ctrl Delay	23.3
HCM 2010 LOS	C

### HCM 2010 Signalized Intersection Summary 15: Beyer Boulevard & Iris Avenue/SR-905 WB Ramps

Horizon Year Conditions (2040) W/ Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	105	255	315	220	290	115	405	170	165	615	130
Future Volume (veh/h)	90	105	255	315	220	290	115	405	170	165	615	130
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q (Ob), veh												

HCM 2010 Signalized Intersection Summary Horizon Year Conditions (2040) W/ Project  
15: Beyer Boulevard & Iris Avenue/SR-905 WB Ramps PM Peak Hour

\* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.  
Bicycles move continuously around the Iris/Beyer bend. Will yield to crossing bikes and pedestrians.

Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↖	↑	↘	↘	↖	↑		
Traffic Volume (veh/h)	67	385	285	92	111	126		
Future Volume (veh/h)	67	385	285	92	111	126		
Number	5	2	6	16	7	14		
Initial Q (Ob), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/m	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	71	405	300	97	117	133		
Adj No. of Lanes	1	1	1	0	1	1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh. %	2	2	2	2	2	2		
Cap, veh/h	98	1099	566	183	248	221		
Arrive On Green	0.06	0.59	0.42	0.42	0.14	0.14		
Sat Flow, veh/h	1774	1863	1347	435	1774	1583		
Grp Volume(v), veh/h	71	405	0	397	117	133		
Grp Sat Flow(s), veh/h/m	1774	1863	0	1782	1774	1583		
Q Serve(g_s), s	1.5	4.4	0.0	6.4	2.3	3.0		
Cycle Q Clear(q_c), s	1.5	4.4	0.0	6.4	2.3	3.0		
Prop In Lane	1.00			0.24	1.00	1.00		
Lane Grp Cap(c), veh/h	98	1099	0	749	248	221		
V/C Ratio(X)	0.72	0.37	0.00	0.53	0.47	0.60		
Avail Cap(c_a), veh/h	258	1626	0	1093	968	864		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	17.9	4.1	0.0	8.3	15.2	15.5		
Incr Delay (d2), s/veh	3.8	0.4	0.0	1.2	0.5	1.0		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%), veh/m	2.3	0.0	0.0	3.3	1.2	2.7		
LnGrp Delay(d), s/veh	21.6	4.6	0.0	9.6	15.8	16.5		
LnGrp LOS	C	A		A	B	B		
Approach Vol, veh/h	476	397		250				
Approach Delay, s/veh	7.1	9.6		16.2				
Approach LOS	A	A		B				
<b>Timer</b>	1	2	3	4	5	6	7	8
Assigned Phs	2	4	5	6				
Phs Duration (G+Y+R), s	28.2	10.3	6.5	21.7				
Change Period (Y+R), s	5.5	4.9	4.4	5.5				
Max Green Setting (Gmax), s	33.6	21.0	5.6	23.6				
Max Q Clear Time (g_c+H1), s	6.4	5.0	3.5	8.4				
Green Ext Time (g_e), s	10.5	0.3	0.0	7.6				
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay	10.0							
HCM 2010 LOS	A							

HCM Signalized Intersection Capacity Analysis Horizon Year Conditions (2040) W/ Project  
16: Dairy Mart Road/SR-905 EB Ramps & Beyer Boulevard PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖	↑	↘	↖	↑	↘	↖	↑	↘	↖	↑	↘	
Traffic Volume (vph)	290	340	540	50	315	110	200	170	65	55	50	150	
Future Volume (vph)	290	340	540	50	315	110	200	170	65	55	50	150	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.7	4.9	5.1	4.7	4.9		5.1	5.1	5.1		5.1	4.7	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95		0.95	0.95	1.00		1.00	1.00	
Frb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98		1.00	0.99	
Frb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.85		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85		1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00		0.97	1.00	
Sat. Flow (prot)	1770	1863	1583	1770	3402		1681	1760	1550		1815	1572	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00		0.97	1.00	
Sat. Flow (perm)	1770	1863	1583	1770	3402		1681	1760	1550		1815	1572	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Adj. Flow (vph)	305	358	568	53	332	116	211	179	68	58	53	158	
RTOR Reduction (vph)	0	0	0	0	21	0	0	0	0	0	0	113	
Lane Group Flow (vph)	305	358	568	53	427	0	190	200	68	0	111	45	
Confl. Bikes (#/hr)							5			1		5	
Turn Type	Prot	NA	Over	Prot	NA		Split	NA	Perm	Split	NA	pm-ov	
Protected Phases	1	6	4	5	2		4	4		8	8	1	
Permitted Phases										4		8	
Actuated Green, G (s)	26.5	38.7	55.2	13.3	25.5		55.2	55.2	55.2		13.5	40.0	
Effective Green, g (s)	26.5	38.7	55.2	13.3	25.5		55.2	55.2	55.2		13.5	40.0	
Actuated g/C Ratio	0.19	0.28	0.39	0.09	0.18		0.39	0.39	0.39		0.10	0.28	
Clearance Time (s)	4.7	4.9	5.1	4.7	4.9		5.1	5.1	5.1		5.1	4.7	
Vehicle Extension (s)	2.0	4.3	2.0	2.0	4.3		2.0	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	333	513	621	167	617		660	691	608		174	447	
v/s Ratio Prot	c0.17	c0.19	c0.36	0.03	c0.13		0.11	0.11			c0.06	0.02	
v/s Ratio Perm									0.04			0.01	
v/c Ratio	0.92	0.70	0.91	0.32	0.69		0.29	0.29	0.11		0.64	0.10	
Uniform Delay, d1	55.9	45.7	40.4	59.4	53.8		29.2	29.2	27.1		61.1	37.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	28.3	4.6	17.8	0.4	3.8		0.1	0.1	0.0		5.5	0.0	
Delay (s)	84.2	50.3	58.2	59.8	57.6		29.3	29.3	27.1		66.7	37.0	
Level of Service	F	D	E	E	E		C	C	C		E	D	
Approach Delay (s)	62.3				57.8			29.0				49.3	
Approach LOS	E				E			C				D	
<b>Intersection Summary</b>													
HCM 2000 Control Delay	53.8						HCM 2000 Level of Service						D
HCM 2000 Volume to Capacity ratio	0.84												
Actuated Cycle Length (s)	140.5						Sum of lost time (s)						19.8
Intersection Capacity Utilization	62.4%						ICU Level of Service						B
Analysis Period (min)	15												
c Critical Lane Group													

Bicycles cross with the through movement (Phase 6) no special phasing required.

HCM 2010 Signalized Intersection Summary Horizon Year Conditions (2040) W/ Project  
17: Beyer Boulevard & Del Sur Boulevard PM Peak Hour

HCM 2010 AWSC Horizon Year Conditions (2040) W/ Project  
18: Smythe Avenue W & Beyer Boulevard PM Peak Hour

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↘	↖	↑	↘	↘
Traffic Vol, veh/h	564	241	450	389	97	193
Future Vol, veh/h	564	241	450	389	97	193
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	594	254	474	409	102	203
Number of Lanes	1	1	1	1	1	0
<b>Approach</b>	EB	WB	NB			
Opposing Approach	WB	EB				
Opposing Lanes	2	2	0			
Conflicting Approach Left		NB	EB			
Conflicting Lanes Left	0	1	2			
Conflicting Approach Right	NB		WB			
Conflicting Lanes Right	1	0	2			
HCM Control Delay	86.3	45.2	18.5			
HCM LOS	F	E	C			
<b>Lane</b>	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	
Vol Left, %	33%	0%	0%	100%	0%	
Vol Thru, %	0%	100%	0%	0%	100%	
Vol Right, %	67%	0%	100%	0%	0%	
Sign Control	Stop	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	290	564	241	450	389	
LT Vol	97	0	0	450	0	
Through Vol	0	564	0	0	389	
RT Vol	193	0	241	0	0	
Lane Flow Rate	305	594	254	474	409	
Geometry Grp	2	7	7	7	7	
Degree of Util (X)	0.565	1.162	0.446	0.958	0.771	
Departure Headway (Hd)	6.914	7.044	6.328	7.54	7.027	
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	
Cap	525	517	571	483	520	
Service Time	4.914	4.773	4.056	5.24	4.727	
HCM Lane V/C Ratio	0.581	1.149	0.445	0.981	0.787	
HCM Control Delay	18.5	117.1	14.1	58.6	29.6	
HCM Lane LOS	C	F	B	F	D	
HCM 95th-ile Q	3.5	20.9	2.3	11.9	6.9	







Table containing intersection summary data for Bolton Hall Road & E Beyer Boulevard, including movement volumes, delays, and LOS. Includes sub-tables for Major/Minor and Approach.

User approved volume balancing among the lanes for turning movement.

Table containing intersection summary data for Camino de la Plaza/E Beyer Boulevard & San Ysidro Boulevard, including movement volumes, delays, and LOS. Includes sub-tables for Major/Minor and Approach.

Table containing intersection summary data for Camino de la Plaza/E Beyer Boulevard & San Ysidro Boulevard, including movement volumes, delays, and LOS. Includes sub-tables for Major/Minor and Approach.

Table containing intersection summary data for I-5 Northbound Ramps/E San Ysidro Boulevard & San Ysidro Boulevard, including movement volumes, delays, and LOS. Includes sub-tables for Major/Minor and Approach.