

HCM 7th AWSC
 1: George Hopper Rd & Chrysler Dr

Burlington Intersection LOS
 Future (2045) Weekday PM Peak Hour

Intersection	
Intersection Delay, s/veh	12.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	15	5	65	5	190	10	105	110	270	55	0
Future Vol, veh/h	5	15	5	65	5	190	10	105	110	270	55	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	1	1	1	1	1	1	3	3	3
Mvmt Flow	5	16	5	71	5	207	11	114	120	293	60	0
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, s/veh	9.2	11.6	10.6	14
HCM LOS	A	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	20%	25%	83%
Vol Thru, %	47%	60%	2%	17%
Vol Right, %	49%	20%	73%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	225	25	260	325
LT Vol	10	5	65	270
Through Vol	105	15	5	55
RT Vol	110	5	190	0
Lane Flow Rate	245	27	283	353
Geometry Grp	1	1	1	1
Degree of Util (X)	0.34	0.044	0.402	0.521
Departure Headway (Hd)	5.002	5.887	5.115	5.308
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	719	607	704	678
Service Time	3.035	3.938	3.149	3.337
HCM Lane V/C Ratio	0.341	0.044	0.402	0.521
HCM Control Delay, s/veh	10.6	9.2	11.6	14
HCM Lane LOS	B	A	B	B
HCM 95th-tile Q	1.5	0.1	1.9	3

HCM 7th TWSC
2: S Spruce St & E Rio Vista Ave

Burlington Intersection LOS
Future (2045) Weekday PM Peak Hour

Intersection												
Int Delay, s/veh	17.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	85	5	10	5	15	5	105	405	5	0	315	75
Future Vol, veh/h	85	5	10	5	15	5	105	405	5	0	315	75
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	3	3	3	0	0	0	2	2	2	2	2	2
Mvmt Flow	108	6	13	6	19	6	133	513	6	0	399	95

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1235	1232	446	1185	1276	518	494	0	0	520	0	0
Stage 1	446	446	-	783	783	-	-	-	-	-	-	-
Stage 2	789	786	-	402	494	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.1	6.5	6.2	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.5	4	3.3	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	152	176	610	167	168	562	1070	-	-	1046	-	-
Stage 1	589	572	-	390	408	-	-	-	-	-	-	-
Stage 2	382	402	-	629	550	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	110	145	610	130	139	561	1070	-	-	1045	-	-
Mov Cap-2 Maneuver	110	145	-	130	139	-	-	-	-	-	-	-
Stage 1	589	572	-	322	336	-	-	-	-	-	-	-
Stage 2	294	331	-	609	550	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/veh	62.98		32.8		1.8		0	
HCM LOS	F		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	366	-	-	121	161	1045	-	-
HCM Lane V/C Ratio	0.124	-	-	1.044	0.197	-	-	-
HCM Control Delay (s/veh)	8.8	0	-	163	32.8	0	-	-
HCM Lane LOS	A	A	-	F	D	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	7.2	0.7	0	-	-

HCM 7th TWSC
3: S Anacortes St & E Rio Vista Ave

Burlington Intersection LOS
Future (2045) Weekday PM Peak Hour

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	10	20	5	40	10	210	70	100	320	5
Future Vol, veh/h	5	5	10	20	5	40	10	210	70	100	320	5
Conflicting Peds, #/hr	0	0	0	0	0	0	3	0	2	2	0	3
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	1	1	1
Mvmt Flow	6	6	11	23	6	45	11	239	80	114	364	6

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	861	940	369	897	903	280	372	0	0	320	0	0
Stage 1	597	597	-	303	303	-	-	-	-	-	-	-
Stage 2	264	343	-	594	600	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	278	266	681	263	279	763	1192	-	-	1245	-	-
Stage 1	493	495	-	711	667	-	-	-	-	-	-	-
Stage 2	745	641	-	495	493	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	223	231	679	221	243	762	1188	-	-	1243	-	-
Mov Cap-2 Maneuver	223	231	-	221	243	-	-	-	-	-	-	-
Stage 1	435	437	-	701	658	-	-	-	-	-	-	-
Stage 2	687	632	-	425	435	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	16.33		16.13		0.28		1.93	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	59	-	-	340	397	422	-	-
HCM Lane V/C Ratio	0.01	-	-	0.067	0.186	0.091	-	-
HCM Control Delay (s/veh)	8.1	0	-	16.3	16.1	8.2	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.7	0.3	-	-

HCM 7th TWSC
4: S Spruce St & Greenleaf Ave

Burlington Intersection LOS
Future (2045) Weekday PM Peak Hour

Intersection												
Int Delay, s/veh	5.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	5	5	95	5	25	5	305	185	65	280	0
Future Vol, veh/h	0	5	5	95	5	25	5	305	185	65	280	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	1	1	1	3	3	3	1	1	1
Mvmt Flow	0	6	6	108	6	28	6	347	210	74	318	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	827	1034	318	932	929	452	318	0	0	557	0	0
Stage 1	466	466	-	463	463	-	-	-	-	-	-	-
Stage 2	361	568	-	469	466	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.11	6.51	6.21	4.13	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.509	4.009	3.309	2.227	-	-	2.209	-	-
Pot Cap-1 Maneuver	293	234	727	248	269	610	1236	-	-	1019	-	-
Stage 1	581	566	-	581	566	-	-	-	-	-	-	-
Stage 2	662	510	-	577	564	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	248	212	727	217	243	610	1236	-	-	1019	-	-
Mov Cap-2 Maneuver	248	212	-	217	243	-	-	-	-	-	-	-
Stage 1	530	516	-	577	562	-	-	-	-	-	-	-
Stage 2	620	506	-	516	514	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	16.36		36.62		0.08		1.66	
HCM LOS	C		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	17	-	-	328	251	339	-	-
HCM Lane V/C Ratio	0.005	-	-	0.035	0.567	0.072	-	-
HCM Control Delay (s/veh)	7.9	0	-	16.4	36.6	8.8	0	-
HCM Lane LOS	A	A	-	C	E	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	3.2	0.2	-	-

HCM 7th TWSC
5: E Whitmarsh Rd & Pease Rd/S Anacortes Rd

Burlington Intersection LOS
Future (2045) Weekday PM Peak Hour

Intersection						
Int Delay, s/veh	9.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔	↑	↔	↔
Traffic Vol, veh/h	465	50	325	165	15	190
Future Vol, veh/h	465	50	325	165	15	190
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	85	-	0	97
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	15	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	3	3	2	2	2	2
Mvmt Flow	522	56	365	185	17	213

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	580	0	1467 552
Stage 1	-	-	-	-	552 -
Stage 2	-	-	-	-	916 -
Critical Hdwy	-	-	4.12	-	9.42 7.72
Critical Hdwy Stg 1	-	-	-	-	8.42 -
Critical Hdwy Stg 2	-	-	-	-	8.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	994	-	41 424
Stage 1	-	-	-	-	364 -
Stage 2	-	-	-	-	182 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	993	-	26 424
Mov Cap-2 Maneuver	-	-	-	-	26 -
Stage 1	-	-	-	-	364 -
Stage 2	-	-	-	-	115 -

Approach	EB	WB	NB
HCM Control Delay, s/v	0	7.11	40.53
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	26	424	-	-	993	-
HCM Lane V/C Ratio	0.644	0.504	-	-	0.368	-
HCM Control Delay (s/veh)	277.5	21.8	-	-	10.7	-
HCM Lane LOS	F	C	-	-	B	-
HCM 95th %tile Q(veh)	2	2.8	-	-	1.7	-

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	55	270	30	40	275	15	20	35	65	20	15	10
Future Vol, veh/h	55	270	30	40	275	15	20	35	65	20	15	10
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	3	3	3	0	0	0	0	0	0
Mvmt Flow	65	321	36	48	327	18	24	42	77	24	18	12
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, s/veh	15.2	14.5	10.5	9.9
HCM LOS	C	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	17%	15%	12%	44%
Vol Thru, %	29%	76%	83%	33%
Vol Right, %	54%	8%	5%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	120	355	330	45
LT Vol	20	55	40	20
Through Vol	35	270	275	15
RT Vol	65	30	15	10
Lane Flow Rate	143	423	393	54
Geometry Grp	1	1	1	1
Degree of Util (X)	0.228	0.593	0.559	0.092
Departure Headway (Hd)	5.737	5.052	5.119	6.204
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	624	714	703	576
Service Time	3.784	3.082	3.15	4.261
HCM Lane V/C Ratio	0.229	0.592	0.559	0.094
HCM Control Delay, s/veh	10.5	15.2	14.5	9.9
HCM Lane LOS	B	C	B	A
HCM 95th-tile Q	0.9	3.9	3.5	0.3

HCM 7th Signalized Intersection Summary

7: S Burlington Blvd & Pease Rd/Fashion Way

Burlington Intersection LOS
Future (2045) Weekday PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	10	50	85	25	120	70	1160	125	155	1080	40
Future Volume (veh/h)	70	10	50	85	25	120	70	1160	125	155	1080	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1885	1885	1885	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	74	11	0	89	26	126	74	1221	132	163	1137	42
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	1	1	1	0	0	0	1	1	1
Cap, veh/h	93	160		110	177	150	346	2159	233	312	2382	88
Arrive On Green	0.05	0.08	0.00	0.06	0.09	0.09	0.03	0.66	0.66	0.04	0.68	0.68
Sat Flow, veh/h	1810	1900	1610	1795	1885	1598	1810	3286	354	1795	3522	130
Grp Volume(v), veh/h	74	11	0	89	26	126	74	669	684	163	578	601
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1795	1885	1598	1810	1805	1836	1795	1791	1861
Q Serve(g_s), s	6.0	0.8	0.0	7.3	1.9	11.6	1.9	30.1	30.4	4.4	23.0	23.0
Cycle Q Clear(g_c), s	6.0	0.8	0.0	7.3	1.9	11.6	1.9	30.1	30.4	4.4	23.0	23.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		0.07
Lane Grp Cap(c), veh/h	93	160		110	177	150	346	1186	1206	312	1211	1259
V/C Ratio(X)	0.79	0.07		0.81	0.15	0.84	0.21	0.56	0.57	0.52	0.48	0.48
Avail Cap(c_a), veh/h	157	397		151	388	329	411	1186	1206	431	1211	1259
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.9	62.8	0.0	69.1	62.0	66.4	9.0	13.9	14.0	12.5	11.5	11.5
Incr Delay (d2), s/veh	10.6	0.2	0.0	18.2	0.4	11.7	0.2	1.9	1.9	1.0	1.3	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	0.4	0.0	3.9	0.9	5.2	0.7	12.7	13.0	1.8	9.4	9.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	80.5	63.0	0.0	87.3	62.4	78.1	9.2	15.9	15.9	13.5	12.9	12.8
LnGrp LOS	F	E		F	E	E	A	B	B	B	B	B
Approach Vol, veh/h	85			241			1427			1342		
Approach Delay, s/veh	78.2			79.8			15.6			12.9		
Approach LOS	E			E			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.3	106.7	13.2	19.9	12.1	103.8	14.6	18.5				
Change Period (Y+Rc), s	5.5	5.9	5.5	5.9	5.5	5.9	5.5	5.9				
Max Green Setting (Gmax), s	73.5	12.9	30.7	16.5	66.1	12.5	31.1					
Max Q Clear Time (g_c+I), s	25.0	8.0	13.6	6.4	32.4	9.3	2.8					
Green Ext Time (p_c), s	0.0	16.4	0.0	0.4	0.2	17.5	0.0	0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	21.1											
HCM 7th LOS	C											
Notes												
User approved pedestrian interval to be less than phase max green.												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 7th Signalized Intersection Summary

Burlington Intersection LOS

8: S Burlington Blvd /S Burlington Blvd & George Hopper Rd/E George Hopper Rd

Future (2045) WED, Friday PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑	↗	↗	↘		↗	↑↑		↗	↑↑	↗
Traffic Volume (veh/h)	415	330	225	120	220	20	240	800	70	15	840	315
Future Volume (veh/h)	415	330	225	120	220	20	240	800	70	15	840	315
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1856	1856	1856	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	423	337	230	122	224	20	245	816	71	15	857	321
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	6	6	6	3	3	3	1	1	1	1	1	1
Cap, veh/h	514	414	523	153	271	24	337	1432	125	261	1198	777
Arrive On Green	0.15	0.23	0.23	0.09	0.16	0.16	0.11	0.43	0.43	0.02	0.33	0.33
Sat Flow, veh/h	3346	1811	1533	1767	1678	150	1795	3332	290	1795	3582	1588
Grp Volume(v), veh/h	423	337	230	122	0	244	245	438	449	15	857	321
Grp Sat Flow(s),veh/h/ln	1673	1811	1533	1767	0	1828	1795	1791	1831	1795	1791	1588
Q Serve(g_s), s	11.7	16.9	11.1	6.5	0.0	12.4	8.4	17.7	17.7	0.4	20.0	12.4
Cycle Q Clear(g_c), s	11.7	16.9	11.1	6.5	0.0	12.4	8.4	17.7	17.7	0.4	20.0	12.4
Prop In Lane	1.00		1.00	1.00		0.08	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	514	414	523	153	0	295	337	770	787	261	1198	777
V/C Ratio(X)	0.82	0.81	0.44	0.80	0.00	0.83	0.73	0.57	0.57	0.06	0.72	0.41
Avail Cap(c_a), veh/h	751	664	734	249	0	517	463	1002	1025	323	1537	927
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.3	35.0	24.5	42.9	0.0	38.9	20.9	20.6	20.6	16.4	27.9	15.7
Incr Delay (d2), s/veh	4.8	4.1	0.6	9.2	0.0	5.9	3.6	0.9	0.9	0.1	1.4	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	7.8	4.0	3.2	0.0	6.0	3.7	7.3	7.5	0.2	8.6	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.1	39.1	25.0	52.2	0.0	44.8	24.5	21.6	21.5	16.5	29.3	16.2
LnGrp LOS	D	D	C	D		D	C	C	C	B	C	B
Approach Vol, veh/h		990			366			1132			1193	
Approach Delay, s/veh		38.0			47.2			22.2			25.6	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.3	37.9	20.2	21.3	7.1	47.1	13.8	27.8				
Change Period (Y+Rc), s	5.5	5.9	5.5	5.9	5.5	5.9	5.5	5.9				
Max Green Setting (Gmax), s	17.5	41.1	21.5	27.1	5.0	53.6	13.5	35.1				
Max Q Clear Time (g_c+110), s	11.0	22.0	13.7	14.4	2.4	19.7	8.5	18.9				
Green Ext Time (p_c), s	0.4	9.7	1.0	1.1	0.0	9.8	0.1	2.6				

Intersection Summary

HCM 7th Control Delay, s/veh	30.0
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 7th Signalized Intersection Summary
 9: N Burlington Blvd & Avon Ave

Burlington Intersection LOS
 Future (2045) Weekday PM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔↔		↑	↗	↘	↑↑
Traffic Volume (veh/h)	275	215	670	520	385	435
Future Volume (veh/h)	275	215	670	520	385	435
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No	
Adj Sat Flow, veh/h/ln	1856	1856	1885	1885	1856	1856
Adj Flow Rate, veh/h	255	257	698	0	401	453
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	1	1	3	3
Cap, veh/h	293	319	805		447	2326
Arrive On Green	0.17	0.20	0.43	0.00	0.16	0.66
Sat Flow, veh/h	1767	1572	1885	1598	1767	3618
Grp Volume(v), veh/h	255	257	698	0	401	453
Grp Sat Flow(s),veh/h/ln	1767	1572	1885	1598	1767	3618
Q Serve(g_s), s	11.3	12.5	27.0	0.0	10.5	4.0
Cycle Q Clear(g_c), s	11.3	12.5	27.0	0.0	10.5	4.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	293	319	805		447	2326
V/C Ratio(X)	0.87	0.80	0.87		0.90	0.19
Avail Cap(c_a), veh/h	529	530	1058		631	3166
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	32.6	30.4	20.9	0.0	17.7	5.3
Incr Delay (d2), s/veh	9.3	5.7	6.5	0.0	11.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	10.8	12.4	0.0	5.0	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	42.0	36.1	27.4	0.0	28.8	5.4
LnGrp LOS	D	D	C		C	A
Approach Vol, veh/h	512		698			854
Approach Delay, s/veh	39.0		27.4			16.4
Approach LOS	D		C			B
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		58.4		21.8	18.6	39.8
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5
Max Green Setting (Gmax), s		72.0		27.0	21.5	45.0
Max Q Clear Time (g_c+I1), s		6.0		14.5	12.5	29.0
Green Ext Time (p_c), s		4.2		1.8	0.7	5.3

Intersection Summary

HCM 7th Control Delay, s/veh	25.7
HCM 7th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Intersection												
Int Delay, s/veh	12											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	840	45	150	490	5	5	0	240	5	0	5
Future Vol, veh/h	5	840	45	150	490	5	5	0	240	5	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	0	0	0
Mvmt Flow	5	894	48	160	521	5	5	0	255	5	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	527	0	0	941	0	0	1769	1774	918	1747	1795	524
Stage 1	-	-	-	-	-	-	928	928	-	843	843	-
Stage 2	-	-	-	-	-	-	840	846	-	904	952	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1040	-	-	728	-	-	65	83	329	68	81	557
Stage 1	-	-	-	-	-	-	321	347	-	361	382	-
Stage 2	-	-	-	-	-	-	360	378	-	334	341	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1040	-	-	728	-	-	44	57	329	10	55	557
Mov Cap-2 Maneuver	-	-	-	-	-	-	44	57	-	10	55	-
Stage 1	-	-	-	-	-	-	318	343	-	249	264	-
Stage 2	-	-	-	-	-	-	246	261	-	74	337	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.05			2.63			68.41			\$ 301.34		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	291	10	-	-	418	-	-	21
HCM Lane V/C Ratio	0.896	0.005	-	-	0.219	-	-	0.518
HCM Control Delay (s/veh)	68.4	8.5	0	-	11.3	0	-	\$ 301.3
HCM Lane LOS	F	A	A	-	B	A	-	F
HCM 95th %tile Q(veh)	8.2	0	-	-	0.8	-	-	1.5

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

HCM 7th TWSC
 11: N Cherry St /N Cherry St & Avon Ave

Burlington Intersection LOS
 Future (2045) Weekday PM Peak Hour

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	1095	15	5	570	5	15	0	10	5	0	5
Future Vol, veh/h	5	1095	15	5	570	5	15	0	10	5	0	5
Conflicting Peds, #/hr	1	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	1	1	1	3	3	3	0	0	0	0	0	0
Mvmt Flow	5	1177	16	5	613	5	16	0	11	5	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	619	0	0	1194	0	0	1820	1826	1185	1816	1832	617
Stage 1	-	-	-	-	-	-	1196	1196	-	627	627	-
Stage 2	-	-	-	-	-	-	624	630	-	1188	1204	-
Critical Hdwy	4.11	-	-	4.13	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.209	-	-	2.227	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	966	-	-	581	-	-	61	78	232	61	77	494
Stage 1	-	-	-	-	-	-	229	262	-	475	479	-
Stage 2	-	-	-	-	-	-	477	478	-	232	259	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	965	-	-	581	-	-	58	75	232	56	75	493
Mov Cap-2 Maneuver	-	-	-	-	-	-	58	75	-	56	75	-
Stage 1	-	-	-	-	-	-	225	257	-	467	472	-
Stage 2	-	-	-	-	-	-	465	471	-	217	255	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.04			0.1			67.9			44.77		
HCM LOS							F			E		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	83	8	-	-	15	-	-	101
HCM Lane V/C Ratio	0.324	0.006	-	-	0.009	-	-	0.106
HCM Control Delay (s/veh)	67.9	8.8	0	-	11.3	0	-	44.8
HCM Lane LOS	F	A	A	-	B	A	-	E
HCM 95th %tile Q(veh)	1.2	0	-	-	0	-	-	0.3

HCM 7th TWSC
12: N Regent St & Cascade Hwy

Burlington Intersection LOS
Future (2045) Weekday PM Peak Hour

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕			↕			↕	
Traffic Vol, veh/h	5	1165	25	15	730	5	5	0	20	5	0	5
Future Vol, veh/h	5	1165	25	15	730	5	5	0	20	5	0	5
Conflicting Peds, #/hr	1	0	3	3	0	1	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	176	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	3	3	3	0	0	0	0	0	0
Mvmt Flow	5	1253	27	16	785	5	5	0	22	5	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	791	0	0	1283	0	0	2098	2103	1269	2084	2114	790
Stage 1	-	-	-	-	-	-	1280	1280	-	821	821	-
Stage 2	-	-	-	-	-	-	818	824	-	1263	1293	-
Critical Hdwy	4.12	-	-	4.13	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.218	-	-	2.227	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	829	-	-	538	-	-	38	52	207	39	51	393
Stage 1	-	-	-	-	-	-	206	239	-	372	391	-
Stage 2	-	-	-	-	-	-	373	390	-	210	235	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	828	-	-	536	-	-	36	49	207	33	49	393
Mov Cap-2 Maneuver	-	-	-	-	-	-	36	49	-	33	49	-
Stage 1	-	-	-	-	-	-	200	233	-	360	379	-
Stage 2	-	-	-	-	-	-	356	378	-	184	229	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.04			0.24			50.21			75.46		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	106	7	-	-	536	-	-	62
HCM Lane V/C Ratio	0.254	0.006	-	-	0.03	-	-	0.175
HCM Control Delay (s/veh)	50.2	9.4	0	-	11.9	-	-	75.5
HCM Lane LOS	F	A	A	-	B	-	-	F
HCM 95th %tile Q(veh)	0.9	0	-	-	0.1	-	-	0.6

HCM 7th TWSC
 13: N Skagit St /N Skagit St & Cascade Hwy

Burlington Intersection LOS
 Future (2045) Weekday PM Peak Hour

Intersection												
Int Delay, s/veh	15.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↖	↗
Traffic Vol, veh/h	150	1015	25	40	660	40	5	5	105	15	5	85
Future Vol, veh/h	150	1015	25	40	660	40	5	5	105	15	5	85
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	189	-	-	116	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	1	1	1	2	2	2	0	0	0	8	8	8
Mvmt Flow	160	1080	27	43	702	43	5	5	112	16	5	90

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	745	0	0	1106	0	0	2202	2242	1093	2210	2234	723
Stage 1	-	-	-	-	-	-	1412	1412	-	809	809	-
Stage 2	-	-	-	-	-	-	790	830	-	1402	1426	-
Critical Hdwy	4.11	-	-	4.12	-	-	7.1	6.5	6.2	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.18	5.58	-
Follow-up Hdwy	2.209	-	-	2.218	-	-	3.5	4	3.3	3.572	4.072	3.372
Pot Cap-1 Maneuver	868	-	-	631	-	-	32	43	263	30	41	416
Stage 1	-	-	-	-	-	-	173	206	-	366	385	-
Stage 2	-	-	-	-	-	-	386	388	-	168	195	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	868	-	-	631	-	-	17	32	263	~ 12	31	416
Mov Cap-2 Maneuver	-	-	-	-	-	-	17	32	-	~ 12	31	-
Stage 1	-	-	-	-	-	-	141	168	-	341	359	-
Stage 2	-	-	-	-	-	-	278	362	-	76	159	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	1.27			0.6			117.28			172.74		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	135	868	-	-	631	-	-	14	416
HCM Lane V/C Ratio	0.907	0.184	-	-	0.067	-	-	1.553	0.217
HCM Control Delay (s/veh)	117.3	10.1	-	-	11.1	-	-	\$ 838.7	16
HCM Lane LOS	F	B	-	-	B	-	-	F	C
HCM 95th %tile Q(veh)	6	0.7	-	-	0.2	-	-	3.3	0.8

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

HCM 7th TWSC
 14: N Section St/Peakcock Ln & Cascade Hwy

Burlington Intersection LOS
 Future (2045) Weekday PM Peak Hour

Intersection												
Int Delay, s/veh	45.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗		↘	↗			↕			↗	↘
Traffic Vol, veh/h	35	1080	20	155	710	5	5	15	165	0	10	25
Future Vol, veh/h	35	1080	20	155	710	5	5	15	165	0	10	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	104	-	-	116	-	-	-	-	-	-	-	82
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	1	1	1	3	3	3	1	1	1	4	4	4
Mvmt Flow	38	1161	22	167	763	5	5	16	177	0	11	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	769	0	0	1183	0	0	2349	2349	1172	2344	2358	766
Stage 1	-	-	-	-	-	-	1247	1247	-	1099	1099	-
Stage 2	-	-	-	-	-	-	1102	1102	-	1245	1258	-
Critical Hdwy	4.11	-	-	4.13	-	-	7.11	6.51	6.21	7.14	6.54	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.14	5.54	-
Follow-up Hdwy	2.209	-	-	2.227	-	-	3.509	4.009	3.309	3.536	4.036	3.336
Pot Cap-1 Maneuver	850	-	-	587	-	-	25	36	235	25	35	399
Stage 1	-	-	-	-	-	-	213	246	-	255	286	-
Stage 2	-	-	-	-	-	-	258	289	-	211	240	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	850	-	-	587	-	-	10	25	235	2	24	399
Mov Cap-2 Maneuver	-	-	-	-	-	-	10	25	-	2	24	-
Stage 1	-	-	-	-	-	-	204	235	-	183	205	-
Stage 2	-	-	-	-	-	-	163	207	-	46	229	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.29	2.41	\$ 518.76	80.44
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	103	850	-	-	587	-	-	24	399
HCM Lane V/C Ratio	1.924	0.044	-	-	0.284	-	-	0.449	0.067
HCM Control Delay (s/veh)	\$ 518.8	9.4	-	-	13.5	-	-	244.9	14.7
HCM Lane LOS	F	A	-	-	B	-	-	F	B
HCM 95th %tile Q(veh)	16.5	0.1	-	-	1.2	-	-	1.3	0.2

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