

# HCM Signalized Intersection Capacity Analysis

## 1: Gage Blvd & Leslie Rd

2006 Existing



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.92		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1693	1782	1515	1693	3324		1693	3113		1676	3235	
Flt Permitted	0.31	1.00	1.00	0.21	1.00		0.44	1.00		0.49	1.00	
Satd. Flow (perm)	556	1782	1515	366	3324		780	3113		866	3235	
Volume (vph)	65	390	225	180	430	60	180	125	145	150	275	85
Peak-hour factor, PHF	0.84	0.84	0.84	0.73	0.73	0.73	0.81	0.81	0.81	0.93	0.93	0.93
Adj. Flow (vph)	77	464	268	247	589	82	222	154	179	161	296	91
RTOR Reduction (vph)	0	0	179	0	18	0	0	131	0	0	48	0
Lane Group Flow (vph)	77	464	89	247	653	0	222	202	0	161	339	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	21.0	18.0	18.0	25.0	20.0		17.0	14.0		17.0	14.0	
Effective Green, g (s)	25.0	20.0	20.0	29.0	22.0		21.0	16.0		21.0	16.0	
Actuated g/C Ratio	0.42	0.33	0.33	0.48	0.37		0.35	0.27		0.35	0.27	
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	326	594	505	332	1219		349	830		371	863	
v/s Ratio Prot	0.02	0.26		c0.09	0.20		c0.05	0.06		0.04	0.10	
v/s Ratio Perm	0.08		0.06	c0.27			c0.17			0.12		
v/c Ratio	0.24	0.78	0.18	0.74	0.54		0.64	0.24		0.43	0.39	
Uniform Delay, d1	10.9	18.0	14.2	11.3	15.0		15.0	17.3		14.1	18.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.7	9.8	0.8	14.0	1.7		8.6	0.7		3.7	1.3	
Delay (s)	12.6	27.9	14.9	25.3	16.7		23.6	17.9		17.7	19.4	
Level of Service	B	C	B	C	B		C	B		B	B	
Approach Delay (s)		22.1			19.0			20.2			18.9	
Approach LOS		C			B			C			B	

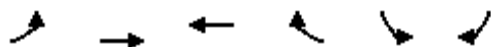
### Intersection Summary

HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

# HCM Signalized Intersection Capacity Analysis

## 2: Gage Blvd & Steptoe St

2006 Existing



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↗↗	↗↗	↖	↖↖	↖
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frbp, ped/bikes	1.00	1.00	1.00	0.99	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1693	3386	3386	1498	3317	1530
Flt Permitted	0.28	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	501	3386	3386	1498	3317	1530
Volume (vph)	115	525	740	355	305	120
Peak-hour factor, PHF	0.93	0.93	0.88	0.88	0.96	0.96
Adj. Flow (vph)	124	565	841	403	318	125
RTOR Reduction (vph)	0	0	0	71	0	104
Lane Group Flow (vph)	124	565	841	332	318	21
Confl. Peds. (#/hr)	1			1		
Heavy Vehicles (%)	1%	1%	1%	1%	0%	0%
Turn Type	pm+pt			pm+ov		Perm
Protected Phases	1	6	2	8	8	
Permitted Phases	6			2		8
Actuated Green, G (s)	66.2	66.2	56.3	69.4	13.1	13.1
Effective Green, g (s)	68.9	68.9	59.1	74.2	15.1	15.1
Actuated g/C Ratio	0.77	0.77	0.66	0.82	0.17	0.17
Clearance Time (s)	3.5	5.7	5.8	5.0	5.0	5.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	474	2592	2223	1285	557	257
v/s Ratio Prot	c0.02	0.17	c0.25	0.04	c0.10	
v/s Ratio Perm	0.18			0.18		0.01
v/c Ratio	0.26	0.22	0.38	0.26	0.57	0.08
Uniform Delay, d1	3.4	3.0	7.1	1.8	34.5	31.6
Progression Factor	1.00	1.00	1.84	5.82	1.00	1.00
Incremental Delay, d2	0.1	0.2	0.4	0.0	0.9	0.0
Delay (s)	3.5	3.2	13.4	10.3	35.4	31.6
Level of Service	A	A	B	B	D	C
Approach Delay (s)		3.2	12.4		34.3	
Approach LOS		A	B		C	

Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	47.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

# HCM Signalized Intersection Capacity Analysis

## 3: Gage Blvd & Grandridge Blvd

2006 Existing



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗			↗	↖
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95			1.00	1.00
Frbp, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00			1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	0.94		1.00	0.99		1.00	1.00			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.95			0.98	1.00
Satd. Flow (prot)	1691	3170		1692	3364		1608	1612			1739	1492
Flt Permitted	0.38	1.00		0.21	1.00		0.95	0.95			0.98	1.00
Satd. Flow (perm)	675	3170		382	3364		1608	1612			1739	1492
Volume (vph)	50	550	325	10	515	20	595	10	5	20	20	50
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.83	0.83	0.83	0.59	0.59	0.59
Adj. Flow (vph)	55	604	357	11	566	22	717	12	6	34	34	85
RTOR Reduction (vph)	0	86	0	0	3	0	0	1	0	0	0	77
Lane Group Flow (vph)	55	875	0	11	585	0	368	366	0	0	68	8
Confl. Peds. (#/hr)	1		1	1		1	1		1	1		1
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Perm		Perm		Split		Split		Split		Perm	
Protected Phases	6		2		4		4		3		3	
Permitted Phases	6		2								3	
Actuated Green, G (s)	45.5	45.5		45.5	45.5		22.5	22.5			6.5	6.5
Effective Green, g (s)	48.0	48.0		48.0	48.0		24.5	24.5			8.5	8.5
Actuated g/C Ratio	0.53	0.53		0.53	0.53		0.27	0.27			0.09	0.09
Clearance Time (s)	5.5	5.5		5.5	5.5		5.0	5.0			5.0	5.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0			2.0	2.0
Lane Grp Cap (vph)	360	1691		204	1794		438	439			164	141
v/s Ratio Prot	c0.28				0.17		c0.23		0.23		c0.04	
v/s Ratio Perm	0.08		0.03								0.01	
v/c Ratio	0.15	0.52		0.05	0.33		0.84	0.83			0.41	0.06
Uniform Delay, d1	10.7	13.5		10.1	11.9		30.9	30.8			38.4	37.1
Progression Factor	0.83	0.69		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.1	0.1		0.5	0.5		13.0	12.3			0.6	0.1
Delay (s)	9.0	9.5		10.6	12.3		43.9	43.1			39.0	37.2
Level of Service	A	A		B	B		D	D			D	D
Approach Delay (s)	9.5		12.3		43.5		38.0					
Approach LOS	A		B		D		D					

### Intersection Summary

HCM Average Control Delay	21.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis  
 4: Gage Blvd & Center Parkway

2006 Existing



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↑			↔↑		↔	↑			↔	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	15	195	0	20	250	30	370	35	25	35	40	10
Peak Hour Factor	0.81	0.81	0.81	0.86	0.86	0.86	0.86	0.86	0.86	0.78	0.78	0.78
Hourly flow rate (vph)	19	241	0	23	291	35	430	41	29	45	51	13
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1					
Volume Total (vph)	99	160	169	180	430	70	109					
Volume Left (vph)	19	0	23	0	430	0	45					
Volume Right (vph)	0	0	0	35	0	29	13					
Hadj (s)	0.13	0.03	0.09	-0.12	0.52	-0.27	0.06					
Departure Headway (s)	7.4	7.3	7.2	7.0	7.1	6.3	7.4					
Degree Utilization, x	0.20	0.33	0.34	0.35	0.85	0.12	0.22					
Capacity (veh/h)	453	461	471	486	498	550	447					
Control Delay (s)	11.1	12.6	12.7	12.6	37.5	9.0	12.6					
Approach Delay (s)	12.0		12.6		33.5		12.6					
Approach LOS	B		B		D		B					
Intersection Summary												
Delay			21.1									
HCM Level of Service			C									
Intersection Capacity Utilization			59.1%		ICU Level of Service			B				
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis  
5: Grandridge Blvd & Columbia Center Blvd

2006 Existing



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖	↖		↕	↕	↖	↕	↖	↖	↕	↖
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0	3.0		3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.95	0.95	1.00		0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frbp, ped/bikes	1.00	1.00	0.99		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1608	1686	1502		3153		1644	3288	1471	1676	3353	1500
Flt Permitted	0.95	1.00	1.00		0.99		0.20	1.00	1.00	0.29	1.00	1.00
Satd. Flow (perm)	1608	1686	1502		3153		349	3288	1471	503	3353	1500
Volume (vph)	140	125	150	45	135	95	135	620	35	110	795	80
Peak-hour factor, PHF	0.92	0.92	0.92	0.85	0.85	0.85	0.89	0.89	0.89	0.94	0.94	0.94
Adj. Flow (vph)	152	136	163	53	159	112	152	697	39	117	846	85
RTOR Reduction (vph)	0	0	118	0	95	0	0	0	17	0	0	37
Lane Group Flow (vph)	140	148	45	0	229	0	152	697	22	117	846	48
Confl. Peds. (#/hr)			1	1								
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	4%	4%	4%	2%	2%	2%
Turn Type	Split		pm+ov	Split			D.P+P		pm+ov	D.P+P		pm+ov
Protected Phases	3	3	5	4	4		5	2	4	1	6	3
Permitted Phases			3				6		2	2		6
Actuated Green, G (s)	10.0	10.0	15.6		9.1		31.1	27.1	36.2	31.6	25.5	35.5
Effective Green, g (s)	11.8	11.8	19.5		10.9		35.3	28.8	39.7	35.3	27.6	39.4
Actuated g/C Ratio	0.17	0.17	0.28		0.16		0.50	0.41	0.57	0.50	0.39	0.56
Clearance Time (s)	4.8	4.8	5.1		4.8		5.1	4.7	4.8	5.0	5.1	4.8
Vehicle Extension (s)	2.0	2.0	2.0		2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	271	284	483		491		318	1353	834	363	1322	844
v/s Ratio Prot	0.09	c0.09	0.01		c0.07		0.05	c0.21	0.00	0.03	c0.25	0.01
v/s Ratio Perm			0.02				0.19		0.01	0.13		0.02
v/c Ratio	0.52	0.52	0.09		0.47		0.48	0.52	0.03	0.32	0.64	0.06
Uniform Delay, d1	26.5	26.5	18.7		26.9		20.2	15.4	6.7	9.7	17.2	6.9
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	0.7	0.8	0.0		0.3		0.4	1.4	0.0	0.2	2.4	0.0
Delay (s)	27.2	27.3	18.7		27.2		20.6	16.8	6.7	9.9	19.6	6.9
Level of Service	C	C	B		C		C	B	A	A	B	A
Approach Delay (s)		24.2			27.2			17.0			17.5	
Approach LOS		C			C			B			B	

Intersection Summary

HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis  
6: Clearwater Ave & Columbia Center Blvd

2006 Existing



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↕		↙	↕	↗	↙	↕		↙	↕	↗
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Util. Factor	1.00	0.95		1.00	0.95	0.88	1.00	*0.60		0.91	0.91	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	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
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1613	3170		1676	3353	2640	1660	3121		1526	3203	1485
Flt Permitted	0.46	1.00		0.64	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	779	3170		1125	3353	2640	1660	3121		1526	3203	1485
Volume (vph)	220	150	20	20	215	410	50	450	25	365	650	245
Peak-hour factor, PHF	0.94	0.94	0.94	0.82	0.82	0.82	0.86	0.86	0.86	0.88	0.88	0.88
Adj. Flow (vph)	234	160	21	24	262	500	58	523	29	415	739	278
RTOR Reduction (vph)	0	14	0	0	0	69	0	5	0	0	0	174
Lane Group Flow (vph)	234	167	0	24	262	431	58	547	0	372	782	104
Conf. Peds. (#/hr)							1					1
Heavy Vehicles (%)	6%	6%	6%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Turn Type	pm+pt			pm+pt		pt+ov	Split			Split		pm+ov
Protected Phases	1	6		5	2	2 3	4	4		3	3	1
Permitted Phases	6			2								3
Actuated Green, G (s)	21.3	16.8		15.8	14.2	37.6	12.8	12.8		18.0	18.0	22.5
Effective Green, g (s)	25.0	19.5		19.2	16.6	40.3	15.2	15.2		20.7	20.7	26.2
Actuated g/C Ratio	0.36	0.28		0.27	0.24	0.58	0.22	0.22		0.30	0.30	0.37
Clearance Time (s)	4.0	5.7		4.0	5.4		5.4	5.4		5.7	5.7	4.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	344	883		329	795	1520	360	678		451	947	556
v/s Ratio Prot	c0.05	0.05		0.00	0.08	0.16	0.03	c0.18		0.24	c0.24	0.01
v/s Ratio Perm	c0.19			0.02								0.06
v/c Ratio	0.68	0.19		0.07	0.33	0.28	0.16	0.81		0.82	0.83	0.19
Uniform Delay, d1	18.3	19.2		18.7	22.1	7.5	22.2	26.0		23.0	23.0	14.7
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	4.4	0.5		0.0	1.1	0.0	0.1	6.6		11.1	5.7	0.1
Delay (s)	22.6	19.7		18.7	23.2	7.6	22.3	32.6		34.1	28.6	14.8
Level of Service	C	B		B	C	A	C	C		C	C	B
Approach Delay (s)		21.4			13.1			31.6			27.4	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM Average Control Delay	23.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis  
 7: Clearwater Ave & Clodfelter Rd

2006 Existing

	→	↘	↙	←	↖	↗		
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑		↙	↑↑	↙	↗		
Sign Control	Free			Free	Stop			
Grade	0%			0%	0%			
Volume (veh/h)	285	25	55	465	15	30		
Peak Hour Factor	0.88	0.88	0.90	0.90	0.69	0.69		
Hourly flow rate (vph)	324	28	61	517	22	43		
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type	None							
Median storage (veh)								
Upstream signal (ft)								
pX, platoon unblocked								
vC, conflicting volume			352		719	176		
vC1, stage 1 conf vol								
vC2, stage 2 conf vol								
vCu, unblocked vol			352		719	176		
tC, single (s)			4.1		6.8	6.9		
tC, 2 stage (s)								
tF (s)			2.2		3.5	3.3		
p0 queue free %			95		94	95		
cM capacity (veh/h)			1203		349	843		
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2	
Volume Total	216	136	61	258	258	22	43	
Volume Left	0	0	61	0	0	22	0	
Volume Right	0	28	0	0	0	0	43	
cSH	1700	1700	1203	1700	1700	349	843	
Volume to Capacity	0.13	0.08	0.05	0.15	0.15	0.06	0.05	
Queue Length 95th (ft)	0	0	4	0	0	5	4	
Control Delay (s)	0.0	0.0	8.2	0.0	0.0	16.0	9.5	
Lane LOS			A				C	A
Approach Delay (s)	0.0		0.9				11.7	
Approach LOS							B	
Intersection Summary								
Average Delay			1.3					
Intersection Capacity Utilization			25.8%	ICU Level of Service		A		
Analysis Period (min)			15					

# HCM Unsignalized Intersection Capacity Analysis

## 8: 10th Ave & Clodfelter Rd

2006 Existing



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SBR2	NEL2	NEL	NER
Lane Configurations		↕			↕		↕				↕	
Sign Control		Stop			Stop		Stop				Stop	
Volume (vph)	5	40	5	40	95	5	5	30	10	5	20	55
Peak Hour Factor	0.75	0.75	0.75	0.65	0.65	0.65	0.66	0.66	0.66	0.77	0.77	0.77
Hourly flow rate (vph)	7	53	7	62	146	8	8	45	15	6	26	71
Direction, Lane #	EB 1	WB 1	SB 1	NE 1								
Volume Total (vph)	67	215	68	104								
Volume Left (vph)	7	62	8	6								
Volume Right (vph)	7	8	15	71								
Hadj (s)	0.16	0.07	-0.03	-0.31								
Departure Headway (s)	4.7	4.5	4.7	4.3								
Degree Utilization, x	0.09	0.27	0.09	0.13								
Capacity (veh/h)	725	771	714	774								
Control Delay (s)	8.2	9.1	8.1	8.0								
Approach Delay (s)	8.2	9.1	8.1	8.0								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.5									
HCM Level of Service			A									
Intersection Capacity Utilization			33.0%	ICU Level of Service								A
Analysis Period (min)			15									

# HCM Unsignalized Intersection Capacity Analysis

## 9: Canyon St & Steptoe St

2006 Existing



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	60	55	135	525	575	105
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	67	61	150	583	639	117
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1289	378	756			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1289	378	756			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	48	90	82			
cM capacity (veh/h)	128	620	851			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	128	150	292	292	426	330
Volume Left	67	150	0	0	0	0
Volume Right	61	0	0	0	0	117
cSH	206	851	1700	1700	1700	1700
Volume to Capacity	0.62	0.18	0.17	0.17	0.25	0.19
Queue Length 95th (ft)	89	16	0	0	0	0
Control Delay (s)	47.2	10.1	0.0	0.0	0.0	0.0
Lane LOS	E	B				
Approach Delay (s)	47.2	2.1			0.0	
Approach LOS	E					
Intersection Summary						
Average Delay			4.7			
Intersection Capacity Utilization			45.3%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis  
 10: Tapteal Dr & Steptoe St

2006 Existing



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶	↷	↶	↷	↶	↶↶
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	70	50	515	70	20	610
Peak Hour Factor	0.89	0.89	0.91	0.91	0.94	0.94
Hourly flow rate (vph)	79	56	566	77	21	649
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	933	566			643	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	933	566			643	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	70	88			98	
cM capacity (veh/h)	259	467			938	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	79	56	566	77	21	324	324
Volume Left	79	0	0	0	21	0	0
Volume Right	0	56	0	77	0	0	0
cSH	259	467	1700	1700	938	1700	1700
Volume to Capacity	0.30	0.12	0.33	0.05	0.02	0.19	0.19
Queue Length 95th (ft)	31	10	0	0	2	0	0
Control Delay (s)	24.9	13.7	0.0	0.0	8.9	0.0	0.0
Lane LOS	C	B			A		
Approach Delay (s)	20.2		0.0		0.3		
Approach LOS	C						

Intersection Summary			
Average Delay		2.0	
Intersection Capacity Utilization	39.4%	ICU Level of Service	A
Analysis Period (min)	15		