

Queues

I-526 Long Point Rd IMR

10: Hobcaw Bluff Dr./Wando Park Blvd. & Long Point Rd.

2030 No Build AM



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	18	886	71	1088	433	3	10	199	330	23
v/c Ratio	0.09	0.66	0.18	0.59	0.28	0.03	0.09	0.65	0.76	0.18
Control Delay	7.9	20.5	4.4	5.8	0.4	53.0	54.6	21.9	62.9	21.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.9	20.5	4.4	5.8	0.4	53.0	54.6	21.9	62.9	21.7
Queue Length 50th (ft)	3	211	7	74	0	2	7	26	127	1
Queue Length 95th (ft)	17	388	m18	138	m0	13	26	90	179	26
Internal Link Dist (ft)		408		302			505			503
Turn Bay Length (ft)	150		525			100		100	200	
Base Capacity (vph)	211	1347	393	1833	1524	120	112	309	460	139
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.66	0.18	0.59	0.28	0.03	0.09	0.64	0.72	0.17
























Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

10: Hobcaw Bluff Dr./Wando Park Blvd. & Long Point Rd.

I-526 Long Point Rd IMR
2030 No Build AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	809	6	65	1001	398	3	9	183	304	1	20
Future Volume (vph)	17	809	6	65	1001	398	3	9	183	304	1	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.8	7.8		6.8	7.8	6.9	6.4	7.0	6.8	6.9	7.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1203	2257		1597	2524	1583	1805	1681	1599	3433	875	
Flt Permitted	0.23	1.00		0.27	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	291	2257		449	2524	1583	1805	1681	1599	3433	875	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	879	7	71	1088	433	3	10	199	330	1	22
RTOR Reduction (vph)	0	0	0	0	0	84	0	0	151	0	19	0
Lane Group Flow (vph)	18	886	0	71	1088	349	3	10	48	330	4	0
Heavy Vehicles (%)	50%	60%	33%	13%	43%	2%	0%	13%	1%	2%	0%	90%
Turn Type	D.Pm	NA		D.P+P	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	
Protected Phases		2		1	6	7	3	8	1	7	4	
Permitted Phases	6			2		6			8			
Actuated Green, G (s)	81.6	66.1		74.8	81.6	96.7	1.6	1.6	10.3	15.1	15.6	
Effective Green, g (s)	81.6	66.1		74.8	81.6	96.7	1.6	1.6	10.3	15.1	15.6	
Actuated g/C Ratio	0.68	0.55		0.62	0.68	0.81	0.01	0.01	0.09	0.13	0.13	
Clearance Time (s)	7.8	7.8		6.8	7.8	6.9	6.4	7.0	6.8	6.9	7.0	
Vehicle Extension (s)	6.0	6.0		2.5	6.0	3.0	3.0	3.0	2.5	3.0	3.0	
Lane Grp Cap (vph)	197	1243		363	1716	1275	24	22	137	431	113	
v/s Ratio Prot		c0.39		0.01	c0.43	0.03	0.00	c0.01	0.03	c0.10	0.00	
v/s Ratio Perm	0.06			0.11		0.19			0.00			
v/c Ratio	0.09	0.71		0.20	0.63	0.27	0.12	0.45	0.35	0.77	0.03	
Uniform Delay, d1	6.6	19.9		9.5	10.8	2.9	58.5	58.8	51.7	50.7	45.6	
Progression Factor	1.00	1.00		0.60	0.50	0.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.9	3.5		0.2	1.4	0.1	2.3	14.2	1.1	7.9	0.1	
Delay (s)	7.5	23.4		5.9	6.8	0.1	60.9	72.9	52.8	58.7	45.7	
Level of Service	A	C		A	A	A	E	E	D	E	D	
Approach Delay (s)		23.1			5.0			53.9			57.8	
Approach LOS		C			A			D			E	

Intersection Summary

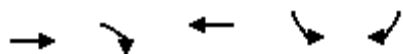
HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	28.5
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Queues

I-526 Long Point Rd IMR

11: I-526 EB On-Ramp/I-526 EB off ramp & Long Point Rd.

2030 No Build AM















Lane Group	EBT	EBR	WBT	SBL	SBR
Lane Group Flow (vph)	954	345	932	866	854
v/c Ratio	0.63	0.33	0.44	0.86	0.83
Control Delay	15.5	3.6	13.0	49.4	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	15.5	3.6	13.0	49.4	7.8
Queue Length 50th (ft)	172	28	224	326	0
Queue Length 95th (ft)	259	71	308	371	0
Internal Link Dist (ft)	362		144		
Turn Bay Length (ft)					400
Base Capacity (vph)	1511	1053	2136	1230	1035
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.63	0.33	0.44	0.70	0.83
Intersection Summary					

HCM Signalized Intersection Capacity Analysis

11: I-526 EB On-Ramp/I-526 EB off ramp & Long Point Rd.

I-526 Long Point Rd IMR
2030 No Build AM

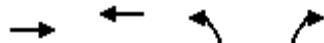
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗		↑↑					↘↗		↗
Traffic Volume (vph)	0	878	317	0	857	0	0	0	0	797	0	786
Future Volume (vph)	0	878	317	0	857	0	0	0	0	797	0	786
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0					5.0		4.0
Lane Util. Factor		0.95	1.00		0.95					0.97		1.00
Frt		1.00	0.85		1.00					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		2456	1495		3471					3433		1035
Flt Permitted		1.00	1.00		1.00					0.95		1.00
Satd. Flow (perm)		2456	1495		3471					3433		1035
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	954	345	0	932	0	0	0	0	866	0	854
RTOR Reduction (vph)	0	0	133	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	954	212	0	932	0	0	0	0	866	0	854
Heavy Vehicles (%)	0%	47%	8%	0%	4%	0%	0%	0%	0%	2%	0%	56%
Turn Type		NA	Perm		NA					Prot		Free
Protected Phases		2			6					4		
Permitted Phases			2									Free
Actuated Green, G (s)		73.9	73.9		73.9					35.1		120.0
Effective Green, g (s)		73.9	73.9		73.9					35.1		120.0
Actuated g/C Ratio		0.62	0.62		0.62					0.29		1.00
Clearance Time (s)		6.0	6.0		6.0					5.0		
Vehicle Extension (s)		2.5	2.5		2.5					2.0		
Lane Grp Cap (vph)		1512	920		2137					1004		1035
v/s Ratio Prot		0.39			0.27					0.25		
v/s Ratio Perm			0.14									c0.82
v/c Ratio		0.63	0.23		0.44					0.86		0.83
Uniform Delay, d1		14.5	10.3		12.1					40.2		0.0
Progression Factor		0.88	2.21		0.96					1.00		1.00
Incremental Delay, d2		1.5	0.4		0.6					7.5		7.5
Delay (s)		14.3	23.3		12.2					47.7		7.5
Level of Service		B	C		B					D		A
Approach Delay (s)		16.7			12.2			0.0			27.7	
Approach LOS		B			B			A			C	
Intersection Summary												
HCM 2000 Control Delay			20.4									HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio			0.91									
Actuated Cycle Length (s)			120.0							11.0		
Intersection Capacity Utilization			93.8%									ICU Level of Service F
Analysis Period (min)			15									
c Critical Lane Group												

Queues

I-526 Long Point Rd IMR

12: I-526 WB off ramp & Long Point Rd.

2030 No Build AM



Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	1079	1047	487	524
v/c Ratio	0.45	0.39	0.77	0.33
Control Delay	4.7	4.8	54.0	0.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.7	4.8	54.0	0.6
Queue Length 50th (ft)	47	65	186	0
Queue Length 95th (ft)	213	m128	231	0
Internal Link Dist (ft)	101	188	405	
Turn Bay Length (ft)				
Base Capacity (vph)	2424	2651	1017	1583
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.45	0.39	0.48	0.33

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.





















HCM Signalized Intersection Capacity Analysis 12: I-526 WB off ramp & Long Point Rd.

I-526 Long Point Rd IMR
2030 No Build AM

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↖↗	↗
Traffic Volume (vph)	993	0	0	963	448	482
Future Volume (vph)	993	0	0	963	448	482
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6			5.6	5.7	4.0
Lane Util. Factor	0.95			*1.00	0.97	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3406			3725	3273	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3406			3725	3273	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1079	0	0	1047	487	524
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1079	0	0	1047	487	524
Heavy Vehicles (%)	6%	0%	0%	2%	7%	2%
Turn Type	NA			NA	Prot	Free
Protected Phases	2			6	8	
Permitted Phases						Free
Actuated Green, G (s)	85.4			85.4	23.3	120.0
Effective Green, g (s)	85.4			85.4	23.3	120.0
Actuated g/C Ratio	0.71			0.71	0.19	1.00
Clearance Time (s)	5.6			5.6	5.7	
Vehicle Extension (s)	4.0			4.0	3.0	
Lane Grp Cap (vph)	2423			2650	635	1583
v/s Ratio Prot	c0.32			0.28	c0.15	
v/s Ratio Perm						0.33
v/c Ratio	0.45			0.40	0.77	0.33
Uniform Delay, d1	7.3			6.9	45.8	0.0
Progression Factor	0.55			0.61	1.00	1.00
Incremental Delay, d2	0.5			0.3	5.5	0.6
Delay (s)	4.4			4.5	51.3	0.6
Level of Service	A			A	D	A
Approach Delay (s)	4.4			4.5	25.0	
Approach LOS	A			A	C	
Intersection Summary						
HCM 2000 Control Delay			11.1		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.51			
Actuated Cycle Length (s)			120.0		Sum of lost time (s)	11.3
Intersection Capacity Utilization			94.4%		ICU Level of Service	F
Analysis Period (min)			15			
c Critical Lane Group						

HCM Unsignalized Intersection Capacity Analysis 13: Belle Hall Pkwy. & Long Point Rd.

I-526 Long Point Rd IMR
2030 No Build AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	169	1213	93	0	2252	76	0	0	4	0	0	348
Future Volume (Veh/h)	169	1213	93	0	2252	76	0	0	4	0	0	348
Sign Control	Free			Free			Yield			Yield		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.91	0.91	0.91	0.94	0.94	0.94	0.67	0.67	0.67	0.81	0.81	0.81
Hourly flow rate (vph)	186	1333	102	0	2396	81	0	0	6	0	0	430
Pedestrians	2									2		
Lane Width (ft)	12.0									12.0		
Walking Speed (ft/s)	3.5									3.5		
Percent Blockage	0									0		
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)	463			836								
pX, platoon unblocked	0.41			0.88			0.47	0.47	0.88	0.47	0.47	0.41
vC, conflicting volume	2398			1333			2905	4103	666	3477	4144	1242
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1527			1108			1653	4211	351	2874	4297	0
tC, single (s)	4.2			4.1			7.5	6.5	7.4	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.5	3.5	4.0	3.3
p0 queue free %	0			100			0	0	99	0	0	3
cM capacity (veh/h)	171			562			0	0	514	0	0	443
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	NB 1	SB 1				
Volume Total	186	666	666	102	1597	880	6	430				
Volume Left	186	0	0	0	0	0	0	0				
Volume Right	0	0	0	102	0	81	6	430				
cSH	171	1700	1700	1700	1700	1700	514	443				
Volume to Capacity	1.09	0.39	0.39	0.06	0.94	0.52	0.01	0.97				
Queue Length 95th (ft)	234	0	0	0	0	0	1	298				
Control Delay (s)	150.3	0.0	0.0	0.0	0.0	0.0	12.1	66.5				
Lane LOS	F						B	F				
Approach Delay (s)	17.2				0.0		12.1	66.5				
Approach LOS							B	F				
Intersection Summary												
Average Delay	12.5											
Intersection Capacity Utilization	93.1%			ICU Level of Service					F			
Analysis Period (min)	15											

Queues

I-526 Long Point Rd IMR

15: Belle Point & Long Point Rd.

2030 No Build AM



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	122	955	246	71	2077	216	16	35	167	50	289
v/c Ratio	0.68	0.43	0.22	0.17	0.95	0.94	0.05	0.08	0.70	0.15	0.61
Control Delay	39.1	11.2	1.6	5.9	33.3	96.1	42.0	10.5	63.9	43.7	39.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.1	11.2	1.6	5.9	33.3	96.1	42.0	10.5	63.9	43.7	39.5
Queue Length 50th (ft)	52	186	7	14	753	167	10	0	123	33	175
Queue Length 95th (ft)	#122	211	24	26	#987	#316	31	25	#217	71	270
Internal Link Dist (ft)		756			790		405			1179	
Turn Bay Length (ft)	190		210	175		175		185	150		175
Base Capacity (vph)	187	2216	1098	408	2177	233	329	465	241	329	484
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.43	0.22	0.17	0.95	0.93	0.05	0.08	0.69	0.15	0.60

Intersection Summary
























95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

15: Belle Point & Long Point Rd.

I-526 Long Point Rd IMR
2030 No Build AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	112	879	226	65	1863	48	199	15	32	154	46	266
Future Volume (vph)	112	879	226	65	1863	48	199	15	32	154	46	266
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.8	5.8	5.7	5.8		6.2	6.2	5.7	6.2	6.2	5.7
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	3438	1568	1770	3528		1770	1900	1568	1770	1900	1599
Flt Permitted	0.05	1.00	1.00	0.26	1.00		0.72	1.00	1.00	0.75	1.00	1.00
Satd. Flow (perm)	99	3438	1568	491	3528		1349	1900	1568	1392	1900	1599
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	122	955	246	71	2025	52	216	16	35	167	50	289
RTOR Reduction (vph)	0	0	90	0	2	0	0	0	27	0	0	19
Lane Group Flow (vph)	122	955	156	71	2075	0	216	16	8	167	50	270
Heavy Vehicles (%)	1%	5%	3%	2%	2%	0%	2%	0%	3%	2%	0%	1%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	pm+ov	Perm	NA	pm+ov
Protected Phases	5	2		1	6			8	1		4	5
Permitted Phases	2		2	6			8		8	4		4
Actuated Green, G (s)	84.1	76.3	76.3	79.7	74.1		20.4	20.4	26.0	20.4	20.4	28.2
Effective Green, g (s)	84.1	76.3	76.3	79.7	74.1		20.4	20.4	26.0	20.4	20.4	28.2
Actuated g/C Ratio	0.70	0.64	0.64	0.66	0.62		0.17	0.17	0.22	0.17	0.17	0.23
Clearance Time (s)	5.7	5.8	5.8	5.7	5.8		6.2	6.2	5.7	6.2	6.2	5.7
Vehicle Extension (s)	2.6	2.6	2.6	2.5	2.6		2.5	2.5	2.5	2.5	2.5	2.6
Lane Grp Cap (vph)	179	2185	996	385	2178		229	323	339	236	323	375
v/s Ratio Prot	0.04	0.28		0.01	c0.59			0.01	0.00		0.03	c0.05
v/s Ratio Perm	0.43		0.10	0.11			c0.16		0.00	0.12		0.12
v/c Ratio	0.68	0.44	0.16	0.18	0.95		0.94	0.05	0.02	0.71	0.15	0.72
Uniform Delay, d1	32.5	11.0	8.8	7.4	21.3		49.2	41.7	37.0	47.0	42.5	42.3
Progression Factor	0.94	0.95	1.01	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	9.0	0.6	0.3	0.2	11.0		43.6	0.0	0.0	8.7	0.2	6.2
Delay (s)	39.6	11.0	9.2	7.6	32.3		92.8	41.7	37.0	55.6	42.6	48.4
Level of Service	D	B	A	A	C		F	D	D	E	D	D
Approach Delay (s)		13.3			31.5			82.5			50.2	
Approach LOS		B			C			F			D	



















Intersection Summary

HCM 2000 Control Delay	31.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.7
Intersection Capacity Utilization	95.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis

21: Hidden Blvd./Shipping Ln. & Long Point Rd.

I-526 Long Point Rd IMR
2030 No Build AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	620	3	52	529	203	1	0	147	17	0	10
Future Volume (Veh/h)	9	620	3	52	529	203	1	0	147	17	0	10
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.94	0.94	0.94	0.82	0.82	0.82	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	10	660	3	63	645	248	1	0	196	23	0	13
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	TWLTL			TWLTL								
Median storage veh)	2			2								
Upstream signal (ft)				1201								
pX, platoon unblocked	1.00						1.00	1.00		1.00	1.00	1.00
vC, conflicting volume	893			663			1143	1700	332	1441	1578	446
vC1, stage 1 conf vol							682	682		895	895	
vC2, stage 2 conf vol							462	1019		546	683	
vCu, unblocked vol	888			663			1138	1697	332	1437	1574	440
tC, single (s)	5.2			4.2			7.5	6.5	6.9	8.0	6.5	7.2
tC, 2 stage (s)							6.5	5.5		7.0	5.5	
tF (s)	2.8			2.3			3.5	4.0	3.3	3.7	4.0	3.4
p0 queue free %	98			93			100	100	70	87	100	98
cM capacity (veh/h)	491			889			333	246	664	175	265	534
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1				
Volume Total	10	440	223	63	430	463	197	36				
Volume Left	10	0	0	63	0	0	1	23				
Volume Right	0	0	3	0	0	248	196	13				
cSH	491	1700	1700	889	1700	1700	661	231				
Volume to Capacity	0.02	0.26	0.13	0.07	0.25	0.27	0.30	0.16				
Queue Length 95th (ft)	2	0	0	6	0	0	31	14				
Control Delay (s)	12.5	0.0	0.0	9.4	0.0	0.0	12.7	23.5				
Lane LOS	B			A			B	C				
Approach Delay (s)	0.2			0.6			12.7	23.5				
Approach LOS							B	C				
Intersection Summary												
Average Delay	2.2											
Intersection Capacity Utilization	49.2%			ICU Level of Service					A			
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis 22: Wando Ln. & Long Point Rd.







I-526 Long Point Rd IMR
2030 No Build AM

	→	↘	↙	←	↖	↗		
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑		↘	↑↑	↘			
Traffic Volume (veh/h)	546	1	41	367	0	6		
Future Volume (Veh/h)	546	1	41	367	0	6		
Sign Control	Free			Free	Stop			
Grade	0%			0%	0%			
Peak Hour Factor	0.96	0.96	0.84	0.84	0.63	0.63		
Hourly flow rate (vph)	569	1	49	437	0	10		
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type	TWLTL		TWLTL					
Median storage veh)	2		2					
Upstream signal (ft)								
pX, platoon unblocked								
vC, conflicting volume			570	886		285		
vC1, stage 1 conf vol			570					
vC2, stage 2 conf vol			316					
vCu, unblocked vol			570	886		285		
tC, single (s)			4.1	6.8		6.9		
tC, 2 stage (s)			5.8					
tF (s)			2.2	3.5		3.3		
p0 queue free %			95	100		99		
cM capacity (veh/h)			1013	472		718		
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1		
Volume Total	379	191	49	218	218	10		
Volume Left	0	0	49	0	0	0		
Volume Right	0	1	0	0	0	10		
cSH	1700	1700	1013	1700	1700	718		
Volume to Capacity	0.22	0.11	0.05	0.13	0.13	0.01		
Queue Length 95th (ft)	0	0	4	0	0	1		
Control Delay (s)	0.0	0.0	8.7	0.0	0.0	10.1		
Lane LOS			A			B		
Approach Delay (s)	0.0	0.9				10.1		
Approach LOS					B			
Intersection Summary								
Average Delay			0.5					
Intersection Capacity Utilization			31.8%	ICU Level of Service		A		
Analysis Period (min)			15					

HCM Unsignalized Intersection Capacity Analysis

23: Lone Tree Dr & Long Point Rd.

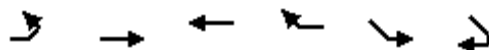
I-526 Long Point Rd IMR
2030 No Build AM

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑↑↱		↱	↑↑↑	↲			
Traffic Volume (veh/h)	1178	118	190	1453	11	17		
Future Volume (Veh/h)	1178	118	190	1453	11	17		
Sign Control	Free			Free	Stop			
Grade	0%			0%	0%			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90		
Hourly flow rate (vph)	1309	131	211	1614	12	19		
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type	None			None				
Median storage veh								
Upstream signal (ft)	382			442				
pX, platoon unblocked					0.93			
vC, conflicting volume			1440	2334		502		
vC1, stage 1 conf vol								
vC2, stage 2 conf vol								
vCu, unblocked vol			1440	2166		502		
tC, single (s)			4.1	6.8		6.9		
tC, 2 stage (s)								
tF (s)			2.2	3.5		3.3		
p0 queue free %			55	41		96		
cM capacity (veh/h)			467	20		515		
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	NB 1
Volume Total	524	524	393	211	538	538	538	31
Volume Left	0	0	0	211	0	0	0	12
Volume Right	0	0	131	0	0	0	0	19
cSH	1700	1700	1700	467	1700	1700	1700	50
Volume to Capacity	0.31	0.31	0.23	0.45	0.32	0.32	0.32	0.62
Queue Length 95th (ft)	0	0	0	58	0	0	0	61
Control Delay (s)	0.0	0.0	0.0	18.9	0.0	0.0	0.0	158.7
Lane LOS				C				F
Approach Delay (s)	0.0			2.2				158.7
Approach LOS								F
Intersection Summary								
Average Delay				2.7				
Intersection Capacity Utilization				49.2%	ICU Level of Service			A
Analysis Period (min)				15				

HCM Unsignalized Intersection Capacity Analysis

41: Long Point Rd. & Long Point/I-526 EB onramp







I-526 Long Point Rd IMR
2030 No Build AM



Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑	↑		
Traffic Volume (veh/h)	0	1555	857	554	0	0
Future Volume (Veh/h)	0	1555	857	554	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	1728	952	616	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		224	1136			
pX, platoon unblocked	0.99				0.78	0.99
vC, conflicting volume	1568				1816	476
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1556				1433	456
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	418				97	547
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	
Volume Total	864	864	476	476	616	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	616	
cSH	1700	1700	1700	1700	1700	
Volume to Capacity	0.51	0.51	0.28	0.28	0.36	
Queue Length 95th (ft)	0	0	0	0	0	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	
Lane LOS						
Approach Delay (s)	0.0		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			93.8%		ICU Level of Service	F
Analysis Period (min)			15			

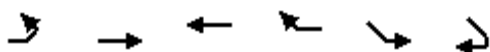
HCM Unsignalized Intersection Capacity Analysis 49: I-526 WB On-Ramp & Long Point Rd.

I-526 Long Point Rd IMR
2030 No Build AM

						
Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations	↑↑	↑		↑↑		
Traffic Volume (veh/h)	993	682	0	1411	0	0
Future Volume (Veh/h)	993	682	0	1411	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.96	0.96	0.90	0.90
Hourly flow rate (vph)	1079	741	0	1470	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1179			181		
pX, platoon unblocked					0.89	
vC, conflicting volume			1820		1814	540
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1820		1662	540
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			333		78	486
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	
Volume Total	540	540	741	735	735	
Volume Left	0	0	0	0	0	
Volume Right	0	0	741	0	0	
cSH	1700	1700	1700	1700	1700	
Volume to Capacity	0.32	0.32	0.44	0.43	0.43	
Queue Length 95th (ft)	0	0	0	0	0	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	
Lane LOS						
Approach Delay (s)	0.0			0.0		
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			94.4%		ICU Level of Service	
Analysis Period (min)			15			
					F	

HCM Unsignalized Intersection Capacity Analysis 54: Long Point Rd. & I-526 WB On-Ramp

I-526 Long Point Rd IMR
2030 No Build AM



Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑↑	↑↑	↑		
Traffic Volume (veh/h)	0	1475	963	1637	0	0
Future Volume (Veh/h)	0	1475	963	1637	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	1639	1070	1819	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)		268	1031			
pX, platoon unblocked					0.87	
vC, conflicting volume	2889				1890	535
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2889				1717	535
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	125				70	490
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	
Volume Total	820	820	535	535	1819	
Volume Left	0	0	0	0	0	
Volume Right	0	0	0	0	1819	
cSH	1700	1700	1700	1700	1700	
Volume to Capacity	0.48	0.48	0.31	0.31	1.07	
Queue Length 95th (ft)	0	0	0	0	0	
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	
Lane LOS						
Approach Delay (s)	0.0		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			104.7%		ICU Level of Service	G
Analysis Period (min)			15			