

HCM Unsignalized Intersection Capacity Analysis
13: PCH &

Year 2015 - With Project
PM Peak Hour - Alternative 1



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Volume (veh/h)	1058	0	0	1409	0	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1058	0	0	1409	0	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	358			234		
pX, platoon unblocked				0.84	0.92	0.84
vC, conflicting volume				1058	1762	529
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol				681	860	49
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	99
cM capacity (veh/h)				760	271	845

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	529	529	704	704	5
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	5
cSH	1700	1700	1700	1700	845
Volume to Capacity	0.31	0.31	0.41	0.41	0.01
Queue Length 95th (ft)	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	9.3
Lane LOS					A
Approach Delay (s)	0.0		0.0		9.3
Approach LOS					A

Intersection Summary					
Average Delay	0.0				
Intersection Capacity Utilization	42.3%		ICU Level of Service		A
Analysis Period (min)	15				

YEAR 2035
TWO-WAY OPERATIONS

Lanes, Volumes, Timings
1: PCH & Blue Lantern

Year 2035 - With Project
AM Peak Hour - Alternative 1

Lane Group	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2	SBL2
Lane Configurations												
Volume (vph)	15	824	246	14	49	1326	49	62	11	20	6	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	11	10	11	11	11	11	11	11	10
Grade (%)		0%				0%			0%			
Storage Length (ft)	150		0		150		0	0		60		
Storage Lanes	1		1		1		0	1		1		
Taper Length (ft)	60		60		60		60	60		60		
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.995				0.850		
Flt Protected	0.950				0.950			0.950				
Satd. Flow (prot)	1652	3292	1531	0	1652	3280	0	1711	1801	1531	0	0
Flt Permitted	0.950				0.950			0.752				
Satd. Flow (perm)	1652	3292	1531	0	1652	3280	0	1354	1801	1531	0	0
Right Turn on Red				No			Yes				Yes	
Satd. Flow (RTOR)						5				6		
Link Speed (mph)		50				35			25			
Link Distance (ft)		327				358			195			
Travel Time (s)		4.5				7.0			5.3			
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	2%	6%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%				0%			0%			
Adj. Flow (vph)	15	824	246	14	49	1326	49	62	11	20	6	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	824	260	0	49	1375	0	62	11	26	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Left	Right	Left	Left	Right	Right	Left
Median Width(ft)		10				10			11			
Link Offset(ft)		0				0			0			
Crosswalk Width(ft)		16				16			16			
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.04	1.09	1.04	1.04	1.04	1.04	1.04	1.04	1.09
Turning Speed (mph)	15		35	9	15		9	15		9	9	15
Number of Detectors	1	1	1		1	1		1	1	1		1
Detector Template			Right									
Leading Detector (ft)	50	50	20		50	50		50	50	50		50
Trailing Detector (ft)	0	0	0		0	0		0	0	0		0
Turn Type	Prot		Perm		Prot			Perm		Perm		Perm
Protected Phases	1	6			5	2			8			
Permitted Phases			6					8		8		4
Detector Phase	1	6	6		5	2		8	8	8		4
Switch Phase												
Minimum Initial (s)	1.0	4.0	4.0		1.0	4.0		4.0	4.0	4.0		4.0

Lanes, Volumes, Timings
1: PCH & Blue Lantern

Year 2035 - With Project
AM Peak Hour - Alternative 1



Lane Group	SBL	SBT	SBR
Lane Configurations	↙	↑	↗
Volume (vph)	11	9	15
Ideal Flow (vphpl)	1900	1900	1900
Lane Width (ft)	11	11	13
Grade (%)		0%	
Storage Length (ft)	0		0
Storage Lanes	1		1
Taper Length (ft)	60		60
Lane Util. Factor	1.00	1.00	1.00
Ped Bike Factor			
Frt			0.850
Flt Protected	0.950		
Satd. Flow (prot)	1711	1801	1636
Flt Permitted	0.750		
Satd. Flow (perm)	1350	1801	1636
Right Turn on Red			Yes
Satd. Flow (RTOR)			15
Link Speed (mph)		25	
Link Distance (ft)		232	
Travel Time (s)		6.3	
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor	1.00	1.00	1.00
Growth Factor	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%
Bus Blockages (#/hr)	0	0	0
Parking (#/hr)			
Mid-Block Traffic (%)		0%	
Adj. Flow (vph)	11	9	15
Shared Lane Traffic (%)			
Lane Group Flow (vph)	49	9	15
Enter Blocked Intersection	No	No	No
Lane Alignment	Left	Left	Right
Median Width(ft)		11	
Link Offset(ft)		0	
Crosswalk Width(ft)		16	
Two way Left Turn Lane			
Headway Factor	1.04	1.04	0.96
Turning Speed (mph)	15		9
Number of Detectors	1	1	1
Detector Template	Left		
Leading Detector (ft)	20	50	50
Trailing Detector (ft)	0	0	0
Turn Type	Perm		Perm
Protected Phases		4	
Permitted Phases	4		4
Detector Phase	4	4	4
Switch Phase			
Minimum Initial (s)	4.0	4.0	4.0

Lanes, Volumes, Timings
1: PCH & Blue Lantern

Year 2035 - With Project
AM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2	SBL2
Minimum Split (s)	4.5	26.0	26.0		4.5	24.0		25.0	25.0	25.0		34.0
Total Split (s)	10.0	72.0	72.0	0.0	14.0	76.0	0.0	34.0	34.0	34.0	0.0	34.0
Total Split (%)	8.3%	60.0%	60.0%	0.0%	11.7%	63.3%	0.0%	28.3%	28.3%	28.3%	0.0%	28.3%
Maximum Green (s)	6.5	67.0	67.0		10.5	71.0		29.0	29.0	29.0		29.0
Yellow Time (s)	3.0	4.0	4.0		3.0	4.0		4.0	4.0	4.0		4.0
All-Red Time (s)	0.5	1.0	1.0		0.5	1.0		1.0	1.0	1.0		1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.0	5.0	4.0	3.5	5.0	4.0	5.0	5.0	5.0	4.0	5.0
Lead/Lag	Lead	Lead	Lead		Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes						
Vehicle Extension (s)	1.5	3.0	3.0		1.5	3.0		1.5	1.5	1.5		1.5
Minimum Gap (s)	1.5	1.5	1.5		1.5	1.5		1.5	1.5	1.5		1.5
Time Before Reduce (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0
Time To Reduce (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0
Recall Mode	None	C-Max	C-Max		None	C-Max		None	None	None		None
Walk Time (s)		7.0	7.0			7.0		7.0	7.0	7.0		7.0
Flash Dont Walk (s)		14.0	14.0			12.0		13.0	13.0	13.0		22.0
Pedestrian Calls (#/hr)		5	5			5		5	5	5		5
Act Effct Green (s)	5.1	89.3	89.3		9.2	96.7		12.4	12.4	12.4		
Actuated g/C Ratio	0.04	0.74	0.74		0.08	0.81		0.10	0.10	0.10		
v/c Ratio	0.21	0.34	0.23		0.39	0.52		0.44	0.06	0.16		
Control Delay	62.1	8.4	8.4		50.8	4.6		57.3	43.2	38.2		
Queue Delay	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0		
Total Delay	62.1	8.4	8.4		50.8	4.6		57.3	43.2	38.2		
LOS	E	A	A		D	A		E	D	D		
Approach Delay		9.1				6.2			50.7			
Approach LOS		A				A			D			
90th %ile Green (s)	6.5	67.0	67.0		10.5	71.0		29.0	29.0	29.0		29.0
90th %ile Term Code	Max	Coord	Coord		Max	Coord		Hold	Hold	Hold		Ped
70th %ile Green (s)	5.8	84.5	84.5		10.5	89.2		11.5	11.5	11.5		11.5
70th %ile Term Code	Gap	Coord	Coord		Hold	Coord		Gap	Gap	Gap		Hold
50th %ile Green (s)	0.0	86.6	86.6		10.5	100.6		9.4	9.4	9.4		9.4
50th %ile Term Code	Skip	Coord	Coord		Hold	Coord		Gap	Gap	Gap		Hold
30th %ile Green (s)	0.0	88.6	88.6		10.5	102.6		7.4	7.4	7.4		7.4
30th %ile Term Code	Skip	Coord	Coord		Hold	Coord		Gap	Gap	Gap		Hold
10th %ile Green (s)	0.0	115.0	115.0		0.0	115.0		0.0	0.0	0.0		0.0
10th %ile Term Code	Skip	Coord	Coord		Skip	Coord		Skip	Skip	Skip		Skip
Queue Length 50th (ft)	11	110	60		35	71		47	8	15		
Queue Length 95th (ft)	35	238	156		m72	131		78	22	36		
Internal Link Dist (ft)		247				278			115			
Turn Bay Length (ft)	150				150							60
Base Capacity (vph)	89	2451	1140		145	2644		327	435	375		
Starvation Cap Reductn	0	0	0		0	71		0	0	0		
Spillback Cap Reductn	0	0	0		0	0		0	0	0		
Storage Cap Reductn	0	0	0		0	0		0	0	0		
Reduced v/c Ratio	0.17	0.34	0.23		0.34	0.53		0.19	0.03	0.07		

Intersection Summary

Area Type: Other



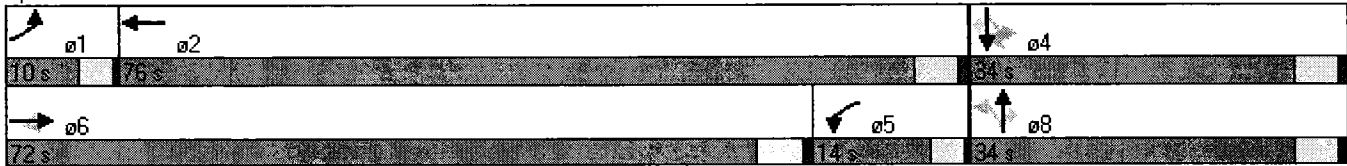
Lane Group	SBL	SBT	SBR
Minimum Split (s)	34.0	34.0	34.0
Total Split (s)	34.0	34.0	34.0
Total Split (%)	28.3%	28.3%	28.3%
Maximum Green (s)	29.0	29.0	29.0
Yellow Time (s)	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0
Lead/Lag			
Lead-Lag Optimize?			
Vehicle Extension (s)	1.5	1.5	1.5
Minimum Gap (s)	1.5	1.5	1.5
Time Before Reduce (s)	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0
Recall Mode	None	None	None
Walk Time (s)	7.0	7.0	7.0
Flash Dont Walk (s)	22.0	22.0	22.0
Pedestrian Calls (#/hr)	5	5	5
Act Effct Green (s)	12.3	12.3	12.3
Actuated g/C Ratio	0.10	0.10	0.10
v/c Ratio	0.36	0.05	0.08
Control Delay	53.4	42.7	18.0
Queue Delay	0.0	0.0	0.0
Total Delay	53.4	42.7	18.0
LOS	D	D	B
Approach Delay		44.8	
Approach LOS		D	
90th %ile Green (s)	29.0	29.0	29.0
90th %ile Term Code	Ped	Ped	Ped
70th %ile Green (s)	11.5	11.5	11.5
70th %ile Term Code	Hold	Hold	Hold
50th %ile Green (s)	9.4	9.4	9.4
50th %ile Term Code	Hold	Hold	Hold
30th %ile Green (s)	7.4	7.4	7.4
30th %ile Term Code	Hold	Hold	Hold
10th %ile Green (s)	0.0	0.0	0.0
10th %ile Term Code	Skip	Skip	Skip
Queue Length 50th (ft)	37	7	0
Queue Length 95th (ft)	64	19	18
Internal Link Dist (ft)		152	
Turn Bay Length (ft)			
Base Capacity (vph)	326	435	407
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.15	0.02	0.04
Intersection Summary			

Lanes, Volumes, Timings
 1: PCH & Blue Lantern

Year 2035 - With Project
 AM Peak Hour - Alternative 1

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 19 (16%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.52
 Intersection Signal Delay: 10.1
 Intersection LOS: B
 Intersection Capacity Utilization 59.2%
 ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: PCH & Blue Lantern



HCM Signalized Intersection Capacity Analysis
1: PCH & Blue Lantern

Year 2035 - With Project
AM Peak Hour - Alternative 1



Movement	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2	SBL2
Lane Configurations												
Volume (vph)	15	824	246	14	49	1326	49	62	11	20	6	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	11	10	11	11	11	11	11	11	10
Total Lost time (s)	3.5	5.0	5.0		3.5	5.0		5.0	5.0	5.0		
Lane Util. Factor	1.00	0.95	1.00		1.00	0.95		1.00	1.00	1.00		
Frpb, ped/bikes	1.00	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		
Frt	1.00	1.00	0.85		1.00	0.99		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)	1652	3292	1531		1652	3279		1711	1801	1531		
Flt Permitted	0.95	1.00	1.00		0.95	1.00		0.75	1.00	1.00		
Satd. Flow (perm)	1652	3292	1531		1652	3279		1354	1801	1531		
Peak-hour factor, PHF	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. Flow (vph)	15	824	246	14	49	1326	49	62	11	20	6	38
RTOR Reduction (vph)	0	0	0	0	0	1	0	0	0	5	0	0
Lane Group Flow (vph)	15	824	260	0	49	1374	0	62	11	21	0	0
Confl. Peds. (#/hr)												
Heavy Vehicles (%)	2%	6%	2%	2%	2%	6%	2%	2%	2%	2%	2%	2%
Turn Type	Prot		Perm		Prot		Perm		Perm		Perm	Perm
Protected Phases	1	6			5	2			8			
Permitted Phases			6					8		8		4
Actuated Green, G (s)	2.5	85.1	85.1		9.9	92.5		11.5	11.5	11.5		
Effective Green, g (s)	2.5	85.1	85.1		9.9	92.5		11.5	11.5	11.5		
Actuated g/C Ratio	0.02	0.71	0.71		0.08	0.77		0.10	0.10	0.10		
Clearance Time (s)	3.5	5.0	5.0		3.5	5.0		5.0	5.0	5.0		
Vehicle Extension (s)	1.5	3.0	3.0		1.5	3.0		1.5	1.5	1.5		
Lane Grp Cap (vph)	34	2335	1086		136	2528		130	173	147		
v/s Ratio Prot	0.01	c0.25			0.03	c0.42			0.01			
v/s Ratio Perm			0.17					c0.05		0.01		
v/c Ratio	0.44	0.35	0.24		0.36	0.54		0.48	0.06	0.14		
Uniform Delay, d1	58.1	6.8	6.1		52.1	5.4		51.4	49.4	49.7		
Progression Factor	1.00	1.00	1.00		0.83	0.54		1.00	1.00	1.00		
Incremental Delay, d2	3.3	0.4	0.5		0.5	0.8		1.0	0.1	0.2		
Delay (s)	61.4	7.2	6.6		43.5	3.7		52.4	49.4	49.9		
Level of Service	E	A	A		D	A		D	D	D		
Approach Delay (s)		7.8				5.1			51.4			
Approach LOS		A				A			D			

Intersection Summary		
HCM Average Control Delay	9.1	HCM Level of Service
HCM Volume to Capacity ratio	0.54	A
Actuated Cycle Length (s)	120.0	Sum of lost time (s)
Intersection Capacity Utilization	59.2%	15.0
Analysis Period (min)	15	ICU Level of Service
		B

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 1: PCH & Blue Lantern

Year 2035 - With Project
 AM Peak Hour - Alternative 1



Movement	SBL	SBT	SBR
Lane Configurations			
Volume (vph)	11	9	15
Ideal Flow (vphpl)	1900	1900	1900
Lane Width	11	11	13
Total Lost time (s)	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00
Frt	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00
Satd. Flow (prot)	1711	1801	1636
Flt Permitted	0.75	1.00	1.00
Satd. Flow (perm)	1351	1801	1636
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	11	9	15
RTOR Reduction (vph)	0	0	14
Lane Group Flow (vph)	49	9	1
Confl. Peds. (#/hr)			
Heavy Vehicles (%)	2%	2%	2%
Turn Type	Perm		Perm
Protected Phases		4	
Permitted Phases	4		4
Actuated Green, G (s)	11.5	11.5	11.5
Effective Green, g (s)	11.5	11.5	11.5
Actuated g/C Ratio	0.10	0.10	0.10
Clearance Time (s)	5.0	5.0	5.0
Vehicle Extension (s)	1.5	1.5	1.5
Lane Grp Cap (vph)	129	173	157
v/s Ratio Prot		0.00	
v/s Ratio Perm	0.04		0.00
v/c Ratio	0.38	0.05	0.01
Uniform Delay, d1	50.9	49.3	49.1
Progression Factor	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.0	0.0
Delay (s)	51.6	49.3	49.1
Level of Service	D	D	D
Approach Delay (s)		50.8	
Approach LOS		D	
Intersection Summary			

Lanes, Volumes, Timings
2: PCH & Ruby Lantern

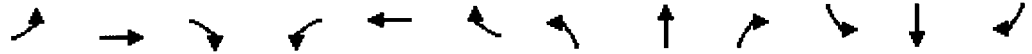
Year 2035 - With Project
AM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	850	1	14	1301	3	113	6	18	8	7	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	10	11	11	12	14	14	16	16	16
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	150		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	60		60	60		60	60		60	60		60
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Fr t								0.982				0.940
Flt Protected	0.950			0.950				0.960				0.985
Satd. Flow (prot)	1652	3292	0	1652	3292	0	0	1873	0	0	1759	0
Flt Permitted	0.950			0.950				0.745				0.927
Satd. Flow (perm)	1652	3292	0	1652	3292	0	0	1454	0	0	1656	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)								6				12
Link Speed (mph)		35			35			25				25
Link Distance (ft)		234			314			168				274
Travel Time (s)		4.6			6.1			4.6				7.5
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												0
Mid-Block Traffic (%)		0%			0%			0%				0%
Adj. Flow (vph)	9	850	1	14	1301	3	113	6	18	8	7	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	851	0	14	1304	0	0	137	0	0	27	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.00	0.92	0.92	0.85	0.97	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	1	6		5	2			8				4
Permitted Phases							8			4		
Detector Phase	1	6		5	2		8	8		4	4	
Switch Phase												
Minimum Initial (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	

Lanes, Volumes, Timings
2: PCH & Ruby Lantern

Year 2035 - With Project
AM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	4.5	21.0		4.5	23.0		30.0	30.0		27.0	27.0	
Total Split (s)	8.0	79.0	0.0	8.0	79.0	0.0	33.0	33.0	0.0	33.0	33.0	0.0
Total Split (%)	6.7%	65.8%	0.0%	6.7%	65.8%	0.0%	27.5%	27.5%	0.0%	27.5%	27.5%	0.0%
Maximum Green (s)	4.5	74.0		4.5	74.0		28.0	28.0		28.0	28.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.0	4.0	3.5	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lead		Lag	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	1.5		1.5	1.5	
Minimum Gap (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		9.0			11.0		18.0	18.0		15.0	15.0	
Pedestrian Calls (#/hr)		5			5		5	5		5	5	
Act Effect Green (s)	4.8	91.3		4.3	92.6			15.5			15.5	
Actuated g/C Ratio	0.04	0.76		0.04	0.77			0.13			0.13	
v/c Ratio	0.14	0.34		0.23	0.51			0.71			0.12	
Control Delay	79.7	2.1		50.9	3.2			66.3			29.0	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	79.7	2.1		50.9	3.2			66.3			29.0	
LOS	E	A		D	A			E			C	
Approach Delay		2.9			3.7			66.3			29.0	
Approach LOS		A			A			E			C	
90th %ile Green (s)	6.1	77.0		4.5	75.4		25.0	25.0		25.0	25.0	
90th %ile Term Code	Gap	Coord		Max	Coord		Ped	Ped		Hold	Hold	
70th %ile Green (s)	0.0	84.4		4.5	92.4		17.6	17.6		17.6	17.6	
70th %ile Term Code	Skip	Coord		Max	Coord		Gap	Gap		Hold	Hold	
50th %ile Green (s)	0.0	95.2		0.0	95.2		14.8	14.8		14.8	14.8	
50th %ile Term Code	Skip	Coord		Skip	Coord		Gap	Gap		Hold	Hold	
30th %ile Green (s)	0.0	98.0		0.0	98.0		12.0	12.0		12.0	12.0	
30th %ile Term Code	Skip	Coord		Skip	Coord		Gap	Gap		Hold	Hold	
10th %ile Green (s)	0.0	102.0		0.0	102.0		8.0	8.0		8.0	8.0	
10th %ile Term Code	Skip	Coord		Skip	Coord		Gap	Gap		Hold	Hold	
Queue Length 50th (ft)	7	18		11	31			99			10	
Queue Length 95th (ft)	m22	51		m20	101			154			35	
Internal Link Dist (ft)		154			234			88			194	
Turn Bay Length (ft)	100			150								
Base Capacity (vph)	69	2505		62	2540			344			396	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.13	0.34		0.23	0.51			0.40			0.07	

Intersection Summary

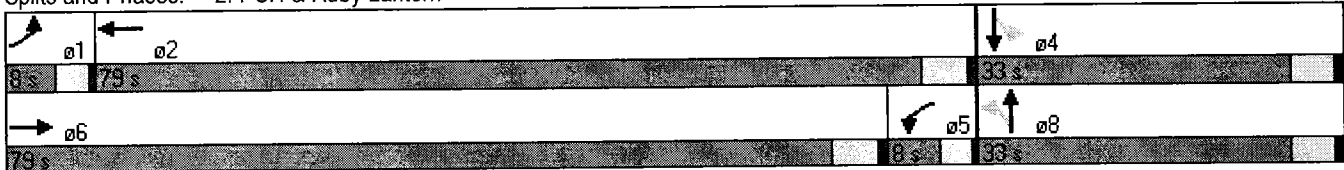
Area Type: Other

Lanes, Volumes, Timings
 2: PCH & Ruby Lantern

Year 2035 - With Project
 AM Peak Hour - Alternative 1

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 24 (20%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.71
 Intersection Signal Delay: 7.4
 Intersection LOS: A
 Intersection Capacity Utilization 58.7%
 ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: PCH & Ruby Lantern



HCM Signalized Intersection Capacity Analysis
2: PCH & Ruby Lantern

Year 2035 - With Project
AM Peak Hour - Alternative 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↕		↙	↕			↕			↕	
Volume (vph)	9	850	1	14	1301	3	113	6	18	8	7	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	10	11	11	12	14	14	16	16	16
Total Lost time (s)	3.5	5.0		3.5	5.0			5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frbp, ped/bikes	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	
Frt	1.00	1.00		1.00	1.00			0.98			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1652	3292		1652	3291			1874			1760	
Flt Permitted	0.95	1.00		0.95	1.00			0.74			0.93	
Satd. Flow (perm)	1652	3292		1652	3291			1454			1656	
Peak-hour factor, PHF	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. Flow (vph)	9	850	1	14	1301	3	113	6	18	8	7	12
RTOR Reduction (vph)	0	0	0	0	0	0	0	5	0	0	10	0
Lane Group Flow (vph)	9	851	0	14	1304	0	0	132	0	0	17	0
Confl. Peds. (#/hr)												
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Parking (#/hr)												0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	1	6		5	2			8				4
Permitted Phases							8			4		
Actuated Green, G (s)	1.2	88.5		2.5	89.8			15.5				15.5
Effective Green, g (s)	1.2	88.5		2.5	89.8			15.5				15.5
Actuated g/C Ratio	0.01	0.74		0.02	0.75			0.13				0.13
Clearance Time (s)	3.5	5.0		3.5	5.0			5.0				5.0
Vehicle Extension (s)	1.5	3.0		1.5	3.0			1.5				1.5
Lane Grp Cap (vph)	17	2428		34	2463			188				214
v/s Ratio Prot	0.01	c0.26		0.01	c0.40							
v/s Ratio Perm								c0.09				0.01
v/c Ratio	0.53	0.35		0.41	0.53			0.70				0.08
Uniform Delay, d1	59.1	5.6		58.0	6.3			50.0				46.0
Progression Factor	1.36	0.30		0.77	0.38			1.00				1.00
Incremental Delay, d2	12.6	0.4		2.5	0.7			9.2				0.1
Delay (s)	93.3	2.1		46.9	3.1			59.3				46.0
Level of Service	F	A		D	A			E				D
Approach Delay (s)		3.0			3.5			59.3				46.0
Approach LOS		A			A			E				D

Intersection Summary

HCM Average Control Delay	7.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	58.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
3: PCH & Amber Lantern

Year 2035 - With Project
AM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↕		↙	↕			↕			↕	
Volume (vph)	23	886	35	111	1350	13	92	8	34	48	25	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	10	11	11	10	11	11	16	16	16
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	150		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	60		60	60		60	60		60	60		60
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.994			0.999			0.966			0.960	
Flt Protected	0.950			0.950				0.967			0.977	
Satd. Flow (prot)	1652	3277	0	1652	3290	0	0	1682	0	0	1782	0
Flt Permitted	0.950			0.950				0.697			0.810	
Satd. Flow (perm)	1652	3277	0	1652	3290	0	0	1212	0	0	1477	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			1			13			17	
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		478			315			117			564	
Travel Time (s)		9.3			6.1			3.2			15.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												0
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	23	886	35	111	1350	13	92	8	34	48	25	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	921	0	111	1363	0	0	134	0	0	104	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.09	1.04	1.04	0.85	0.97	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	1	6		5	2			8			4	
Permitted Phases							8			4		
Detector Phase	1	6		5	2		8	8		4	4	
Switch Phase												
Minimum Initial (s)	1.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lanes, Volumes, Timings
3: PCH & Amber Lantern

Year 2035 - With Project
AM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	4.5	24.0		9.0	24.0		31.0	31.0		29.0	29.0	
Total Split (s)	11.0	66.0	0.0	21.0	76.0	0.0	33.0	33.0	0.0	33.0	33.0	0.0
Total Split (%)	9.2%	55.0%	0.0%	17.5%	63.3%	0.0%	27.5%	27.5%	0.0%	27.5%	27.5%	0.0%
Maximum Green (s)	7.5	61.0		17.5	71.0		28.0	28.0		28.0	28.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.0	4.0	3.5	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lag	Lead		Lag	Lead							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	1.5	3.0		3.0	3.0		1.5	1.5		1.5	1.5	
Minimum Gap (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		12.0			12.0		19.0	19.0		17.0	17.0	
Pedestrian Calls (#/hr)		5			5		5	5		5	5	
Act Effct Green (s)	5.7	76.6		13.8	87.8			16.1			16.1	
Actuated g/C Ratio	0.05	0.64		0.12	0.73			0.13			0.13	
v/c Ratio	0.29	0.44		0.58	0.57			0.77			0.49	
Control Delay	55.1	8.5		50.6	3.7			71.1			46.0	
Queue Delay	0.0	0.0		0.0	0.2			0.0			0.0	
Total Delay	55.1	8.5		50.6	3.8			71.1			46.0	
LOS	E	A		D	A			E			D	
Approach Delay		9.7			7.4			71.1			46.0	
Approach LOS		A			A			E			D	
90th %ile Green (s)	7.5	63.0		17.5	73.0		26.0	26.0		26.0	26.0	
90th %ile Term Code	Max	Coord		Max	Coord		Ped	Ped		Hold	Hold	
70th %ile Green (s)	6.6	71.1		16.6	81.1		18.8	18.8		18.8	18.8	
70th %ile Term Code	Gap	Coord		Hold	Coord		Gap	Gap		Hold	Hold	
50th %ile Green (s)	5.6	75.3		15.6	85.3		15.6	15.6		15.6	15.6	
50th %ile Term Code	Gap	Coord		Hold	Coord		Gap	Gap		Hold	Hold	
30th %ile Green (s)	0.0	82.9		11.2	97.6		12.4	12.4		12.4	12.4	
30th %ile Term Code	Skip	Coord		Gap	Coord		Gap	Gap		Hold	Hold	
10th %ile Green (s)	0.0	90.6		8.1	102.2		7.8	7.8		7.8	7.8	
10th %ile Term Code	Skip	Coord		Gap	Coord		Gap	Gap		Hold	Hold	
Queue Length 50th (ft)	18	110		88	61			92			63	
Queue Length 95th (ft)	m46	111		m122	257			149			110	
Internal Link Dist (ft)		398			235			37			484	
Turn Bay Length (ft)	150			150								
Base Capacity (vph)	103	2093		241	2409			293			358	
Starvation Cap Reductn	0	0		0	312			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.22	0.44		0.46	0.65			0.46			0.29	

Intersection Summary

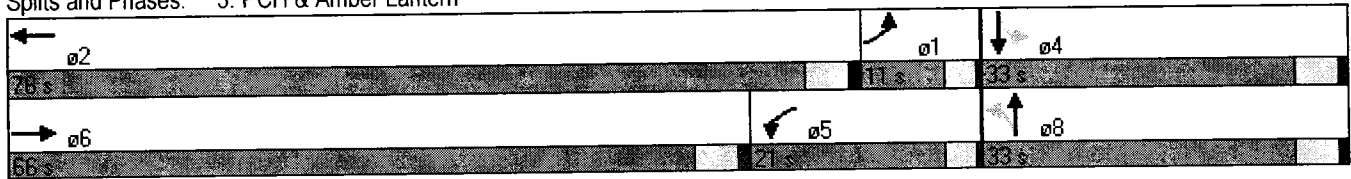
Area Type: Other

Lanes, Volumes, Timings
 3: PCH & Amber Lantern

Year 2035 - With Project
 AM Peak Hour - Alternative 1

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 14 (12%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 12.9
 Intersection LOS: B
 Intersection Capacity Utilization 64.3%
 ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: PCH & Amber Lantern



HCM Signalized Intersection Capacity Analysis
3: PCH & Amber Lantern

Year 2035 - With Project
AM Peak Hour - Alternative 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Volume (vph)	23	886	35	111	1350	13	92	8	34	48	25	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	10	11	11	10	11	11	16	16	16
Total Lost time (s)	3.5	5.0		3.5	5.0			5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frbp, ped/bikes	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	
Frft	1.00	0.99		1.00	1.00			0.97			0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.98	
Satd. Flow (prot)	1652	3278		1652	3289			1681			1782	
Flt Permitted	0.95	1.00		0.95	1.00			0.70			0.81	
Satd. Flow (perm)	1652	3278		1652	3289			1212			1477	
Peak-hour factor, PHF	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. Flow (vph)	23	886	35	111	1350	13	92	8	34	48	25	31
RTOR Reduction (vph)	0	2	0	0	0	0	0	11	0	0	15	0
Lane Group Flow (vph)	23	919	0	111	1363	0	0	123	0	0	89	0
Confl. Peds. (#/hr)												
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Parking (#/hr)												0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	1	6		5	2			8				4
Permitted Phases							8			4		
Actuated Green, G (s)	3.9	75.3		15.1	86.5			16.1				16.1
Effective Green, g (s)	3.9	75.3		15.1	86.5			16.1				16.1
Actuated g/C Ratio	0.03	0.63		0.13	0.72			0.13				0.13
Clearance Time (s)	3.5	5.0		3.5	5.0			5.0				5.0
Vehicle Extension (s)	1.5	3.0		3.0	3.0			1.5				1.5
Lane Grp Cap (vph)	54	2057		208	2371			163				198
v/s Ratio Prot	0.01	0.28		c0.07	c0.41							
v/s Ratio Perm								c0.10				0.06
v/c Ratio	0.43	0.45		0.53	0.57			0.75				0.45
Uniform Delay, d1	57.0	11.6		49.2	8.0			50.0				47.9
Progression Factor	0.84	0.63		0.84	0.31			1.00				1.00
Incremental Delay, d2	1.9	0.7		1.9	0.7			15.9				0.6
Delay (s)	49.7	7.9		43.0	3.2			65.9				48.5
Level of Service	D	A		D	A			E				D
Approach Delay (s)		8.9			6.2			65.9				48.5
Approach LOS		A			A			E				D

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
4: PCH & Violet Lantern

Year 2035 - With Project
AM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕			↕	
Volume (vph)	20	952	6	89	1420	16	37	10	43	17	14	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	10	11	11	10	11	11	16	16	16
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	150		0	0		150	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	60		60	60		60	60		60	60		60
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.999			0.998			0.935			0.941	
Flt Protected		0.999			0.997			0.980			0.985	
Satd. Flow (prot)	0	3289	0	0	3284	0	0	1485	0	0	1761	0
Flt Permitted		0.892			0.784			0.869			0.858	
Satd. Flow (perm)	0	2937	0	0	2583	0	0	1317	0	0	1534	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			2			34			24	
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		304			663			170			436	
Travel Time (s)		5.9			12.9			4.6			11.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	20	952	6	89	1420	16	37	10	43	17	14	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	978	0	0	1525	0	0	90	0	0	55	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.09	1.19	1.04	0.85	0.97	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		6			2			8			4	
Permitted Phases		6			2			8			4	
Detector Phase	6	6		2	2		8	8		4	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lanes, Volumes, Timings
4: PCH & Violet Lantern

Year 2035 - With Project
AM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	23.0	23.0		23.0	23.0		27.0	27.0		27.0	27.0	
Total Split (s)	93.0	93.0	0.0	93.0	93.0	0.0	27.0	27.0	0.0	27.0	27.0	0.0
Total Split (%)	77.5%	77.5%	0.0%	77.5%	77.5%	0.0%	22.5%	22.5%	0.0%	22.5%	22.5%	0.0%
Maximum Green (s)	88.0	88.0		88.0	88.0		22.0	22.0		22.0	22.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		1.5	1.5		1.5	1.5	
Minimum Gap (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	5	5		5	5		5	5		5	5	
Act Effct Green (s)		99.3			99.3			10.7			10.7	
Actuated g/C Ratio		0.83			0.83			0.09			0.09	
v/c Ratio		0.40			0.71			0.60			0.35	
Control Delay		1.9			5.8			48.9			36.1	
Queue Delay		0.0			0.1			0.0			0.0	
Total Delay		1.9			5.9			48.9			36.1	
LOS		A			A			D			D	
Approach Delay		1.9			5.9			48.9			36.1	
Approach LOS		A			A			D			D	
90th %ile Green (s)	88.0	88.0		88.0	88.0		22.0	22.0		22.0	22.0	
90th %ile Term Code	Coord	Coord		Coord	Coord		Ped	Ped		Ped	Ped	
70th %ile Green (s)	98.3	98.3		98.3	98.3		11.7	11.7		11.7	11.7	
70th %ile Term Code	Coord	Coord		Coord	Coord		Gap	Gap		Hold	Hold	
50th %ile Green (s)	100.8	100.8		100.8	100.8		9.2	9.2		9.2	9.2	
50th %ile Term Code	Coord	Coord		Coord	Coord		Gap	Gap		Hold	Hold	
30th %ile Green (s)	103.3	103.3		103.3	103.3		6.7	6.7		6.7	6.7	
30th %ile Term Code	Coord	Coord		Coord	Coord		Gap	Gap		Hold	Hold	
10th %ile Green (s)	106.0	106.0		106.0	106.0		4.0	4.0		4.0	4.0	
10th %ile Term Code	Coord	Coord		Coord	Coord		Min	Min		Hold	Hold	
Queue Length 50th (ft)		31			26			43			23	
Queue Length 95th (ft)		37			171			88			58	
Internal Link Dist (ft)		224			583			90			356	
Turn Bay Length (ft)												
Base Capacity (vph)		2430			2137			269			301	
Starvation Cap Reductn		0			63			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.40			0.74			0.33			0.18	

Intersection Summary

Area Type: Other

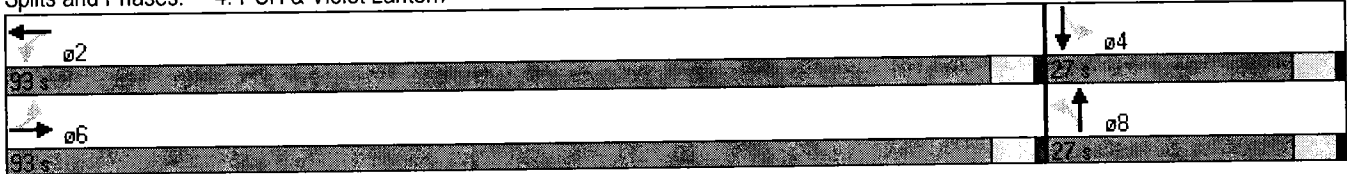
Lanes, Volumes, Timings
4: PCH & Violet Lantern

Year 2035 - With Project
AM Peak Hour - Alternative 1

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 16 (13%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 6.5
Intersection Capacity Utilization 89.7%
Analysis Period (min) 15

Intersection LOS: A
ICU Level of Service E

Splits and Phases: 4: PCH & Violet Lantern



HCM Signalized Intersection Capacity Analysis
4: PCH & Violet Lantern

Year 2035 - With Project
AM Peak Hour - Alternative 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↕			↕	
Volume (vph)	20	952	6	89	1420	16	37	10	43	17	14	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	10	11	11	10	11	11	16	16	16
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frbp, ped/bikes		1.00			1.00			1.00			1.00	
Fipb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		1.00			1.00			0.94			0.94	
Flt Protected		1.00			1.00			0.98			0.98	
Satd. Flow (prot)		3289			3286			1486			1761	
Flt Permitted		0.89			0.78			0.87			0.86	
Satd. Flow (perm)		2937			2584			1318			1534	
Peak-hour factor, PHF	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. Flow (vph)	20	952	6	89	1420	16	37	10	43	17	14	24
RTOR Reduction (vph)	0	0	0	0	0	0	0	31	0	0	22	0
Lane Group Flow (vph)	0	978	0	0	1525	0	0	59	0	0	33	0
Confl. Peds. (#/hr)												
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Parking (#/hr)								0			0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)		99.3			99.3			10.7			10.7	
Effective Green, g (s)		99.3			99.3			10.7			10.7	
Actuated g/C Ratio		0.83			0.83			0.09			0.09	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			1.5			1.5	
Lane Grp Cap (vph)		2430			2138			118			137	
v/s Ratio Prot												
v/s Ratio Perm		0.33			0.59			0.04			0.02	
v/c Ratio		0.40			0.71			0.50			0.24	
Uniform Delay, d1		2.7			4.4			52.1			50.9	
Progression Factor		0.44			0.77			1.00			1.00	
Incremental Delay, d2		0.5			1.3			1.2			0.3	
Delay (s)		1.6			4.6			53.3			51.2	
Level of Service		A			A			D			D	
Approach Delay (s)		1.6			4.6			53.3			51.2	
Approach LOS		A			A			D			D	
Intersection Summary												
HCM Average Control Delay			6.1			HCM Level of Service				A		
HCM Volume to Capacity ratio			0.69									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			89.7%			ICU Level of Service				E		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
5: PCH & Golden Lantern

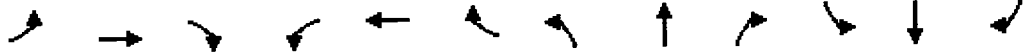
Year 2035 - With Project
AM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	78	741	125	80	1425	131	57	89	39	389	211	223
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	10	11	11	10	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	300		0	300		0	250		0	150		300
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	60		60	60		60	60		60	60		60
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	0.97	1.00	1.00
Ped Bike Factor												
Frt		0.978			0.987			0.954				0.850
Fit Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1652	3237	0	1652	3260	0	1652	3376	0	3433	1863	1583
Fit Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1652	3237	0	1652	3260	0	1652	3376	0	3433	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			10			39				150
Link Speed (mph)		35			35			30				30
Link Distance (ft)		663			279			658				428
Travel Time (s)		12.9			5.4			15.0				9.7
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Adj. Flow (vph)	78	741	125	80	1425	131	57	89	39	389	211	223
Shared Lane Traffic (%)												
Lane Group Flow (vph)	78	866	0	80	1556	0	57	128	0	389	211	223
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.09	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	50
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Turn Type	Prot			Prot			Prot			Prot		Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases												4
Detector Phase	1	6		5	2		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	1.0	4.0		1.0	4.0		1.0	4.0		1.0	4.0	4.0

Lanes, Volumes, Timings
5: PCH & Golden Lantern

Year 2035 - With Project
AM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	4.5	32.0		4.5	37.0		4.5	33.0		4.5	30.0	30.0
Total Split (s)	10.2	52.9	0.0	16.3	59.0	0.0	13.6	33.0	0.0	17.8	37.2	37.2
Total Split (%)	8.5%	44.1%	0.0%	13.6%	49.2%	0.0%	11.3%	27.5%	0.0%	14.8%	31.0%	31.0%
Maximum Green (s)	6.7	47.9		12.8	54.0		10.1	28.0		14.3	32.2	32.2
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	4.0
All-Red Time (s)	0.5	1.0		0.5	1.0		0.5	1.0		0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.0	4.0	3.5	5.0	4.0	3.5	5.0	4.0	3.5	5.0	5.0
Lead/Lag	Lag	Lag		Lead	Lead		Lag	Lag		Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	3.0		1.5	3.0	3.0
Minimum Gap (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	1.5
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Recall Mode	None	C-Max		None	C-Max		None	Min		None	Min	Min
Walk Time (s)		7.0			7.0			7.0			7.0	7.0
Flash Dont Walk (s)		20.0			25.0			21.0			16.0	16.0
Pedestrian Calls (#/hr)		5			5			5			5	5
Act Effct Green (s)	6.7	66.7		9.4	67.7		8.9	14.3		14.3	21.3	21.3
Actuated g/C Ratio	0.06	0.56		0.08	0.56		0.07	0.12		0.12	0.18	0.18
v/c Ratio	0.85	0.48		0.62	0.84		0.47	0.29		0.95	0.64	0.55
Control Delay	105.2	15.4		83.2	10.4		64.0	32.5		86.5	55.1	20.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	105.2	15.4		83.2	10.4		64.0	32.5		86.5	55.1	20.7
LOS	F	B		F	B		E	C		F	E	C
Approach Delay		22.8			14.0			42.2			60.7	
Approach LOS		C			B			D			E	
90th %ile Green (s)	6.7	47.9		12.8	54.0		16.1	28.0		14.3	26.2	26.2
90th %ile Term Code	Max	Coord		Max	Coord		Hold	Ped		Max	Gap	Gap
70th %ile Green (s)	6.7	60.2		11.6	65.1		9.6	16.9		14.3	21.6	21.6
70th %ile Term Code	Max	Coord		Gap	Coord		Gap	Hold		Max	Gap	Gap
50th %ile Green (s)	6.7	66.4		9.7	69.4		8.0	12.6		14.3	18.9	18.9
50th %ile Term Code	Max	Coord		Gap	Coord		Gap	Hold		Max	Gap	Gap
30th %ile Green (s)	6.7	72.5		7.8	73.6		6.5	8.4		14.3	16.2	16.2
30th %ile Term Code	Max	Coord		Gap	Coord		Gap	Hold		Max	Gap	Gap
10th %ile Green (s)	6.7	86.4		0.0	76.2		0.0	5.8		14.3	23.6	23.6
10th %ile Term Code	Max	Coord		Skip	Coord		Skip	Gap		Max	Hold	Hold
Queue Length 50th (ft)	62	99		62	68		43	33		156	157	51
Queue Length 95th (ft)	#151	277		m100	#820		83	55		#253	225	124
Internal Link Dist (ft)		583			199			578			348	
Turn Bay Length (ft)	300			300			250			150		300
Base Capacity (vph)	92	1807		176	1843		156	818		409	500	535
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.85	0.48		0.45	0.84		0.37	0.16		0.95	0.42	0.42

Intersection Summary

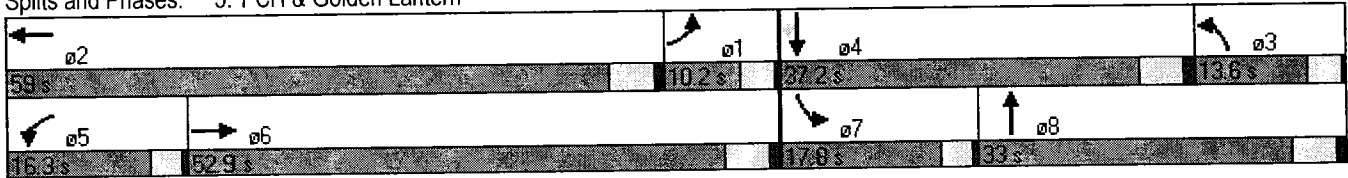
Area Type: Other

Lanes, Volumes, Timings
 5: PCH & Golden Lantern

Year 2035 - With Project
 AM Peak Hour - Alternative 1

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow, Master Intersection
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 28.4
 Intersection LOS: C
 Intersection Capacity Utilization 77.7%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: PCH & Golden Lantern



HCM Signalized Intersection Capacity Analysis
5: PCH & Golden Lantern

Year 2035 - With Project
AM Peak Hour - Alternative 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	↖
Volume (vph)	78	741	125	80	1425	131	57	89	39	389	211	223
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	10	11	11	10	12	12	12	12	12
Total Lost time (s)	3.5	5.0		3.5	5.0		3.5	5.0		3.5	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		0.97	1.00	1.00
Frbp, ped/bikes	1.00	1.00		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
Frt	1.00	0.98		1.00	0.99		1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1652	3238		1652	3261		1652	3377		3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1652	3238		1652	3261		1652	3377		3433	1863	1583
Peak-hour factor, PHF	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. Flow (vph)	78	741	125	80	1425	131	57	89	39	389	211	223
RTOR Reduction (vph)	0	9	0	0	4	0	0	34	0	0	0	123
Lane Group Flow (vph)	78	857	0	80	1552	0	57	94	0	389	211	100
Confl. Peds. (#/hr)												
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot			Prot			Prot			Prot		Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases												4
Actuated Green, G (s)	7.4	65.3		8.4	66.3		8.0	15.0		14.3	21.3	21.3
Effective Green, g (s)	7.4	65.3		8.4	66.3		8.0	15.0		14.3	21.3	21.3
Actuated g/C Ratio	0.06	0.54		0.07	0.55		0.07	0.12		0.12	0.18	0.18
Clearance Time (s)	3.5	5.0		3.5	5.0		3.5	5.0		3.5	5.0	5.0
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	3.0		1.5	3.0	3.0
Lane Grp Cap (vph)	102	1762		116	1802		110	422		409	331	281
v/s Ratio Prot	c0.05	0.26		0.05	c0.48		c0.03	0.03		c0.11	c0.11	
v/s Ratio Perm												0.06
v/c Ratio	0.76	0.49		0.69	0.86		0.52	0.22		0.95	0.64	0.35
Uniform Delay, d1	55.4	17.0		54.5	22.9		54.1	47.3		52.5	45.8	43.3
Progression Factor	0.84	0.78		1.25	0.17		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	24.4	0.9		10.8	4.8		1.7	0.3		31.8	4.0	0.8
Delay (s)	71.0	14.2		79.1	8.6		55.8	47.5		84.3	49.8	44.1
Level of Service	E	B		E	A		E	D		F	D	D
Approach Delay (s)		18.9			12.0			50.1			64.6	
Approach LOS		B			B			D			E	

Intersection Summary

HCM Average Control Delay	27.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
6: PCH & Del Prado

Year 2035 - With Project
AM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↕		↙	↕			↕	↕		↕	↘
Volume (vph)	8	1067	0	257	1656	2	2	0	377	29	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	11	12	11	12	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	200		0	0		0	0		0
Storage Lanes	1		0	1		0	0		2	0		0
Taper Length (ft)	60		60	60		60	60		60	60		60
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	0.88	1.00	1.00	1.00
Ped Bike Factor									0.850		0.996	
Frt												
Flt Protected	0.950			0.950				0.950			0.954	
Satd. Flow (prot)	1711	3406	0	1770	3406	0	0	1711	2647	0	1711	0
Flt Permitted	0.950			0.950				0.950			0.954	
Satd. Flow (perm)	1711	3406	0	1770	3406	0	0	1711	2647	0	1711	0
Right Turn on Red			Yes			Yes				Yes		Yes
Satd. Flow (RTOR)									377		1	
Link Speed (mph)		35			35			30			25	
Link Distance (ft)		308			560			146			102	
Travel Time (s)		6.0			10.9			3.3			2.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	8	1067	0	257	1656	2	2	0	377	29	0	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	1067	0	257	1658	0	0	2	377	0	30	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.04	1.00	1.04	1.07	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turn Type	Prot			Prot			Split		pm+ov		Split	
Protected Phases	1	6		5	2		8	8	5	4	4	
Permitted Phases								8				
Detector Phase	1	6		5	2		8	8	5	4	4	
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		4.0	4.0	4.0	10.0	10.0	

Lanes, Volumes, Timings
6: PCH & Del Prado

Year 2035 - With Project
AM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	7.5	30.0		7.5	24.0		9.0	9.0	7.5	27.0	27.0	
Total Split (s)	7.5	53.0	0.0	31.0	76.5	0.0	9.0	9.0	31.0	27.0	27.0	0.0
Total Split (%)	6.3%	44.2%	0.0%	25.8%	63.8%	0.0%	7.5%	7.5%	25.8%	22.5%	22.5%	0.0%
Maximum Green (s)	4.0	48.0		27.5	71.5		4.0	4.0	27.5	22.0	22.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0	3.0	4.0	4.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		1.0	1.0	0.5	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.0	4.0	3.5	5.0	4.0	5.0	5.0	3.5	5.0	5.0	4.0
Lead/Lag	Lead	Lead		Lag	Lag				Lag			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Vehicle Extension (s)	3.0	3.0		1.5	3.0		3.0	3.0	1.5	3.0	3.0	
Minimum Gap (s)	1.5	1.5		1.5	1.5		1.5	1.5	1.5	1.5	1.5	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Walk Time (s)		7.0			7.0					7.0	7.0	
Flash Dont Walk (s)		18.0			12.0					15.0	15.0	
Pedestrian Calls (#/hr)		5			5					5	5	
Act Effct Green (s)	5.5	70.8		27.5	102.3		5.3	28.6		12.4		
Actuated g/C Ratio	0.05	0.59		0.23	0.85		0.04	0.24		0.10		
v/c Ratio	0.10	0.53		0.63	0.57		0.03	0.41		0.17		
Control Delay	61.5	8.0		30.6	2.3		56.5	3.8		48.0		
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0		
Total Delay	61.5	8.0		30.6	2.3		56.5	3.8		48.0		
LOS	E	A		C	A		E	A		D		
Approach Delay		8.4			6.1		4.0			48.0		
Approach LOS		A			A		A			D		
90th %ile Green (s)	4.0	48.0		27.5	71.5		4.0	4.0	27.5	22.0	22.0	
90th %ile Term Code	Max	Coord		Max	Coord		Max	Max	Max	Ped	Ped	
70th %ile Green (s)	0.0	69.0		27.5	100.0		0.0	0.0	27.5	10.0	10.0	
70th %ile Term Code	Skip	Coord		Hold	Coord		Skip	Skip	Hold	Min	Min	
50th %ile Green (s)	0.0	69.0		27.5	100.0		0.0	0.0	27.5	10.0	10.0	
50th %ile Term Code	Skip	Coord		Hold	Coord		Skip	Skip	Hold	Min	Min	
30th %ile Green (s)	0.0	84.0		27.5	115.0		0.0	0.0	27.5	0.0	0.0	
30th %ile Term Code	Skip	Coord		Hold	Coord		Skip	Skip	Hold	Skip	Skip	
10th %ile Green (s)	0.0	84.0		27.5	115.0		0.0	0.0	27.5	0.0	0.0	
10th %ile Term Code	Skip	Coord		Hold	Coord		Skip	Skip	Hold	Skip	Skip	
Queue Length 50th (ft)	6	181		179	13		2	0			21	
Queue Length 95th (ft)	m11	m321		245	120		11	25			47	
Internal Link Dist (ft)		228			480		66				22	
Turn Bay Length (ft)	100			200								
Base Capacity (vph)	78	2009		406	2903		75	918		315		
Starvation Cap Reductn	0	0		0	0		0	0		0		
Spillback Cap Reductn	0	0		0	0		0	0		0		
Storage Cap Reductn	0	0		0	0		0	0		0		
Reduced v/c Ratio	0.10	0.53		0.63	0.57		0.03	0.41		0.10		

Intersection Summary

Area Type: Other

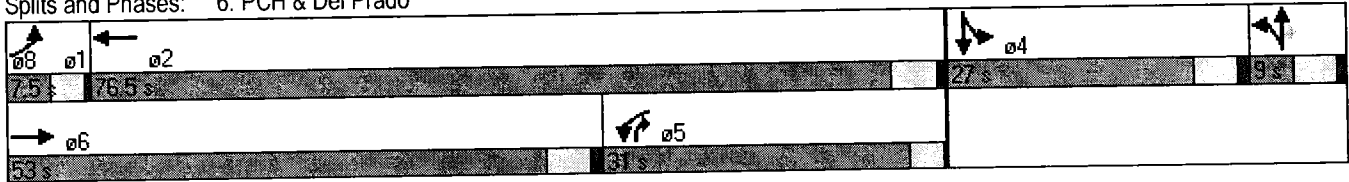
Lanes, Volumes, Timings
 6: PCH & Del Prado

Year 2035 - With Project
 AM Peak Hour - Alternative 1

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 62 (52%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.63
 Intersection Signal Delay: 7.0
 Intersection Capacity Utilization 69.2%
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Intersection LOS: A
 ICU Level of Service C

Splits and Phases: 6: PCH & Del Prado



HCM Signalized Intersection Capacity Analysis
6: PCH & Del Prado

Year 2035 - With Project
AM Peak Hour - Alternative 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕	↗		↕	↗
Volume (vph)	8	1067	0	257	1656	2	2	0	377	29	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	11	12	11	12	11	11	11
Total Lost time (s)	3.5	5.0		3.5	5.0			5.0	3.5		5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	0.88		1.00	
Frbp, ped/bikes	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	
Frt	1.00	1.00		1.00	1.00			1.00	0.85		1.00	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.95	
Satd. Flow (prot)	1711	3406		1770	3405			1711	2647		1710	
Flt Permitted	0.95	1.00		0.95	1.00			0.95	1.00		0.95	
Satd. Flow (perm)	1711	3406		1770	3405			1711	2647		1710	
Peak-hour factor, PHF	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. Flow (vph)	8	1067	0	257	1656	2	2	0	377	29	0	1
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	279	0	1	0
Lane Group Flow (vph)	8	1067	0	257	1658	0	0	2	98	0	29	0
Confl. Peds. (#/hr)												
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Parking (#/hr)									0			
Turn Type	Prot			Prot			Split		pm+ov		Split	
Protected Phases	1	6		5	2		8	8	5		4	4
Permitted Phases									8			
Actuated Green, G (s)	0.8	62.0		30.3	91.5			0.8	31.1		8.4	
Effective Green, g (s)	0.8	62.0		30.3	91.5			0.8	31.1		8.4	
Actuated g/C Ratio	0.01	0.52		0.25	0.76			0.01	0.26		0.07	
Clearance Time (s)	3.5	5.0		3.5	5.0			5.0	3.5		5.0	
Vehicle Extension (s)	3.0	3.0		1.5	3.0			3.0	1.5		3.0	
Lane Grp Cap (vph)	11	1760		447	2596			11	686		120	
v/s Ratio Prot	0.00	c0.31		0.15	c0.49			c0.00	0.04		c0.02	
v/s Ratio Perm									0.00			
v/c Ratio	0.73	0.61		0.57	0.64			0.18	0.14		0.24	
Uniform Delay, d1	59.5	20.4		39.2	6.6			59.3	34.2		52.8	
Progression Factor	1.07	0.41		0.58	0.25			1.00	1.00		1.00	
Incremental Delay, d2	105.5	1.2		0.9	1.0			7.8	0.0		1.1	
Delay (s)	168.9	9.6		23.8	2.6			67.1	34.2		53.8	
Level of Service	F	A		C	A			E	C		D	
Approach Delay (s)		10.8			5.4			34.4			53.8	
Approach LOS		B			A			C			D	

Intersection Summary

HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
7: PCH & Crystal Lantern

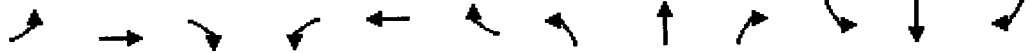
Year 2035 - With Project
AM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↕		↙	↕	↗		↕			↖	↗
Volume (vph)	21	1347	9	10	1720	72	6	1	7	122	2	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		0	100		0	0		0	0		0
Storage Lanes	1		0	1		1	0		0	0		1
Taper Length (ft)	60		60	60		60	60		60	60		60
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.999				0.850		0.932				0.850
Flt Protected	0.950			0.950				0.979			0.953	
Satd. Flow (prot)	1770	3233	0	1770	3406	1583	0	1700	0	0	1598	1583
Flt Permitted	0.950			0.950				0.906			0.720	
Satd. Flow (perm)	1770	3233	0	1770	3406	1583	0	1573	0	0	1207	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				63		7				25
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		525			900			140			300	
Travel Time (s)		10.2			17.5			3.8			8.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0									0	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	21	1347	9	10	1720	72	6	1	7	122	2	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	1356	0	10	1720	72	0	14	0	0	124	25
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.07	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.14	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	50	50		50	50	50	50	50		50	50	50
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Turn Type	Prot			Prot		Perm	Perm			Perm		Perm
Protected Phases	1	6		5	2			8			4	
Permitted Phases						2	8			4		4
Detector Phase	1	6		5	2	2	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	1.0	4.0		1.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0

Lanes, Volumes, Timings
7: PCH & Crystal Lantern

Year 2035 - With Project
AM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	4.5	19.0		4.5	21.0	21.0	9.0	9.0		37.0	37.0	37.0
Total Split (s)	8.0	76.2	0.0	6.8	75.0	75.0	37.0	37.0	0.0	37.0	37.0	37.0
Total Split (%)	6.7%	63.5%	0.0%	5.7%	62.5%	62.5%	30.8%	30.8%	0.0%	30.8%	30.8%	30.8%
Maximum Green (s)	4.5	71.3		3.3	70.1	70.1	33.0	33.0		33.0	33.0	33.0
Yellow Time (s)	3.0	3.9		3.0	3.9	3.9	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	0.5	1.0		0.5	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	4.9	4.0	3.5	4.9	4.9	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lead		Lag	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	1.5	3.0		1.5	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)	1.5	1.5		1.5	1.5	1.5	1.5	1.5		1.5	1.5	1.5
Time Before Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	None
Walk Time (s)		7.0			7.0	7.0				7.0	7.0	7.0
Flash Dont Walk (s)		7.0			9.0	9.0				25.0	25.0	25.0
Pedestrian Calls (#/hr)		5			5	5				5	5	5
Act Effct Green (s)	5.1	90.8		3.3	88.4	88.4		19.0			19.0	19.0
Actuated g/C Ratio	0.04	0.76		0.03	0.74	0.74		0.16			0.16	0.16
v/c Ratio	0.28	0.55		0.20	0.69	0.06		0.05			0.65	0.09
Control Delay	70.1	5.1		49.4	5.4	0.1		26.5			61.4	13.5
Queue Delay	0.0	0.0		0.0	0.2	0.0		0.0			0.0	0.0
Total Delay	70.1	5.1		49.4	5.6	0.1		26.5			61.4	13.5
LOS	E	A		D	A	A		C			E	B
Approach Delay		6.1			5.6			26.5			53.3	
Approach LOS		A			A			C			D	
90th %ile Green (s)	5.5	72.3		3.3	70.1	70.1	32.0	32.0		32.0	32.0	32.0
90th %ile Term Code	Max	Coord		Max	Coord	Coord	Hold	Hold		Ped	Ped	Ped
70th %ile Green (s)	6.2	90.3		0.0	80.6	80.6	20.8	20.8		20.8	20.8	20.8
70th %ile Term Code	Gap	Coord		Skip	Coord	Coord	Hold	Hold		Gap	Gap	Gap
50th %ile Green (s)	0.0	93.4		0.0	93.4	93.4	17.7	17.7		17.7	17.7	17.7
50th %ile Term Code	Skip	Coord		Skip	Coord	Coord	Hold	Hold		Gap	Gap	Gap
30th %ile Green (s)	0.0	96.6		0.0	96.6	96.6	14.5	14.5		14.5	14.5	14.5
30th %ile Term Code	Skip	Coord		Skip	Coord	Coord	Hold	Hold		Gap	Gap	Gap
10th %ile Green (s)	0.0	101.2		0.0	101.2	101.2	9.9	9.9		9.9	9.9	9.9
10th %ile Term Code	Skip	Coord		Skip	Coord	Coord	Hold	Hold		Gap	Gap	Gap
Queue Length 50th (ft)	17	35		8	114	0		5			92	0
Queue Length 95th (ft)	m35	184		m13	91	m0		21			138	22
Internal Link Dist (ft)		445			820			60			220	
Turn Bay Length (ft)	120			100								
Base Capacity (vph)	77	2446		49	2509	1183		438			332	453
Starvation Cap Reductn	0	0		0	208	0		0			0	0
Spillback Cap Reductn	0	0		0	0	0		0			0	0
Storage Cap Reductn	0	0		0	0	0		0			0	0
Reduced v/c Ratio	0.27	0.55		0.20	0.75	0.06		0.03			0.37	0.06

Intersection Summary

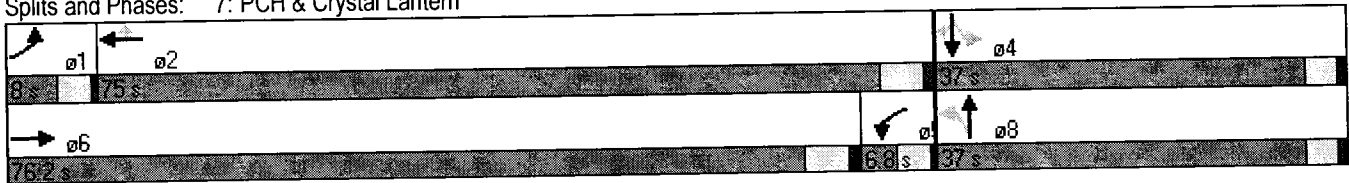
Area Type: Other

Lanes, Volumes, Timings
 7: PCH & Crystal Lantern

Year 2035 - With Project
 AM Peak Hour - Alternative 1

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 73 (61%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.69
 Intersection Signal Delay: 8.0
 Intersection LOS: A
 Intersection Capacity Utilization 68.5%
 ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: PCH & Crystal Lantern



HCM Signalized Intersection Capacity Analysis
 7: PCH & Crystal Lantern

Year 2035 - With Project
 AM Peak Hour - Alternative 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↕		↘	↕	↗		↕			↕	↗
Volume (vph)	21	1347	9	10	1720	72	6	1	7	122	2	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	3.5	4.9		3.5	4.9	4.9		4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	1.00
Frbp, ped/bikes	1.00	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
Frt	1.00	1.00		1.00	1.00	0.85		0.93			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98			0.95	1.00
Satd. Flow (prot)	1770	3233		1770	3406	1583		1701			1598	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.91			0.72	1.00
Satd. Flow (perm)	1770	3233		1770	3406	1583		1574			1207	1583
Peak-hour factor, PHF	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. Flow (vph)	21	1347	9	10	1720	72	6	1	7	122	2	25
RTOR Reduction (vph)	0	0	0	0	0	18	0	6	0	0	0	21
Lane Group Flow (vph)	21	1356	0	10	1720	54	0	8	0	0	124	4
Confl. Peds. (#/hr)												
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Parking (#/hr)		0									0	
Turn Type	Prot			Prot		Perm	Perm			Perm		Perm
Protected Phases	1	6		5	2			8			4	
Permitted Phases						2	8			4		4
Actuated Green, G (s)	2.3	87.9		0.7	86.3	86.3		19.0			19.0	19.0
Effective Green, g (s)	2.3	87.9		0.7	86.3	86.3		19.0			19.0	19.0
Actuated g/C Ratio	0.02	0.73		0.01	0.72	0.72		0.16			0.16	0.16
Clearance Time (s)	3.5	4.9		3.5	4.9	4.9		4.0			4.0	4.0
Vehicle Extension (s)	1.5	3.0		1.5	3.0	3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	34	2368		10	2449	1138		249			191	251
v/s Ratio Prot	0.01	c0.42		c0.01	c0.51						c0.10	0.00
v/s Ratio Perm						0.03		0.01				0.00
v/c Ratio	0.62	0.57		1.00	0.70	0.05		0.03			0.65	0.02
Uniform Delay, d1	58.4	7.4		59.6	9.6	4.9		42.7			47.4	42.6
Progression Factor	1.12	0.53		0.75	0.37	0.00		1.00			1.00	1.00
Incremental Delay, d2	18.9	0.9		238.3	1.2	0.1		0.1			7.4	0.0
Delay (s)	84.1	4.9		282.8	4.8	0.1		42.8			54.8	42.6
Level of Service	F	A		F	A	A		D			D	D
Approach Delay (s)		6.1			6.1			42.8			52.7	
Approach LOS		A			A			D			D	

Intersection Summary

HCM Average Control Delay	8.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.3
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
9: Del Prado & Ruby Lantern

Year 2035 - With Project
AM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	3	273	2	11	0	110	0	23	6	25	9	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	60		60	60		60	60		60	60		60
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.999			0.877			0.972			0.986	
Flt Protected		0.999			0.995						0.968	
Satd. Flow (prot)	0	1557	0	0	1414	0	0	1575	0	0	1719	0
Flt Permitted		0.999			0.995						0.968	
Satd. Flow (perm)	0	1557	0	0	1414	0	0	1575	0	0	1719	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		155			735			173			168	
Travel Time (s)		3.0			14.3			4.7			4.6	
Confl. Peds. (#/hr)	9		9	9		9	6		6	6		6
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0			0			0			0	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	3	273	2	11	0	110	0	23	6	25	9	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	278	0	0	121	0	0	29	0	0	38	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.19	1.04	1.04	1.19	1.04	1.04	1.19	1.04	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 32.0% ICU Level of Service A
 Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis
 9: Del Prado & Ruby Lantern

Year 2035 - With Project
 AM Peak Hour - Alternative 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	3	273	2	11	0	110	0	23	6	25	9	4
Peak Hour 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
Hourly flow rate (vph)	3	273	2	11	0	110	0	23	6	25	9	4

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	278	121	29	38
Volume Left (vph)	3	11	0	25
Volume Right (vph)	2	110	6	4
Hadj (s)	0.10	-0.49	-0.09	0.10
Departure Headway (s)	4.3	3.9	4.7	4.9
Degree Utilization, x	0.33	0.13	0.04	0.05
Capacity (veh/h)	824	901	696	669
Control Delay (s)	9.4	7.4	7.9	8.2
Approach Delay (s)	9.4	7.4	7.9	8.2
Approach LOS	A	A	A	A

Intersection Summary			
Delay		8.7	
HCM Level of Service		A	
Intersection Capacity Utilization	32.0%		ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings
10: Del Prado & Amber Lantern

Year 2035 - With Project
AM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	38	277	7	31	106	68	4	40	11	85	21	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	60		60	60		60	60		60	60		60
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.997			0.955			0.973			0.986	
Flt Protected		0.994			0.992			0.996			0.965	
Satd. Flow (prot)	0	1554	0	0	1505	0	0	1571	0	0	1542	0
Flt Permitted		0.994			0.992			0.996			0.965	
Satd. Flow (perm)	0	1554	0	0	1505	0	0	1571	0	0	1542	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		735			607			197			209	
Travel Time (s)		14.3			11.8			5.4			5.7	
Confl. Peds. (#/hr)	9		9	9		9	6		6	6		6
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0			0			0			0	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	38	277	7	31	106	68	4	40	11	85	21	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	322	0	0	205	0	0	55	0	0	118	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.19	1.04	1.04	1.19	1.04	1.04	1.19	1.04	1.04	1.19	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 41.4% ICU Level of Service A
 Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis
 10: Del Prado & Amber Lantern

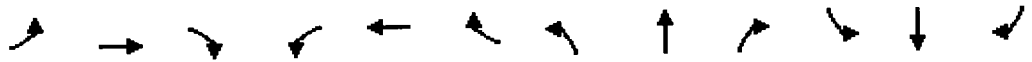
Year 2035 - With Project
 AM Peak Hour - Alternative 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	38	277	7	31	106	68	4	40	11	85	21	12
Peak Hour 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
Hourly flow rate (vph)	38	277	7	31	106	68	4	40	11	85	21	12
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	322	205	55	118								
Volume Left (vph)	38	31	4	85								
Volume Right (vph)	7	68	11	12								
Hadj (s)	0.10	-0.10	-0.07	0.12								
Departure Headway (s)	4.7	4.7	5.3	5.4								
Degree Utilization, x	0.42	0.27	0.08	0.18								
Capacity (veh/h)	725	727	592	605								
Control Delay (s)	11.2	9.4	8.8	9.5								
Approach Delay (s)	11.2	9.4	8.8	9.5								
Approach LOS	B	A	A	A								
Intersection Summary												
Delay			10.2									
HCM Level of Service			B									
Intersection Capacity Utilization			41.4%	ICU Level of Service	A							
Analysis Period (min)			15									

Lanes, Volumes, Timings
 11: Del Prado & Violet Lantern

Year 2035 - With Project
 AM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	10	301	2	24	182	22	7	26	13	51	14	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	60		60	60		60	60		60	60		60
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.999			0.987			0.962			0.984	
Flt Protected		0.998			0.995			0.992			0.967	
Satd. Flow (prot)	0	1557	0	0	1543	0	0	1547	0	0	1542	0
Flt Permitted		0.998			0.995			0.992			0.967	
Satd. Flow (perm)	0	1557	0	0	1543	0	0	1547	0	0	1542	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		607			647			193			304	
Travel Time (s)		11.8			12.6			5.3			8.3	
Confl. Peds. (#/hr)	9		9	9		9	6		6	6		6
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0			0			0			0	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	10	301	2	24	182	22	7	26	13	51	14	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	313	0	0	228	0	0	46	0	0	74	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.19	1.04	1.04	1.19	1.04	1.04	1.19	1.04	1.04	1.19	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 39.9% ICU Level of Service A
 Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis
 11: Del Prado & Violet Lantern

Year 2035 - With Project
 AM Peak Hour - Alternative 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	301	2	24	182	22	7	26	13	51	14	9
Peak Hour 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
Hourly flow rate (vph)	10	301	2	24	182	22	7	26	13	51	14	9
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	313	228	46	74								
Volume Left (vph)	10	24	7	51								
Volume Right (vph)	2	22	13	9								
Hadj (s)	0.10	0.05	-0.11	0.10								
Departure Headway (s)	4.6	4.6	5.2	5.3								
Degree Utilization, x	0.40	0.29	0.07	0.11								
Capacity (veh/h)	760	741	616	603								
Control Delay (s)	10.6	9.6	8.6	9.0								
Approach Delay (s)	10.6	9.6	8.6	9.0								
Approach LOS	B	A	A	A								
Intersection Summary												
Delay			9.9									
HCM Level of Service			A									
Intersection Capacity Utilization			39.9%	ICU Level of Service	A							
Analysis Period (min)			15									

Lanes, Volumes, Timings
12: Del Prado & Golden Lantern

Year 2035 - With Project
AM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↗	↖	↕		↖	↕	
Volume (vph)	26	261	46	27	179	48	65	245	12	19	339	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	10	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	140		0	200		0	180		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	60		60	60		60	60		60	60		60
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.978				0.850		0.993			0.973	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1652	1585	0	1652	1621	1531	1711	3397	0	1711	3329	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1652	1585	0	1652	1621	1531	1711	3397	0	1711	3329	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9				48		4			21	
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		223			434			937			658	
Travel Time (s)		4.3			9.9			21.3			15.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0			0						0	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	26	261	46	27	179	48	65	245	12	19	339	75
Shared Lane Traffic (%)												
Lane Group Flow (vph)	26	307	0	27	179	48	65	257	0	19	414	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.19	1.04	1.09	1.19	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						2						
Detector Phase	1	6		5	2	2	3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	

Lanes, Volumes, Timings
12: Del Prado & Golden Lantern

Year 2035 - With Project
AM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	7.5	42.0		7.5	34.0	34.0	7.5	35.0		7.5	30.0	
Total Split (s)	12.0	55.0	0.0	12.0	55.0	55.0	17.0	42.0	0.0	11.0	36.0	0.0
Total Split (%)	10.0%	45.8%	0.0%	10.0%	45.8%	45.8%	14.2%	35.0%	0.0%	9.2%	30.0%	0.0%
Maximum Green (s)	8.5	50.0		8.5	50.0	50.0	13.5	37.0		7.5	31.0	
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0		3.0	4.0	
All-Red Time (s)	0.5	1.0		0.5	1.0	1.0	0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.0	4.0	3.5	5.0	5.0	3.5	5.0	4.0	3.5	5.0	4.0
Lead/Lag	Lead	Lead		Lag	Lag	Lag	Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	3.0		1.5	3.0	3.0	1.5	3.0		1.5	3.0	
Minimum Gap (s)	1.5	1.5		1.5	1.5	1.5	1.5	1.5		1.5	1.5	
Time Before Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None	None	None	Min		None	Min	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		30.0			22.0	22.0		23.0			18.0	
Pedestrian Calls (#/hr)		5			5	5		5			5	
Act Effct Green (s)	6.0	19.3		6.1	19.3	19.3	7.4	19.4		5.7	14.9	
Actuated g/C Ratio	0.11	0.35		0.11	0.35	0.35	0.13	0.35		0.10	0.27	
v/c Ratio	0.14	0.55		0.15	0.32	0.08	0.28	0.21		0.11	0.45	
Control Delay	35.9	21.2		35.9	18.3	6.6	33.7	15.6		36.3	21.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	35.9	21.2		35.9	18.3	6.6	33.7	15.6		36.3	21.3	
LOS	D	C		D	B	A	C	B		D	C	
Approach Delay		22.3			17.9			19.3			21.9	
Approach LOS		C			B			B			C	
90th %ile Green (s)	7.6	37.0		7.7	37.1	37.1	10.9	30.0		6.8	25.9	
90th %ile Term Code	Gap	Ped		Gap	Hold	Hold	Gap	Ped		Gap	Hold	
70th %ile Green (s)	5.9	21.4		5.9	21.4	21.4	7.9	26.7		0.0	15.3	
70th %ile Term Code	Gap	Gap		Gap	Hold	Hold	Gap	Hold		Skip	Gap	
50th %ile Green (s)	0.0	17.4		0.0	17.4	17.4	6.5	23.0		0.0	13.0	
50th %ile Term Code	Skip	Gap		Skip	Hold	Hold	Gap	Hold		Skip	Gap	
30th %ile Green (s)	0.0	12.6		0.0	12.6	12.6	0.0	10.1		0.0	10.1	
30th %ile Term Code	Skip	Gap		Skip	Hold	Hold	Skip	Hold		Skip	Gap	
10th %ile Green (s)	0.0	8.6		0.0	8.6	8.6	0.0	7.7		0.0	7.7	
10th %ile Term Code	Skip	Gap		Skip	Hold	Hold	Skip	Hold		Skip	Gap	
Queue Length 50th (ft)	7	69		8	38	0	18	21		5	51	
Queue Length 95th (ft)	42	225		44	131	23	80	94		34	155	
Internal Link Dist (ft)		143			354			857			578	
Turn Bay Length (ft)				140			200			180		
Base Capacity (vph)	319	1345		319	1375	1306	524	2486		291	2229	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.08	0.23		0.08	0.13	0.04	0.12	0.10		0.07	0.19	

Intersection Summary

Area Type: Other

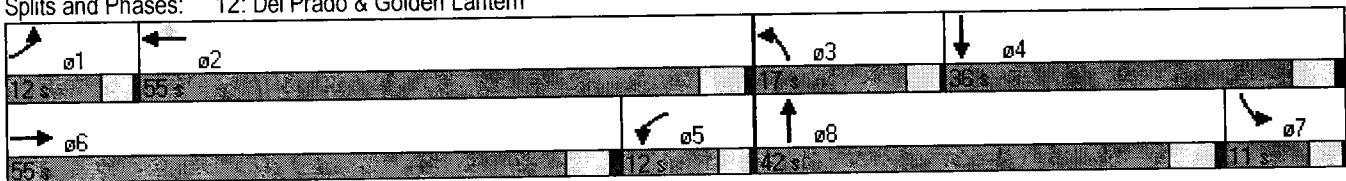
Lanes, Volumes, Timings
 12: Del Prado & Golden Lantern

Year 2035 - With Project
 AM Peak Hour - Alternative 1

Cycle Length: 120
 Actuated Cycle Length: 55.1
 Natural Cycle: 95
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.55
 Intersection Signal Delay: 20.6
 Intersection Capacity Utilization 49.5%
 Analysis Period (min) 15
 90th %ile Actuated Cycle: 98.5
 70th %ile Actuated Cycle: 67.5
 50th %ile Actuated Cycle: 50.4
 30th %ile Actuated Cycle: 32.7
 10th %ile Actuated Cycle: 26.3

Intersection LOS: C
 ICU Level of Service A

Splits and Phases: 12: Del Prado & Golden Lantern



HCM Signalized Intersection Capacity Analysis
 12: Del Prado & Golden Lantern

Year 2035 - With Project
 AM Peak Hour - Alternative 1

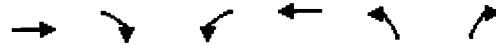


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↗	↖	↕		↖	↗	↖
Volume (vph)	26	261	46	27	179	48	65	245	12	19	339	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	10	11	11	11	11	11	11	11	11
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	3.5	5.0		3.5	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1652	1584		1652	1621	1531	1711	3397		1711	3328	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1652	1584		1652	1621	1531	1711	3397		1711	3328	
Peak-hour factor, PHF	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. Flow (vph)	26	261	46	27	179	48	65	245	12	19	339	75
RTOR Reduction (vph)	0	6	0	0	0	32	0	3	0	0	15	0
Lane Group Flow (vph)	26	301	0	27	179	16	65	254	0	19	399	0
Parking (#/hr)		0			0							
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						2						
Actuated Green, G (s)	1.8	19.3		1.8	19.3	19.3	3.9	19.4		0.8	16.3	
Effective Green, g (s)	1.8	19.3		1.8	19.3	19.3	3.9	19.4		0.8	16.3	
Actuated g/C Ratio	0.03	0.33		0.03	0.33	0.33	0.07	0.33		0.01	0.28	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	3.5	5.0		3.5	5.0	
Vehicle Extension (s)	1.5	3.0		1.5	3.0	3.0	1.5	3.0		1.5	3.0	
Lane Grp Cap (vph)	51	524		51	537	507	114	1130		23	930	
v/s Ratio Prot	0.02	c0.19		c0.02	0.11		c0.04	0.07		c0.01	c0.12	
v/s Ratio Perm						0.01						
v/c Ratio	0.51	0.57		0.53	0.33	0.03	0.57	0.23		0.83	0.43	
Uniform Delay, d1	27.8	16.1		27.8	14.7	13.2	26.4	14.0		28.7	17.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.9	1.5		4.5	0.4	0.0	4.2	0.1		106.5	0.3	
Delay (s)	30.7	17.6		32.3	15.0	13.2	30.6	14.1		135.1	17.5	
Level of Service	C	B		C	B	B	C	B		F	B	
Approach Delay (s)		18.7			16.5			17.5			22.7	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM Average Control Delay	19.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	58.3	Sum of lost time (s)	20.5
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
13: PCH &

Year 2035 - With Project
AM Peak Hour - Alternative 1



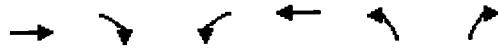
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Volume (vph)	828	0	0	1494	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		0	1
Taper Length (ft)		60	60		60	60
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Ped Bike Factor						0.865
Frt						
Flt Protected						
Satd. Flow (prot)	3421	0	0	3421	0	1558
Flt Permitted						
Satd. Flow (perm)	3421	0	0	3421	0	1558
Link Speed (mph)	35			35	35	
Link Distance (ft)	358			234	171	
Travel Time (s)	7.0			4.6	3.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	828	0	0	1494	0	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	828	0	0	1494	0	6
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 44.6% ICU Level of Service A
 Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis
 13: PCH &

Year 2035 - With Project
 AM Peak Hour - Alternative 1



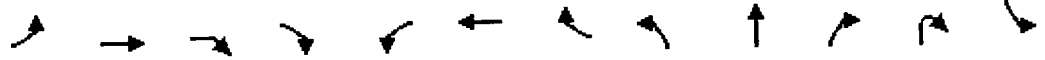
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Volume (veh/h)	828	0	0	1494	0	6
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	828	0	0	1494	0	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	358			234		
pX, platoon unblocked			0.91		0.88	0.91
vC, conflicting volume			828		1575	414
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			621		928	167
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	99
cM capacity (veh/h)			873		234	774

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	414	414	747	747	6
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	6
cSH	1700	1700	1700	1700	774
Volume to Capacity	0.24	0.24	0.44	0.44	0.01
Queue Length 95th (ft)	0	0	0	0	1
Control Delay (s)	0.0	0.0	0.0	0.0	9.7
Lane LOS					A
Approach Delay (s)	0.0		0.0		9.7
Approach LOS					A

Intersection Summary					
Average Delay			0.0		
Intersection Capacity Utilization			44.6%	ICU Level of Service	A
Analysis Period (min)			15		

Lanes, Volumes, Timings
1: PCH & Blue Lantern

Year 2035 - With Project
PM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2	SBL2
Lane Configurations												
Volume (vph)	26	1157	340	16	95	1401	65	88	33	58	17	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	11	10	11	11	11	11	11	11	10
Grade (%)		0%							0%			
Storage Length (ft)	150		0		150		0	0		60		
Storage Lanes	1		1		1		0	1		1		
Taper Length (ft)	60		60		60		60	60		60		
Lane Util. Factor	1.00	0.95	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frnt			0.850			0.993				0.850		
Flt Protected	0.950				0.950			0.950				
Satd. Flow (prot)	1652	3292	1531	0	1652	3275	0	1711	1801	1531	0	0
Flt Permitted	0.950				0.950			0.750				
Satd. Flow (perm)	1652	3292	1531	0	1652	3275	0	1350	1801	1531	0	0
Right Turn on Red				No			Yes				Yes	
Satd. Flow (RTOR)						7				12		
Link Speed (mph)		50				35			25			
Link Distance (ft)		327				358			195			
Travel Time (s)		4.5				7.0			5.3			
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	2%	6%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%				0%			0%			
Adj. Flow (vph)	26	1157	340	16	95	1401	65	88	33	58	17	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	26	1157	356	0	95	1466	0	88	33	75	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Left	Right	Left	Left	Right	Right	Left
Median Width(ft)		10				10			11			
Link Offset(ft)		0				0			0			
Crosswalk Width(ft)		16				16			16			
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.04	1.09	1.04	1.04	1.04	1.04	1.04	1.04	1.09
Turning Speed (mph)	15		35	9	15		9	15		9	9	15
Number of Detectors	1	1	1		1	1		1	1	1		1
Detector Template			Right									
Leading Detector (ft)	50	50	20		50	50		50	50	50		50
Trailing Detector (ft)	0	0	0		0	0		0	0	0		0
Turn Type	Prot		Perm		Prot			Perm		Perm		Perm
Protected Phases	1	6			5	2			8			4
Permitted Phases			6						8	8	8	4
Detector Phase	1	6	6		5	2		8	8	8		4
Switch Phase												
Minimum Initial (s)	1.0	4.0	4.0		1.0	4.0		4.0	4.0	4.0		4.0

Lanes, Volumes, Timings
1: PCH & Blue Lantern

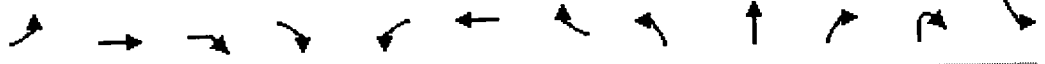
Year 2035 - With Project
PM Peak Hour - Alternative 1



Lane Group	SBL	SBT	SBR
Lane Configurations	↔	↑	↗
Volume (vph)	10	12	21
Ideal Flow (vphpl)	1900	1900	1900
Lane Width (ft)	11	11	13
Grade (%)		0%	
Storage Length (ft)	0		0
Storage Lanes	1		1
Taper Length (ft)	60		60
Lane Util. Factor	1.00	1.00	1.00
Ped Bike Factor			
Frt			0.850
Flt Protected	0.950		
Satd. Flow (prot)	1711	1801	1636
Flt Permitted	0.736		
Satd. Flow (perm)	1325	1801	1636
Right Turn on Red			Yes
Satd. Flow (RTOR)			21
Link Speed (mph)		25	
Link Distance (ft)		232	
Travel Time (s)		6.3	
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor	1.00	1.00	1.00
Growth Factor	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%
Bus Blockages (#/hr)	0	0	0
Parking (#/hr)			
Mid-Block Traffic (%)		0%	
Adj. Flow (vph)	10	12	21
Shared Lane Traffic (%)			
Lane Group Flow (vph)	45	12	21
Enter Blocked Intersection	No	No	No
Lane Alignment	Left	Left	Right
Median Width(ft)		11	
Link Offset(ft)		0	
Crosswalk Width(ft)		16	
Two way Left Turn Lane			
Headway Factor	1.04	1.04	0.96
Turning Speed (mph)	15		9
Number of Detectors	1	1	1
Detector Template	Left		
Leading Detector (ft)	20	50	50
Trailing Detector (ft)	0	0	0
Turn Type	Perm		Perm
Protected Phases		4	
Permitted Phases	4		4
Detector Phase	4	4	4
Switch Phase			
Minimum Initial (s)	4.0	4.0	4.0

Lanes, Volumes, Timings
1: PCH & Blue Lantern

Year 2035 - With Project
PM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2	SBL2
Minimum Split (s)	4.5	26.0	26.0		4.5	24.0		25.0	25.0	25.0	0.0	34.0
Total Split (s)	10.0	68.0	68.0	0.0	18.0	76.0	0.0	34.0	34.0	34.0	0.0	34.0
Total Split (%)	8.3%	56.7%	56.7%	0.0%	15.0%	63.3%	0.0%	28.3%	28.3%	28.3%	0.0%	28.3%
Maximum Green (s)	6.5	63.0	63.0		14.5	71.0		29.0	29.0	29.0		29.0
Yellow Time (s)	3.0	4.0	4.0		3.0	4.0		4.0	4.0	4.0		4.0
All-Red Time (s)	0.5	1.0	1.0		0.5	1.0		1.0	1.0	1.0		1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.0	5.0	4.0	3.5	5.0	4.0	5.0	5.0	5.0	4.0	5.0
Lead/Lag	Lead	Lead	Lead		Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes						
Vehicle Extension (s)	1.5	3.0	3.0		1.5	3.0		1.5	1.5	1.5		1.5
Minimum Gap (s)	1.5	1.5	1.5		1.5	1.5		1.5	1.5	1.5		1.5
Time Before Reduce (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0
Time To Reduce (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0
Recall Mode	None	C-Max	C-Max		None	C-Max		None	None	None		None
Walk Time (s)		7.0	7.0			7.0		7.0	7.0	7.0		7.0
Flash Dont Walk (s)		14.0	14.0			12.0		13.0	13.0	13.0		22.0
Pedestrian Calls (#/hr)		5	5			5		5	5	5		5
Act Effct Green (s)	5.6	78.0	78.0		14.5	90.0		14.0	14.0	14.0		14.0
Actuated g/C Ratio	0.05	0.65	0.65		0.12	0.75		0.12	0.12	0.12		0.12
v/c Ratio	0.34	0.54	0.36		0.48	0.60		0.56	0.16	0.39		0.39
Control Delay	66.8	13.9	12.4		47.8	6.3		61.0	45.1	44.2		44.2
Queue Delay	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0
Total Delay	66.8	13.9	12.4		47.8	6.3		61.0	45.1	44.2		44.2
LOS	E	B	B		D	A		E	D	D		D
Approach Delay		14.5				8.8			51.9			
Approach LOS		B				A			D			
90th %ile Green (s)	6.5	63.0	63.0		14.5	71.0		29.0	29.0	29.0		29.0
90th %ile Term Code	Max	Coord	Coord		Max	Coord		Hold	Hold	Hold		Ped
70th %ile Green (s)	6.9	77.8	77.8		14.5	85.4		14.2	14.2	14.2		14.2
70th %ile Term Code	Gap	Coord	Coord		Hold	Coord		Gap	Gap	Gap		Hold
50th %ile Green (s)	5.8	80.2	80.2		14.5	88.9		11.8	11.8	11.8		11.8
50th %ile Term Code	Gap	Coord	Coord		Hold	Coord		Gap	Gap	Gap		Hold
30th %ile Green (s)	0.0	82.7	82.7		14.5	100.7		9.3	9.3	9.3		9.3
30th %ile Term Code	Skip	Coord	Coord		Hold	Coord		Gap	Gap	Gap		Hold
10th %ile Green (s)	0.0	86.1	86.1		14.5	104.1		5.9	5.9	5.9		5.9
10th %ile Term Code	Skip	Coord	Coord		Hold	Coord		Gap	Gap	Gap		Hold
Queue Length 50th (ft)	20	220	109		70	127		67	24	47		60
Queue Length 95th (ft)	51	410	243		119	154		104	47	81		115
Internal Link Dist (ft)		247				278			115			60
Turn Bay Length (ft)	150				150							60
Base Capacity (vph)	90	2139	995		200	2459		326	435	379		379
Starvation Cap Reductn	0	0	0		0	68		0	0	0		0
Spillback Cap Reductn	0	0	0		0	0		0	0	0		0
Storage Cap Reductn	0	0	0		0	0		0	0	0		0
Reduced v/c Ratio	0.29	0.54	0.36		0.48	0.61		0.27	0.08	0.20		0.20

Intersection Summary

Area Type: Other

Lanes, Volumes, Timings
1: PCH & Blue Lantern

Year 2035 - With Project
PM Peak Hour - Alternative 1



Lane Group	SBL	SBT	SBR
Minimum Split (s)	34.0	34.0	34.0
Total Split (s)	34.0	34.0	34.0
Total Split (%)	28.3%	28.3%	28.3%
Maximum Green (s)	29.0	29.0	29.0
Yellow Time (s)	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0
Lead/Lag			
Lead-Lag Optimize?			
Vehicle Extension (s)	1.5	1.5	1.5
Minimum Gap (s)	1.5	1.5	1.5
Time Before Reduce (s)	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0
Recall Mode	None	None	None
Walk Time (s)	7.0	7.0	7.0
Flash Dont Walk (s)	22.0	22.0	22.0
Pedestrian Calls (#/hr)	5	5	5
Act Effct Green (s)	14.0	14.0	14.0
Actuated g/C Ratio	0.12	0.12	0.12
v/c Ratio	0.29	0.06	0.10
Control Delay	49.5	42.2	15.9
Queue Delay	0.0	0.0	0.0
Total Delay	49.5	42.2	15.9
LOS	D	D	B
Approach Delay		39.3	
Approach LOS		D	
90th %ile Green (s)	29.0	29.0	29.0
90th %ile Term Code	Ped	Ped	Ped
70th %ile Green (s)	14.2	14.2	14.2
70th %ile Term Code	Hold	Hold	Hold
50th %ile Green (s)	11.8	11.8	11.8
50th %ile Term Code	Hold	Hold	Hold
30th %ile Green (s)	9.3	9.3	9.3
30th %ile Term Code	Hold	Hold	Hold
10th %ile Green (s)	5.9	5.9	5.9
10th %ile Term Code	Hold	Hold	Hold
Queue Length 50th (ft)	33	9	0
Queue Length 95th (ft)	60	24	21
Internal Link Dist (ft)		152	
Turn Bay Length (ft)			
Base Capacity (vph)	320	435	411
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.14	0.03	0.05

Intersection Summary

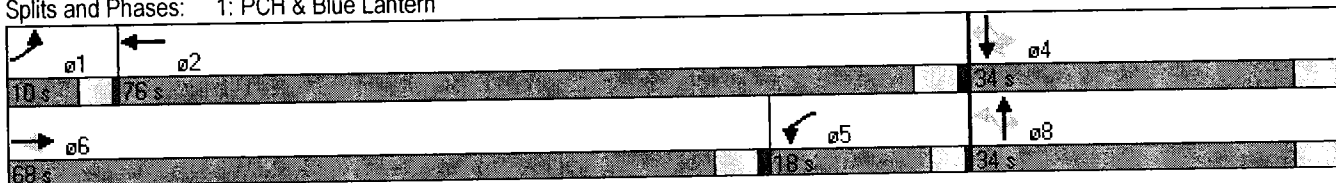
Lanes, Volumes, Timings
 1: PCH & Blue Lantern

Year 2035 - With Project
 PM Peak Hour - Alternative 1

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 114 (95%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.60
 Intersection Signal Delay: 14.6
 Intersection Capacity Utilization 67.3%
 Analysis Period (min) 15

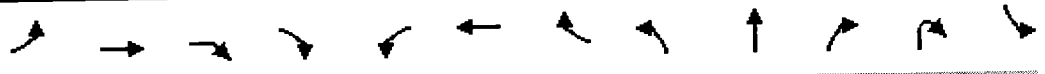
Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 1: PCH & Blue Lantern



HCM Signalized Intersection Capacity Analysis
1: PCH & Blue Lantern

Year 2035 - With Project
PM Peak Hour - Alternative 1



Movement	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2	SBL2
Lane Configurations	↙	↕	↘		↙	↕		↙	↕	↘		
Volume (vph)	26	1157	340	16	95	1401	65	88	33	58	17	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	11	10	11	11	11	11	11	11	10
Total Lost time (s)	3.5	5.0	5.0		3.5	5.0		5.0	5.0	5.0		
Lane Util. Factor	1.00	0.95	1.00		1.00	0.95		1.00	1.00	1.00		
Frbp, ped/bikes	1.00	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		
Frt	1.00	1.00	0.85		1.00	0.99		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)	1652	3292	1531		1652	3276		1711	1801	1531		
Flt Permitted	0.95	1.00	1.00		0.95	1.00		0.75	1.00	1.00		
Satd. Flow (perm)	1652	3292	1531		1652	3276		1350	1801	1531		
Peak-hour factor, PHF	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. Flow (vph)	26	1157	340	16	95	1401	65	88	33	58	17	35
RTOR Reduction (vph)	0	0	0	0	0	2	0	0	0	11	0	0
Lane Group Flow (vph)	26	1157	356	0	95	1464	0	88	33	64	0	0
Confl. Peds. (#/hr)												
Heavy Vehicles (%)	2%	6%	2%	2%	2%	6%	2%	2%	2%	2%	2%	2%
Turn Type	Prot		Perm		Prot		Perm		Perm		Perm	Perm
Protected Phases	1	6			5	2			8		8	
Permitted Phases			6					8		8		4
Actuated Green, G (s)	3.8	76.7	76.7		15.8	88.7		14.0	14.0	14.0		
Effective Green, g (s)	3.8	76.7	76.7		15.8	88.7		14.0	14.0	14.0		
Actuated g/C Ratio	0.03	0.64	0.64		0.13	0.74		0.12	0.12	0.12		
Clearance Time (s)	3.5	5.0	5.0		3.5	5.0		5.0	5.0	5.0		
Vehicle Extension (s)	1.5	3.0	3.0		1.5	3.0		1.5	1.5	1.5		
Lane Grp Cap (vph)	52	2104	979		218	2422		158	210	179		
v/s Ratio Prot	0.02	c0.35			0.06	c0.45			0.02			
v/s Ratio Perm			0.23					c0.07		0.04		
v/c Ratio	0.50	0.55	0.36		0.44	0.60		0.56	0.16	0.36		
Uniform Delay, d1	57.2	12.0	10.2		48.0	7.4		50.1	47.7	48.9		
Progression Factor	1.00	1.00	1.00		0.82	0.58		1.00	1.00	1.00		
Incremental Delay, d2	2.7	1.0	1.0		0.4	1.0		2.4	0.1	0.5		
Delay (s)	59.9	13.1	11.2		39.8	5.2		52.5	47.8	49.3		
Level of Service	E	B	B		D	A		D	D	D		
Approach Delay (s)		13.4				7.3			50.5			
Approach LOS		B				A			D			

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 1: PCH & Blue Lantern

Year 2035 - With Project
 PM Peak Hour - Alternative 1



Movement	SBL	SBT	SBR
Lane Configurations			
Volume (vph)	10	12	21
Ideal Flow (vphpl)	1900	1900	1900
Lane Width	11	11	13
Total Lost time (s)	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00
Frt	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00
Satd. Flow (prot)	1711	1801	1636
Flt Permitted	0.74	1.00	1.00
Satd. Flow (perm)	1325	1801	1636
Peak-hour factor, PHF	1.00	1.00	1.00
Adj. Flow (vph)	10	12	21
RTOR Reduction (vph)	0	0	19
Lane Group Flow (vph)	45	12	2
Confl. Peds. (#/hr)			
Heavy Vehicles (%)	2%	2%	2%
Turn Type	Perm		Perm
Protected Phases		4	
Permitted Phases	4		4
Actuated Green, G (s)	14.0	14.0	14.0
Effective Green, g (s)	14.0	14.0	14.0
Actuated g/C Ratio	0.12	0.12	0.12
Clearance Time (s)	5.0	5.0	5.0
Vehicle Extension (s)	1.5	1.5	1.5
Lane Grp Cap (vph)	155	210	191
v/s Ratio Prot		0.01	
v/s Ratio Perm	0.03		0.00
v/c Ratio	0.29	0.06	0.01
Uniform Delay, d1	48.5	47.1	46.9
Progression Factor	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.0	0.0
Delay (s)	48.8	47.2	46.9
Level of Service	D	D	D
Approach Delay (s)		48.1	
Approach LOS		D	

Intersection Summary

Lanes, Volumes, Timings
2: PCH & Ruby Lantern

Year 2035 - With Project
PM Peak Hour - Alternative 1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	1190	2	21	1430	6	102	2	18	19	15	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	10	11	11	12	14	14	16	16	16
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	150		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	60		60	60		60	60		60	60		60
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.999			0.980			0.943	
Flt Protected	0.950			0.950				0.960			0.984	
Satd. Flow (prot)	1652	3292	0	1652	3289	0	0	1869	0	0	1763	0
Flt Permitted	0.950			0.950				0.753			0.907	
Satd. Flow (perm)	1652	3292	0	1652	3289	0	0	1466	0	0	1625	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					1			7			25	
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		234			314			168			274	
Travel Time (s)		4.6			6.1			4.6			7.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	10	1190	2	21	1430	6	102	2	18	19	15	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	1192	0	21	1436	0	0	122	0	0	59	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.00	0.92	0.92	0.85	0.97	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	1	6		5	2			8			4	
Permitted Phases							8	8		4		
Detector Phase	1	6		5	2		8	8		4	4	
Switch Phase												
Minimum Initial (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	

Lanes, Volumes, Timings
2: PCH & Ruby Lantern

Year 2035 - With Project
PM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	4.5	21.0		4.5	23.0		30.0	30.0		27.0	27.0	
Total Split (s)	7.1	78.0	0.0	10.0	80.9	0.0	32.0	32.0	0.0	32.0	32.0	0.0
Total Split (%)	5.9%	65.0%	0.0%	8.3%	67.4%	0.0%	26.7%	26.7%	0.0%	26.7%	26.7%	0.0%
Maximum Green (s)	3.6	73.0		6.5	75.9		27.0	27.0		27.0	27.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.0	4.0	3.5	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lag	Lead		Lag	Lead							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	1.5		1.5	1.5	
Minimum Gap (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		9.0			11.0		18.0	18.0		15.0	15.0	
Pedestrian Calls (#/hr)		5			5		5	5		5	5	
Act Effct Green (s)	3.6	91.6		5.4	94.1			14.5			14.5	
Actuated g/C Ratio	0.03	0.76		0.04	0.78			0.12			0.12	
v/c Ratio	0.20	0.47		0.28	0.56			0.67			0.27	
Control Delay	69.8	2.0		48.3	3.0			63.6			31.4	
Queue Delay	0.0	0.1		0.0	0.0			0.0			0.0	
Total Delay	69.8	2.1		48.3	3.0			63.6			31.4	
LOS	E	A		D	A			E			C	
Approach Delay		2.6			3.7			63.6			31.4	
Approach LOS		A			A			E			C	
90th %ile Green (s)	3.6	75.0		6.5	77.9		25.0	25.0		25.0	25.0	
90th %ile Term Code	Max	Coord		Max	Coord		Ped	Ped		Hold	Hold	
70th %ile Green (s)	0.0	84.0		6.4	93.9		16.1	16.1		16.1	16.1	
70th %ile Term Code	Skip	Coord		Gap	Coord		Gap	Gap		Hold	Hold	
50th %ile Green (s)	0.0	96.6		0.0	96.6		13.4	13.4		13.4	13.4	
50th %ile Term Code	Skip	Coord		Skip	Coord		Gap	Gap		Hold	Hold	
30th %ile Green (s)	0.0	99.2		0.0	99.2		10.8	10.8		10.8	10.8	
30th %ile Term Code	Skip	Coord		Skip	Coord		Gap	Gap		Hold	Hold	
10th %ile Green (s)	0.0	103.0		0.0	103.0		7.0	7.0		7.0	7.0	
10th %ile Term Code	Skip	Coord		Skip	Coord		Gap	Gap		Hold	Hold	
Queue Length 50th (ft)	8	36		16	56			87			24	
Queue Length 95th (ft)	m17	48		m26	102			138			59	
Internal Link Dist (ft)		154			234			88			194	
Turn Bay Length (ft)	100			150								
Base Capacity (vph)	50	2512		89	2580			335			385	
Starvation Cap Reductn	0	294		0	57			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.20	0.54		0.24	0.57			0.36			0.15	

Intersection Summary

Area Type: Other

Lanes, Volumes, Timings
 2: PCH & Ruby Lantern

Year 2035 - With Project
 PM Peak Hour - Alternative 1

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 12 (10%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.67
 Intersection Signal Delay: 6.4
 Intersection Capacity Utilization 61.6%
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Intersection LOS: A
 ICU Level of Service B

Splits and Phases: 2: PCH & Ruby Lantern

← ø2	↖ ø1	↓ ø4
90.9 s	71 s	32 s
→ ø6	↙ ø5	↑ ø8
78 s	10 s	32 s

HCM Signalized Intersection Capacity Analysis

2: PCH & Ruby Lantern

Year 2035 - With Project
PM Peak Hour - Alternative 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Volume (vph)	10	1190	2	21	1430	6	102	2	18	19	15	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	10	11	11	12		14	16	16	16
Total Lost time (s)	3.5	5.0		3.5	5.0			5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frb, ped/bikes	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	
Frt	1.00	1.00		1.00	1.00			0.98			0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.98	
Satd. Flow (prot)	1652	3292		1652	3291			1869			1763	
Flt Permitted	0.95	1.00		0.95	1.00			0.75			0.91	
Satd. Flow (perm)	1652	3292		1652	3291			1465			1625	
Peak-hour factor, PHF	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. Flow (vph)	10	1190	2	21	1430	6	102	2	18	19	15	25
RTOR Reduction (vph)	0	0	0	0	0	0	0	6	0	0	22	0
Lane Group Flow (vph)	10	1192	0	21	1436	0	0	116	0	0	37	0
Confl. Peds. (#/hr)												
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Parking (#/hr)												0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	1	6		5	2			8			4	
Permitted Phases							8			4		
Actuated Green, G (s)	0.7	88.8		3.2	91.3			14.5			14.5	
Effective Green, g (s)	0.7	88.8		3.2	91.3			14.5			14.5	
Actuated g/C Ratio	0.01	0.74		0.03	0.76			0.12			0.12	
Clearance Time (s)	3.5	5.0		3.5	5.0			5.0			5.0	
Vehicle Extension (s)	1.5	3.0		1.5	3.0			1.5			1.5	
Lane Grp Cap (vph)	10	2436		44	2504			177			196	
v/s Ratio Prot	0.01	0.36		c0.01	c0.44							
v/s Ratio Perm								c0.08			0.02	
v/c Ratio	1.00	0.49		0.48	0.57			0.65			0.19	
Uniform Delay, d1	59.6	6.4		57.6	6.1			50.4			47.5	
Progression Factor	1.08	0.20		0.74	0.36			1.00			1.00	
Incremental Delay, d2	267.4	0.6		2.3	0.8			6.5			0.2	
Delay (s)	332.0	1.9		44.9	2.9			56.8			47.6	
Level of Service	F	A		D	A			E			D	
Approach Delay (s)		4.6			3.5			56.8			47.6	
Approach LOS		A			A			E			D	

Intersection Summary

HCM Average Control Delay	7.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
3: PCH & Amber Lantern

Year 2035 - With Project
PM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	56	1143	49	108	1375	48	99	15	55	48	24	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	10	11	11	10	11	11	16	16	16
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	150		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	60		60	60		60	60		60	60		60
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frnt		0.994			0.995			0.956			0.974	
Flt Protected	0.950			0.950				0.972			0.974	
Satd. Flow (prot)	1652	3277	0	1652	3280	0	0	1673	0	0	1802	0
Flt Permitted	0.950			0.950				0.767			0.743	
Satd. Flow (perm)	1652	3277	0	1652	3280	0	0	1320	0	0	1375	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			5			19			9	
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		478			315			117			564	
Travel Time (s)		9.3			6.1			3.2			15.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	56	1143	49	108	1375	48	99	15	55	48	24	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	56	1192	0	108	1423	0	0	169	0	0	89	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.09	1.04	1.04	0.85	0.97	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	1	6		5	2			8		4		4
Permitted Phases							8		8		4	4
Detector Phase	1	6		5	2		8	8		4	4	
Switch Phase												
Minimum Initial (s)	1.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lanes, Volumes, Timings
3: PCH & Amber Lantern

Year 2035 - With Project
PM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	4.5	24.0		9.0	24.0		31.0	31.0		29.0	29.0	
Total Split (s)	14.0	69.0	0.0	19.0	74.0	0.0	32.0	32.0	0.0	32.0	32.0	0.0
Total Split (%)	11.7%	57.5%	0.0%	15.8%	61.7%	0.0%	26.7%	26.7%	0.0%	26.7%	26.7%	0.0%
Maximum Green (s)	10.5	64.0		15.5	69.0		27.0	27.0		27.0	27.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.0	4.0	3.5	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lag	Lead		Lag	Lead							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	1.5	3.0		3.0	3.0		1.5	1.5		1.5	1.5	
Minimum Gap (s)	1.5	1.5		1.5	1.5							
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		12.0			12.0		19.0	19.0		17.0	17.0	
Pedestrian Calls (#/hr)		5			5		5	5		5	5	
Act Effct Green (s)	7.9	76.2		12.6	82.5			17.6			17.6	
Actuated g/C Ratio	0.07	0.64		0.10	0.69			0.15			0.15	
v/c Ratio	0.51	0.57		0.62	0.63			0.80			0.42	
Control Delay	58.5	6.7		44.5	8.7			69.6			46.1	
Queue Delay	0.0	0.0		0.0	0.6			0.0			0.0	
Total Delay	58.5	6.7		44.5	9.2			69.6			46.1	
LOS	E	A		D	A			E			D	
Approach Delay		9.0			11.7			69.6			46.1	
Approach LOS		A			B			E			D	
90th %ile Green (s)	10.5	65.0		15.5	70.0		26.0	26.0		26.0	26.0	
90th %ile Term Code	Max	Coord		Max	Coord		Ped	Ped		Hold	Hold	
70th %ile Green (s)	10.2	70.3		15.2	75.3		21.0	21.0		21.0	21.0	
70th %ile Term Code	Hold	Coord		Gap	Coord		Gap	Gap		Hold	Hold	
50th %ile Green (s)	8.1	75.8		13.1	80.8		17.6	17.6		17.6	17.6	
50th %ile Term Code	Hold	Coord		Gap	Coord		Gap	Gap		Hold	Hold	
30th %ile Green (s)	6.4	80.8		11.4	85.8		14.3	14.3		14.3	14.3	
30th %ile Term Code	Gap	Coord		Hold	Coord		Gap	Gap		Hold	Hold	
10th %ile Green (s)	0.0	89.3		7.9	100.7		9.3	9.3		9.3	9.3	
10th %ile Term Code	Skip	Coord		Gap	Coord		Gap	Gap		Hold	Hold	
Queue Length 50th (ft)	43	83		79	170			114			57	
Queue Length 95th (ft)	89	95		m77	m296			180			102	
Internal Link Dist (ft)		398			235			37			484	
Turn Bay Length (ft)	150			150								
Base Capacity (vph)	145	2084		213	2257			312			316	
Starvation Cap Reductn	0	0		0	418			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.39	0.57		0.51	0.77			0.54			0.28	

Intersection Summary

Area Type: Other

Lanes, Volumes, Timings
 3: PCH & Amber Lantern

Year 2035 - With Project
 PM Peak Hour - Alternative 1

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 4 (3%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 14.8
 Intersection Capacity Utilization 66.8%
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 3: PCH & Amber Lantern



HCM Signalized Intersection Capacity Analysis
 3: PCH & Amber Lantern

Year 2035 - With Project
 PM Peak Hour - Alternative 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↕		↙	↕			↕			↕	
Volume (vph)	56	1143	49	108	1375	48	99	15	55	48	24	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	10	11	11	10	11	11	16	16	16
Total Lost time (s)	3.5	5.0		3.5	5.0			5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frbp, ped/bikes	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	
Frt	1.00	0.99		1.00	0.99			0.96			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.97	
Satd. Flow (prot)	1652	3277		1652	3280			1673			1802	
Flt Permitted	0.95	1.00		0.95	1.00			0.77			0.74	
Satd. Flow (perm)	1652	3277		1652	3280			1320			1375	
Peak-hour factor, PHF	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. Flow (vph)	56	1143	49	108	1375	48	99	15	55	48	24	17
RTOR Reduction (vph)	0	2	0	0	2	0	0	16	0	0	8	0
Lane Group Flow (vph)	56	1190	0	108	1421	0	0	153	0	0	81	0
Confl. Peds. (#/hr)												
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Parking (#/hr)												0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	1	6		5	2		8	8		4		4
Permitted Phases							8			4		
Actuated Green, G (s)	7.0	75.6		13.3	81.9			17.6			17.6	
Effective Green, g (s)	7.0	75.6		13.3	81.9			17.6			17.6	
Actuated g/C Ratio	0.06	0.63		0.11	0.68			0.15			0.15	
Clearance Time (s)	3.5	5.0		3.5	5.0			5.0			5.0	
Vehicle Extension (s)	1.5	3.0		3.0	3.0			1.5			1.5	
Lane Grp Cap (vph)	96	2065		183	2239			194			202	
v/s Ratio Prot	0.03	0.36		c0.07	c0.43							
v/s Ratio Perm								c0.12			0.06	
v/c Ratio	0.58	0.58		0.59	0.63			0.79			0.40	
Uniform Delay, d1	55.1	12.9		50.8	10.7			49.4			46.4	
Progression Factor	0.81	0.40		0.84	0.68			1.00			1.00	
Incremental Delay, d2	5.2	1.1		0.5	0.1			17.5			0.5	
Delay (s)	50.0	6.2		43.3	7.4			66.8			46.9	
Level of Service	D	A		D	A			E			D	
Approach Delay (s)		8.1			9.9			66.8			46.9	
Approach LOS		A			A			E			D	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	66.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
4: PCH & Violet Lantern

Year 2035 - With Project
PM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕			↕	
Volume (vph)	21	1317	11	123	1468	60	66	75	55	42	33	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	10	11	11	10	11	11	16	16	16
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	150		0	0		150	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	60		60	60		60	60		60	60		60
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.999			0.995			0.962			0.946	
Flt Protected		0.999			0.996			0.983			0.983	
Satd. Flow (prot)	0	3289	0	0	3276	0	0	1533	0	0	1767	0
Flt Permitted		0.895			0.628			0.774			0.701	
Satd. Flow (perm)	0	2946	0	0	2066	0	0	1207	0	0	1260	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			10			14			23	
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		304			663			170			436	
Travel Time (s)		5.9			12.9			4.6			11.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	21	1317	11	123	1468	60	66	75	55	42	33	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1349	0	0	1651	0	0	196	0	0	125	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.09	1.19	1.04	0.85	0.97	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Detector Phase	6	6		2	2		8	8		4	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lanes, Volumes, Timings
4: PCH & Violet Lantern

Year 2035 - With Project
PM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	23.0	23.0		23.0	23.0		21.0	21.0		21.0	21.0	
Total Split (s)	98.0	98.0	0.0	98.0	98.0	0.0	22.0	22.0	0.0	22.0	22.0	0.0
Total Split (%)	81.7%	81.7%	0.0%	81.7%	81.7%	0.0%	18.3%	18.3%	0.0%	18.3%	18.3%	0.0%
Maximum Green (s)	93.0	93.0		93.0	93.0		17.0	17.0		17.0	17.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		1.5	1.5		1.5	1.5	
Minimum Gap (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		9.0	9.0		9.0	9.0	
Pedestrian Calls (#/hr)	5	5		5	5		5	5		5	5	
Act Effct Green (s)		93.0			93.0			17.0			17.0	
Actuated g/C Ratio		0.78			0.78			0.14			0.14	
v/c Ratio		0.59			1.03			1.07			0.63	
Control Delay		2.7			47.2			132.2			54.7	
Queue Delay		0.0			1.6			0.0			0.0	
Total Delay		2.7			48.7			132.2			54.7	
LOS		A			D			F			D	
Approach Delay		2.7			48.7			132.2			54.7	
Approach LOS		A			D			F			D	
90th %ile Green (s)	93.0	93.0		93.0	93.0		17.0	17.0		17.0	17.0	
90th %ile Term Code	Coord	Coord		Coord	Coord		Max	Max		Max	Max	
70th %ile Green (s)	93.0	93.0		93.0	93.0		17.0	17.0		17.0	17.0	
70th %ile Term Code	Coord	Coord		Coord	Coord		Max	Max		Hold	Hold	
50th %ile Green (s)	93.0	93.0		93.0	93.0		17.0	17.0		17.0	17.0	
50th %ile Term Code	Coord	Coord		Coord	Coord		Max	Max		Hold	Hold	
30th %ile Green (s)	93.0	93.0		93.0	93.0		17.0	17.0		17.0	17.0	
30th %ile Term Code	Coord	Coord		Coord	Coord		Max	Max		Hold	Hold	
10th %ile Green (s)	93.0	93.0		93.0	93.0		17.0	17.0		17.0	17.0	
10th %ile Term Code	Coord	Coord		Coord	Coord		Max	Max		Hold	Hold	
Queue Length 50th (ft)		33			~420			~159			75	
Queue Length 95th (ft)		47			#551			#313			#151	
Internal Link Dist (ft)		224			583			90			356	
Turn Bay Length (ft)												
Base Capacity (vph)		2284			1603			183			198	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			7			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.59			1.03			1.07			0.63	

Intersection Summary

Area Type: Other

Lanes, Volumes, Timings
 4: PCH & Violet Lantern

Year 2035 - With Project
 PM Peak Hour - Alternative 1

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 10 (8%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.07
 Intersection Signal Delay: 35.2
 Intersection Capacity Utilization 110.3%
 Analysis Period (min) 15

Intersection LOS: D
 ICU Level of Service H

- ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 4: PCH & Violet Lantern

← ø2 98 s	↓ ø4 22 s
→ ø6 98 s	↑ ø8 22 s

HCM Signalized Intersection Capacity Analysis

Year 2035 - With Project

4: PCH & Violet Lantern

PM Peak Hour - Alternative 1

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	21	1317	11	123	1468	60	66	75	55	42	33	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	10	11	11	10		11	16	16	16
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frbp, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		1.00			0.99			0.96			0.95	
Flt Protected		1.00			1.00			0.98			0.98	
Satd. Flow (prot)		3288			3276			1533			1768	
Flt Permitted		0.90			0.63			0.77			0.70	
Satd. Flow (perm)		2946			2065			1206			1259	
Peak-hour factor, PHF	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. Flow (vph)	21	1317	11	123	1468	60	66	75	55	42	33	50
RTOR Reduction (vph)	0	0	0	0	2	0	0	12	0	0	20	0
Lane Group Flow (vph)	0	1349	0	0	1649	0	0	184	0	0	105	0
Confi. Peds. (#/hr)												
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Parking (#/hr)								0			0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)		93.0			93.0			17.0			17.0	
Effective Green, g (s)		93.0			93.0			17.0			17.0	
Actuated g/C Ratio		0.78			0.78			0.14			0.14	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			1.5			1.5	
Lane Grp Cap (vph)		2283			1600			171			178	
v/s Ratio Prot												
v/s Ratio Perm		0.46			0.80			0.15			0.08	
v/c Ratio		0.59			1.03			1.08			0.59	
Uniform Delay, d1		5.6			13.5			51.5			48.2	
Progression Factor		0.30			1.58			1.00			1.00	
Incremental Delay, d2		1.0			26.0			90.5			3.5	
Delay (s)		2.7			47.3			142.0			51.7	
Level of Service		A			D			F			D	
Approach Delay (s)		2.7			47.3			142.0			51.7	
Approach LOS		A			D			F			D	

Intersection Summary

HCM Average Control Delay	34.9	HCM Level of Service	C
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	110.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
5: PCH & Golden Lantern

Year 2035 - With Project
PM Peak Hour - Alternative 1

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	162	1136	110	169	1244	169	174	402	25	356	208	202
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	10	11	11	10	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	300		0	300		0	250		0	150		300
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	60		60	60		60	60		60	60		60
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95	0.97	1.00	1.00
Ped Bike Factor												
Frt		0.987				0.850		0.991				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1652	3260	0	1652	3292	1531	1652	3507	0	3433	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1652	3260	0	1652	3292	1531	1652	3507	0	3433	1863	1583
Right Turn on Red			Yes			Yes		Yes	Yes			Yes
Satd. Flow (RTOR)		10				140		5				47
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		663			279			658			428	
Travel Time (s)		12.9			5.4			15.0			9.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	162	1136	110	169	1244	169	174	402	25	356	208	202
Shared Lane Traffic (%)												
Lane Group Flow (vph)	162	1246	0	169	1244	169	174	427	0	356	208	202
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.04	1.04	1.09	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1		1	1	1
Detector Template												
Leading Detector (ft)	50	50		50	50	50	50	50		50	50	50
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Turn Type	Prot			Prot		Perm	Prot			Prot		pm+ov
Protected Phases	1	6		5	2		3	8		7	4	1
Permitted Phases					2							4
Detector Phase	1	6		5	2	2	3	8		7	4	1
Switch Phase												
Minimum Initial (s)	1.0	4.0		1.0	4.0	4.0	1.0	4.0		1.0	4.0	1.0

Lanes, Volumes, Timings
5: PCH & Golden Lantern

Year 2035 - With Project
PM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	4.5	32.0		4.5	37.0	37.0	4.5	33.0		4.5	30.0	4.5
Total Split (s)	18.0	52.6	0.0	17.4	52.0	52.0	18.5	33.0	0.0	17.0	31.5	18.0
Total Split (%)	15.0%	43.8%	0.0%	14.5%	43.3%	43.3%	15.4%	27.5%	0.0%	14.2%	26.3%	15.0%
Maximum Green (s)	14.5	47.6		13.9	47.0	47.0	15.0	28.0		13.5	26.5	14.5
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0		3.0	4.0	3.0
All-Red Time (s)	0.5	1.0		0.5	1.0	1.0	0.5	1.0		0.5	1.0	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.0	4.0	3.5	5.0	5.0	3.5	5.0	4.0	3.5	5.0	3.5
Lead/Lag	Lag	Lag		Lead	Lead	Lead	Lag	Lag		Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	1.5	3.0		1.5	3.0	3.0	1.5	3.0		1.5	3.0	1.5
Minimum Gap (s)	1.5	1.5		1.5	1.5	1.5	1.5	1.5		1.5	1.5	1.5
Time Before Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Recall Mode	None	C-Max		None	C-Max	C-Max	None	Min		None	Min	None
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		20.0			25.0	25.0		21.0			16.0	
Pedestrian Calls (#/hr)		5			5	5		5			5	
Act Effct Green (s)	14.5	52.5		14.7	52.7	52.7	17.2	22.3		13.5	18.6	38.1
Actuated g/C Ratio	0.12	0.44		0.12	0.44	0.44	0.14	0.19		0.11	0.16	0.32
v/c Ratio	0.81	0.87		0.84	0.86	0.23	0.73	0.65		0.92	0.72	0.38
Control Delay	65.9	28.4		80.3	16.9	2.4	67.9	48.9		83.1	62.0	25.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	65.9	28.4		80.3	16.9	2.4	67.9	48.9		83.1	62.0	25.3
LOS	E	C		F	B	A	E	D		F	E	C
Approach Delay		32.7			22.1			54.4			62.1	
Approach LOS		C			C			D			E	
90th %ile Green (s)	14.5	47.6		13.9	47.0	47.0	16.6	28.0		13.5	24.9	14.5
90th %ile Term Code	Max	Coord		Max	Coord	Coord	Max	Ped		Max	Gap	Max
70th %ile Green (s)	14.5	47.6		14.1	47.2	47.2	20.1	27.8		13.5	21.2	14.5
70th %ile Term Code	Max	Coord		Max	Coord	Coord	Gap	Hold		Max	Gap	Max
50th %ile Green (s)	14.5	48.3		18.1	51.9	51.9	18.0	23.1		13.5	18.6	14.5
50th %ile Term Code	Max	Coord		Gap	Coord	Coord	Gap	Hold		Max	Gap	Max
30th %ile Green (s)	14.5	56.0		15.7	57.2	57.2	15.3	17.8		13.5	16.0	14.5
30th %ile Term Code	Hold	Coord		Gap	Coord	Coord	Gap	Hold		Max	Gap	Hold
10th %ile Green (s)	14.5	63.0		11.8	60.3	60.3	16.0	14.8		13.4	12.2	14.5
10th %ile Term Code	Hold	Coord		Gap	Coord	Coord	Hold	Gap		Gap	Gap	Hold
Queue Length 50th (ft)	126	497		109	201	1	130	159		142	155	91
Queue Length 95th (ft)	m#231	m#619		#257	#634	44	#241	204		#232	225	146
Internal Link Dist (ft)		583			199			578			348	
Turn Bay Length (ft)	300			300			250			150		300
Base Capacity (vph)	200	1432		208	1446	751	237	822		386	411	534
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	0.81	0.87		0.81	0.86	0.23	0.73	0.52		0.92	0.51	0.38

Intersection Summary

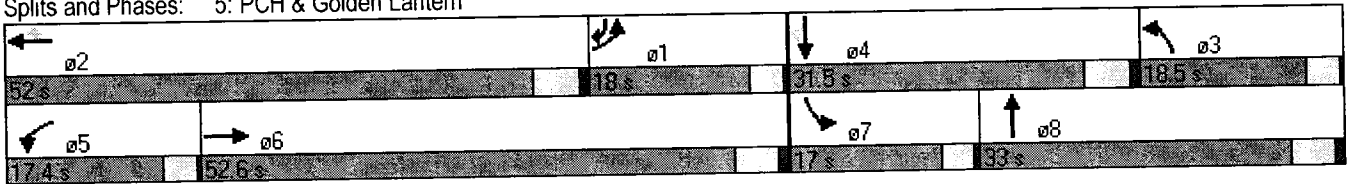
Area Type: Other

Lanes, Volumes, Timings
 5: PCH & Golden Lantern

Year 2035 - With Project
 PM Peak Hour - Alternative 1

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow, Master Intersection
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 37.0
 Intersection Capacity Utilization 81.3%
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: PCH & Golden Lantern



HCM Signalized Intersection Capacity Analysis
5: PCH & Golden Lantern

Year 2035 - With Project
PM Peak Hour - Alternative 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗	↖	↖	↖↗		↖↗	↖	↖
Volume (vph)	162	1136	110	169	1244	169	174	402	25	356	208	202
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	10	11	11	10	12	12	12	12	12
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	3.5	5.0		0.97	1.00	1.00
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	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	0.99		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)	1652	3259		1652	3292	1531	1652	3508		3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1652	3259		1652	3292	1531	1652	3508		3433	1863	1583
Peak-hour factor, PHF	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. Flow (vph)	162	1136	110	169	1244	169	174	402	25	356	208	202
RTOR Reduction (vph)	0	6	0	0	0	79	0	4	0	0	0	34
Lane Group Flow (vph)	162	1240	0	169	1244	90	174	423	0	356	208	168
Confl. Peds. (#/hr)												
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot			Prot		Perm	Prot			Prot		pm+ov
Protected Phases	1	6		5	2		3	8		7	4	1
Permitted Phases						2						4
Actuated Green, G (s)	14.5	52.5		14.7	52.7	52.7	17.2	22.3		13.5	18.6	33.1
Effective Green, g (s)	14.5	52.5		14.7	52.7	52.7	17.2	22.3		13.5	18.6	33.1
Actuated g/C Ratio	0.12	0.44		0.12	0.44	0.44	0.14	0.19		0.11	0.16	0.28
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	3.5	5.0		3.5	5.0	3.5
Vehicle Extension (s)	1.5	3.0		1.5	3.0	3.0	1.5	3.0		1.5	3.0	1.5
Lane Grp Cap (vph)	200	1426		202	1446	672	237	652		386	289	483
v/s Ratio Prot	0.10	c0.38		0.10	c0.38		c0.11	0.12		c0.10	c0.11	0.04
v/s Ratio Perm						0.06						0.06
v/c Ratio	0.81	0.87		0.84	0.86	0.13	0.73	0.65		0.92	0.72	0.35
Uniform Delay, d1	51.4	30.6		51.5	30.3	20.1	49.2	45.2		52.7	48.2	34.8
Progression Factor	0.79	0.68		1.05	0.31	0.31	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	16.7	6.1		19.5	5.5	0.3	9.7	2.2		26.8	8.3	0.2
Delay (s)	57.4	26.7		73.6	14.8	6.5	58.9	47.5		79.5	56.5	35.0
Level of Service	E	C		E	B	A	E	D		E	E	C
Approach Delay (s)		30.3			20.2			50.8			61.5	
Approach LOS		C			C			D			E	

Intersection Summary

HCM Average Control Delay	34.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	81.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
6: PCH & Del Prado

Year 2035 - With Project
PM Peak Hour - Alternative 1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	1592	0	237	1660	54	12	0	550	20	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	11	12	11	12	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	200		0	0		0	0		0
Storage Lanes	1		0	1		0	0		2	0		0
Taper Length (ft)	60		60	60		60	60		60	60		60
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	0.88	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.995				0.850			0.988
Flt Protected	0.950			0.950				0.950				0.957
Satd. Flow (prot)	1711	3406	0	1770	3393	0	0	1711	2647	0	1703	0
Flt Permitted	0.950			0.950				0.950				0.957
Satd. Flow (perm)	1711	3406	0	1770	3393	0	0	1711	2647	0	1703	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					5				496			2
Link Speed (mph)		35			35				30			25
Link Distance (ft)		308			560				146			102
Travel Time (s)		6.0			10.9				3.3			2.8
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)									0			
Mid-Block Traffic (%)		0%			0%				0%			0%
Adj. Flow (vph)	32	1592	0	237	1660	54	12	0	550	20	0	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	1592	0	237	1714	0	0	12	550	0	22	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.04	1.00	1.04	1.07	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turn Type	Prot			Prot			Split		pm+ov		Split	
Protected Phases	1	6		5	2		8	8	5		4	4
Permitted Phases									8			
Detector Phase	1	6		5	2		8	8	5		4	4
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		4.0	4.0	4.0	10.0	10.0	

Lanes, Volumes, Timings
6: PCH & Del Prado

Year 2035 - With Project
PM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	7.5	30.0		7.5	24.0		9.0	9.0	7.5	27.0	27.0	
Total Split (s)	8.1	63.0	0.0	21.0	75.9	0.0	9.0	9.0	21.0	27.0	27.0	0.0
Total Split (%)	6.8%	52.5%	0.0%	17.5%	63.3%	0.0%	7.5%	7.5%	17.5%	22.5%	22.5%	0.0%
Maximum Green (s)	4.6	58.0		17.5	70.9		4.0	4.0	17.5	22.0	22.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0	3.0	4.0	4.0	
All-Red Time (s)	0.5	1.0		0.5	1.0		1.0	1.0	0.5	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.0	4.0	3.5	5.0	4.0	5.0	5.0	3.5	5.0	5.0	4.0
Lead/Lag	Lead	Lead		Lag	Lag				Lag			
Lead-Lag Optimize?	Yes	Yes		Yes	Yes				Yes			
Vehicle Extension (s)	3.0	3.0		1.5	3.0		3.0	3.0	1.5	3.0	3.0	
Minimum Gap (s)	1.5	1.5		1.5	1.5		1.5	1.5	1.5	1.5	1.5	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Walk Time (s)		7.0			7.0					7.0	7.0	
Flash Dont Walk (s)		18.0			12.0					15.0	15.0	
Pedestrian Calls (#/hr)		5			5					5	5	
Act Effct Green (s)	6.7	78.4		17.5	95.1			5.7	20.3			12.4
Actuated g/C Ratio	0.06	0.65		0.15	0.79			0.05	0.17			0.10
v/c Ratio	0.34	0.72		0.92	0.64			0.15	0.64			0.12
Control Delay	73.2	8.0		66.1	4.8			59.4	7.7			44.9
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0			0.0
Total Delay	73.2	8.0		66.1	4.8			59.4	7.7			44.9
LOS	E	A		E	A			E	A			D
Approach Delay		9.3			12.2			8.8				44.9
Approach LOS		A			B			A				D
90th %ile Green (s)	4.6	58.0		17.5	70.9		4.0	4.0	17.5	22.0	22.0	
90th %ile Term Code	Max	Coord		Max	Coord		Max	Max	Max	Ped	Ped	
70th %ile Green (s)	8.8	67.0		17.5	75.7		7.0	7.0	17.5	10.0	10.0	
70th %ile Term Code	Gap	Coord		Max	Coord		Gap	Gap	Max	Min	Min	
50th %ile Green (s)	7.7	79.0		17.5	88.8		0.0	0.0	17.5	10.0	10.0	
50th %ile Term Code	Gap	Coord		Max	Coord		Skip	Skip	Max	Min	Min	
30th %ile Green (s)	0.0	94.0		17.5	115.0		0.0	0.0	17.5	0.0	0.0	
30th %ile Term Code	Skip	Coord		Max	Coord		Skip	Skip	Max	Skip	Skip	
10th %ile Green (s)	0.0	94.0		17.5	115.0		0.0	0.0	17.5	0.0	0.0	
10th %ile Term Code	Skip	Coord		Hold	Coord		Skip	Skip	Hold	Skip	Skip	
Queue Length 50th (ft)	25	25		169	33			9	21			15
Queue Length 95th (ft)	m28	m#807		m#328	161			31	48			37
Internal Link Dist (ft)		228			480			66				22
Turn Bay Length (ft)	100			200								
Base Capacity (vph)	95	2225		258	2689			81	860			314
Starvation Cap Reductn	0	0		0	0			0	0			0
Spillback Cap Reductn	0	0		0	0			0	0			0
Storage Cap Reductn	0	0		0	0			0	0			0
Reduced v/c Ratio	0.34	0.72		0.92	0.64			0.15	0.64			0.07

Intersection Summary

Area Type: Other

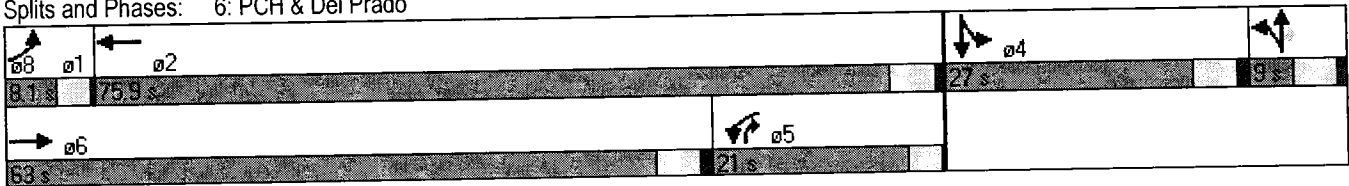
Lanes, Volumes, Timings
 6: PCH & Del Prado

Year 2035 - With Project
 PM Peak Hour - Alternative 1

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 72 (60%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 10.8
 Intersection Capacity Utilization 83.2%
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Intersection LOS: B
 ICU Level of Service E

Splits and Phases: 6: PCH & Del Prado



HCM Signalized Intersection Capacity Analysis
6: PCH & Del Prado

Year 2035 - With Project
PM Peak Hour - Alternative 1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	1592	0	237	1660	54	12	0	550	20	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	12	12	11	12	11	12	11	11	11
Total Lost time (s)	3.5	5.0		3.5	5.0			5.0	3.5		5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	0.88		1.00	
Frbp, ped/bikes	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	
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.99	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.96	
Satd. Flow (prot)	1711	3406		1770	3394			1711	2647		1701	
Flt Permitted	0.95	1.00		0.95	1.00			0.95	1.00		0.96	
Satd. Flow (perm)	1711	3406		1770	3394			1711	2647		1701	
Peak-hour factor, PHF	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. Flow (vph)	32	1592	0	237	1660	54	12	0	550	20	0	2
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	409	0	2	0
Lane Group Flow (vph)	32	1592	0	237	1713	0	0	12	141	0	20	0
Confl. Peds. (#/hr)												
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Parking (#/hr)									0			
Turn Type	Prot			Prot			Split		pm+ov		Split	
Protected Phases	1	6		5	2		8	8	5		4	4
Permitted Phases									8			
Actuated Green, G (s)	4.2	72.0		18.9	86.7				21.1		8.4	
Effective Green, g (s)	4.2	72.0		18.9	86.7				21.1		8.4	
Actuated g/C Ratio	0.04	0.60		0.16	0.72				0.18		0.07	
Clearance Time (s)	3.5	5.0		3.5	5.0				3.5		5.0	
Vehicle Extension (s)	3.0	3.0		1.5	3.0				1.5		3.0	
Lane Grp Cap (vph)	60	2044		279	2452				465		119	
v/s Ratio Prot	0.02	c0.47		c0.13	0.50				0.05		c0.01	
v/s Ratio Perm									0.01			
v/c Ratio	0.53	0.78		0.85	0.70				0.30		0.17	
Uniform Delay, d1	56.9	18.0		49.2	9.3				43.1		52.5	
Progression Factor	1.24	0.33		0.62	0.35				1.00		1.00	
Incremental Delay, d2	5.1	1.7		16.1	1.3				0.1		0.7	
Delay (s)	75.4	7.6		46.6	4.5				43.2		53.2	
Level of Service	E	A		D	A				D		D	
Approach Delay (s)		8.9			9.7				43.7		53.2	
Approach LOS		A			A				D		D	
Intersection Summary												
HCM Average Control Delay			14.2									B
HCM Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			120.0						18.5			
Intersection Capacity Utilization			83.2%									E
Analysis Period (min)			15									
c Critical Lane Group												

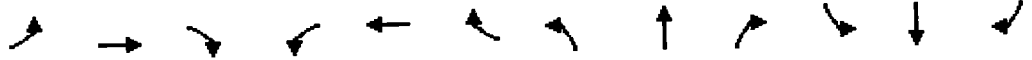
Lanes, Volumes, Timings
7: PCH & Crystal Lantern

Year 2035 - With Project
PM Peak Hour - Alternative 1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	2019	10	21	1736	96	15	0	12	111	2	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		0	100		0	0		0	0		0
Storage Lanes	1		0	1		1	0		0	0		1
Taper Length (ft)	60		60	60		60	60		60	60		60
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.999				0.850		0.940				0.850
Flt Protected	0.950			0.950				0.973			0.953	
Satd. Flow (prot)	1770	3233	0	1770	3406	1583	0	1704	0	0	1598	1583
Flt Permitted	0.950			0.950				0.849			0.710	
Satd. Flow (perm)	1770	3233	0	1770	3406	1583	0	1487	0	0	1190	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				82		12				35
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		525			900			140			300	
Travel Time (s)		10.2			17.5			3.8			8.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0									0	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	42	2019	10	21	1736	96	15	0	12	111	2	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	42	2029	0	21	1736	96	0	27	0	0	113	35
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.07	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.14	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	50	50		50	50	50	50	50		50	50	50
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Turn Type	Prot			Prot		Perm	Perm			Perm		Perm
Protected Phases	1	6		5	2			8			4	
Permitted Phases						2	8			4		4
Detector Phase	1	6		5	2	2	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	1.0	4.0		1.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0

Lanes, Volumes, Timings
7: PCH & Crystal Lantern

Year 2035 - With Project
PM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	4.5	19.0		4.5	21.0	21.0	9.0	9.0		37.0	37.0	37.0
Total Split (s)	8.6	76.9	0.0	6.1	74.4	74.4	37.0	37.0	0.0	37.0	37.0	37.0
Total Split (%)	7.2%	64.1%	0.0%	5.1%	62.0%	62.0%	30.8%	30.8%	0.0%	30.8%	30.8%	30.8%
Maximum Green (s)	5.1	72.0		2.6	69.5	69.5	33.0	33.0		33.0	33.0	33.0
Yellow Time (s)	3.0	3.9		3.0	3.9	3.9	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	0.5	1.0		0.5	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	4.9	4.0	3.5	4.9	4.9	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lead		Lag	Lead	Lead						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	1.5	3.0		1.5	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)	1.5	1.5		1.5	1.5	1.5	1.5	1.5		1.5	1.5	1.5
Time Before Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	None
Walk Time (s)		7.0			7.0	7.0				7.0	7.0	7.0
Flash Dont Walk (s)		7.0			9.0	9.0				25.0	25.0	25.0
Pedestrian Calls (#/hr)		5			5	5				5	5	5
Act Effct Green (s)	4.9	89.2		2.6	86.0	86.0		18.2			18.2	18.2
Actuated g/C Ratio	0.04	0.74		0.02	0.72	0.72		0.15			0.15	0.15
v/c Ratio	0.58	0.84		0.55	0.71	0.08		0.11			0.62	0.13
Control Delay	65.1	10.5		77.2	5.1	0.1		26.4			60.9	12.6
Queue Delay	0.0	0.0		0.0	0.3	0.0		0.0			0.0	0.0
Total Delay	65.1	10.5		77.2	5.4	0.1		26.4			60.9	12.6
LOS	E	B		E	A	A		C			E	B
Approach Delay		11.6			5.9			26.4			49.5	
Approach LOS		B			A			C			D	
90th %ile Green (s)	5.1	73.0		2.6	70.5	70.5	32.0	32.0		32.0	32.0	32.0
90th %ile Term Code	Max	Coord		Max	Coord	Coord	Hold	Hold		Ped	Ped	Ped
70th %ile Green (s)	5.1	85.3		2.6	82.8	82.8	19.7	19.7		19.7	19.7	19.7
70th %ile Term Code	Max	Coord		Max	Coord	Coord	Hold	Hold		Gap	Gap	Gap
50th %ile Green (s)	5.1	88.4		2.6	85.9	85.9	16.6	16.6		16.6	16.6	16.6
50th %ile Term Code	Max	Coord		Max	Coord	Coord	Hold	Hold		Gap	Gap	Gap
30th %ile Green (s)	5.1	97.5		0.0	88.9	88.9	13.6	13.6		13.6	13.6	13.6
30th %ile Term Code	Max	Coord		Skip	Coord	Coord	Hold	Hold		Gap	Gap	Gap
10th %ile Green (s)	0.0	101.9		0.0	101.9	101.9	9.2	9.2		9.2	9.2	9.2
10th %ile Term Code	Skip	Coord		Skip	Coord	Coord	Hold	Hold		Gap	Gap	Gap
Queue Length 50th (ft)	34	94		17	56	0		10			84	0
Queue Length 95th (ft)	m46	#1005		m21	118	m0		33			127	26
Internal Link Dist (ft)		445			820			60			220	
Turn Bay Length (ft)	120			100								
Base Capacity (vph)	75	2404		38	2441	1158		418			327	461
Starvation Cap Reductn	0	0		0	202	0		0			0	0
Spillback Cap Reductn	0	0		0	0	0		0			0	0
Storage Cap Reductn	0	0		0	0	0		0			0	0
Reduced v/c Ratio	0.56	0.84		0.55	0.78	0.08		0.06			0.35	0.08

Intersection Summary

Area Type: Other

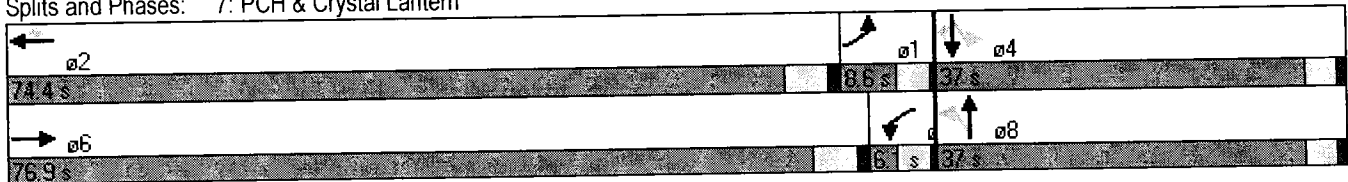
Lanes, Volumes, Timings
 7: PCH & Crystal Lantern

Year 2035 - With Project
 PM Peak Hour - Alternative 1

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 83 (69%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 10.5
 Intersection Capacity Utilization 73.5%
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Intersection LOS: B
 ICU Level of Service D

Splits and Phases: 7: PCH & Crystal Lantern



HCM Signalized Intersection Capacity Analysis
7: PCH & Crystal Lantern

Year 2035 - With Project
PM Peak Hour - Alternative 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕	↖		↕			↖	↖
Volume (vph)	42	2019	10	21	1736	96	15	0	12	111	2	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	3.5	4.9		3.5	4.9	4.9		4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	1.00
Frbp, ped/bikes	1.00	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
Frt	1.00	1.00		1.00	1.00	0.85		0.94			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.95	1.00
Satd. Flow (prot)	1770	3234		1770	3406	1583		1704			1598	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.85			0.71	1.00
Satd. Flow (perm)	1770	3234		1770	3406	1583		1486			1191	1583
Peak-hour factor, PHF	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. Flow (vph)	42	2019	10	21	1736	96	15	0	12	111	2	35
RTOR Reduction (vph)	0	0	0	0	0	24	0	10	0	0	0	30
Lane Group Flow (vph)	42	2029	0	21	1736	72	0	17	0	0	113	5
Confl. Peds. (#/hr)												
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Parking (#/hr)		0									0	
Turn Type	Prot			Prot		Perm	Perm			Perm		Perm
Protected Phases	1	6		5	2			8			4	
Permitted Phases						2	8			4		4
Actuated Green, G (s)	4.8	87.8		1.6	84.6	84.6		18.2			18.2	18.2
Effective Green, g (s)	4.8	87.8		1.6	84.6	84.6		18.2			18.2	18.2
Actuated g/C Ratio	0.04	0.73		0.01	0.70	0.70		0.15			0.15	0.15
Clearance Time (s)	3.5	4.9		3.5	4.9	4.9		4.0			4.0	4.0
Vehicle Extension (s)	1.5	3.0		1.5	3.0	3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	71	2366		24	2401	1116		225			181	240
v/s Ratio Prot	c0.02	c0.63		0.01	0.51						c0.09	0.00
v/s Ratio Perm						0.05		0.01				0.00
v/c Ratio	0.59	0.86		0.88	0.72	0.06		0.07			0.62	0.02
Uniform Delay, d1	56.6	11.6		59.1	10.7	5.5		43.7			47.7	43.3
Progression Factor	0.74	0.48		0.84	0.32	0.00		1.00			1.00	1.00
Incremental Delay, d2	6.1	3.1		83.6	1.0	0.1		0.1			6.6	0.0
Delay (s)	48.1	8.6		133.1	4.4	0.1		43.8			54.3	43.4
Level of Service	D	A		F	A	A		D			D	D
Approach Delay (s)		9.4			5.7			43.8			51.7	
Approach LOS		A			A			D			D	

Intersection Summary

HCM Average Control Delay	9.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.4
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
9: Del Prado & Ruby Lantern

Year 2035 - With Project
PM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (vph)	3	385	5	17	0	100	0	20	7	40	20	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	60		60	60		60	60		60	60		60
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.998			0.885			0.965			0.990	
Flt Protected					0.993						0.970	
Satd. Flow (prot)	0	1558	0	0	1424	0	0	1564	0	0	1729	0
Flt Permitted					0.993						0.970	
Satd. Flow (perm)	0	1558	0	0	1424	0	0	1564	0	0	1729	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		155			735			173			168	
Travel Time (s)		3.0			14.3			4.7			4.6	
Confl. Peds. (#/hr)	9		9	9		9	6		6	6		6
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0			0			0			0	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	3	385	5	17	0	100	0	20	7	40	20	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	393	0	0	117	0	0	27	0	0	65	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.19	1.04	1.04	1.19	1.04	1.04	1.19	1.04	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 38.5%
 Analysis Period (min) 15
 ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis
 9: Del Prado & Ruby Lantern

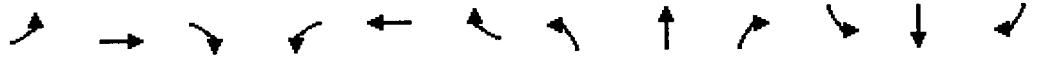
Year 2035 - With Project
 PM Peak Hour - Alternative 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	3	385	5	17	0	100	0	20	7	40	20	5
Peak Hour 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
Hourly flow rate (vph)	3	385	5	17	0	100	0	20	7	40	20	5
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	393	117	27	65								
Volume Left (vph)	3	17	0	40								
Volume Right (vph)	5	100	7	5								
Hadj (s)	0.09	-0.45	-0.12	0.11								
Departure Headway (s)	4.4	4.1	5.0	5.2								
Degree Utilization, x	0.48	0.13	0.04	0.09								
Capacity (veh/h)	810	829	640	625								
Control Delay (s)	11.3	7.8	8.2	8.7								
Approach Delay (s)	11.3	7.8	8.2	8.7								
Approach LOS	B	A	A	A								
Intersection Summary												
Delay			10.2									
HCM Level of Service			B									
Intersection Capacity Utilization			38.5%	ICU Level of Service	A							
Analysis Period (min)			15									

Lanes, Volumes, Timings
10: Del Prado & Amber Lantern

Year 2035 - With Project
PM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (vph)	29	377	10	29	98	53	5	46	13	92	49	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	60		60	60		60	60		60	60		60
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.997			0.960			0.973			0.988	
Flt Protected		0.997			0.992			0.996			0.971	
Satd. Flow (prot)	0	1556	0	0	1511	0	0	1571	0	0	1555	0
Flt Permitted		0.997			0.992			0.996			0.971	
Satd. Flow (perm)	0	1556	0	0	1511	0	0	1571	0	0	1555	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		735			607			197			209	
Travel Time (s)		14.3			11.8			5.4			5.7	
Confl. Peds. (#/hr)	9		9	9		9	6		6	6		6
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0			0			0			0	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	29	377	10	29	98	53	5	46	13	92	49	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	416	0	0	180	0	0	64	0	0	155	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.19	1.04	1.04	1.19	1.04	1.04	1.19	1.04	1.04	1.19	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 46.8% ICU Level of Service A
 Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis
 10: Del Prado & Amber Lantern

Year 2035 - With Project
 PM Peak Hour - Alternative 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	29	377	10	29	98	53	5	46	13	92	49	14
Peak Hour 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
Hourly flow rate (vph)	29	377	10	29	98	53	5	46	13	92	49	14

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	416	180	64	155
Volume Left (vph)	29	29	5	92
Volume Right (vph)	10	53	13	14
Hadj (s)	0.10	-0.07	-0.07	0.10
Departure Headway (s)	4.9	5.0	5.6	5.6
Degree Utilization, x	0.57	0.25	0.10	0.24
Capacity (veh/h)	709	668	550	579
Control Delay (s)	14.0	9.7	9.3	10.4
Approach Delay (s)	14.0	9.7	9.3	10.4
Approach LOS	B	A	A	B

Intersection Summary			
Delay		12.0	
HCM Level of Service		B	
Intersection Capacity Utilization	46.8%		ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings
11: Del Prado & Violet Lantern

Year 2035 - With Project
PM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	15	424	9	30	151	25	9	23	5	105	27	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	60		60	60		60	60		60	60		60
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.997			0.984			0.982			0.985	
Flt Protected		0.998			0.993			0.988			0.966	
Satd. Flow (prot)	0	1555	0	0	1539	0	0	1572	0	0	1542	0
Flt Permitted		0.998			0.993			0.988			0.966	
Satd. Flow (perm)	0	1555	0	0	1539	0	0	1572	0	0	1542	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		607			647			193			304	
Travel Time (s)		11.8			12.6			5.3			8.3	
Confl. Peds. (#/hr)	9		9	9		9	6		6	6		6
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0			0			0			0	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	15	424	9	30	151	25	9	23	5	105	27	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	448	0	0	206	0	0	37	0	0	149	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.19	1.04	1.04	1.19	1.04	1.04	1.19	1.04	1.04	1.19	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 46.9% ICU Level of Service A
 Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis
 11: Del Prado & Violet Lantern

Year 2035 - With Project
 PM Peak Hour - Alternative 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	15	424	9	30	151	25	9	23	5	105	27	17
Peak Hour 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
Hourly flow rate (vph)	15	424	9	30	151	25	9	23	5	105	27	17

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	448	206	37	149
Volume Left (vph)	15	30	9	105
Volume Right (vph)	9	25	5	17
Hadj (s)	0.09	0.04	0.00	0.11
Departure Headway (s)	4.8	5.1	5.8	5.7
Degree Utilization, x	0.60	0.29	0.06	0.24
Capacity (veh/h)	720	668	523	569
Control Delay (s)	14.9	10.2	9.2	10.5
Approach Delay (s)	14.9	10.2	9.2	10.5
Approach LOS	B	B	A	B

Intersection Summary			
Delay		12.7	
HCM Level of Service		B	
Intersection Capacity Utilization	46.9%		ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings
12: Del Prado & Golden Lantern

Year 2035 - With Project
PM Peak Hour - Alternative 1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	407	45	65	101	67	150	470	8	81	349	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	10		11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	140		0	200		0	180		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	60		60	60		60	60		60	60		60
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.985				0.850		0.997			0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1652	1596	0	1652	1621	1531	1711	3411	0	1711	3336	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1652	1596	0	1652	1621	1531	1711	3411	0	1711	3336	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				67		1			18	
Link Speed (mph)		35			30			30			30	
Link Distance (ft)		223			434			937			658	
Travel Time (s)		4.3			9.9			21.3			15.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0			0						0	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	57	407	45	65	101	67	150	470	8	81	349	70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	452	0	65	101	67	150	478	0	81	419	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.19	1.04	1.09	1.19	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	50	50		50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						2						
Detector Phase	1	6		5	2	2	3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	

Lanes, Volumes, Timings
12: Del Prado & Golden Lantern

Year 2035 - With Project
PM Peak Hour - Alternative 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	7.5	42.0		7.5	34.0	34.0	7.5	35.0		7.5	30.0	
Total Split (s)	13.6	53.8	0.0	14.0	54.2	54.2	22.2	36.2	0.0	16.0	30.0	0.0
Total Split (%)	11.3%	44.6%	0.0%	11.7%	45.2%	45.2%	18.5%	30.2%	0.0%	13.3%	25.0%	0.0%
Maximum Green (s)	10.1	48.8		10.5	49.2	49.2	18.7	31.2		12.5	25.0	
Yellow Time (s)	3.0	4.0		3.0	4.0	4.0	3.0	4.0		3.0	4.0	
All-Red Time (s)	0.5	1.0		0.5	1.0	1.0	0.5	1.0		0.5	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	5.0	4.0	3.5	5.0	5.0	3.5	5.0	4.0	3.5	5.0	4.0
Lead/Lag	Lead	Lead		Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.5	3.0		1.5	3.0	3.0	1.5	3.0		1.5	3.0	
Minimum Gap (s)	1.5	1.5		1.5	1.5	1.5	1.5	1.5		1.5	1.5	
Time Before Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None	None	None	Min		None	Min	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		30.0			22.0	22.0		23.0			18.0	
Pedestrian Calls (#/hr)		5			5	5		5			5	
Act Effct Green (s)	7.2	29.7		7.6	30.0	30.0	11.9	23.2		8.4	16.6	
Actuated g/C Ratio	0.09	0.36		0.09	0.37	0.37	0.15	0.28		0.10	0.20	
v/c Ratio	0.39	0.78		0.43	0.17	0.11	0.60	0.50		0.46	0.61	
Control Delay	51.9	35.0		52.4	20.8	5.8	49.7	31.4		51.2	36.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	51.9	35.0		52.4	20.8	5.8	49.7	31.4		51.2	36.0	
LOS	D	C		D	C	A	D	C		D	D	
Approach Delay		36.9			25.3			35.8			38.5	
Approach LOS		D			C			D			D	
90th %ile Green (s)	10.1	48.8		10.5	49.2	49.2	18.7	31.2		12.5	25.0	
90th %ile Term Code	Max	Max		Max	Hold	Hold	Max	Hold		Max	Ped	
70th %ile Green (s)	8.9	37.0		9.4	37.5	37.5	15.0	23.9		10.4	19.3	
70th %ile Term Code	Gap	Gap		Gap	Hold	Hold	Gap	Hold		Gap	Gap	
50th %ile Green (s)	7.1	29.2		7.5	29.6	29.6	11.7	19.4		8.2	15.9	
50th %ile Term Code	Gap	Gap		Gap	Hold	Hold	Gap	Hold		Gap	Gap	
30th %ile Green (s)	5.6	22.9		5.9	23.2	23.2	9.1	15.7		6.5	13.1	
30th %ile Term Code	Gap	Gap		Gap	Hold	Hold	Gap	Hold		Gap	Gap	
10th %ile Green (s)	0.0	14.1		0.0	14.1	14.1	6.0	18.8		0.0	9.3	
10th %ile Term Code	Skip	Gap		Skip	Hold	Hold	Gap	Hold		Skip	Gap	
Queue Length 50th (ft)	28	199		32	34	0	73	113		40	98	
Queue Length 95th (ft)	88	408		96	87	28	180	223		113	203	
Internal Link Dist (ft)		143			354			857			578	
Turn Bay Length (ft)				140			200			180		
Base Capacity (vph)	230	1031		239	1051	1016	441	1467		295	1161	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.25	0.44		0.27	0.10	0.07	0.34	0.33		0.27	0.36	

Intersection Summary

Area Type: Other









Lanes, Volumes, Timings
 12: Del Prado & Golden Lantern

Year 2035 - With Project
 PM Peak Hour - Alternative 1

Cycle Length: 120
 Actuated Cycle Length: 82
 Natural Cycle: 95
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 35.5
 Intersection Capacity Utilization 62.9%
 Analysis Period (min) 15
 90th %ile Actuated Cycle: 120
 70th %ile Actuated Cycle: 97.7
 50th %ile Actuated Cycle: 81.3
 30th %ile Actuated Cycle: 68
 10th %ile Actuated Cycle: 42.9

Intersection LOS: D
 ICU Level of Service B

Splits and Phases: 12: Del Prado & Golden Lantern

 ø1	 ø2	 ø3	 ø4
3.6 s	54.2 s	22.2 s	30 s
 ø6	 ø5	 ø7	 ø8
53.8 s	14 s	16 s	36.2 s

HCM Signalized Intersection Capacity Analysis
12: Del Prado & Golden Lantern

Year 2035 - With Project
PM Peak Hour - Alternative 1



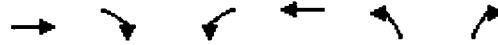
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↗	↖	↕		↖	↕	
Volume (vph)	57	407	45	65	101	67	150	470	8	81	349	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	11	11	10	11	11	11	11	11	11	11	11
Total Lost time (s)	3.5	5.0		3.5	5.0	5.0	3.5	5.0		3.5	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1652	1596		1652	1621	1531	1711	3413		1711	3336	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1652	1596		1652	1621	1531	1711	3413		1711	3336	
Peak-hour factor, PHF	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. Flow (vph)	57	407	45	65	101	67	150	470	8	81	349	70
RTOR Reduction (vph)	0	4	0	0	0	43	0	1	0	0	14	0
Lane Group Flow (vph)	57	448	0	65	101	24	150	477	0	81	405	0
Parking (#/hr)		0			0							
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases						2						
Actuated Green, G (s)	5.7	29.7		6.0	30.0	30.0	11.9	23.2		6.7	18.0	
Effective Green, g (s)	5.7	29.7		6.0	30.0	30.0	11.9	23.2		6.7	18.0	
Actuated g/C Ratio	0.07	0.36		0.07	0.36	0.36	0.14	0.28		0.08	0.22	
Clearance Time (s)	3.5	5.0		3.5	5.0	5.0	3.5	5.0		3.5	5.0	
Vehicle Extension (s)	1.5	3.0		1.5	3.0	3.0	1.5	3.0		1.5	3.0	
Lane Grp Cap (vph)	114	574		120	589	556	247	959		139	727	
v/s Ratio Prot	0.03	c0.28		c0.04	0.06		c0.09	c0.14		0.05	0.12	
v/s Ratio Perm						0.02						
v/c Ratio	0.50	0.78		0.54	0.17	0.04	0.61	0.50		0.58	0.56	
Uniform Delay, d1	37.1	23.6		37.0	17.9	17.0	33.2	24.8		36.6	28.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.3	6.8		2.7	0.1	0.0	2.9	0.4		4.0	0.9	
Delay (s)	38.3	30.4		39.6	18.0	17.1	36.0	25.2		40.6	29.7	
Level of Service	D	C		D	B	B	D	C		D	C	
Approach Delay (s)		31.3			23.8			27.8			31.4	
Approach LOS		C			C			C			C	

Intersection Summary

HCM Average Control Delay	29.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	82.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
13: PCH &

Year 2035 - With Project
PM Peak Hour - Alternative 1



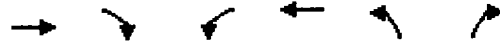
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Volume (vph)	1155	0	0	1534	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		0	1
Taper Length (ft)		60	60		60	60
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Ped Bike Factor						0.865
Flt Protected						
Satd. Flow (prot)	3421	0	0	3421	0	1558
Flt Permitted						
Satd. Flow (perm)	3421	0	0	3421	0	1558
Link Speed (mph)	35			35	35	
Link Distance (ft)	358			234	171	
Travel Time (s)	7.0			4.6	3.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	1155	0	0	1534	0	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1155	0	0	1534	0	6
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			10	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.04	1.04	1.04	1.04	1.04
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 45.7% ICU Level of Service A
 Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis
 13: PCH &

Year 2035 - With Project
 PM Peak Hour - Alternative 1



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↗
Volume (veh/h)	1155	0	0	1534	0	6
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1155	0	0	1534	0	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)	358			234		
pX, platoon unblocked			0.81		0.91	0.81
vC, conflicting volume			1155		1922	578
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			728		877	16
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	99
cM capacity (veh/h)			708		261	859

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	578	578	767	767	6
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	6
cSH	1700	1700	1700	1700	859
Volume to Capacity	0.34	0.34	0.45	0.45	0.01
Queue Length 95th (ft)	0	0	0	0	1
Control Delay (s)	0.0	0.0	0.0	0.0	9.2
Lane LOS					A
Approach Delay (s)	0.0		0.0		9.2
Approach LOS					A

Intersection Summary					
Average Delay			0.0		
Intersection Capacity Utilization			45.7%	ICU Level of Service	A
Analysis Period (min)			15		