

APPENDIX H
YEAR 2015 AND 2035 ALLEY
INTERSECTION LEVEL OF SERVICE CALCULATION
WORKSHEETS (HCM)

YEAR 2015
ONE-WAY OPERATIONS

HCM Unsignalized Intersection Capacity Analysis
 14: Alley & Blue Lantern

Year 2015 - No Project
 AM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	6	9	54	6	1	41
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	6	9	54	6	1	41
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						195
pX, platoon unblocked						
vC, conflicting volume	100	57			60	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	100	57			60	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			100	
cM capacity (veh/h)	898	1009			1544	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	15	60	42
Volume Left	6	0	1
Volume Right	9	6	0
cSH	962	1700	1544
Volume to Capacity	0.02	0.04	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.8	0.0	0.2
Lane LOS	A		A
Approach Delay (s)	8.8	0.0	0.2
Approach LOS	A		

Intersection Summary			
Average Delay		1.2	
Intersection Capacity Utilization		13.3%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 15: Alley & Ruby Lantern

Year 2015 - No Project
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	3	2	3	0	2	1	3	22	2	4	17	17
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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	2	3	0	2	1	3	22	2	4	17	17
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	64	64	26	66	71	23	34			24		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	64	64	26	66	71	23	34			24		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	924	824	1050	919	816	1054	1578			1591		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	8	3	27	38								
Volume Left	3	0	3	4								
Volume Right	3	1	2	17								
cSH	938	882	1578	1591								
Volume to Capacity	0.01	0.00	0.00	0.00								
Queue Length 95th (ft)	1	0	0	0								
Control Delay (s)	8.9	9.1	0.8	0.8								
Lane LOS	A	A	A	A								
Approach Delay (s)	8.9	9.1	0.8	0.8								
Approach LOS	A	A										
Intersection Summary												
Average Delay			2.0									
Intersection Capacity Utilization			13.3%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

Year 2015 - No Project

16: Alley & Amber Lantern

AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕			↕			↕			↕		
Volume (veh/h)	4	2	4	0	0	4	1	15	1	4	25	7	
Sign Control		Stop			Stop			Free			Free		
Grade		0%			0%			0%			0%		
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)	4	2	4	0	0	4	1	15	1	4	25	7	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type									None				
Median storage veh												197	
Upstream signal (ft)													
pX, platoon unblocked													
vC, conflicting volume	58	54	28	59	58	16	32					16	
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	58	54	28	59	58	16	32					16	
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1					4.1	
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2					2.2	
p0 queue free %	100	100	100	100	100	100	100					100	
cM capacity (veh/h)	933	834	1046	930	831	1064	1580					1602	
Direction Lane #	EB 1	WB 1	NB 1	SB 1									
Volume Total	10	4	17	36									
Volume Left	4	0	1	4									
Volume Right	4	4	1	7									
cSH	952	1064	1580	1602									
Volume to Capacity	0.01	0.00	0.00	0.00									
Queue Length 95th (ft)	1	0	0	0									
Control Delay (s)	8.8	8.4	0.4	0.8									
Lane LOS	A	A	A	A									
Approach Delay (s)	8.8	8.4	0.4	0.8									
Approach LOS	A	A											
Intersection Summary													
Average Delay			2.4										
Intersection Capacity Utilization			14.1%	ICU Level of Service	A								
Analysis Period (min)			15										

HCM Unsignalized Intersection Capacity Analysis
 17: Alley & Violet Lantern

Year 2015 - No Project
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (veh/h)	5	1	0	2	0	3	1	15	0	2	13	15
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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)	5	1	0	2	0	3	1	15	0	2	13	15
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh												193
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	44	42	20	42	49	15	28			15		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	44	42	20	42	49	15	28			15		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	100	100	100	100	100			100		
cM capacity (veh/h)	954	849	1057	959	841	1065	1585			1603		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	6	5	16	30
Volume Left	5	2	1	2
Volume Right	0	3	0	15
cSH	934	1020	1585	1603
Volume to Capacity	0.01	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0	0
Control Delay (s)	8.9	8.5	0.5	0.5
Lane LOS	A	A	A	A
Approach Delay (s)	8.9	8.5	0.5	0.5
Approach LOS	A	A		

Intersection Summary			
Average Delay		2.1	
Intersection Capacity Utilization		13.3%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 18: Alley & Old Golden Lantern

Year 2015 - No Project
 AM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↑	↓	
Volume (veh/h)	4	1	2	28	3	1
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	4	1	2	28	3	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	36	4	4			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	36	4	4			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	976	1080	1618			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	5	30	4
Volume Left	4	2	0
Volume Right	1	0	1
cSH	995	1618	1700
Volume to Capacity	0.01	0.00	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	8.6	0.5	0.0
Lane LOS	A	A	
Approach Delay (s)	8.6	0.5	0.0
Approach LOS	A		

Intersection Summary			
Average Delay		1.5	
Intersection Capacity Utilization		13.3%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 14: Alley & Blue Lantern

Year 2015 - No Project
 PM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Volume (veh/h)	1	9	112	3	2	46
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1	9	112	3	2	46
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						195
pX, platoon unblocked						
vC, conflicting volume	164	114			115	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	164	114			115	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	826	939			1474	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	10	115	48
Volume Left	1	0	2
Volume Right	9	3	0
cSH	927	1700	1474
Volume to Capacity	0.01	0.07	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.9	0.0	0.3
Lane LOS	A		A
Approach Delay (s)	8.9	0.0	0.3
Approach LOS	A		

Intersection Summary			
Average Delay		0.6	
Intersection Capacity Utilization		16.1%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 15: Alley & Ruby Lantern

Year 2015 - No Project
 PM Peak Hour



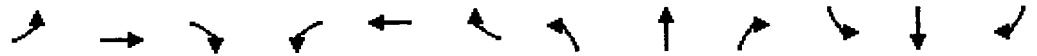
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	0	2	3	1	4	7	2	20	1	5	32	12
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	2	3	1	4	7	2	20	1	5	32	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	82	73	38	76	78	20	44			21		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	82	73	38	76	78	20	44			21		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	99	100			100		
cM capacity (veh/h)	894	814	1034	906	808	1057	1564			1595		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	5	12	23	49
Volume Left	0	1	2	5
Volume Right	3	7	1	12
cSH	933	947	1564	1595
Volume to Capacity	0.01	0.01	0.00	0.00
Queue Length 95th (ft)	0	1	0	0
Control Delay (s)	8.9	8.9	0.6	0.8
Lane LOS	A	A	A	A
Approach Delay (s)	8.9	8.9	0.6	0.8
Approach LOS	A	A		

Intersection Summary			
Average Delay		2.3	
Intersection Capacity Utilization		13.7%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 16: Alley & Amber Lantern

Year 2015 - No Project
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (veh/h)	13	0	1	0	0	8	0	25	2	6	16	14
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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)	13	0	1	0	0	8	0	25	2	6	16	14
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)											197	
pX, platoon unblocked												
vC, conflicting volume	69	62	23	62	68	26	30			27		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	69	62	23	62	68	26	30			27		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	100	100	100	99	100			100		
cM capacity (veh/h)	914	826	1054	929	819	1050	1583			1587		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	14	8	27	36
Volume Left	13	0	0	6
Volume Right	1	8	2	14
cSH	922	1050	1583	1587
Volume to Capacity	0.02	0.01	0.00	0.00
Queue Length 95th (ft)	1	1	0	0
Control Delay (s)	9.0	8.5	0.0	1.2
Lane LOS	A	A		A
Approach Delay (s)	9.0	8.5	0.0	1.2
Approach LOS	A	A		

Intersection Summary			
Average Delay		2.8	
Intersection Capacity Utilization		21.2%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 17: Alley & Violet Lantern

Year 2015 - No Project
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	21	0	0	2	1	7	0	24	0	5	61	18
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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)	21	0	0	2	1	7	0	24	0	5	61	18
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											193	
pX, platoon unblocked												
vC, conflicting volume	112	104	70	104	113	24	79			24		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	112	104	70	104	113	24	79			24		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	100	100	100	99	100			100		
cM capacity (veh/h)	858	784	993	874	775	1052	1519			1591		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	21	10	24	84
Volume Left	21	2	0	5
Volume Right	0	7	0	18
cSH	858	978	1519	1591
Volume to Capacity	0.02	0.01	0.00	0.00
Queue Length 95th (ft)	2	1	0	0
Control Delay (s)	9.3	8.7	0.0	0.5
Lane LOS	A	A		A
Approach Delay (s)	9.3	8.7	0.0	0.5
Approach LOS	A	A		

Intersection Summary			
Average Delay		2.3	
Intersection Capacity Utilization		19.6%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 18: Alley & Old Golden Lantern

Year 2015 - No Project
 PM Peak Hour












Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↕	↕	
Volume (veh/h)	8	1	0	20	4	1
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	8	1	0	20	4	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	24	4	5			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	24	4	5			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	991	1079	1616			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	9	20	5			
Volume Left	8	0	0			
Volume Right	1	0	1			
cSH	1000	1616	1700			
Volume to Capacity	0.01	0.00	0.00			
Queue Length 95th (ft)	1	0	0			
Control Delay (s)	8.6	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	8.6	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			2.3			
Intersection Capacity Utilization			13.3%	ICU Level of Service	A	
Analysis Period (min)			15			

YEAR 2035
ONE-WAY OPERATIONS

HCM Unsignalized Intersection Capacity Analysis
 14 Alley & Blue Lantern

Year 2035 - No Project
 AM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	7	10	60	7	1	45
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	7	10	60	7	1	45
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						195
pX, platoon unblocked						
vC, conflicting volume	110	64			67	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	110	64			67	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			100	
cM capacity (veh/h)	886	1001			1535	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	17	67	46			
Volume Left	7	0	1			
Volume Right	10	7	0			
cSH	950	1700	1535			
Volume to Capacity	0.02	0.04	0.00			
Queue Length 95th (ft)	1	0	0			
Control Delay (s)	8.9	0.0	0.2			
Lane LOS	A		A			
Approach Delay (s)	8.9	0.0	0.2			
Approach LOS	A					
Intersection Summary						
Average Delay			1.2			
Intersection Capacity Utilization			13.6%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

Year 2035 · No Project

15. Alley & Ruby Lantern

AM Peak Hour



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (veh/h)	3	2	3	0	2	1	3	24	2	5	19	19
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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	2	3	0	2	1	3	24	2	5	19	19
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	72	70	28	74	79	25	38			26		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	72	70	28	74	79	25	38			26		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	914	816	1046	909	807	1051	1572			1588		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	8	3	29	43
Volume Left	3	0	3	5
Volume Right	3	1	2	19
cSH	930	875	1572	1588
Volume to Capacity	0.01	0.00	0.00	0.00
Queue Length 95th (ft)	1	0	0	0
Control Delay (s)	8.9	9.1	0.8	0.9
Lane LOS	A	A	A	A
Approach Delay (s)	8.9	9.1	0.8	0.9
Approach LOS	A	A		

Intersection Summary			
Average Delay		1.9	
Intersection Capacity Utilization		13.3%	ICU Level of Service
Analysis Period (min)		15	A

















HCM Unsignalized Intersection Capacity Analysis
 16 Alley & Amber Lantern

Year 2035 · No Project
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	2	5	0	0	5	1	17	1	5	27	8
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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)	5	2	5	0	0	5	1	17	1	5	27	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)											197	
pX, platoon unblocked												
vC, conflicting volume	66	61	31	66	64	18	35			18		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	66	61	31	66	64	18	35			18		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	100	100	100	100	100			100		
cM capacity (veh/h)	921	827	1043	918	823	1061	1576			1599		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	12	5	19	40								
Volume Left	5	0	1	5								
Volume Right	5	5	1	8								
cSH	949	1061	1576	1599								
Volume to Capacity	0.01	0.00	0.00	0.00								
Queue Length 95th (ft)	1	0	0	0								
Control Delay (s)	8.8	8.4	0.4	0.9								
Lane LOS	A	A	A	A								
Approach Delay (s)	8.8	8.4	0.4	0.9								
Approach LOS	A	A										
Intersection Summary												
Average Delay			2.5									
Intersection Capacity Utilization			15.5%		ICU Level of Service					A		
Analysis Period (min)			15									










HCM Unsignalized Intersection Capacity Analysis
 17 Alley & Violet Lantern

Year 2035 · No Project
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	1	0	2	0	3	1	16	0	2	14	17
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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)	6	1	0	2	0	3	1	16	0	2	14	17
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (ft)											193	
pX, platoon unblocked												
vC, conflicting volume	48	44	22	45	53	16	31			16		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	48	44	22	45	53	16	31			16		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	100	100	100	100	100			100		
cM capacity (veh/h)	949	846	1054	955	837	1063	1582			1602		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	7	5	17	33								
Volume Left	6	2	1	2								
Volume Right	0	3	0	17								
cSH	933	1017	1582	1602								
Volume to Capacity	0.01	0.00	0.00	0.00								
Queue Length 95th (ft)	1	0	0	0								
Control Delay (s)	8.9	8.6	0.4	0.4								
Lane LOS	A	A	A	A								
Approach Delay (s)	8.9	8.6	0.4	0.4								
Approach LOS	A	A										
Intersection Summary												
Average Delay			2.1									
Intersection Capacity Utilization			13.3%		ICU Level of Service					A		
Analysis Period (min)			15									










HCM Unsignalized Intersection Capacity Analysis
 18 Alley & Old Golden Lantern

Year 2035 · No Project
 AM Peak Hour

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	5	1	2	30	3	1
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	5	1	2	30	3	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	38	4	4			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	38	4	4			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	974	1080	1618			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	6	32	4			
Volume Left	5	2	0			
Volume Right	1	0	1			
cSH	990	1618	1700			
Volume to Capacity	0.01	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	8.7	0.5	0.0			
Lane LOS	A	A				
Approach Delay (s)	8.7	0.5	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			1.6			
Intersection Capacity Utilization			13.3%	ICU Level of Service	A	
Analysis Period (min)			15			

















HCM Unsignalized Intersection Capacity Analysis
 14 Alley & Blue Lantern

Year 2035 - No Project
 PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	1	10	123	3	2	51
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1	10	123	3	2	51
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						195
pX, platoon unblocked						
vC, conflicting volume	180	124			126	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	180	124			126	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	809	926			1460	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	11	126	53			
Volume Left	1	0	2			
Volume Right	10	3	0			
cSH	914	1700	1460			
Volume to Capacity	0.01	0.07	0.00			
Queue Length 95th (ft)	1	0	0			
Control Delay (s)	9.0	0.0	0.3			
Lane LOS	A		A			
Approach Delay (s)	9.0	0.0	0.3			
Approach LOS	A					
Intersection Summary						
Average Delay			0.6			
Intersection Capacity Utilization			16.7%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
15 Alley & Ruby Lantern

Year 2035 · No Project
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	2	3	1	5	8	2	22	1	6	34	14
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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)	0	2	3	1	5	8	2	22	1	6	34	14
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	90	80	41	84	86	22	48			23		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	90	80	41	84	86	22	48			23		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	99	99	100			100		
cM capacity (veh/h)	880	806	1030	896	800	1054	1559			1592		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	5	14	25	54								
Volume Left	0	1	2	6								
Volume Right	3	8	1	14								
cSH	927	936	1559	1592								
Volume to Capacity	0.01	0.01	0.00	0.00								
Queue Length 95th (ft)	0	1	0	0								
Control Delay (s)	8.9	8.9	0.6	0.8								
Lane LOS	A	A	A	A								
Approach Delay (s)	8.9	8.9	0.6	0.8								
Approach LOS	A	A										
Intersection Summary												
Average Delay			2.3									
Intersection Capacity Utilization			14.3%	ICU Level of Service	A							
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 16 Alley & Amber Lantern

Year 2035 · No Project
 PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	15	0	1	0	0	9	0	27	2	7	18	16
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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	0	1	0	0	9	0	27	2	7	18	16
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (ft)											197	
pX, platoon unblocked												
vC, conflicting volume	77	69	26	69	76	28	34			29		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	77	69	26	69	76	28	34			29		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	100	100	100	99	100			100		
cM capacity (veh/h)	901	818	1050	919	811	1047	1578			1584		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	16	9	29	41								
Volume Left	15	0	0	7								
Volume Right	1	9	2	16								
cSH	909	1047	1578	1584								
Volume to Capacity	0.02	0.01	0.00	0.00								
Queue Length 95th (ft)	1	1	0	0								
Control Delay (s)	9.0	8.5	0.0	1.3								
Lane LOS	A	A		A								
Approach Delay (s)	9.0	8.5	0.0	1.3								
Approach LOS	A	A										
Intersection Summary												
Average Delay			2.9									
Intersection Capacity Utilization			22.5%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 17 Alley & Violet Lantern

Year 2035 - No Project
 PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	23	0	0	2	1	8	0	26	0	6	65	20
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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)	23	0	0	2	1	8	0	26	0	6	65	20
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (ft)												193
pX, platoon unblocked												
vC, conflicting volume	122	113	75	113	123	26	85			26		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	122	113	75	113	123	26	85			26		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	100	100	100	99	100			100		
cM capacity (veh/h)	844	774	986	862	764	1050	1512			1588		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	23	11	26	91								
Volume Left	23	2	0	6								
Volume Right	0	8	0	20								
cSH	844	978	1512	1588								
Volume to Capacity	0.03	0.01	0.00	0.00								
Queue Length 95th (ft)	2	1	0	0								
Control Delay (s)	9.4	8.7	0.0	0.5								
Lane LOS	A	A		A								
Approach Delay (s)	9.4	8.7	0.0	0.5								
Approach LOS	A	A										
Intersection Summary												
Average Delay			2.4									
Intersection Capacity Utilization			21.5%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 18 Alley & Old Golden Lantern

Year 2035 - No Project
 PM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	9	1	0	22	5	1
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	9	1	0	22	5	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	28	6	6			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	28	6	6			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	987	1077	1615			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	10	22	6
Volume Left	9	0	0
Volume Right	1	0	1
cSH	996	1615	1700
Volume to Capacity	0.01	0.00	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.7	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.7	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay		2.3	
Intersection Capacity Utilization		13.3%	ICU Level of Service
Analysis Period (min)		15	A