



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	75	12	108	47	38	193	207	1814	38	42	1138	138
Future Volume (vph)	75	12	108	47	38	193	207	1814	38	42	1138	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-4%			-4%			-2%			0%	
Storage Length (ft)	0		0	0		0	470		280	470		355
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fr <sub>t</sub>			0.850				0.850			0.850		0.850
Fl <sub>t</sub> Protected		0.959			0.973			0.950			0.950	
Satd. Flow (prot)	0	1314	1569	0	1777	1584	1770	3408	1470	1570	3167	1538
Fl <sub>t</sub> Permitted		0.687			0.762			0.950			0.950	
Satd. Flow (perm)	0	941	1569	0	1392	1584	1770	3408	1470	1570	3167	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			117			210			113			113
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		1253			1187			3553			2951	
Travel Time (s)		34.2			32.4			44.0			36.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	48%	0%	5%	11%	0%	4%	3%	7%	11%	15%	14%	5%
Adj. Flow (vph)	82	13	117	51	41	210	225	1972	41	46	1237	150
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	95	117	0	92	210	225	1972	41	46	1237	150
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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.99	0.99	0.99	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	4	1	1	4	1
Detector Template		Thru	Right		Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)		35	35		35	35	35	406	46	35	406	46
Trailing Detector (ft)		-5	-5		-5	-5	-5	94	40	-5	94	40
Detector 1 Position(ft)		-5	-5		-5	-5	-5	94	40	-5	94	40
Detector 1 Size(ft)		40	40		40	40	40	6	6	40	6	6
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)								196			196	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Detector 3 Position(ft)								298			298	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 3 Size(ft)								6			6	
Detector 3 Type								Cl+Ex			Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)								0.0			0.0	
Detector 4 Position(ft)								400			400	
Detector 4 Size(ft)								6			6	
Detector 4 Type								Cl+Ex			Cl+Ex	
Detector 4 Channel												
Detector 4 Extend (s)								0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Free	Prot	NA	Free
Protected Phases		8			4		1	6		5		2
Permitted Phases	8		8	4		4			Free			Free
Detector Phase	8	8	8	4	4	4	1	6		5		2
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	7.0	20.0		7.0	20.0	
Minimum Split (s)	43.2	43.2	43.2	43.2	43.2	43.2	14.5	34.6		14.9	34.9	
Total Split (s)	43.2	43.2	43.2	43.2	43.2	43.2	37.5	107.6		37.9	108.0	
Total Split (%)	22.9%	22.9%	22.9%	22.9%	22.9%	22.9%	19.9%	57.0%		20.1%	57.2%	
Maximum Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	30.0	100.0		30.0	100.1	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.7	5.6		4.9	5.9	
All-Red Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	2.8	2.0		3.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		7.2	7.2		7.2	7.2	7.5	7.6		7.9	7.9	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0		4.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	
Walk Time (s)	8.0	8.0	8.0	8.0	8.0	8.0		7.0			7.0	
Flash Don't Walk (s)	28.0	28.0	28.0	28.0	28.0	28.0		20.0			20.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		21.6	21.6		21.6	21.6	25.0	104.0	156.1	11.2	86.6	156.1
Actuated g/C Ratio		0.14	0.14		0.14	0.14	0.16	0.67	1.00	0.07	0.55	1.00
v/c Ratio		0.73	0.37		0.48	0.53	0.80	0.87	0.03	0.41	0.70	0.10
Control Delay (s/veh)		97.1	12.9		72.0	12.1	85.2	29.1	0.0	85.4	29.8	0.1
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		97.1	12.9		72.0	12.1	85.2	29.1	0.0	85.4	29.8	0.1
LOS		F	B		E	B	F	C	A	F	C	A
Approach Delay (s/veh)		50.6			30.3			34.2			28.5	
Approach LOS		D			C			C			C	
Queue Length 50th (ft)		94	0		87	0	220	838	0	45	476	0
Queue Length 95th (ft)		180	62		165	80	#408	#1331	0	105	699	0
Internal Link Dist (ft)		1173			1107			3473			2871	
Turn Bay Length (ft)							470		280	470		355
Base Capacity (vph)		220	457		326	532	345	2269	1470	306	2066	1538
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		0.43	0.26		0.28	0.39	0.65	0.87	0.03	0.15	0.60	0.10

Intersection Summary

Area Type: Other

Cycle Length: 188.7

Actuated Cycle Length: 156.1

Natural Cycle: 145

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay (s/veh): 32.8

Intersection LOS: C

Intersection Capacity Utilization 88.8%







ICU Level of Service E

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: PW Pkwy (234 By-Pass)way/PW Pkwy (234 By-Pass) & Clover Hill Rd

 Ø1 37.5 s	 Ø2 108 s	 Ø4 43.2 s
 Ø5 37.9 s	 Ø6 107.6 s	 Ø8 43.2 s

HCM Signalized Intersection Capacity Analysis

Manassas HEF EA

1: PW Pkwy (234 By-Pass)way/PW Pkwy (234 By-Pass) & Clover Hill Rd

09/14/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕	↗		↕	↗	↘	↕↕	↗	↘	↕↕	↗	
Traffic Volume (vph)	75	12	108	47	38	193	207	1814	38	42	1138	138	
Future Volume (vph)	75	12	108	47	38	193	207	1814	38	42	1138	138	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Grade (%)		-4%			-4%			-2%				0%	
Total Lost time (s)		7.2	7.2		7.2	7.2	7.5	7.6	4.0	7.9	7.9	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Fr <sub>t</sub>		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Fl <sub>t</sub> Protected		0.96	1.00		0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)		1314	1569		1777	1584	1770	3408	1470	1570	3167	1538	
Fl <sub>t</sub> Permitted		0.69	1.00		0.76	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (perm)		942	1569		1392	1584	1770	3408	1470	1570	3167	1538	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	82	13	117	51	41	210	225	1972	41	46	1237	150	
RTOR Reduction (vph)	0	0	101	0	0	181	0	0	0	0	0	0	
Lane Group Flow (vph)	0	95	16	0	92	29	225	1972	41	46	1237	150	
Heavy Vehicles (%)	48%	0%	5%	11%	0%	4%	3%	7%	11%	15%	14%	5%	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Free	Prot	NA	Free	
Protected Phases		8			4		1	6		5		2	
Permitted Phases	8		8	4		4			Free			Free	
Actuated Green, G (s)		21.6	21.6		21.6	21.6	25.0	104.0	157.7	9.4	88.5	157.7	
Effective Green, g (s)		21.6	21.6		21.6	21.6	25.0	104.0	157.7	9.4	88.5	157.7	
Actuated g/C Ratio		0.14	0.14		0.14	0.14	0.16	0.66	1.00	0.06	0.56	1.00	
Clearance Time (s)		7.2	7.2		7.2	7.2	7.5	7.6		7.9	7.9		
Vehicle Extension (s)		3.0	3.0		3.0	3.0	4.0	3.0		4.0	3.0		
Lane Grp Cap (vph)		129	214		190	216	280	2247	1470	93	1777	1538	
v/s Ratio Prot							c0.13	c0.58		0.03	0.39		
v/s Ratio Perm		c0.10	0.01		0.07	0.02			0.03			0.10	
v/c Ratio		0.74	0.07		0.48	0.13	0.80	0.88	0.03	0.49	0.70	0.10	
Uniform Delay, d <sub>1</sub>		65.3	59.3		62.9	59.8	64.0	21.7	0.0	71.8	24.9	0.0	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d <sub>2</sub>		19.5	0.1		1.9	0.3	16.0	4.2	0.0	5.5	1.2	0.1	
Delay (s)		84.8	59.5		64.8	60.1	80.0	25.9	0.0	77.4	26.1	0.1	
Level of Service		F	E		E	E	F	C	A	E	C	A	
Approach Delay (s/veh)		70.8			61.5			30.9			25.0		
Approach LOS		E			E			C			C		
<b>Intersection Summary</b>													
HCM 2000 Control Delay (s/veh)			33.1									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.88										
Actuated Cycle Length (s)			157.7									Sum of lost time (s)	22.7
Intersection Capacity Utilization			88.8%									ICU Level of Service	E
Analysis Period (min)			15										

c Critical Lane Group














Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↕	↕	↕	↕	↕
Traffic Volume (vph)	173	3	0	22	53	330
Future Volume (vph)	173	3	0	22	53	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>				0.850		0.850
Fl <sub>t</sub> Protected		0.953			0.950	
Satd. Flow (prot)	0	1476	1900	1615	1805	1553
Fl <sub>t</sub> Permitted		0.953			0.950	
Satd. Flow (perm)	0	1476	1900	1615	1805	1553
Link Speed (mph)		35	35		25	
Link Distance (ft)		4575	551		1253	
Travel Time (s)		89.1	10.7		34.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	23%	0%	0%	0%	0%	4%
Adj. Flow (vph)	188	3	0	24	58	359
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	191	0	24	58	359
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Stop	Stop		Free	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	23.8%
	ICU Level of Service A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
 2: Harry J. Parrish Blvd & Clover Hill Rd

Manassas HEF EA  
 09/14/2025

						
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (veh/h)	173	3	0	22	53	330
Future Volume (Veh/h)	173	3	0	22	53	330
Sign Control		Stop	Stop		Free	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	188	3	0	24	58	359
<b>Pedestrians</b>						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)	1253					
pX, platoon unblocked						
vC, conflicting volume	116	116	116	0	0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	116	116	116	0	0	
tC, single (s)	7.3	6.5	6.5	6.2	4.1	
tC, 2 stage (s)						
tF (s)	3.7	4.0	4.0	3.3	2.2	
p0 queue free %	76	100	100	98	96	
cM capacity (veh/h)	774	750	750	1091	1636	
<b>Direction, Lane #</b>	<b>SE 1</b>	<b>NW 1</b>	<b>NW 2</b>	<b>SW 1</b>	<b>SW 2</b>	
Volume Total	191	0	24	58	359	
Volume Left	188	0	0	58	0	
Volume Right	0	0	24	0	359	
cSH	774	1700	1091	1636	1700	
Volume to Capacity	0.25	0.00	0.02	0.04	0.21	
Queue Length 95th (ft)	24	0	2	3	0	
Control Delay (s/veh)	11.2	0.0	8.4	7.3	0.0	
Lane LOS	B	A	A	A		
Approach Delay (s/veh)	11.2	8.4		1.0		
Approach LOS	B	A				
<b>Intersection Summary</b>						
Average Delay			4.4			
Intersection Capacity Utilization			23.8%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings  
 3: Parking Lot/Harry J. Parrish Blvd

Manassas HEF EA  
 09/14/2025



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	1	0	1	12	11	88	3	7	1	42	5	1
Future Volume (vph)	1	0	1	12	11	88	3	7	1	42	5	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Fr <sub>t</sub>		0.932			0.893			0.989			0.997	
Fl <sub>t</sub> Protected		0.976			0.995			0.988			0.958	
Satd. Flow (prot)	0	1728	0	0	1649	0	0	1857	0	0	1780	0
Fl <sub>t</sub> Permitted		0.976			0.995			0.988			0.958	
Satd. Flow (perm)	0	1728	0	0	1649	0	0	1857	0	0	1780	0
Link Speed (mph)		20			35			35			35	
Link Distance (ft)		296			4575			313			332	
Travel Time (s)		10.1			89.1			6.1			6.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%	20%	0%
Adj. Flow (vph)	1	0	1	13	12	96	3	8	1	46	5	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2	0	0	121	0	0	12	0	0	52	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	20.4%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
 3: Parking Lot/Harry J. Parrish Blvd

Manassas HEF EA  
 09/14/2025

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	0	1	12	11	88	3	7	1	42	5	1
Future Volume (Veh/h)	1	0	1	12	11	88	3	7	1	42	5	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	0	1	13	12	96	3	8	1	46	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	118	113	6	113	113	9	6			9		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	118	113	6	113	113	9	6			9		
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	98	98	91	100			97		
cM capacity (veh/h)	758	758	1083	848	758	1070	1628			1624		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	2	121	12	52								
Volume Left	1	13	3	46								
Volume Right	1	96	1	1								
cSH	892	1001	1628	1624								
Volume to Capacity	0.00*	0.12	0.00*	0.03								
Queue Length 95th (ft)	0	10	0	2								
Control Delay (s/veh)	9.0	9.1	1.8	6.5								
Lane LOS	A	A	A	A								
Approach Delay (s/veh)	9.0	9.1	1.8	6.5								
Approach LOS	A	A										
Intersection Summary												
Average Delay			7.9									
Intersection Capacity Utilization			20.4%		ICU Level of Service					A		
Analysis Period (min)			15									

\* Value less than 0.01.

Intersection												
Int Delay, s/veh	7.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	1	12	11	88	3	7	1	42	5	1
Future Vol, veh/h	1	0	1	12	11	88	3	7	1	42	5	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	3	0	0	0	0	20	0
Mvmt Flow	1	0	1	13	12	96	3	8	1	46	5	1

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	119	113	6	113	113	9	6	0	0	9	0	0
Stage 1	98	98	-	15	15	-	-	-	-	-	-	-
Stage 2	21	15	-	98	98	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.23	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.327	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	861	781	1083	869	781	1070	1628	-	-	1624	-	-
Stage 1	913	818	-	1010	887	-	-	-	-	-	-	-
Stage 2	1003	887	-	913	818	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	757	758	1083	848	758	1070	1628	-	-	1624	-	-
Mov Cap-2 Maneuver	757	758	-	848	758	-	-	-	-	-	-	-
Stage 1	911	795	-	1008	885	-	-	-	-	-	-	-
Stage 2	899	885	-	887	795	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Ctrl Dly, s/v	9.1		7.9		2		6.4	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1628	-	-	891	1350	1624	-	-
HCM Lane V/C Ratio	0.002	-	-	0.002	0.089	0.028	-	-
HCM Ctrl Dly (s/v)	7.2	0	-	9.1	7.9	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q (veh)	0	-	-	0	0.3	0.1	-	-

Lanes, Volumes, Timings  
4: Wakeman Dr & Frontage Rd Exit

Manassas HEF EA  
09/14/2025



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	6	1	0	5	18	0
Future Volume (vph)	6	1	0	5	18	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>	0.850					
Fl <sub>t</sub> Protected	0.950					
Satd. Flow (prot)	1805	1615	0	1900	1792	0
Fl <sub>t</sub> Permitted	0.950					
Satd. Flow (perm)	1805	1615	0	1900	1792	0
Link Speed (mph)	20			35	35	
Link Distance (ft)	393			735	313	
Travel Time (s)	13.4			14.3	6.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	6%	0%
Adj. Flow (vph)	7	1	0	5	20	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	7	1	0	5	20	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis  
 4: Wakeman Dr & Frontage Rd Exit

Manassas HEF EA  
 09/14/2025



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	6	1	0	5	18	0
Future Volume (Veh/h)	6	1	0	5	18	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	1	0	5	20	0
<b>Pedestrians</b>						
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	25	20	20			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	25	20	20			
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)	996	1064	1609			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>EB 2</b>	<b>NB 1</b>	<b>SB 1</b>		
Volume Total	7	1	5	20		
Volume Left	7	0	0	0		
Volume Right	0	1	0	0		
cSH	996	1064	1700	1700		
Volume to Capacity	0.00*	0.00*	0.00*	0.01		
Queue Length 95th (ft)	1	0	0	0		
Control Delay (s/veh)	8.6	8.4	0.0	0.0		
Lane LOS	A	A				
Approach Delay (s/veh)	8.6		0.0	0.0		
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay			2.1			
Intersection Capacity Utilization			13.3%	ICU Level of Service	A	
Analysis Period (min)			15			

\* Value less than 0.01.

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘	↗		↑	↑	
Traffic Vol, veh/h	6	1	0	5	18	0
Future Vol, veh/h	6	1	0	5	18	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	6	0
Mvmt Flow	7	1	0	5	20	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	25	20	-	0	-	0
Stage 1	20	-	-	-	-	-
Stage 2	5	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	-	-
Pot Cap-1 Maneuver	996	1064	0	-	-	0
Stage 1	1008	-	0	-	-	0
Stage 2	1023	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	996	1064	-	-	-	-
Mov Cap-2 Maneuver	996	-	-	-	-	-
Stage 1	1008	-	-	-	-	-
Stage 2	1023	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	8.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	-	996	1064	-
HCM Lane V/C Ratio	-	0.007	0.001	-
HCM Ctrl Dly (s/v)	-	8.6	8.4	-
HCM Lane LOS	-	A	A	-
HCM 95th %tile Q (veh)	-	0	0	-

Lanes, Volumes, Timings  
5: Frontage Rd Entrance & Wakeman Dr



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	7	0	12	85	49	19
Future Volume (vph)	7	0	12	85	49	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0			165
Storage Lanes	1	0	0			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>						0.850
Fl <sub>t</sub> Protected	0.950			0.994		
Satd. Flow (prot)	1399	0	0	1838	1863	1538
Fl <sub>t</sub> Permitted	0.950			0.994		
Satd. Flow (perm)	1399	0	0	1838	1863	1538
Link Speed (mph)	20			35	35	
Link Distance (ft)	189			332	652	
Travel Time (s)	6.4			6.5	12.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.94	0.92
Heavy Vehicles (%)	29%	0%	8%	2%	2%	5%
Adj. Flow (vph)	8	0	13	92	52	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	8	0	0	105	52	21
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
<b>Intersection Summary</b>						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	21.8%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis  
5: Frontage Rd Entrance & Wakeman Dr

Manassas HEF EA  
09/14/2025



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	7	0	12	85	49	19
Future Volume (Veh/h)	7	0	12	85	49	19
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.94	0.92
Hourly flow rate (vph)	8	0	13	92	52	21
<b>Pedestrians</b>						
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	170	52	73			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	170	52	73			
tC, single (s)	6.7	6.2	4.2			
tC, 2 stage (s)						
tF (s)	3.8	3.3	2.3			
p0 queue free %	99	100	99			
cM capacity (veh/h)	755	1021	1490			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>NB 1</b>	<b>SB 1</b>	<b>SB 2</b>		
Volume Total	8	105	52	21		
Volume Left	8	13	0	0		
Volume Right	0	0	0	21		
cSH	755	1490	1700	1700		
Volume to Capacity	0.01	0.00*	0.03	0.01		
Queue Length 95th (ft)	1	1	0	0		
Control Delay (s/veh)	9.8	1.0	0.0	0.0		
Lane LOS	A	A				
Approach Delay (s/veh)	9.8	1.0	0.0			
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay	1.0					
Intersection Capacity Utilization	21.8%			ICU Level of Service	A	
Analysis Period (min)	15					

\* Value less than 0.01.

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	0	12	85	49	19
Future Vol, veh/h	7	0	12	85	49	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	165
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	94	92
Heavy Vehicles, %	29	0	8	2	2	5
Mvmt Flow	8	0	13	92	52	21

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	170	52	73	0	0
Stage 1	52	-	-	-	-
Stage 2	118	-	-	-	-
Critical Hdwy	6.69	6.2	4.18	-	-
Critical Hdwy Stg 1	5.69	-	-	-	-
Critical Hdwy Stg 2	5.69	-	-	-	-
Follow-up Hdwy	3.761	3.3	2.272	-	-
Pot Cap-1 Maneuver	762	1021	1490	-	-
Stage 1	906	-	-	-	-
Stage 2	844	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	755	1021	1490	-	-
Mov Cap-2 Maneuver	755	-	-	-	-
Stage 1	898	-	-	-	-
Stage 2	844	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	9.8	0.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1490	-	755	-	-
HCM Lane V/C Ratio	0.009	-	0.01	-	-
HCM Ctrl Dly (s/v)	7.4	0	9.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q (veh)	0	-	0	-	-

Lanes, Volumes, Timings  
6: Wakeman Dr & Observation Rd

Manassas HEF EA  
09/14/2025



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	35	45	32	51	51	33
Future Volume (vph)	35	45	32	51	51	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105	0	145			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.947	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1612	1615	1752	1827	1737	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1612	1615	1752	1827	1737	0
Link Speed (mph)	35			35	35	
Link Distance (ft)	671			989	700	
Travel Time (s)	13.1			19.3	13.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	12%	0%	3%	4%	4%	3%
Adj. Flow (vph)	38	49	35	55	55	36
Shared Lane Traffic (%)						
Lane Group Flow (vph)	38	49	35	55	91	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
<b>Intersection Summary</b>						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	18.4%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis  
6: Wakeman Dr & Observation Rd

Manassas HEF EA  
09/14/2025



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	35	45	32	51	51	33
Future Volume (Veh/h)	35	45	32	51	51	33
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	38	49	35	55	55	36
<b>Pedestrians</b>						
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	198	73	91			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	198	73	91			
tC, single (s)	6.5	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.3	2.2			
p0 queue free %	95	95	98			
cM capacity (veh/h)	751	995	1498			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>EB 2</b>	<b>NB 1</b>	<b>NB 2</b>	<b>SB 1</b>	
Volume Total	38	49	35	55	91	
Volume Left	38	0	35	0	0	
Volume Right	0	49	0	0	36	
cSH	751	995	1498	1700	1700	
Volume to Capacity	0.05	0.05	0.02	0.03	0.05	
Queue Length 95th (ft)	4	4	2	0	0	
Control Delay (s/veh)	10.1	8.8	7.5	0.0	0.0	
Lane LOS	B	A	A			
Approach Delay (s/veh)	9.4		2.9		0.0	
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay			4.0			
Intersection Capacity Utilization			18.4%	ICU Level of Service	A	
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↙	↗	↙	↑	↗	
Traffic Vol, veh/h	35	45	32	51	51	33
Future Vol, veh/h	35	45	32	51	51	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	105	0	145	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	12	0	3	4	4	3
Mvmt Flow	38	49	35	55	55	36










Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	198	73	91	0	0
Stage 1	73	-	-	-	-
Stage 2	125	-	-	-	-
Critical Hdwy	6.52	6.2	4.13	-	-
Critical Hdwy Stg 1	5.52	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-
Follow-up Hdwy	3.608	3.3	2.227	-	-
Pot Cap-1 Maneuver	769	995	1498	-	-
Stage 1	925	-	-	-	-
Stage 2	876	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	751	995	1498	-	-
Mov Cap-2 Maneuver	751	-	-	-	-
Stage 1	904	-	-	-	-
Stage 2	876	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	9.3	2.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1498	-	751	995	-	-
HCM Lane V/C Ratio	0.023	-	0.051	0.049	-	-
HCM Ctrl Dly (s/v)	7.5	-	10	8.8	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q (veh)	0.1	-	0.2	0.2	-	-










Lanes, Volumes, Timings  
8: Observation Rd & Piper Ln

Manassas HEF EA  
09/14/2025

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	11	33	21	21	60	21
Future Volume (vph)	11	33	21	21	60	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.899		0.932			
Flt Protected	0.988					0.964
Satd. Flow (prot)	1688	0	1771	0	0	1717
Flt Permitted	0.988					0.964
Satd. Flow (perm)	1688	0	1771	0	0	1717
Link Speed (mph)	35		25			25
Link Distance (ft)	2530		410			1111
Travel Time (s)	49.3		11.2			30.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	9%	0%
Adj. Flow (vph)	12	36	23	23	65	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	48	0	46	0	0	88
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.04	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
<b>Intersection Summary</b>						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	21.1%		ICU Level of Service A			
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis  
 8: Observation Rd & Piper Ln

Manassas HEF EA  
 09/14/2025

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	11	33	21	21	60	21
Future Volume (Veh/h)	11	33	21	21	60	21
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	36	23	23	65	23
<b>Pedestrians</b>						
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	188	35			46	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	188	35			46	
tC, single (s)	6.4	6.2			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.3	
p0 queue free %	98	97			96	
cM capacity (veh/h)	772	1044			1518	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	48	46	88			
Volume Left	12	0	65			
Volume Right	36	23	0			
cSH	960	1700	1518			
Volume to Capacity	0.05	0.03	0.04			
Queue Length 95th (ft)	4	0	3			
Control Delay (s/veh)	8.9	0.0	5.6			
Lane LOS	A		A			
Approach Delay (s/veh)	8.9	0.0	5.6			
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay			5.1			
Intersection Capacity Utilization			21.1%	ICU Level of Service		A
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		T			T
Traffic Vol, veh/h	11	33	21	21	60	21
Future Vol, veh/h	11	33	21	21	60	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	9	0
Mvmt Flow	12	36	23	23	65	23










Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	188	35	0	0	46
Stage 1	35	-	-	-	-
Stage 2	153	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.19
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.281
Pot Cap-1 Maneuver	806	1044	-	-	1518
Stage 1	993	-	-	-	-
Stage 2	880	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	771	1044	-	-	1518
Mov Cap-2 Maneuver	771	-	-	-	-
Stage 1	993	-	-	-	-
Stage 2	842	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	9	0	5.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	959	1518
HCM Lane V/C Ratio	-	-	0.05	0.043
HCM Ctrl Dly (s/v)	-	-	9	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q (veh)	-	-	0.2	0.1










Lanes, Volumes, Timings  
 12: Wakeman Dr & S Satellite Driveway

Manassas HEF EA  
 09/14/2025

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	92	0	0	68
Future Volume (vph)	0	0	92	0	0	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
<b>Fr</b>						
<b>Flt Protected</b>						
Satd. Flow (prot)	1900	0	1810	0	0	1845
<b>Flt Permitted</b>						
Satd. Flow (perm)	1900	0	1810	0	0	1845
Link Speed (mph)	20		35			35
Link Distance (ft)	455		652			568
Travel Time (s)	15.5		12.7			11.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	5%	0%	0%	3%
Adj. Flow (vph)	0	0	100	0	0	74
<b>Shared Lane Traffic (%)</b>						
Lane Group Flow (vph)	0	0	100	0	0	74
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
<b>Two way Left Turn Lane</b>						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
<b>Intersection Summary</b>						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	8.2%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis  
 12: Wakeman Dr & S Satellite Driveway

Manassas HEF EA  
 09/14/2025

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	92	0	0	68
Future Volume (Veh/h)	0	0	92	0	0	68
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	100	0	0	74
<b>Pedestrians</b>						
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	174	100			100	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	174	100			100	
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)	821	961			1505	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	0	100	74			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1505			
Volume to Capacity	0.00	0.06	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s/veh)	0.0	0.0	0.0			
Lane LOS	A					
Approach Delay (s/veh)	0.0	0.0	0.0			
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay			0.0			
Intersection Capacity Utilization			8.2%	ICU Level of Service		A
Analysis Period (min)			15			










Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	92	0	0	68
Future Vol, veh/h	0	0	92	0	0	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	5	0	0	3
Mvmt Flow	0	0	100	0	0	74

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	174	100	0	0	100
Stage 1	100	-	-	-	-
Stage 2	74	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	821	961	-	-	1505
Stage 1	929	-	-	-	-
Stage 2	954	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	821	961	-	-	1505
Mov Cap-2 Maneuver	821	-	-	-	-
Stage 1	929	-	-	-	-
Stage 2	954	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS	A		










Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1505	-
HCM Lane V/C Ratio	-	-	-	-
HCM Ctrl Dly (s/v)	-	-	0	-
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q (veh)	-	-	0	-

Lanes, Volumes, Timings  
 13: Wakeman Dr & N Satellite Driveway

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	92	0	0	68
Future Volume (vph)	0	0	92	0	0	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
<b>Fr</b>						
Flt Protected						
Satd. Flow (prot)	1900	0	1810	0	0	1845
Flt Permitted						
Satd. Flow (perm)	1900	0	1810	0	0	1845
Link Speed (mph)	20		35			35
Link Distance (ft)	404		568			681
Travel Time (s)	13.8		11.1			13.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	5%	0%	0%	3%
Adj. Flow (vph)	0	0	100	0	0	74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	100	0	0	74
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
<b>Two way Left Turn Lane</b>						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
<b>Intersection Summary</b>						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	8.2%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis  
 13: Wakeman Dr & N Satellite Driveway

Manassas HEF EA  
 09/14/2025

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	92	0	0	68
Future Volume (Veh/h)	0	0	92	0	0	68
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	100	0	0	74
<b>Pedestrians</b>						
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	174	100			100	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	174	100			100	
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)	821	961			1505	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	0	100	74			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1505			
Volume to Capacity	0.00	0.06	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s/veh)	0.0	0.0	0.0			
Lane LOS	A					
Approach Delay (s/veh)	0.0	0.0	0.0			
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay	0.0					
Intersection Capacity Utilization	8.2%		ICU Level of Service	A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		T			T
Traffic Vol, veh/h	0	0	92	0	0	68
Future Vol, veh/h	0	0	92	0	0	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	5	0	0	3
Mvmt Flow	0	0	100	0	0	74

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	174	100	0	0	100
Stage 1	100	-	-	-	-
Stage 2	74	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	821	961	-	-	1505
Stage 1	929	-	-	-	-
Stage 2	954	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	821	961	-	-	1505
Mov Cap-2 Maneuver	821	-	-	-	-
Stage 1	929	-	-	-	-
Stage 2	954	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1505	-
HCM Lane V/C Ratio	-	-	-	-
HCM Ctrl Dly (s/v)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q (veh)	-	-	0	0



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	28	68	83	10	0	0
Future Volume (vph)	28	68	83	10	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>			0.985			
Fl <sub>t</sub> Protected		0.986				
Satd. Flow (prot)	0	1834	1792	0	1900	0
Fl <sub>t</sub> Permitted		0.986				
Satd. Flow (perm)	0	1834	1792	0	1900	0
Link Speed (mph)		35	35		20	
Link Distance (ft)		989	681		412	
Travel Time (s)		19.3	13.3		14.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	3%	5%	0%	0%	0%
Adj. Flow (vph)	30	74	90	11	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	104	101	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	15.1%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis  
 14: Wakeman Dr & Employee Lot

Manassas HEF EA  
 09/14/2025



Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↔	↔		↔	
Traffic Volume (veh/h)	28	68	83	10	0	0
Future Volume (Veh/h)	28	68	83	10	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	30	74	90	11	0	0
<b>Pedestrians</b>						
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	101				230	96
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	101				230	96
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				100	100
cM capacity (veh/h)	1504				748	967
<b>Direction, Lane #</b>	<b>SE 1</b>	<b>NW 1</b>	<b>SW 1</b>			
Volume Total	104	101	0			
Volume Left	30	0	0			
Volume Right	0	11	0			
cSH	1504	1700	1700			
Volume to Capacity	0.02	0.06	0.00			
Queue Length 95th (ft)	2	0	0			
Control Delay (s/veh)	2.3	0.0	0.0			
Lane LOS	A		A			
Approach Delay (s/veh)	2.3	0.0	0.0			
Approach LOS			A			
<b>Intersection Summary</b>						
Average Delay			1.1			
Intersection Capacity Utilization		15.1%		ICU Level of Service		A
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	1.1					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	28	68	83	10	0	0
Future Vol, veh/h	28	68	83	10	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	3	5	0	0	0
Mvmt Flow	30	74	90	11	0	0




















Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	101	0	-	0	230 96
Stage 1	-	-	-	-	96 -
Stage 2	-	-	-	-	134 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1504	-	-	-	763 966
Stage 1	-	-	-	-	933 -
Stage 2	-	-	-	-	897 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1504	-	-	-	747 966
Mov Cap-2 Maneuver	-	-	-	-	747 -
Stage 1	-	-	-	-	913 -
Stage 2	-	-	-	-	897 -

Approach	SE	NW	SW
HCM Ctrl Dly, s/v	2.2	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NWT	NWR	SEL	SETSWLn1
Capacity (veh/h)	-	-	1504	-
HCM Lane V/C Ratio	-	-	0.02	-
HCM Ctrl Dly (s/v)	-	-	7.4	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q (veh)	-	-	0.1	-




















Lanes, Volumes, Timings  
15: Gateway Blvd

Manassas HEF EA  
09/14/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	17	2	1	64	31	0	0	2	12	0	49
Future Volume (vph)	18	17	2	1	64	31	0	0	2	12	0	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	305		0	0		0	0		105
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (ft)	95			105			0			0		
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
Frt		0.985			0.951			0.865				0.850
Flt Protected	0.950			0.950							0.950	
Satd. Flow (prot)	1703	3209	0	1805	3313	0	0	1644	0	0	1656	1524
Flt Permitted	0.950			0.950							0.950	
Satd. Flow (perm)	1703	3209	0	1805	3313	0	0	1644	0	0	1656	1524
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		1357			2771			405			407	
Travel Time (s)		26.4			54.0			11.0			11.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	12%	0%	0%	2%	7%	0%	0%	0%	9%	0%	6%
Adj. Flow (vph)	20	18	2	1	70	34	0	0	2	13	0	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	20	20	0	1	104	0	0	2	0	0	13	53
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
<b>Intersection Summary</b>												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	21.7%						ICU Level of Service A					
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis  
15: Gateway Blvd

Manassas HEF EA  
09/14/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	17	2	1	64	31	0	0	2	12	0	49
Future Volume (Veh/h)	18	17	2	1	64	31	0	0	2	12	0	49
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	18	2	1	70	34	0	0	2	13	0	53
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
4												
Median type												
None												
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume												
104												
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol												
104												
tC, single (s)												
4.2												
tC, 2 stage (s)												
tF (s)												
2.3												
p0 queue free %												
99												
cM capacity (veh/h)												
1457												
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1				
Volume Total	20	12	8	1	47	57	2	66				
Volume Left	20	0	0	1	0	0	0	13				
Volume Right	0	0	2	0	0	34	2	53				
cSH	1457	1700	1700	1609	1700	1700	1075	1235				
Volume to Capacity	0.01	0.00*	0.00*	0.00*	0.03	0.03	0.00*	0.05				
Queue Length 95th (ft)	1	0	0	0	0	0	0	4				
Control Delay (s/veh)	7.5	0.0	0.0	7.2	0.0	0.0	8.4	9.0				
Lane LOS	A			A			A	A				
Approach Delay (s/veh)	3.8			0.1			8.4	9.0				
Approach LOS							A	A				
Intersection Summary												
Average Delay												
3.6												
Intersection Capacity Utilization												
21.7%												
ICU Level of Service												
A												
Analysis Period (min)												
15												

\* Value less than 0.01.

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↕		↙	↕			↕			↕	↗
Traffic Vol, veh/h	18	17	2	1	64	31	0	0	2	12	0	49
Future Vol, veh/h	18	17	2	1	64	31	0	0	2	12	0	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	305	-	-	-	-	-	-	-	105
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	6	12	0	0	2	7	0	0	0	9	0	6
Mvmt Flow	20	18	2	1	70	34	0	0	2	13	0	53

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	104	0	0	20	0	0	96	165	10	138	149	52
Stage 1	-	-	-	-	-	-	59	59	-	89	89	-
Stage 2	-	-	-	-	-	-	37	106	-	49	60	-
Critical Hdwy	4.22	-	-	4.1	-	-	7.5	6.5	6.9	7.68	6.5	7.02
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.68	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.68	5.5	-
Follow-up Hdwy	2.26	-	-	2.2	-	-	3.5	4	3.3	3.59	4	3.36
Pot Cap-1 Maneuver	1457	-	-	1609	-	-	882	731	1075	800	746	992
Stage 1	-	-	-	-	-	-	951	850	-	888	825	-
Stage 2	-	-	-	-	-	-	980	811	-	938	849	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1457	-	-	1609	-	-	826	720	1075	790	735	992
Mov Cap-2 Maneuver	-	-	-	-	-	-	826	720	-	790	735	-
Stage 1	-	-	-	-	-	-	938	838	-	876	824	-
Stage 2	-	-	-	-	-	-	927	810	-	923	837	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	3.7	0.1	8.4	9
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1075	1457	-	-	1609	-	-	790	992
HCM Lane V/C Ratio	0.002	0.013	-	-	0.001	-	-	0.017	0.054
HCM Ctrl Dly (s/v)	8.4	7.5	-	-	7.2	-	-	9.6	8.8
HCM Lane LOS	A	A	-	-	A	-	-	A	A
HCM 95th %tile Q (veh)	0	0	-	-	0	-	-	0.1	0.2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	101	29	195	52	15	122	72	1502	53	164	2033	36
Future Volume (vph)	101	29	195	52	15	122	72	1502	53	164	2033	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-4%			-4%			-2%			0%	
Storage Length (ft)	0		0	0		0	470		280	470		355
Storage Lanes	0		1	0		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fr <sub>t</sub>			0.850				0.850			0.850		0.850
Fl <sub>t</sub> Protected		0.963			0.962			0.950			0.950	
Satd. Flow (prot)	0	1797	1615	0	1808	1599	1805	3227	1382	1787	3374	1369
Fl <sub>t</sub> Permitted		0.726			0.532			0.950			0.950	
Satd. Flow (perm)	0	1355	1615	0	1000	1599	1805	3227	1382	1787	3374	1369
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			212			133			113			113
Link Speed (mph)		25			25			55			55	
Link Distance (ft)		1253			1187			3553			2951	
Travel Time (s)		34.2			32.4			44.0			36.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.96	0.92	0.95	0.92	0.92
Heavy Vehicles (%)	5%	0%	2%	2%	7%	3%	1%	13%	18%	1%	7%	18%
Adj. Flow (vph)	110	32	212	57	16	133	78	1565	58	173	2210	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	142	212	0	73	133	78	1565	58	173	2210	39
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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.99	0.99	0.99	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	4	1	1	4	1
Detector Template		Thru	Right		Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)		35	35		35	35	35	406	46	35	406	46
Trailing Detector (ft)		-5	-5		-5	-5	-5	94	40	-5	94	40
Detector 1 Position(ft)		-5	-5		-5	-5	-5	94	40	-5	94	40
Detector 1 Size(ft)		40	40		40	40	40	6	6	40	6	6
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)								196			196	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Detector 3 Position(ft)								298			298	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 3 Size(ft)								6			6	
Detector 3 Type								Cl+Ex			Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)								0.0			0.0	
Detector 4 Position(ft)								400			400	
Detector 4 Size(ft)								6			6	
Detector 4 Type								Cl+Ex			Cl+Ex	
Detector 4 Channel												
Detector 4 Extend (s)								0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Free	Prot	NA	Free
Protected Phases		8			4		1	6		5		2
Permitted Phases	8		8	4		4			Free			Free
Detector Phase	8	8	8	4	4	4	1	6		5		2
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	7.0	20.0		7.0	20.0	
Minimum Split (s)	43.2	43.2	43.2	43.2	43.2	43.2	14.5	34.6		14.9	34.9	
Total Split (s)	43.2	43.2	43.2	43.2	43.2	43.2	37.5	107.6		37.9	108.0	
Total Split (%)	22.9%	22.9%	22.9%	22.9%	22.9%	22.9%	19.9%	57.0%		20.1%	57.2%	
Maximum Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	30.0	100.0		30.0	100.1	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	4.7	5.6		4.9	5.9	
All-Red Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	2.8	2.0		3.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		7.2	7.2		7.2	7.2	7.5	7.6		7.9	7.9	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0		4.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	
Walk Time (s)	8.0	8.0	8.0	8.0	8.0	8.0		7.0			7.0	
Flash Don't Walk (s)	28.0	28.0	28.0	28.0	28.0	28.0		20.0			20.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0			0	
Act Effct Green (s)		22.9	22.9		22.9	22.9	13.7	98.0	165.9	22.1	106.5	165.9
Actuated g/C Ratio		0.14	0.14		0.14	0.14	0.08	0.59	1.00	0.13	0.64	1.00
v/c Ratio		0.76	0.52		0.53	0.40	0.52	0.82	0.04	0.73	1.02	0.03
Control Delay (s/veh)		94.8	12.1		81.9	12.6	88.2	33.5	0.1	88.0	54.5	0.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		94.8	12.1		81.9	12.6	88.2	33.5	0.1	88.0	54.5	0.0
LOS		F	B		F	B	F	C	A	F	D	A
Approach Delay (s/veh)		45.3			37.2			34.8			56.0	
Approach LOS		D			D			C			E	
Queue Length 50th (ft)		153	0		76	0	84	691	0	186	~1291	0
Queue Length 95th (ft)		246	80		142	65	154	1015	0	291	#1727	0
Internal Link Dist (ft)		1173			1107			3473			2871	
Turn Bay Length (ft)							470		280	470		355
Base Capacity (vph)		296	519		218	453	329	1962	1382	325	2165	1369
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		0.48	0.41		0.33	0.29	0.24	0.80	0.04	0.53	1.02	0.03

Intersection Summary

Area Type:	Other
Cycle Length:	188.7
Actuated Cycle Length:	165.9
Natural Cycle:	145
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.02
Intersection Signal Delay (s/veh):	46.7
Intersection LOS:	D
Intersection Capacity Utilization:	95.2%
ICU Level of Service:	F
Analysis Period (min)	15
~ 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: 1: PW Pkwy (234 By-Pass)way/PW Pkwy (234 By-Pass) & Clover Hill Rd

 Ø1 37.5 s	 Ø2 108 s	 Ø4 43.2 s
 Ø5 37.9 s	 Ø6 107.6 s	 Ø8 43.2 s

HCM Signalized Intersection Capacity Analysis

1: PW Pkwy (234 By-Pass)way/PW Pkwy (234 By-Pass) & Clover Hill Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↘	↕↕	↗	↘	↕↕	↗
Traffic Volume (vph)	101	29	195	52	15	122	72	1502	53	164	2033	36
Future Volume (vph)	101	29	195	52	15	122	72	1502	53	164	2033	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-4%			-4%			-2%				0%
Total Lost time (s)		7.2	7.2		7.2	7.2	7.5	7.6	4.0	7.9	7.9	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1796	1615		1809	1599	1805	3227	1382	1787	3374	1369
Flt Permitted		0.73	1.00		0.53	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1355	1615		1000	1599	1805	3227	1382	1787	3374	1369
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.96	0.92	0.95	0.92	0.92
Adj. Flow (vph)	110	32	212	57	16	133	78	1565	58	173	2210	39
RTOR Reduction (vph)	0	0	183	0	0	115	0	0	0	0	0	0
Lane Group Flow (vph)	0	142	29	0	73	18	78	1565	58	173	2210	39
Heavy Vehicles (%)	5%	0%	2%	2%	7%	3%	1%	13%	18%	1%	7%	18%
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Free	Prot	NA	Free
Protected Phases		8			4		1	6		5		2
Permitted Phases	8		8	4		4			Free			Free
Actuated Green, G (s)		22.9	22.9		22.9	22.9	13.7	98.0	165.7	22.1	106.5	165.7
Effective Green, g (s)		22.9	22.9		22.9	22.9	13.7	98.0	165.7	22.1	106.5	165.7
Actuated g/C Ratio		0.14	0.14		0.14	0.14	0.08	0.59	1.00	0.13	0.64	1.00
Clearance Time (s)		7.2	7.2		7.2	7.2	7.5	7.6		7.9	7.9	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	4.0	3.0		4.0	3.0	
Lane Grp Cap (vph)		187	223		138	220	149	1908	1382	238	2168	1369
v/s Ratio Prot							0.04	0.49		c0.10	c0.66	
v/s Ratio Perm		c0.10	0.02		0.07	0.01			0.04			0.03
v/c Ratio		0.76	0.13		0.53	0.08	0.52	0.82	0.04	0.73	1.02	0.03
Uniform Delay, d1		68.7	62.7		66.4	62.3	72.9	26.9	0.0	68.9	29.6	0.0
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		16.1	0.3		3.6	0.2	4.3	3.0	0.1	11.2	24.4	0.0
Delay (s)		84.9	62.9		70.0	62.4	77.1	29.8	0.1	80.1	54.0	0.0
Level of Service		F	E		E	E	E	C	A	F	D	A
Approach Delay (s/veh)		71.7			65.1			31.0			55.0	
Approach LOS		E			E			C			D	

Intersection Summary

HCM 2000 Control Delay (s/veh)	48.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	165.7	Sum of lost time (s)	22.7
Intersection Capacity Utilization	95.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings  
 2: Harry J. Parrish Blvd & Clover Hill Rd

Manassas HEF EA  
 09/14/2025



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↕	↑	↗	↖	↗
Traffic Volume (vph)	273	1	4	52	0	123
Future Volume (vph)	273	1	4	52	0	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>				0.850		0.850
Fl <sub>t</sub> Protected		0.953				
Satd. Flow (prot)	0	1775	1900	1524	1900	1509
Fl <sub>t</sub> Permitted		0.953				
Satd. Flow (perm)	0	1775	1900	1524	1900	1509
Link Speed (mph)		35	35		25	
Link Distance (ft)		4575	551		1253	
Travel Time (s)		89.1	10.7		34.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	0%	0%	6%	0%	7%
Adj. Flow (vph)	297	1	4	57	0	134
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	298	4	57	0	134
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Stop	Stop		Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	25.2%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis  
 2: Harry J. Parrish Blvd & Clover Hill Rd

Manassas HEF EA  
 09/14/2025



Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↕	↕	↕	↕	↕
Traffic Volume (veh/h)	273	1	4	52	0	123
Future Volume (Veh/h)	273	1	4	52	0	123
Sign Control		Stop	Stop		Free	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	297	1	4	57	0	134
<b>Pedestrians</b>						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)	1253					
pX, platoon unblocked						
vC, conflicting volume	2	0	0	0	0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2	0	0	0	0	
tC, single (s)	7.1	6.5	6.5	6.3	4.1	
tC, 2 stage (s)						
tF (s)	3.5	4.0	4.0	3.4	2.2	
p0 queue free %	69	100	100	95	100	
cM capacity (veh/h)	963	900	900	1073	1636	
<b>Direction, Lane #</b>	<b>SE 1</b>	<b>NW 1</b>	<b>NW 2</b>	<b>SW 1</b>	<b>SW 2</b>	
Volume Total	298	4	57	0	134	
Volume Left	297	0	0	0	0	
Volume Right	0	0	57	0	134	
cSH	963	900	1073	1700	1700	
Volume to Capacity	0.31	0.00*	0.05	0.00	0.08	
Queue Length 95th (ft)	33	0	4	0	0	
Control Delay (s/veh)	10.4	9.0	8.5	0.0	0.0	
Lane LOS	B	A	A			
Approach Delay (s/veh)	10.4	8.6		0.0		
Approach LOS	B	A				
<b>Intersection Summary</b>						
Average Delay			7.4			
Intersection Capacity Utilization			25.2%	ICU Level of Service	A	
Analysis Period (min)			15			

\* Value less than 0.01.

Lanes, Volumes, Timings  
 3: Parking Lot/Harry J. Parrish Blvd

















Manassas HEF EA  
 09/14/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	4	4	4	3	68	2	8	13	63	7	0
Future Volume (vph)	7	4	4	4	3	68	2	8	13	63	7	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Fr <sub>t</sub>		0.966			0.877			0.924				
Fl <sub>t</sub> Protected		0.976			0.998			0.996			0.957	
Satd. Flow (prot)	0	1791	0	0	1577	0	0	1674	0	0	1746	0
Fl <sub>t</sub> Permitted		0.976			0.998			0.996			0.957	
Satd. Flow (perm)	0	1791	0	0	1577	0	0	1674	0	0	1746	0
Link Speed (mph)		20			35			35			35	
Link Distance (ft)		296			4575			313			332	
Travel Time (s)		10.1			89.1			6.1			6.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	6%	0%	0%	8%	3%	14%	0%
Adj. Flow (vph)	8	4	4	4	3	74	2	9	14	68	8	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	16	0	0	81	0	0	25	0	0	76	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	21.8%
	ICU Level of Service A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis  
 3: Parking Lot/Harry J. Parrish Blvd

Manassas HEF EA  
 09/14/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	4	4	4	3	68	2	8	13	63	7	0
Future Volume (Veh/h)	7	4	4	4	3	68	2	8	13	63	7	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	4	4	4	3	74	2	9	14	68	8	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	166	171	8	170	164	16	8			23		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	166	171	8	170	164	16	8			23		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.3	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.4	2.2			2.2		
p0 queue free %	99	99	100	99	100	93	100			96		
cM capacity (veh/h)	719	694	1080	765	700	1052	1625			1586		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	16	81	25	76								
Volume Left	8	4	2	68								
Volume Right	4	74	14	0								
cSH	777	1014	1625	1586								
Volume to Capacity	0.02	0.08	0.00*	0.04								
Queue Length 95th (ft)	2	6	0	3								
Control Delay (s/veh)	9.7	8.9	0.6	6.6								
Lane LOS	A	A	A	A								
Approach Delay (s/veh)	9.7	8.9	0.6	6.6								
Approach LOS	A	A										
Intersection Summary												
Average Delay			7.0									
Intersection Capacity Utilization			21.8%		ICU Level of Service				A			
Analysis Period (min)			15									

\* Value less than 0.01.

Intersection												
Int Delay, s/veh	6.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	4	4	4	3	68	2	8	13	63	7	0
Future Vol, veh/h	7	4	4	4	3	68	2	8	13	63	7	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	6	0	0	8	3	14	0
Mvmt Flow	8	4	4	4	3	74	2	9	14	68	8	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	166	171	8	168	164	16	8	0	0	23	0	0
Stage 1	144	144	-	20	20	-	-	-	-	-	-	-
Stage 2	22	27	-	148	144	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.26	4.1	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.354	2.2	-	-	2.227	-	-
Pot Cap-1 Maneuver	803	726	1080	800	732	1052	1625	-	-	1586	-	-
Stage 1	864	782	-	1004	883	-	-	-	-	-	-	-
Stage 2	1002	877	-	859	782	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	719	694	1080	766	700	1052	1625	-	-	1586	-	-
Mov Cap-2 Maneuver	719	694	-	766	700	-	-	-	-	-	-	-
Stage 1	863	748	-	1003	882	-	-	-	-	-	-	-
Stage 2	927	876	-	814	748	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Ctrl Dly, s/v	9.7		8.3		0.6		6.6	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1625	-	-	781	1160	1586	-	-
HCM Lane V/C Ratio	0.001	-	-	0.021	0.07	0.043	-	-
HCM Ctrl Dly (s/v)	7.2	0	-	9.7	8.3	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q (veh)	0	-	-	0.1	0.2	0.1	-	-

Lanes, Volumes, Timings  
4: Wakeman Dr & Frontage Rd Exit

Manassas HEF EA  
09/14/2025













Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	4	0	0	19	16	0
Future Volume (vph)	4	0	0	19	16	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
<b>Fr</b>						
Flt Protected	0.950					
Satd. Flow (prot)	1805	1900	0	1810	1792	0
Flt Permitted	0.950					
Satd. Flow (perm)	1805	1900	0	1810	1792	0
Link Speed (mph)	20			35	35	
Link Distance (ft)	393			735	313	
Travel Time (s)	13.4			14.3	6.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	5%	6%	0%
Adj. Flow (vph)	4	0	0	21	17	0
<b>Shared Lane Traffic (%)</b>						
Lane Group Flow (vph)	4	0	0	21	17	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
<b>Two way Left Turn Lane</b>						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis  
4: Wakeman Dr & Frontage Rd Exit

Manassas HEF EA  
09/14/2025

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	4	0	0	19	16	0
Future Volume (Veh/h)	4	0	0	19	16	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	0	0	21	17	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	38	17	17			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	38	17	17			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %						
cM capacity (veh/h)	979	1068	1613			
Direction, Lane #	EB 1	EB 2	NB 1	SB 1		
Volume Total	4	0	21	17		
Volume Left	4	0	0	0		
Volume Right	0	0	0	0		
cSH	979	1700	1700	1700		
Volume to Capacity	0.00*	0.00	0.01	0.01		
Queue Length 95th (ft)	0	0	0	0		
Control Delay (s/veh)	8.7	0.0	0.0	0.0		
Lane LOS	A	A				
Approach Delay (s/veh)	8.7		0.0	0.0		
Approach LOS	A					
Intersection Summary						
Average Delay				0.8		
Intersection Capacity Utilization				13.3%	ICU Level of Service	A
Analysis Period (min)				15		

\* Value less than 0.01.

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↵	↵		↑	↑	
Traffic Vol, veh/h	4	0	0	19	16	0
Future Vol, veh/h	4	0	0	19	16	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	5	6	0
Mvmt Flow	4	0	0	21	17	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	38	17	-	0	-	0
Stage 1	17	-	-	-	-	-
Stage 2	21	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	-	-
Pot Cap-1 Maneuver	979	1068	0	-	-	0
Stage 1	1011	-	0	-	-	0
Stage 2	1007	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	979	1068	-	-	-	-
Mov Cap-2 Maneuver	979	-	-	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	1007	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	8.7	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	-	979	-	-
HCM Lane V/C Ratio	-	0.004	-	-
HCM Ctrl Dly (s/v)	-	8.7	0	-
HCM Lane LOS	-	A	A	-
HCM 95th %tile Q (veh)	-	0	-	-

Lanes, Volumes, Timings  
5: Frontage Rd Entrance & Wakeman Dr

Manassas HEF EA  
09/14/2025



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	14	5	5	79	65	12
Future Volume (vph)	14	5	5	79	65	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0			165
Storage Lanes	1	0	0			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.966					0.850
Flt Protected	0.964			0.997		
Satd. Flow (prot)	1769	0	0	1806	1810	1615
Flt Permitted	0.964			0.997		
Satd. Flow (perm)	1769	0	0	1806	1810	1615
Link Speed (mph)	20			35	35	
Link Distance (ft)	189			332	652	
Travel Time (s)	6.4			6.5	12.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	20%	4%	5%	0%
Adj. Flow (vph)	15	5	5	86	71	13
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	0	0	91	71	13
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
<b>Intersection Summary</b>						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	18.3%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis  
5: Frontage Rd Entrance & Wakeman Dr

Manassas HEF EA  
09/14/2025



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	14	5	5	79	65	12
Future Volume (Veh/h)	14	5	5	79	65	12
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	15	5	5	86	71	13
<b>Pedestrians</b>						
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	167	71	84			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	167	71	84			
tC, single (s)	6.4	6.2	4.3			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.4			
p0 queue free %	98	99	100			
cM capacity (veh/h)	825	997	1407			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>NB 1</b>	<b>SB 1</b>	<b>SB 2</b>		
Volume Total	20	91	71	13		
Volume Left	15	5	0	0		
Volume Right	5	0	0	13		
cSH	862	1407	1700	1700		
Volume to Capacity	0.02	0.00*	0.04	0.00*		
Queue Length 95th (ft)	2	0	0	0		
Control Delay (s/veh)	9.3	0.4	0.0	0.0		
Lane LOS	A	A				
Approach Delay (s/veh)	9.3	0.4	0.0			
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay	1.2					
Intersection Capacity Utilization	18.3%			ICU Level of Service	A	
Analysis Period (min)	15					

\* Value less than 0.01.

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	5	5	79	65	12
Future Vol, veh/h	14	5	5	79	65	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	165
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	20	4	5	0
Mvmt Flow	15	5	5	86	71	13

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	167	71	84	0	0
Stage 1	71	-	-	-	-
Stage 2	96	-	-	-	-
Critical Hdwy	6.4	6.2	4.3	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.38	-	-
Pot Cap-1 Maneuver	828	997	1407	-	-
Stage 1	957	-	-	-	-
Stage 2	933	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	825	997	1407	-	-
Mov Cap-2 Maneuver	825	-	-	-	-
Stage 1	953	-	-	-	-
Stage 2	933	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	9.3	0.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1407	-	864	-	-
HCM Lane V/C Ratio	0.004	-	0.024	-	-
HCM Ctrl Dly (s/v)	7.6	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q (veh)	0	-	0.1	-	-

Lanes, Volumes, Timings  
6: Wakeman Dr & Observation Rd



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	21	32	65	74	33	28
Future Volume (vph)	21	32	65	74	33	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105	0	145			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.939	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1583	1524	1770	1845	1625	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1583	1524	1770	1845	1625	0
Link Speed (mph)	35			35	35	
Link Distance (ft)	671			989	700	
Travel Time (s)	13.1			19.3	13.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	14%	6%	2%	3%	3%	18%
Adj. Flow (vph)	23	35	71	80	36	30
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	35	71	80	66	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	
<b>Intersection Summary</b>						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	20.3%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis  
 6: Wakeman Dr & Observation Rd

Manassas HEF EA  
 09/14/2025



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	21	32	65	74	33	28
Future Volume (Veh/h)	21	32	65	74	33	28
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	23	35	71	80	36	30
<b>Pedestrians</b>						
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	273	51	66			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	273	51	66			
tC, single (s)	6.5	6.3	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.2			
p0 queue free %	97	97	95			
cM capacity (veh/h)	660	1006	1536			
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>EB 2</b>	<b>NB 1</b>	<b>NB 2</b>	<b>SB 1</b>	
Volume Total	23	35	71	80	66	
Volume Left	23	0	71	0	0	
Volume Right	0	35	0	0	30	
cSH	660	1006	1536	1700	1700	
Volume to Capacity	0.03	0.03	0.05	0.05	0.04	
Queue Length 95th (ft)	3	3	4	0	0	
Control Delay (s/veh)	10.7	8.7	7.5	0.0	0.0	
Lane LOS	B	A	A			
Approach Delay (s/veh)	9.5		3.5		0.0	
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay			3.9			
Intersection Capacity Utilization			20.3%	ICU Level of Service	A	
Analysis Period (min)			15			










Intersection						
Int Delay, s/veh	3.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↶	↷	↶	↷	↷	↷
Traffic Vol, veh/h	21	32	65	74	33	28
Future Vol, veh/h	21	32	65	74	33	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	None
Storage Length	105	0	145	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	14	6	2	3	3	18
Mvmt Flow	23	35	71	80	36	30

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	273	51	66	0	0
Stage 1	51	-	-	-	-
Stage 2	222	-	-	-	-
Critical Hdwy	6.54	6.26	4.12	-	-
Critical Hdwy Stg 1	5.54	-	-	-	-
Critical Hdwy Stg 2	5.54	-	-	-	-
Follow-up Hdwy	3.626	3.354	2.218	-	-
Pot Cap-1 Maneuver	692	1006	1536	-	-
Stage 1	942	-	-	-	-
Stage 2	787	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	660	1006	1536	-	-
Mov Cap-2 Maneuver	660	-	-	-	-
Stage 1	899	-	-	-	-
Stage 2	787	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	9.5	3.5	0
HCM LOS	A		










Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1536	-	660	1006	-	-
HCM Lane V/C Ratio	0.046	-	0.035	0.035	-	-
HCM Ctrl Dly (s/v)	7.5	-	10.7	8.7	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q (veh)	0.1	-	0.1	0.1	-	-

Lanes, Volumes, Timings  
8: Observation Rd & Piper Ln

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	30	70	30	8	28	30
Future Volume (vph)	30	70	30	8	28	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.906		0.971			
Flt Protected	0.985					0.977
Satd. Flow (prot)	1638	0	1845	0	0	1764
Flt Permitted	0.985					0.977
Satd. Flow (perm)	1638	0	1845	0	0	1764
Link Speed (mph)	35		25			25
Link Distance (ft)	2530		410			1111
Travel Time (s)	49.3		11.2			30.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	5%	0%	0%	11%	0%
Adj. Flow (vph)	33	76	33	9	30	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	109	0	42	0	0	63
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.04	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
<b>Intersection Summary</b>						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	22.4%		ICU Level of Service A			
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis  
 8: Observation Rd & Piper Ln

Manassas HEF EA  
 09/14/2025

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	30	70	30	8	28	30
Future Volume (Veh/h)	30	70	30	8	28	30
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	33	76	33	9	30	33
<b>Pedestrians</b>						
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	131	38			42	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	131	38			42	
tC, single (s)	6.4	6.2			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.3	
p0 queue free %	96	93			98	
cM capacity (veh/h)	851	1026			1511	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	109	42	63			
Volume Left	33	0	30			
Volume Right	76	9	0			
cSH	966	1700	1511			
Volume to Capacity	0.11	0.02	0.02			
Queue Length 95th (ft)	10	0	2			
Control Delay (s/veh)	9.2	0.0	3.6			
Lane LOS	A		A			
Approach Delay (s/veh)	9.2	0.0	3.6			
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay			5.8			
Intersection Capacity Utilization			22.4%	ICU Level of Service	A	
Analysis Period (min)			15			










Intersection						
Int Delay, s/veh	5.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	70	30	8	28	30
Future Vol, veh/h	30	70	30	8	28	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	5	0	0	11	0
Mvmt Flow	33	76	33	9	30	33

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	131	38	0	0	42	0
Stage 1	38	-	-	-	-	-
Stage 2	93	-	-	-	-	-
Critical Hdwy	6.4	6.25	-	-	4.21	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.345	-	-	2.299	-
Pot Cap-1 Maneuver	868	1025	-	-	1511	-
Stage 1	990	-	-	-	-	-
Stage 2	936	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	851	1025	-	-	1511	-
Mov Cap-2 Maneuver	851	-	-	-	-	-
Stage 1	990	-	-	-	-	-
Stage 2	917	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	9.2	0	3.6
HCM LOS	A		










Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	966	1511
HCM Lane V/C Ratio	-	-	0.113	0.02
HCM Ctrl Dly (s/v)	-	-	9.2	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q (veh)	-	-	0.4	0.1

Lanes, Volumes, Timings  
 12: Wakeman Dr & S Satellite Driveway

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	92	0	0	76
Future Volume (vph)	0	0	92	0	0	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
<b>Fr</b>						
<b>Flt Protected</b>						
Satd. Flow (prot)	1900	0	1845	0	0	1827
<b>Flt Permitted</b>						
Satd. Flow (perm)	1900	0	1845	0	0	1827
Link Speed (mph)	20		35			35
Link Distance (ft)	455		652			568
Travel Time (s)	15.5		12.7			11.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	3%	0%	0%	4%
Adj. Flow (vph)	0	0	100	0	0	83
<b>Shared Lane Traffic (%)</b>						
Lane Group Flow (vph)	0	0	100	0	0	83
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
<b>Two way Left Turn Lane</b>						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
<b>Intersection Summary</b>						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	8.2%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis  
 12: Wakeman Dr & S Satellite Driveway

Manassas HEF EA  
 09/14/2025

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	92	0	0	76
Future Volume (Veh/h)	0	0	92	0	0	76
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	100	0	0	83
<b>Pedestrians</b>						
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	183	100			100	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	183	100			100	
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)	811	961			1505	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	0	100	83			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1505			
Volume to Capacity	0.00	0.06	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s/veh)	0.0	0.0	0.0			
Lane LOS	A					
Approach Delay (s/veh)	0.0	0.0	0.0			
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay			0.0			
Intersection Capacity Utilization			8.2%	ICU Level of Service	A	
Analysis Period (min)			15			










Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		T			T
Traffic Vol, veh/h	0	0	92	0	0	76
Future Vol, veh/h	0	0	92	0	0	76
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	3	0	0	4
Mvmt Flow	0	0	100	0	0	83

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	183	100	0	0	100
Stage 1	100	-	-	-	-
Stage 2	83	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	811	961	-	-	1505
Stage 1	929	-	-	-	-
Stage 2	945	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	811	961	-	-	1505
Mov Cap-2 Maneuver	811	-	-	-	-
Stage 1	929	-	-	-	-
Stage 2	945	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS	A		










Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1505
HCM Lane V/C Ratio	-	-	-	-
HCM Ctrl Dly (s/v)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q (veh)	-	-	-	0

Lanes, Volumes, Timings  
 13: Wakeman Dr & N Satellite Driveway

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	92	0	0	76
Future Volume (vph)	0	0	92	0	0	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
<b>Fr</b>						
<b>Flt Protected</b>						
Satd. Flow (prot)	1900	0	1845	0	0	1827
<b>Flt Permitted</b>						
Satd. Flow (perm)	1900	0	1845	0	0	1827
Link Speed (mph)	20		35			35
Link Distance (ft)	404		568			681
Travel Time (s)	13.8		11.1			13.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	3%	0%	0%	4%
Adj. Flow (vph)	0	0	100	0	0	83
<b>Shared Lane Traffic (%)</b>						
Lane Group Flow (vph)	0	0	100	0	0	83
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
<b>Two way Left Turn Lane</b>						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
<b>Intersection Summary</b>						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	8.2%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis  
 13: Wakeman Dr & N Satellite Driveway

Manassas HEF EA  
 09/14/2025

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	92	0	0	76
Future Volume (Veh/h)	0	0	92	0	0	76
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	100	0	0	83
<b>Pedestrians</b>						
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	183	100			100	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	183	100			100	
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)	811	961			1505	
<b>Direction, Lane #</b>	<b>WB 1</b>	<b>NB 1</b>	<b>SB 1</b>			
Volume Total	0	100	83			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1505			
Volume to Capacity	0.00	0.06	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s/veh)	0.0	0.0	0.0			
Lane LOS	A					
Approach Delay (s/veh)	0.0	0.0	0.0			
Approach LOS	A					
<b>Intersection Summary</b>						
Average Delay	0.0					
Intersection Capacity Utilization	8.2%		ICU Level of Service	A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	92	0	0	76
Future Vol, veh/h	0	0	92	0	0	76
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	3	0	0	4
Mvmt Flow	0	0	100	0	0	83

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	183	100	0	0	100
Stage 1	100	-	-	-	-
Stage 2	83	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	811	961	-	-	1505
Stage 1	929	-	-	-	-
Stage 2	945	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	811	961	-	-	1505
Mov Cap-2 Maneuver	811	-	-	-	-
Stage 1	929	-	-	-	-
Stage 2	945	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1505
HCM Lane V/C Ratio	-	-	-	-
HCM Ctrl Dly (s/v)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q (veh)	-	-	-	0



Lane Group	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	0	65	92	0	12	47
Future Volume (vph)	0	65	92	0	12	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>					0.892	
Fl <sub>t</sub> Protected					0.990	
Satd. Flow (prot)	0	1810	1845	0	1678	0
Fl <sub>t</sub> Permitted					0.990	
Satd. Flow (perm)	0	1810	1845	0	1678	0
Link Speed (mph)		35	35		20	
Link Distance (ft)		989	681		412	
Travel Time (s)		19.3	13.3		14.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	5%	3%	0%	0%	0%
Adj. Flow (vph)	0	71	100	0	13	51
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	71	100	0	64	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	15.1%
Analysis Period (min)	15
	ICU Level of Service A

HCM Unsignalized Intersection Capacity Analysis  
 14: Wakeman Dr & Employee Lot

Manassas HEF EA  
 09/14/2025



Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↕	↔		↕	↔
Traffic Volume (veh/h)	0	65	92	0	12	47
Future Volume (Veh/h)	0	65	92	0	12	47
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	71	100	0	13	51
<b>Pedestrians</b>						
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	100				171	100
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	100				171	100
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	95
cM capacity (veh/h)	1505				824	961
<b>Direction, Lane #</b>	<b>SE 1</b>	<b>NW 1</b>	<b>SW 1</b>			
Volume Total	71	100	64			
Volume Left	0	0	13			
Volume Right	0	0	51			
cSH	1505	1700	930			
Volume to Capacity	0.00	0.06	0.07			
Queue Length 95th (ft)	0	0	6			
Control Delay (s/veh)	0.0	0.0	9.2			
Lane LOS			A			
Approach Delay (s/veh)	0.0	0.0	9.2			
Approach LOS			A			
<b>Intersection Summary</b>						
Average Delay			2.5			
Intersection Capacity Utilization			15.1%	ICU Level of Service	A	
Analysis Period (min)			15			

Intersection						
Int Delay, s/veh	2.5					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	65	92	0	12	47
Future Vol, veh/h	0	65	92	0	12	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	5	3	0	0	0
Mvmt Flow	0	71	100	0	13	51




















Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	100	0	-	0	171
Stage 1	-	-	-	-	100
Stage 2	-	-	-	-	71
Critical Hdwy	4.1	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	1505	-	-	-	824
Stage 1	-	-	-	-	929
Stage 2	-	-	-	-	957
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1505	-	-	-	824
Mov Cap-2 Maneuver	-	-	-	-	824
Stage 1	-	-	-	-	929
Stage 2	-	-	-	-	957

Approach	SE	NW	SW
HCM Ctrl Dly, s/v	0	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NWT	NWR	SEL	SETSWLn1
Capacity (veh/h)	-	-	1505	-
HCM Lane V/C Ratio	-	-	-	0.069
HCM Ctrl Dly (s/v)	-	-	0	9.2
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q (veh)	-	-	0	0.2




















Lanes, Volumes, Timings  
15: Gateway Blvd

Manassas HEF EA  
09/14/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	54	1	12	17	34	2	3	10	38	4	35
Future Volume (vph)	63	54	1	12	17	34	2	3	10	38	4	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	305		0	0		0	0		105
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (ft)	95			105			0			0		
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
Frt		0.997			0.899			0.907				0.850
Flt Protected	0.950			0.950				0.994			0.956	
Satd. Flow (prot)	1805	3337	0	1530	3123	0	0	1593	0	0	1722	1524
Flt Permitted	0.950			0.950				0.994			0.956	
Satd. Flow (perm)	1805	3337	0	1530	3123	0	0	1593	0	0	1722	1524
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		1357			2771			405			407	
Travel Time (s)		26.4			54.0			11.0			11.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	8%	0%	18%	12%	0%	0%	0%	11%	6%	0%	6%
Adj. Flow (vph)	68	59	1	13	18	37	2	3	11	41	4	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	68	60	0	13	55	0	0	16	0	0	45	38
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	
<b>Intersection Summary</b>												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	25.8%						ICU Level of Service A					
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis  
15: Gateway Blvd

Manassas HEF EA  
09/14/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	54	1	12	17	34	2	3	10	38	4	35
Future Volume (Veh/h)	63	54	1	12	17	34	2	3	10	38	4	35
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	68	59	1	13	18	37	2	3	11	41	4	38
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												4
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	55			60			252	277	30	241	259	28
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	55			60			252	277	30	241	259	28
tC, single (s)	4.1			4.5			7.5	6.5	7.1	7.6	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.4			3.5	4.0	3.4	3.6	4.0	3.4
p0 queue free %	96			99			100	100	99	94	99	96
cM capacity (veh/h)	1563			1432			632	601	1009	646	615	1029
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1				
Volume Total	68	39	21	13	12	43	16	83				
Volume Left	68	0	0	13	0	0	2	41				
Volume Right	0	0	1	0	0	37	11	38				
cSH	1563	1700	1700	1432	1700	1700	840	1187				
Volume to Capacity	0.04	0.02	0.01	0.00*	0.00*	0.03	0.02	0.07				
Queue Length 95th (ft)	3	0	0	1	0	0	1	6				
Control Delay (s/veh)	7.4	0.0	0.0	7.5	0.0	0.0	9.4	9.9				
Lane LOS	A			A			A	A				
Approach Delay (s/veh)	3.9			1.4			9.4	9.9				
Approach LOS							A	A				
Intersection Summary												
Average Delay			5.3									
Intersection Capacity Utilization			25.8%			ICU Level of Service		A				
Analysis Period (min)			15									

\* Value less than 0.01.

Intersection												
Int Delay, s/veh	5.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↕		↙	↕			↕			↕	↗
Traffic Vol, veh/h	63	54	1	12	17	34	2	3	10	38	4	35
Future Vol, veh/h	63	54	1	12	17	34	2	3	10	38	4	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	-	305	-	-	-	-	-	-	-	105
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	8	0	18	12	0	0	0	11	6	0	6
Mvmt Flow	68	59	1	13	18	37	2	3	11	41	4	38

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	55	0	0	60	0	0	233	277	30	230	259	28
Stage 1	-	-	-	-	-	-	196	196	-	63	63	-
Stage 2	-	-	-	-	-	-	37	81	-	167	196	-
Critical Hdwy	4.1	-	-	4.46	-	-	7.5	6.5	7.12	7.62	6.5	7.02
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.62	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.62	5.5	-
Follow-up Hdwy	2.2	-	-	2.38	-	-	3.5	4	3.41	3.56	4	3.36
Pot Cap-1 Maneuver	1563	-	-	1432	-	-	707	634	1009	695	649	1028
Stage 1	-	-	-	-	-	-	793	742	-	929	846	-
Stage 2	-	-	-	-	-	-	980	832	-	807	742	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1563	-	-	1432	-	-	650	600	1009	657	615	1028
Mov Cap-2 Maneuver	-	-	-	-	-	-	650	600	-	657	615	-
Stage 1	-	-	-	-	-	-	758	709	-	888	838	-
Stage 2	-	-	-	-	-	-	930	825	-	760	709	-

Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	4			1.4			9.4			9.9		
HCM LOS							A			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	834	1563	-	-	1432	-	-	653	1028
HCM Lane V/C Ratio	0.02	0.044	-	-	0.009	-	-	0.07	0.037
HCM Ctrl Dly (s/v)	9.4	7.4	-	-	7.5	-	-	10.9	8.6
HCM Lane LOS	A	A	-	-	A	-	-	B	A
HCM 95th %tile Q (veh)	0.1	0.1	-	-	0	-	-	0.2	0.1