

# Appendix K



HCM 7th Signalized Intersection Capacity Analysis  
 27: KY-1865 (New Cut Rd) & 3rd Street/Southside

AM Peak - Design Year  
 09/20/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	200	60	90	100	10	90	610	130	50	380	130
Future Volume (veh/h)	280	200	60	90	100	10	90	610	130	50	380	130
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1856	1856	1856	1811	1811	1811	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	350	250	75	112	125	12	112	762	162	62	475	162
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	3	3	3	6	6	6	3	3	3	5	5	5
Opposing Right Turn Influence	No			No			No			No		
Cap, veh/h	369	289	87	213	311	30	453	1359	289	257	1584	842
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
Prop Arrive On Green	0.09	0.21	0.21	0.07	0.19	0.19	0.02	0.16	0.16	0.01	0.15	0.15
Unsig. Movement Delay												
Ln Grp Delay, s/veh	78.2	0.0	56.6	39.3	0.0	43.6	17.5	41.8	41.9	20.6	34.4	23.3
Ln Grp LOS	E		E	D		D	B	D	D	C	C	C
Approach Vol, veh/h		675			249			1036			699	
Approach Delay, s/veh		67.8			41.7			39.2			30.6	
Approach LOS		E			D			D			C	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		1	2	3	4	5	6	7	8			
Case No		1.1	4.0	1.1	4.0	1.1	3.0	1.1	4.0			
Phs Duration (G+Y+Rc), s		10.9	62.8	17.0	29.4	12.4	61.2	14.6	31.7			
Change Period (Y+Rc), s		6.5	6.4	6.5	* 6.4	6.5	6.4	6.5	* 6.4			
Max Green (Gmax), s		12.5	29.6	10.5	* 42	10.5	31.6	14.5	* 38			
Max Allow Headway (MAH), s		4.3	5.1	4.3	6.2	4.2	4.8	4.3	6.2			
Max Q Clear (g_c+1), s		4.3	31.3	12.5	10.1	6.0	16.6	8.2	23.1			
Green Ext Time (g_e), s		0.1	0.0	0.0	1.1	0.1	3.2	0.2	2.2			
Prob of Phs Call (p_c)		0.87	1.00	1.00	1.00	0.98	1.00	0.98	1.00			
Prob of Max Out (p_x)		0.01	0.00	1.00	0.00	0.77	0.00	0.17	0.11			
<b>Left-Turn Movement Data</b>												
Assigned Mvmt		1		3		5		7				
Mvmt Sat Flow, veh/h		1739		1767		1767		1725				
<b>Through Movement Data</b>												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			2893		1627		3469		1370			
<b>Right-Turn Movement Data</b>												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			615		156		1547		411			
<b>Left Lane Group Data</b>												
Assigned Mvmt		1	0	3	0	5	0	7	0			
Lane Assignment		L (Pr/Pm)		L (Pr/Pm)		L (Pr/Pm)		L (Pr/Pm)				
Lanes in Grp		1	0	1	0	1	0	1	0			
Grp Vol (v), veh/h		62	0	350	0	112	0	112	0			
Grp Sat Flow (s), veh/h/ln		1739	0	1767	0	1767	0	1725	0			

HCM 7th Signalized Intersection Capacity Analysis  
 27: KY-1865 (New Cut Rd) & 3rd Street/Southside

AM Peak - Design Year  
 09/20/2024

Q Serve Time (g_s), s	2.3	0.0	10.5	0.0	4.0	0.0	6.2	0.0
Cycle Q Clear Time (g_c), s	2.3	0.0	10.5	0.0	4.0	0.0	6.2	0.0
Perm LT Sat Flow (s_l), veh/h/ln	591	0	1242	0	912	0	1021	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	54.8	0.0	23.0	0.0	54.8	0.0	23.0	0.0
Perm LT Serve Time (g_u), s	27.1	0.0	14.9	0.0	40.2	0.0	4.2	0.0
Perm LT Q Serve Time (g_ps), s	3.3	0.0	14.9	0.0	2.1	0.0	2.3	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	257	0	369	0	453	0	213	0
V/C Ratio (X)	0.24	0.00	0.95	0.00	0.25	0.00	0.53	0.00
Avail Cap (c_a), veh/h	375	0	369	0	520	0	304	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	0.95	0.00	1.00	0.00
Uniform Delay (d1), s/veh	20.1	0.0	44.3	0.0	17.2	0.0	36.9	0.0
Incr Delay (d2), s/veh	0.6	0.0	34.0	0.0	0.3	0.0	2.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	20.6	0.0	78.2	0.0	17.5	0.0	39.3	0.0
1st-Term Q (Q1), veh/ln	0.9	0.0	5.4	0.0	1.6	0.0	2.6	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	3.5	0.0	0.0	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.55	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	1.7	0.0	13.8	0.0	3.0	0.0	4.9	0.0
%ile Storage Ratio (RQ%)	0.22	0.00	0.97	0.00	0.31	0.00	0.51	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	2	0	0
Grp Vol (v), veh/h	0	464	0	0	0	475	0	0
Grp Sat Flow (s), veh/h/ln	0	1763	0	0	0	1735	0	0
Q Serve Time (g_s), s	0.0	29.3	0.0	0.0	0.0	14.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	29.3	0.0	0.0	0.0	14.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	828	0	0	0	1584	0	0
V/C Ratio (X)	0.00	0.56	0.00	0.00	0.00	0.30	0.00	0.00
Avail Cap (c_a), veh/h	0	828	0	0	0	1584	0	0
Upstream Filter (I)	0.00	0.95	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	39.2	0.0	0.0	0.0	33.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.6	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	41.8	0.0	0.0	0.0	34.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	13.8	0.0	0.0	0.0	6.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.42	0.00	1.00	0.00	1.62	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	20.4	0.0	0.0	0.0	11.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	1.01	0.00	0.00	0.00	0.34	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
 27: KY-1865 (New Cut Rd) & 3rd Street/Southside

AM Peak - Design Year  
 09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	460	0	137	0	162	0	325
Grp Sat Flow (s), veh/h/ln	0	1745	0	1783	0	1547	0	1782
Q Serve Time (g_s), s	0.0	29.3	0.0	8.1	0.0	9.3	0.0	21.1
Cycle Q Clear Time (g_c), s	0.0	29.3	0.0	8.1	0.0	9.3	0.0	21.1
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	1547.4	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	10.5	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.35	0.00	0.09	0.00	1.00	0.00	0.23
Lane Grp Cap (c), veh/h	0	820	0	341	0	842	0	376
V/C Ratio (X)	0.00	0.56	0.00	0.40	0.00	0.19	0.00	0.86
Avail Cap (c_a), veh/h	0	820	0	618	0	842	0	558
Upstream Filter (I)	0.00	0.95	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	39.2	0.0	42.5	0.0	22.8	0.0	45.7
Incr Delay (d2), s/veh	0.0	2.6	0.0	1.1	0.0	0.5	0.0	10.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	41.9	0.0	43.6	0.0	23.3	0.0	56.6
1st-Term Q (Q1), veh/ln	0.0	13.6	0.0	3.5	0.0	3.7	0.0	9.2
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.1	0.0	0.1	0.0	1.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.42	0.00	1.80	0.00	1.80	0.00	1.51
%ile Back of Q (95%), veh/ln	0.0	20.3	0.0	6.6	0.0	6.8	0.0	15.6
%ile Storage Ratio (RQ%)	0.00	1.01	0.00	0.26	0.00	0.88	0.00	0.37
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	44.4
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.  
 \* HCM 7th Edition computational engine requires equal clearance times for the phases crossing the barrier.

HCM 7th Signalized Intersection Capacity Analysis  
 121: KY - 1865 (New Cut Rd) & KY 1065

AM Peak - Design Year  
 09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	260	250	80	210	110	240	550	100	140	350	100
Future Volume (veh/h)	110	260	250	80	210	110	240	550	100	140	350	100
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj. (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1826	1826	1826	1781	1781	1781	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	124	294	282	90	237	124	271	621	113	158	395	113
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh. %	5	5	5	8	8	8	5	5	5	5	5	5
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	233	385	326	132	280	238	784	1171	522	631	882	393
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Prop Arrive On Green	0.09	0.21	0.21	0.04	0.16	0.16	0.69	0.68	0.68	0.26	0.25	0.25
Unsig. Movement Delay												
Ln Grp Delay, s/veh	52.0	48.1	56.1	61.6	56.1	48.2	9.0	16.4	14.4	25.7	39.3	37.8
Ln Grp LOS	D	D	E	E	E	D	A	B	B	C	D	D
Approach Vol, veh/h		700			451			1005			666	
Approach Delay, s/veh		52.0			55.0			14.2			35.8	
Approach LOS		D			D			B			D	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		2	1	4	3	6	5	8	7			
Case No		3.0	1.4	3.0	1.4	3.0	1.4	3.0	1.4			
Phs Duration (G+Y+Rc), s		45.0	36.0	23.4	15.7	35.0	46.0	29.8	9.3			
Change Period (Y+Rc), s		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5			
Max Green (Gmax), s		40.5	15.5	34.5	11.5	30.5	25.5	37.5	8.5			
Max Allow Headway (MAH), s		4.8	3.7	4.5	3.7	4.7	3.7	4.4	3.7			
Max Q Clear (g_c+I1), s		12.9	2.0	17.5	5.1	13.5	2.0	23.1	3.6			
Green Ext Time (g_e), s		4.4	0.3	1.4	0.1	2.5	0.7	2.2	0.1			
Prob of Phs Call (p_c)		1.00	0.99	1.00	0.98	1.00	1.00	1.00	0.95			
Prob of Max Out (p_x)		0.00	0.00	0.00	0.06	0.00	0.00	0.05	0.25			
<b>Left-Turn Movement Data</b>												
Assigned Mvmt			1		3		5		7			
Mvmt Sat Flow, veh/h			1739		1739		1739		1697			
<b>Through Movement Data</b>												
Assigned Mvmt		2		4		6		8				
Mvmt Sat Flow, veh/h		3469		1781		3469		1826				
<b>Right-Turn Movement Data</b>												
Assigned Mvmt		12		14		16		18				
Mvmt Sat Flow, veh/h		1547		1510		1547		1547				
<b>Left Lane Group Data</b>												
Assigned Mvmt		0	1	0	3	0	5	0	7			
Lane Assignment		L (Pr/Pm)		L (Pr/Pm)		L (Pr/Pm)		L (Pr/Pm)				
Lanes in Grp		0	1	0	1	0	1	0	1			
Grp Vol (v), veh/h		0	158	0	124	0	271	0	90			
Grp Sat Flow (s), veh/h/ln		0	1739	0	1739	0	1739	0	1697			

HCM 7th Signalized Intersection Capacity Analysis  
 121: KY - 1865 (New Cut Rd) & KY 1065

AM Peak - Design Year  
 09/20/2024

Q Serve Time (g_s), s	0.0	0.0	0.0	3.1	0.0	0.0	0.0	1.6
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	3.1	0.0	0.0	0.0	1.6
Perm LT Sat Flow (s_l), veh/h/ln	0	706	0	996	0	870	0	797
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	30.5	0.0	16.9	0.0	28.5	0.0	18.9
Perm LT Serve Time (g_u), s	0.0	19.6	0.0	1.4	0.0	17.0	0.0	0.7
Perm LT Q Serve Time (g_ps), s	0.0	19.6	0.0	1.4	0.0	10.6	0.0	0.7
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	631	0	233	0	784	0	132
V/C Ratio (X)	0.00	0.25	0.00	0.53	0.00	0.35	0.00	0.68
Avail Cap (c_a), veh/h	0	631	0	238	0	784	0	185
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	25.5	0.0	49.8	0.0	8.7	0.0	55.5
Incr Delay (d2), s/veh	0.0	0.2	0.0	2.2	0.0	0.3	0.0	6.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	25.7	0.0	52.0	0.0	9.0	0.0	61.6
1st-Term Q (Q1), veh/ln	0.0	3.2	0.0	3.4	0.0	2.0	0.0	2.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	5.8	0.0	6.3	0.0	3.8	0.0	5.0
%ile Storage Ratio (RQ%)	0.00	1.00	0.00	0.72	0.00	0.39	0.00	0.62
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	2	0	4	0	6	0	8	0
Lane Assignment	T		T		T		T	
Lanes in Grp	2	0	1	0	2	0	1	0
Grp Vol (v), veh/h	621	0	237	0	395	0	294	0
Grp Sat Flow (s), veh/h/ln	1735	0	1781	0	1735	0	1826	0
Q Serve Time (g_s), s	10.9	0.0	15.5	0.0	11.5	0.0	18.2	0.0
Cycle Q Clear Time (g_c), s	10.9	0.0	15.5	0.0	11.5	0.0	18.2	0.0
Lane Grp Cap (c), veh/h	1171	0	280	0	882	0	385	0
V/C Ratio (X)	0.53	0.00	0.85	0.00	0.45	0.00	0.76	0.00
Avail Cap (c_a), veh/h	1171	0	512	0	882	0	571	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	14.7	0.0	49.1	0.0	37.7	0.0	44.5	0.0
Incr Delay (d2), s/veh	1.7	0.0	6.9	0.0	1.6	0.0	3.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	16.4	0.0	56.1	0.0	39.3	0.0	48.1	0.0
1st-Term Q (Q1), veh/ln	3.1	0.0	6.6	0.0	4.7	0.0	8.0	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.5	0.0	0.2	0.0	0.4	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.61	0.00	1.74	0.00	1.57	0.00
%ile Back of Q (95%), veh/ln	6.1	0.0	11.5	0.0	8.6	0.0	13.1	0.0
%ile Storage Ratio (RQ%)	0.22	0.00	0.36	0.00	0.74	0.00	0.41	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
 121: KY - 1865 (New Cut Rd) & KY 1065

AM Peak - Design Year  
 09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	12	0	14	0	16	0	18	0
Lane Assignment	R		R		R		R	
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	113	0	124	0	113	0	282	0
Grp Sat Flow (s), veh/h/ln	1547	0	1510	0	1547	0	1547	0
Q Serve Time (g_s), s	3.3	0.0	9.0	0.0	7.1	0.0	21.1	0.0
Cycle Q Clear Time (g_c), s	3.3	0.0	9.0	0.0	7.1	0.0	21.1	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	522	0	238	0	393	0	326	0
V/C Ratio (X)	0.22	0.00	0.52	0.00	0.29	0.00	0.86	0.00
Avail Cap (c_a), veh/h	522	0	434	0	393	0	484	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	13.5	0.0	46.4	0.0	36.0	0.0	45.7	0.0
Incr Delay (d2), s/veh	0.9	0.0	1.8	0.0	1.8	0.0	10.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	14.4	0.0	48.2	0.0	37.8	0.0	56.1	0.0
1st-Term Q (Q1), veh/ln	1.1	0.0	3.3	0.0	2.6	0.0	7.8	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.1	0.0	0.2	0.0	0.9	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.80	0.00	1.80	0.00	1.55	0.00
%ile Back of Q (95%), veh/ln	2.2	0.0	6.2	0.0	5.0	0.0	13.6	0.0
%ile Storage Ratio (RQ%)	0.22	0.00	0.91	0.00	0.43	0.00	1.54	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	35.2
HCM 7th LOS	D

HCM 7th Signalized Intersection Capacity Analysis  
 128: WB 841 Exit & KY - 1865 (New Cut Rd)

AM Peak - Design Year  
 09/20/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↵		↗↘	↵	↑			↑	↗
Traffic Volume (veh/h)	0	0	0	80	0	430	60	500	0	0	510	120
Future Volume (veh/h)	0	0	0	80	0	430	60	500	0	0	510	120
Number				7	4	14	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1796	0	1796	1841	1841	0	0	1826	1826
Adj Flow Rate, veh/h				89	0	480	67	559	0	0	570	0
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				7	0	7	4	4	0	0	5	5
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				382	0	599	439	1153	0	0	905	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.22	0.00	0.22	0.06	0.63	0.00	0.00	0.50	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh				19.4	0.0	26.3	7.7	7.0	0.0	0.0	14.4	0.0
Ln Grp LOS				B		C	A	A			B	
Approach Vol, veh/h					569			626			570	
Approach Delay, s/veh					25.2			7.0			14.4	
Approach LOS					C			A			B	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs			2		4	5	6					
Case No			4.0		9.0	1.2	7.0					
Phs Duration (G+Y+Rc), s			42.1		17.9	7.9	34.2					
Change Period (Y+Rc), s			4.5		4.5	4.5	4.5					
Max Green (Gmax), s			33.0		18.0	5.0	23.5					
Max Allow Headway (MAH), s			4.9		4.0	3.7	4.9					
Max Q Clear (g_c+I1), s			11.8		12.2	3.0	15.7					
Green Ext Time (g_e), s			3.3		1.2	0.0	2.1					
Prob of Phs Call (p_c)			1.00		1.00	0.67	1.00					
Prob of Max Out (p_x)			0.00		0.49	1.00	0.00					
<b>Left-Turn Movement Data</b>												
Assigned Mvmt					7	5	1					
Mvmt Sat Flow, veh/h					1711	1753	0					
<b>Through Movement Data</b>												
Assigned Mvmt			2		4		6					
Mvmt Sat Flow, veh/h			1841		0		1826					
<b>Right-Turn Movement Data</b>												
Assigned Mvmt			12		14		16					
Mvmt Sat Flow, veh/h			0		2679		1547					
<b>Left Lane Group Data</b>												
Assigned Mvmt	0	0	0	7	5	1	0	0				
Lane Assignment				LL (Pr/Pm)								
Lanes in Grp	0	0	0	1	1	0	0	0				
Grp Vol (v), veh/h	0	0	0	89	67	0	0	0				
Grp Sat Flow (s), veh/h/ln	0	0	0	1711	1753	0	0	0				

HCM 7th Signalized Intersection Capacity Analysis  
 128: WB 841 Exit & KY - 1865 (New Cut Rd)

AM Peak - Design Year  
 09/20/2024

Q Serve Time (g_s), s	0.0	0.0	0.0	2.6	1.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	2.6	1.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1711	828	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	31.7	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	16.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	29.7	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	382	439	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.23	0.15	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	513	487	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.65	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	19.1	7.6	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	19.4	7.7	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.9	0.2	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	0.00	1.80	1.80	1.00	0.00	0.00
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	1.8	0.4	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.07	0.04	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	559	0	0	0	570	0	0
Grp Sat Flow (s), veh/h/ln	0	1841	0	0	0	1826	0	0
Q Serve Time (g_s), s	0.0	9.8	0.0	0.0	0.0	13.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	9.8	0.0	0.0	0.0	13.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	1153	0	0	0	905	0	0
V/C Ratio (X)	0.00	0.48	0.00	0.00	0.00	0.63	0.00	0.00
Avail Cap (c_a), veh/h	0	1153	0	0	0	905	0	0
Upstream Filter (I)	0.00	0.65	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	6.0	0.0	0.0	0.0	11.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.0	0.0	0.0	0.0	3.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.0	0.0	0.0	0.0	14.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.1	0.0	0.0	0.0	4.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.8	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.00	0.00	1.75	0.00	0.00
%ile Back of Q (95%), veh/ln	0.0	4.4	0.0	0.0	0.0	8.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.14	0.00	0.00	0.00	0.54	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
 128: WB 841 Exit & KY - 1865 (New Cut Rd)

AM Peak - Design Year  
 09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment				R		R		
Lanes in Grp	0	0	0	2	0	1	0	0
Grp Vol (v), veh/h	0	0	0	480	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1340	0	1547	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	10.2	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	10.2	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	599	0	767	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.80	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	804	0	767	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	22.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	26.3	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	7.1	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.60	0.00	1.00	0.00	0.00
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	11.9	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	1.26	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	15.3
HCM 7th LOS	B

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 7th Signalized Intersection Capacity Analysis  
 136: EB 841 Exit/WB 841 Entrance

AM Peak - Design Year  
 09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	0	80	0	0	0	0	350	250	320	270	0
Future Volume (veh/h)	220	0	80	0	0	0	0	350	250	320	270	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1841	0	1841				0	1856	1856	1811	1811	0
Adj Flow Rate, veh/h	246	0	89				0	391	0	357	302	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	0	4				0	3	3	6	6	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	278	0	247				0	1169		741	1388	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.67	1.67	1.00
Prop Arrive On Green	0.16	0.00	0.16				0.00	0.63	0.00	0.16	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	68.0	0.0	45.9				0.0	11.2	0.0	6.2	0.3	0.0
Ln Grp LOS	E		D					B		A	A	
Approach Vol, veh/h		335						391			659	
Approach Delay, s/veh		62.2						11.2			3.5	
Approach LOS		E						B			A	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		1	2		4		6					
Case No		1.2	8.0		9.0		4.0					
Phs Duration (G+Y+Rc), s		16.3	80.1		23.5		96.5					
Change Period (Y+Rc), s		4.5	4.5		4.5		4.5					
Max Green (Gmax), s		24.5	57.5		24.5		86.5					
Max Allow Headway (MAH), s		3.7	4.9		3.9		4.9					
Max Q Clear (g_c+1), s		11.0	13.8		18.5		2.0					
Green Ext Time (g_e), s		0.9	2.3		0.6		1.7					
Prob of Phs Call (p_c)		1.00	1.00		1.00		1.00					
Prob of Max Out (p_x)		0.00	0.00		0.30		0.00					
<b>Left-Turn Movement Data</b>												
Assigned Mvmt		1	5		7							
Mvmt Sat Flow, veh/h		1725	0		1753							
<b>Through Movement Data</b>												
Assigned Mvmt			2		4		6					
Mvmt Sat Flow, veh/h			1856		0		1811					
<b>Right-Turn Movement Data</b>												
Assigned Mvmt			12		14		16					
Mvmt Sat Flow, veh/h			0		1560		0					
<b>Left Lane Group Data</b>												
Assigned Mvmt		1	5	0	7	0	0	0	0			
Lane Assignment		L (Pr/Pm)			L							
Lanes in Grp		1	0	0	1	0	0	0	0			
Grp Vol (v), veh/h		357	0	0	246	0	0	0	0			
Grp Sat Flow (s), veh/h/ln		1725	0	0	1753	0	0	0	0			

HCM 7th Signalized Intersection Capacity Analysis  
 136: EB 841 Exit/WB 841 Entrance

AM Peak - Design Year  
 09/20/2024

Q Serve Time (g_s), s	9.0	0.0	0.0	16.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	9.0	0.0	0.0	16.5	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	961	0	0	1753	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	77.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	63.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	7.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	75.6	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	741	0	0	278	0	0	0	0
V/C Ratio (X)	0.48	0.00	0.00	0.88	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	923	0	0	358	0	0	0	0
Upstream Filter (I)	0.85	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	5.8	0.0	0.0	49.4	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.0	18.6	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	6.2	0.0	0.0	68.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	2.0	0.0	0.0	7.2	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	1.4	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	1.00	0.00	1.56	0.00	0.00	0.00	0.00
%ile Back of Q (95%), veh/ln	3.7	0.0	0.0	13.5	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.33	0.00	0.00	1.39	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	391	0	0	0	302	0	0
Grp Sat Flow (s), veh/h/ln	0	1856	0	0	0	1811	0	0
Q Serve Time (g_s), s	0.0	11.8	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	11.8	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1169	0	0	0	1388	0	0
V/C Ratio (X)	0.00	0.33	0.00	0.00	0.00	0.22	0.00	0.00
Avail Cap (c_a), veh/h	0	1169	0	0	0	1388	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.85	0.00	0.00
Uniform Delay (d1), s/veh	0.0	10.4	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.2	0.0	0.0	0.0	0.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.77	0.00	1.00	0.00	1.80	0.00	0.00
%ile Back of Q (95%), veh/ln	0.0	8.1	0.0	0.0	0.0	0.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.29	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
 136: EB 841 Exit/WB 841 Entrance

AM Peak - Design Year  
 09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment	R							
Lanes in Grp	0	0	0	1	0	0	0	0
Grp Vol (v), veh/h	0	0	0	89	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1560	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	6.1	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	6.1	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	247	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.36	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	318	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	45.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	45.9	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.80	0.00	1.00	0.00	0.00
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	4.4	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	19.8
HCM 7th LOS	B

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 7th Signalized Intersection Capacity Analysis  
140:

AM Peak - Design Year  
09/20/2024

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	No			No			No			No		
Cap, veh/h	120	779	0	120	779	0	0	810	0	0	810	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ln Grp LOS												
Approach Vol, veh/h		0			0			0			0	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS												
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs			2		4		6		8			
Case No			6.0		8.0		6.0		8.0			
Phs Duration (G+Y+Rc), s			29.5		30.5		29.5		30.5			
Change Period (Y+Rc), s			4.5		4.5		4.5		4.5			
Max Green (Gmax), s			25.0		26.0		25.0		26.0			
Max Allow Headway (MAH), s			0.0		0.0		0.0		0.0			
Max Q Clear (g_c+I1), s			0.0		0.0		0.0		0.0			
Green Ext Time (g_e), s			0.0		0.0		0.0		0.0			
Prob of Phs Call (p_c)			1.00		1.00		1.00		1.00			
Prob of Max Out (p_x)			0.00		0.00		0.00		0.00			
<b>Left-Turn Movement Data</b>												
Assigned Mvmt			5		7		1		3			
Mvmt Sat Flow, veh/h			1781		0		1781		0			
<b>Through Movement Data</b>												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			1870		1870		1870		1870			
<b>Right-Turn Movement Data</b>												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			0		0		0		0			
<b>Left Lane Group Data</b>												
Assigned Mvmt	0	5	0	7	0	1	0	3				
Lane Assignment		L				L						
Lanes in Grp	0	1	0	0	0	1	0	0				
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0				
Grp Sat Flow (s), veh/h/ln	0	1781	0	0	0	1781	0	0				

HCM 7th Signalized Intersection Capacity Analysis  
140:

AM Peak - Design Year  
09/20/2024

Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1781	0	0	0	1781	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	26.0	0.0	0.0	0.0	26.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	120	0	0	0	120	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	120	0	0	0	120	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	779	0	810	0	779	0	810
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	779	0	810	0	779	0	810
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
140:

AM Peak - Design Year  
09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	0.0
HCM 7th LOS	A

HCM 7th Signalized Intersection Capacity Analysis  
141: KY - 1865 (New Cut Rd)

AM Peak - Design Year  
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	60	60	10	60	60	760	60	30	450	50
Future Volume (veh/h)	10	10	60	60	10	60	60	760	60	30	450	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	11	68	68	11	68	68	867	68	34	514	57
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	46	32	494	57	5	494	542	1912	150	314	1848	204
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Prop Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.57	0.57	0.57	1.00	1.00	1.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	36.0	0.0	29.8	258.2	0.0	29.8	12.4	16.3	16.2	3.2	0.6	0.6
Ln Grp LOS	D		C	F		C	B	B	B	A	A	A
Approach Vol, veh/h		90			147			1003			605	
Approach Delay, s/veh		31.3			152.6			16.0			0.8	
Approach LOS		C			F			B			A	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs			2		4		6		8			
Case No			6.0		7.0		6.0		7.0			
Phs Duration (G+Y+Rc), s			76.0		44.0		76.0		44.0			
Change Period (Y+Rc), s			7.3		6.6		7.3		6.6			
Max Green (Gmax), s			68.7		37.4		68.7		37.4			
Max Allow Headway (MAH), s			5.2		4.4		5.3		4.9			
Max Q Clear (g_c+I1), s			20.0		39.4		21.8		39.4			
Green Ext Time (g_e), s			7.7		0.0		4.2		0.0			
Prob of Phs Call (p_c)			1.00		1.00		1.00		1.00			
Prob of Max Out (p_x)			0.00		1.00		0.00		1.00			
<b>Left-Turn Movement Data</b>												
Assigned Mvmt			5		7		1		3			
Mvmt Sat Flow, veh/h			841		2		599		4			
<b>Through Movement Data</b>												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			3338		102		3226		17			
<b>Right-Turn Movement Data</b>												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			262		1585		357		1585			
<b>Left Lane Group Data</b>												
Assigned Mvmt		0	5	0	7	0	1	0	3			
Lane Assignment			L		L+T		L		L+T			
Lanes in Grp		0	1	0	1	0	1	0	1			
Grp Vol (v), veh/h		0	68	0	22	0	34	0	79			
Grp Sat Flow (s), veh/h/ln		0	841	0	104	0	599	0	21			

HCM 7th Signalized Intersection Capacity Analysis  
 141: KY - 1865 (New Cut Rd)

AM Peak - Design Year  
 09/20/2024

Q Serve Time (g_s), s	0.0	4.5	0.0	0.1	0.0	2.0	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	4.5	0.0	37.4	0.0	19.8	0.0	37.4
Perm LT Sat Flow (s_l), veh/h/ln	0	841	0	1341	0	599	0	1341
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	68.7	0.0	37.4	0.0	68.7	0.0	37.4
Perm LT Serve Time (g_u), s	0.0	68.8	0.0	0.1	0.0	50.9	0.0	0.1
Perm LT Q Serve Time (g_ps), s	0.0	4.5	0.0	0.1	0.0	2.0	0.0	0.1
Time to First Blk (g_f), s	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.3
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.3
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.50	0.00	1.00	0.00	0.86
Lane Grp Cap (c), veh/h	0	542	0	77	0	314	0	62
V/C Ratio (X)	0.00	0.13	0.00	0.28	0.00	0.11	0.00	1.27
Avail Cap (c_a), veh/h	0	542	0	78	0	314	0	63
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.93	0.00	1.00
Uniform Delay (d1), s/veh	0.0	11.9	0.0	34.0	0.0	2.6	0.0	57.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	2.0	0.0	0.6	0.0	201.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.4	0.0	36.0	0.0	3.2	0.0	258.2
1st-Term Q (Q1), veh/ln	0.0	0.8	0.0	0.5	0.0	0.1	0.0	1.9
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	3.5
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	1.6	0.0	0.9	0.0	0.3	0.0	9.7
%ile Storage Ratio (RQ%)	0.00	0.48	0.00	0.11	0.00	0.10	0.00	0.98
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
<b>Middle Lane Group Data</b>								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	461	0	0	0	282	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1018	0	0	0	1018	0	0
V/C Ratio (X)	0.00	0.45	0.00	0.00	0.00	0.28	0.00	0.00
Avail Cap (c_a), veh/h	0	1018	0	0	0	1018	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.93	0.00	0.00
Uniform Delay (d1), s/veh	0.0	14.8	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.5	0.0	0.0	0.0	0.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.3	0.0	0.0	0.0	0.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.61	0.00	1.00	0.00	1.80	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	11.8	0.0	0.0	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.46	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
 141: KY - 1865 (New Cut Rd)

AM Peak - Design Year  
 09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	474	0	68	0	289	0	68
Grp Sat Flow (s), veh/h/ln	0	1823	0	1585	0	1806	0	1585
Q Serve Time (g_s), s	0.0	18.0	0.0	3.7	0.0	0.0	0.0	3.7
Cycle Q Clear Time (g_c), s	0.0	18.0	0.0	3.7	0.0	0.0	0.0	3.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.14	0.00	1.00	0.00	0.20	0.00	1.00
Lane Grp Cap (c), veh/h	0	1044	0	494	0	1034	0	494
V/C Ratio (X)	0.00	0.45	0.00	0.14	0.00	0.28	0.00	0.14
Avail Cap (c_a), veh/h	0	1044	0	494	0	1034	0	494
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.93	0.00	1.00
Uniform Delay (d1), s/veh	0.0	14.8	0.0	29.7	0.0	0.0	0.0	29.7
Incr Delay (d2), s/veh	0.0	1.4	0.0	0.1	0.0	0.6	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.2	0.0	29.8	0.0	0.6	0.0	29.8
1st-Term Q (Q1), veh/ln	0.0	7.1	0.0	1.4	0.0	0.0	0.0	1.4
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.60	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	12.0	0.0	2.6	0.0	0.3	0.0	2.6
%ile Storage Ratio (RQ%)	0.00	0.47	0.00	0.33	0.00	0.02	0.00	0.78
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	22.6
HCM 7th LOS	C

HCM 7th Signalized Intersection Capacity Analysis  
 1406: KY-1865 (New Cut Rd) & KY-1142 (Palatka Rd)

AM Peak - Design Year  
 09/20/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	150	120	10	90	30	120	820	10	60	470	110
Future Volume (veh/h)	110	150	120	10	90	30	120	820	10	60	470	110
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1796	1796	1796	1885	1885	1885	1826	1826	1826
Adj Flow Rate, veh/h	131	179	143	12	107	36	143	978	12	72	561	131
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	7	7	7	1	1	1	5	5	5
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	283	202	161	113	189	64	650	1866	23	143	824	192
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Prop Arrive On Green	0.08	0.21	0.21	0.01	0.15	0.15	0.27	0.52	0.52	0.09	0.57	0.57
Unsig. Movement Delay												
Ln Grp Delay, s/veh	39.4	0.0	59.0	43.9	0.0	50.5	26.3	21.5	21.4	39.2	28.6	29.2
Ln Grp LOS	D		E	D		D	C	C	C	D	C	C
Approach Vol, veh/h		453			155			1133			764	
Approach Delay, s/veh		53.4			50.0			22.0			29.9	
Approach LOS		D			D			C			C	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		1	2	3	4	6	5	7	8			
Case No		1.2	4.0	1.1	4.0	4.0	1.3	1.1	4.0			
Phs Duration (G+Y+Rc), s		11.9	68.3	15.7	24.1	41.0	39.2	8.1	31.6			
Change Period (Y+Rc), s		6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5			
Max Green (Gmax), s		10.5	34.5	10.5	38.5	34.5	10.5	10.5	38.5			
Max Allow Headway (MAH), s		4.5	0.0	4.4	5.0	0.0	4.4	4.5	5.0			
Max Q Clear (g_c+1), s		5.9	0.0	9.2	11.3	0.0	2.0	2.7	23.7			
Green Ext Time (g_e), s		0.1	0.0	0.0	0.7	0.0	0.3	0.0	1.5			
Prob of Phs Call (p_c)		0.91	1.00	0.99	1.00	1.00	0.99	0.33	1.00			
Prob of Max Out (p_x)		0.85	0.00	1.00	0.00	0.00	0.05	0.00	0.02			
<b>Left-Turn Movement Data</b>												
Assigned Mvmt		1		3			5	7				
Mvmt Sat Flow, veh/h		1739		1781			1795	1711				
<b>Through Movement Data</b>												
Assigned Mvmt			2		4	6			8			
Mvmt Sat Flow, veh/h			3624		1286	2865			963			
<b>Right-Turn Movement Data</b>												
Assigned Mvmt			12		14	16				18		
Mvmt Sat Flow, veh/h			44		433	667				769		
<b>Left Lane Group Data</b>												
Assigned Mvmt		1	0	3	0	0	5	7	0			
Lane Assignment		L (Pr/Pm)		L (Pr/Pm)			L (Pr/Pm)	L (Pr/Pm)				
Lanes in Grp		1	0	1	0	0	1	1	0			
Grp Vol (v), veh/h		72	0	131	0	0	143	12	0			
Grp Sat Flow (s), veh/h/ln		1739	0	1781	0	0	1795	1711	0			

HCM 7th Signalized Intersection Capacity Analysis  
 1406: KY-1865 (New Cut Rd) & KY-1142 (Palatka Rd)

AM Peak - Design Year  
 09/20/2024

Q Serve Time (g_s), s	3.9	0.0	7.2	0.0	0.0	0.0	0.7	0.0
Cycle Q Clear Time (g_c), s	3.9	0.0	7.2	0.0	0.0	0.0	0.7	0.0
Perm LT Sat Flow (s_l), veh/h/ln	555	0	1245	0	0	758	1016	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	24.6	0.0	19.6	0.0	0.0	20.6	17.6	0.0
Perm LT Serve Time (g_u), s	1.1	0.0	8.3	0.0	0.0	16.0	3.5	0.0
Perm LT Q Serve Time (g_ps), s	1.1	0.0	1.3	0.0	0.0	16.0	0.2	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00
Lane Grp Cap (c), veh/h	143	0	283	0	0	650	113	0
V/C Ratio (X)	0.50	0.00	0.46	0.00	0.00	0.22	0.11	0.00
Avail Cap (c_a), veh/h	217	0	302	0	0	650	239	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	35.9	0.0	38.0	0.0	0.0	26.1	43.4	0.0
Incr Delay (d2), s/veh	3.3	0.0	1.4	0.0	0.0	0.2	0.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	39.2	0.0	39.4	0.0	0.0	26.3	43.9	0.0
1st-Term Q (Q1), veh/ln	1.6	0.0	3.1	0.0	0.0	2.9	0.3	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.80	0.00	0.00	1.80	1.80	0.00
%ile Back of Q (95%), veh/ln	3.0	0.0	5.8	0.0	0.0	5.4	0.6	0.0
%ile Storage Ratio (RQ%)	0.93	0.00	1.75	0.00	0.00	1.59	0.18	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	6	0	0	8
Lane Assignment		T			T			
Lanes in Grp	0	1	0	0	1	0	0	0
Grp Vol (v), veh/h	0	483	0	0	357	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1791	0	0	1826	0	0	0
Q Serve Time (g_s), s	0.0	21.5	0.0	0.0	16.4	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	21.5	0.0	0.0	16.4	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	922	0	0	525	0	0	0
V/C Ratio (X)	0.00	0.52	0.00	0.00	0.68	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	922	0	0	525	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	19.3	0.0	0.0	21.6	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.1	0.0	0.0	6.9	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	21.5	0.0	0.0	28.6	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	8.6	0.0	0.0	5.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.0	1.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.54	0.00	1.00	1.67	0.00	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	14.1	0.0	0.0	10.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	1.04	0.00	0.00	1.11	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
 1406: KY-1865 (New Cut Rd) & KY-1142 (Palatka Rd)

AM Peak - Design Year  
 09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	16	0	0	18
Lane Assignment		T+R		T+R	T+R			T+R
Lanes in Grp	0	1	0	1	1	0	0	1
Grp Vol (v), veh/h	0	507	0	143	335	0	0	322
Grp Sat Flow (s), veh/h/ln	0	1877	0	1718	1706	0	0	1732
Q Serve Time (g_s), s	0.0	21.5	0.0	9.3	16.5	0.0	0.0	21.7
Cycle Q Clear Time (g_c), s	0.0	21.5	0.0	9.3	16.5	0.0	0.0	21.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.02	0.00	0.25	0.39	0.00	0.00	0.44
Lane Grp Cap (c), veh/h	0	967	0	252	490	0	0	363
V/C Ratio (X)	0.00	0.52	0.00	0.57	0.68	0.00	0.00	0.89
Avail Cap (c_a), veh/h	0	967	0	551	490	0	0	556
Upstream Filter (I)	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	19.3	0.0	47.6	21.7	0.0	0.0	46.0
Incr Delay (d2), s/veh	0.0	2.0	0.0	2.8	7.5	0.0	0.0	13.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	21.4	0.0	50.5	29.2	0.0	0.0	59.0
1st-Term Q (Q1), veh/ln	0.0	9.0	0.0	3.9	4.7	0.0	0.0	9.2
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.2	1.0	0.0	0.0	1.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.53	0.00	1.80	1.69	0.00	0.00	1.51
%ile Back of Q (95%), veh/ln	0.0	14.7	0.0	7.5	9.6	0.0	0.0	15.8
%ile Storage Ratio (RQ%)	0.00	1.08	0.00	0.82	1.07	0.00	0.00	0.64
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	31.8
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 7th Signalized Intersection Capacity Analysis  
 1407: KY-1865 (New Cut Rd) & Park Dr

AM Peak - Design Year  
 09/20/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR			
Lane Configurations									
Traffic Volume (veh/h)	140	10	10	990	640	10			
Future Volume (veh/h)	140	10	10	990	640	10			
Number	7	14	5	2	6	16			
Initial Q, veh	0	0	0	0	0	0			
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00			
Ped-Bike Adj (A_pbT)	1.00	1.00	1.00			1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach	No			No	No				
Lanes Open During Work Zone									
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1841	1841			
Adj Flow Rate, veh/h	163	12	12	1155	747	12			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	2	2	4	4			
Opposing Right Turn Influence	Yes		Yes						
Cap, veh/h	195	14	608	2756	2732	44			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00			
Prop Arrive On Green	0.12	0.12	0.78	0.78	1.00	1.00			
Unsig. Movement Delay									
Ln Grp Delay, s/veh	61.6	0.0	3.1	4.9	0.5	0.5			
Ln Grp LOS	E		A	A	A	A			
Approach Vol, veh/h	176			1167	759				
Approach Delay, s/veh	61.6			4.9	0.5				
Approach LOS	E			A	A				
Timer:		1	2	3	4	5	6	7	8
Assigned Phs			2		4		6		
Case No			6.0		12.0		8.0		
Phs Duration (G+Y+Rc), s			99.1		20.9		99.1		
Change Period (Y+Rc), s			6.0		6.6		6.0		
Max Green (Gmax), s			72.0		35.4		72.0		
Max Allow Headway (MAH), s			0.1		4.6		0.0		
Max Q Clear (g_c+1), s			2.5		13.7		0.0		
Green Ext Time (g_e), s			0.0		0.7		0.0		
Prob of Phs Call (p_c)			1.00		1.00		1.00		
Prob of Max Out (p_x)			0.00		0.00		0.00		
<b>Left-Turn Movement Data</b>									
Assigned Mvmt			5		7		1		
Mvmt Sat Flow, veh/h			706		1636		0		
<b>Through Movement Data</b>									
Assigned Mvmt			2		4		6		
Mvmt Sat Flow, veh/h			3647		10		3615		
<b>Right-Turn Movement Data</b>									
Assigned Mvmt			12		14		16		
Mvmt Sat Flow, veh/h			0		120		57		
<b>Left Lane Group Data</b>									
Assigned Mvmt	0	5	0	7	0	1	0	0	
Lane Assignment		L		L+T+R					
Lanes in Grp	0	1	0	1	0	0	0	0	
Grp Vol (v), veh/h	0	12	0	176	0	0	0	0	
Grp Sat Flow (s), veh/h/ln	0	706	0	1767	0	0	0	0	

HCM 7th Signalized Intersection Capacity Analysis  
 1407: KY-1865 (New Cut Rd) & Park Dr

AM Peak - Design Year  
 09/20/2024

Q Serve Time (g_s), s	0.0	0.5	0.0	11.7	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.5	0.0	11.7	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	706	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	93.1	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	93.1	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	93.1	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.93	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	608	0	211	0	0	0	0
V/C Ratio (X)	0.00	0.02	0.00	0.83	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	608	0	521	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	3.1	0.0	51.7	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	9.9	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.1	0.0	61.6	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	5.2	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.68	0.00	1.00	0.00	0.00
%ile Back of Q (95%), veh/ln	0.0	0.1	0.0	9.7	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.06	0.00	0.32	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	1	0	0
Grp Vol (v), veh/h	0	1155	0	0	0	371	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1749	0	0
Q Serve Time (g_s), s	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	2756	0	0	0	1356	0	0
V/C Ratio (X)	0.00	0.42	0.00	0.00	0.00	0.27	0.00	0.00
Avail Cap (c_a), veh/h	0	2756	0	0	0	1356	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.9	0.0	0.0	0.0	0.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.00	0.00	1.80	0.00	0.00
%ile Back of Q (95%), veh/ln	0.0	7.1	0.0	0.0	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.33	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
 1407: KY-1865 (New Cut Rd) & Park Dr

AM Peak - Design Year  
 09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment	T+R							
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	388	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1831	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.00	0.07	0.00	0.03	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	0	0	1420	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1420	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.80	0.00	0.00
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	8.1
HCM 7th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

HCM 7th Signalized Intersection Capacity Analysis  
 1408: KY-1865 (New Cut Rd) & Kenwood Dr

AM Peak - Design Year  
 09/20/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔		↔	↔		↔	↔	
Traffic Volume (veh/h)	10	10	10	90	10	130	10	970	130	130	540	10
Future Volume (veh/h)	10	10	10	90	10	130	10	970	130	130	540	10
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	907	907	907	1811	1811	1811	1885	1885	1885	1841	1841	1841
Adj Flow Rate, veh/h	12	12	12	105	12	152	12	1132	152	152	630	12
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	67	67	67	6	6	6	1	1	1	4	4	4
Opposing Right Turn Influence	No			Yes			No			Yes		
Cap, veh/h	52	30	21	199	17	215	320	1376	184	520	2307	44
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Prop Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.01	0.14	0.14	0.25	0.66	0.66
Unsig. Movement Delay												
Ln Grp Delay, s/veh	48.6	0.0	0.0	52.3	0.0	52.5	23.3	56.5	56.6	33.8	9.2	9.2
Ln Grp LOS	D			D		D	C	E	E	C	A	A
Approach Vol, veh/h		36			269			1296			794	
Approach Delay, s/veh		48.6			52.4			56.2			13.9	
Approach LOS		D			D			E			B	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		2	1		4	5	6		8			
Case No		4.0	1.3		6.0	1.2	4.0		8.0			
Phs Duration (G+Y+Rc), s		59.0	36.5		24.5	9.6	85.9		24.5			
Change Period (Y+Rc), s		7.0	7.0		6.6	7.0	7.0		6.6			
Max Green (Gmax), s		52.0	14.0		33.4	10.0	56.0		33.4			
Max Allow Headway (MAH), s		0.0	4.5		5.1	3.8	0.0		5.7			
Max Q Clear (g_c+I1), s		0.0	3.9		16.6	2.5	0.0		15.2			
Green Ext Time (g_e), s		0.0	0.4		1.3	0.0	0.0		0.1			
Prob of Phs Call (p_c)		1.00	0.99		1.00	0.33	1.00		1.00			
Prob of Max Out (p_x)		0.00	0.02		0.01	0.00	0.00		0.00			
<b>Left-Turn Movement Data</b>												
Assigned Mvmt			1		7	5					3	
Mvmt Sat Flow, veh/h			1753		1343	1795					80	
<b>Through Movement Data</b>												
Assigned Mvmt		2			4		6		8			
Mvmt Sat Flow, veh/h		3174			114		3511		204			
<b>Right-Turn Movement Data</b>												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			425		1439		67		142			
<b>Left Lane Group Data</b>												
Assigned Mvmt		0	1	0	7	5	0	0	3			
Lane Assignment		L (Pr/Pm)			LL (Pr/Pm)			L+T+R				
Lanes in Grp		0	1	0	1	1	0	0	1			
Grp Vol (v), veh/h		0	152	0	105	12	0	0	36			
Grp Sat Flow (s), veh/h/ln		0	1753	0	1343	1795	0	0	425			

HCM 7th Signalized Intersection Capacity Analysis  
 1408: KY-1865 (New Cut Rd) & Kenwood Dr

AM Peak - Design Year  
 09/20/2024

Q Serve Time (g_s), s	0.0	1.9	0.0	1.5	0.5	0.0	0.0	1.1
Cycle Q Clear Time (g_c), s	0.0	1.9	0.0	14.6	0.5	0.0	0.0	13.2
Perm LT Sat Flow (s_l), veh/h/ln	0	424	0	1343	794	0	0	1241
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	781	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	40.4	0.0	17.9	44.4	0.0	0.0	17.9
Perm LT Serve Time (g_u), s	0.0	8.3	0.0	4.7	33.4	0.0	0.0	5.8
Perm LT Q Serve Time (g_ps), s	0.0	8.3	0.0	1.5	0.2	0.0	0.0	1.1
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	1.00	0.00	0.00	0.33
Lane Grp Cap (c), veh/h	0	520	0	199	320	0	0	103
V/C Ratio (X)	0.00	0.29	0.00	0.53	0.04	0.00	0.00	0.35
Avail Cap (c_a), veh/h	0	520	0	372	430	0	0	198
Upstream Filter (I)	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	33.5	0.0	50.1	23.2	0.0	0.0	46.6
Incr Delay (d2), s/veh	0.0	0.4	0.0	2.2	0.0	0.0	0.0	2.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	33.8	0.0	52.3	23.3	0.0	0.0	48.6
1st-Term Q (Q1), veh/ln	0.0	3.4	0.0	3.1	0.2	0.0	0.0	1.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	1.80	0.00	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	6.2	0.0	5.8	0.4	0.0	0.0	2.0
%ile Storage Ratio (RQ%)	0.00	1.88	0.00	2.34	0.11	0.00	0.00	0.17
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	2	0	0	4	0	6	0	8
Lane Assignment	T					T		
Lanes in Grp	1	0	0	0	0	1	0	0
Grp Vol (v), veh/h	638	0	0	0	0	314	0	0
Grp Sat Flow (s), veh/h/ln	1791	0	0	0	0	1749	0	0
Q Serve Time (g_s), s	41.5	0.0	0.0	0.0	0.0	9.0	0.0	0.0
Cycle Q Clear Time (g_c), s	41.5	0.0	0.0	0.0	0.0	9.0	0.0	0.0
Lane Grp Cap (c), veh/h	776	0	0	0	0	1149	0	0
V/C Ratio (X)	0.82	0.00	0.00	0.00	0.00	0.27	0.00	0.00
Avail Cap (c_a), veh/h	776	0	0	0	0	1149	0	0
Upstream Filter (I)	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	46.9	0.0	0.0	0.0	0.0	8.6	0.0	0.0
Incr Delay (d2), s/veh	9.5	0.0	0.0	0.0	0.0	0.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	56.5	0.0	0.0	0.0	0.0	9.2	0.0	0.0
1st-Term Q (Q1), veh/ln	19.9	0.0	0.0	0.0	0.0	3.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	2.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.35	0.00	0.00	1.00	0.00	1.80	0.00	1.00
%ile Back of Q (95%), veh/ln	29.6	0.0	0.0	0.0	0.0	6.1	0.0	0.0
%ile Storage Ratio (RQ%)	2.80	0.00	0.00	0.00	0.00	0.21	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
 1408: KY-1865 (New Cut Rd) & Kenwood Dr

AM Peak - Design Year  
 09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	12	0	0	14	0	16	0	18
Lane Assignment	T+R			T+R		T+R		
Lanes in Grp	1	0	0	1	0	1	0	0
Grp Vol (v), veh/h	646	0	0	164	0	328	0	0
Grp Sat Flow (s), veh/h/ln	1809	0	0	1552	0	1829	0	0
Q Serve Time (g_s), s	41.7	0.0	0.0	12.1	0.0	9.0	0.0	0.0
Cycle Q Clear Time (g_c), s	41.7	0.0	0.0	12.1	0.0	9.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.24	0.00	0.00	0.93	0.00	0.04	0.00	0.33
Lane Grp Cap (c), veh/h	784	0	0	232	0	1202	0	0
V/C Ratio (X)	0.82	0.00	0.00	0.71	0.00	0.27	0.00	0.00
Avail Cap (c_a), veh/h	784	0	0	432	0	1202	0	0
Upstream Filter (I)	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	47.0	0.0	0.0	48.6	0.0	8.6	0.0	0.0
Incr Delay (d2), s/veh	9.6	0.0	0.0	4.0	0.0	0.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	56.6	0.0	0.0	52.5	0.0	9.2	0.0	0.0
1st-Term Q (Q1), veh/ln	20.2	0.0	0.0	4.7	0.0	3.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	2.1	0.0	0.0	0.3	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.35	0.00	0.00	1.74	0.00	1.80	0.00	1.00
%ile Back of Q (95%), veh/ln	30.0	0.0	0.0	8.6	0.0	6.3	0.0	0.0
%ile Storage Ratio (RQ%)	2.83	0.00	0.00	0.97	0.00	0.22	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	41.7
HCM 7th LOS	D

HCM 7th Signalized Intersection Capacity Analysis  
 1409: Southern Pkwy & KY-1865/KY-1865 (Taylor Blvd)

AM Peak - Design Year  
 09/20/2024

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	10	660	470	80	460	10	10	10	20	200	20	90
Future Volume (veh/h)	10	660	470	80	460	10	10	10	20	200	20	90
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1826	1826	1826	1900	1900	1900	1826	1826	1826
Adj Flow Rate, veh/h	12	788	561	95	549	12	12	12	24	239	24	107
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	5	5	5	0	0	0	5	5	5
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	404	757	770	394	2275	50	94	54	108	281	67	301
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.41	0.41	0.41	0.38	1.00	1.00	0.10	0.10	0.10	0.08	0.23	0.23
Unsig. Movement Delay												
Ln Grp Delay, s/veh	21.7	79.3	30.5	30.2	0.5	0.5	58.0	0.0	50.8	75.6	0.0	39.3
Ln Grp LOS	C	F	C	C	A	A	E		D	E		D
Approach Vol, veh/h		1361			656			48			370	
Approach Delay, s/veh		58.7			4.8			52.6			62.7	
Approach LOS		E			A			D			E	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		2	1	4	3		6		8			
Case No		5.4	1.4	6.4	2.0		4.0		4.0			
Phs Duration (G+Y+Rc), s		55.6	30.0	18.1	16.3		85.6		34.4			
Change Period (Y+Rc), s		* 7	7.0	6.6	6.6		7.0		6.6			
Max Green (Gmax), s		* 49	5.0	30.0	9.7		60.1		46.3			
Max Allow Headway (MAH), s		3.8	4.3	4.1	4.0		3.7		4.6			
Max Q Clear (g_c+1), s		50.6	2.0	11.4	10.1		2.0		10.3			
Green Ext Time (g_e), s		0.0	0.1	0.1	0.0		1.6		0.6			
Prob of Phs Call (p_c)		1.00	0.96	1.00	1.00		1.00		1.00			
Prob of Max Out (p_x)		0.00	1.00	0.00	1.00		0.00		0.00			
<b>Left-Turn Movement Data</b>												
Assigned Mvmt		5	1	7	3							
Mvmt Sat Flow, veh/h		849	1739	1279	3478							
<b>Through Movement Data</b>												
Assigned Mvmt		2		4			6		8			
Mvmt Sat Flow, veh/h		1870		565			3471		292			
<b>Right-Turn Movement Data</b>												
Assigned Mvmt		12		14			16		18			
Mvmt Sat Flow, veh/h		1585		1131			76		1300			
<b>Left Lane Group Data</b>												
Assigned Mvmt		5	1	7	3	0	0	0	0			
Lane Assignment		LL (Pr/Pm)		L L (Prot)								
Lanes in Grp		1	1	1	2	0	0	0	0			
Grp Vol (v), veh/h		12	95	12	239	0	0	0	0			
Grp Sat Flow (s), veh/h/ln		849	1739	1279	1739	0	0	0	0			

HCM 7th Signalized Intersection Capacity Analysis  
 1409: Southern Pkwy & KY-1865/KY-1865 (Taylor Blvd)

AM Peak - Design Year  
 09/20/2024

Q Serve Time (g_s), s	1.0	0.0	1.1	8.1	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	1.0	0.0	9.4	8.1	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	849	395	1279	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	48.6	46.6	11.5	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	48.6	0.0	3.2	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	1.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	404	394	94	281	0	0	0	0
V/C Ratio (X)	0.03	0.24	0.13	0.85	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	404	394	292	281	0	0	0	0
Upstream Filter (I)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	21.5	29.9	57.4	54.4	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.4	0.6	21.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	21.7	30.2	58.0	75.6	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.2	1.7	0.4	3.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	1.80	1.80	1.79	0.00	0.00	0.00	0.00
%ile Back of Q (95%), veh/ln	0.4	3.2	0.7	7.8	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.10	0.83	0.17	0.67	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	2	0	4	0	0	6	0	8
Lane Assignment	T					T		
Lanes in Grp	1	0	0	0	0	1	0	0
Grp Vol (v), veh/h	788	0	0	0	0	274	0	0
Grp Sat Flow (s), veh/h/ln	1870	0	0	0	0	1735	0	0
Q Serve Time (g_s), s	48.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	48.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	757	0	0	0	0	1137	0	0
V/C Ratio (X)	1.04	0.00	0.00	0.00	0.00	0.24	0.00	0.00
Avail Cap (c_a), veh/h	757	0	0	0	0	1137	0	0
Upstream Filter (I)	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	35.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	43.6	0.0	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	79.3	0.0	0.0	0.0	0.0	0.5	0.0	0.0
1st-Term Q (Q1), veh/ln	21.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	9.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.34	0.00	1.00	0.00	0.00	1.80	0.00	1.00
%ile Back of Q (95%), veh/ln	40.7	0.0	0.0	0.0	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	1.39	0.00	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	7.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
 1409: Southern Pkwy & KY-1865/KY-1865 (Taylor Blvd)

AM Peak - Design Year  
 09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	12	0	14	0	0	16	0	18
Lane Assignment	R		T+R			T+R		T+R
Lanes in Grp	1	0	1	0	0	1	0	1
Grp Vol (v), veh/h	561	0	36	0	0	287	0	131
Grp Sat Flow (s), veh/h/ln	1585	0	1696	0	0	1812	0	1592
Q Serve Time (g_s), s	24.1	0.0	2.4	0.0	0.0	0.0	0.0	8.3
Cycle Q Clear Time (g_c), s	24.1	0.0	2.4	0.0	0.0	0.0	0.0	8.3
Prot RT Sat Flow (s_R), veh/h/ln	1585.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	1.00	0.00	0.67	0.00	0.00	0.04	0.00	0.82
Lane Grp Cap (c), veh/h	770	0	162	0	0	1188	0	368
V/C Ratio (X)	0.73	0.00	0.22	0.00	0.00	0.24	0.00	0.36
Avail Cap (c_a), veh/h	770	0	424	0	0	1188	0	614
Upstream Filter (I)	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	24.6	0.0	50.1	0.0	0.0	0.0	0.0	38.6
Incr Delay (d2), s/veh	6.0	0.0	0.7	0.0	0.0	0.5	0.0	0.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	30.5	0.0	50.8	0.0	0.0	0.5	0.0	39.3
1st-Term Q (Q1), veh/ln	7.9	0.0	1.0	0.0	0.0	0.0	0.0	3.2
2nd-Term Q (Q2), veh/ln	1.3	0.0	0.0	0.0	0.0	0.2	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.54	0.00	1.80	0.00	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	14.1	0.0	1.8	0.0	0.0	0.3	0.0	5.9
%ile Storage Ratio (RQ%)	0.48	0.00	0.05	0.00	0.00	0.03	0.00	0.33
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	44.7
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.  
 \* HCM 7th Edition computational engine requires equal clearance times for the phases crossing the barrier.

HCM 7th Signalized Intersection Capacity Analysis  
 1410: KY-1865 (Taylor Blvd) & Brookline Ave

AM Peak - Design Year  
 09/20/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↑	↗	↘	↑	
Traffic Volume (veh/h)	10	10	10	10	0	10	0	720	40	50	460	0
Future Volume (veh/h)	10	10	10	10	0	10	0	720	40	50	460	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1900	1900	1900	1796	1796	1796	0	1841	1841	1826	1826	0
Adj Flow Rate, veh/h	12	12	12	12	0	12	0	889	49	62	568	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	7	7	7	0	4	4	5	5	0
Opposing Right Turn Influence	Yes			Yes			No			Yes		
Cap, veh/h	61	44	32	76	12	43	0	1541	1306	548	1529	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	1.00
Prop Arrive On Green	0.06	0.06	0.06	0.06	0.00	0.06	0.00	1.00	1.00	1.00	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	55.8	0.0	0.0	55.0	0.0	0.0	0.0	1.6	0.1	0.4	0.7	0.0
Ln Grp LOS	E			E				A	A	A	A	
Approach Vol, veh/h		36			24			938			630	
Approach Delay, s/veh		55.8			55.0			1.5			0.7	
Approach LOS		E			E			A			A	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs			2		4		6		8			
Case No			7.0		8.0		6.0		8.0			
Phs Duration (G+Y+Rc), s			106.5		13.5		106.5		13.5			
Change Period (Y+Rc), s			6.0		6.6		6.0		6.6			
Max Green (Gmax), s			78.0		29.4		78.0		29.4			
Max Allow Headway (MAH), s			0.2		5.1		0.7		5.2			
Max Q Clear (g_c+I1), s			2.0		4.3		2.0		3.7			
Green Ext Time (g_e), s			0.2		0.1		0.1		0.1			
Prob of Phs Call (p_c)			1.00		0.86		1.00		0.86			
Prob of Max Out (p_x)			0.00		0.00		0.00		0.00			
<b>Left-Turn Movement Data</b>												
Assigned Mvmt			5		7		1		3			
Mvmt Sat Flow, veh/h			0		364		583		536			
<b>Through Movement Data</b>												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			1841		755		1826		217			
<b>Right-Turn Movement Data</b>												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			1560		559		0		752			
<b>Left Lane Group Data</b>												
Assigned Mvmt	0	5	0	7	0	1	0	3				
Lane Assignment				L+T+R		L		L+T+R				
Lanes in Grp	0	0	0	1	0	1	0	1				
Grp Vol (v), veh/h	0	0	0	36	0	62	0	24				
Grp Sat Flow (s), veh/h/ln	0	0	0	1678	0	583	0	1505				

HCM 7th Signalized Intersection Capacity Analysis  
 1410: KY-1865 (Taylor Blvd) & Brookline Ave

AM Peak - Design Year  
 09/20/2024

Q Serve Time (g_s), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	2.3	0.0	0.0	0.0	1.7
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1424	0	583	0	1409
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1869	0	0	0	1752
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	6.9	0.0	100.5	0.0	6.9
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	5.2	0.0	100.5	0.0	4.6
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	100.5	0.0	2.3	0.0	0.0	0.0	1.8
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	2.3	0.0	0.0	0.0	1.7
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	0.33	0.00	1.00	0.00	0.50
Lane Grp Cap (c), veh/h	0	0	0	137	0	548	0	132
V/C Ratio (X)	0.00	0.00	0.00	0.26	0.00	0.11	0.00	0.18
Avail Cap (c_a), veh/h	0	0	0	441	0	548	0	398
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	54.4	0.0	0.0	0.0	54.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.4	0.0	0.4	0.0	0.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	55.8	0.0	0.4	0.0	55.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.7
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	2.0	0.0	0.1	0.0	1.3
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.15	0.00	0.06	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	889	0	0	0	568	0	0
Grp Sat Flow (s), veh/h/ln	0	1841	0	0	0	1826	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1541	0	0	0	1529	0	0
V/C Ratio (X)	0.00	0.58	0.00	0.00	0.00	0.37	0.00	0.00
Avail Cap (c_a), veh/h	0	1541	0	0	0	1529	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.6	0.0	0.0	0.0	0.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	1.6	0.0	0.0	0.0	0.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.0	0.0	0.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.00	0.00	1.80	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	1.2	0.0	0.0	0.0	0.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	1.49	0.00	0.00	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
 1410: KY-1865 (Taylor Blvd) & Brookline Ave

AM Peak - Design Year  
 09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	R							
Lanes in Grp	0	1	0	0	0	0	0	0
Grp Vol (v), veh/h	0	49	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1560	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.33	0.00	0.00	0.00	0.50
Lane Grp Cap (c), veh/h	0	1306	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1306	0	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	3.2
HCM 7th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

HCM 7th Signalized Intersection Capacity Analysis  
 1411: KY-1865 (Taylor Blvd) & Bluegrass Ave

AM Peak - Design Year  
 09/20/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	420	80	120	10	70	10	160	501	60	10	380	270
Future Volume (veh/h)	420	80	120	10	70	10	160	501	60	10	380	270
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	464	88	133	11	77	11	177	554	66	11	420	298
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	3	3	3	4	4	4	4	4	4
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	543	228	345	92	236	200	447	1736	206	375	784	910
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00
Prop Arrive On Green	0.16	0.34	0.34	0.13	0.13	0.13	0.02	0.18	0.18	0.85	0.85	0.85
Unsig. Movement Delay												
Ln Grp Delay, s/veh	59.5	0.0	30.7	58.1	48.8	46.2	17.8	30.4	30.4	5.9	8.2	1.8
Ln Grp LOS	E		C	E	D	D	B	C	C	A	A	A
Approach Vol, veh/h		685			99			797			729	
Approach Delay, s/veh		50.2			49.5			27.6			5.6	
Approach LOS		D			D			C			A	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs			2	4	3	5	6		8			
Case No			4.0	5.4	2.0	1.2	5.3		4.0			
Phs Duration (G+Y+Rc), s			72.7	21.9	25.5	15.0	57.6		47.3			
Change Period (Y+Rc), s			6.5	6.6	6.6	6.5	6.5		6.6			
Max Green (Gmax), s			54.5	23.4	22.4	10.5	37.5		52.4			
Max Allow Headway (MAH), s			0.0	5.0	4.9	4.3	1.9		5.1			
Max Q Clear (g_c+1), s			0.0	15.1	17.7	8.4	5.7		13.9			
Green Ext Time (g_e), s			0.0	0.2	1.2	0.1	0.4		1.3			
Prob of Phs Call (p_c)			1.00	1.00	1.00	1.00	1.00		1.00			
Prob of Max Out (p_x)			0.00	0.09	1.00	1.00	0.00		0.00			
<b>Left-Turn Movement Data</b>												
Assigned Mvmt				7	3	5	1					
Mvmt Sat Flow, veh/h				1151	3456	1753	791					
<b>Through Movement Data</b>												
Assigned Mvmt		2	4				6		8			
Mvmt Sat Flow, veh/h		3148	1856				1841		672			
<b>Right-Turn Movement Data</b>												
Assigned Mvmt			12	14			16		18			
Mvmt Sat Flow, veh/h			374	1572			1560		1016			
<b>Left Lane Group Data</b>												
Assigned Mvmt	0	0	7	3	5	1	0	0				
Lane Assignment			L	L (Prot)	(Pr/Pm)	L						
Lanes in Grp	0	0	1	2	1	1	0	0				
Grp Vol (v), veh/h	0	0	11	464	177	11	0	0				
Grp Sat Flow (s), veh/h/ln	0	0	1151	1728	1753	791	0	0				

HCM 7th Signalized Intersection Capacity Analysis  
 1411: KY-1865 (Taylor Blvd) & Bluegrass Ave

AM Peak - Design Year  
 09/20/2024

Q Serve Time (g_s), s	0.0	0.0	1.1	15.7	6.4	0.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	13.1	15.7	6.4	3.7	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1151	0	722	791	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	15.3	0.0	53.1	51.1	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	3.3	0.0	43.7	47.8	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	1.1	0.0	3.3	0.3	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	92	543	447	375	0	0
V/C Ratio (X)	0.00	0.00	0.12	0.85	0.40	0.03	0.00	0.00
Avail Cap (c_a), veh/h	0	0	170	645	476	375	0	0
Upstream Filter (I)	0.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	57.3	49.2	17.1	5.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.8	10.3	0.7	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	58.1	59.5	17.8	5.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.3	6.7	2.7	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.8	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.80	1.60	1.80	1.80	0.00	0.00
%ile Back of Q (95%), veh/ln	0.0	0.0	0.6	12.0	5.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.22	1.69	0.87	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	4	0	0	6	0	8
Lane Assignment		T	T			T		
Lanes in Grp	0	1	1	0	0	1	0	0
Grp Vol (v), veh/h	0	307	77	0	0	420	0	0
Grp Sat Flow (s), veh/h/ln	0	1749	1856	0	0	1841	0	0
Q Serve Time (g_s), s	0.0	18.3	4.5	0.0	0.0	7.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	18.3	4.5	0.0	0.0	7.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	964	236	0	0	784	0	0
V/C Ratio (X)	0.00	0.32	0.33	0.00	0.00	0.54	0.00	0.00
Avail Cap (c_a), veh/h	0	964	362	0	0	784	0	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	29.5	47.7	0.0	0.0	5.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.9	1.1	0.0	0.0	2.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	30.4	48.8	0.0	0.0	8.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	8.6	2.1	0.0	0.0	1.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.1	0.0	0.0	0.6	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.55	1.80	0.00	0.00	1.80	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	13.7	4.0	0.0	0.0	4.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	1.98	0.08	0.00	0.00	0.42	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
 1411: KY-1865 (Taylor Blvd) & Bluegrass Ave

AM Peak - Design Year  
 09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	14	0	0	16	0	18
Lane Assignment		T+R	R			R		T+R
Lanes in Grp	0	1	1	0	0	1	0	1
Grp Vol (v), veh/h	0	313	11	0	0	298	0	221
Grp Sat Flow (s), veh/h/ln	0	1773	1572	0	0	1560	0	1688
Q Serve Time (g_s), s	0.0	18.4	0.7	0.0	0.0	1.2	0.0	11.9
Cycle Q Clear Time (g_c), s	0.0	18.4	0.7	0.0	0.0	1.2	0.0	11.9
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	1559.9	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	18.9	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.21	1.00	0.00	0.00	1.00	0.00	0.60
Lane Grp Cap (c), veh/h	0	978	200	0	0	910	0	573
V/C Ratio (X)	0.00	0.32	0.05	0.00	0.00	0.33	0.00	0.39
Avail Cap (c_a), veh/h	0	978	307	0	0	910	0	737
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	29.5	46.0	0.0	0.0	0.8	0.0	30.1
Incr Delay (d2), s/veh	0.0	0.9	0.2	0.0	0.0	1.0	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	30.4	46.2	0.0	0.0	1.8	0.0	30.7
1st-Term Q (Q1), veh/ln	0.0	8.7	0.3	0.0	0.0	0.4	0.0	4.8
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.55	1.80	0.00	0.00	1.80	0.00	1.74
%ile Back of Q (95%), veh/ln	0.0	13.9	0.5	0.0	0.0	1.1	0.0	8.5
%ile Storage Ratio (RQ%)	0.00	2.01	0.19	0.00	0.00	0.11	0.00	0.54
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	28.3
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

---

HCM 7th Edition methodology does not support Non-NEMA phasing.

HCM 7th Signalized Intersection Capacity Analysis  
 1413: KY-1865 (Taylor Blvd) & I-264 EB ramps/Ashland Ave

AM Peak - Design Year  
 09/20/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↖	↕↗		↖	↕↕	↗
Traffic Volume (veh/h)	70	40	160	30	100	90	590	420	50	30	720	340
Future Volume (veh/h)	70	40	160	30	100	90	590	420	50	30	720	340
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1856	1856	1856	1811	1811	1811	1856	1856	1856	1811	1811	1811
Adj Flow Rate, veh/h	81	46	185	35	115	104	681	485	58	35	831	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	6	6	6	3	3	3	6	6	6
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	49	18	778	37	98	402	598	1533	183	511	1207	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	2.00	2.00	2.00
Prop Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.16	0.32	0.32	0.17	0.67	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	509.3	0.0	17.6	151.0	0.0	35.5	109.0	26.6	26.6	17.1	17.8	0.0
Ln Grp LOS	F		B	F		D	F	C	C	B	B	
Approach Vol, veh/h		312			254			1224			866	
Approach Delay, s/veh		217.7			103.7			72.5			17.8	
Approach LOS		F			F			E			B	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		2	1		4	5	6		8			
Case No		4.0	1.3		7.0	1.2	3.0		7.0			
Phs Duration (G+Y+Rc), s		65.0	17.0		38.0	35.0	47.0		38.0			
Change Period (Y+Rc), s		7.0	7.0		6.6	7.0	7.0		6.6			
Max Green (Gmax), s		58.0	10.0		31.4	28.0	40.0		31.4			
Max Allow Headway (MAH), s		0.0	4.5		5.2	5.0	0.0		4.6			
Max Q Clear (g_c+1), s		0.0	2.0		33.4	30.0	0.0		33.4			
Green Ext Time (g_e), s		0.0	0.0		0.0	0.0	0.0		0.0			
Prob of Phs Call (p_c)		1.00	0.69		1.00	1.00	1.00		1.00			
Prob of Max Out (p_x)		0.00	0.01		1.00	1.00	0.00		1.00			
<b>Left-Turn Movement Data</b>												
Assigned Mvmt			1		7	5					3	
Mvmt Sat Flow, veh/h			1725		0	1767					0	
<b>Through Movement Data</b>												
Assigned Mvmt		2			4		6		8			
Mvmt Sat Flow, veh/h		3172			67		3622		373			
<b>Right-Turn Movement Data</b>												
Assigned Mvmt		12			14		16		18			
Mvmt Sat Flow, veh/h		378			1572		1535		1535			
<b>Left Lane Group Data</b>												
Assigned Mvmt		0	1	0	7	5	0	0	3			
Lane Assignment		L (Pr/Pm)			L+T (Pr/Pm)			L+T				
Lanes in Grp		0	1	0	1	1	0	0	1			
Grp Vol (v), veh/h		0	35	0	127	681	0	0	150			
Grp Sat Flow (s), veh/h/ln		0	1725	0	67	1767	0	0	373			

HCM 7th Signalized Intersection Capacity Analysis  
 1413: KY-1865 (Taylor Blvd) & I-264 EB ramps/Ashland Ave

AM Peak - Design Year  
 09/20/2024

Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	28.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	31.4	28.0	0.0	0.0	31.4
Perm LT Sat Flow (s_l), veh/h/ln	0	836	0	1181	655	0	0	1168
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	58.0	0.0	31.4	40.0	0.0	0.0	31.4
Perm LT Serve Time (g_u), s	0.0	44.1	0.0	0.0	23.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	2.6	0.0	0.0	23.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	1.1	0.0	0.0	0.0	6.5
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.1	0.0	0.0	0.0	6.5
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.64	1.00	0.00	0.00	0.23
Lane Grp Cap (c), veh/h	0	511	0	67	598	0	0	135
V/C Ratio (X)	0.00	0.07	0.00	1.90	1.14	0.00	0.00	1.11
Avail Cap (c_a), veh/h	0	511	0	67	598	0	0	135
Upstream Filter (I)	0.00	0.51	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	17.1	0.0	51.9	27.7	0.0	0.0	39.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	457.4	81.3	0.0	0.0	111.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.1	0.0	509.3	109.0	0.0	0.0	151.0
1st-Term Q (Q1), veh/ln	0.0	0.5	0.0	2.0	10.6	0.0	0.0	3.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	8.5	13.5	0.0	0.0	4.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	1.43	0.00	0.00	1.70
%ile Back of Q (95%), veh/ln	0.0	0.9	0.0	18.9	34.6	0.0	0.0	12.4
%ile Storage Ratio (RQ%)	0.00	0.19	0.00	1.49	2.53	0.00	0.00	0.45
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	15.1	20.7	0.0	0.0	3.8
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.5	0.3	0.0	0.0	0.3

Middle Lane Group Data

Assigned Mvmt	2	0	0	4	0	6	0	8
Lane Assignment	T					T		
Lanes in Grp	1	0	0	0	0	2	0	0
Grp Vol (v), veh/h	269	0	0	0	0	831	0	0
Grp Sat Flow (s), veh/h/ln	1763	0	0	0	0	1811	0	0
Q Serve Time (g_s), s	13.8	0.0	0.0	0.0	0.0	17.0	0.0	0.0
Cycle Q Clear Time (g_c), s	13.8	0.0	0.0	0.0	0.0	17.0	0.0	0.0
Lane Grp Cap (c), veh/h	852	0	0	0	0	1207	0	0
V/C Ratio (X)	0.32	0.00	0.00	0.00	0.00	0.69	0.00	0.00
Avail Cap (c_a), veh/h	852	0	0	0	0	1207	0	0
Upstream Filter (I)	1.00	0.00	0.00	0.00	0.00	0.51	0.00	0.00
Uniform Delay (d1), s/veh	25.6	0.0	0.0	0.0	0.0	16.2	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	26.6	0.0	0.0	0.0	0.0	17.8	0.0	0.0
1st-Term Q (Q1), veh/ln	6.1	0.0	0.0	0.0	0.0	4.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.0	0.0	0.0	0.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.65	0.00	0.00	1.00	0.00	1.54	0.00	1.00
%ile Back of Q (95%), veh/ln	10.5	0.0	0.0	0.0	0.0	7.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.48	0.00	0.00	0.00	0.00	0.19	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
 1413: KY-1865 (Taylor Blvd) & I-264 EB ramps/Ashland Ave

AM Peak - Design Year  
 09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	12	0	0	14	0	16	0	18
Lane Assignment	T+R			R		R		R
Lanes in Grp	1	0	0	1	0	1	0	1
Grp Vol (v), veh/h	274	0	0	185	0	0	0	104
Grp Sat Flow (s), veh/h/ln	1788	0	0	1572	0	1535	0	1535
Q Serve Time (g_s), s	13.9	0.0	0.0	8.1	0.0	0.0	0.0	6.4
Cycle Q Clear Time (g_c), s	13.9	0.0	0.0	8.1	0.0	0.0	0.0	6.4
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1572.5	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	28.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.21	0.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	864	0	0	778	0	512	0	402
V/C Ratio (X)	0.32	0.00	0.00	0.24	0.00	0.00	0.00	0.26
Avail Cap (c_a), veh/h	864	0	0	778	0	512	0	402
Upstream Filter (I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	25.7	0.0	0.0	17.3	0.0	0.0	0.0	35.1
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.2	0.0	0.0	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	26.6	0.0	0.0	17.6	0.0	0.0	0.0	35.5
1st-Term Q (Q1), veh/ln	6.3	0.0	0.0	2.9	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.64	0.00	0.00	1.80	0.00	1.00	0.00	1.80
%ile Back of Q (95%), veh/ln	10.7	0.0	0.0	5.3	0.0	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.49	0.00	0.00	0.67	0.00	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	74.7
HCM 7th LOS	E

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 7th Signalized Intersection Capacity Analysis  
 1414: KY-1865 (Taylor Blvd) & I-264 WB ramps

AM Peak - Design Year  
 09/20/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↔		↔	↔	↑↑			↑↑	
Traffic Volume (veh/h)	0	0	0	480	0	300	190	390	0	0	610	85
Future Volume (veh/h)	0	0	0	480	0	300	190	390	0	0	610	85
Number				7	4	14	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1870	0	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				548	0	0	217	445	0	0	696	0
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				591	0		529	1973	0	0	977	
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.33	0.00	0.00	0.44	1.00	0.00	0.00	0.28	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh				56.8	0.0	0.0	24.7	0.3	0.0	0.0	43.6	0.0
Ln Grp LOS				E			C	A			D	
Approach Vol, veh/h					548			662			696	
Approach Delay, s/veh					56.8			8.3			43.6	
Approach LOS					E			A			D	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs			2		4	6	5					
Case No			4.0		9.0	8.0	1.4					
Phs Duration (G+Y+Rc), s			73.6		46.4	40.0	33.6					
Change Period (Y+Rc), s			7.0		6.6	7.0	7.0					
Max Green (Gmax), s			60.0		46.4	33.0	20.0					
Max Allow Headway (MAH), s			0.0		4.9	0.0	4.9					
Max Q Clear (g_c+I1), s			0.0		37.6	0.0	2.0					
Green Ext Time (g_e), s			0.0		2.1	0.0	1.0					
Prob of Phs Call (p_c)			1.00		1.00	1.00	1.00					
Prob of Max Out (p_x)			0.00		0.39	0.00	0.00					
<b>Left-Turn Movement Data</b>												
Assigned Mvmt					7	1	5					
Mvmt Sat Flow, veh/h					1781	0	1781					
<b>Through Movement Data</b>												
Assigned Mvmt			2		4	6						
Mvmt Sat Flow, veh/h			3647		0	3741						
<b>Right-Turn Movement Data</b>												
Assigned Mvmt			12		14	16						
Mvmt Sat Flow, veh/h			0		1585	0						
<b>Left Lane Group Data</b>												
Assigned Mvmt	0	0	0	7	1	5	0	0				
Lane Assignment				L	L	(Pr/Pm)						
Lanes in Grp	0	0	0	1	0	1	0	0				
Grp Vol (v), veh/h	0	0	0	548	0	217	0	0				
Grp Sat Flow (s), veh/h/ln	0	0	0	1781	0	1781	0	0				

HCM 7th Signalized Intersection Capacity Analysis  
 1414: KY-1865 (Taylor Blvd) & I-264 WB ramps

AM Peak - Design Year  
 09/20/2024

Q Serve Time (g_s), s	0.0	0.0	0.0	35.6	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	35.6	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1781	0	749	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	33.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	11.8	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	11.8	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	33.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	591	0	529	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.93	0.00	0.41	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	689	0	529	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.98	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	38.7	0.0	24.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	18.1	0.0	0.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	56.8	0.0	24.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	15.2	0.0	3.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	3.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	0.00	1.38	1.00	1.80	0.00	0.00
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	25.1	0.0	6.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.56	0.00	0.74	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	6	0	0	0
Lane Assignment		T			T			
Lanes in Grp	0	2	0	0	2	0	0	0
Grp Vol (v), veh/h	0	445	0	0	696	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	1777	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1973	0	0	977	0	0	0
V/C Ratio (X)	0.00	0.23	0.00	0.00	0.71	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1973	0	0	977	0	0	0
Upstream Filter (I)	0.00	0.98	0.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	39.2	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	4.4	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.3	0.0	0.0	43.6	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	9.1	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.6	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.00	1.53	0.00	0.00	0.00
%ile Back of Q (95%), veh/ln	0.0	0.1	0.0	0.0	14.8	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	1.36	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
 1414: KY-1865 (Taylor Blvd) & I-264 WB ramps

AM Peak - Design Year  
 09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	16	0	0	0
Lane Assignment				R				
Lanes in Grp	0	0	0	1	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1585	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	525	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	613	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	35.1
HCM 7th LOS	D

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 7th Signalized Intersection Capacity Analysis  
27: KY-1865 (New Cut Rd) & 3rd Street/Southside

PM Peak - Design Year  
09/20/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	140	90	280	280	40	160	670	190	40	760	220
Future Volume (veh/h)	210	140	90	280	280	40	160	670	190	40	760	220
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	232	155	99	309	309	44	177	741	210	44	840	243
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	1	1	1
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	284	191	122	362	337	48	417	1296	367	248	1280	763
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Prop Arrive On Green	0.12	0.18	0.18	0.15	0.21	0.21	0.28	0.94	0.94	0.06	0.71	0.71
Unsig. Movement Delay												
Ln Grp Delay, s/veh	57.2	0.0	67.0	60.5	0.0	79.1	36.1	5.0	5.0	34.3	19.1	4.6
Ln Grp LOS	E		E	E		E	D	A	A	C	B	A
Approach Vol, veh/h		486			662			1128			1127	
Approach Delay, s/veh		62.3			70.4			9.9			16.6	
Approach LOS		E			E			A			B	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		1	2	3	4	6	5	7	8			
Case No		1.2	4.0	1.1	4.0	3.0	1.3	1.1	4.0			
Phs Duration (G+Y+Rc), s		10.7	77.1	24.5	37.7	60.0	27.8	29.0	33.2			
Change Period (Y+Rc), s		6.5	* 6.5	6.5	* 6.4	6.4	6.5	6.5	* 6.4			
Max Green (Gmax), s		15.5	* 49	22.5	* 38	53.6	10.5	22.5	* 38			
Max Allow Headway (MAH), s		3.8	5.1	3.8	5.2	4.9	3.7	3.8	5.2			
Max Q Clear (g_c+1), s		4.5	7.1	17.7	30.1	20.9	2.0	22.9	22.9			
Green Ext Time (g_e), s		0.0	6.9	0.3	1.2	7.7	0.3	0.0	1.2			
Prob of Phs Call (p_c)		0.84	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Prob of Max Out (p_x)		0.00	0.00	0.49	0.45	0.00	0.02	1.00	0.02			
<b>Left-Turn Movement Data</b>												
Assigned Mvmt		1		3			5	7				
Mvmt Sat Flow, veh/h		1795		1781			1795	1795				
<b>Through Movement Data</b>												
Assigned Mvmt			2		4	6			8			
Mvmt Sat Flow, veh/h			2755		1614	3582			1067			
<b>Right-Turn Movement Data</b>												
Assigned Mvmt			12		14	16				18		
Mvmt Sat Flow, veh/h			781		230	1598				681		
<b>Left Lane Group Data</b>												
Assigned Mvmt		1	0	3	0	0	5	7	0			
Lane Assignment		L (Pr/Pm)		L (Pr/Pm)			L (Pr/Pm)	L (Pr/Pm)				
Lanes in Grp		1	0	1	0	0	1	1	0			
Grp Vol (v), veh/h		44	0	232	0	0	177	309	0			
Grp Sat Flow (s), veh/h/ln		1795	0	1781	0	0	1795	1795	0			

HCM 7th Signalized Intersection Capacity Analysis  
 27: KY-1865 (New Cut Rd) & 3rd Street/Southside

PM Peak - Design Year  
 09/20/2024

Q Serve Time (g_s), s	2.5	0.0	15.7	0.0	0.0	0.0	20.9	0.0
Cycle Q Clear Time (g_c), s	2.5	0.0	15.7	0.0	0.0	0.0	20.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	595	0	1028	0	0	525	1135	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	44.9	0.0	26.8	0.0	0.0	40.9	26.8	0.0
Perm LT Serve Time (g_u), s	37.8	0.0	3.2	0.0	0.0	32.7	5.9	0.0
Perm LT Q Serve Time (g_ps), s	0.6	0.0	3.2	0.0	0.0	32.7	5.9	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00
Lane Grp Cap (c), veh/h	248	0	284	0	0	417	362	0
V/C Ratio (X)	0.18	0.00	0.82	0.00	0.00	0.42	0.85	0.00
Avail Cap (c_a), veh/h	383	0	337	0	0	417	362	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	0.00	0.88	1.00	0.00
Uniform Delay (d1), s/veh	34.0	0.0	44.6	0.0	0.0	35.5	42.8	0.0
Incr Delay (d2), s/veh	0.3	0.0	12.6	0.0	0.0	0.6	17.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	34.3	0.0	57.2	0.0	0.0	36.1	60.5	0.0
1st-Term Q (Q1), veh/ln	1.1	0.0	6.9	0.0	0.0	4.8	9.3	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	1.0	0.0	0.0	0.1	1.8	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.58	0.00	0.00	1.70	1.49	0.00
%ile Back of Q (95%), veh/ln	2.0	0.0	12.6	0.0	0.0	8.3	16.5	0.0
%ile Storage Ratio (RQ%)	0.25	0.00	0.87	0.00	0.00	0.83	1.66	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	6	0	0	8
Lane Assignment		T			T			
Lanes in Grp	0	1	0	0	2	0	0	0
Grp Vol (v), veh/h	0	482	0	0	840	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1791	0	0	1791	0	0	0
Q Serve Time (g_s), s	0.0	5.1	0.0	0.0	18.9	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.1	0.0	0.0	18.9	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	843	0	0	1280	0	0	0
V/C Ratio (X)	0.00	0.57	0.00	0.00	0.66	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	843	0	0	1280	0	0	0
Upstream Filter (I)	0.00	0.88	0.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	2.5	0.0	0.0	16.5	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.5	0.0	0.0	2.6	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.0	0.0	0.0	19.1	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.0	0.0	0.0	4.9	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.0	0.5	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.00	1.71	0.00	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	2.9	0.0	0.0	9.2	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.14	0.00	0.00	0.27	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
 27: KY-1865 (New Cut Rd) & 3rd Street/Southside

PM Peak - Design Year  
 09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	16	0	0	18
Lane Assignment		T+R		T+R	R			T+R
Lanes in Grp	0	1	0	1	1	0	0	1
Grp Vol (v), veh/h	0	469	0	353	243	0	0	254
Grp Sat Flow (s), veh/h/ln	0	1745	0	1844	1598	0	0	1748
Q Serve Time (g_s), s	0.0	5.1	0.0	28.1	3.7	0.0	0.0	20.9
Cycle Q Clear Time (g_c), s	0.0	5.1	0.0	28.1	3.7	0.0	0.0	20.9
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	1597.6	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	18.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.45	0.00	0.12	1.00	0.00	0.00	0.39
Lane Grp Cap (c), veh/h	0	821	0	385	763	0	0	312
V/C Ratio (X)	0.00	0.57	0.00	0.92	0.32	0.00	0.00	0.81
Avail Cap (c_a), veh/h	0	821	0	462	763	0	0	438
Upstream Filter (I)	0.00	0.88	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	2.5	0.0	58.1	3.5	0.0	0.0	59.2
Incr Delay (d2), s/veh	0.0	2.5	0.0	21.0	1.1	0.0	0.0	7.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.0	0.0	79.1	4.6	0.0	0.0	67.0
1st-Term Q (Q1), veh/ln	0.0	1.0	0.0	13.0	1.2	0.0	0.0	9.2
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	2.2	0.2	0.0	0.0	0.7
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.42	1.80	0.00	0.00	1.52
%ile Back of Q (95%), veh/ln	0.0	2.9	0.0	21.7	2.6	0.0	0.0	15.1
%ile Storage Ratio (RQ%)	0.00	0.14	0.00	0.82	0.33	0.00	0.00	0.35
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	31.4
HCM 7th LOS	C

Notes

\* HCM 7th Edition computational engine requires equal clearance times for the phases crossing the barrier.

HCM 7th Signalized Intersection Capacity Analysis  
 121: KY - 1865 (New Cut Rd) & KY 1065

PM Peak - Design Year  
 09/20/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	230	300	130	410	170	320	620	130	150	520	120
Future Volume (veh/h)	120	230	300	130	410	170	320	620	130	150	520	120
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1856	1856	1856	1885	1885	1885	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	133	254	332	144	453	188	354	685	144	166	575	133
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	1	1	1	2	2	2	3	3	3
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	200	405	588	338	496	421	448	1170	522	353	995	444
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.22	0.22	0.11	0.26	0.26	0.05	0.11	0.11	0.11	0.28	0.28
Unsig. Movement Delay												
Ln Grp Delay, s/veh	41.1	41.2	28.3	28.8	57.7	34.6	33.6	44.0	38.3	24.9	36.3	32.7
Ln Grp LOS	D	D	C	C	E	C	C	D	D	C	D	C
Approach Vol, veh/h		719			785			1183			874	
Approach Delay, s/veh		35.2			46.9			40.2			33.6	
Approach LOS		D			D			D			C	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		1	2	3	4	5	6	7	8			
Case No		1.1	3.0	1.1	3.0	1.1	3.0	1.1	3.0			
Phs Duration (G+Y+Rc), s		18.4	42.9	13.4	35.3	23.6	37.7	18.4	30.3			
Change Period (Y+Rc), s		6.5	* 6.7	6.5	6.3	6.5	* 6.7	6.5	6.3			
Max Green (Gmax), s		12.7	* 32	6.9	32.3	21.5	* 23	12.0	27.2			
Max Allow Headway (MAH), s		3.7	4.7	3.7	4.5	3.7	4.7	3.6	4.4			
Max Q Clear (g_c+I1), s		9.0	22.2	8.4	27.6	16.6	17.4	8.4	20.4			
Green Ext Time (g_e), s		0.1	3.4	0.0	1.3	0.5	2.0	0.1	1.5			
Prob of Phs Call (p_c)		0.99	1.00	0.98	1.00	1.00	1.00	0.99	1.00			
Prob of Max Out (p_x)		0.96	0.00	1.00	0.95	0.50	0.00	1.00	0.48			
<b>Left-Turn Movement Data</b>												
Assigned Mvmt		1		3		5		7				
Mvmt Sat Flow, veh/h		1767		1767		1781		1795				
<b>Through Movement Data</b>												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			3554		1885		3526		1856			
<b>Right-Turn Movement Data</b>												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			1585		1598		1572		1572			
<b>Left Lane Group Data</b>												
Assigned Mvmt		1	0	3	0	5	0	7	0			
Lane Assignment		L (Pr/Pm)		L (Pr/Pm)		L (Pr/Pm)		L (Pr/Pm)				
Lanes in Grp		1	0	1	0	1	0	1	0			
Grp Vol (v), veh/h		166	0	133	0	354	0	144	0			
Grp Sat Flow (s), veh/h/ln		1767	0	1767	0	1781	0	1795	0			

HCM 7th Signalized Intersection Capacity Analysis  
 121: KY - 1865 (New Cut Rd) & KY 1065

PM Peak - Design Year  
 09/20/2024

Q Serve Time (g_s), s	7.0	0.0	6.4	0.0	14.6	0.0	6.4	0.0
Cycle Q Clear Time (g_c), s	7.0	0.0	6.4	0.0	14.6	0.0	6.4	0.0
Perm LT Sat Flow (s_l), veh/h/ln	656	0	782	0	741	0	836	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	31.0	0.0	24.0	0.0	31.7	0.0	24.5	0.0
Perm LT Serve Time (g_u), s	16.0	0.0	3.3	0.0	15.6	0.0	10.4	0.0
Perm LT Q Serve Time (g_ps), s	5.1	0.0	3.3	0.0	15.6	0.0	2.9	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	353	0	200	0	448	0	338	0
V/C Ratio (X)	0.47	0.00	0.67	0.00	0.79	0.00	0.43	0.00
Avail Cap (c_a), veh/h	365	0	200	0	519	0	340	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	23.9	0.0	33.1	0.0	26.5	0.0	27.9	0.0
Incr Delay (d2), s/veh	1.0	0.0	8.1	0.0	7.1	0.0	0.9	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	24.9	0.0	41.1	0.0	33.6	0.0	28.8	0.0
1st-Term Q (Q1), veh/ln	2.8	0.0	2.6	0.0	6.8	0.0	2.6	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.4	0.0	0.9	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.80	0.00	1.59	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	5.1	0.0	5.6	0.0	12.2	0.0	4.8	0.0
%ile Storage Ratio (RQ%)	0.88	0.00	0.62	0.00	1.24	0.00	0.56	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	2	0	1	0	2	0	1
Grp Vol (v), veh/h	0	685	0	453	0	575	0	254
Grp Sat Flow (s), veh/h/ln	0	1777	0	1885	0	1763	0	1856
Q Serve Time (g_s), s	0.0	20.2	0.0	25.6	0.0	15.4	0.0	13.6
Cycle Q Clear Time (g_c), s	0.0	20.2	0.0	25.6	0.0	15.4	0.0	13.6
Lane Grp Cap (c), veh/h	0	1170	0	496	0	995	0	405
V/C Ratio (X)	0.00	0.59	0.00	0.91	0.00	0.58	0.00	0.63
Avail Cap (c_a), veh/h	0	1170	0	554	0	995	0	459
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	41.9	0.0	39.3	0.0	33.9	0.0	38.9
Incr Delay (d2), s/veh	0.0	2.1	0.0	18.4	0.0	2.4	0.0	2.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	44.0	0.0	57.7	0.0	36.3	0.0	41.2
1st-Term Q (Q1), veh/ln	0.0	9.5	0.0	11.0	0.0	6.3	0.0	6.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	2.5	0.0	0.3	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.52	0.00	1.45	0.00	1.64	0.00	1.66
%ile Back of Q (95%), veh/ln	0.0	15.0	0.0	19.6	0.0	10.9	0.0	10.3
%ile Storage Ratio (RQ%)	0.00	0.53	0.00	0.59	0.00	0.92	0.00	0.32
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
 121: KY - 1865 (New Cut Rd) & KY 1065

PM Peak - Design Year  
 09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	144	0	188	0	133	0	332
Grp Sat Flow (s), veh/h/ln	0	1585	0	1598	0	1572	0	1572
Q Serve Time (g_s), s	0.0	9.2	0.0	10.8	0.0	7.3	0.0	18.4
Cycle Q Clear Time (g_c), s	0.0	9.2	0.0	10.8	0.0	7.3	0.0	18.4
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1572.5
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.1
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	522	0	421	0	444	0	588
V/C Ratio (X)	0.00	0.28	0.00	0.45	0.00	0.30	0.00	0.56
Avail Cap (c_a), veh/h	0	522	0	469	0	444	0	633
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	37.0	0.0	33.8	0.0	31.0	0.0	27.3
Incr Delay (d2), s/veh	0.0	1.3	0.0	0.7	0.0	1.7	0.0	1.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	38.3	0.0	34.6	0.0	32.7	0.0	28.3
1st-Term Q (Q1), veh/ln	0.0	3.7	0.0	4.0	0.0	2.7	0.0	6.6
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.1	0.0	0.2	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	0.00	1.63
%ile Back of Q (95%), veh/ln	0.0	7.0	0.0	7.4	0.0	5.2	0.0	11.0
%ile Storage Ratio (RQ%)	0.00	0.71	0.00	1.04	0.00	0.44	0.00	1.22
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	39.0
HCM 7th LOS	D

Notes

\* HCM 7th Edition computational engine requires equal clearance times for the phases crossing the barrier.

HCM 7th Signalized Intersection Capacity Analysis  
128: WB 841 Exit & KY - 1865 (New Cut Rd)

PM Peak - Design Year  
09/20/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↔		↔↔	↔	↑			↑	↔
Traffic Volume (veh/h)	0	0	0	220	0	500	140	490	0	0	740	230
Future Volume (veh/h)	0	0	0	220	0	500	140	490	0	0	740	230
Number				7	4	14	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1870	0	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				241	0	547	153	536	0	0	809	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				358	0	560	292	1287	0	0	1066	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67
Prop Arrive On Green				0.20	0.00	0.20	0.06	0.69	0.00	0.00	0.38	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh				45.5	0.0	75.5	41.4	7.8	0.0	0.0	32.5	0.0
Ln Grp LOS				D		E	D	A			C	
Approach Vol, veh/h					788			689			809	
Approach Delay, s/veh					66.3			15.2			32.5	
Approach LOS					E			B			C	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs			2		4	6	5					
Case No			4.0		9.0	7.0	1.4					
Phs Duration (G+Y+Rc), s			82.0		28.0	69.0	13.0					
Change Period (Y+Rc), s			6.3		5.9	* 6.3	6.3					
Max Green (Gmax), s			75.7		22.1	* 63	8.1					
Max Allow Headway (MAH), s			4.9		4.0	4.9	3.7					
Max Q Clear (g_c+I1), s			15.8		23.4	43.4	2.0					
Green Ext Time (g_e), s			3.5		0.0	5.3	0.2					
Prob of Phs Call (p_c)			1.00		1.00	1.00	0.99					
Prob of Max Out (p_x)			0.00		1.00	0.00	0.11					
<b>Left-Turn Movement Data</b>												
Assigned Mvmt					7	1	5					
Mvmt Sat Flow, veh/h					1781	0	1781					
<b>Through Movement Data</b>												
Assigned Mvmt			2		4	6						
Mvmt Sat Flow, veh/h			1870		0	1870						
<b>Right-Turn Movement Data</b>												
Assigned Mvmt			12		14	16						
Mvmt Sat Flow, veh/h			0		2790	1585						
<b>Left Lane Group Data</b>												
Assigned Mvmt	0	0	0	7	1	5	0	0				
Lane Assignment				L	L	(Pr/Pm)						
Lanes in Grp	0	0	0	1	0	1	0	0				
Grp Vol (v), veh/h	0	0	0	241	0	153	0	0				
Grp Sat Flow (s), veh/h/ln	0	0	0	1781	0	1781	0	0				

HCM 7th Signalized Intersection Capacity Analysis  
 128: WB 841 Exit & KY - 1865 (New Cut Rd)

PM Peak - Design Year  
 09/20/2024

Q Serve Time (g_s), s	0.0	0.0	0.0	13.8	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	13.8	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1781	0	674	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	60.7	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	19.3	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	19.3	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	62.7	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	358	0	292	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.67	0.00	0.52	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	358	0	315	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.26	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	40.6	0.0	41.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	4.9	0.0	0.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	45.5	0.0	41.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	6.0	0.0	3.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	0.00	1.64	1.00	1.42	0.00	0.00
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	10.7	0.0	5.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.42	0.00	0.47	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Middle Lane Group Data</b>								
Assigned Mvmt	0	2	0	4	6	0	0	0
Lane Assignment		T			T			
Lanes in Grp	0	1	0	0	1	0	0	0
Grp Vol (v), veh/h	0	536	0	0	809	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	0	1870	0	0	0
Q Serve Time (g_s), s	0.0	13.8	0.0	0.0	41.4	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	13.8	0.0	0.0	41.4	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1287	0	0	1066	0	0	0
V/C Ratio (X)	0.00	0.42	0.00	0.00	0.76	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1287	0	0	1066	0	0	0
Upstream Filter (I)	0.00	0.26	0.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.5	0.0	0.0	27.4	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	5.1	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.8	0.0	0.0	32.5	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	4.5	0.0	0.0	18.8	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	1.5	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.39	0.00	1.00	1.36	0.00	0.00	0.00
%ile Back of Q (95%), veh/ln	0.0	6.4	0.0	0.0	27.7	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.20	0.00	0.00	1.71	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
 128: WB 841 Exit & KY - 1865 (New Cut Rd)

PM Peak - Design Year  
 09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Right Lane Group Data</b>								
Assigned Mvmt	0	12	0	14	16	0	0	0
Lane Assignment				R	R			
Lanes in Grp	0	0	0	2	1	0	0	0
Grp Vol (v), veh/h	0	0	0	547	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1395	1585	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	560	903	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.98	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	560	903	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	43.7	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	31.8	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	75.5	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	15.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.39	1.00	0.00	0.00	0.00
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	24.4	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	2.48	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

<b>Intersection Summary</b>	
HCM 7th Control Delay, s/veh	39.0
HCM 7th LOS	D

**Notes**  
 \* HCM 7th Edition computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 7th Signalized Intersection Capacity Analysis  
136: EB 841 Exit/WB 841 Entrance

PM Peak - Design Year  
09/20/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	0	120	0	0	0	0	500	250	380	570	0
Future Volume (veh/h)	140	0	120	0	0	0	0	500	250	380	570	0
Number	7	4	14				5	2	12	1	6	16
Initial Q, veh	0	0	0				0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1856	0	1856				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	163	0	140				0	583	0	443	665	0
Peak Hour Factor	0.90	0.90	0.90				0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	0	3				0	2	2	2	2	0
Opposing Right Turn Influence	Yes						No			Yes		
Cap, veh/h	199	0	178				0	877		697	1452	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Prop Arrive On Green	0.11	0.00	0.11				0.00	0.47	0.00	0.51	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	58.7	0.0	57.2				0.0	26.5	0.0	16.5	0.6	0.0
Ln Grp LOS	E		E					C		B	A	
Approach Vol, veh/h		303						583			1108	
Approach Delay, s/veh		58.0						26.5			7.0	
Approach LOS		E						C			A	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		2	1		4		6					
Case No		8.0	1.4		9.0		4.0					
Phs Duration (G+Y+Rc), s		57.2	34.1		18.7		91.3					
Change Period (Y+Rc), s		5.6	* 5.9		6.3		* 5.9					
Max Green (Gmax), s		51.6	* 23		18.1		* 80					
Max Allow Headway (MAH), s		4.9	3.7		3.9		4.9					
Max Q Clear (g_c+1), s		28.4	2.0		11.9		2.0					
Green Ext Time (g_e), s		3.5	1.3		0.5		4.7					
Prob of Phs Call (p_c)		1.00	1.00		1.00		1.00					
Prob of Max Out (p_x)		0.00	0.00		0.26		0.00					
<b>Left-Turn Movement Data</b>												
Assigned Mvmt		5	1		7							
Mvmt Sat Flow, veh/h		0	1781		1767							
<b>Through Movement Data</b>												
Assigned Mvmt		2			4		6					
Mvmt Sat Flow, veh/h		1870			0		1870					
<b>Right-Turn Movement Data</b>												
Assigned Mvmt		12			14		16					
Mvmt Sat Flow, veh/h		0			1572		0					
<b>Left Lane Group Data</b>												
Assigned Mvmt		5	1	0	7	0	0	0	0			
Lane Assignment		L (Pr/Pm)			L							
Lanes in Grp		0	1	0	1	0	0	0	0			
Grp Vol (v), veh/h		0	443	0	163	0	0	0	0			
Grp Sat Flow (s), veh/h/ln		0	1781	0	1767	0	0	0	0			

HCM 7th Signalized Intersection Capacity Analysis  
 136: EB 841 Exit/WB 841 Entrance

PM Peak - Design Year  
 09/20/2024

Q Serve Time (g_s), s	0.0	0.0	0.0	9.9	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	9.9	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	832	0	1767	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	49.6	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	23.2	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	23.2	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	51.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	697	0	199	0	0	0	0
V/C Ratio (X)	0.00	0.64	0.00	0.82	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	697	0	291	0	0	0	0
Upstream Filter (I)	0.00	0.59	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	15.4	0.0	47.7	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.1	0.0	11.1	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.5	0.0	58.7	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.6	0.0	4.3	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.6	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	1.52	0.00	1.74	0.00	0.00	0.00	0.00
%ile Back of Q (95%), veh/ln	0.0	8.8	0.0	8.6	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.75	0.00	0.88	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	2	0	0	4	0	6	0	0
Lane Assignment	T					T		
Lanes in Grp	1	0	0	0	0	1	0	0
Grp Vol (v), veh/h	583	0	0	0	0	665	0	0
Grp Sat Flow (s), veh/h/ln	1870	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	26.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	26.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	877	0	0	0	0	1452	0	0
V/C Ratio (X)	0.66	0.00	0.00	0.00	0.00	0.46	0.00	0.00
Avail Cap (c_a), veh/h	877	0	0	0	0	1452	0	0
Upstream Filter (I)	1.00	0.00	0.00	0.00	0.00	0.59	0.00	0.00
Uniform Delay (d1), s/veh	22.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	4.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	26.5	0.0	0.0	0.0	0.0	0.6	0.0	0.0
1st-Term Q (Q1), veh/ln	10.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	1.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.48	0.00	0.00	1.00	0.00	1.80	0.00	0.00
%ile Back of Q (95%), veh/ln	17.3	0.0	0.0	0.0	0.0	0.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.62	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
 136: EB 841 Exit/WB 841 Entrance

PM Peak - Design Year  
 09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Right Lane Group Data</b>								
Assigned Mvmt	12	0	0	14	0	16	0	0
Lane Assignment	R							
Lanes in Grp	0	0	0	1	0	0	0	0
Grp Vol (v), veh/h	0	0	0	140	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1572	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	9.5	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	9.5	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	178	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.79	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	259	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	47.5	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	9.6	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	57.2	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.80	0.00	1.00	0.00	0.00
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	7.6	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

<b>Intersection Summary</b>	
HCM 7th Control Delay, s/veh	20.4
HCM 7th LOS	C

**Notes**  
 \* HCM 7th Edition computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 7th Signalized Intersection Capacity Analysis  
140:

PM Peak - Design Year  
09/20/2024

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	0	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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	No			No			No			No		
Cap, veh/h	65	1765	0	65	1765	0	0	2	0	0	2	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ln Grp LOS												
Approach Vol, veh/h		0			0			0			0	
Approach Delay, s/veh		0.0			0.0			0.0			0.0	
Approach LOS												
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs			2		4		6		8			
Case No			6.0		8.0		6.0		8.0			
Phs Duration (G+Y+Rc), s			110.0		0.0		110.0		0.0			
Change Period (Y+Rc), s			6.2		6.3		6.2		6.3			
Max Green (Gmax), s			53.6		43.9		53.6		43.9			
Max Allow Headway (MAH), s			0.0		0.0		0.0		0.0			
Max Q Clear (g_c+1), s			0.0		0.0		0.0		0.0			
Green Ext Time (g_e), s			0.0		0.0		0.0		0.0			
Prob of Phs Call (p_c)			1.00		0.00		1.00		0.00			
Prob of Max Out (p_x)			0.00		0.00		0.00		0.00			
<b>Left-Turn Movement Data</b>												
Assigned Mvmt			5		7		1		3			
Mvmt Sat Flow, veh/h			1781		0		1781		0			
<b>Through Movement Data</b>												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			1870		-117833		1870		-117833			
<b>Right-Turn Movement Data</b>												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			0		0		0		0			
<b>Left Lane Group Data</b>												
Assigned Mvmt	0	5	0	7	0	1	0	3				
Lane Assignment		L				L						
Lanes in Grp	0	1	0	0	0	1	0	0				
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0				
Grp Sat Flow (s), veh/h/ln	0	1781	0	0	0	1781	0	0				

HCM 7th Signalized Intersection Capacity Analysis  
140:

PM Peak - Design Year  
09/20/2024

Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	1781	0	0	0	1781	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	-6.3	0.0	0.0	0.0	-6.3
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	65	0	0	0	65	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	65	0	0	0	65	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Middle Lane Group Data</b>								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1765	0	2	0	1765	0	2
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1765	0	746	0	1765	0	746
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
140:

PM Peak - Design Year  
09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment								
Lanes in Grp	0	0	0	0	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	0.0
HCM 7th LOS	A

HCM 7th Signalized Intersection Capacity Analysis  
141: KY - 1865 (New Cut Rd)

PM Peak - Design Year  
09/20/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↖	↕↗		↖	↕↗	
Traffic Volume (veh/h)	50	10	60	10	10	140	120	760	120	50	880	70
Future Volume (veh/h)	50	10	60	10	10	140	120	760	120	50	880	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	57	11	68	11	11	160	137	867	137	57	1004	80
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	44	5	522	36	25	522	349	1777	281	279	1927	154
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Prop Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.58	0.58	0.58	1.00	1.00	1.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	330.3	0.0	35.4	57.4	0.0	39.0	21.4	20.3	20.3	5.5	1.4	1.3
Ln Grp LOS	F		D	E		D	C	C	C	A	A	A
Approach Vol, veh/h		136			182			1141			1141	
Approach Delay, s/veh		182.8			41.3			20.4			1.6	
Approach LOS		F			D			C			A	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs			2		4		6		8			
Case No			6.0		7.0		6.0		7.0			
Phs Duration (G+Y+Rc), s			94.0		56.0		94.0		56.0			
Change Period (Y+Rc), s			7.3		6.6		7.3		6.6			
Max Green (Gmax), s			86.7		49.4		86.7		49.4			
Max Allow Headway (MAH), s			6.6		5.8		6.4		5.2			
Max Q Clear (g_c+I1), s			26.9		51.4		32.2		51.4			
Green Ext Time (g_e), s			17.6		0.0		16.3		0.0			
Prob of Phs Call (p_c)			1.00		1.00		1.00		1.00			
Prob of Max Out (p_x)			0.00		1.00		0.00		0.00			
<b>Left-Turn Movement Data</b>												
Assigned Mvmt			5		7		1		3			
Mvmt Sat Flow, veh/h			520		1		561		0			
<b>Through Movement Data</b>												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			3074		15		3334		76			
<b>Right-Turn Movement Data</b>												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			486		1585		266		1585			
<b>Left Lane Group Data</b>												
Assigned Mvmt		0	5	0	7	0	1	0	3			
Lane Assignment			L		L+T		L		L+T			
Lanes in Grp		0	1	0	1	0	1	0	1			
Grp Vol (v), veh/h		0	137	0	68	0	57	0	22			
Grp Sat Flow (s), veh/h/ln		0	520	0	15	0	561	0	76			

HCM 7th Signalized Intersection Capacity Analysis  
 141: KY - 1865 (New Cut Rd)

PM Peak - Design Year  
 09/20/2024

Q Serve Time (g_s), s	0.0	22.6	0.0	0.0	0.0	5.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	22.6	0.0	49.4	0.0	30.2	0.0	49.4
Perm LT Sat Flow (s_l), veh/h/ln	0	520	0	1233	0	561	0	1341
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	86.7	0.0	49.4	0.0	86.7	0.0	49.4
Perm LT Serve Time (g_u), s	0.0	86.7	0.0	0.0	0.0	61.8	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	22.6	0.0	0.0	0.0	5.3	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.4	0.0	0.0	0.0	2.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.4	0.0	0.0	0.0	1.2
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.84	0.00	1.00	0.00	0.50
Lane Grp Cap (c), veh/h	0	349	0	49	0	279	0	61
V/C Ratio (X)	0.00	0.39	0.00	1.38	0.00	0.20	0.00	0.36
Avail Cap (c_a), veh/h	0	349	0	49	0	279	0	61
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.73	0.00	1.00
Uniform Delay (d1), s/veh	0.0	18.1	0.0	70.2	0.0	4.3	0.0	41.6
Incr Delay (d2), s/veh	0.0	3.3	0.0	260.1	0.0	1.2	0.0	15.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	21.4	0.0	330.3	0.0	5.5	0.0	57.4
1st-Term Q (Q1), veh/ln	0.0	2.7	0.0	1.9	0.0	0.5	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	3.6	0.0	0.1	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	5.5	0.0	9.8	0.0	1.0	0.0	1.5
%ile Storage Ratio (RQ%)	0.00	1.64	0.00	1.24	0.00	0.31	0.00	0.15
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	4.7	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
<b>Middle Lane Group Data</b>								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	501	0	0	0	535	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	24.9	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	24.9	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1027	0	0	0	1027	0	0
V/C Ratio (X)	0.00	0.49	0.00	0.00	0.00	0.52	0.00	0.00
Avail Cap (c_a), veh/h	0	1027	0	0	0	1027	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.73	0.00	0.00
Uniform Delay (d1), s/veh	0.0	18.6	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.7	0.0	0.0	0.0	1.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.3	0.0	0.0	0.0	1.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	10.3	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.0	0.0	0.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.50	0.00	1.00	0.00	1.80	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	16.1	0.0	0.0	0.0	0.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.63	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
 141: KY - 1865 (New Cut Rd)

PM Peak - Design Year  
 09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		T+R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	503	0	68	0	549	0	160
Grp Sat Flow (s), veh/h/ln	0	1783	0	1585	0	1823	0	1585
Q Serve Time (g_s), s	0.0	24.9	0.0	4.5	0.0	0.0	0.0	11.3
Cycle Q Clear Time (g_c), s	0.0	24.9	0.0	4.5	0.0	0.0	0.0	11.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.27	0.00	1.00	0.00	0.15	0.00	1.00
Lane Grp Cap (c), veh/h	0	1031	0	522	0	1053	0	522
V/C Ratio (X)	0.00	0.49	0.00	0.13	0.00	0.52	0.00	0.31
Avail Cap (c_a), veh/h	0	1031	0	522	0	1053	0	522
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.73	0.00	1.00
Uniform Delay (d1), s/veh	0.0	18.6	0.0	35.2	0.0	0.0	0.0	37.5
Incr Delay (d2), s/veh	0.0	1.7	0.0	0.2	0.0	1.3	0.0	1.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.3	0.0	35.4	0.0	1.3	0.0	39.0
1st-Term Q (Q1), veh/ln	0.0	10.3	0.0	1.8	0.0	0.0	0.0	4.5
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.0	0.0	0.4	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.50	0.00	1.80	0.00	1.80	0.00	1.76
%ile Back of Q (95%), veh/ln	0.0	16.2	0.0	3.2	0.0	0.7	0.0	8.2
%ile Storage Ratio (RQ%)	0.00	0.63	0.00	0.41	0.00	0.03	0.00	2.46
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	22.1
HCM 7th LOS	C

HCM 7th Signalized Intersection Capacity Analysis  
 1406: KY-1865 (New Cut Rd) & KY-1142 (Palatka Rd)

PM Peak - Design Year  
 09/20/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	130	190	170	30	200	50	190	740	40	80	880	180	
Future Volume (veh/h)	130	190	170	30	200	50	190	740	40	80	880	180	
Number	3	8	18	7	4	14	5	2	12	1	6	16	
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No			No			No			No		
Lanes Open During Work Zone													
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1885	1885	1885	
Adj Flow Rate, veh/h	139	204	182	32	214	54	204	793	43	86	943	193	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	1	1	1	
Opposing Right Turn Influence	Yes			Yes			Yes			Yes			
Cap, veh/h	237	219	196	114	273	69	443	1405	76	438	1063	217	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	
Prop Arrive On Green	0.08	0.24	0.24	0.02	0.19	0.19	0.21	0.41	0.41	0.05	0.12	0.12	
Unsig. Movement Delay													
Ln Grp Delay, s/veh	47.3	0.0	79.8	51.1	0.0	66.8	49.3	37.1	37.0	45.0	79.6	80.6	
Ln Grp LOS	D		E	D		E	D	D	D	D	E	F	
Approach Vol, veh/h		525			300			1040			1222		
Approach Delay, s/veh		71.2			65.1			39.5			77.6		
Approach LOS		E			E			D			E		
Timer:		1	2	3	4	5	6	7	8				
Assigned Phs		2	1	3	4	6	5	7	8				
Case No		4.0	1.4	1.1	4.0	4.0	1.4	1.1	4.0				
Phs Duration (G+Y+Rc), s		68.0	29.5	17.8	34.7	59.0	38.5	10.2	42.3				
Change Period (Y+Rc), s		6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5				
Max Green (Gmax), s		61.5	10.5	17.5	34.5	52.5	19.5	10.5	41.5				
Max Allow Headway (MAH), s		0.0	4.4	4.4	4.9	0.0	4.4	4.4	5.0				
Max Q Clear (g_c+I1), s		0.0	2.0	11.1	23.0	0.0	11.3	4.1	34.6				
Green Ext Time (g_e), s		0.0	0.1	0.2	1.0	0.0	0.5	0.0	1.2				
Prob of Phs Call (p_c)		1.00	0.97	1.00	1.00	1.00	1.00	0.74	1.00				
Prob of Max Out (p_x)		0.00	0.02	0.23	0.05	0.00	0.09	0.08	0.53				
<b>Left-Turn Movement Data</b>													
Assigned Mvmt			1	3			5	7					
Mvmt Sat Flow, veh/h			1795	1795			1781	1795					
<b>Through Movement Data</b>													
Assigned Mvmt		2			4	6			8				
Mvmt Sat Flow, veh/h		3428			1453	3038			918				
<b>Right-Turn Movement Data</b>													
Assigned Mvmt		12			14	16			18				
Mvmt Sat Flow, veh/h		186			367	621			819				
<b>Left Lane Group Data</b>													
Assigned Mvmt		0	1	3	0	0	5	7	0				
Lane Assignment		L (Pr/Pm), (Pr/Pm)					L (Pr/Pm), (Pr/Pm)						
Lanes in Grp		0	1	1	0	0	1	1	0				
Grp Vol (v), veh/h		0	86	139	0	0	204	32	0				
Grp Sat Flow (s), veh/h/ln		0	1795	1795	0	0	1781	1795	0				

HCM 7th Signalized Intersection Capacity Analysis  
 1406: KY-1865 (New Cut Rd) & KY-1142 (Palatka Rd)

PM Peak - Design Year  
 09/20/2024

Q Serve Time (g_s), s	0.0	0.0	9.1	0.0	0.0	9.3	2.1	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	9.1	0.0	0.0	9.3	2.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	662	1120	0	0	495	1005	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	52.5	30.2	0.0	0.0	50.5	28.2	0.0
Perm LT Serve Time (g_u), s	0.0	25.9	7.1	0.0	0.0	4.6	3.2	0.0
Perm LT Q Serve Time (g_ps), s	0.0	17.2	3.3	0.0	0.0	4.6	0.8	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Lane Grp Cap (c), veh/h	0	438	237	0	0	443	114	0
V/C Ratio (X)	0.00	0.20	0.59	0.00	0.00	0.46	0.28	0.00
Avail Cap (c_a), veh/h	0	438	311	0	0	443	195	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d1), s/veh	0.0	44.7	44.6	0.0	0.0	48.4	49.5	0.0
Incr Delay (d2), s/veh	0.0	0.3	2.8	0.0	0.0	0.9	1.6	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	45.0	47.3	0.0	0.0	49.3	51.1	0.0
1st-Term Q (Q1), veh/ln	0.0	2.8	4.1	0.0	0.0	6.5	1.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	1.80	0.00	0.00	1.64	1.80	0.00
%ile Back of Q (95%), veh/ln	0.0	5.1	7.6	0.0	0.0	10.8	1.8	0.0
%ile Storage Ratio (RQ%)	0.00	1.52	2.26	0.00	0.00	3.23	0.54	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	2	0	0	4	6	0	0	8
Lane Assignment	T				T			
Lanes in Grp	1	0	0	0	1	0	0	0
Grp Vol (v), veh/h	411	0	0	0	585	0	0	0
Grp Sat Flow (s), veh/h/ln	1777	0	0	0	1885	0	0	0
Q Serve Time (g_s), s	26.6	0.0	0.0	0.0	45.9	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	26.6	0.0	0.0	0.0	45.9	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	729	0	0	0	660	0	0	0
V/C Ratio (X)	0.56	0.00	0.00	0.00	0.89	0.00	0.00	0.00
Avail Cap (c_a), veh/h	729	0	0	0	660	0	0	0
Upstream Filter (I)	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	34.0	0.0	0.0	0.0	63.4	0.0	0.0	0.0
Incr Delay (d2), s/veh	3.1	0.0	0.0	0.0	16.2	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	37.1	0.0	0.0	0.0	79.6	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	11.5	0.0	0.0	0.0	23.3	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.6	0.0	0.0	0.0	3.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.47	0.00	0.00	1.00	1.32	0.00	0.00	1.00
%ile Back of Q (95%), veh/ln	17.8	0.0	0.0	0.0	34.7	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	1.32	0.00	0.00	0.00	3.74	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
 1406: KY-1865 (New Cut Rd) & KY-1142 (Palatka Rd)

PM Peak - Design Year  
 09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	12	0	0	14	16	0	0	18
Lane Assignment	T+R			T+R	T+R			T+R
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	425	0	0	268	551	0	0	386
Grp Sat Flow (s), veh/h/ln	1837	0	0	1819	1773	0	0	1738
Q Serve Time (g_s), s	26.6	0.0	0.0	21.0	45.9	0.0	0.0	32.6
Cycle Q Clear Time (g_c), s	26.6	0.0	0.0	21.0	45.9	0.0	0.0	32.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.10	0.00	0.00	0.20	0.35	0.00	0.00	0.47
Lane Grp Cap (c), veh/h	753	0	0	342	621	0	0	415
V/C Ratio (X)	0.56	0.00	0.00	0.78	0.89	0.00	0.00	0.93
Avail Cap (c_a), veh/h	753	0	0	418	621	0	0	481
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	34.0	0.0	0.0	58.0	63.4	0.0	0.0	55.9
Incr Delay (d2), s/veh	3.0	0.0	0.0	8.8	17.1	0.0	0.0	23.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	37.0	0.0	0.0	66.8	80.6	0.0	0.0	79.8
1st-Term Q (Q1), veh/ln	11.9	0.0	0.0	9.7	22.0	0.0	0.0	14.2
2nd-Term Q (Q2), veh/ln	0.6	0.0	0.0	0.8	3.0	0.0	0.0	2.8
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.46	0.00	0.00	1.51	1.33	0.00	0.00	1.40
%ile Back of Q (95%), veh/ln	18.3	0.0	0.0	15.8	33.1	0.0	0.0	23.7
%ile Storage Ratio (RQ%)	1.36	0.00	0.00	1.66	3.57	0.00	0.00	0.95
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	62.5
HCM 7th LOS	E

HCM 7th Signalized Intersection Capacity Analysis  
1407: KY-1865 (New Cut Rd) & Park Dr

PM Peak - Design Year  
09/20/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR			
Lane Configurations									
Traffic Volume (veh/h)	100	10	10	960	1150	90			
Future Volume (veh/h)	100	10	10	960	1150	90			
Number	7	14	5	2	6	16			
Initial Q, veh	0	0	0	0	0	0			
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00			
Ped-Bike Adj (A_pbT)	1.00	1.00	1.00			1.00			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach	No			No	No				
Lanes Open During Work Zone									
Adj Sat Flow, veh/h/ln	1826	1826	1870	1870	1885	1885			
Adj Flow Rate, veh/h	112	11	11	1072	1285	101			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	5	5	2	2	1	1			
Opposing Right Turn Influence	Yes		Yes						
Cap, veh/h	135	13	372	2947	2790	219			
HCM Platoon Ratio	1.00	1.00	2.00	2.00	2.00	2.00			
Prop Arrive On Green	0.09	0.09	1.00	1.00	1.00	1.00			
Unsig. Movement Delay									
Ln Grp Delay, s/veh	80.5	0.0	0.1	0.3	1.0	1.0			
Ln Grp LOS	F		A	A	A	A			
Approach Vol, veh/h	124			1083	1386				
Approach Delay, s/veh	80.5			0.3	1.0				
Approach LOS	F			A	A				
Timer:		1	2	3	4	5	6	7	8
Assigned Phs			2		4		6		
Case No			6.0		12.0		8.0		
Phs Duration (G+Y+Rc), s			130.4		19.6		130.4		
Change Period (Y+Rc), s			6.0		6.6		6.0		
Max Green (Gmax), s			102.0		35.4		102.0		
Max Allow Headway (MAH), s			0.1		4.6		0.0		
Max Q Clear (g_c+1), s			2.0		12.6		0.0		
Green Ext Time (g_e), s			0.0		0.5		0.0		
Prob of Phs Call (p_c)			1.00		0.99		1.00		
Prob of Max Out (p_x)			0.00		0.00		0.00		
<b>Left-Turn Movement Data</b>									
Assigned Mvmt			5		7		1		
Mvmt Sat Flow, veh/h			390		1554		0		
<b>Through Movement Data</b>									
Assigned Mvmt			2		4		6		
Mvmt Sat Flow, veh/h			3647		14		3459		
<b>Right-Turn Movement Data</b>									
Assigned Mvmt			12		14		16		
Mvmt Sat Flow, veh/h			0		153		264		
<b>Left Lane Group Data</b>									
Assigned Mvmt	0	5	0	7	0	1	0	0	
Lane Assignment		L		L+T+R					
Lanes in Grp	0	1	0	1	0	0	0	0	
Grp Vol (v), veh/h	0	11	0	124	0	0	0	0	
Grp Sat Flow (s), veh/h/ln	0	390	0	1721	0	0	0	0	

HCM 7th Signalized Intersection Capacity Analysis  
 1407: KY-1865 (New Cut Rd) & Park Dr

PM Peak - Design Year  
 09/20/2024

Q Serve Time (g_s), s	0.0	0.0	0.0	10.6	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	10.6	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	390	0	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	124.4	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	124.4	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	124.4	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.90	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	372	0	149	0	0	0	0
V/C Ratio (X)	0.00	0.03	0.00	0.83	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	372	0	406	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	67.4	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	13.1	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.1	0.0	80.5	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	4.7	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.71	0.00	1.00	0.00	0.00
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	9.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.31	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	1	0	0
Grp Vol (v), veh/h	0	1072	0	0	0	682	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1791	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	2947	0	0	0	1485	0	0
V/C Ratio (X)	0.00	0.36	0.00	0.00	0.00	0.46	0.00	0.00
Avail Cap (c_a), veh/h	0	2947	0	0	0	1485	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	1.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.3	0.0	0.0	0.0	1.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.00	0.00	1.80	0.00	0.00
%ile Back of Q (95%), veh/ln	0.0	0.3	0.0	0.0	0.0	0.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
 1407: KY-1865 (New Cut Rd) & Park Dr

PM Peak - Design Year  
 09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment	T+R							
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	704	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1838	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.00	0.09	0.00	0.14	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	0	0	1524	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1524	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.80	0.00	0.00
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	4.5
HCM 7th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

HCM 7th Signalized Intersection Capacity Analysis  
 1408: KY-1865 (New Cut Rd) & Kenwood Dr

PM Peak - Design Year  
 09/20/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔		↔	↕		↔	↕	
Traffic Volume (veh/h)	20	10	20	180	20	200	20	870	160	170	1000	50
Future Volume (veh/h)	20	10	20	180	20	200	20	870	160	170	1000	50
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1811	1811	1811	1870	1870	1870	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	22	11	22	199	22	221	22	962	177	188	1105	55
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6	2	2	2	2	2	2	1	1	1
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	82	45	62	271	33	332	307	1725	317	442	2095	104
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Prop Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.06	1.00	1.00	0.06	0.60	0.60
Unsig. Movement Delay												
Ln Grp Delay, s/veh	51.7	0.0	0.0	67.1	0.0	56.7	13.3	2.2	2.2	11.9	19.1	19.1
Ln Grp LOS	D			E		E	B	A	A	B	B	B
Approach Vol, veh/h		55			442			1161			1348	
Approach Delay, s/veh		51.7			61.4			2.4			18.1	
Approach LOS		D			E			A			B	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		1	2		4	5	6		8			
Case No		1.1	4.0		6.0	1.1	4.0		8.0			
Phs Duration (G+Y+Rc), s		16.0	93.3		40.7	11.8	97.5		40.7			
Change Period (Y+Rc), s		7.0	7.0		6.6	7.0	7.0		6.6			
Max Green (Gmax), s		23.0	69.0		37.4	10.0	82.0		37.4			
Max Allow Headway (MAH), s		4.4	0.0		5.5	4.3	0.0		6.1			
Max Q Clear (g_c+1), s		8.4	0.0		33.0	2.7	0.0		24.5			
Green Ext Time (g_e), s		0.6	0.0		1.1	0.0	0.0		0.2			
Prob of Phs Call (p_c)		1.00	1.00		1.00	0.60	1.00		1.00			
Prob of Max Out (p_x)		0.00	0.00		1.00	0.01	0.00		0.01			
<b>Left-Turn Movement Data</b>												
Assigned Mvmt		1			7	5					3	
Mvmt Sat Flow, veh/h		1795			1376	1781					215	
<b>Through Movement Data</b>												
Assigned Mvmt			2		4		6			8		
Mvmt Sat Flow, veh/h			2997		146		3472			197		
<b>Right-Turn Movement Data</b>												
Assigned Mvmt			12		14		16			18		
Mvmt Sat Flow, veh/h			551		1462		173			274		
<b>Left Lane Group Data</b>												
Assigned Mvmt		1	0	0	7	5	0	0	3			
Lane Assignment		L (Pr/Pm)			IL (Pr/Pm)				L+T+R			
Lanes in Grp		1	0	0	1	1	0	0	1			
Grp Vol (v), veh/h		188	0	0	199	22	0	0	55			
Grp Sat Flow (s), veh/h/ln		1795	0	0	1376	1781	0	0	686			

HCM 7th Signalized Intersection Capacity Analysis  
 1408: KY-1865 (New Cut Rd) & Kenwood Dr

PM Peak - Design Year  
 09/20/2024

Q Serve Time (g_s), s	6.4	0.0	0.0	8.5	0.7	0.0	0.0	1.9
Cycle Q Clear Time (g_c), s	6.4	0.0	0.0	31.0	0.7	0.0	0.0	22.5
Perm LT Sat Flow (s_l), veh/h/ln	498	0	0	1376	484	0	0	1155
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	780	0	0	0	0
Perm LT Eff Green (g_p), s	86.3	0.0	0.0	34.1	86.3	0.0	0.0	34.1
Perm LT Serve Time (g_u), s	86.3	0.0	0.0	11.6	62.7	0.0	0.0	13.4
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	8.5	1.1	0.0	0.0	1.9
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.40
Lane Grp Cap (c), veh/h	442	0	0	271	307	0	0	189
V/C Ratio (X)	0.43	0.00	0.00	0.73	0.07	0.00	0.00	0.29
Avail Cap (c_a), veh/h	610	0	0	302	369	0	0	219
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	11.1	0.0	0.0	58.7	13.2	0.0	0.0	50.7
Incr Delay (d2), s/veh	0.8	0.0	0.0	8.5	0.1	0.0	0.0	1.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	11.9	0.0	0.0	67.1	13.3	0.0	0.0	51.7
1st-Term Q (Q1), veh/ln	2.5	0.0	0.0	7.5	0.3	0.0	0.0	1.9
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.6	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	0.00	1.57	1.80	0.00	0.00	1.80
%ile Back of Q (95%), veh/ln	4.7	0.0	0.0	12.8	0.5	0.0	0.0	3.6
%ile Storage Ratio (RQ%)	1.40	0.00	0.00	5.01	0.16	0.00	0.00	0.22
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	570	0	0	0	570	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1791	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	27.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	27.8	0.0	0.0
Lane Grp Cap (c), veh/h	0	1023	0	0	0	1081	0	0
V/C Ratio (X)	0.00	0.56	0.00	0.00	0.00	0.53	0.00	0.00
Avail Cap (c_a), veh/h	0	1023	0	0	0	1081	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	17.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.2	0.0	0.0	0.0	1.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.2	0.0	0.0	0.0	19.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	11.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.0	0.0	0.6	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.00	0.00	1.48	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	1.1	0.0	0.0	0.0	17.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.11	0.00	0.00	0.00	0.58	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
 1408: KY-1865 (New Cut Rd) & Kenwood Dr

PM Peak - Design Year  
 09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	569	0	243	0	590	0	0
Grp Sat Flow (s), veh/h/ln	0	1771	0	1607	0	1854	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	20.6	0.0	27.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	20.6	0.0	27.8	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.31	0.00	0.91	0.00	0.09	0.00	0.40
Lane Grp Cap (c), veh/h	0	1019	0	365	0	1119	0	0
V/C Ratio (X)	0.00	0.56	0.00	0.67	0.00	0.53	0.00	0.00
Avail Cap (c_a), veh/h	0	1019	0	401	0	1119	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	52.8	0.0	17.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.2	0.0	4.0	0.0	1.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.2	0.0	56.7	0.0	19.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	8.5	0.0	11.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.4	0.0	0.6	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.55	0.00	1.47	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	1.1	0.0	13.7	0.0	17.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.11	0.00	1.50	0.00	0.60	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	19.0
HCM 7th LOS	B

HCM 7th Signalized Intersection Capacity Analysis  
 1409: Southern Pkwy & KY-1865/KY-1865 (Taylor Blvd)

PM Peak - Design Year  
 09/20/2024

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	10	720	320	80	850	20	20	30	30	360	50	40
Future Volume (veh/h)	10	720	320	80	850	20	20	30	30	360	50	40
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1900	1900	1900	1885	1885	1885
Adj Flow Rate, veh/h	11	779	346	87	920	22	22	32	32	390	54	43
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	2	2	2	0	0	0	1	1	1
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	319	851	913	364	2368	57	89	66	66	439	235	187
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.46	0.46	0.46	0.32	1.00	1.00	0.08	0.08	0.08	0.12	0.24	0.24
Unsig. Movement Delay												
Ln Grp Delay, s/veh	22.6	54.0	18.1	41.6	1.0	0.9	73.0	0.0	69.3	83.2	0.0	46.0
Ln Grp LOS	C	D	B	D	A	A	E		E	F		D
Approach Vol, veh/h		1136			1029			86			487	
Approach Delay, s/veh		42.7			4.4			70.2			75.8	
Approach LOS		D			A			E			E	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		2	1	4	3		6		8			
Case No		5.4	1.4	6.4	2.0		4.0		4.0			
Phs Duration (G+Y+Rc), s		75.8	31.3	17.9	24.9		107.1		42.9			
Change Period (Y+Rc), s		* 7	7.0	6.6	6.6		7.0		6.6			
Max Green (Gmax), s		* 69	5.1	30.0	19.4		80.4		56.0			
Max Allow Headway (MAH), s		3.8	4.3	4.0	4.4		3.7		4.5			
Max Q Clear (g_c+1), s		60.8	2.0	11.2	18.0		2.0		8.7			
Green Ext Time (g_e), s		2.8	0.1	0.2	0.3		3.1		0.4			
Prob of Phs Call (p_c)		1.00	0.97	1.00	1.00		1.00		1.00			
Prob of Max Out (p_x)		0.00	1.00	0.00	1.00		0.00		0.00			
<b>Left-Turn Movement Data</b>												
Assigned Mvmt		5	1	7	3							
Mvmt Sat Flow, veh/h		590	1781	1319	3591							
<b>Through Movement Data</b>												
Assigned Mvmt		2		4			6		8			
Mvmt Sat Flow, veh/h		1856		872			3547		972			
<b>Right-Turn Movement Data</b>												
Assigned Mvmt			12		14			16		18		
Mvmt Sat Flow, veh/h			1572		872			85		774		
<b>Left Lane Group Data</b>												
Assigned Mvmt		5	1	7	3	0	0	0	0			
Lane Assignment		LL (Pr/Pm)		L L (Prot)								
Lanes in Grp		1	1	1	2	0	0	0	0			
Grp Vol (v), veh/h		11	87	22	390	0	0	0	0			
Grp Sat Flow (s), veh/h/ln		590	1781	1319	1795	0	0	0	0			

HCM 7th Signalized Intersection Capacity Analysis  
 1409: Southern Pkwy & KY-1865/KY-1865 (Taylor Blvd)

PM Peak - Design Year  
 09/20/2024

Q Serve Time (g_s), s	1.5	0.0	2.5	16.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	1.5	0.0	9.2	16.0	0.0	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	590	501	1319	0	0	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	68.8	66.8	11.3	0.0	0.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	68.8	8.0	4.7	0.0	0.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	1.5	8.0	2.5	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	319	364	89	439	0	0	0	0
V/C Ratio (X)	0.03	0.24	0.25	0.89	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	319	364	253	464	0	0	0	0
Upstream Filter (I)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	22.4	41.2	71.6	64.8	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.4	1.4	18.4	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	22.6	41.6	73.0	83.2	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.2	2.2	0.8	7.3	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	1.80	1.80	1.56	0.00	0.00	0.00	0.00
%ile Back of Q (95%), veh/ln	0.4	4.1	1.6	13.2	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.11	1.04	0.39	1.11	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	2	0	4	0	0	6	0	8
Lane Assignment	T					T		
Lanes in Grp	1	0	0	0	0	1	0	0
Grp Vol (v), veh/h	779	0	0	0	0	461	0	0
Grp Sat Flow (s), veh/h/ln	1856	0	0	0	0	1777	0	0
Q Serve Time (g_s), s	58.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	58.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	851	0	0	0	0	1186	0	0
V/C Ratio (X)	0.92	0.00	0.00	0.00	0.00	0.39	0.00	0.00
Avail Cap (c_a), veh/h	851	0	0	0	0	1186	0	0
Upstream Filter (I)	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	37.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	16.1	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	54.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
1st-Term Q (Q1), veh/ln	26.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	3.8	0.0	0.0	0.0	0.0	0.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.30	0.00	1.00	0.00	0.00	1.80	0.00	1.00
%ile Back of Q (95%), veh/ln	38.9	0.0	0.0	0.0	0.0	0.6	0.0	0.0
%ile Storage Ratio (RQ%)	1.33	0.00	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
 1409: Southern Pkwy & KY-1865/KY-1865 (Taylor Blvd)

PM Peak - Design Year  
 09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	12	0	14	0	0	16	0	18
Lane Assignment	R		T+R			T+R		T+R
Lanes in Grp	1	0	1	0	0	1	0	1
Grp Vol (v), veh/h	346	0	64	0	0	481	0	97
Grp Sat Flow (s), veh/h/ln	1572	0	1743	0	0	1855	0	1746
Q Serve Time (g_s), s	0.0	0.0	5.3	0.0	0.0	0.0	0.0	6.7
Cycle Q Clear Time (g_c), s	0.0	0.0	5.3	0.0	0.0	0.0	0.0	6.7
Prot RT Sat Flow (s_R), veh/h/ln	1572.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	18.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	1.00	0.00	0.50	0.00	0.00	0.05	0.00	0.44
Lane Grp Cap (c), veh/h	913	0	132	0	0	1238	0	422
V/C Ratio (X)	0.38	0.00	0.49	0.00	0.00	0.39	0.00	0.23
Avail Cap (c_a), veh/h	913	0	349	0	0	1238	0	652
Upstream Filter (I)	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	16.9	0.0	66.5	0.0	0.0	0.0	0.0	45.7
Incr Delay (d2), s/veh	1.2	0.0	2.7	0.0	0.0	0.9	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	18.1	0.0	69.3	0.0	0.0	0.9	0.0	46.0
1st-Term Q (Q1), veh/ln	6.4	0.0	2.4	0.0	0.0	0.0	0.0	2.9
2nd-Term Q (Q2), veh/ln	0.3	0.0	0.1	0.0	0.0	0.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.64	0.00	1.80	0.00	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	10.9	0.0	4.4	0.0	0.0	0.6	0.0	5.3
%ile Storage Ratio (RQ%)	0.37	0.00	0.11	0.00	0.00	0.05	0.00	0.29
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	35.1
HCM 7th LOS	D

Notes

\* HCM 7th Edition computational engine requires equal clearance times for the phases crossing the barrier.

HCM 7th Signalized Intersection Capacity Analysis  
 1410: KY-1865 (Taylor Blvd) & Brookline Ave

PM Peak - Design Year  
 09/20/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↑	↗	↘	↑	
Traffic Volume (veh/h)	10	10	10	40	0	30	0	690	40	10	830	0
Future Volume (veh/h)	10	10	10	40	0	30	0	690	40	10	830	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1900	1900	1900	1841	1841	1841	0	1841	1841	1870	1870	0
Adj Flow Rate, veh/h	11	11	11	44	0	33	0	755	44	11	908	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	4	4	4	0	4	4	2	2	0
Opposing Right Turn Influence	No			Yes			No			Yes		
Cap, veh/h	94	79	55	142	15	61	0	1355	1148	597	1377	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	1.00
Prop Arrive On Green	0.10	0.10	0.10	0.10	0.00	0.10	0.00	1.00	1.00	1.00	1.00	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	31.6	0.0	0.0	33.6	0.0	0.0	0.0	1.7	0.1	0.1	2.5	0.0
Ln Grp LOS	C			C				A	A	A	A	
Approach Vol, veh/h		33			77			799			919	
Approach Delay, s/veh		31.6			33.6			1.6			2.5	
Approach LOS		C			C			A			A	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs			2		4		6		8			
Case No			7.0		8.0		6.0		8.0			
Phs Duration (G+Y+Rc), s			61.2		13.8		61.2		13.8			
Change Period (Y+Rc), s			6.0		6.6		6.0		6.6			
Max Green (Gmax), s			37.0		25.4		37.0		25.4			
Max Allow Headway (MAH), s			0.2		5.1		0.1		5.1			
Max Q Clear (g_c+1), s			2.0		3.3		2.0		5.6			
Green Ext Time (g_e), s			0.2		0.1		0.2		0.3			
Prob of Phs Call (p_c)			1.00		0.90		1.00		0.90			
Prob of Max Out (p_x)			0.00		0.00		0.00		0.00			
<b>Left-Turn Movement Data</b>												
Assigned Mvmt			5		7		1		3			
Mvmt Sat Flow, veh/h			0		314		680		691			
<b>Through Movement Data</b>												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			1841		824		1870		161			
<b>Right-Turn Movement Data</b>												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			1560		569		0		639			
<b>Left Lane Group Data</b>												
Assigned Mvmt	0	5	0	7	0	1	0	3				
Lane Assignment				L+T+R		L		L+T+R				
Lanes in Grp	0	0	0	1	0	1	0	1				
Grp Vol (v), veh/h	0	0	0	33	0	11	0	77				
Grp Sat Flow (s), veh/h/ln	0	0	0	1706	0	680	0	1492				

HCM 7th Signalized Intersection Capacity Analysis  
 1410: KY-1865 (Taylor Blvd) & Brookline Ave

PM Peak - Design Year  
 09/20/2024

Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.3	0.0	0.0	0.0	3.6
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1398	0	680	0	1412
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1869	0	0	0	1790
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	7.2	0.0	55.2	0.0	7.2
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	3.6	0.0	55.2	0.0	5.9
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3
Time to First Blk (g_f), s	0.0	55.2	0.0	3.1	0.0	0.0	0.0	1.2
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.3	0.0	0.0	0.0	1.2
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	0.33	0.00	1.00	0.00	0.57
Lane Grp Cap (c), veh/h	0	0	0	228	0	597	0	218
V/C Ratio (X)	0.00	0.00	0.00	0.15	0.00	0.02	0.00	0.35
Avail Cap (c_a), veh/h	0	0	0	619	0	597	0	569
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	31.2	0.0	0.0	0.0	32.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.4	0.0	0.1	0.0	1.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	31.6	0.0	0.1	0.0	33.6
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.3
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	1.0	0.0	0.0	0.0	2.5
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.08	0.00	0.01	0.00	0.07
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	755	0	0	0	908	0	0
Grp Sat Flow (s), veh/h/ln	0	1841	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	1355	0	0	0	1377	0	0
V/C Ratio (X)	0.00	0.56	0.00	0.00	0.00	0.66	0.00	0.00
Avail Cap (c_a), veh/h	0	1355	0	0	0	1377	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.7	0.0	0.0	0.0	2.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	1.7	0.0	0.0	0.0	2.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.0	0.0	1.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.00	0.00	1.80	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	1.1	0.0	0.0	0.0	1.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.64	0.00	0.00	0.00	0.18	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
 1410: KY-1865 (Taylor Blvd) & Brookline Ave

PM Peak - Design Year  
 09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	R							
Lanes in Grp	0	1	0	0	0	0	0	0
Grp Vol (v), veh/h	0	44	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	1560	0	0	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	0.33	0.00	0.00	0.00	0.43
Lane Grp Cap (c), veh/h	0	1148	0	0	0	0	0	0
V/C Ratio (X)	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	1148	0	0	0	0	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	3.9
HCM 7th LOS	A

HCM 7th Signalized Intersection Capacity Analysis  
 1411: KY-1865 (Taylor Blvd) & Bluegrass Ave

PM Peak - Design Year  
 09/20/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	430	130	180	10	160	20	130	540	10	10	680	240
Future Volume (veh/h)	430	130	180	10	160	20	130	540	10	10	680	240
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1841	1841	1841	1870	1870	1870
Adj Flow Rate, veh/h	461	139	193	11	171	21	139	579	11	11	729	257
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	3	3	3	4	4	4	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	549	254	353	48	289	245	301	1933	37	420	842	965
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Prop Arrive On Green	0.16	0.36	0.36	0.16	0.16	0.16	0.11	1.00	1.00	0.90	0.90	0.90
Unsig. Movement Delay												
Ln Grp Delay, s/veh	67.2	0.0	39.4	78.4	62.7	54.4	22.3	0.8	0.8	4.2	17.0	1.4
Ln Grp LOS	E		D	E	E	D	C	A	A	A	B	A
Approach Vol, veh/h		793			203			729			997	
Approach Delay, s/veh		55.6			62.7			4.9			12.8	
Approach LOS		E			E			A			B	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs			2	4	3	5	6		8			
Case No			4.0	5.4	2.0	1.2	5.3		4.0			
Phs Duration (G+Y+Rc), s			89.6	30.0	30.4	15.0	74.5		60.4			
Change Period (Y+Rc), s			7.0	6.6	6.6	6.6	7.0		6.6			
Max Green (Gmax), s			70.0	23.4	36.4	10.4	53.0		66.4			
Max Allow Headway (MAH), s			0.0	5.0	4.9	4.3	1.1		5.1			
Max Q Clear (g_c+1), s			0.0	25.4	21.4	8.4	2.7		25.5			
Green Ext Time (g_e), s			0.0	0.0	2.4	0.1	0.2		2.0			
Prob of Phs Call (p_c)			1.00	1.00	1.00	1.00	1.00		1.00			
Prob of Max Out (p_x)			0.00	1.00	0.04	1.00	0.00		0.00			
<b>Left-Turn Movement Data</b>												
Assigned Mvmt				7	3	5	1					
Mvmt Sat Flow, veh/h				1040	3456	1753	826					
<b>Through Movement Data</b>												
Assigned Mvmt		2	4				6		8			
Mvmt Sat Flow, veh/h		3511	1856				1870		709			
<b>Right-Turn Movement Data</b>												
Assigned Mvmt			12	14			16		18			
Mvmt Sat Flow, veh/h			67	1572			1585		984			
<b>Left Lane Group Data</b>												
Assigned Mvmt	0	0	7	3	5	1	0	0				
Lane Assignment			L	L (Prot)	(Pr/Pm)	L						
Lanes in Grp	0	0	1	2	1	1	0	0				
Grp Vol (v), veh/h	0	0	11	461	139	11	0	0				
Grp Sat Flow (s), veh/h/ln	0	0	1040	1728	1753	826	0	0				

HCM 7th Signalized Intersection Capacity Analysis  
 1411: KY-1865 (Taylor Blvd) & Bluegrass Ave

PM Peak - Design Year  
 09/20/2024

Q Serve Time (g_s), s	0.0	0.0	0.0	19.4	6.4	0.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	23.4	19.4	6.4	0.2	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	1040	0	562	826	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	23.4	0.0	69.5	67.5	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	41.2	67.5	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	8.6	0.2	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	48	549	301	420	0	0
V/C Ratio (X)	0.00	0.00	0.23	0.84	0.46	0.03	0.00	0.00
Avail Cap (c_a), veh/h	0	0	48	839	324	420	0	0
Upstream Filter (I)	0.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	75.0	61.2	21.0	4.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	3.4	6.0	1.3	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	78.4	67.2	22.3	4.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.4	8.5	2.4	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.5	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	1.80	1.55	1.80	1.80	0.00	0.00
%ile Back of Q (95%), veh/ln	0.0	0.0	0.9	13.9	4.5	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.30	1.96	0.77	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	4	0	0	6	0	8
Lane Assignment		T	T			T		
Lanes in Grp	0	1	1	0	0	1	0	0
Grp Vol (v), veh/h	0	288	171	0	0	729	0	0
Grp Sat Flow (s), veh/h/ln	0	1749	1856	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	12.9	0.0	0.0	26.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	12.9	0.0	0.0	26.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	963	289	0	0	842	0	0
V/C Ratio (X)	0.00	0.30	0.59	0.00	0.00	0.87	0.00	0.00
Avail Cap (c_a), veh/h	0	963	289	0	0	842	0	0
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	58.8	0.0	0.0	5.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	3.8	0.0	0.0	11.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.8	62.7	0.0	0.0	17.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	6.1	0.0	0.0	2.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.3	0.0	0.0	2.7	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	1.65	0.00	0.00	1.70	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	0.4	10.6	0.0	0.0	9.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.06	0.22	0.00	0.00	0.89	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
 1411: KY-1865 (Taylor Blvd) & Bluegrass Ave

PM Peak - Design Year  
 09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	14	0	0	16	0	18
Lane Assignment		T+R	R			R		T+R
Lanes in Grp	0	1	1	0	0	1	0	1
Grp Vol (v), veh/h	0	302	21	0	0	257	0	332
Grp Sat Flow (s), veh/h/ln	0	1829	1572	0	0	1585	0	1693
Q Serve Time (g_s), s	0.0	0.0	1.7	0.0	0.0	0.7	0.0	23.5
Cycle Q Clear Time (g_c), s	0.0	0.0	1.7	0.0	0.0	0.7	0.0	23.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	1585.1	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	23.8	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.04	1.00	0.00	0.00	1.00	0.00	0.58
Lane Grp Cap (c), veh/h	0	1007	245	0	0	965	0	608
V/C Ratio (X)	0.00	0.30	0.09	0.00	0.00	0.27	0.00	0.55
Avail Cap (c_a), veh/h	0	1007	245	0	0	965	0	750
Upstream Filter (I)	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	54.1	0.0	0.0	0.7	0.0	38.4
Incr Delay (d2), s/veh	0.0	0.8	0.2	0.0	0.0	0.7	0.0	1.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.8	54.4	0.0	0.0	1.4	0.0	39.4
1st-Term Q (Q1), veh/ln	0.0	0.0	0.7	0.0	0.0	0.2	0.0	9.7
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	1.80	0.00	0.00	1.80	0.00	1.52
%ile Back of Q (95%), veh/ln	0.0	0.4	1.3	0.0	0.0	0.8	0.0	15.1
%ile Storage Ratio (RQ%)	0.00	0.06	0.43	0.00	0.00	0.07	0.00	0.95
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	26.9
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

---

HCM 7th Edition methodology does not support Non-NEMA phasing.

HCM 7th Signalized Intersection Capacity Analysis  
 1413: KY-1865 (Taylor Blvd) & I-264 EB ramps/Ashland Ave

PM Peak - Design Year  
 09/20/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↖	↗	↖	↕		↖	↕	↗
Traffic Volume (veh/h)	150	40	240	30	80	90	500	610	20	90	880	360
Future Volume (veh/h)	150	40	240	30	80	90	500	610	20	90	880	360
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1826	1826	1826	1870	1870	1870	1841	1841	1841	1870	1870	1870
Adj Flow Rate, veh/h	162	43	260	32	87	97	541	660	22	97	953	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	5	5	5	2	2	2	4	4	4	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	43	0	582	30	67	332	614	2026	68	487	1819	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00
Prop Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.06	0.19	0.19	0.13	0.97	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh	1823.5	0.0	35.8	215.8	0.0	50.5	27.4	35.8	35.8	20.7	1.5	0.0
Ln Grp LOS	F		D	F		D	C	D	D	C	A	
Approach Vol, veh/h		465			216			1223			1050	
Approach Delay, s/veh		823.9			141.6			32.1			3.3	
Approach LOS		F			F			C			A	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		2	1		4	5	6		8			
Case No		4.0	1.3		7.0	1.2	3.0		7.0			
Phs Duration (G+Y+Rc), s		95.0	17.0		38.0	32.1	79.9		38.0			
Change Period (Y+Rc), s		7.0	7.0		6.6	7.0	7.0		6.6			
Max Green (Gmax), s		88.0	10.0		31.4	37.0	61.0		31.4			
Max Allow Headway (MAH), s		0.0	4.4		5.2	5.0	0.0		4.6			
Max Q Clear (g_c+I1), s		0.0	2.0		33.4	22.3	0.0		33.4			
Green Ext Time (g_e), s		0.0	0.2		0.0	2.8	0.0		0.0			
Prob of Phs Call (p_c)		1.00	0.98		1.00	1.00	1.00		1.00			
Prob of Max Out (p_x)		0.00	0.04		1.00	0.09	0.00		1.00			
<b>Left-Turn Movement Data</b>												
Assigned Mvmt			1		7	5					3	
Mvmt Sat Flow, veh/h			1781		0	1753					0	
<b>Through Movement Data</b>												
Assigned Mvmt		2			4		6			8		
Mvmt Sat Flow, veh/h		3454			0		3741			322		
<b>Right-Turn Movement Data</b>												
Assigned Mvmt		12			14		16			18		
Mvmt Sat Flow, veh/h		115			1547		1585			1585		
<b>Left Lane Group Data</b>												
Assigned Mvmt		0	1	0	7	5	0	0	3			
Lane Assignment		L (Pr/Pm)			L+T (Pr/Pm)			L+T				
Lanes in Grp		0	1	0	1	1	0	0	1			
Grp Vol (v), veh/h		0	97	0	205	541	0	0	119			
Grp Sat Flow (s), veh/h/ln		0	1781	0	0	1753	0	0	322			

HCM 7th Signalized Intersection Capacity Analysis  
 1413: KY-1865 (Taylor Blvd) & I-264 EB ramps/Ashland Ave

PM Peak - Design Year  
 09/20/2024

Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	20.3	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	31.4	20.3	0.0	0.0	31.4
Perm LT Sat Flow (s_l), veh/h/ln	0	759	0	1219	580	0	0	1093
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	88.0	0.0	31.4	72.9	0.0	0.0	31.4
Perm LT Serve Time (g_u), s	0.0	63.3	0.0	0.0	70.8	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	10.3	0.0	0.0	70.8	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.79	1.00	0.00	0.00	0.27
Lane Grp Cap (c), veh/h	0	487	0	43	614	0	0	98
V/C Ratio (X)	0.00	0.20	0.00	4.77	0.88	0.00	0.00	1.22
Avail Cap (c_a), veh/h	0	487	0	43	754	0	0	98
Upstream Filter (I)	0.00	0.38	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	20.7	0.0	75.0	16.4	0.0	0.0	55.2
Incr Delay (d2), s/veh	0.0	0.1	0.0	1748.5	10.9	0.0	0.0	160.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.7	0.0	1823.5	27.4	0.0	0.0	215.8
1st-Term Q (Q1), veh/ln	0.0	1.9	0.0	1.7	9.2	0.0	0.0	3.8
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	20.9	1.9	0.0	0.0	4.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.74	0.00	1.75	1.49	0.00	0.00	1.72
%ile Back of Q (95%), veh/ln	0.0	3.3	0.0	39.4	16.6	0.0	0.0	14.0
%ile Storage Ratio (RQ%)	0.00	0.66	0.00	3.15	1.22	0.00	0.00	0.49
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	40.5	0.0	0.0	0.0	5.3
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.3

Middle Lane Group Data

Assigned Mvmt	2	0	0	4	0	6	0	8
Lane Assignment	T					T		
Lanes in Grp	1	0	0	0	0	2	0	0
Grp Vol (v), veh/h	334	0	0	0	0	953	0	0
Grp Sat Flow (s), veh/h/ln	1749	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	24.7	0.0	0.0	0.0	0.0	2.1	0.0	0.0
Cycle Q Clear Time (g_c), s	24.7	0.0	0.0	0.0	0.0	2.1	0.0	0.0
Lane Grp Cap (c), veh/h	1026	0	0	0	0	1819	0	0
V/C Ratio (X)	0.33	0.00	0.00	0.00	0.00	0.52	0.00	0.00
Avail Cap (c_a), veh/h	1026	0	0	0	0	1819	0	0
Upstream Filter (I)	1.00	0.00	0.00	0.00	0.00	0.38	0.00	0.00
Uniform Delay (d1), s/veh	34.9	0.0	0.0	0.0	0.0	1.1	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	35.8	0.0	0.0	0.0	0.0	1.5	0.0	0.0
1st-Term Q (Q1), veh/ln	11.6	0.0	0.0	0.0	0.0	0.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.48	0.00	0.00	1.00	0.00	1.80	0.00	1.00
%ile Back of Q (95%), veh/ln	17.5	0.0	0.0	0.0	0.0	1.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.81	0.00	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
 1413: KY-1865 (Taylor Blvd) & I-264 EB ramps/Ashland Ave

PM Peak - Design Year  
 09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	12	0	0	14	0	16	0	18
Lane Assignment	T+R			R		R		R
Lanes in Grp	1	0	0	1	0	1	0	1
Grp Vol (v), veh/h	348	0	0	260	0	0	0	97
Grp Sat Flow (s), veh/h/ln	1820	0	0	1547	0	1585	0	1585
Q Serve Time (g_s), s	24.7	0.0	0.0	18.9	0.0	0.0	0.0	7.7
Cycle Q Clear Time (g_c), s	24.7	0.0	0.0	18.9	0.0	0.0	0.0	7.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	1547.4	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	25.1	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.06	0.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	1068	0	0	582	0	771	0	332
V/C Ratio (X)	0.33	0.00	0.00	0.45	0.00	0.00	0.00	0.29
Avail Cap (c_a), veh/h	1068	0	0	582	0	771	0	332
Upstream Filter (I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	35.0	0.0	0.0	35.1	0.0	0.0	0.0	49.9
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.8	0.0	0.0	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	35.8	0.0	0.0	35.8	0.0	0.0	0.0	50.5
1st-Term Q (Q1), veh/ln	12.1	0.0	0.0	7.1	0.0	0.0	0.0	3.1
2nd-Term Q (Q2), veh/ln	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.47	0.00	0.00	1.61	0.00	1.00	0.00	1.80
%ile Back of Q (95%), veh/ln	18.1	0.0	0.0	11.7	0.0	0.0	0.0	5.6
%ile Storage Ratio (RQ%)	0.84	0.00	0.00	1.52	0.00	0.00	0.00	0.96
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	154.5
HCM 7th LOS	F

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 7th Signalized Intersection Capacity Analysis  
 1414: KY-1865 (Taylor Blvd) & I-264 WB ramps

PM Peak - Design Year  
 09/20/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↙		↗	↙	↗			↗	↘
Traffic Volume (veh/h)	0	0	0	530	0	550	230	620	0	0	800	125
Future Volume (veh/h)	0	0	0	530	0	550	230	620	0	0	800	125
Number				7	4	14	5	2	12	1	6	16
Initial Q, veh				0	0	0	0	0	0	0	0	0
Lane Width Adj.				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln				1870	0	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				605	0	0	262	708	0	0	913	0
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	2	2	0	0	2	2
Opposing Right Turn Influence				Yes			Yes			No		
Cap, veh/h				741	0		306	1753	0	0	1208	
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Prop Arrive On Green				0.42	0.00	0.00	0.21	0.99	0.00	0.00	0.34	0.00
Unsig. Movement Delay												
Ln Grp Delay, s/veh				48.4	0.0	0.0	49.7	1.2	0.0	0.0	48.4	0.0
Ln Grp LOS				D			D	A			D	
Approach Vol, veh/h					605			970			913	
Approach Delay, s/veh					48.4			14.3			48.4	
Approach LOS					D			B			D	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs			2		4	5	6					
Case No			4.0		9.0	1.2	8.0					
Phs Duration (G+Y+Rc), s			81.0		69.0	23.0	58.0					
Change Period (Y+Rc), s			7.0		6.6	7.0	7.0					
Max Green (Gmax), s			74.0		62.4	16.0	51.0					
Max Allow Headway (MAH), s			0.0		4.9	4.9	0.0					
Max Q Clear (g_c+I1), s			0.0		47.1	17.2	0.0					
Green Ext Time (g_e), s			0.0		3.3	0.0	0.0					
Prob of Phs Call (p_c)			1.00		1.00	1.00	1.00					
Prob of Max Out (p_x)			0.00		0.00	1.00	0.00					
<b>Left-Turn Movement Data</b>												
Assigned Mvmt					7	5	1					
Mvmt Sat Flow, veh/h					1781	1781	0					
<b>Through Movement Data</b>												
Assigned Mvmt			2		4		6					
Mvmt Sat Flow, veh/h			3647		0		3741					
<b>Right-Turn Movement Data</b>												
Assigned Mvmt			12		14		16					
Mvmt Sat Flow, veh/h			0		1585		0					
<b>Left Lane Group Data</b>												
Assigned Mvmt	0	0	0	7	5	1	0	0				
Lane Assignment				LL (Pr/Pm)								
Lanes in Grp	0	0	0	1	1	0	0	0				
Grp Vol (v), veh/h	0	0	0	605	262	0	0	0				
Grp Sat Flow (s), veh/h/ln	0	0	0	1781	1781	0	0	0				

HCM 7th Signalized Intersection Capacity Analysis  
 1414: KY-1865 (Taylor Blvd) & I-264 WB ramps

PM Peak - Design Year  
 09/20/2024

Q Serve Time (g_s), s	0.0	0.0	0.0	45.1	15.2	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	45.1	15.2	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1781	611	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	0.0	51.0	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	16.8	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	16.8	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	51.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	741	306	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.82	0.86	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	741	306	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.96	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	38.7	29.4	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	9.7	20.3	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	48.4	49.7	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	19.4	5.3	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	2.0	1.7	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	0.00	0.00	1.35	1.61	1.00	0.00	0.00
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	29.0	11.2	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.65	1.27	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Grp	0	2	0	0	0	2	0	0
Grp Vol (v), veh/h	0	708	0	0	0	913	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	0.7	0.0	0.0	0.0	34.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.7	0.0	0.0	0.0	34.2	0.0	0.0
Lane Grp Cap (c), veh/h	0	1753	0	0	0	1208	0	0
V/C Ratio (X)	0.00	0.40	0.00	0.00	0.00	0.76	0.00	0.00
Avail Cap (c_a), veh/h	0	1753	0	0	0	1208	0	0
Upstream Filter (I)	0.00	0.96	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.5	0.0	0.0	0.0	44.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	4.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	1.2	0.0	0.0	0.0	48.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	15.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.7	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.00	0.00	1.41	0.00	0.00
%ile Back of Q (95%), veh/ln	0.0	0.6	0.0	0.0	0.0	22.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.00	0.00	2.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCM 7th Signalized Intersection Capacity Analysis  
 1414: KY-1865 (Taylor Blvd) & I-264 WB ramps

PM Peak - Design Year  
 09/20/2024

Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	0
Lane Assignment	R							
Lanes in Grp	0	0	0	1	0	0	0	0
Grp Vol (v), veh/h	0	0	0	0	0	0	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	1585	0	0	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	0	0	659	0	0	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	659	0	0	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 7th Control Delay, s/veh	35.1
HCM 7th LOS	D

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.