

Appendix E

Intersection Alternatives: Operational Summary & Reports

No.	Intersection	Existing Traffic Control	Peak Hour	2023 TRAFFIC VOLUMES: NO IMPROVEMENTS					2023 TRAFFIC VOLUMES: IMPROVEMENTS					Recommended Improvements
				EB LOS	WB LOS	NB LOS	SB LOS	Intersection LOS	EB LOS	WB LOS	NB LOS	SB LOS	Intersection LOS	
1	River Rd & I-55 SB Ramps	Two-way Stop Controlled	AM	*	*	-	B	*	*	*	-	B	*	None recommended.
			PM	*	*	-	B	*	*	*	-	B	*	
2	River Rd & I-55 NB Ramps	Two-way Stop Controlled	AM	*	*	-	B	*	*	*	-	B	*	None recommended.
			PM	*	*	-	D	*	*	*	-	D	*	
3	IL 53 & River Rd	Signalized	AM	C	-	A	A	B	C	-	A	A	B	None recommended.
			PM	D	-	A	B	B	D	-	A	B	B	
4	IL 53 & Kankakee River Dr/Peotone Rd	Signalized	AM	D	F	B	A	D	D	F	B	A	D	None recommended.
			PM	D	C	B	A	B	D	C	B	A	B	
4.5	Indian Trail Rd & Peotone Rd	Two-way Stop Controlled	AM	*	*	B	B	*						
			PM	*	*	C	C	*						
5	Old Chicago Rd & Peotone Rd	Two-way Stop Controlled	AM	*	*	B	C	*	*	*	B	C	*	None recommended.
			PM	*	*	C	C	*	*	*	C	C	*	
5.5	Symerton Rd & Peotone Rd	Two-way Stop Controlled	AM	*	*	B	B	*						
			PM	*	*	C	C	*						
6	Warner Bridge Rd & Peotone Rd	Two-way Stop Controlled	AM	*	*	B	B	*	*	*	B	B	*	None recommended.
			PM	*	*	C	C	*	*	*	C	C	*	
7	Cedar Rd & Wilmington Rd	Two-way Stop Controlled	AM	*	*	C	B	*	*	*	C	B	*	None recommended.
			PM	*	*	C	C	*	*	*	C	C	*	
8	US 52 & Wilmington Rd	All-way Stop Controlled	AM	B	B	C	C	C	B	C	B	B	B	Signal added. Left turn lane added for all approaches.
			PM	F	C	E	F	F	C	B	C	C	C	
9	I-57 SB Ramps & Wilmington Rd	Two-way Stop Controlled	AM	*	*	-	B	*	A	A	-	-	B	Signal added. Lane geometry to remain the same.
			PM	*	*	-	D	*	B	A	-	-	B	
10	I-57 NB Ramps & Wilmington Rd	Two-way Stop Controlled	AM	*	*	B	-	*	*	*	B	-	*	None recommended.
			PM	*	*	C	-	*	*	*	C	-	*	
11	IL 50 & Wilmington Rd	All-way Stop Controlled	AM	B	A	B	B	B	B	A	B	B	B	None recommended.
			PM	B	B	B	C	B	B	B	B	C	B	

Node	Intersection	Existing Traffic Control	Peak Hour	2035 TRAFFIC VOLUMES: NO IMPROVEMENTS*					2035 TRAFFIC VOLUMES: WITH IMPROVEMENTS					Recommended Improvements
				EB LOS	WB LOS	NB LOS	SB LOS	Intersection LOS	EB LOS	WB LOS	NB LOS	SB LOS	Intersection LOS	
1	River Rd & I-55 SB Ramps	Two-way Stop Controlled	AM	*	*	-	B	*	*	*	-	B	*	None recommended.
			PM	*	*	-	C	*	*	*	-	C	*	
2	River Rd & I-55 NB Ramps	Two-way Stop Controlled	AM	*	*	-	C	*	A	A	-	C	A	Signal added. Lane geometry to remain.
			PM	*	*	-	F	*	A	B	-	C	B	
3	IL 53 & River Rd	Signalized	AM	C	-	A	B	B	D	-	A	A	B	Added another EB right turn lane, additional SB merge lane required on south leg. Re-optimized timing splits.
			PM	F	-	A	B	D	C	-	A	B	B	
4	IL 53 & Kankakee River Dr/Peotone Rd	Signalized	AM	D	F	B	A	D	D	D	B	A	C	Added additional WB right turn lane, additional NB merge lane required on north leg. Re-optimized timing
			PM	D	C	D	D	D	D	C	C	C	C	
4.5	Indian Trail Rd & Peotone Rd	Two-way Stop Controlled	AM	*	*	C	C	*						
			PM	*	*	E	D	*						
5	Old Chicago Rd & Peotone Rd	Two-way Stop Controlled	AM	*	*	C	C	*	B	B	B	C	B	Signal added. Lane geometry to remain.
			PM	*	*	F	F	*	D	A	D	D	C	
5.5	Symerton Rd & Peotone Rd	Two-way Stop Controlled	AM	*	*	C	C	*						
			PM	*	*	D	F	*						
6	Warner Bridge Rd & Peotone Rd	Two-way Stop Controlled	AM	*	*	B	C	*	*	*	B	C	*	None recommended.
			PM	*	*	E	D	*	*	*	E	D	*	
7	Cedar Rd & Wilmington Rd	Two-way Stop Controlled	AM	*	*	C	C	*	A	B	B	B	A	Signal added. EB and WB left turn lane added.
			PM	*	*	D	F	*	B	B	C	C	B	
8	US 52 & Wilmington Rd	All-way Stop Controlled	AM	D	D	E	D	D	C	C	B	B	C	Re-optimized timing splits.
			PM	F	E	F	F	F	D	B	C	D	C	
9	I-57 SB Ramps & Wilmington Rd	Two-way Stop Controlled	AM	*	*	-	B	*	B	A	-	-	B	Re-optimized timing splits.
			PM	*	*	-	F	*	B	A	-	-	B	
10	I-57 NB Ramps & Wilmington Rd	Two-way Stop Controlled	AM	*	*	B	-	*	A	B	-	-	B	Signal added. Lane geometry to remain.
			PM	*	*	D	-	*	A	B	-	-	B	
11	IL 50 & Wilmington Rd	All-way Stop Controlled	AM	B	B	B	B	B	B	B	B	B	B	None recommended.
			PM	C	B	C	C	C	C	B	C	C	C	

*2035 volumes only, existing conditions

Node	Intersection	Traffic Control	Peak Hour	2050 TRAFFIC VOLUMES: NO IMPROVEMENTS*					2050 TRAFFIC VOLUMES: SEE 2035 IMPROVEMENTS**					2050 TRAFFIC VOLUMES: ADDITIONAL IMPROVEMENTS					Recommended Improvements
				EB LOS	WB LOS	NB LOS	SB LOS	Intersection LOS	EB LOS	WB LOS	NB LOS	SB LOS	Intersection LOS	EB LOS	WB LOS	NB LOS	SB LOS	Intersection LOS	
1	d & I-55 SB	Two-way Stop	AM	*	*	-	B	*	*	*	-	B	*	*	*	-	B	*	No improvements recommended for 2050.
			PM	*	*	-	B	*	*	*	-	B	*	*	*	-	B	*	
2	d & I-55 NB	Two-way Stop	AM	*	*	-	C	*	A	A	-	C	A	A	A	-	C	A	No improvements recommended for 2050.
			PM	*	*	-	F	*	B	B	-	C	B	B	B	-	C	B	
3	53 & River	Signalized	AM	C	-	A	B	B	D	-	A	A	B	D	-	A	A	B	No improvements recommended for 2050.
			PM	F	-	A	B	D	C	-	B	B	B	C	-	B	B	B	
4	kee River D	Signalized	AM	D	F	C	A	D	D	D	B	B	C	D	C	B	B	C	Added NB right turn lane, NBR overlap phase. Re-optimized timing splits.
			PM	D	C	E	F	F	D	C	D	F	E	D	C	C	B	C	
4.5	ail Rd & Pe	Two-way Stop	AM	*	*	C	C	*											
			PM	*	*	F	F	*											
5	go Rd & Pe	Two-way Stop	AM	*	*	E	E	*	C	B	B	C	B	B	B	B	C	B	Added EB right turn lane, EBR overlap phase. Re-optimized timing splits.
			PM	*	*	F	F	*	E	A	D	D	D	C	B	C	C	C	
5.5	n Rd & Pec	Two-way Stop	AM	*	*	C	C	*											
			PM	*	*	F	F	*											
6	idge Rd & P	Two-way Stop	AM	*	*	C	C	*	*	*	C	C	*	*	*	C	C	*	No improvements recommended for 2050. Minor leg volumes very low.
			PM	*	*	F	F	*	*	*	F	F	*	*	*	F	F	*	
7	d & Wilmin	Two-way Stop	AM	*	*	D	C	*	A	B	B	B	B	A	B	B	B	B	No improvements recommended for 2050.
			PM	*	*	D	F	*	C	B	C	C	C	C	B	C	C	C	
8	& Wilming	All-way Stop	AM	F	E	F	F	F	C	C	B	C	C	C	C	B	C	C	No improvements recommended for 2050.
			PM	F	F	F	F	F	E	B	C	D	D	E	B	C	D	D	
9	mps & Wiln	Two-way Stop	AM	*	*	-	C	*	B	A	-	-	B	B	A	-	-	B	No improvements recommended for 2050.
			PM	*	*	-	F	*	C	B	-	-	C	C	B	-	-	C	
10	mps & Wiln	Two-way Stop	AM	*	*	B	-	*	A	A	-	-	B	A	A	-	-	B	No improvements recommended for 2050.
			PM	*	*	D	-	*	A	B	-	-	B	A	B	-	-	B	
11	& Wilmingt	All-way Stop	AM	B	B	B	B	B	B	B	B	B	B	B	C	B	B	B	Signal added. NB and SB left turn lanes added.
			PM	C	B	C	B	C	C	B	C	C	C	C	C	B	C	B	

*2050 volumes only, existing conditions

**2050 volumes w/ 2035 improvements

Intersection						
Int Delay, s/veh	8.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	6	12	66	272	5
Future Vol, veh/h	1	6	12	66	272	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	25	63	75	69	85	42
Heavy Vehicles, %	0	0	0	15	26	0
Mvmt Flow	4	10	16	96	320	12

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	112	0	-	0	81
Stage 1	-	-	-	-	64
Stage 2	-	-	-	-	18
Critical Hdwy	4.1	-	-	-	6.66
Critical Hdwy Stg 1	-	-	-	-	5.66
Critical Hdwy Stg 2	-	-	-	-	5.66
Follow-up Hdwy	2.2	-	-	-	3.734
Pot Cap-1 Maneuver	1491	-	-	-	865
Stage 1	-	-	-	-	901
Stage 2	-	-	-	-	946
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1491	-	-	-	863
Mov Cap-2 Maneuver	-	-	-	-	863
Stage 1	-	-	-	-	899
Stage 2	-	-	-	-	946

Approach	EB	WB	SB
HCM Control Delay, s/v	2.2	0	11.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1491	-	-	-	867
HCM Lane V/C Ratio	0.003	-	-	-	0.383
HCM Control Delay (s/veh)	7.4	-	-	-	11.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	1.8

Intersection						
Int Delay, s/veh	1.3					
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Vol, veh/h	48	7	4	271	70	286
Future Vol, veh/h	48	7	4	271	70	286
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	480	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	58	100	88	73	88
Heavy Vehicles, %	17	0	5	26	14	14
Mvmt Flow	64	12	4	308	96	325

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	574	258	421	0	0
Stage 1	258	-	-	-	-
Stage 2	316	-	-	-	-
Critical Hdwy	6.57	6.2	4.15	-	-
Critical Hdwy Stg 1	5.57	-	-	-	-
Critical Hdwy Stg 2	5.57	-	-	-	-
Follow-up Hdwy	3.653	3.3	2.245	-	-
Pot Cap-1 Maneuver	456	785	1122	-	-
Stage 1	751	-	-	-	-
Stage 2	706	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	454	785	1122	-	-
Mov Cap-2 Maneuver	454	-	-	-	-
Stage 1	748	-	-	-	-
Stage 2	706	-	-	-	-

Approach	SB	SE	NW
HCM Control Delay, s/v	13.76	0.11	0
HCM LOS	B		

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SBLn1
Capacity (veh/h)	-	-	1122	-	487
HCM Lane V/C Ratio	-	-	0.004	-	0.156
HCM Control Delay (s/veh)	-	-	8.2	-	13.8
HCM Lane LOS	-	-	A	-	B
HCM 95th %tile Q(veh)	-	-	0	-	0.5

HCM 7th Signalized Intersection Summary
 300: IL 53 & River Rd

AM Peak Period
 10/16/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	109	138	178	289	117	33
Future Volume (veh/h)	109	138	178	289	117	33
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1559	1411	1663	1953	1766	1189
Adj Flow Rate, veh/h	128	160	247	371	148	44
Peak Hour Factor	0.85	0.86	0.72	0.78	0.79	0.75
Percent Heavy Veh, %	23	33	16	3	15	48
Cap, veh/h	231	295	799	1389	1027	742
Arrive On Green	0.16	0.16	0.18	1.00	0.58	0.58
Sat Flow, veh/h	1485	1196	1584	1953	1766	1007
Grp Volume(v), veh/h	128	160	247	371	148	44
Grp Sat Flow(s),veh/h/ln	1485	1196	1584	1953	1766	1007
Q Serve(g_s), s	7.2	10.5	5.6	0.0	3.4	1.1
Cycle Q Clear(g_c), s	7.2	10.5	5.6	0.0	3.4	1.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	231	295	799	1389	1027	742
V/C Ratio(X)	0.55	0.54	0.31	0.27	0.14	0.06
Avail Cap(c_a), veh/h	412	441	1051	1389	1027	742
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.79	0.79	1.00	1.00
Uniform Delay (d), s/veh	35.1	29.5	4.7	0.0	8.6	3.3
Incr Delay (d2), s/veh	4.4	3.3	0.2	0.4	0.3	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.9	11.7	1.8	0.3	2.1	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	39.5	32.8	4.9	0.4	8.9	3.4
LnGrp LOS	D	C	A	A	A	A
Approach Vol, veh/h	288			618	192	
Approach Delay, s/veh	35.8			2.2	7.6	
Approach LOS	D			A	A	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		70.0		20.0	11.7	58.3
Change Period (Y+Rc), s		6.0		6.0	3.5	6.0
Max Green Setting (Gmax), s		53.0		25.0	22.5	27.0
Max Q Clear Time (g_c+I1), s		2.0		12.5	7.6	5.4
Green Ext Time (p_c), s		8.0		1.5	0.6	2.6
Intersection Summary						
HCM 7th Control Delay, s/veh			12.0			
HCM 7th LOS			B			

HCM 7th Signalized Intersection Summary
 400: IL 53 & Kankakee River Dr/Peotone Rd

AM Peak Period
 10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↖	↖	↗		↖	↗	↖
Traffic Volume (veh/h)	31	26	19	71	13	213	16	241	80	133	103	20
Future Volume (veh/h)	31	26	19	71	13	213	16	241	80	133	103	20
Initial Q (Qb), 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		No		No
Adj Sat Flow, veh/h/ln	1455	1663	1796	1737	1704	1707	1841	1870	1826	1485	1766	1278
Adj Flow Rate, veh/h	60	60	28	80	24	292	36	287	104	160	124	28
Peak Hour Factor	0.52	0.43	0.68	0.89	0.54	0.73	0.44	0.84	0.77	0.83	0.83	0.71
Percent Heavy Veh, %	30	16	7	11	19	13	4	2	5	28	15	42
Cap, veh/h	236	121	57	246	208	281	781	718	260	514	1060	700
Arrive On Green	0.05	0.11	0.11	0.06	0.12	0.12	0.02	0.55	0.55	0.12	1.00	1.00
Sat Flow, veh/h	1386	1072	500	1654	1704	1447	1753	1310	475	1414	1766	1083
Grp Volume(v), veh/h	60	0	88	80	24	292	36	0	391	160	124	28
Grp Sat Flow(s),veh/h/ln	1386	0	1573	1654	1704	1447	1753	0	1785	1414	1766	1083
Q Serve(g_s), s	3.4	0.0	4.7	3.8	1.1	11.0	0.8	0.0	11.4	4.3	0.0	0.0
Cycle Q Clear(g_c), s	3.4	0.0	4.7	3.8	1.1	11.0	0.8	0.0	11.4	4.3	0.0	0.0
Prop In Lane	1.00		0.32	1.00		1.00	1.00		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	236	0	178	246	208	281	781	0	978	514	1060	700
V/C Ratio(X)	0.25	0.00	0.49	0.33	0.12	1.04	0.05	0.00	0.40	0.31	0.12	0.04
Avail Cap(c_a), veh/h	271	0	192	273	208	281	814	0	978	703	1060	700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.97	0.97	0.97
Uniform Delay (d), s/veh	33.2	0.0	37.5	32.8	35.2	36.3	8.6	0.0	11.8	7.4	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	4.5	0.8	0.5	64.7	0.0	0.0	1.2	0.3	0.2	0.1
Initial Q Delay(d3), 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
%ile BackOfQ(95%),veh/ln	2.1	0.0	3.6	2.6	0.8	16.3	0.5	0.0	7.4	1.7	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.7	0.0	42.0	33.5	35.7	101.0	8.6	0.0	13.0	7.7	0.2	0.1
LnGrp LOS	C		D	C	D	F	A		B	A	A	A
Approach Vol, veh/h		148			396			427			312	
Approach Delay, s/veh		38.6			83.4			12.6			4.0	
Approach LOS		D			F			B			A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	55.3	8.5	16.2	5.3	60.0	7.7	17.0				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green Setting (Gmax), s	10.5	35.0	6.5	11.0	3.5	50.0	6.5	11.0				
Max Q Clear Time (g_c+10), s	10.3	13.4	5.8	6.7	2.8	2.0	5.4	13.0				
Green Ext Time (p_c), s	0.3	6.3	0.0	0.2	0.0	2.7	0.0	0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh			35.4									
HCM 7th LOS			D									

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	25	200	25	25	200	25	20	10	20	20	10	20
Future Vol, veh/h	25	200	25	25	200	25	20	10	20	20	10	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	38	38	38	33	33	33	9	9	9	4	4	4
Mvmt Flow	26	211	26	26	211	26	21	11	21	21	11	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	237	0	0	237	0	0	545	566	224	545	566	224
Stage 1	-	-	-	-	-	-	276	276	-	276	276	-
Stage 2	-	-	-	-	-	-	268	289	-	268	289	-
Critical Hdwy	4.48	-	-	4.43	-	-	7.19	6.59	6.29	7.14	6.54	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.19	5.59	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.19	5.59	-	6.14	5.54	-
Follow-up Hdwy	2.542	-	-	2.497	-	-	3.581	4.081	3.381	3.536	4.036	3.336
Pot Cap-1 Maneuver	1145	-	-	1168	-	-	439	424	799	446	431	811
Stage 1	-	-	-	-	-	-	715	669	-	726	678	-
Stage 2	-	-	-	-	-	-	722	660	-	733	669	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1145	-	-	1168	-	-	395	402	799	402	409	811
Mov Cap-2 Maneuver	-	-	-	-	-	-	395	402	-	402	409	-
Stage 1	-	-	-	-	-	-	696	651	-	707	660	-
Stage 2	-	-	-	-	-	-	674	643	-	683	651	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.82			0.82			13.09			12.95		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	497	176	-	-	176	-	-	505
HCM Lane V/C Ratio	0.106	0.023	-	-	0.023	-	-	0.104
HCM Control Delay (s/veh)	13.1	8.2	0	-	8.2	0	-	12.9
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0.1	-	-	0.3

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Traffic Vol, veh/h	1	180	63	2	181	46	93	26	10	15	3	1
Future Vol, veh/h	1	180	63	2	181	46	93	26	10	15	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	250	-	-	290	-	-	280	-	-	280	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	87	83	50	77	77	70	59	42	75	75	95
Heavy Vehicles, %	50	22	10	0	18	28	4	3	0	85	11	0
Mvmt Flow	1	207	76	4	235	60	133	44	24	20	4	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	295	0	0	283	0	0	492	550	245	504	558	265
Stage 1	-	-	-	-	-	-	247	247	-	273	273	-
Stage 2	-	-	-	-	-	-	245	303	-	231	285	-
Critical Hdwy	4.6	-	-	4.1	-	-	7.14	6.53	6.2	7.95	6.61	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.14	5.53	-	6.95	5.61	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.14	5.53	-	6.95	5.61	-
Follow-up Hdwy	2.65	-	-	2.2	-	-	3.536	4.027	3.3	4.265	4.099	3.3
Pot Cap-1 Maneuver	1037	-	-	1291	-	-	484	442	799	368	426	779
Stage 1	-	-	-	-	-	-	752	700	-	583	668	-
Stage 2	-	-	-	-	-	-	754	662	-	618	660	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1037	-	-	1291	-	-	477	440	799	320	424	779
Mov Cap-2 Maneuver	-	-	-	-	-	-	477	440	-	320	424	-
Stage 1	-	-	-	-	-	-	752	699	-	581	666	-
Stage 2	-	-	-	-	-	-	746	660	-	561	659	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.03			0.1			14.59			16.13		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	477	522	1037	-	-	1291	-	-	320	469
HCM Lane V/C Ratio	0.279	0.13	0.001	-	-	0.003	-	-	0.062	0.011
HCM Control Delay (s/veh)	15.4	12.9	8.5	-	-	7.8	-	-	17	12.8
HCM Lane LOS	C	B	A	-	-	A	-	-	C	B
HCM 95th %tile Q(veh)	1.1	0.4	0	-	-	0	-	-	0.2	0

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	61	190	5	5	183	23	5	5	5	12	5	24
Future Vol, veh/h	61	190	5	5	183	23	5	5	5	12	5	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	35	35	35	35	35	35	12	12	12	9	9	9
Mvmt Flow	66	207	5	5	199	25	5	5	5	13	5	26

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	224	0	0	212	0	0	554	577	209	564	567	211
Stage 1	-	-	-	-	-	-	342	342	-	222	222	-
Stage 2	-	-	-	-	-	-	213	235	-	342	345	-
Critical Hdwy	4.45	-	-	4.45	-	-	7.22	6.62	6.32	7.19	6.59	6.29
Critical Hdwy Stg 1	-	-	-	-	-	-	6.22	5.62	-	6.19	5.59	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.22	5.62	-	6.19	5.59	-
Follow-up Hdwy	2.515	-	-	2.515	-	-	3.608	4.108	3.408	3.581	4.081	3.381
Pot Cap-1 Maneuver	1172	-	-	1185	-	-	428	414	806	426	424	811
Stage 1	-	-	-	-	-	-	653	621	-	765	707	-
Stage 2	-	-	-	-	-	-	767	692	-	659	624	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1172	-	-	1185	-	-	381	386	806	389	394	811
Mov Cap-2 Maneuver	-	-	-	-	-	-	381	386	-	389	394	-
Stage 1	-	-	-	-	-	-	611	581	-	761	703	-
Stage 2	-	-	-	-	-	-	733	689	-	607	584	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	1.97			0.19			13.04			11.98		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	464	427	-	-	42	-	-	561
HCM Lane V/C Ratio	0.035	0.057	-	-	0.005	-	-	0.08
HCM Control Delay (s/veh)	13	8.3	0	-	8.1	0	-	12
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0	-	-	0.3

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	207	2	1	215	1	1	1	1	2	1	1
Future Vol, veh/h	1	207	2	1	215	1	1	1	1	2	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	86	50	95	87	95	25	95	25	50	95	95
Heavy Vehicles, %	0	24	0	100	24	0	17	0	60	0	0	0
Mvmt Flow	1	241	4	1	247	1	4	1	4	4	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	248	0	0	245	0	0	495	495	243	493	497	248
Stage 1	-	-	-	-	-	-	245	245	-	250	250	-
Stage 2	-	-	-	-	-	-	250	250	-	243	247	-
Critical Hdwy	4.1	-	-	5.1	-	-	7.27	6.5	6.8	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.27	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.27	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	3.1	-	-	3.653	4	3.84	3.5	4	3.3
Pot Cap-1 Maneuver	1329	-	-	911	-	-	462	479	673	490	478	796
Stage 1	-	-	-	-	-	-	727	707	-	759	704	-
Stage 2	-	-	-	-	-	-	722	703	-	765	706	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1329	-	-	911	-	-	459	478	673	485	477	796
Mov Cap-2 Maneuver	-	-	-	-	-	-	459	478	-	485	477	-
Stage 1	-	-	-	-	-	-	726	707	-	758	703	-
Stage 2	-	-	-	-	-	-	719	702	-	758	705	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.03			0.04			11.82			12.03		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	537	8	-	-	8	-	-	518
HCM Lane V/C Ratio	0.017	0.001	-	-	0.001	-	-	0.012
HCM Control Delay (s/veh)	11.8	7.7	0	-	9	0	-	12
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	61	190	1	1	183	23	1	3	1	12	1	24
Future Vol, veh/h	61	190	1	1	183	23	1	3	1	12	1	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	77	95	95	71	64	95	38	95	100	95	60
Heavy Vehicles, %	3	24	0	0	24	24	0	0	0	22	0	8
Mvmt Flow	80	247	1	1	258	36	1	8	1	12	1	40

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	294	0	0	248	0	0	668	704	247	689	686	276
Stage 1	-	-	-	-	-	-	408	408	-	278	278	-
Stage 2	-	-	-	-	-	-	260	296	-	411	408	-
Critical Hdwy	4.13	-	-	4.1	-	-	7.1	6.5	6.2	7.32	6.5	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.32	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.32	5.5	-
Follow-up Hdwy	2.227	-	-	2.2	-	-	3.5	4	3.3	3.698	4	3.372
Pot Cap-1 Maneuver	1262	-	-	1330	-	-	374	364	796	335	373	749
Stage 1	-	-	-	-	-	-	624	600	-	687	684	-
Stage 2	-	-	-	-	-	-	749	672	-	580	600	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1262	-	-	1330	-	-	327	337	796	303	345	749
Mov Cap-2 Maneuver	-	-	-	-	-	-	327	337	-	303	345	-
Stage 1	-	-	-	-	-	-	578	556	-	686	684	-
Stage 2	-	-	-	-	-	-	707	671	-	529	556	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	1.97			0.03			15.36			12.22		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	358	440	-	-	6	-	-	552
HCM Lane V/C Ratio	0.028	0.064	-	-	0.001	-	-	0.096
HCM Control Delay (s/veh)	15.4	8	0	-	7.7	0	-	12.2
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0	-	-	0.3

Intersection	
Intersection Delay, s/veh	16.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	20	132	38	9	130	18	52	231	4	22	159	8
Future Vol, veh/h	20	132	38	9	130	18	52	231	4	22	159	8
Peak Hour Factor	0.71	0.80	0.95	0.75	0.68	0.64	0.72	0.86	0.50	0.55	0.75	0.67
Heavy Vehicles, %	6	26	25	0	29	9	19	4	0	21	15	7
Mvmt Flow	28	165	40	12	191	28	72	269	8	40	212	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	14.1	13.9	19.2	15.6
HCM LOS	B	B	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	18%	11%	6%	12%
Vol Thru, %	80%	69%	83%	84%
Vol Right, %	1%	20%	11%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	287	190	157	189
LT Vol	52	20	9	22
Through Vol	231	132	130	159
RT Vol	4	38	18	8
Lane Flow Rate	349	233	231	264
Geometry Grp	1	1	1	1
Degree of Util (X)	0.617	0.418	0.411	0.481
Departure Headway (Hd)	6.369	6.452	6.4	6.555
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	565	557	562	549
Service Time	4.418	4.506	4.456	4.608
HCM Lane V/C Ratio	0.618	0.418	0.411	0.481
HCM Control Delay, s/veh	19.2	14.1	13.9	15.6
HCM Lane LOS	C	B	B	C
HCM 95th-tile Q	4.2	2.1	2	2.6

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↖					↗		↗
Traffic Vol, veh/h	0	145	51	82	203	0	0	0	0	46	0	73
Future Vol, veh/h	0	145	51	82	203	0	0	0	0	46	0	73
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Stop	Stop	Stop								
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	-	-	-	150	-	-	-	-	-	0	-	185
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	86	80	85	89	95	95	95	95	82	95	73
Heavy Vehicles, %	0	19	34	9	17	0	0	0	0	19	0	33
Mvmt Flow	0	169	64	96	228	0	0	0	0	56	0	100

Major/Minor	Major1			Major2			Minor2				
Conflicting Flow All	-	0	0	232	0	0			590	-	228
Stage 1	-	-	-	-	-	-			421	-	-
Stage 2	-	-	-	-	-	-			169	-	-
Critical Hdwy	-	-	-	4.19	-	-			6.59	-	6.53
Critical Hdwy Stg 1	-	-	-	-	-	-			5.59	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-			5.59	-	-
Follow-up Hdwy	-	-	-	2.281	-	-			3.671	-	3.597
Pot Cap-1 Maneuver	0	-	-	1295	-	0			443	0	740
Stage 1	0	-	-	-	-	0			627	0	-
Stage 2	0	-	-	-	-	0			822	0	-
Platoon blocked, %		-	-	-							
Mov Cap-1 Maneuver	-	-	-	1295	-	-			410	0	740
Mov Cap-2 Maneuver	-	-	-	-	-	-			410	0	-
Stage 1	-	-	-	-	-	-			627	0	-
Stage 2	-	-	-	-	-	-			760	0	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	2.38	12.25
HCM LOS			B

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1295	-	410	740
HCM Lane V/C Ratio	-	-	0.074	-	0.137	0.135
HCM Control Delay (s/veh)	-	-	8	-	15.2	10.6
HCM Lane LOS	-	-	A	-	C	B
HCM 95th %tile Q(veh)	-	-	0.2	-	0.5	0.5

HCM 7th TWSC
 1000: I-57 NB Off Ramp/I-57 NB On Ramp & Wilmington Rd

AM Peak Period
 10/16/2024

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖		↖		↗			
Traffic Vol, veh/h	55	130	0	0	220	131	75	0	83	0	0	0
Future Vol, veh/h	55	130	0	0	220	131	75	0	83	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Stop	-	-	None
Storage Length	150	-	-	-	-	-	0	-	185	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	72	96	95	95	93	86	72	95	67	95	95	95
Heavy Vehicles, %	20	19	0	0	14	7	16	0	10	0	0	0
Mvmt Flow	76	135	0	0	237	152	104	0	124	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	389	0	525
Stage 1	-	-	288
Stage 2	-	-	237
Critical Hdwy	4.3	-	6.56
Critical Hdwy Stg 1	-	-	5.56
Critical Hdwy Stg 2	-	-	5.56
Follow-up Hdwy	2.38	-	3.644
Pot Cap-1 Maneuver	1078	0	892
Stage 1	-	0	730
Stage 2	-	0	771
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1078	-	892
Mov Cap-2 Maneuver	-	-	0
Stage 1	-	-	678
Stage 2	-	-	771

Approach	EB	WB	NB
HCM Control Delay, s/v	3.1	0	12.23
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	455	892	1078	-	-	-
HCM Lane V/C Ratio	0.229	0.139	0.071	-	-	-
HCM Control Delay (s/veh)	15.3	9.7	8.6	-	-	-
HCM Lane LOS	C	A	A	-	-	-
HCM 95th %tile Q(veh)	0.9	0.5	0.2	-	-	-

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↶	↷		↶	↷			↶↷			↶↷	
Traffic Vol, veh/h	111	27	35	1	34	4	33	177	2	1	109	129
Future Vol, veh/h	111	27	35	1	34	4	33	177	2	1	109	129
Peak Hour Factor	0.82	0.75	0.73	0.95	0.61	0.50	0.83	0.79	0.25	0.25	0.88	0.87
Heavy Vehicles, %	12	34	24	0	26	0	30	8	20	0	14	11
Mvmt Flow	135	36	48	1	56	8	40	224	8	4	124	148
Number of Lanes	1	1	0	1	1	0	0	2	0	0	2	0

Approach	EB	WB	NE	SW
Opposing Approach	WB	EB	SW	NE
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SW	NE	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NE	SW	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay, s/veh	11.2	10.5	10.9	10.6
HCM LOS	B	B	B	B

Lane	NELn1	NELn2	EBLn1	EBLn2	WBLn1	WBLn2	SWLn1	SWLn2
Vol Left, %	27%	0%	100%	0%	100%	0%	2%	0%
Vol Thru, %	73%	98%	0%	44%	0%	89%	98%	30%
Vol Right, %	0%	2%	0%	56%	0%	11%	0%	70%
Sign Control	Stop							
Traffic Vol by Lane	122	91	111	62	1	38	56	184
LT Vol	33	0	111	0	1	0	1	0
Through Vol	89	89	0	27	0	34	55	55
RT Vol	0	2	0	35	0	4	0	129
Lane Flow Rate	152	120	135	84	1	64	66	210
Geometry Grp	5	5	5	5	5	5	5	5
Degree of Util (X)	0.272	0.197	0.257	0.147	0.002	0.12	0.107	0.325
Departure Headway (Hd)	6.443	5.912	6.832	6.304	6.92	6.786	5.83	5.564
Convergence, Y/N	Yes							
Cap	559	607	527	569	517	528	615	647
Service Time	4.172	3.641	4.565	4.037	4.659	4.526	3.559	3.293
HCM Lane V/C Ratio	0.272	0.198	0.256	0.148	0.002	0.121	0.107	0.325
HCM Control Delay, s/veh	11.6	10.1	11.9	10.1	9.7	10.5	9.3	11
HCM Lane LOS	B	B	B	B	A	B	A	B
HCM 95th-tile Q	1.1	0.7	1	0.5	0	0.4	0.4	1.4

Intersection						
Int Delay, s/veh	10.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	22	26	101	397	20
Future Vol, veh/h	1	22	26	101	397	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	25	69	59	87	91	63
Heavy Vehicles, %	0	5	5	21	16	0
Mvmt Flow	4	32	44	116	436	32

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	160	0	-	0	142
Stage 1	-	-	-	-	102
Stage 2	-	-	-	-	40
Critical Hdwy	4.1	-	-	-	6.56
Critical Hdwy Stg 1	-	-	-	-	5.56
Critical Hdwy Stg 2	-	-	-	-	5.56
Follow-up Hdwy	2.2	-	-	-	3.644
Pot Cap-1 Maneuver	1431	-	-	-	819
Stage 1	-	-	-	-	888
Stage 2	-	-	-	-	948
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1431	-	-	-	817
Mov Cap-2 Maneuver	-	-	-	-	817
Stage 1	-	-	-	-	886
Stage 2	-	-	-	-	948

Approach	EB	WB	SB
HCM Control Delay, s/v	0.84	0	14.93
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1431	-	-	-	825
HCM Lane V/C Ratio	0.003	-	-	-	0.567
HCM Control Delay (s/veh)	7.5	-	-	-	14.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	3.6

Intersection						
Int Delay, s/veh	5.7					
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Vol, veh/h	120	16	6	409	110	241
Future Vol, veh/h	120	16	6	409	110	241
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	480	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	61	40	50	93	92	79
Heavy Vehicles, %	14	4	3	16	20	26
Mvmt Flow	197	40	12	440	120	305

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	736	272	425	0	0
Stage 1	272	-	-	-	-
Stage 2	464	-	-	-	-
Critical Hdwy	6.54	6.24	4.13	-	-
Critical Hdwy Stg 1	5.54	-	-	-	-
Critical Hdwy Stg 2	5.54	-	-	-	-
Follow-up Hdwy	3.626	3.336	2.227	-	-
Pot Cap-1 Maneuver	369	762	1129	-	-
Stage 1	747	-	-	-	-
Stage 2	609	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	365	762	1129	-	-
Mov Cap-2 Maneuver	365	-	-	-	-
Stage 1	739	-	-	-	-
Stage 2	609	-	-	-	-

Approach	SB	SE	NW
HCM Control Delay, s/v	26.17	0.22	0
HCM LOS	D		

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SBLn1
Capacity (veh/h)	-	-	1129	-	401
HCM Lane V/C Ratio	-	-	0.011	-	0.591
HCM Control Delay (s/veh)	-	-	8.2	-	26.2
HCM Lane LOS	-	-	A	-	D
HCM 95th %tile Q(veh)	-	-	0	-	3.7

HCM 7th Signalized Intersection Summary
300: IL 53 & River Rd

PM Peak Period
10/16/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	90	294	137	233	367	155
Future Volume (veh/h)	90	294	137	233	367	155
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1485	1618	1381	1828	1938	1589
Adj Flow Rate, veh/h	148	334	163	259	448	191
Peak Hour Factor	0.61	0.88	0.84	0.90	0.82	0.81
Percent Heavy Veh, %	28	19	35	11	4	21
Cap, veh/h	299	398	416	1199	1042	1008
Arrive On Green	0.21	0.21	0.16	1.00	0.54	0.54
Sat Flow, veh/h	1414	1372	1316	1828	1938	1346
Grp Volume(v), veh/h	148	334	163	259	448	191
Grp Sat Flow(s),veh/h/ln	1414	1372	1316	1828	1938	1346
Q Serve(g_s), s	8.3	19.0	4.9	0.0	12.5	3.7
Cycle Q Clear(g_c), s	8.3	19.0	4.9	0.0	12.5	3.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	299	398	416	1199	1042	1008
V/C Ratio(X)	0.50	0.84	0.39	0.22	0.43	0.19
Avail Cap(c_a), veh/h	299	398	627	1199	1042	1008
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.84	0.84	1.00	1.00
Uniform Delay (d), s/veh	31.3	30.0	7.6	0.0	12.5	3.3
Incr Delay (d2), s/veh	2.7	16.0	0.5	0.3	1.3	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.1	22.6	1.7	0.2	8.6	3.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	34.0	45.9	8.1	0.3	13.8	3.7
LnGrp LOS	C	D	A	A	B	A
Approach Vol, veh/h	482			422	639	
Approach Delay, s/veh	42.3			3.3	10.8	
Approach LOS	D			A	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		65.0		25.0	10.6	54.4
Change Period (Y+Rc), s		6.0		6.0	3.5	6.0
Max Green Setting (Gmax), s		59.0		19.0	21.5	34.0
Max Q Clear Time (g_c+I1), s		2.0		21.0	6.9	14.5
Green Ext Time (p_c), s		5.3		0.0	0.3	9.0
Intersection Summary						
HCM 7th Control Delay, s/veh			18.6			
HCM 7th LOS			B			

HCM 7th Signalized Intersection Summary
 400: IL 53 & Kankakee River Dr/Peotone Rd

PM Peak Period
 10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	21	18	104	14	143	6	200	145	333	302	25
Future Volume (veh/h)	26	21	18	104	14	143	6	200	145	333	302	25
Initial Q (Qb), 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										
Adj Sat Flow, veh/h/ln	1248	1722	1752	1841	1672	1411	1618	1796	1781	1663	1938	1396
Adj Flow Rate, veh/h	36	32	36	124	20	199	8	215	207	354	347	28
Peak Hour Factor	0.72	0.66	0.50	0.84	0.70	0.72	0.75	0.93	0.70	0.94	0.87	0.89
Percent Heavy Veh, %	44	12	10	4	21	33	19	7	8	16	4	34
Cap, veh/h	184	66	74	283	233	337	506	402	387	561	1189	761
Arrive On Green	0.03	0.09	0.09	0.08	0.14	0.14	0.01	0.48	0.48	0.24	1.00	1.00
Sat Flow, veh/h	1188	740	832	1753	1672	1196	1541	841	810	1584	1938	1183
Grp Volume(v), veh/h	36	0	68	124	20	199	8	0	422	354	347	28
Grp Sat Flow(s),veh/h/ln	1188	0	1572	1753	1672	1196	1541	0	1651	1584	1938	1183
Q Serve(g_s), s	2.5	0.0	3.7	5.5	0.9	12.6	0.2	0.0	16.2	10.2	0.0	0.0
Cycle Q Clear(g_c), s	2.5	0.0	3.7	5.5	0.9	12.6	0.2	0.0	16.2	10.2	0.0	0.0
Prop In Lane	1.00		0.53	1.00		1.00	1.00		0.49	1.00		1.00
Lane Grp Cap(c), veh/h	184	0	140	283	233	337	506	0	788	561	1189	761
V/C Ratio(X)	0.20	0.00	0.49	0.44	0.09	0.59	0.02	0.00	0.54	0.63	0.29	0.04
Avail Cap(c_a), veh/h	208	0	140	308	233	337	556	0	788	661	1189	761
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.82	0.82	0.82
Uniform Delay (d), s/veh	36.1	0.0	39.0	31.9	33.7	27.8	12.1	0.0	16.5	9.3	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	5.5	1.1	0.3	4.2	0.0	0.0	2.6	1.2	0.5	0.1
Initial Q Delay(d3), 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
%ile BackOfQ(95%),veh/ln	1.3	0.0	2.9	4.0	0.7	6.7	0.1	0.0	9.8	4.1	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.6	0.0	44.6	32.9	34.1	32.0	12.1	0.0	19.1	10.5	0.5	0.1
LnGrp LOS	D		D	C	C	C	B		B	B	A	A
Approach Vol, veh/h		104			343			430			729	
Approach Delay, s/veh		41.8			32.5			19.0			5.4	
Approach LOS		D			C			B			A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.3	49.0	10.7	14.0	4.0	61.2	6.2	18.6				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green Setting (Gmax), s	18.5	36.0	8.5	8.0	3.5	51.0	4.5	12.0				
Max Q Clear Time (g_c+1/2), s	11.2	18.2	7.5	5.7	2.2	2.0	4.5	14.6				
Green Ext Time (p_c), s	0.6	6.2	0.0	0.1	0.0	7.9	0.0	0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh			17.2									
HCM 7th LOS			B									

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	25	450	25	25	200	25	20	10	20	20	10	20
Future Vol, veh/h	25	450	25	25	200	25	20	10	20	20	10	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	38	38	38	33	33	33	9	9	9	4	4	4
Mvmt Flow	26	474	26	26	211	26	21	11	21	21	11	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	237	0	0	500	0	0	808	829	487	808	829	224
Stage 1	-	-	-	-	-	-	539	539	-	276	276	-
Stage 2	-	-	-	-	-	-	268	289	-	532	553	-
Critical Hdwy	4.48	-	-	4.43	-	-	7.19	6.59	6.29	7.14	6.54	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.19	5.59	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.19	5.59	-	6.14	5.54	-
Follow-up Hdwy	2.542	-	-	2.497	-	-	3.581	4.081	3.381	3.536	4.036	3.336
Pot Cap-1 Maneuver	1145	-	-	922	-	-	291	298	567	297	304	811
Stage 1	-	-	-	-	-	-	514	510	-	726	678	-
Stage 2	-	-	-	-	-	-	722	660	-	528	511	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1145	-	-	922	-	-	256	279	567	258	284	811
Mov Cap-2 Maneuver	-	-	-	-	-	-	256	279	-	258	284	-
Stage 1	-	-	-	-	-	-	497	494	-	702	656	-
Stage 2	-	-	-	-	-	-	669	638	-	482	495	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.41			0.9			17.72			16.54		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	335	89	-	-	176	-	-	364
HCM Lane V/C Ratio	0.157	0.023	-	-	0.029	-	-	0.144
HCM Control Delay (s/veh)	17.7	8.2	0	-	9	0	-	16.5
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0.1	-	-	0.5

Intersection												
Int Delay, s/veh	6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Traffic Vol, veh/h	1	347	127	14	206	8	47	7	8	69	39	4
Future Vol, veh/h	1	347	127	14	206	8	47	7	8	69	39	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	250	-	-	290	-	-	280	-	-	280	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	81	76	58	89	67	73	58	67	56	70	50
Heavy Vehicles, %	25	18	6	3	24	7	10	0	5	22	5	0
Mvmt Flow	1	428	167	24	231	12	64	12	12	123	56	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	243	0	0	596	0	0	822	806	512	722	883	237
Stage 1	-	-	-	-	-	-	514	514	-	286	286	-
Stage 2	-	-	-	-	-	-	308	292	-	437	598	-
Critical Hdwy	4.35	-	-	4.13	-	-	7.2	6.5	6.25	7.32	6.55	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.2	5.5	-	6.32	5.55	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.2	5.5	-	6.32	5.55	-
Follow-up Hdwy	2.425	-	-	2.227	-	-	3.59	4	3.345	3.698	4.045	3.3
Pot Cap-1 Maneuver	1199	-	-	976	-	-	284	318	556	317	281	807
Stage 1	-	-	-	-	-	-	529	539	-	680	670	-
Stage 2	-	-	-	-	-	-	686	675	-	561	486	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1199	-	-	976	-	-	219	310	556	291	274	807
Mov Cap-2 Maneuver	-	-	-	-	-	-	219	310	-	291	274	-
Stage 1	-	-	-	-	-	-	528	538	-	663	653	-
Stage 2	-	-	-	-	-	-	606	658	-	537	486	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.01			0.79			24.42			24.14		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	219	397	1199	-	-	976	-	-	291	299
HCM Lane V/C Ratio	0.293	0.06	0.001	-	-	0.025	-	-	0.423	0.213
HCM Control Delay (s/veh)	28.1	14.6	8	-	-	8.8	-	-	26.1	20.3
HCM Lane LOS	D	B	A	-	-	A	-	-	D	C
HCM 95th %tile Q(veh)	1.2	0.2	0	-	-	0.1	-	-	2	0.8

Intersection												
Int Delay, s/veh	3.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	61	388	5	5	207	20	5	5	5	36	7	87
Future Vol, veh/h	61	388	5	5	207	20	5	5	5	36	7	87
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	35	35	35	35	35	35	12	12	12	9	9	9
Mvmt Flow	66	422	5	5	225	22	5	5	5	39	8	95

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	247	0	0	427	0	0	797	815	424	804	807	236
Stage 1	-	-	-	-	-	-	557	557	-	247	247	-
Stage 2	-	-	-	-	-	-	240	258	-	557	560	-
Critical Hdwy	4.45	-	-	4.45	-	-	7.22	6.62	6.32	7.19	6.59	6.29
Critical Hdwy Stg 1	-	-	-	-	-	-	6.22	5.62	-	6.19	5.59	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.22	5.62	-	6.19	5.59	-
Follow-up Hdwy	2.515	-	-	2.515	-	-	3.608	4.108	3.408	3.581	4.081	3.381
Pot Cap-1 Maneuver	1149	-	-	976	-	-	293	301	609	293	308	786
Stage 1	-	-	-	-	-	-	497	496	-	742	689	-
Stage 2	-	-	-	-	-	-	742	677	-	502	500	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1149	-	-	976	-	-	231	276	609	262	282	786
Mov Cap-2 Maneuver	-	-	-	-	-	-	231	276	-	262	282	-
Stage 1	-	-	-	-	-	-	460	459	-	737	685	-
Stage 2	-	-	-	-	-	-	641	672	-	455	462	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	1.12			0.19			17.14			15.71		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	313	241	-	-	38	-	-	476
HCM Lane V/C Ratio	0.052	0.058	-	-	0.006	-	-	0.297
HCM Control Delay (s/veh)	17.1	8.3	0	-	8.7	0	-	15.7
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.2	0.2	-	-	0	-	-	1.2

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	431	3	4	214	1	1	1	1	1	1	2
Future Vol, veh/h	1	431	3	4	214	1	1	1	1	1	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	75	38	50	92	25	25	95	95	25	25	50
Heavy Vehicles, %	0	18	0	0	22	0	20	0	50	0	67	0
Mvmt Flow	1	575	8	8	233	4	4	1	1	4	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	237	0	0	583	0	0	831	833	579	828	835	235
Stage 1	-	-	-	-	-	-	581	581	-	251	251	-
Stage 2	-	-	-	-	-	-	251	253	-	577	585	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.3	6.5	6.7	7.1	7.17	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.3	5.5	-	6.1	6.17	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.3	5.5	-	6.1	6.17	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.68	4	3.75	3.5	4.603	3.3
Pot Cap-1 Maneuver	1342	-	-	1002	-	-	269	307	435	293	241	809
Stage 1	-	-	-	-	-	-	470	503	-	758	595	-
Stage 2	-	-	-	-	-	-	715	702	-	505	408	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	1342	-	-	1002	-	-	261	303	435	288	239	809
Mov Cap-2 Maneuver	-	-	-	-	-	-	261	303	-	288	239	-
Stage 1	-	-	-	-	-	-	469	502	-	751	589	-
Stage 2	-	-	-	-	-	-	700	695	-	502	407	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.01			0.28			17.79			16.07		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	287	3	-	-	59	-	-	337
HCM Lane V/C Ratio	0.021	0.001	-	-	0.008	-	-	0.036
HCM Control Delay (s/veh)	17.8	7.7	0	-	8.6	0	-	16.1
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	61	388	2	2	207	20	1	1	1	36	7	87
Future Vol, veh/h	61	388	2	2	207	20	1	1	1	36	7	87
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	78	25	50	88	56	95	25	25	82	58	75
Heavy Vehicles, %	3	21	0	20	26	16	20	0	0	3	8	3
Mvmt Flow	76	497	8	4	235	36	1	4	4	44	12	116

Major/Minor	Major1		Major2			Minor1			Minor2			
Conflicting Flow All	271	0	0	505	0	0	903	933	501	913	919	253
Stage 1	-	-	-	-	-	-	654	654	-	261	261	-
Stage 2	-	-	-	-	-	-	249	279	-	652	658	-
Critical Hdwy	4.13	-	-	4.3	-	-	7.3	6.5	6.2	7.13	6.58	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.3	5.5	-	6.13	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.3	5.5	-	6.13	5.58	-
Follow-up Hdwy	2.227	-	-	2.38	-	-	3.68	4	3.3	3.527	4.072	3.327
Pot Cap-1 Maneuver	1287	-	-	973	-	-	240	268	574	253	265	783
Stage 1	-	-	-	-	-	-	427	466	-	742	681	-
Stage 2	-	-	-	-	-	-	716	683	-	455	452	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	1287	-	-	973	-	-	178	245	574	226	242	783
Mov Cap-2 Maneuver	-	-	-	-	-	-	178	245	-	226	242	-
Stage 1	-	-	-	-	-	-	392	428	-	738	678	-
Stage 2	-	-	-	-	-	-	597	680	-	411	415	-

Approach	EB		WB			NB			SB		
HCM Control Delay, s/v	1.05		0.13			16.97			18.41		
HCM LOS						C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	310	235	-	-	26	-	-	439
HCM Lane V/C Ratio	0.029	0.059	-	-	0.004	-	-	0.392
HCM Control Delay (s/veh)	17	8	0	-	8.7	0	-	18.4
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0	-	-	1.8

Intersection	
Intersection Delay, s/veh	61.3
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	28	301	72	12	123	24	56	225	7	28	300	20
Future Vol, veh/h	28	301	72	12	123	24	56	225	7	28	300	20
Peak Hour Factor	0.88	0.93	0.78	0.75	0.75	0.67	0.88	0.83	0.58	0.47	0.91	0.71
Heavy Vehicles, %	13	23	14	13	26	16	26	8	6	15	3	3
Mvmt Flow	32	324	92	16	164	36	64	271	12	60	330	28
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	84.5	23.9	47.1	67.5
HCM LOS	F	C	E	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	19%	7%	8%	8%
Vol Thru, %	78%	75%	77%	86%
Vol Right, %	2%	18%	15%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	288	401	159	348
LT Vol	56	28	12	28
Through Vol	225	301	123	300
RT Vol	7	72	24	20
Lane Flow Rate	347	448	216	417
Geometry Grp	1	1	1	1
Degree of Util (X)	0.854	1.043	0.555	0.973
Departure Headway (Hd)	9.146	8.385	9.588	8.658
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	399	434	378	422
Service Time	7.146	6.385	7.588	6.658
HCM Lane V/C Ratio	0.87	1.032	0.571	0.988
HCM Control Delay, s/veh	47.1	84.5	23.9	67.5
HCM Lane LOS	E	F	C	F
HCM 95th-tile Q	8.2	14.2	3.2	11.6

HCM 7th TWSC
 900: I-57 SB On Ramp/I-57 SB Off Ramp & Wilmington Rd

PM Peak Period
 10/16/2024

Intersection												
Int Delay, s/veh	8.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↖					↗		↗
Traffic Vol, veh/h	0	352	70	131	146	0	0	0	0	127	0	62
Future Vol, veh/h	0	352	70	131	146	0	0	0	0	127	0	62
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Stop	Stop	Stop								
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	-	-	-	150	-	-	-	-	-	0	-	185
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	91	83	78	87	25	25	95	25	77	95	91
Heavy Vehicles, %	0	17	16	7	24	0	0	0	0	6	0	17
Mvmt Flow	0	387	84	168	168	0	0	0	0	165	0	68

Major/Minor	Major1			Major2			Minor2				
Conflicting Flow All	-	0	0	471	0	0			891	-	168
Stage 1	-	-	-	-	-	-			504	-	-
Stage 2	-	-	-	-	-	-			387	-	-
Critical Hdwy	-	-	-	4.17	-	-			6.46	-	6.37
Critical Hdwy Stg 1	-	-	-	-	-	-			5.46	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-			5.46	-	-
Follow-up Hdwy	-	-	-	2.263	-	-			3.554	-	3.453
Pot Cap-1 Maneuver	0	-	-	1065	-	0			308	0	839
Stage 1	0	-	-	-	-	0			599	0	-
Stage 2	0	-	-	-	-	0			678	0	-
Platoon blocked, %		-	-	-	-	-					
Mov Cap-1 Maneuver	-	-	-	1065	-	-			259	0	839
Mov Cap-2 Maneuver	-	-	-	-	-	-			259	0	-
Stage 1	-	-	-	-	-	-			599	0	-
Stage 2	-	-	-	-	-	-			571	0	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	4.51	31.34
HCM LOS			D

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1065	-	259	839
HCM Lane V/C Ratio	-	-	0.158	-	0.636	0.081
HCM Control Delay (s/veh)	-	-	9	-	40.3	9.7
HCM Lane LOS	-	-	A	-	E	A
HCM 95th %tile Q(veh)	-	-	0.6	-	3.9	0.3

HCM 7th TWSC
 1000: I-57 NB Off Ramp/I-57 NB On Ramp & Wilmington Rd

PM Peak Period
 10/16/2024

Intersection												
Int Delay, s/veh	5.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↘		↖		↗			
Traffic Vol, veh/h	180	295	0	0	222	79	58	0	94	0	0	0
Future Vol, veh/h	180	295	0	0	222	79	58	0	94	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Stop	-	-	None
Storage Length	150	-	-	-	-	-	0	-	185	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	87	95	95	82	90	85	95	73	95	95	95
Heavy Vehicles, %	19	12	0	0	13	15	29	0	7	0	0	0
Mvmt Flow	225	339	0	0	271	88	68	0	129	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	359	0	0
Stage 1	-	-	789
Stage 2	-	-	271
Critical Hdwy	4.29	-	6.69
Critical Hdwy Stg 1	-	-	5.69
Critical Hdwy Stg 2	-	-	5.69
Follow-up Hdwy	2.371	-	3.761
Pot Cap-1 Maneuver	1112	0	0
Stage 1	-	0	404
Stage 2	-	0	716
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1112	-	176
Mov Cap-2 Maneuver	-	-	176
Stage 1	-	-	322
Stage 2	-	-	716

Approach	EB	WB	NB
HCM Control Delay, s/v	3.61	0	20.54
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	176	692	1112	-	-	-
HCM Lane V/C Ratio	0.387	0.186	0.202	-	-	-
HCM Control Delay (s/veh)	37.8	11.4	9.1	-	-	-
HCM Lane LOS	E	B	A	-	-	-
HCM 95th %tile Q(veh)	1.7	0.7	0.8	-	-	-

Intersection	
Intersection Delay, s/veh	14.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↶	↷		↶	↷			↶↷			↶↷	
Traffic Vol, veh/h	155	40	66	3	31	1	53	224	4	1	258	153
Future Vol, veh/h	155	40	66	3	31	1	53	224	4	1	258	153
Peak Hour Factor	0.84	0.67	0.83	0.38	0.60	0.95	0.74	0.93	1.00	0.95	0.87	0.80
Heavy Vehicles, %	13	63	35	0	36	0	31	8	0	0	10	10
Mvmt Flow	185	60	80	8	52	1	72	241	4	1	297	191
Number of Lanes	1	1	0	1	1	0	0	2	0	0	2	0

Approach	EB	WB	NE	SW
Opposing Approach	WB	EB	SW	NE
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SW	NE	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NE	SW	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay, s/veh	14.4	11.9	13.5	15.6
HCM LOS	B	B	B	C

Lane	NELn1	NELn2	EBLn1	EBLn2	WBLn1	WBLn2	SWLn1	SWLn2
Vol Left, %	32%	0%	100%	0%	100%	0%	1%	0%
Vol Thru, %	68%	97%	0%	38%	0%	97%	99%	46%
Vol Right, %	0%	3%	0%	62%	0%	3%	0%	54%
Sign Control	Stop							
Traffic Vol by Lane	165	116	155	106	3	32	130	282
LT Vol	53	0	155	0	3	0	1	0
Through Vol	112	112	0	40	0	31	129	129
RT Vol	0	4	0	66	0	1	0	153
Lane Flow Rate	192	124	185	139	8	53	149	340
Geometry Grp	5	5	5	5	5	5	5	5
Degree of Util (X)	0.39	0.233	0.39	0.291	0.018	0.12	0.266	0.585
Departure Headway (Hd)	7.316	6.729	7.608	7.52	8.129	8.222	6.418	6.201
Convergence, Y/N	Yes							
Cap	490	530	471	476	443	439	557	577
Service Time	5.1	4.513	5.386	5.299	5.829	5.922	4.194	3.977
HCM Lane V/C Ratio	0.392	0.234	0.393	0.292	0.018	0.121	0.268	0.589
HCM Control Delay, s/veh	14.8	11.6	15.2	13.4	11	12	11.5	17.4
HCM Lane LOS	B	B	C	B	B	B	B	C
HCM 95th-tile Q	1.8	0.9	1.8	1.2	0.1	0.4	1.1	3.8

Intersection						
Int Delay, s/veh	10					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑	↗		↘	
Traffic Vol, veh/h	5	10	0	75	330	0
Future Vol, veh/h	5	10	0	75	330	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	25	63	75	69	85	42
Heavy Vehicles, %	0	0	0	16	27	0
Mvmt Flow	20	16	0	109	388	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	109	0	-	0	110 54
Stage 1	-	-	-	-	54 -
Stage 2	-	-	-	-	56 -
Critical Hdwy	4.1	-	-	-	6.67 6.2
Critical Hdwy Stg 1	-	-	-	-	5.67 -
Critical Hdwy Stg 2	-	-	-	-	5.67 -
Follow-up Hdwy	2.2	-	-	-	3.743 3.3
Pot Cap-1 Maneuver	1494	-	-	-	830 1018
Stage 1	-	-	-	-	908 -
Stage 2	-	-	-	-	907 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1494	-	-	-	819 1018
Mov Cap-2 Maneuver	-	-	-	-	819 -
Stage 1	-	-	-	-	896 -
Stage 2	-	-	-	-	907 -

Approach	EB	WB	SB
HCM Control Delay, s/v	4.15	0	13.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1494	-	-	-	819
HCM Lane V/C Ratio	0.013	-	-	-	0.474
HCM Control Delay (s/veh)	7.4	-	-	-	13.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	2.6

Intersection						
Int Delay, s/veh	1.7					
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Vol, veh/h	60	10	10	335	75	380
Future Vol, veh/h	60	10	10	335	75	380
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	480	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	58	100	88	73	88
Heavy Vehicles, %	18	0	5	27	15	15
Mvmt Flow	80	17	10	381	103	432

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	719	319	535	0	-	0
Stage 1	319	-	-	-	-	-
Stage 2	401	-	-	-	-	-
Critical Hdwy	6.58	6.2	4.15	-	-	-
Critical Hdwy Stg 1	5.58	-	-	-	-	-
Critical Hdwy Stg 2	5.58	-	-	-	-	-
Follow-up Hdwy	3.662	3.3	2.245	-	-	-
Pot Cap-1 Maneuver	372	727	1018	-	-	-
Stage 1	702	-	-	-	-	-
Stage 2	643	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	369	727	1018	-	-	-
Mov Cap-2 Maneuver	369	-	-	-	-	-
Stage 1	695	-	-	-	-	-
Stage 2	643	-	-	-	-	-

Approach	SB	SE	NW
HCM Control Delay, s/v	16.72	0.22	0
HCM LOS	C		

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SBLn1
Capacity (veh/h)	-	-	1018	-	404
HCM Lane V/C Ratio	-	-	0.01	-	0.241
HCM Control Delay (s/veh)	-	-	8.6	-	16.7
HCM Lane LOS	-	-	A	-	C
HCM 95th %tile Q(veh)	-	-	0	-	0.9

HCM 7th Signalized Intersection Summary
300: IL 53 & River Rd

AM Peak Hour
10/16/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	135	185	190	350	160	35
Future Volume (veh/h)	135	185	190	350	160	35
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1544	1381	1663	1953	1766	1189
Adj Flow Rate, veh/h	159	215	264	449	203	47
Peak Hour Factor	0.85	0.86	0.72	0.78	0.79	0.75
Percent Heavy Veh, %	24	35	16	3	15	48
Cap, veh/h	291	355	712	1306	926	728
Arrive On Green	0.20	0.20	0.21	1.00	0.52	0.52
Sat Flow, veh/h	1471	1171	1584	1953	1766	1007
Grp Volume(v), veh/h	159	215	264	449	203	47
Grp Sat Flow(s),veh/h/ln	1471	1171	1584	1953	1766	1007
Q Serve(g_s), s	8.7	14.1	6.9	0.0	5.6	1.2
Cycle Q Clear(g_c), s	8.7	14.1	6.9	0.0	5.6	1.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	291	355	712	1306	926	728
V/C Ratio(X)	0.55	0.61	0.37	0.34	0.22	0.06
Avail Cap(c_a), veh/h	409	449	940	1306	926	728
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.66	0.66	1.00	1.00
Uniform Delay (d), s/veh	32.5	26.7	6.2	0.0	11.5	3.6
Incr Delay (d2), s/veh	3.4	3.5	0.2	0.5	0.5	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.7	14.5	2.5	0.3	3.6	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	35.8	30.3	6.4	0.5	12.1	3.8
LnGrp LOS	D	C	A	A	B	A
Approach Vol, veh/h	374			713	250	
Approach Delay, s/veh	32.6			2.7	10.5	
Approach LOS	C			A	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		66.2		23.8	13.0	53.2
Change Period (Y+Rc), s		6.0		6.0	3.5	6.0
Max Green Setting (Gmax), s		53.0		25.0	22.5	27.0
Max Q Clear Time (g_c+I1), s		2.0		16.1	8.9	7.6
Green Ext Time (p_c), s		10.2		1.7	0.6	3.3
Intersection Summary						
HCM 7th Control Delay, s/veh			12.5			
HCM 7th LOS			B			

HCM 7th Signalized Intersection Summary
 400: IL 53 & Kankakee River Dr/Peotone Rd

AM Peak Hour
 10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	40	20	75	25	270	30	305	115	195	110	35
Future Volume (veh/h)	40	40	20	75	25	270	30	305	115	195	110	35
Initial Q (Qb), 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		
Adj Sat Flow, veh/h/ln	1455	1663	1796	1737	1704	1707	1841	1870	1826	1470	1766	1263
Adj Flow Rate, veh/h	77	93	29	84	46	370	68	363	149	235	133	49
Peak Hour Factor	0.52	0.43	0.68	0.89	0.54	0.73	0.44	0.84	0.77	0.83	0.83	0.71
Percent Heavy Veh, %	30	16	7	11	19	13	4	2	5	29	15	43
Cap, veh/h	237	151	47	237	208	331	730	630	259	437	1012	678
Arrive On Green	0.06	0.12	0.12	0.06	0.12	0.12	0.03	0.50	0.50	0.18	0.96	0.96
Sat Flow, veh/h	1386	1216	379	1654	1704	1447	1753	1260	517	1400	1766	1070
Grp Volume(v), veh/h	77	0	122	84	46	370	68	0	512	235	133	49
Grp Sat Flow(s),veh/h/ln	1386	0	1595	1654	1704	1447	1753	0	1777	1400	1766	1070
Q Serve(g_s), s	4.3	0.0	6.5	3.9	2.2	11.0	1.7	0.0	18.2	7.2	0.3	0.2
Cycle Q Clear(g_c), s	4.3	0.0	6.5	3.9	2.2	11.0	1.7	0.0	18.2	7.2	0.3	0.2
Prop In Lane	1.00		0.24	1.00		1.00	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	237	0	198	237	208	331	730	0	889	437	1012	678
V/C Ratio(X)	0.32	0.00	0.62	0.35	0.22	1.12	0.09	0.00	0.58	0.54	0.13	0.07
Avail Cap(c_a), veh/h	254	0	198	260	208	331	740	0	889	576	1012	678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.94	0.94	0.94
Uniform Delay (d), s/veh	31.9	0.0	37.4	32.1	35.6	34.7	10.2	0.0	15.8	10.0	0.8	0.6
Incr Delay (d2), s/veh	0.8	0.0	8.2	0.9	1.1	85.1	0.1	0.0	2.7	1.0	0.3	0.2
Initial Q Delay(d3), 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
%ile BackOfQ(95%),veh/ln	2.6	0.0	5.3	2.7	1.6	21.6	1.0	0.0	11.2	2.8	0.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	32.7	0.0	45.5	33.0	36.8	119.8	10.2	0.0	18.5	10.9	1.1	0.8
LnGrp LOS	C		D	C	D	F	B		B	B	A	A
Approach Vol, veh/h	199		500				580			417		
Approach Delay, s/veh	40.6		97.6				17.5			6.6		
Approach LOS	D		F				B			A		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.1	51.0	8.7	17.2	6.5	57.6	8.9	17.0				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green Setting (Gmax), s	10.5	35.0	6.5	11.0	3.5	50.0	6.5	11.0				
Max Q Clear Time (g_c+1), s	19.2	20.2	5.9	8.5	3.7	2.3	6.3	13.0				
Green Ext Time (p_c), s	0.4	6.7	0.0	0.2	0.0	3.2	0.0	0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh			41.2									
HCM 7th LOS			D									

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	30	290	40	40	270	30	30	15	30	30	15	30
Future Vol, veh/h	30	290	40	40	270	30	30	15	30	30	15	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	47	47	47	50	50	50	9	9	9	1	1	1
Mvmt Flow	32	305	42	42	284	32	32	16	32	32	16	32

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	316	0	0	347	0	0	766	789	326	761	795	300
Stage 1	-	-	-	-	-	-	389	389	-	384	384	-
Stage 2	-	-	-	-	-	-	376	400	-	376	411	-
Critical Hdwy	4.57	-	-	4.6	-	-	7.19	6.59	6.29	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.19	5.59	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.19	5.59	-	6.11	5.51	-
Follow-up Hdwy	2.623	-	-	2.65	-	-	3.581	4.081	3.381	3.509	4.009	3.309
Pot Cap-1 Maneuver	1029	-	-	988	-	-	311	315	699	323	322	742
Stage 1	-	-	-	-	-	-	621	596	-	641	613	-
Stage 2	-	-	-	-	-	-	631	590	-	647	597	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1029	-	-	988	-	-	258	287	699	267	293	742
Mov Cap-2 Maneuver	-	-	-	-	-	-	258	287	-	267	293	-
Stage 1	-	-	-	-	-	-	597	573	-	608	581	-
Stage 2	-	-	-	-	-	-	557	559	-	578	574	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.72			1.04			18.02			17.43		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	355	146	-	-	208	-	-	368
HCM Lane V/C Ratio	0.222	0.031	-	-	0.043	-	-	0.214
HCM Control Delay (s/veh)	18	8.6	0	-	8.8	0	-	17.4
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.8	0.1	-	-	0.1	-	-	0.8

Intersection												
Int Delay, s/veh	6.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Traffic Vol, veh/h	0	255	105	5	240	50	125	30	15	25	5	0
Future Vol, veh/h	0	255	105	5	240	50	125	30	15	25	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	250	-	-	290	-	-	280	-	-	280	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	87	83	50	77	77	70	59	42	75	75	95
Heavy Vehicles, %	52	23	10	0	18	29	4	3	0	90	12	0
Mvmt Flow	0	293	127	10	312	65	179	51	36	33	7	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	377	0	0	420	0	0	691	753	356	683	784	344
Stage 1	-	-	-	-	-	-	356	356	-	364	364	-
Stage 2	-	-	-	-	-	-	335	397	-	319	420	-
Critical Hdwy	4.62	-	-	4.1	-	-	7.14	6.53	6.2	8	6.62	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.14	5.53	-	7	5.62	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.14	5.53	-	7	5.62	-
Follow-up Hdwy	2.668	-	-	2.2	-	-	3.536	4.027	3.3	4.31	4.108	3.3
Pot Cap-1 Maneuver	954	-	-	1150	-	-	356	338	692	268	314	703
Stage 1	-	-	-	-	-	-	657	627	-	508	607	-
Stage 2	-	-	-	-	-	-	675	602	-	541	573	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	954	-	-	1150	-	-	345	335	692	214	311	703
Mov Cap-2 Maneuver	-	-	-	-	-	-	345	335	-	214	311	-
Stage 1	-	-	-	-	-	-	657	627	-	503	601	-
Stage 2	-	-	-	-	-	-	661	597	-	471	573	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0			0.21			22.65			23.55		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	345	425	954	-	-	1150	-	-	214	311
HCM Lane V/C Ratio	0.517	0.204	-	-	-	0.009	-	-	0.156	0.021
HCM Control Delay (s/veh)	26.1	15.6	0	-	-	8.2	-	-	24.9	16.8
HCM Lane LOS	D	C	A	-	-	A	-	-	C	C
HCM 95th %tile Q(veh)	2.8	0.8	0	-	-	0	-	-	0.5	0.1

Intersection												
Int Delay, s/veh	3.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	95	275	10	10	250	35	10	10	10	20	10	35
Future Vol, veh/h	95	275	10	10	250	35	10	10	10	20	10	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	52	52	52	53	53	53	22	22	22	23	23	23
Mvmt Flow	103	299	11	11	272	38	11	11	11	22	11	38

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	310	0	0	310	0	0	810	842	304	823	829	291
Stage 1	-	-	-	-	-	-	511	511	-	313	313	-
Stage 2	-	-	-	-	-	-	299	332	-	511	516	-
Critical Hdwy	4.62	-	-	4.63	-	-	7.32	6.72	6.42	7.33	6.73	6.43
Critical Hdwy Stg 1	-	-	-	-	-	-	6.32	5.72	-	6.33	5.73	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.32	5.72	-	6.33	5.73	-
Follow-up Hdwy	2.668	-	-	2.677	-	-	3.698	4.198	3.498	3.707	4.207	3.507
Pot Cap-1 Maneuver	1015	-	-	1011	-	-	276	279	691	269	284	701
Stage 1	-	-	-	-	-	-	510	505	-	656	621	-
Stage 2	-	-	-	-	-	-	669	611	-	509	501	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1015	-	-	1011	-	-	217	242	691	220	246	701
Mov Cap-2 Maneuver	-	-	-	-	-	-	217	242	-	220	246	-
Stage 1	-	-	-	-	-	-	447	443	-	647	613	-
Stage 2	-	-	-	-	-	-	613	603	-	428	439	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	2.24			0.29			18.73			17.49		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	295	447	-	-	60	-	-	358
HCM Lane V/C Ratio	0.111	0.102	-	-	0.011	-	-	0.197
HCM Control Delay (s/veh)	18.7	8.9	0	-	8.6	0	-	17.5
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.4	0.3	-	-	0	-	-	0.7

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	295	5	0	295	0	5	0	5	5	0	0
Future Vol, veh/h	0	295	5	0	295	0	5	0	5	5	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	86	50	95	87	95	25	95	25	50	95	95
Heavy Vehicles, %	0	25	0	100	24	0	17	0	60	0	0	0
Mvmt Flow	0	343	10	0	339	0	20	0	20	10	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	339	0	0	353	0	0	687	687	348	682	692	339
Stage 1	-	-	-	-	-	-	348	348	-	339	339	-
Stage 2	-	-	-	-	-	-	339	339	-	343	353	-
Critical Hdwy	4.1	-	-	5.1	-	-	7.27	6.5	6.8	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.27	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.27	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	3.1	-	-	3.653	4	3.84	3.5	4	3.3
Pot Cap-1 Maneuver	1231	-	-	817	-	-	342	372	582	366	370	708
Stage 1	-	-	-	-	-	-	638	638	-	680	643	-
Stage 2	-	-	-	-	-	-	645	643	-	676	634	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	1231	-	-	817	-	-	342	372	582	354	370	708
Mov Cap-2 Maneuver	-	-	-	-	-	-	342	372	-	354	370	-
Stage 1	-	-	-	-	-	-	638	638	-	680	643	-
Stage 2	-	-	-	-	-	-	645	643	-	653	634	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0	14.22	15.47
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	430	1231	-	-	817	-	-	354
HCM Lane V/C Ratio	0.093	-	-	-	-	-	-	0.028
HCM Control Delay (s/veh)	14.2	0	-	-	0	-	-	15.5
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.1

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	95	255	0	0	225	35	0	5	0	20	0	30
Future Vol, veh/h	95	255	0	0	225	35	0	5	0	20	0	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	77	95	95	71	64	95	38	95	100	95	60
Heavy Vehicles, %	3	25	0	0	25	25	0	0	0	24	0	9
Mvmt Flow	125	331	0	0	317	55	0	13	0	20	0	50

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	372	0	0	331	0	0	898	953	331	932	925	344
Stage 1	-	-	-	-	-	-	581	581	-	344	344	-
Stage 2	-	-	-	-	-	-	317	372	-	588	581	-
Critical Hdwy	4.13	-	-	4.1	-	-	7.1	6.5	6.2	7.34	6.5	6.29
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.34	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.34	5.5	-
Follow-up Hdwy	2.227	-	-	2.2	-	-	3.5	4	3.3	3.716	4	3.381
Pot Cap-1 Maneuver	1181	-	-	1240	-	-	262	261	715	226	271	683
Stage 1	-	-	-	-	-	-	503	503	-	628	640	-
Stage 2	-	-	-	-	-	-	699	623	-	459	503	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1181	-	-	1240	-	-	212	227	715	186	236	683
Mov Cap-2 Maneuver	-	-	-	-	-	-	212	227	-	186	236	-
Stage 1	-	-	-	-	-	-	438	438	-	628	640	-
Stage 2	-	-	-	-	-	-	647	623	-	387	438	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	2.3			0			21.81			16.32		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	227	493	-	-	1240	-	-	388
HCM Lane V/C Ratio	0.058	0.106	-	-	-	-	-	0.181
HCM Control Delay (s/veh)	21.8	8.4	0	-	0	-	-	16.3
HCM Lane LOS	C	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	0.2	0.4	-	-	0	-	-	0.7

Intersection	
Intersection Delay, s/veh	40.3
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	25	190	50	15	165	20	65	250	10	35	200	10
Future Vol, veh/h	25	190	50	15	165	20	65	250	10	35	200	10
Peak Hour Factor	0.71	0.80	0.95	0.75	0.68	0.64	0.72	0.86	0.50	0.55	0.75	0.67
Heavy Vehicles, %	6	26	25	0	30	9	21	4	0	22	15	7
Mvmt Flow	35	238	53	20	243	31	90	291	20	64	267	15
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	32.8	28.1	55.8	39.9
HCM LOS	D	D	F	E

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	20%	9%	8%	14%
Vol Thru, %	77%	72%	83%	82%
Vol Right, %	3%	19%	10%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	325	265	200	245
LT Vol	65	25	15	35
Through Vol	250	190	165	200
RT Vol	10	50	20	10
Lane Flow Rate	401	325	294	345
Geometry Grp	1	1	1	1
Degree of Util (X)	0.925	0.753	0.686	0.816
Departure Headway (Hd)	8.306	8.334	8.409	8.514
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	437	433	429	425
Service Time	6.351	6.387	6.487	6.564
HCM Lane V/C Ratio	0.918	0.751	0.685	0.812
HCM Control Delay, s/veh	55.8	32.8	28.1	39.9
HCM Lane LOS	F	D	D	E
HCM 95th-tile Q	10.4	6.2	5	7.5

HCM 7th TWSC
 900: I-57 SB On Ramp/I-57 SB Off Ramp & Wilmington Rd

AM Peak Hour
 10/16/2024

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↖					↖		↗
Traffic Vol, veh/h	0	195	60	90	245	0	0	0	0	65	0	90
Future Vol, veh/h	0	195	60	90	245	0	0	0	0	65	0	90
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Stop	Stop	Stop								
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	-	-	-	150	-	-	-	-	-	0	-	185
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	86	80	85	89	95	95	95	95	82	95	73
Heavy Vehicles, %	0	19	34	9	17	0	0	0	0	19	0	33
Mvmt Flow	0	227	75	106	275	0	0	0	0	79	0	123

Major/Minor	Major1			Major2			Minor2				
Conflicting Flow All	-	0	0	302	0	0			714	-	275
Stage 1	-	-	-	-	-	-			487	-	-
Stage 2	-	-	-	-	-	-			227	-	-
Critical Hdwy	-	-	-	4.19	-	-			6.59	-	6.53
Critical Hdwy Stg 1	-	-	-	-	-	-			5.59	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-			5.59	-	-
Follow-up Hdwy	-	-	-	2.281	-	-			3.671	-	3.597
Pot Cap-1 Maneuver	0	-	-	1220	-	0			374	0	695
Stage 1	0	-	-	-	-	0			584	0	-
Stage 2	0	-	-	-	-	0			772	0	-
Platoon blocked, %		-	-	-							
Mov Cap-1 Maneuver	-	-	-	1220	-	-			341	0	695
Mov Cap-2 Maneuver	-	-	-	-	-	-			341	0	-
Stage 1	-	-	-	-	-	-			584	0	-
Stage 2	-	-	-	-	-	-			705	0	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	2.29	14.2
HCM LOS			B

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1220	-	341	695
HCM Lane V/C Ratio	-	-	0.087	-	0.232	0.177
HCM Control Delay (s/veh)	-	-	8.2	-	18.7	11.3
HCM Lane LOS	-	-	A	-	C	B
HCM 95th %tile Q(veh)	-	-	0.3	-	0.9	0.6

HCM 7th TWSC
 1000: I-57 NB Off Ramp/I-57 NB On Ramp & Wilmington Rd

AM Peak Hour
 10/16/2024

Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↘		↖		↗			
Traffic Vol, veh/h	50	135	0	0	270	115	95	0	85	0	0	0
Future Vol, veh/h	50	135	0	0	270	115	95	0	85	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Stop	-	-	None
Storage Length	150	-	-	-	-	-	0	-	185	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	72	96	95	95	93	86	72	95	67	95	95	95
Heavy Vehicles, %	20	19	0	0	14	7	16	0	10	0	0	0
Mvmt Flow	69	141	0	0	290	134	132	0	127	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	424	0	570
Stage 1	-	-	280
Stage 2	-	-	290
Critical Hdwy	4.3	-	6.56
Critical Hdwy Stg 1	-	-	5.56
Critical Hdwy Stg 2	-	-	5.56
Follow-up Hdwy	2.38	-	3.644
Pot Cap-1 Maneuver	1045	0	886
Stage 1	-	0	737
Stage 2	-	0	728
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1045	-	886
Mov Cap-2 Maneuver	-	-	430
Stage 1	-	-	688
Stage 2	-	-	728

Approach	EB	WB	NB
HCM Control Delay, s/v	2.87	0	13.46
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	430	886	1045	-	-	-
HCM Lane V/C Ratio	0.307	0.143	0.066	-	-	-
HCM Control Delay (s/veh)	17	9.7	8.7	-	-	-
HCM Lane LOS	C	A	A	-	-	-
HCM 95th %tile Q(veh)	1.3	0.5	0.2	-	-	-

Intersection	
Intersection Delay, s/veh	11.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↶	↷		↶	↷			↶↷			↶↷	
Traffic Vol, veh/h	125	20	35	0	45	5	45	200	5	5	100	160
Future Vol, veh/h	125	20	35	0	45	5	45	200	5	5	100	160
Peak Hour Factor	0.82	0.75	0.73	0.95	0.61	0.50	0.83	0.79	0.25	0.25	0.88	0.87
Heavy Vehicles, %	12	35	25	0	26	0	31	8	20	0	14	11
Mvmt Flow	152	27	48	0	74	10	54	253	20	20	114	184
Number of Lanes	1	1	0	1	1	0	0	2	0	0	2	0

Approach	EB	WB	NE	SW
Opposing Approach	WB	EB	SW	NE
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SW	NE	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NE	SW	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay, s/veh	12.1	11.3	12	11.5
HCM LOS	B	B	B	B

Lane	NELn1	NELn2	EBLn1	EBLn2	WBLn1	WBLn2	SWLn1	SWLn2
Vol Left, %	31%	0%	100%	0%	0%	0%	9%	0%
Vol Thru, %	69%	95%	0%	36%	100%	90%	91%	24%
Vol Right, %	0%	5%	0%	64%	0%	10%	0%	76%
Sign Control	Stop							
Traffic Vol by Lane	145	105	125	55	0	50	55	210
LT Vol	45	0	125	0	0	0	5	0
Through Vol	100	100	0	20	0	45	50	50
RT Vol	0	5	0	35	0	5	0	160
Lane Flow Rate	181	147	152	75	0	84	77	241
Geometry Grp	5	5	5	5	5	5	5	5
Degree of Util (X)	0.337	0.249	0.303	0.137	0	0.166	0.131	0.386
Departure Headway (Hd)	6.714	6.126	7.158	6.596	6.75	7.129	6.125	5.78
Convergence, Y/N	Yes							
Cap	535	585	502	542	0	502	585	621
Service Time	4.46	3.872	4.909	4.347	4.511	4.89	3.872	3.526
HCM Lane V/C Ratio	0.338	0.251	0.303	0.138	0	0.167	0.132	0.388
HCM Control Delay, s/veh	12.9	10.9	13	10.4	9.5	11.3	9.8	12.1
HCM Lane LOS	B	B	B	B	N	B	A	B
HCM 95th-tile Q	1.5	1	1.3	0.5	0	0.6	0.4	1.8

Intersection						
Int Delay, s/veh	13.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↗	↖		↖	
Traffic Vol, veh/h	5	30	0	110	485	0
Future Vol, veh/h	5	30	0	110	485	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	25	69	59	87	91	63
Heavy Vehicles, %	0	5	5	22	16	0
Mvmt Flow	20	43	0	126	533	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	126	0	-	0	147 63
Stage 1	-	-	-	-	63 -
Stage 2	-	-	-	-	83 -
Critical Hdwy	4.1	-	-	-	6.56 6.2
Critical Hdwy Stg 1	-	-	-	-	5.56 -
Critical Hdwy Stg 2	-	-	-	-	5.56 -
Follow-up Hdwy	2.2	-	-	-	3.644 3.3
Pot Cap-1 Maneuver	1472	-	-	-	814 1007
Stage 1	-	-	-	-	925 -
Stage 2	-	-	-	-	906 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1472	-	-	-	803 1007
Mov Cap-2 Maneuver	-	-	-	-	803 -
Stage 1	-	-	-	-	912 -
Stage 2	-	-	-	-	906 -

Approach	EB	WB	SB
HCM Control Delay, s/v	2.36	0	17.88
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1472	-	-	-	803
HCM Lane V/C Ratio	0.014	-	-	-	0.664
HCM Control Delay (s/veh)	7.5	-	-	-	17.9
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	5.1

Intersection						
Int Delay, s/veh	15.9					
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Vol, veh/h	150	20	10	505	120	320
Future Vol, veh/h	150	20	10	505	120	320
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	480	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	61	40	50	93	92	79
Heavy Vehicles, %	14	4	3	16	21	27
Mvmt Flow	246	50	20	543	130	405

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	916	333	535	0	-	0
Stage 1	333	-	-	-	-	-
Stage 2	583	-	-	-	-	-
Critical Hdwy	6.54	6.24	4.13	-	-	-
Critical Hdwy Stg 1	5.54	-	-	-	-	-
Critical Hdwy Stg 2	5.54	-	-	-	-	-
Follow-up Hdwy	3.626	3.336	2.227	-	-	-
Pot Cap-1 Maneuver	288	704	1027	-	-	-
Stage 1	700	-	-	-	-	-
Stage 2	535	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	282	704	1027	-	-	-
Mov Cap-2 Maneuver	282	-	-	-	-	-
Stage 1	686	-	-	-	-	-
Stage 2	535	-	-	-	-	-

Approach	SB	SE	NW
HCM Control Delay, s/v	74.34	0.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SBLn1
Capacity (veh/h)	-	-	1027	-	314
HCM Lane V/C Ratio	-	-	0.019	-	0.942
HCM Control Delay (s/veh)	-	-	8.6	-	74.3
HCM Lane LOS	-	-	A	-	F
HCM 95th %tile Q(veh)	-	-	0.1	-	9.5

HCM 7th Signalized Intersection Summary
 300: IL 53 & River Rd

PM Peak Hour
 10/16/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	110	395	145	285	495	165
Future Volume (veh/h)	110	395	145	285	495	165
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1455	1604	1366	1828	1938	1589
Adj Flow Rate, veh/h	180	449	173	317	604	204
Peak Hour Factor	0.61	0.88	0.84	0.90	0.82	0.81
Percent Heavy Veh, %	30	20	36	11	4	21
Cap, veh/h	293	402	348	1199	1031	1001
Arrive On Green	0.21	0.21	0.17	1.00	0.53	0.53
Sat Flow, veh/h	1386	1359	1301	1828	1938	1346
Grp Volume(v), veh/h	180	449	173	317	604	204
Grp Sat Flow(s),veh/h/ln	1386	1359	1301	1828	1938	1346
Q Serve(g_s), s	10.6	19.0	5.3	0.0	19.1	4.1
Cycle Q Clear(g_c), s	10.6	19.0	5.3	0.0	19.1	4.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	293	402	348	1199	1031	1001
V/C Ratio(X)	0.62	1.12	0.50	0.26	0.59	0.20
Avail Cap(c_a), veh/h	293	402	549	1199	1031	1001
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.56	0.56	1.00	1.00
Uniform Delay (d), s/veh	32.2	31.7	9.5	0.0	14.3	3.5
Incr Delay (d2), s/veh	5.6	80.7	0.6	0.3	2.4	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.7	36.7	1.8	0.2	12.2	3.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	37.8	112.4	10.1	0.3	16.8	4.0
LnGrp LOS	D	F	B	A	B	A
Approach Vol, veh/h	629			490	808	
Approach Delay, s/veh	91.1			3.8	13.5	
Approach LOS	F			A	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		65.0		25.0	11.1	53.9
Change Period (Y+Rc), s		6.0		6.0	3.5	6.0
Max Green Setting (Gmax), s		59.0		19.0	21.5	34.0
Max Q Clear Time (g_c+I1), s		2.0		21.0	7.3	21.1
Green Ext Time (p_c), s		6.7		0.0	0.4	8.4
Intersection Summary						
HCM 7th Control Delay, s/veh			36.4			
HCM 7th LOS			D			

HCM 7th Signalized Intersection Summary
 400: IL 53 & Kankakee River Dr/Peotone Rd

PM Peak Hour
 10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	35	20	110	25	185	10	255	210	480	310	40
Future Volume (veh/h)	35	35	20	110	25	185	10	255	210	480	310	40
Initial Q (Qb), 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		
Adj Sat Flow, veh/h/ln	1248	1722	1752	1841	1672	1396	1604	1796	1781	1663	1938	1381
Adj Flow Rate, veh/h	49	53	40	131	36	257	13	274	300	511	356	45
Peak Hour Factor	0.72	0.66	0.50	0.84	0.70	0.72	0.75	0.93	0.70	0.94	0.87	0.89
Percent Heavy Veh, %	44	12	10	4	21	34	20	7	8	16	4	35
Cap, veh/h	196	83	63	272	223	401	438	320	350	472	1171	757
Arrive On Green	0.04	0.09	0.09	0.08	0.13	0.13	0.01	0.41	0.41	0.34	1.00	1.00
Sat Flow, veh/h	1188	911	687	1753	1672	1183	1527	784	858	1584	1938	1171
Grp Volume(v), veh/h	49	0	93	131	36	257	13	0	574	511	356	45
Grp Sat Flow(s),veh/h/ln	1188	0	1598	1753	1672	1183	1527	0	1642	1584	1938	1171
Q Serve(g_s), s	3.4	0.0	5.1	5.8	1.7	12.0	0.5	0.0	28.6	18.5	0.0	0.0
Cycle Q Clear(g_c), s	3.4	0.0	5.1	5.8	1.7	12.0	0.5	0.0	28.6	18.5	0.0	0.0
Prop In Lane	1.00		0.43	1.00		1.00	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	196	0	146	272	223	401	438	0	670	472	1171	757
V/C Ratio(X)	0.25	0.00	0.64	0.48	0.16	0.64	0.03	0.00	0.86	1.08	0.30	0.06
Avail Cap(c_a), veh/h	206	0	146	291	223	401	484	0	670	472	1171	757
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.62	0.62	0.62
Uniform Delay (d), s/veh	35.2	0.0	39.4	31.6	34.5	25.1	15.4	0.0	24.2	15.9	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	12.2	1.3	0.7	4.8	0.0	0.0	13.3	56.9	0.4	0.1
Initial Q Delay(d3), 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
%ile BackOfQ(95%),veh/ln	1.8	0.0	4.4	4.3	1.2	8.2	0.3	0.0	17.9	16.0	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.9	0.0	51.7	32.9	35.3	29.9	15.4	0.0	37.6	72.8	0.4	0.1
LnGrp LOS	D		D	C	D	C	B		D	F	A	A
Approach Vol, veh/h	142			424			587			912		
Approach Delay, s/veh	46.2			31.3			37.1			41.0		
Approach LOS	D			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.0	42.7	11.1	14.2	4.3	60.4	7.3	18.0				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green Setting (Gmax), s	18.5	36.0	8.5	8.0	3.5	51.0	4.5	12.0				
Max Q Clear Time (g_c+20), s	20.5	30.6	7.8	7.1	2.5	2.0	5.4	14.0				
Green Ext Time (p_c), s	0.0	3.3	0.0	0.1	0.0	8.5	0.0	0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	38.2											
HCM 7th LOS	D											

Intersection												
Int Delay, s/veh	4.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	30	645	40	40	270	30	30	15	30	30	15	30
Future Vol, veh/h	30	645	40	40	270	30	30	15	30	30	15	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	47	47	47	50	50	50	9	9	9	1	1	1
Mvmt Flow	32	679	42	42	284	32	32	16	32	32	16	32

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	316	0	0	721	0	0	1139	1163	700	1134	1168	300
Stage 1	-	-	-	-	-	-	763	763	-	384	384	-
Stage 2	-	-	-	-	-	-	376	400	-	750	784	-
Critical Hdwy	4.57	-	-	4.6	-	-	7.19	6.59	6.29	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.19	5.59	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.19	5.59	-	6.11	5.51	-
Follow-up Hdwy	2.623	-	-	2.65	-	-	3.581	4.081	3.381	3.509	4.009	3.309
Pot Cap-1 Maneuver	1029	-	-	697	-	-	173	189	428	180	194	742
Stage 1	-	-	-	-	-	-	386	403	-	641	613	-
Stage 2	-	-	-	-	-	-	631	590	-	405	405	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1029	-	-	697	-	-	133	166	428	134	171	742
Mov Cap-2 Maneuver	-	-	-	-	-	-	133	166	-	134	171	-
Stage 1	-	-	-	-	-	-	366	382	-	594	568	-
Stage 2	-	-	-	-	-	-	544	546	-	341	385	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.36			1.24			35.62			31.46		
HCM LOS							E			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	194	75	-	-	208	-	-	213
HCM Lane V/C Ratio	0.406	0.031	-	-	0.06	-	-	0.37
HCM Control Delay (s/veh)	35.6	8.6	0	-	10.5	0	-	31.5
HCM Lane LOS	E	A	A	-	B	A	-	D
HCM 95th %tile Q(veh)	1.8	0.1	-	-	0.2	-	-	1.6

Intersection												
Int Delay, s/veh	44.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Vol, veh/h	0	495	210	25	275	10	65	10	15	100	65	10
Future Vol, veh/h	0	495	210	25	275	10	65	10	15	100	65	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	250	-	-	290	-	-	280	-	-	280	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	81	76	58	89	67	73	58	67	56	70	50
Heavy Vehicles, %	26	19	6	3	24	73	10	0	5	23	5	0
Mvmt Flow	0	611	276	43	309	15	89	17	22	179	93	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	324	0	0	887	0	0	1191	1159	749	1022	1290	316
Stage 1	-	-	-	-	-	-	749	749	-	403	403	-
Stage 2	-	-	-	-	-	-	442	410	-	620	887	-
Critical Hdwy	4.36	-	-	4.13	-	-	7.2	6.5	6.25	7.33	6.55	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.2	5.5	-	6.33	5.55	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.2	5.5	-	6.33	5.55	-
Follow-up Hdwy	2.434	-	-	2.227	-	-	3.59	4	3.345	3.707	4.045	3.3
Pot Cap-1 Maneuver	1112	-	-	759	-	-	158	197	407	196	161	729
Stage 1	-	-	-	-	-	-	392	422	-	584	595	-
Stage 2	-	-	-	-	-	-	579	599	-	442	358	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	1112	-	-	759	-	-	~ 59	186	407	~ 159	152	729
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 59	186	-	~ 159	152	-
Stage 1	-	-	-	-	-	-	392	422	-	551	561	-
Stage 2	-	-	-	-	-	-	444	565	-	400	358	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	1.18	296.87	122.75
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	59	268	1112	-	-	759	-	-	159	177
HCM Lane V/C Ratio	1.521	0.148	-	-	-	0.057	-	-	1.121	0.638
HCM Control Delay (s/veh)	\$ 419.8	20.7	0	-	-	10	-	-	165.2	55.6
HCM Lane LOS	F	C	A	-	-	B	-	-	F	F
HCM 95th %tile Q(veh)	8	0.5	0	-	-	0.2	-	-	9.5	3.6

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	10.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	95	555	10	10	285	30	10	10	10	55	10	120
Future Vol, veh/h	95	555	10	10	285	30	10	10	10	55	10	120
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	52	52	52	53	53	53	22	22	22	23	23	23
Mvmt Flow	103	603	11	11	310	33	11	11	11	60	11	130

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	342	0	0	614	0	0	1152	1179	609	1163	1168	326
Stage 1	-	-	-	-	-	-	815	815	-	348	348	-
Stage 2	-	-	-	-	-	-	337	364	-	815	821	-
Critical Hdwy	4.62	-	-	4.63	-	-	7.32	6.72	6.42	7.33	6.73	6.43
Critical Hdwy Stg 1	-	-	-	-	-	-	6.32	5.72	-	6.33	5.73	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.32	5.72	-	6.33	5.73	-
Follow-up Hdwy	2.668	-	-	2.677	-	-	3.698	4.198	3.498	3.707	4.207	3.507
Pot Cap-1 Maneuver	985	-	-	760	-	-	160	175	460	156	177	669
Stage 1	-	-	-	-	-	-	344	364	-	627	599	-
Stage 2	-	-	-	-	-	-	637	590	-	342	360	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	985	-	-	760	-	-	99	144	460	118	146	669
Mov Cap-2 Maneuver	-	-	-	-	-	-	99	144	-	118	146	-
Stage 1	-	-	-	-	-	-	289	306	-	616	588	-
Stage 2	-	-	-	-	-	-	495	580	-	271	303	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	1.31			0.3			33.95			54.6		
HCM LOS							D			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	157	258	-	-	54	-	-	259
HCM Lane V/C Ratio	0.208	0.105	-	-	0.014	-	-	0.777
HCM Control Delay (s/veh)	34	9.1	0	-	9.8	0	-	54.6
HCM Lane LOS	D	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	0.8	0.4	-	-	0	-	-	5.8

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	610	5	10	295	5	5	0	0	5	5	5
Future Vol, veh/h	0	610	5	10	295	5	5	0	0	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	75	38	50	92	25	25	95	95	25	25	50
Heavy Vehicles, %	0	19	0	0	22	0	20	0	50	0	69	0
Mvmt Flow	0	813	13	20	321	20	20	0	0	20	20	10

Major/Minor	Major1		Major2		Minor1			Minor2				
Conflicting Flow All	341	0	0	826	0	0	1191	1201	820	1184	1197	331
Stage 1	-	-	-	-	-	-	820	820	-	371	371	-
Stage 2	-	-	-	-	-	-	371	381	-	813	826	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.3	6.5	6.7	7.1	7.19	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.3	5.5	-	6.1	6.19	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.3	5.5	-	6.1	6.19	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.68	4	3.75	3.5	4.621	3.3
Pot Cap-1 Maneuver	1230	-	-	813	-	-	151	187	310	168	140	716
Stage 1	-	-	-	-	-	-	344	392	-	654	518	-
Stage 2	-	-	-	-	-	-	614	617	-	375	305	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	1230	-	-	813	-	-	124	181	310	163	135	716
Mov Cap-2 Maneuver	-	-	-	-	-	-	124	181	-	163	135	-
Stage 1	-	-	-	-	-	-	344	392	-	634	502	-
Stage 2	-	-	-	-	-	-	564	598	-	375	305	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	0		0.53		39.6		33.47	
HCM LOS					E		D	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	124	1230	-	-	99	-	-	176
HCM Lane V/C Ratio	0.162	-	-	-	0.025	-	-	0.285
HCM Control Delay (s/veh)	39.6	0	-	-	9.5	0	-	33.5
HCM Lane LOS	E	A	-	-	A	A	-	D
HCM 95th %tile Q(veh)	0.6	0	-	-	0.1	-	-	1.1

Intersection												
Int Delay, s/veh	14.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	95	520	5	5	255	30	0	5	5	50	10	110
Future Vol, veh/h	95	520	5	5	255	30	0	5	5	50	10	110
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	78	25	50	88	56	95	25	25	82	58	75
Heavy Vehicles, %	3	22	0	21	27	17	23	0	0	3	9	3
Mvmt Flow	119	667	20	10	290	54	0	20	20	61	17	147

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	343	0	0	687	0	0	1233	1278	677	1251	1261	317
Stage 1	-	-	-	-	-	-	914	914	-	337	337	-
Stage 2	-	-	-	-	-	-	318	363	-	914	924	-
Critical Hdwy	4.13	-	-	4.31	-	-	7.33	6.5	6.2	7.13	6.59	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.33	5.5	-	6.13	5.59	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.33	5.5	-	6.13	5.59	-
Follow-up Hdwy	2.227	-	-	2.389	-	-	3.707	4	3.3	3.527	4.081	3.327
Pot Cap-1 Maneuver	1210	-	-	825	-	-	139	168	456	149	165	722
Stage 1	-	-	-	-	-	-	300	355	-	676	629	-
Stage 2	-	-	-	-	-	-	651	628	-	326	339	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	1210	-	-	825	-	-	82	139	456	103	137	722
Mov Cap-2 Maneuver	-	-	-	-	-	-	82	139	-	103	137	-
Stage 1	-	-	-	-	-	-	253	298	-	665	620	-
Stage 2	-	-	-	-	-	-	496	618	-	244	285	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	1.22			0.27			25.76			81.71		
HCM LOS							D			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	213	264	-	-	49	-	-	245
HCM Lane V/C Ratio	0.188	0.098	-	-	0.012	-	-	0.919
HCM Control Delay (s/veh)	25.8	8.3	0	-	9.4	0	-	81.7
HCM Lane LOS	D	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	0.7	0.3	-	-	0	-	-	8

Intersection	
Intersection Delay, s/veh	176.1
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	30	425	90	15	155	30	70	240	10	40	370	25
Future Vol, veh/h	30	425	90	15	155	30	70	240	10	40	370	25
Peak Hour Factor	0.88	0.93	0.78	0.75	0.75	0.67	0.88	0.83	0.58	0.47	0.91	0.71
Heavy Vehicles, %	13	23	14	14	27	17	29	9	7	15	3	3
Mvmt Flow	34	457	115	20	207	45	80	289	17	85	407	35
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	271.2	43.4	90	197.9
HCM LOS	F	E	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	6%	8%	9%
Vol Thru, %	75%	78%	78%	85%
Vol Right, %	3%	17%	15%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	320	545	200	435
LT Vol	70	30	15	40
Through Vol	240	425	155	370
RT Vol	10	90	30	25
Lane Flow Rate	386	606	271	527
Geometry Grp	1	1	1	1
Degree of Util (X)	1.007	1.515	0.734	1.332
Departure Headway (Hd)	11.921	10	12.481	10.689
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	309	370	293	342
Service Time	9.921	8	10.481	8.689
HCM Lane V/C Ratio	1.249	1.638	0.925	1.541
HCM Control Delay, s/veh	90	271.2	43.4	197.9
HCM Lane LOS	F	F	E	F
HCM 95th-tile Q	10.8	30	5.3	21.7

HCM 7th TWSC
 900: I-57 SB On Ramp/I-57 SB Off Ramp & Wilmington Rd

PM Peak Hour
 10/16/2024

Intersection												
Int Delay, s/veh	31.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↖					↖		↗
Traffic Vol, veh/h	0	470	80	145	180	0	0	0	0	170	0	75
Future Vol, veh/h	0	470	80	145	180	0	0	0	0	170	0	75
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Stop	Stop	Stop								
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	-	-	-	150	-	-	-	-	-	0	-	185
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	91	83	78	87	25	25	95	25	77	95	91
Heavy Vehicles, %	0	17	16	7	24	0	0	0	0	6	0	17
Mvmt Flow	0	516	96	186	207	0	0	0	0	221	0	82

Major/Minor	Major1			Major2			Minor2				
Conflicting Flow All	-	0	0	613	0	0			1095	-	207
Stage 1	-	-	-	-	-	-			579	-	-
Stage 2	-	-	-	-	-	-			516	-	-
Critical Hdwy	-	-	-	4.17	-	-			6.46	-	6.37
Critical Hdwy Stg 1	-	-	-	-	-	-			5.46	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-			5.46	-	-
Follow-up Hdwy	-	-	-	2.263	-	-			3.554	-	3.453
Pot Cap-1 Maneuver	0	-	-	943	-	0			232	0	797
Stage 1	0	-	-	-	-	0			553	0	-
Stage 2	0	-	-	-	-	0			591	0	-
Platoon blocked, %		-	-	-							
Mov Cap-1 Maneuver	-	-	-	943	-	-			~ 186	0	797
Mov Cap-2 Maneuver	-	-	-	-	-	-			~ 186	0	-
Stage 1	-	-	-	-	-	-			553	0	-
Stage 2	-	-	-	-	-	-			474	0	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	4.62	130.42
HCM LOS			F

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	943	-	186	797
HCM Lane V/C Ratio	-	-	0.197	-	1.184	0.103
HCM Control Delay (s/veh)	-	-	9.8	-	175.4	10
HCM Lane LOS	-	-	A	-	F	B
HCM 95th %tile Q(veh)	-	-	0.7	-	11.5	0.3

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 7th TWSC
 1000: I-57 NB Off Ramp/I-57 NB On Ramp & Wilmington Rd

PM Peak Hour
 10/16/2024

Intersection												
Int Delay, s/veh	6.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖		↖		↗			
Traffic Vol, veh/h	155	305	0	0	275	70	75	0	100	0	0	0
Future Vol, veh/h	155	305	0	0	275	70	75	0	100	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Stop	-	-	None
Storage Length	150	-	-	-	-	-	0	-	185	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	87	95	95	82	90	85	95	73	95	95	95
Heavy Vehicles, %	19	12	0	0	13	15	30	0	7	0	0	0
Mvmt Flow	194	351	0	0	335	78	88	0	137	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	413	0	0
Stage 1	-	-	738
Stage 2	-	-	335
Critical Hdwy	4.29	-	6.7
Critical Hdwy Stg 1	-	-	5.7
Critical Hdwy Stg 2	-	-	5.7
Follow-up Hdwy	2.371	-	3.77
Pot Cap-1 Maneuver	1060	0	0
Stage 1	-	0	426
Stage 2	-	0	666
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1060	-	176
Mov Cap-2 Maneuver	-	-	176
Stage 1	-	-	348
Stage 2	-	-	666

Approach	EB	WB	NB
HCM Control Delay, s/v	3.26	0	24.42
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	176	682	1060	-	-	-
HCM Lane V/C Ratio	0.501	0.201	0.183	-	-	-
HCM Control Delay (s/veh)	44.3	11.6	9.2	-	-	-
HCM Lane LOS	E	B	A	-	-	-
HCM 95th %tile Q(veh)	2.5	0.7	0.7	-	-	-

Intersection	
Intersection Delay, s/veh	15.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↶	↷		↶	↷			↶↷			↶↷	
Traffic Vol, veh/h	175	25	60	5	40	0	65	255	5	0	235	190
Future Vol, veh/h	175	25	60	5	40	0	65	255	5	0	235	190
Peak Hour Factor	0.84	0.67	0.83	0.38	0.60	0.95	0.74	0.93	1.00	0.95	0.87	0.80
Heavy Vehicles, %	14	66	37	0	37	0	32	8	0	0	10	10
Mvmt Flow	208	37	72	13	67	0	88	274	5	0	270	238
Number of Lanes	1	1	0	1	1	0	0	2	0	0	2	0

Approach	EB	WB	NE	SW
Opposing Approach	WB	EB	SW	NE
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SW	NE	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NE	SW	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay, s/veh	15.9	12.7	15.3	16.1
HCM LOS	C	B	C	C

Lane	NELn1	NELn2	EBLn1	EBLn2	WBLn1	WBLn2	SWLn1	SWLn2
Vol Left, %	34%	0%	100%	0%	100%	0%	0%	0%
Vol Thru, %	66%	96%	0%	29%	0%	100%	100%	29%
Vol Right, %	0%	4%	0%	71%	0%	0%	0%	71%
Sign Control	Stop							
Traffic Vol by Lane	193	133	175	85	5	40	157	268
LT Vol	65	0	175	0	5	0	0	0
Through Vol	128	128	0	25	0	40	157	78
RT Vol	0	5	0	60	0	0	0	190
Lane Flow Rate	225	142	208	110	13	67	180	328
Geometry Grp	5	5	5	5	5	5	5	5
Degree of Util (X)	0.475	0.276	0.462	0.239	0.031	0.158	0.345	0.582
Departure Headway (Hd)	7.609	6.993	7.976	7.864	8.377	8.51	6.901	6.396
Convergence, Y/N	Yes							
Cap	475	514	452	458	428	422	522	567
Service Time	5.337	4.721	5.704	5.591	6.119	6.252	4.625	4.12
HCM Lane V/C Ratio	0.474	0.276	0.46	0.24	0.03	0.159	0.345	0.578
HCM Control Delay, s/veh	17.1	12.4	17.4	13.1	11.4	12.9	13.2	17.7
HCM Lane LOS	C	B	C	B	B	B	B	C
HCM 95th-tile Q	2.5	1.1	2.4	0.9	0.1	0.6	1.5	3.7

Intersection						
Int Delay, s/veh	10					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↙	↑	↗		↘	
Traffic Vol, veh/h	5	10	0	75	330	0
Future Vol, veh/h	5	10	0	75	330	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	25	63	75	69	85	42
Heavy Vehicles, %	0	0	0	16	27	0
Mvmt Flow	20	16	0	109	388	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	109	0	-	0	110 54
Stage 1	-	-	-	-	54 -
Stage 2	-	-	-	-	56 -
Critical Hdwy	4.1	-	-	-	6.67 6.2
Critical Hdwy Stg 1	-	-	-	-	5.67 -
Critical Hdwy Stg 2	-	-	-	-	5.67 -
Follow-up Hdwy	2.2	-	-	-	3.743 3.3
Pot Cap-1 Maneuver	1494	-	-	-	830 1018
Stage 1	-	-	-	-	908 -
Stage 2	-	-	-	-	907 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1494	-	-	-	819 1018
Mov Cap-2 Maneuver	-	-	-	-	819 -
Stage 1	-	-	-	-	896 -
Stage 2	-	-	-	-	907 -

Approach	EB	WB	SB
HCM Control Delay, s/v	4.15	0	13.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1494	-	-	-	819
HCM Lane V/C Ratio	0.013	-	-	-	0.474
HCM Control Delay (s/veh)	7.4	-	-	-	13.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	2.6

HCM 7th Signalized Intersection Summary
 200: River Rd & I-55 NB Ramps

AM Peak Hour
 10/16/2024



Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	60	10	10	335	75	380
Future Volume (veh/h)	60	10	10	335	75	380
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1633	1900	1826	1579	1678	1678
Adj Flow Rate, veh/h	80	17	10	381	103	432
Peak Hour Factor	0.75	0.58	1.00	0.88	0.73	0.88
Percent Heavy Veh, %	18	0	5	27	15	15
Cap, veh/h	108	23	355	908	132	554
Arrive On Green	0.09	0.09	0.01	0.57	0.47	0.47
Sat Flow, veh/h	1244	264	1739	1579	282	1183
Grp Volume(v), veh/h	98	0	10	381	0	535
Grp Sat Flow(s),veh/h/ln	1523	0	1739	1579	0	1465
Q Serve(g_s), s	2.2	0.0	0.1	4.8	0.0	10.9
Cycle Q Clear(g_c), s	2.2	0.0	0.1	4.8	0.0	10.9
Prop In Lane	0.82	0.17	1.00			0.81
Lane Grp Cap(c), veh/h	133	0	355	908	0	686
V/C Ratio(X)	0.74	0.00	0.03	0.42	0.00	0.78
Avail Cap(c_a), veh/h	772	0	512	2666	0	2185
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.8	0.0	6.3	4.2	0.0	7.9
Incr Delay (d2), s/veh	7.7	0.0	0.0	0.3	0.0	2.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	0.0	0.0	0.5	0.0	2.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	23.5	0.0	6.3	4.5	0.0	9.9
LnGrp LOS	C		A	A		A
Approach Vol, veh/h	98			391	535	
Approach Delay, s/veh	23.5			4.6	9.9	
Approach LOS	C			A	A	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	3.8	22.6		9.1		26.4
Change Period (Y+Rc), s	3.5	6.0		6.0		6.0
Max Green Setting (Gmax), s	3.5	53.0		18.0		60.0
Max Q Clear Time (g_c+I1), s	2.1	12.9		4.2		6.8
Green Ext Time (p_c), s	0.0	3.8		0.2		2.2
Intersection Summary						
HCM 7th Control Delay, s/veh			9.2			
HCM 7th LOS			A			

HCM 7th Signalized Intersection Summary
300: IL 53 & River Rd

AM Peak Hour
10/16/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	135	185	190	350	160	35
Future Volume (veh/h)	135	185	190	350	160	35
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1544	1381	1663	1953	1766	1189
Adj Flow Rate, veh/h	159	215	264	449	203	47
Peak Hour Factor	0.85	0.86	0.72	0.78	0.79	0.75
Percent Heavy Veh, %	24	35	16	3	15	48
Cap, veh/h	223	496	757	1397	1037	744
Arrive On Green	0.15	0.15	0.09	0.71	0.59	0.59
Sat Flow, veh/h	1471	2060	1584	1953	1766	1007
Grp Volume(v), veh/h	159	215	264	449	203	47
Grp Sat Flow(s),veh/h/ln	1471	1030	1584	1953	1766	1007
Q Serve(g_s), s	9.3	8.0	5.4	7.7	4.8	1.2
Cycle Q Clear(g_c), s	9.3	8.0	5.4	7.7	4.8	1.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	223	496	757	1397	1037	744
V/C Ratio(X)	0.71	0.43	0.35	0.32	0.20	0.06
Avail Cap(c_a), veh/h	425	779	976	1397	1037	744
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.3	29.0	5.3	4.7	8.7	3.2
Incr Delay (d2), s/veh	8.7	1.3	0.3	0.6	0.4	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.6	8.4	2.2	3.9	2.9	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	45.0	30.2	5.5	5.4	9.1	3.4
LnGrp LOS	D	C	A	A	A	A
Approach Vol, veh/h	374			713	250	
Approach Delay, s/veh	36.5			5.4	8.0	
Approach LOS	D			A	A	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		70.3		19.7	11.5	58.8
Change Period (Y+Rc), s		6.0		6.0	3.5	6.0
Max Green Setting (Gmax), s		52.0		26.0	20.5	28.0
Max Q Clear Time (g_c+I1), s		9.7		11.3	7.4	6.8
Green Ext Time (p_c), s		9.7		2.4	0.6	3.5
Intersection Summary						
HCM 7th Control Delay, s/veh			14.6			
HCM 7th LOS			B			

HCM 7th Signalized Intersection Summary
 400: IL 53 & Kankakee River Dr/Peotone Rd

AM Peak Hour
 10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	40	20	75	25	270	30	305	115	195	110	35
Future Volume (veh/h)	40	40	20	75	25	270	30	305	115	195	110	35
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1455	1663	1796	1737	1704	1707	1841	1870	1826	1470	1766	1263
Adj Flow Rate, veh/h	77	93	29	84	46	370	68	363	149	235	133	49
Peak Hour Factor	0.52	0.43	0.68	0.89	0.54	0.73	0.44	0.84	0.77	0.83	0.83	0.71
Percent Heavy Veh, %	30	16	7	11	19	13	4	2	5	29	15	43
Cap, veh/h	229	138	43	224	189	534	751	654	268	444	1032	690
Arrive On Green	0.06	0.11	0.11	0.06	0.11	0.11	0.03	0.52	0.52	0.10	0.58	0.58
Sat Flow, veh/h	1386	1216	379	1654	1704	2547	1753	1260	517	1400	1766	1070
Grp Volume(v), veh/h	77	0	122	84	46	370	68	0	512	235	133	49
Grp Sat Flow(s),veh/h/ln	1386	0	1595	1654	1704	1273	1753	0	1777	1400	1766	1070
Q Serve(g_s), s	4.4	0.0	6.6	4.0	2.2	10.0	1.6	0.0	17.5	6.5	3.0	1.5
Cycle Q Clear(g_c), s	4.4	0.0	6.6	4.0	2.2	10.0	1.6	0.0	17.5	6.5	3.0	1.5
Prop In Lane	1.00		0.24	1.00		1.00	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	229	0	181	224	189	534	751	0	922	444	1032	690
V/C Ratio(X)	0.34	0.00	0.67	0.38	0.24	0.69	0.09	0.00	0.56	0.53	0.13	0.07
Avail Cap(c_a), veh/h	261	0	213	228	189	534	762	0	922	532	1032	690
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
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.7	0.0	38.3	32.9	36.5	32.9	9.4	0.0	14.6	10.2	8.4	5.9
Incr Delay (d2), s/veh	0.9	0.0	10.5	1.0	1.4	4.9	0.1	0.0	2.4	1.0	0.3	0.2
Initial Q Delay(d3), 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
%ile BackOfQ(95%),veh/ln	2.7	0.0	5.5	2.8	1.7	6.8	1.0	0.0	10.7	3.0	1.9	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.6	0.0	48.8	34.0	37.9	37.8	9.5	0.0	17.1	11.2	8.7	6.1
LnGrp LOS	C		D	C	D	D	A		B	B	A	A
Approach Vol, veh/h		199			500			580			417	
Approach Delay, s/veh		42.9			37.2			16.2			9.8	
Approach LOS		D			D			B			A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.4	52.7	8.8	16.2	6.5	58.6	9.0	16.0				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green Setting (Gmax), s	11.5	39.0	5.5	12.0	3.5	50.0	7.5	10.0				
Max Q Clear Time (g_c+I), s	19.5	19.5	6.0	8.6	3.6	5.0	6.4	12.0				
Green Ext Time (p_c), s	0.3	8.1	0.0	0.3	0.0	3.2	0.0	0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh			23.9									
HCM 7th LOS			C									

HCM 7th Signalized Intersection Summary
500: Old Chicago Rd & Peotone Rd

AM Peak Hour
10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	0	255	105	5	240	50	125	30	15	25	5	0
Future Volume (veh/h)	0	255	105	5	240	50	125	30	15	25	5	0
Initial Q (Qb), 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										
Adj Sat Flow, veh/h/ln	1129	1559	1752	1900	1633	1470	1841	1856	1900	566	1722	1900
Adj Flow Rate, veh/h	0	293	127	10	312	65	179	51	36	33	7	0
Peak Hour Factor	0.95	0.87	0.83	0.50	0.77	0.77	0.70	0.59	0.42	0.75	0.75	0.95
Percent Heavy Veh, %	52	23	10	0	18	29	4	3	0	90	12	0
Cap, veh/h	327	425	184	319	633	132	497	217	153	192	213	0
Arrive On Green	0.00	0.41	0.41	0.01	0.48	0.48	0.11	0.21	0.21	0.02	0.12	0.00
Sat Flow, veh/h	1076	1032	447	1810	1311	273	1753	1012	715	539	1722	0
Grp Volume(v), veh/h	0	0	420	10	0	377	179	0	87	33	7	0
Grp Sat Flow(s),veh/h/ln	0	1479	1810	0	1584	1753	0	1727	539	1722	0	0
Q Serve(g_s), s	0.0	0.0	12.9	0.2	0.0	9.0	4.6	0.0	2.3	1.3	0.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	12.9	0.2	0.0	9.0	4.6	0.0	2.3	1.3	0.2	0.0
Prop In Lane	1.00		0.30	1.00		0.17	1.00		0.41	1.00		0.00
Lane Grp Cap(c), veh/h	327	0	609	319	0	765	497	0	370	192	213	0
V/C Ratio(X)	0.00	0.00	0.69	0.03	0.00	0.49	0.36	0.00	0.24	0.17	0.03	0.00
Avail Cap(c_a), veh/h	393	0	1173	419	0	1256	660	0	529	242	372	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
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	13.4	10.3	0.0	9.7	16.3	0.0	18.0	21.6	21.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	6.3	0.0	0.0	2.3	0.4	0.0	0.7	0.4	0.1	0.0
Initial Q Delay(d3), 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
%ile BackOfQ(95%),veh/ln	0.0	0.0	7.2	0.1	0.0	4.4	2.7	0.0	1.5	0.6	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	19.7	10.3	0.0	12.0	16.8	0.0	18.7	22.0	21.5	0.0
LnGrp LOS			B	B		B	B		B	C	C	
Approach Vol, veh/h		420			387			266			40	
Approach Delay, s/veh		19.7			12.0			17.4			22.0	
Approach LOS		B			B			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.8	17.9	3.9	28.8	9.8	12.9	0.0	32.8				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green Setting (Gmax), s	5	17.0	3.5	44.0	11.5	12.0	3.5	44.0				
Max Q Clear Time (g_c+1), s	13	4.3	2.2	14.9	6.6	2.2	0.0	11.0				
Green Ext Time (p_c), s	0.0	0.4	0.0	7.9	0.2	0.0	0.0	7.2				
Intersection Summary												
HCM 7th Control Delay, s/veh			16.5									
HCM 7th LOS			B									

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	295	5	0	295	0	5	0	5	5	0	0
Future Vol, veh/h	0	295	5	0	295	0	5	0	5	5	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	86	50	95	87	95	25	95	25	50	95	95
Heavy Vehicles, %	0	25	0	100	24	0	17	0	60	0	0	0
Mvmt Flow	0	343	10	0	339	0	20	0	20	10	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	339	0	0	353	0	0	687	687	348	682	692	339
Stage 1	-	-	-	-	-	-	348	348	-	339	339	-
Stage 2	-	-	-	-	-	-	339	339	-	343	353	-
Critical Hdwy	4.1	-	-	5.1	-	-	7.27	6.5	6.8	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.27	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.27	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	3.1	-	-	3.653	4	3.84	3.5	4	3.3
Pot Cap-1 Maneuver	1231	-	-	817	-	-	342	372	582	366	370	708
Stage 1	-	-	-	-	-	-	638	638	-	680	643	-
Stage 2	-	-	-	-	-	-	645	643	-	676	634	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	1231	-	-	817	-	-	342	372	582	354	370	708
Mov Cap-2 Maneuver	-	-	-	-	-	-	342	372	-	354	370	-
Stage 1	-	-	-	-	-	-	638	638	-	680	643	-
Stage 2	-	-	-	-	-	-	645	643	-	653	634	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0	14.22	15.47
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	430	1231	-	-	817	-	-	354
HCM Lane V/C Ratio	0.093	-	-	-	-	-	-	0.028
HCM Control Delay (s/veh)	14.2	0	-	-	0	-	-	15.5
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.1

HCM 7th Signalized Intersection Summary
700: Cedar Rd & Wilmington Rd

AM Peak Hour
10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	255	0	0	225	35	0	5	0	20	0	30
Future Volume (veh/h)	95	255	0	0	225	35	0	5	0	20	0	30
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1856	1530	1900	1900	1530	1530	1900	1900	1900	1544	1900	1767
Adj Flow Rate, veh/h	125	331	0	0	317	55	0	13	0	20	0	50
Peak Hour Factor	0.76	0.77	0.95	0.95	0.71	0.64	0.95	0.38	0.95	1.00	0.95	0.60
Percent Heavy Veh, %	3	25	0	0	25	25	0	0	0	24	0	9
Cap, veh/h	533	888	0	639	543	94	0	229	0	153	17	137
Arrive On Green	0.07	0.58	0.00	0.00	0.43	0.43	0.00	0.12	0.00	0.12	0.00	0.12
Sat Flow, veh/h	1767	1530	0	1810	1270	220	0	1900	0	310	145	1137
Grp Volume(v), veh/h	125	331	0	0	0	372	0	13	0	70	0	0
Grp Sat Flow(s),veh/h/ln	1767	1530	0	1810	0	1490	0	1900	0	1592	0	0
Q Serve(g_s), s	1.4	4.6	0.0	0.0	0.0	7.6	0.0	0.2	0.0	0.1	0.0	0.0
Cycle Q Clear(g_c), s	1.4	4.6	0.0	0.0	0.0	7.6	0.0	0.2	0.0	1.5	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.15	0.00		0.00	0.29		0.71
Lane Grp Cap(c), veh/h	533	888	0	639	0	637	0	229	0	307	0	0
V/C Ratio(X)	0.23	0.37	0.00	0.00	0.00	0.58	0.00	0.06	0.00	0.23	0.00	0.00
Avail Cap(c_a), veh/h	792	2022	0	793	0	1784	0	853	0	817	0	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
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.8	4.5	0.0	0.0	0.0	8.8	0.0	15.6	0.0	16.2	0.0	0.0
Incr Delay (d2), s/veh	0.2	1.2	0.0	0.0	0.0	3.9	0.0	0.2	0.0	0.8	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	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	1.0	0.0	0.0	0.0	3.4	0.0	0.2	0.0	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	6.1	5.7	0.0	0.0	0.0	12.7	0.0	15.8	0.0	17.0	0.0	0.0
LnGrp LOS	A	A				B		B		B		
Approach Vol, veh/h		456			372			13				70
Approach Delay, s/veh		5.8			12.7			15.8				17.0
Approach LOS		A			B			B				B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		10.8	0.0	29.3		10.8	6.1	23.1				
Change Period (Y+Rc), s		6.0	3.5	6.0		6.0	3.5	6.0				
Max Green Setting (Gmax), s		18.0	3.5	53.0		18.0	8.5	48.0				
Max Q Clear Time (g_c+I1), s		2.2	0.0	6.6		3.5	3.4	9.6				
Green Ext Time (p_c), s		0.0	0.0	6.7		0.4	0.1	7.5				
Intersection Summary												
HCM 7th Control Delay, s/veh			9.6									
HCM 7th LOS			A									

HCM 7th Signalized Intersection Summary
800: US 52 & Wilmington Rd

AM Peak Hour
10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	25	190	50	15	165	20	65	250	10	35	200	10
Future Volume (veh/h)	25	190	50	15	165	20	65	250	10	35	200	10
Initial Q (Qb), 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										
Adj Sat Flow, veh/h/ln	1811	1515	1530	1900	1455	1767	1589	1841	1900	1574	1678	1796
Adj Flow Rate, veh/h	35	238	53	20	243	31	90	291	20	64	267	15
Peak Hour Factor	0.71	0.80	0.95	0.75	0.68	0.64	0.72	0.86	0.50	0.55	0.75	0.67
Percent Heavy Veh, %	6	26	25	0	30	9	21	4	0	22	15	7
Cap, veh/h	272	325	72	265	332	42	362	522	36	348	455	26
Arrive On Green	0.02	0.27	0.27	0.01	0.26	0.26	0.06	0.31	0.31	0.04	0.29	0.29
Sat Flow, veh/h	1725	1199	267	1810	1265	161	1513	1703	117	1499	1573	88
Grp Volume(v), veh/h	35	0	291	20	0	274	90	0	311	64	0	282
Grp Sat Flow(s),veh/h/ln	1725	0	1467	1810	0	1426	1513	0	1820	1499	0	1662
Q Serve(g_s), s	0.8	0.0	9.4	0.4	0.0	9.1	2.1	0.0	7.4	1.5	0.0	7.5
Cycle Q Clear(g_c), s	0.8	0.0	9.4	0.4	0.0	9.1	2.1	0.0	7.4	1.5	0.0	7.5
Prop In Lane	1.00		0.18	1.00		0.11	1.00		0.06	1.00		0.05
Lane Grp Cap(c), veh/h	272	0	398	265	0	375	362	0	558	348	0	481
V/C Ratio(X)	0.13	0.00	0.73	0.08	0.00	0.73	0.25	0.00	0.56	0.18	0.00	0.59
Avail Cap(c_a), veh/h	349	0	877	361	0	853	463	0	1123	416	0	962
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
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.3	0.0	17.2	14.5	0.0	17.4	12.3	0.0	15.0	12.6	0.0	15.8
Incr Delay (d2), s/veh	0.2	0.0	5.5	0.1	0.0	5.8	0.4	0.0	4.0	0.3	0.0	5.2
Initial Q Delay(d3), 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
%ile BackOfQ(95%),veh/ln	0.4	0.0	5.3	0.2	0.0	5.1	1.0	0.0	5.1	0.7	0.0	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	14.5	0.0	22.6	14.6	0.0	23.2	12.7	0.0	19.0	12.8	0.0	20.9
LnGrp LOS	B		C	B		C	B		B	B		C
Approach Vol, veh/h		326			294			401			346	
Approach Delay, s/veh		21.8			22.6			17.6			19.4	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.6	21.9	4.3	20.1	6.5	21.0	4.7	19.6				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green Setting (Gmax), s	4.5	32.0	3.5	31.0	6.5	30.0	3.5	31.0				
Max Q Clear Time (g_c+1), s	13.5	9.4	2.4	11.4	4.1	9.5	2.8	11.1				
Green Ext Time (p_c), s	0.0	4.8	0.0	2.7	0.0	4.1	0.0	2.5				
Intersection Summary												
HCM 7th Control Delay, s/veh			20.1									
HCM 7th LOS			C									

HCM 7th Signalized Intersection Summary
 900: I-57 SB On Ramp/I-57 SB Off Ramp & Wilmington Rd

AM Peak Hour
 10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻		↻	↻					↻		↻
Traffic Volume (veh/h)	0	195	60	90	245	0	0	0	0	65	0	90
Future Volume (veh/h)	0	195	60	90	245	0	0	0	0	65	0	90
Initial Q (Qb), 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		
Adj Sat Flow, veh/h/ln	0	1618	1396	1767	1648	0				1618	0	1411
Adj Flow Rate, veh/h	0	227	75	106	275	0				79	0	123
Peak Hour Factor	0.95	0.86	0.80	0.85	0.89	0.95				0.82	0.95	0.73
Percent Heavy Veh, %	0	19	34	9	17	0				19	0	33
Cap, veh/h	0	446	147	522	876	0				250	0	194
Arrive On Green	0.00	0.38	0.38	0.06	0.53	0.00				0.16	0.00	0.16
Sat Flow, veh/h	0	1164	385	1682	1648	0				1541	0	1196
Grp Volume(v), veh/h	0	0	302	106	275	0				79	0	123
Grp Sat Flow(s),veh/h/ln	0	0	1549	1682	1648	0				1541	0	1196
Q Serve(g_s), s	0.0	0.0	5.9	1.3	3.7	0.0				1.8	0.0	3.8
Cycle Q Clear(g_c), s	0.0	0.0	5.9	1.3	3.7	0.0				1.8	0.0	3.8
Prop In Lane	0.00		0.25	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	0	593	522	876	0				250	0	194
V/C Ratio(X)	0.00	0.00	0.51	0.20	0.31	0.00				0.32	0.00	0.63
Avail Cap(c_a), veh/h	0	0	1541	786	2144	0				1062	0	824
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	9.3	6.2	5.2	0.0				14.5	0.0	15.3
Incr Delay (d2), s/veh	0.0	0.0	3.1	0.2	0.9	0.0				1.5	0.0	7.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	3.1	0.4	1.3	0.0				1.1	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	12.4	6.4	6.1	0.0				16.0	0.0	22.5
LnGrp LOS			B	A	A					B		C
Approach Vol, veh/h		302			381						202	
Approach Delay, s/veh		12.4			6.2						20.0	
Approach LOS		B			A						B	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			5.8	21.0		12.4		26.8				
Change Period (Y+Rc), s			3.5	6.0		6.0		6.0				
Max Green Setting (Gmax), s			8.5	39.0		27.0		51.0				
Max Q Clear Time (g_c+I1), s			3.3	7.9		5.8		5.7				
Green Ext Time (p_c), s			0.1	5.7		1.4		5.6				
Intersection Summary												
HCM 7th Control Delay, s/veh			11.4									
HCM 7th LOS			B									

HCM 7th Signalized Intersection Summary
 1000: I-57 NB Off Ramp/I-57 NB On Ramp & Wilmington Rd

AM Peak Hour
 10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	135	0	0	270	115	95	0	85	0	0	0
Future Volume (veh/h)	50	135	0	0	270	115	95	0	85	0	0	0
Initial Q (Qb), 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				
Adj Sat Flow, veh/h/ln	1604	1618	0	0	1693	1796	1663	0	1752			
Adj Flow Rate, veh/h	69	141	0	0	290	134	132	0	127			
Peak Hour Factor	0.72	0.96	0.95	0.95	0.93	0.86	0.72	0.95	0.67			
Percent Heavy Veh, %	20	19	0	0	14	7	16	0	10			
Cap, veh/h	433	922	0	0	494	228	245	0	230			
Arrive On Green	0.04	0.57	0.00	0.00	0.45	0.45	0.15	0.00	0.15			
Sat Flow, veh/h	1527	1618	0	0	1095	506	1584	0	1485			
Grp Volume(v), veh/h	69	141	0	0	0	424	132	0	127			
Grp Sat Flow(s),veh/h/ln	1527	1618	0	0	0	1601	1584	0	1485			
Q Serve(g_s), s	1.0	1.8	0.0	0.0	0.0	8.6	3.4	0.0	3.4			
Cycle Q Clear(g_c), s	1.0	1.8	0.0	0.0	0.0	8.6	3.4	0.0	3.4			
Prop In Lane	1.00		0.00	0.00		0.32	1.00		1.00			
Lane Grp Cap(c), veh/h	433	922	0	0	0	722	245	0	230			
V/C Ratio(X)	0.16	0.15	0.00	0.00	0.00	0.59	0.54	0.00	0.55			
Avail Cap(c_a), veh/h	567	2079	0	0	0	1726	799	0	749			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	6.3	4.4	0.0	0.0	0.0	8.9	17.0	0.0	17.0			
Incr Delay (d2), s/veh	0.2	0.4	0.0	0.0	0.0	3.5	3.9	0.0	4.4			
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	0.3	0.6	0.0	0.0	0.0	4.5	2.4	0.0	2.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	6.5	4.8	0.0	0.0	0.0	12.4	20.9	0.0	21.4			
LnGrp LOS	A	A				B	C		C			
Approach Vol, veh/h		210			424			259				
Approach Delay, s/veh		5.3			12.4			21.1				
Approach LOS		A			B			C				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		12.8		30.8			5.2	25.6				
Change Period (Y+Rc), s		6.0		6.0			3.5	6.0				
Max Green Setting (Gmax), s		22.0		56.0			5.5	47.0				
Max Q Clear Time (g_c+1), s		5.4		3.8			3.0	10.6				
Green Ext Time (p_c), s		1.6		2.7			0.0	9.0				
Intersection Summary												
HCM 7th Control Delay, s/veh				13.3								
HCM 7th LOS				B								

Intersection												
Intersection Delay, s/veh	11.8											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	125	20	35	0	45	5	45	200	5	5	100	160
Future Vol, veh/h	125	20	35	0	45	5	45	200	5	5	100	160
Peak Hour Factor	0.82	0.75	0.73	0.95	0.61	0.50	0.83	0.79	0.25	0.25	0.88	0.87
Heavy Vehicles, %	12	35	25	0	26	0	31	8	20	0	14	11
Mvmt Flow	152	27	48	0	74	10	54	253	20	20	114	184
Number of Lanes	1	1	0	1	1	0	0	2	0	0	2	0

Approach	EB	WB	NE	SW
Opposing Approach	WB	EB	SW	NE
Opposing Lanes	2	2	2	2
Conflicting Approach Left SW		NE	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right NE		SW	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay, s/veh	2.1		11.3	
HCM LOS	B		B	

Lane	NELn1	NELn2	EBLn1	EBLn2	WBLn1	WBLn2	SWLn1	SWLn2
Vol Left, %		31%	0%	100%	0%	0%	0%	9%
Vol Thru, %		69%	95%	0%	36%	100%	90%	24%
Vol Right, %		0%	5%	0%	64%	0%	10%	76%
Sign Control		Stop						
Traffic Vol by Lane		145	105	125	55	0	50	55
LT Vol		45	0	125	0	0	0	5
Through Vol		100	100	0	20	0	45	50
RT Vol		0	5	0	35	0	5	0
Lane Flow Rate		181	147	152	75	0	84	77
Geometry Grp		5	5	5	5	5	5	5
Degree of Util (X)		0.337	0.249	0.303	0.137	0	0.166	0.131
Departure Headway (Hd)		6.714	6.126	7.158	6.596	6.75	7.129	6.125
Convergence, Y/N		Yes						
Cap		535	585	502	542	0	502	585
Service Time		4.46	3.872	4.909	4.347	4.511	4.89	3.872
HCM Lane V/C Ratio		0.338	0.251	0.303	0.138	0	0.167	0.132
HCM Control Delay, s/veh		12.9	10.9	13	10.4	9.5	11.3	9.8
HCM Lane LOS		B	B	B	B	N	B	A
HCM 95th-tile Q		1.5	1	1.3	0.5	0	0.6	0.4

Intersection						
Int Delay, s/veh	13.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑	↗		↖	
Traffic Vol, veh/h	5	30	0	110	485	0
Future Vol, veh/h	5	30	0	110	485	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	25	69	59	87	91	63
Heavy Vehicles, %	0	5	5	22	16	0
Mvmt Flow	20	43	0	126	533	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	126	0	-	0	147 63
Stage 1	-	-	-	-	63 -
Stage 2	-	-	-	-	83 -
Critical Hdwy	4.1	-	-	-	6.56 6.2
Critical Hdwy Stg 1	-	-	-	-	5.56 -
Critical Hdwy Stg 2	-	-	-	-	5.56 -
Follow-up Hdwy	2.2	-	-	-	3.644 3.3
Pot Cap-1 Maneuver	1472	-	-	-	814 1007
Stage 1	-	-	-	-	925 -
Stage 2	-	-	-	-	906 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1472	-	-	-	803 1007
Mov Cap-2 Maneuver	-	-	-	-	803 -
Stage 1	-	-	-	-	912 -
Stage 2	-	-	-	-	906 -

Approach	EB	WB	SB
HCM Control Delay, s/v	2.36	0	17.88
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1472	-	-	-	803
HCM Lane V/C Ratio	0.014	-	-	-	0.664
HCM Control Delay (s/veh)	7.5	-	-	-	17.9
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	5.1

HCM 7th Signalized Intersection Summary
 200: River Rd & I-55 NB Ramps

PM Peak Hour
 10/16/2024



Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	150	20	10	505	120	320
Future Volume (veh/h)	150	20	10	505	120	320
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1693	1841	1856	1750	1589	1500
Adj Flow Rate, veh/h	246	50	20	543	130	405
Peak Hour Factor	0.61	0.40	0.50	0.93	0.92	0.79
Percent Heavy Veh, %	14	4	3	16	21	27
Cap, veh/h	300	61	263	935	153	477
Arrive On Green	0.23	0.23	0.01	0.53	0.45	0.45
Sat Flow, veh/h	1308	266	1767	1750	340	1058
Grp Volume(v), veh/h	297	0	20	543	0	535
Grp Sat Flow(s),veh/h/ln	1579	0	1767	1750	0	1398
Q Serve(g_s), s	9.1	0.0	0.3	10.6	0.0	17.3
Cycle Q Clear(g_c), s	9.1	0.0	0.3	10.6	0.0	17.3
Prop In Lane	0.83	0.17	1.00			0.76
Lane Grp Cap(c), veh/h	362	0	263	935	0	630
V/C Ratio(X)	0.82	0.00	0.08	0.58	0.00	0.85
Avail Cap(c_a), veh/h	747	0	359	1862	0	1295
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.6	0.0	10.0	8.0	0.0	12.4
Incr Delay (d2), s/veh	4.6	0.0	0.1	0.6	0.0	3.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.1	0.0	0.1	4.2	0.0	7.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	23.2	0.0	10.2	8.6	0.0	15.7
LnGrp LOS	C		B	A		B
Approach Vol, veh/h	297			563	535	
Approach Delay, s/veh	23.2			8.6	15.7	
Approach LOS	C			A	B	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	4.2	28.9		17.6		33.1
Change Period (Y+Rc), s	3.5	6.0		6.0		6.0
Max Green Setting (Gmax), s	3.5	47.0		24.0		54.0
Max Q Clear Time (g_c+I1), s	2.3	19.3		11.1		12.6
Green Ext Time (p_c), s	0.0	3.6		0.8		3.4
Intersection Summary						
HCM 7th Control Delay, s/veh			14.4			
HCM 7th LOS			B			

HCM 7th Signalized Intersection Summary
300: IL 53 & River Rd

PM Peak Hour
10/16/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	110	395	145	285	495	165
Future Volume (veh/h)	110	395	145	285	495	165
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1455	1604	1366	1828	1938	1589
Adj Flow Rate, veh/h	180	449	173	317	604	204
Peak Hour Factor	0.61	0.88	0.84	0.90	0.82	0.81
Percent Heavy Veh, %	30	20	36	11	4	21
Cap, veh/h	282	673	350	1213	1059	1010
Arrive On Green	0.20	0.20	0.08	0.66	0.55	0.55
Sat Flow, veh/h	1386	2392	1301	1828	1938	1346
Grp Volume(v), veh/h	180	449	173	317	604	204
Grp Sat Flow(s),veh/h/ln	1386	1196	1301	1828	1938	1346
Q Serve(g_s), s	10.7	14.9	4.9	6.4	18.5	4.0
Cycle Q Clear(g_c), s	10.7	14.9	4.9	6.4	18.5	4.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	282	673	350	1213	1059	1010
V/C Ratio(X)	0.64	0.67	0.49	0.26	0.57	0.20
Avail Cap(c_a), veh/h	308	718	443	1213	1059	1010
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.8	28.6	10.1	6.2	13.4	3.3
Incr Delay (d2), s/veh	6.0	3.1	1.1	0.5	2.2	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.9	15.1	2.0	3.5	11.7	3.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	38.8	31.8	11.2	6.7	15.7	3.8
LnGrp LOS	D	C	B	A	B	A
Approach Vol, veh/h	629			490	808	
Approach Delay, s/veh	33.8			8.3	12.7	
Approach LOS	C			A	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		65.7		24.3	10.5	55.2
Change Period (Y+Rc), s		6.0		6.0	3.5	6.0
Max Green Setting (Gmax), s		58.0		20.0	13.5	41.0
Max Q Clear Time (g_c+I1), s		8.4		16.9	6.9	20.5
Green Ext Time (p_c), s		6.6		1.4	0.2	12.0
Intersection Summary						
HCM 7th Control Delay, s/veh			18.4			
HCM 7th LOS			B			

HCM 7th Signalized Intersection Summary
 400: IL 53 & Kankakee River Dr/Peotone Rd

PM Peak Hour
 10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	35	20	110	25	185	10	255	210	480	310	40
Future Volume (veh/h)	35	35	20	110	25	185	10	255	210	480	310	40
Initial Q (Qb), 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										
Adj Sat Flow, veh/h/ln	1248	1722	1752	1841	1672	1396	1604	1796	1781	1663	1938	1381
Adj Flow Rate, veh/h	49	53	40	131	36	257	13	274	300	511	356	45
Peak Hour Factor	0.72	0.66	0.50	0.84	0.70	0.72	0.75	0.93	0.70	0.94	0.87	0.89
Percent Heavy Veh, %	44	12	10	4	21	34	20	7	8	16	4	35
Cap, veh/h	176	81	61	190	149	671	455	335	367	539	1263	809
Arrive On Green	0.04	0.09	0.09	0.04	0.09	0.09	0.01	0.43	0.43	0.23	0.65	0.65
Sat Flow, veh/h	1188	911	687	1753	1672	2082	1527	784	858	1584	1938	1171
Grp Volume(v), veh/h	49	0	93	131	36	257	13	0	574	511	356	45
Grp Sat Flow(s),veh/h/ln	1188	0	1598	1753	1672	1041	1527	0	1642	1584	1938	1171
Q Serve(g_s), s	3.4	0.0	5.1	3.5	1.8	8.0	0.4	0.0	27.7	18.6	7.1	1.1
Cycle Q Clear(g_c), s	3.4	0.0	5.1	3.5	1.8	8.0	0.4	0.0	27.7	18.6	7.1	1.1
Prop In Lane	1.00		0.43	1.00		1.00	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	176	0	142	190	149	671	455	0	702	539	1263	809
V/C Ratio(X)	0.28	0.00	0.65	0.69	0.24	0.38	0.03	0.00	0.82	0.95	0.28	0.06
Avail Cap(c_a), veh/h	176	0	142	190	149	671	500	0	702	566	1263	809
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
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	0.0	39.7	39.5	38.2	23.6	14.4	0.0	22.7	20.1	6.7	4.5
Incr Delay (d2), s/veh	0.8	0.0	13.9	10.1	1.8	0.8	0.0	0.0	10.2	24.9	0.6	0.1
Initial Q Delay(d3), 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
%ile BackOfQ(95%),veh/ln	1.8	0.0	4.5	2.8	1.4	3.5	0.2	0.0	16.8	14.2	4.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.6	0.0	53.5	49.5	40.0	24.3	14.4	0.0	32.9	45.0	7.2	4.6
LnGrp LOS	D		D	D	D	C	B		C	D	A	A
Approach Vol, veh/h		142			424			587			912	
Approach Delay, s/veh		47.7			33.5			32.5			28.3	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	24.5	44.5	7.0	14.0	4.3	64.7	7.0	14.0				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green Setting (Gmax), s	22.5	37.0	3.5	8.0	3.5	56.0	3.5	8.0				
Max Q Clear Time (g_c+20), s	20.6	29.7	5.5	7.1	2.4	9.1	5.4	10.0				
Green Ext Time (p_c), s	0.4	4.3	0.0	0.1	0.0	8.4	0.0	0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh			31.9									
HCM 7th LOS			C									

HCM 7th Signalized Intersection Summary
500: Old Chicago Rd & Peotone Rd

PM Peak Hour
10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	495	210	25	275	10	65	10	15	100	65	10
Future Volume (veh/h)	0	495	210	25	275	10	65	10	15	100	65	10
Initial Q (Qb), 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										
Adj Sat Flow, veh/h/ln	1515	1618	1811	1856	1544	818	1752	1900	1826	1559	1826	1900
Adj Flow Rate, veh/h	0	611	276	43	309	15	89	17	22	179	93	20
Peak Hour Factor	0.95	0.81	0.76	0.58	0.89	0.67	0.73	0.58	0.67	0.56	0.70	0.50
Percent Heavy Veh, %	26	19	6	3	24	73	10	0	5	23	5	0
Cap, veh/h	567	627	283	144	959	47	233	69	89	273	167	36
Arrive On Green	0.00	0.59	0.59	0.02	0.66	0.66	0.05	0.09	0.09	0.07	0.11	0.11
Sat Flow, veh/h	1443	1056	477	1767	1461	71	1668	752	973	1485	1456	313
Grp Volume(v), veh/h	0	0	887	43	0	324	89	0	39	179	0	113
Grp Sat Flow(s),veh/h/ln	1443	0	1533	1767	0	1532	1668	0	1725	1485	0	1770
Q Serve(g_s), s	0.0	0.0	48.7	0.8	0.0	8.0	4.2	0.0	1.8	6.5	0.0	5.3
Cycle Q Clear(g_c), s	0.0	0.0	48.7	0.8	0.0	8.0	4.2	0.0	1.8	6.5	0.0	5.3
Prop In Lane	1.00		0.31	1.00		0.05	1.00		0.56	1.00		0.18
Lane Grp Cap(c), veh/h	567	0	910	144	0	1005	233	0	158	273	0	202
V/C Ratio(X)	0.00	0.00	0.97	0.30	0.00	0.32	0.38	0.00	0.25	0.65	0.00	0.56
Avail Cap(c_a), veh/h	623	0	913	176	0	1005	233	0	178	273	0	223
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
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	17.1	21.6	0.0	6.5	33.9	0.0	36.8	35.0	0.0	36.6
Incr Delay (d2), s/veh	0.0	0.0	24.2	1.1	0.0	0.8	1.0	0.0	1.7	5.5	0.0	5.1
Initial Q Delay(d3), 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
%ile BackOfQ(95%),veh/ln	0.0	0.0	25.5	0.9	0.0	3.6	2.9	0.0	1.4	6.9	0.0	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	41.3	22.7	0.0	7.4	34.9	0.0	38.6	40.6	0.0	41.7
LnGrp LOS			D	C		A	C		D	D		D
Approach Vol, veh/h		887			367			128			292	
Approach Delay, s/veh		41.3			9.2			36.0			41.0	
Approach LOS		D			A			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	14.0	5.4	57.8	8.0	16.0	0.0	63.3				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green Setting (Gmax), s	5.5	9.0	3.5	52.0	4.5	11.0	3.5	52.0				
Max Q Clear Time (g_c+1), s	10.5	3.8	2.8	50.7	6.2	7.3	0.0	10.0				
Green Ext Time (p_c), s	0.0	0.1	0.0	1.2	0.0	0.2	0.0	6.4				
Intersection Summary												
HCM 7th Control Delay, s/veh			33.8									
HCM 7th LOS			C									

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	610	5	10	295	5	5	0	0	5	5	5
Future Vol, veh/h	0	610	5	10	295	5	5	0	0	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	75	38	50	92	25	25	95	95	25	25	50
Heavy Vehicles, %	0	19	0	0	22	0	20	0	50	0	69	0
Mvmt Flow	0	813	13	20	321	20	20	0	0	20	20	10

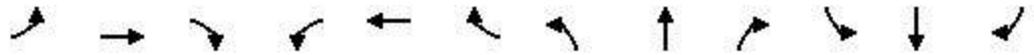
Major/Minor	Major1		Major2		Minor1			Minor2				
Conflicting Flow All	341	0	0	826	0	0	1191	1201	820	1184	1197	331
Stage 1	-	-	-	-	-	-	820	820	-	371	371	-
Stage 2	-	-	-	-	-	-	371	381	-	813	826	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.3	6.5	6.7	7.1	7.19	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.3	5.5	-	6.1	6.19	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.3	5.5	-	6.1	6.19	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.68	4	3.75	3.5	4.621	3.3
Pot Cap-1 Maneuver	1230	-	-	813	-	-	151	187	310	168	140	716
Stage 1	-	-	-	-	-	-	344	392	-	654	518	-
Stage 2	-	-	-	-	-	-	614	617	-	375	305	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	1230	-	-	813	-	-	124	181	310	163	135	716
Mov Cap-2 Maneuver	-	-	-	-	-	-	124	181	-	163	135	-
Stage 1	-	-	-	-	-	-	344	392	-	634	502	-
Stage 2	-	-	-	-	-	-	564	598	-	375	305	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0.53	39.6	33.47
HCM LOS			E	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	124	1230	-	-	99	-	-	176
HCM Lane V/C Ratio	0.162	-	-	-	0.025	-	-	0.285
HCM Control Delay (s/veh)	39.6	0	-	-	9.5	0	-	33.5
HCM Lane LOS	E	A	-	-	A	A	-	D
HCM 95th %tile Q(veh)	0.6	0	-	-	0.1	-	-	1.1

HCM 7th Signalized Intersection Summary
700: Cedar Rd & Wilmington Rd

PM Peak Hour
10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	520	5	5	255	30	0	5	5	50	10	110
Future Volume (veh/h)	95	520	5	5	255	30	0	5	5	50	10	110
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1856	1574	1900	1589	1500	1648	1559	1900	1900	1856	1767	1856
Adj Flow Rate, veh/h	119	667	20	10	290	54	0	20	20	61	17	147
Peak Hour Factor	0.80	0.78	0.25	0.50	0.88	0.56	0.95	0.25	0.25	0.82	0.58	0.75
Percent Heavy Veh, %	3	22	0	21	27	17	23	0	0	3	9	3
Cap, veh/h	583	857	26	263	637	119	0	170	170	127	42	188
Arrive On Green	0.05	0.56	0.56	0.01	0.52	0.52	0.00	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1767	1520	46	1513	1230	229	0	872	872	298	216	969
Grp Volume(v), veh/h	119	0	687	10	0	344	0	0	40	225	0	0
Grp Sat Flow(s),veh/h/ln	1767	0	1566	1513	0	1459	0	0	1743	1482	0	0
Q Serve(g_s), s	1.9	0.0	22.6	0.2	0.0	9.8	0.0	0.0	1.3	6.3	0.0	0.0
Cycle Q Clear(g_c), s	1.9	0.0	22.6	0.2	0.0	9.8	0.0	0.0	1.3	9.4	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.16	0.00		0.50	0.27		0.65
Lane Grp Cap(c), veh/h	583	0	882	263	0	755	0	0	339	358	0	0
V/C Ratio(X)	0.20	0.00	0.78	0.04	0.00	0.46	0.00	0.00	0.12	0.63	0.00	0.00
Avail Cap(c_a), veh/h	635	0	1160	331	0	1036	0	0	580	558	0	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
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.9	0.0	11.2	10.4	0.0	10.1	0.0	0.0	22.0	25.2	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	6.7	0.1	0.0	2.0	0.0	0.0	0.3	3.9	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	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	0.0	10.7	0.1	0.0	4.7	0.0	0.0	0.8	5.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	7.1	0.0	17.9	10.5	0.0	12.0	0.0	0.0	22.3	29.0	0.0	0.0
LnGrp LOS	A		B	B		B			C	C		
Approach Vol, veh/h		806			354			40			225	
Approach Delay, s/veh		16.4			12.0			22.3			29.0	
Approach LOS		B			B			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		18.9	4.0	43.3		18.9	7.0	40.3				
Change Period (Y+Rc), s		6.0	3.5	6.0		6.0	3.5	6.0				
Max Green Setting (Gmax), s		22.0	3.5	49.0		22.0	5.5	47.0				
Max Q Clear Time (g_c+I1), s		3.3	2.2	24.6		11.4	3.9	11.8				
Green Ext Time (p_c), s		0.2	0.0	12.7		1.4	0.0	6.6				
Intersection Summary												
HCM 7th Control Delay, s/veh			17.4									
HCM 7th LOS			B									

HCM 7th Signalized Intersection Summary
800: US 52 & Wilmington Rd

PM Peak Hour
10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	30	425	90	15	155	30	70	240	10	40	370	25
Future Volume (veh/h)	30	425	90	15	155	30	70	240	10	40	370	25
Initial Q (Qb), 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										
Adj Sat Flow, veh/h/ln	1707	1559	1693	1693	1500	1648	1470	1767	1796	1678	1856	1856
Adj Flow Rate, veh/h	34	457	115	20	207	45	80	289	17	85	407	35
Peak Hour Factor	0.88	0.93	0.78	0.75	0.75	0.67	0.88	0.83	0.58	0.47	0.91	0.71
Percent Heavy Veh, %	13	23	14	14	27	17	29	9	7	15	3	3
Cap, veh/h	418	502	126	157	490	107	198	478	28	293	488	42
Arrive On Green	0.02	0.42	0.42	0.01	0.41	0.41	0.04	0.29	0.29	0.04	0.29	0.29
Sat Flow, veh/h	1626	1202	303	1612	1194	259	1400	1652	97	1598	1685	145
Grp Volume(v), veh/h	34	0	572	20	0	252	80	0	306	85	0	442
Grp Sat Flow(s),veh/h/ln	1626	0	1505	1612	0	1453	1400	0	1749	1598	0	1829
Q Serve(g_s), s	1.0	0.0	28.7	0.6	0.0	9.9	3.3	0.0	12.1	3.0	0.0	18.2
Cycle Q Clear(g_c), s	1.0	0.0	28.7	0.6	0.0	9.9	3.3	0.0	12.1	3.0	0.0	18.2
Prop In Lane	1.00		0.20	1.00		0.18	1.00		0.06	1.00		0.08
Lane Grp Cap(c), veh/h	418	0	628	157	0	597	198	0	506	293	0	530
V/C Ratio(X)	0.08	0.00	0.91	0.13	0.00	0.42	0.41	0.00	0.60	0.29	0.00	0.83
Avail Cap(c_a), veh/h	456	0	692	205	0	668	198	0	587	293	0	614
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
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.9	0.0	22.0	18.6	0.0	16.9	21.3	0.0	24.6	19.9	0.0	26.8
Incr Delay (d2), s/veh	0.1	0.0	16.8	0.4	0.0	1.0	1.3	0.0	5.3	0.5	0.0	14.4
Initial Q Delay(d3), 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
%ile BackOfQ(95%),veh/ln	0.6	0.0	16.7	0.3	0.0	5.3	1.8	0.0	8.9	1.8	0.0	14.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	14.0	0.0	38.8	18.9	0.0	17.9	22.6	0.0	29.9	20.4	0.0	41.1
LnGrp LOS	B		D	B		B	C		C	C		D
Approach Vol, veh/h		606			272			386			527	
Approach Delay, s/veh		37.5			18.0			28.4			37.8	
Approach LOS		D			B			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.0	29.3	4.6	39.6	7.0	29.3	5.1	39.1				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green Setting (Gmax), s	3.5	27.0	3.5	37.0	3.5	27.0	3.5	37.0				
Max Q Clear Time (g_c+1/3), s	15.0	14.1	2.6	30.7	5.3	20.2	3.0	11.9				
Green Ext Time (p_c), s	0.0	3.4	0.0	2.8	0.0	3.1	0.0	2.5				
Intersection Summary												
HCM 7th Control Delay, s/veh			32.6									
HCM 7th LOS			C									

HCM 7th Signalized Intersection Summary
 900: I-57 SB On Ramp/I-57 SB Off Ramp & Wilmington Rd

PM Peak Hour
 10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻		↻	↻					↻		↻
Traffic Volume (veh/h)	0	470	80	145	180	5	0	0	0	170	0	75
Future Volume (veh/h)	0	470	80	145	180	5	0	0	0	170	0	75
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	0	1648	1663	1796	1544	1900				1811	0	1648
Adj Flow Rate, veh/h	0	516	96	186	207	20				221	0	82
Peak Hour Factor	0.95	0.91	0.83	0.78	0.87	0.25				0.77	0.95	0.91
Percent Heavy Veh, %	0	17	16	7	24	0				6	0	17
Cap, veh/h	0	689	128	404	889	86				300	0	243
Arrive On Green	0.00	0.51	0.51	0.08	0.64	0.64				0.17	0.00	0.17
Sat Flow, veh/h	0	1351	251	1711	1386	134				1725	0	1397
Grp Volume(v), veh/h	0	0	612	186	0	227				221	0	82
Grp Sat Flow(s),veh/h/ln	0	0	1603	1711	0	1520				1725	0	1397
Q Serve(g_s), s	0.0	0.0	19.6	3.0	0.0	4.1				7.9	0.0	3.3
Cycle Q Clear(g_c), s	0.0	0.0	19.6	3.0	0.0	4.1				7.9	0.0	3.3
Prop In Lane	0.00		0.16	1.00		0.09				1.00		1.00
Lane Grp Cap(c), veh/h	0	0	818	404	0	975				300	0	243
V/C Ratio(X)	0.00	0.00	0.75	0.46	0.00	0.23				0.74	0.00	0.34
Avail Cap(c_a), veh/h	0	0	1136	497	0	1359				532	0	430
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	12.6	10.1	0.0	4.9				25.4	0.0	23.5
Incr Delay (d2), s/veh	0.0	0.0	6.2	0.8	0.0	0.6				7.3	0.0	1.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	10.8	1.4	0.0	1.7				6.6	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	18.8	10.9	0.0	5.5				32.7	0.0	25.3
LnGrp LOS			B	B		A				C		C
Approach Vol, veh/h		612			413						303	
Approach Delay, s/veh		18.8			7.9						30.7	
Approach LOS		B			A						C	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			8.5	39.1		17.3		47.6				
Change Period (Y+Rc), s			3.5	6.0		6.0		6.0				
Max Green Setting (Gmax), s			8.5	46.0		20.0		58.0				
Max Q Clear Time (g_c+I1), s			5.0	21.6		9.9		6.1				
Green Ext Time (p_c), s			0.2	11.5		1.5		4.6				
Intersection Summary												
HCM 7th Control Delay, s/veh			18.1									
HCM 7th LOS			B									

HCM 7th Signalized Intersection Summary
 1000: I-57 NB Off Ramp/I-57 NB On Ramp & Wilmington Rd

PM Peak Hour
 10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	305	0	0	275	70	75	0	100	0	0	0
Future Volume (veh/h)	155	305	0	0	275	70	75	0	100	0	0	0
Initial Q (Qb), 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				
Adj Sat Flow, veh/h/ln	1618	1722	0	0	1707	1678	1455	0	1796			
Adj Flow Rate, veh/h	194	351	0	0	335	78	88	0	137			
Peak Hour Factor	0.80	0.87	0.95	0.95	0.82	0.90	0.85	0.95	0.73			
Percent Heavy Veh, %	19	12	0	0	13	15	30	0	7			
Cap, veh/h	500	1023	0	0	555	129	203	0	223			
Arrive On Green	0.10	0.59	0.00	0.00	0.41	0.41	0.15	0.00	0.15			
Sat Flow, veh/h	1541	1722	0	0	1339	312	1386	0	1522			
Grp Volume(v), veh/h	194	351	0	0	0	413	88	0	137			
Grp Sat Flow(s),veh/h/ln	1541	1722	0	0	0	1651	1386	0	1522			
Q Serve(g_s), s	2.9	4.8	0.0	0.0	0.0	9.0	2.7	0.0	3.9			
Cycle Q Clear(g_c), s	2.9	4.8	0.0	0.0	0.0	9.0	2.7	0.0	3.9			
Prop In Lane	1.00		0.00	0.00		0.19	1.00		1.00			
Lane Grp Cap(c), veh/h	500	1023	0	0	0	684	203	0	223			
V/C Ratio(X)	0.39	0.34	0.00	0.00	0.00	0.60	0.43	0.00	0.61			
Avail Cap(c_a), veh/h	757	2162	0	0	0	1501	600	0	659			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	6.8	4.8	0.0	0.0	0.0	10.6	18.0	0.0	18.5			
Incr Delay (d2), s/veh	0.5	0.9	0.0	0.0	0.0	3.9	3.1	0.0	5.8			
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	0.9	1.8	0.0	0.0	0.0	5.2	1.7	0.0	2.8			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	7.3	5.7	0.0	0.0	0.0	14.5	21.1	0.0	24.2			
LnGrp LOS	A	A				B	C		C			
Approach Vol, veh/h		545			413			225				
Approach Delay, s/veh		6.3			14.5			23.0				
Approach LOS		A			B			C				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		12.8		33.4			8.3	25.2				
Change Period (Y+Rc), s		6.0		6.0			3.5	6.0				
Max Green Setting (Gmax), s		20.0		58.0			12.5	42.0				
Max Q Clear Time (g_c+I1), s		5.9		6.8			4.9	11.0				
Green Ext Time (p_c), s		1.3		7.6			0.3	8.1				
Intersection Summary												
HCM 7th Control Delay, s/veh				12.3								
HCM 7th LOS				B								

Intersection												
Intersection Delay, s/veh	15.6											
Intersection LOS	C											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	175	25	60	5	40	0	65	255	5	0	235	190
Future Vol, veh/h	175	25	60	5	40	0	65	255	5	0	235	190
Peak Hour Factor	0.84	0.67	0.83	0.38	0.60	0.95	0.74	0.93	1.00	0.95	0.87	0.80
Heavy Vehicles, %	14	66	37	0	37	0	32	8	0	0	10	10
Mvmt Flow	208	37	72	13	67	0	88	274	5	0	270	238
Number of Lanes	1	1	0	1	1	0	0	2	0	0	2	0

Approach	EB	WB	NE	SW
Opposing Approach	WB	EB	SW	NE
Opposing Lanes	2	2	2	2
Conflicting Approach Left SW		NE	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right NE		SW	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay, s/veh	5.9		12.7	15.3
HCM LOS	C	B	C	C

Lane	NELn1	NELn2	EBLn1	EBLn2	WBLn1	WBLn2	SWLn1	SWLn2
Vol Left, %		34%	0%	100%	0%	100%	0%	0%
Vol Thru, %		66%	96%	0%	29%	0%	100%	29%
Vol Right, %		0%	4%	0%	71%	0%	0%	71%
Sign Control		Stop						
Traffic Vol by Lane		193	133	175	85	5	40	157
LT Vol		65	0	175	0	5	0	0
Through Vol		128	128	0	25	0	40	157
RT Vol		0	5	0	60	0	0	190
Lane Flow Rate		225	142	208	110	13	67	180
Geometry Grp		5	5	5	5	5	5	5
Degree of Util (X)		0.475	0.276	0.462	0.239	0.031	0.158	0.345
Departure Headway (Hd)		7.609	6.993	7.976	7.864	8.377	8.51	6.901
Convergence, Y/N		Yes						
Cap		475	514	452	458	428	422	522
Service Time		5.337	4.721	5.704	5.591	6.119	6.252	4.625
HCM Lane V/C Ratio		0.474	0.276	0.46	0.24	0.03	0.159	0.345
HCM Control Delay, s/veh		17.1	12.4	17.4	13.1	11.4	12.9	13.2
HCM Lane LOS		C	B	C	B	B	B	C
HCM 95th-tile Q		2.5	1.1	2.4	0.9	0.1	0.6	1.5

Intersection						
Int Delay, s/veh	7.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑	↗		↘	
Traffic Vol, veh/h	5	10	0	90	235	0
Future Vol, veh/h	5	10	0	90	235	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	25	63	75	69	85	42
Heavy Vehicles, %	0	0	0	16	27	0
Mvmt Flow	20	16	0	130	276	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	130	0	-	0	121 65
Stage 1	-	-	-	-	65 -
Stage 2	-	-	-	-	56 -
Critical Hdwy	4.1	-	-	-	6.67 6.2
Critical Hdwy Stg 1	-	-	-	-	5.67 -
Critical Hdwy Stg 2	-	-	-	-	5.67 -
Follow-up Hdwy	2.2	-	-	-	3.743 3.3
Pot Cap-1 Maneuver	1467	-	-	-	818 1004
Stage 1	-	-	-	-	898 -
Stage 2	-	-	-	-	907 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1467	-	-	-	807 1004
Mov Cap-2 Maneuver	-	-	-	-	807 -
Stage 1	-	-	-	-	885 -
Stage 2	-	-	-	-	907 -

Approach	EB	WB	SB
HCM Control Delay, s/v	4.17	0	11.77
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1467	-	-	-	807
HCM Lane V/C Ratio	0.014	-	-	-	0.343
HCM Control Delay (s/veh)	7.5	-	-	-	11.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	1.5

HCM 7th Signalized Intersection Summary
 200: River Rd & I-55 NB Ramps

AM Peak Hour
 10/16/2024



Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	70	10	5	390	95	295
Future Volume (veh/h)	70	10	5	390	95	295
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1633	1900	1826	1579	1678	1678
Adj Flow Rate, veh/h	93	17	5	443	130	335
Peak Hour Factor	0.75	0.58	1.00	0.88	0.73	0.88
Percent Heavy Veh, %	18	0	5	27	15	15
Cap, veh/h	125	23	371	842	175	451
Arrive On Green	0.10	0.10	0.00	0.53	0.42	0.42
Sat Flow, veh/h	1280	234	1739	1579	415	1070
Grp Volume(v), veh/h	111	0	5	443	0	465
Grp Sat Flow(s),veh/h/ln	1527	0	1739	1579	0	1485
Q Serve(g_s), s	2.3	0.0	0.0	5.9	0.0	8.6
Cycle Q Clear(g_c), s	2.3	0.0	0.0	5.9	0.0	8.6
Prop In Lane	0.84	0.15	1.00			0.72
Lane Grp Cap(c), veh/h	149	0	371	842	0	626
V/C Ratio(X)	0.75	0.00	0.01	0.53	0.00	0.74
Avail Cap(c_a), veh/h	846	0	552	2916	0	2423
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.3	0.0	6.0	4.9	0.0	7.9
Incr Delay (d2), s/veh	7.2	0.0	0.0	0.5	0.0	1.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	0.0	0.0	0.7	0.0	2.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	21.5	0.0	6.0	5.4	0.0	9.7
LnGrp LOS	C		A	A		A
Approach Vol, veh/h	111			448	465	
Approach Delay, s/veh	21.5			5.4	9.7	
Approach LOS	C			A	A	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	3.6	19.7		9.2		23.3
Change Period (Y+Rc), s	3.5	6.0		6.0		6.0
Max Green Setting (Gmax), s	3.5	53.0		18.0		60.0
Max Q Clear Time (g_c+I1), s	2.0	10.6		4.3		7.9
Green Ext Time (p_c), s	0.0	3.1		0.2		2.7
Intersection Summary						
HCM 7th Control Delay, s/veh			9.1			
HCM 7th LOS			A			

HCM 7th Signalized Intersection Summary
 300: IL 53 & River Rd

AM Peak Hour
 10/16/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	140	210	225	365	180	45
Future Volume (veh/h)	140	210	225	365	180	45
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1544	1381	1663	1953	1766	1189
Adj Flow Rate, veh/h	165	244	312	468	228	60
Peak Hour Factor	0.85	0.86	0.72	0.78	0.79	0.75
Percent Heavy Veh, %	24	35	16	3	15	48
Cap, veh/h	232	543	732	1384	997	728
Arrive On Green	0.16	0.16	0.11	0.71	0.56	0.56
Sat Flow, veh/h	1471	2060	1584	1953	1766	1007
Grp Volume(v), veh/h	165	244	312	468	228	60
Grp Sat Flow(s),veh/h/ln	1471	1030	1584	1953	1766	1007
Q Serve(g_s), s	9.6	8.9	6.8	8.3	5.8	1.6
Cycle Q Clear(g_c), s	9.6	8.9	6.8	8.3	5.8	1.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	232	543	732	1384	997	728
V/C Ratio(X)	0.71	0.45	0.43	0.34	0.23	0.08
Avail Cap(c_a), veh/h	425	813	926	1384	997	728
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.9	27.7	5.8	5.0	9.8	3.7
Incr Delay (d2), s/veh	8.3	1.2	0.4	0.7	0.5	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.7	9.2	2.9	4.3	3.6	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	44.2	28.9	6.2	5.7	10.3	3.9
LnGrp LOS	D	C	A	A	B	A
Approach Vol, veh/h	409			780	288	
Approach Delay, s/veh	35.1			5.9	9.0	
Approach LOS	D			A	A	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		69.8		20.2	13.0	56.8
Change Period (Y+Rc), s		6.0		6.0	3.5	6.0
Max Green Setting (Gmax), s		52.0		26.0	20.5	28.0
Max Q Clear Time (g_c+I1), s		10.3		11.6	8.8	7.8
Green Ext Time (p_c), s		10.2		2.6	0.7	4.0
Intersection Summary						
HCM 7th Control Delay, s/veh			14.6			
HCM 7th LOS			B			

HCM 7th Signalized Intersection Summary
 400: IL 53 & Kankakee River Dr/Peotone Rd

AM Peak Hour
 10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↖↗	↖	↗		↖	↗	↖↗
Traffic Volume (veh/h)	45	45	25	80	25	295	30	335	135	225	115	40
Future Volume (veh/h)	45	45	25	80	25	295	30	335	135	225	115	40
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1455	1663	1796	1737	1704	1707	1841	1870	1826	1470	1766	1263
Adj Flow Rate, veh/h	87	105	37	90	46	404	68	399	175	271	139	56
Peak Hour Factor	0.52	0.43	0.68	0.89	0.54	0.73	0.44	0.84	0.77	0.83	0.83	0.71
Percent Heavy Veh, %	30	16	7	11	19	13	4	2	5	29	15	43
Cap, veh/h	238	139	49	218	189	574	718	610	268	407	1016	689
Arrive On Green	0.07	0.12	0.12	0.06	0.11	0.11	0.03	0.50	0.50	0.11	0.58	0.58
Sat Flow, veh/h	1386	1175	414	1654	1704	2547	1753	1232	541	1400	1766	1070
Grp Volume(v), veh/h	87	0	142	90	46	404	68	0	574	271	139	56
Grp Sat Flow(s),veh/h/ln	1386	0	1588	1654	1704	1273	1753	0	1773	1400	1766	1070
Q Serve(g_s), s	4.9	0.0	7.8	4.3	2.2	10.0	1.7	0.0	21.8	8.0	3.3	1.8
Cycle Q Clear(g_c), s	4.9	0.0	7.8	4.3	2.2	10.0	1.7	0.0	21.8	8.0	3.3	1.8
Prop In Lane	1.00		0.26	1.00		1.00	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	238	0	188	218	189	574	718	0	878	407	1016	689
V/C Ratio(X)	0.37	0.00	0.75	0.41	0.24	0.70	0.09	0.00	0.65	0.67	0.14	0.08
Avail Cap(c_a), veh/h	259	0	212	218	189	574	727	0	878	473	1016	689
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
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.3	0.0	38.4	32.9	36.5	32.1	10.4	0.0	17.0	12.9	8.8	6.0
Incr Delay (d2), s/veh	0.9	0.0	16.5	1.2	1.4	4.9	0.1	0.0	3.8	2.9	0.3	0.2
Initial Q Delay(d3), 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
%ile BackOfQ(95%),veh/ln	8.0	0.0	6.9	3.0	1.7	7.3	1.0	0.0	13.2	4.0	2.1	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.3	0.0	54.9	34.2	37.9	37.0	10.5	0.0	20.7	15.8	9.1	6.2
LnGrp LOS	C		D	C	D	D	B		C	B	A	A
Approach Vol, veh/h		229			540			642			466	
Approach Delay, s/veh		46.7			36.6			19.7			12.6	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.8	50.6	9.0	16.7	6.5	57.8	9.7	16.0				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green Setting (Gmax), s	11.5	39.0	5.5	12.0	3.5	50.0	7.5	10.0				
Max Q Clear Time (g_c+110), s	11.0	23.8	6.3	9.8	3.7	5.3	6.9	12.0				
Green Ext Time (p_c), s	0.3	7.7	0.0	0.2	0.0	3.4	0.0	0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh			26.1									
HCM 7th LOS			C									

HCM 7th Signalized Intersection Summary
500: Old Chicago Rd & Peotone Rd

AM Peak Hour
10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	300	105	5	285	80	150	45	20	25	5	0
Future Volume (veh/h)	0	300	105	5	285	80	150	45	20	25	5	0
Initial Q (Qb), 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										
Adj Sat Flow, veh/h/ln	1129	1559	1752	1900	1633	1470	1841	1856	1900	566	1722	1900
Adj Flow Rate, veh/h	0	345	127	10	370	104	214	76	48	33	7	0
Peak Hour Factor	0.95	0.87	0.83	0.50	0.77	0.77	0.70	0.59	0.42	0.75	0.75	0.95
Percent Heavy Veh, %	52	23	10	0	18	29	4	3	0	90	12	0
Cap, veh/h	274	471	173	289	610	172	509	242	153	176	209	0
Arrive On Green	0.00	0.43	0.43	0.01	0.50	0.50	0.13	0.23	0.23	0.02	0.12	0.00
Sat Flow, veh/h	1076	1087	400	1810	1226	345	1753	1063	671	539	1722	0
Grp Volume(v), veh/h	0	0	472	10	0	474	214	0	124	33	7	0
Grp Sat Flow(s),veh/h/ln	1076	0	1487	1810	0	1571	1753	0	1735	539	1722	0
Q Serve(g_s), s	0.0	0.0	16.3	0.2	0.0	13.5	6.2	0.0	3.7	1.5	0.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	16.3	0.2	0.0	13.5	6.2	0.0	3.7	1.5	0.2	0.0
Prop In Lane	1.00		0.27	1.00		0.22	1.00		0.39	1.00		0.00
Lane Grp Cap(c), veh/h	274	0	645	289	0	782	509	0	395	176	209	0
V/C Ratio(X)	0.00	0.00	0.73	0.03	0.00	0.61	0.42	0.00	0.31	0.19	0.03	0.00
Avail Cap(c_a), veh/h	333	0	1055	377	0	1115	604	0	476	219	333	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
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	14.6	11.4	0.0	11.2	18.1	0.0	19.9	24.3	24.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	7.2	0.0	0.0	3.5	0.6	0.0	1.0	0.5	0.1	0.0
Initial Q Delay(d3), 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
%ile BackOfQ(95%),veh/ln	0.0	0.0	9.0	0.1	0.0	7.0	3.8	0.0	2.4	0.7	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	21.8	11.4	0.0	14.7	18.7	0.0	20.9	24.8	24.2	0.0
LnGrp LOS			C	B		B	B		C	C	C	
Approach Vol, veh/h		472			484			338			40	
Approach Delay, s/veh		21.8			14.6			19.5			24.7	
Approach LOS		C			B			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	20.1	4.0	32.9	11.6	13.5	0.0	36.9				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green Setting (Gmax), s	5.0	17.0	3.5	44.0	11.5	12.0	3.5	44.0				
Max Q Clear Time (g_c+1), s	13.5	5.7	2.2	18.3	8.2	2.2	0.0	15.5				
Green Ext Time (p_c), s	0.0	0.7	0.0	8.5	0.2	0.0	0.0	9.0				
Intersection Summary												
HCM 7th Control Delay, s/veh			18.7									
HCM 7th LOS			B									

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	345	5	0	360	0	5	0	5	5	0	0
Future Vol, veh/h	0	345	5	0	360	0	5	0	5	5	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	86	50	95	87	95	25	95	25	50	95	95
Heavy Vehicles, %	0	25	0	100	24	0	17	0	60	0	0	0
Mvmt Flow	0	401	10	0	414	0	20	0	20	10	0	0

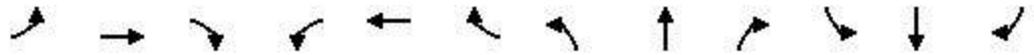
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	414	0	0	411	0	0	820	820	406	815	825	414
Stage 1	-	-	-	-	-	-	406	406	-	414	414	-
Stage 2	-	-	-	-	-	-	414	414	-	401	411	-
Critical Hdwy	4.1	-	-	5.1	-	-	7.27	6.5	6.8	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.27	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.27	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	3.1	-	-	3.653	4	3.84	3.5	4	3.3
Pot Cap-1 Maneuver	1156	-	-	770	-	-	277	312	536	299	310	643
Stage 1	-	-	-	-	-	-	593	601	-	620	597	-
Stage 2	-	-	-	-	-	-	587	597	-	629	598	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	1156	-	-	770	-	-	277	312	536	287	310	643
Mov Cap-2 Maneuver	-	-	-	-	-	-	277	312	-	287	310	-
Stage 1	-	-	-	-	-	-	593	601	-	620	597	-
Stage 2	-	-	-	-	-	-	587	597	-	606	598	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0	16.06	17.98
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	365	1156	-	-	770	-	-	287
HCM Lane V/C Ratio	0.109	-	-	-	-	-	-	0.035
HCM Control Delay (s/veh)	16.1	0	-	-	0	-	-	18
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	0.1

HCM 7th Signalized Intersection Summary
700: Cedar Rd & Wilmington Rd

AM Peak Hour
10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↕			↕	
Traffic Volume (veh/h)	100	275	0	0	275	40	0	5	0	20	0	40
Future Volume (veh/h)	100	275	0	0	275	40	0	5	0	20	0	40
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1856	1530	1900	1900	1530	1530	1900	1900	1900	1544	1900	1767
Adj Flow Rate, veh/h	132	357	0	0	387	62	0	13	0	20	0	67
Peak Hour Factor	0.76	0.77	0.95	0.95	0.71	0.64	0.95	0.38	0.95	1.00	0.95	0.60
Percent Heavy Veh, %	3	25	0	0	25	25	0	0	0	24	0	9
Cap, veh/h	500	938	0	652	607	97	0	239	0	126	17	155
Arrive On Green	0.07	0.61	0.00	0.00	0.47	0.47	0.00	0.13	0.00	0.13	0.00	0.13
Sat Flow, veh/h	1767	1530	0	1810	1286	206	0	1900	0	234	133	1232
Grp Volume(v), veh/h	132	357	0	0	0	449	0	13	0	87	0	0
Grp Sat Flow(s),veh/h/ln	1767	1530	0	1810	0	1492	0	1900	0	1600	0	0
Q Serve(g_s), s	1.6	5.4	0.0	0.0	0.0	10.4	0.0	0.3	0.0	0.2	0.0	0.0
Cycle Q Clear(g_c), s	1.6	5.4	0.0	0.0	0.0	10.4	0.0	0.3	0.0	2.2	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.14	0.00		0.00	0.23		0.77
Lane Grp Cap(c), veh/h	500	938	0	652	0	704	0	239	0	297	0	0
V/C Ratio(X)	0.26	0.38	0.00	0.00	0.00	0.64	0.00	0.05	0.00	0.29	0.00	0.00
Avail Cap(c_a), veh/h	712	1766	0	786	0	1561	0	745	0	714	0	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
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.3	4.5	0.0	0.0	0.0	9.2	0.0	17.7	0.0	18.5	0.0	0.0
Incr Delay (d2), s/veh	0.3	1.2	0.0	0.0	0.0	4.4	0.0	0.2	0.0	1.2	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	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	1.3	0.0	0.0	0.0	4.7	0.0	0.2	0.0	1.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	6.6	5.7	0.0	0.0	0.0	13.6	0.0	17.9	0.0	19.7	0.0	0.0
LnGrp LOS	A	A				B		B		B		
Approach Vol, veh/h		489			449			13				87
Approach Delay, s/veh		5.9			13.6			17.9				19.7
Approach LOS		A			B			B				B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.8	0.0	34.1		11.8	6.5	27.6				
Change Period (Y+Rc), s		6.0	3.5	6.0		6.0	3.5	6.0				
Max Green Setting (Gmax), s		18.0	3.5	53.0		18.0	8.5	48.0				
Max Q Clear Time (g_c+I1), s		2.3	0.0	7.4		4.2	3.6	12.4				
Green Ext Time (p_c), s		0.0	0.0	7.4		0.5	0.1	9.2				
Intersection Summary												
HCM 7th Control Delay, s/veh				10.5								
HCM 7th LOS				B								

HCM 7th Signalized Intersection Summary
800: US 52 & Wilmington Rd

AM Peak Hour
10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	25	210	55	15	185	25	75	280	10	35	220	15
Future Volume (veh/h)	25	210	55	15	185	25	75	280	10	35	220	15
Initial Q (Qb), 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										
Adj Sat Flow, veh/h/ln	1811	1515	1530	1900	1455	1767	1589	1841	1900	1574	1678	1796
Adj Flow Rate, veh/h	35	262	58	20	272	39	104	326	20	64	293	22
Peak Hour Factor	0.71	0.80	0.95	0.75	0.68	0.64	0.72	0.86	0.50	0.55	0.75	0.67
Percent Heavy Veh, %	6	26	25	0	30	9	21	4	0	22	15	7
Cap, veh/h	257	353	78	259	356	51	336	531	33	320	437	33
Arrive On Green	0.02	0.29	0.29	0.01	0.29	0.29	0.07	0.31	0.31	0.04	0.28	0.28
Sat Flow, veh/h	1725	1201	266	1810	1245	178	1513	1716	105	1499	1541	116
Grp Volume(v), veh/h	35	0	320	20	0	311	104	0	346	64	0	315
Grp Sat Flow(s),veh/h/ln	1725	0	1467	1810	0	1423	1513	0	1822	1499	0	1657
Q Serve(g_s), s	0.8	0.0	11.0	0.4	0.0	11.1	2.7	0.0	9.0	1.7	0.0	9.4
Cycle Q Clear(g_c), s	0.8	0.0	11.0	0.4	0.0	11.1	2.7	0.0	9.0	1.7	0.0	9.4
Prop In Lane	1.00		0.18	1.00		0.13	1.00		0.06	1.00		0.07
Lane Grp Cap(c), veh/h	257	0	431	259	0	407	336	0	564	320	0	470
V/C Ratio(X)	0.14	0.00	0.74	0.08	0.00	0.76	0.31	0.00	0.61	0.20	0.00	0.67
Avail Cap(c_a), veh/h	326	0	816	347	0	791	410	0	1046	379	0	892
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
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.8	0.0	17.8	14.8	0.0	18.2	13.5	0.0	16.4	13.8	0.0	17.7
Incr Delay (d2), s/veh	0.2	0.0	5.3	0.1	0.0	6.3	0.5	0.0	4.9	0.3	0.0	7.4
Initial Q Delay(d3), 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
%ile BackOfQ(95%),veh/ln	0.5	0.0	6.2	0.3	0.0	6.3	1.3	0.0	6.5	0.8	0.0	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	15.0	0.0	23.1	14.9	0.0	24.5	14.0	0.0	21.3	14.1	0.0	25.1
LnGrp LOS	B		C	B		C	B		C	B		C
Approach Vol, veh/h		355			331			450			379	
Approach Delay, s/veh		22.3			23.9			19.7			23.3	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.8	23.2	4.3	22.4	7.3	21.8	4.8	21.9				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green Setting (Gmax), s	4.5	32.0	3.5	31.0	6.5	30.0	3.5	31.0				
Max Q Clear Time (g_c+13), s	13.5	11.0	2.4	13.0	4.7	11.4	2.8	13.1				
Green Ext Time (p_c), s	0.0	5.2	0.0	2.9	0.0	4.4	0.0	2.8				
Intersection Summary												
HCM 7th Control Delay, s/veh			22.1									
HCM 7th LOS			C									

HCM 7th Signalized Intersection Summary
 900: I-57 SB On Ramp/I-57 SB Off Ramp & Wilmington Rd

AM Peak Hour
 10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↘	↖					↙		↗
Traffic Volume (veh/h)	0	245	65	100	295	0	0	0	0	80	0	110
Future Volume (veh/h)	0	245	65	100	295	0	0	0	0	80	0	110
Initial Q (Qb), 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		
Adj Sat Flow, veh/h/ln	0	1618	1396	1767	1648	0				1618	0	1411
Adj Flow Rate, veh/h	0	285	81	118	331	0				98	0	151
Peak Hour Factor	0.95	0.86	0.80	0.85	0.89	0.95				0.82	0.95	0.73
Percent Heavy Veh, %	0	19	34	9	17	0				19	0	33
Cap, veh/h	0	472	134	468	881	0				296	0	229
Arrive On Green	0.00	0.39	0.39	0.07	0.53	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	1212	344	1682	1648	0				1541	0	1196
Grp Volume(v), veh/h	0	0	366	118	331	0				98	0	151
Grp Sat Flow(s),veh/h/ln	0	0	1556	1682	1648	0				1541	0	1196
Q Serve(g_s), s	0.0	0.0	8.2	1.7	5.1	0.0				2.4	0.0	5.1
Cycle Q Clear(g_c), s	0.0	0.0	8.2	1.7	5.1	0.0				2.4	0.0	5.1
Prop In Lane	0.00		0.22	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	0	606	468	881	0				296	0	229
V/C Ratio(X)	0.00	0.00	0.60	0.25	0.38	0.00				0.33	0.00	0.66
Avail Cap(c_a), veh/h	0	0	1383	684	1916	0				948	0	736
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	10.7	7.2	5.9	0.0				15.3	0.0	16.4
Incr Delay (d2), s/veh	0.0	0.0	4.4	0.3	1.2	0.0				1.4	0.0	6.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	4.7	0.6	2.1	0.0				1.5	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	15.1	7.5	7.2	0.0				16.7	0.0	23.1
LnGrp LOS			B	A	A					B		C
Approach Vol, veh/h		366			449						249	
Approach Delay, s/veh		15.1			7.3						20.6	
Approach LOS		B			A						C	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			6.4	23.1		14.4		29.5				
Change Period (Y+Rc), s			3.5	6.0		6.0		6.0				
Max Green Setting (Gmax), s			8.5	39.0		27.0		51.0				
Max Q Clear Time (g_c+I1), s			3.7	10.2		7.1		7.1				
Green Ext Time (p_c), s			0.1	6.9		1.7		6.9				
Intersection Summary												
HCM 7th Control Delay, s/veh			13.1									
HCM 7th LOS			B									

HCM 7th Signalized Intersection Summary
 1000: I-57 NB Off Ramp/I-57 NB On Ramp & Wilmington Rd

AM Peak Hour
 10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	155	0	0	305	110	105	0	100	0	0	0
Future Volume (veh/h)	50	155	0	0	305	110	105	0	100	0	0	0
Initial Q (Qb), 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				
Adj Sat Flow, veh/h/ln	1604	1618	0	0	1693	1796	1663	0	1752			
Adj Flow Rate, veh/h	69	161	0	0	328	128	146	0	149			
Peak Hour Factor	0.72	0.96	0.95	0.95	0.93	0.86	0.72	0.95	0.67			
Percent Heavy Veh, %	20	19	0	0	14	7	16	0	10			
Cap, veh/h	411	930	0	0	535	209	270	0	253			
Arrive On Green	0.04	0.57	0.00	0.00	0.46	0.46	0.17	0.00	0.17			
Sat Flow, veh/h	1527	1618	0	0	1159	452	1584	0	1485			
Grp Volume(v), veh/h	69	161	0	0	0	456	146	0	149			
Grp Sat Flow(s),veh/h/ln	1527	1618	0	0	0	1611	1584	0	1485			
Q Serve(g_s), s	1.0	2.2	0.0	0.0	0.0	10.0	4.0	0.0	4.4			
Cycle Q Clear(g_c), s	1.0	2.2	0.0	0.0	0.0	10.0	4.0	0.0	4.4			
Prop In Lane	1.00		0.00	0.00		0.28	1.00		1.00			
Lane Grp Cap(c), veh/h	411	930	0	0	0	744	270	0	253			
V/C Ratio(X)	0.17	0.17	0.00	0.00	0.00	0.61	0.54	0.00	0.59			
Avail Cap(c_a), veh/h	531	1928	0	0	0	1610	741	0	695			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	6.8	4.7	0.0	0.0	0.0	9.5	17.8	0.0	18.0			
Incr Delay (d2), s/veh	0.2	0.4	0.0	0.0	0.0	3.8	3.6	0.0	4.6			
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	0.3	0.8	0.0	0.0	0.0	5.4	2.8	0.0	3.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	7.0	5.1	0.0	0.0	0.0	13.3	21.4	0.0	22.6			
LnGrp LOS	A	A				B	C		C			
Approach Vol, veh/h		230			456			295				
Approach Delay, s/veh		5.7			13.3			22.0				
Approach LOS		A			B			C				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		14.0		33.0			5.3	27.7				
Change Period (Y+Rc), s		6.0		6.0			3.5	6.0				
Max Green Setting (Gmax), s		22.0		56.0			5.5	47.0				
Max Q Clear Time (g_c+I1), s		6.4		4.2			3.0	12.0				
Green Ext Time (p_c), s		1.8		3.1			0.0	9.7				
Intersection Summary												
HCM 7th Control Delay, s/veh				14.1								
HCM 7th LOS				B								

Intersection	
Intersection Delay, s/veh	14
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	150	25	35	0	55	10	55	235	5	5	110	205
Future Vol, veh/h	150	25	35	0	55	10	55	235	5	5	110	205
Peak Hour Factor	0.82	0.75	0.73	0.95	0.61	0.50	0.83	0.79	0.25	0.25	0.88	0.87
Heavy Vehicles, %	12	35	25	0	26	0	31	8	20	0	14	11
Mvmt Flow	183	33	48	0	90	20	66	297	20	20	125	236
Number of Lanes	1	1	0	1	1	0	0	2	0	0	2	0

Approach	EB	WB	NE	SW
Opposing Approach	WB	EB	SW	NE
Opposing Lanes	2	2	2	2
Conflicting Approach Left SW		NE	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right NE		SW	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay, s/veh	14	12.8	14	14.3
HCM LOS	B	B	B	B

Lane	NELn1	NELn2	EBLn1	EBLn2	WBLn1	WBLn2	SWLn1	SWLn2
Vol Left, %		32%	0%	100%	0%	0%	0%	8%
Vol Thru, %		68%	96%	0%	42%	100%	85%	92%
Vol Right, %		0%	4%	0%	58%	0%	15%	0%
Sign Control		Stop						
Traffic Vol by Lane		173	123	150	60	0	65	60
LT Vol		55	0	150	0	0	0	5
Through Vol		118	118	0	25	0	55	55
RT Vol		0	5	0	35	0	10	0
Lane Flow Rate		215	169	183	81	0	110	83
Geometry Grp		5	5	5	5	5	5	5
Degree of Util (X)		0.428	0.308	0.388	0.16	0	0.237	0.15
Departure Headway (Hd)		7.159	6.569	7.628	7.101	7.387	7.73	6.556
Convergence, Y/N		Yes						
Cap		499	543	468	501	0	467	543
Service Time		4.953	4.362	5.423	4.896	5.087	5.43	4.348
HCM Lane V/C Ratio		0.431	0.311	0.391	0.162	0	0.236	0.153
HCM Control Delay, s/veh		15.3	12.3	15.2	11.3	10.1	12.8	10.5
HCM Lane LOS		C	B	C	B	N	B	B
HCM 95th-tile Q		2.1	1.3	1.8	0.6	0	0.9	0.5

Intersection						
Int Delay, s/veh	8.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑	↗		↖	
Traffic Vol, veh/h	5	20	0	135	340	0
Future Vol, veh/h	5	20	0	135	340	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	25	69	59	87	91	63
Heavy Vehicles, %	0	5	5	22	16	0
Mvmt Flow	20	29	0	155	374	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	155	0	-	0	147 78
Stage 1	-	-	-	-	78 -
Stage 2	-	-	-	-	69 -
Critical Hdwy	4.1	-	-	-	6.56 6.2
Critical Hdwy Stg 1	-	-	-	-	5.56 -
Critical Hdwy Stg 2	-	-	-	-	5.56 -
Follow-up Hdwy	2.2	-	-	-	3.644 3.3
Pot Cap-1 Maneuver	1437	-	-	-	814 989
Stage 1	-	-	-	-	911 -
Stage 2	-	-	-	-	919 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1437	-	-	-	803 989
Mov Cap-2 Maneuver	-	-	-	-	803 -
Stage 1	-	-	-	-	899 -
Stage 2	-	-	-	-	919 -

Approach	EB	WB	SB
HCM Control Delay, s/v	3.08	0	13.33
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1437	-	-	-	803
HCM Lane V/C Ratio	0.014	-	-	-	0.466
HCM Control Delay (s/veh)	7.5	-	-	-	13.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	2.5

HCM 7th Signalized Intersection Summary
 200: River Rd & I-55 NB Ramps

PM Peak Hour
 10/16/2024



Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	175	25	10	585	150	250
Future Volume (veh/h)	175	25	10	585	150	250
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1693	1841	1856	1750	1589	1500
Adj Flow Rate, veh/h	287	62	20	629	163	316
Peak Hour Factor	0.61	0.40	0.50	0.93	0.92	0.79
Percent Heavy Veh, %	14	4	3	16	21	27
Cap, veh/h	344	74	266	860	196	380
Arrive On Green	0.27	0.27	0.01	0.49	0.41	0.41
Sat Flow, veh/h	1294	279	1767	1750	483	937
Grp Volume(v), veh/h	350	0	20	629	0	479
Grp Sat Flow(s),veh/h/ln	1578	0	1767	1750	0	1420
Q Serve(g_s), s	10.3	0.0	0.3	14.1	0.0	14.9
Cycle Q Clear(g_c), s	10.3	0.0	0.3	14.1	0.0	14.9
Prop In Lane	0.82	0.18	1.00			0.66
Lane Grp Cap(c), veh/h	419	0	266	860	0	576
V/C Ratio(X)	0.83	0.00	0.08	0.73	0.00	0.83
Avail Cap(c_a), veh/h	766	0	365	1913	0	1351
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.1	0.0	10.2	10.0	0.0	13.2
Incr Delay (d2), s/veh	4.4	0.0	0.1	1.2	0.0	3.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.7	0.0	0.1	6.2	0.0	6.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	21.5	0.0	10.3	11.2	0.0	16.3
LnGrp LOS	C		B	B		B
Approach Vol, veh/h	350			649	479	
Approach Delay, s/veh	21.5			11.2	16.3	
Approach LOS	C			B	B	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	4.2	26.1		19.1		30.3
Change Period (Y+Rc), s	3.5	6.0		6.0		6.0
Max Green Setting (Gmax), s	3.5	47.0		24.0		54.0
Max Q Clear Time (g_c+I1), s	2.3	16.9		12.3		16.1
Green Ext Time (p_c), s	0.0	3.1		0.9		4.1
Intersection Summary						
HCM 7th Control Delay, s/veh			15.3			
HCM 7th LOS			B			

HCM 7th Signalized Intersection Summary
 300: IL 53 & River Rd

PM Peak Hour
 10/16/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	115	445	175	295	555	195
Future Volume (veh/h)	115	445	175	295	555	195
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1455	1604	1366	1828	1938	1589
Adj Flow Rate, veh/h	189	506	208	328	677	241
Peak Hour Factor	0.61	0.88	0.84	0.90	0.82	0.81
Percent Heavy Veh, %	30	20	36	11	4	21
Cap, veh/h	298	740	318	1191	1005	988
Arrive On Green	0.22	0.22	0.09	0.65	0.52	0.52
Sat Flow, veh/h	1386	2392	1301	1828	1938	1346
Grp Volume(v), veh/h	189	506	208	328	677	241
Grp Sat Flow(s),veh/h/ln	1386	1196	1301	1828	1938	1346
Q Serve(g_s), s	11.2	16.7	6.3	6.9	23.3	5.2
Cycle Q Clear(g_c), s	11.2	16.7	6.3	6.9	23.3	5.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	298	740	318	1191	1005	988
V/C Ratio(X)	0.63	0.68	0.65	0.28	0.67	0.24
Avail Cap(c_a), veh/h	308	756	391	1191	1005	988
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	27.2	13.8	6.7	16.0	3.9
Incr Delay (d2), s/veh	5.9	3.3	2.8	0.6	3.6	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.1	16.5	2.8	3.9	14.7	4.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	38.0	30.6	16.6	7.2	19.6	4.5
LnGrp LOS	D	C	B	A	B	A
Approach Vol, veh/h	695			536	918	
Approach Delay, s/veh	32.6			10.9	15.7	
Approach LOS	C			B	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		64.6		25.4	12.0	52.7
Change Period (Y+Rc), s		6.0		6.0	3.5	6.0
Max Green Setting (Gmax), s		58.0		20.0	13.5	41.0
Max Q Clear Time (g_c+I1), s		8.9		18.7	8.3	25.3
Green Ext Time (p_c), s		6.8		0.7	0.3	10.9
Intersection Summary						
HCM 7th Control Delay, s/veh			19.9			
HCM 7th LOS			B			

HCM 7th Signalized Intersection Summary
 400: IL 53 & Kankakee River Dr/Peotone Rd

PM Peak Hour
 10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	35	20	115	30	200	15	280	245	555	330	50
Future Volume (veh/h)	40	35	20	115	30	200	15	280	245	555	330	50
Initial Q (Qb), 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								
Adj Sat Flow, veh/h/ln	1248	1722	1752	1841	1672	1396	1604	1796	1781	1663	1938	1381
Adj Flow Rate, veh/h	56	53	40	137	43	278	20	301	350	590	379	56
Peak Hour Factor	0.72	0.66	0.50	0.84	0.70	0.72	0.75	0.93	0.70	0.94	0.87	0.89
Percent Heavy Veh, %	44	12	10	4	21	34	20	7	8	16	4	35
Cap, veh/h	172	81	61	190	149	706	436	311	362	492	1256	804
Arrive On Green	0.04	0.09	0.09	0.04	0.09	0.09	0.01	0.41	0.41	0.25	0.65	0.65
Sat Flow, veh/h	1188	911	687	1753	1672	2082	1527	757	881	1584	1938	1171
Grp Volume(v), veh/h	56	0	93	137	43	278	20	0	651	590	379	56
Grp Sat Flow(s),veh/h/ln	1188	0	1598	1753	1672	1041	1527	0	1638	1584	1938	1171
Q Serve(g_s), s	3.5	0.0	5.1	3.5	2.2	8.0	0.7	0.0	35.0	22.5	7.7	1.4
Cycle Q Clear(g_c), s	3.5	0.0	5.1	3.5	2.2	8.0	0.7	0.0	35.0	22.5	7.7	1.4
Prop In Lane	1.00		0.43	1.00		1.00	1.00		0.54	1.00		1.00
Lane Grp Cap(c), veh/h	172	0	142	190	149	706	436	0	673	492	1256	804
V/C Ratio(X)	0.33	0.00	0.65	0.72	0.29	0.39	0.05	0.00	0.97	1.20	0.30	0.07
Avail Cap(c_a), veh/h	172	0	142	190	149	706	475	0	673	492	1256	804
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
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.2	0.0	39.7	39.7	38.3	22.7	15.1	0.0	25.9	26.0	6.9	4.6
Incr Delay (d2), s/veh	1.1	0.0	13.9	12.5	2.3	0.8	0.0	0.0	27.5	108.3	0.6	0.2
Initial Q Delay(d3), 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
%ile BackOfQ(95%),veh/ln	2.1	0.0	4.5	3.3	1.7	3.7	0.4	0.0	23.7	29.2	4.8	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.3	0.0	53.5	52.2	40.6	23.5	15.2	0.0	53.4	134.3	7.6	4.8
LnGrp LOS	D		D	D	D	C	B		D	F	A	A
Approach Vol, veh/h		149			458			671			1025	
Approach Delay, s/veh		47.4			33.7			52.2			80.4	
Approach LOS		D			C			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	36.0	43.0	7.0	14.0	4.7	64.3	7.0	14.0				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green Setting (Gmax), s	22.5	37.0	3.5	8.0	3.5	56.0	3.5	8.0				
Max Q Clear Time (g_c+24.5), s	24.5	37.0	5.5	7.1	2.7	9.7	5.5	10.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.0	9.2	0.0	0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh			60.7									
HCM 7th LOS			E									

HCM 7th Signalized Intersection Summary
500: Old Chicago Rd & Peotone Rd

PM Peak Hour
10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	0	580	210	25	325	15	75	15	15	115	65	10
Future Volume (veh/h)	0	580	210	25	325	15	75	15	15	115	65	10
Initial Q (Qb), 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										
Adj Sat Flow, veh/h/ln	1515	1618	1811	1856	1544	818	1752	1900	1826	1559	1826	1900
Adj Flow Rate, veh/h	0	716	276	43	365	22	103	26	22	205	93	20
Peak Hour Factor	0.95	0.81	0.76	0.58	0.89	0.67	0.73	0.58	0.67	0.56	0.70	0.50
Percent Heavy Veh, %	26	19	6	3	24	73	10	0	5	23	5	0
Cap, veh/h	520	662	255	122	947	57	233	87	73	267	166	36
Arrive On Green	0.00	0.59	0.59	0.02	0.66	0.66	0.05	0.09	0.09	0.07	0.11	0.11
Sat Flow, veh/h	1443	1112	429	1767	1442	87	1668	951	804	1485	1456	313
Grp Volume(v), veh/h	0	0	992	43	0	387	103	0	48	205	0	113
Grp Sat Flow(s),veh/h/ln	1443	0	1541	1767	0	1529	1668	0	1755	1485	0	1770
Q Serve(g_s), s	0.0	0.0	52.0	0.8	0.0	10.2	4.5	0.0	2.2	6.5	0.0	5.3
Cycle Q Clear(g_c), s	0.0	0.0	52.0	0.8	0.0	10.2	4.5	0.0	2.2	6.5	0.0	5.3
Prop In Lane	1.00		0.28	1.00		0.06	1.00		0.46	1.00		0.18
Lane Grp Cap(c), veh/h	520	0	917	122	0	1004	233	0	160	267	0	202
V/C Ratio(X)	0.00	0.00	1.08	0.35	0.00	0.39	0.44	0.00	0.30	0.77	0.00	0.56
Avail Cap(c_a), veh/h	577	0	917	153	0	1004	233	0	181	267	0	223
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
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	17.7	22.5	0.0	6.9	34.6	0.0	37.1	36.4	0.0	36.6
Incr Delay (d2), s/veh	0.0	0.0	54.5	1.7	0.0	1.1	1.3	0.0	2.2	12.6	0.0	5.2
Initial Q Delay(d3), 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
%ile BackOfQ(95%),veh/ln	0.0	0.0	38.0	1.0	0.0	4.6	3.5	0.0	1.8	1.7	0.0	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	72.2	24.2	0.0	8.0	35.9	0.0	39.3	48.9	0.0	41.8
LnGrp LOS			F	C		A	D		D	D		D
Approach Vol, veh/h		992			430			151				318
Approach Delay, s/veh		72.2			9.6			37.0				46.4
Approach LOS		E			A			D				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	14.0	5.4	58.0	8.0	16.0	0.0	63.4				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green Setting (Gmax), s	6.5	9.0	3.5	52.0	4.5	11.0	3.5	52.0				
Max Q Clear Time (g_c+1), s	10.5	4.2	2.8	54.0	6.5	7.3	0.0	12.2				
Green Ext Time (p_c), s	0.0	0.1	0.0	0.0	0.0	0.2	0.0	7.9				
Intersection Summary												
HCM 7th Control Delay, s/veh			50.8									
HCM 7th LOS			D									

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	720	5	10	355	5	5	0	0	5	5	5
Future Vol, veh/h	0	720	5	10	355	5	5	0	0	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	75	38	50	92	25	25	95	95	25	25	50
Heavy Vehicles, %	0	19	0	0	22	0	20	0	50	0	69	0
Mvmt Flow	0	960	13	20	386	20	20	0	0	20	20	10

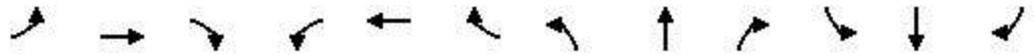
Major/Minor	Major1		Major2		Minor1			Minor2				
Conflicting Flow All	406	0	0	973	0	0	1402	1412	967	1396	1409	396
Stage 1	-	-	-	-	-	-	967	967	-	436	436	-
Stage 2	-	-	-	-	-	-	436	446	-	960	973	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.3	6.5	6.7	7.1	7.19	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.3	5.5	-	6.1	6.19	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.3	5.5	-	6.1	6.19	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.68	4	3.75	3.5	4.621	3.3
Pot Cap-1 Maneuver	1164	-	-	717	-	-	107	139	252	120	101	658
Stage 1	-	-	-	-	-	-	284	335	-	603	481	-
Stage 2	-	-	-	-	-	-	565	577	-	311	256	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1164	-	-	717	-	-	81	134	252	115	97	658
Mov Cap-2 Maneuver	-	-	-	-	-	-	81	134	-	115	97	-
Stage 1	-	-	-	-	-	-	284	335	-	581	463	-
Stage 2	-	-	-	-	-	-	514	557	-	311	256	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0.48	63.02	50.67
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	81	1164	-	-	84	-	-	127
HCM Lane V/C Ratio	0.246	-	-	-	0.028	-	-	0.394
HCM Control Delay (s/veh)	63	0	-	-	10.2	0	-	50.7
HCM Lane LOS	F	A	-	-	B	A	-	F
HCM 95th %tile Q(veh)	0.9	0	-	-	0.1	-	-	1.7

HCM 7th Signalized Intersection Summary
700: Cedar Rd & Wilmington Rd

PM Peak Hour
10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	560	5	5	310	35	0	5	5	55	15	130
Future Volume (veh/h)	100	560	5	5	310	35	0	5	5	55	15	130
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1856	1574	1900	1589	1500	1648	1559	1900	1900	1856	1767	1856
Adj Flow Rate, veh/h	125	718	20	10	352	62	0	20	20	67	26	173
Peak Hour Factor	0.80	0.78	0.25	0.50	0.88	0.56	0.95	0.25	0.25	0.82	0.58	0.75
Percent Heavy Veh, %	3	22	0	21	27	17	23	0	0	3	9	3
Cap, veh/h	512	864	24	220	647	114	0	188	188	123	51	208
Arrive On Green	0.05	0.57	0.57	0.01	0.52	0.52	0.00	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1767	1524	42	1513	1242	219	0	872	872	285	235	967
Grp Volume(v), veh/h	125	0	738	10	0	414	0	0	40	266	0	0
Grp Sat Flow(s),veh/h/ln	1767	0	1566	1513	0	1460	0	0	1743	1487	0	0
Q Serve(g_s), s	2.2	0.0	28.5	0.2	0.0	14.0	0.0	0.0	1.4	9.0	0.0	0.0
Cycle Q Clear(g_c), s	2.2	0.0	28.5	0.2	0.0	14.0	0.0	0.0	1.4	12.5	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.15	0.00		0.50	0.25		0.65
Lane Grp Cap(c), veh/h	512	0	888	220	0	761	0	0	376	382	0	0
V/C Ratio(X)	0.24	0.00	0.83	0.05	0.00	0.54	0.00	0.00	0.11	0.70	0.00	0.00
Avail Cap(c_a), veh/h	549	0	1041	280	0	931	0	0	520	503	0	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
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.3	0.0	13.1	12.6	0.0	11.8	0.0	0.0	23.2	27.5	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	8.9	0.1	0.0	2.8	0.0	0.0	0.3	5.2	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	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.1	0.0	13.9	0.1	0.0	7.1	0.0	0.0	0.9	7.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	8.6	0.0	22.0	12.7	0.0	14.6	0.0	0.0	23.5	32.7	0.0	0.0
LnGrp LOS	A		C	B		B			C	C		
Approach Vol, veh/h		863			424			40			266	
Approach Delay, s/veh		20.1			14.6			23.5			32.7	
Approach LOS		C			B			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		21.9	4.1	47.8		21.9	7.4	44.4				
Change Period (Y+Rc), s		6.0	3.5	6.0		6.0	3.5	6.0				
Max Green Setting (Gmax), s		22.0	3.5	49.0		22.0	5.5	47.0				
Max Q Clear Time (g_c+I1), s		3.4	2.2	30.5		14.5	4.2	16.0				
Green Ext Time (p_c), s		0.2	0.0	11.3		1.4	0.0	7.9				
Intersection Summary												
HCM 7th Control Delay, s/veh			20.8									
HCM 7th LOS			C									

HCM 7th Signalized Intersection Summary
 800: US 52 & Wilmington Rd

PM Peak Hour
 10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	35	475	100	20	175	30	80	270	15	45	415	30
Future Volume (veh/h)	35	475	100	20	175	30	80	270	15	45	415	30
Initial Q (Qb), 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										
Adj Sat Flow, veh/h/ln	1707	1559	1693	1693	1500	1648	1470	1767	1796	1678	1856	1856
Adj Flow Rate, veh/h	40	511	128	27	233	45	91	325	26	96	456	42
Peak Hour Factor	0.88	0.93	0.78	0.75	0.75	0.67	0.88	0.83	0.58	0.47	0.91	0.71
Percent Heavy Veh, %	13	23	14	14	27	17	29	9	7	15	3	3
Cap, veh/h	403	512	128	110	512	99	165	484	39	261	501	46
Arrive On Green	0.02	0.43	0.43	0.02	0.42	0.42	0.04	0.30	0.30	0.04	0.30	0.30
Sat Flow, veh/h	1626	1203	301	1612	1221	236	1400	1614	129	1598	1674	154
Grp Volume(v), veh/h	40	0	639	27	0	278	91	0	351	96	0	498
Grp Sat Flow(s),veh/h/ln	1626	0	1505	1612	0	1457	1400	0	1743	1598	0	1828
Q Serve(g_s), s	1.2	0.0	36.9	0.8	0.0	11.9	3.5	0.0	15.4	3.5	0.0	22.8
Cycle Q Clear(g_c), s	1.2	0.0	36.9	0.8	0.0	11.9	3.5	0.0	15.4	3.5	0.0	22.8
Prop In Lane	1.00		0.20	1.00		0.16	1.00		0.07	1.00		0.08
Lane Grp Cap(c), veh/h	403	0	640	110	0	610	165	0	522	261	0	547
V/C Ratio(X)	0.10	0.00	1.00	0.24	0.00	0.46	0.55	0.00	0.67	0.37	0.00	0.91
Avail Cap(c_a), veh/h	432	0	640	148	0	620	165	0	541	261	0	567
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
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.7	0.0	25.0	21.7	0.0	18.2	25.8	0.0	26.7	22.2	0.0	29.3
Incr Delay (d2), s/veh	0.1	0.0	35.2	1.1	0.0	1.1	3.8	0.0	6.8	0.9	0.0	21.6
Initial Q Delay(d3), 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
%ile BackOfQ(95%),veh/ln	0.7	0.0	24.0	0.5	0.0	6.6	2.4	0.0	10.9	2.3	0.0	17.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	14.8	0.0	60.1	22.9	0.0	19.3	29.7	0.0	33.5	23.1	0.0	50.9
LnGrp LOS	B		E	C		B	C		C	C		D
Approach Vol, veh/h		679			305			442			594	
Approach Delay, s/veh		57.5			19.6			32.7			46.4	
Approach LOS		E			B			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.0	32.1	4.9	43.0	7.0	32.1	5.5	42.4				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green Setting (Gmax), s	3.5	27.0	3.5	37.0	3.5	27.0	3.5	37.0				
Max Q Clear Time (g_c+1), s	15.5	17.4	2.8	38.9	5.5	24.8	3.2	13.9				
Green Ext Time (p_c), s	0.0	3.2	0.0	0.0	0.0	1.2	0.0	2.7				
Intersection Summary												
HCM 7th Control Delay, s/veh			43.1									
HCM 7th LOS			D									

HCM 7th Signalized Intersection Summary
 900: I-57 SB On Ramp/I-57 SB Off Ramp & Wilmington Rd

PM Peak Hour
 10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻		↻	↻					↻		↻
Traffic Volume (veh/h)	0	590	85	160	215	0	0	0	0	215	0	90
Future Volume (veh/h)	0	590	85	160	215	0	0	0	0	215	0	90
Initial Q (Qb), 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		
Adj Sat Flow, veh/h/ln	0	1648	1663	1796	1544	0				1811	0	1648
Adj Flow Rate, veh/h	0	648	102	205	247	0				279	0	99
Peak Hour Factor	0.95	0.91	0.83	0.78	0.87	0.25				0.77	0.95	0.91
Percent Heavy Veh, %	0	17	16	7	24	0				6	0	17
Cap, veh/h	0	742	117	306	1009	0				338	0	274
Arrive On Green	0.00	0.53	0.53	0.08	0.65	0.00				0.20	0.00	0.20
Sat Flow, veh/h	0	1390	219	1711	1544	0				1725	0	1397
Grp Volume(v), veh/h	0	0	750	205	247	0				279	0	99
Grp Sat Flow(s),veh/h/ln	0	0	1609	1711	1544	0				1725	0	1397
Q Serve(g_s), s	0.0	0.0	32.4	4.0	5.3	0.0				12.4	0.0	4.9
Cycle Q Clear(g_c), s	0.0	0.0	32.4	4.0	5.3	0.0				12.4	0.0	4.9
Prop In Lane	0.00		0.14	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	0	858	306	1009	0				338	0	274
V/C Ratio(X)	0.00	0.00	0.87	0.67	0.24	0.00				0.83	0.00	0.36
Avail Cap(c_a), veh/h	0	0	929	359	1125	0				433	0	351
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	16.2	16.4	5.7	0.0				30.7	0.0	27.7
Incr Delay (d2), s/veh	0.0	0.0	12.0	3.8	0.6	0.0				13.3	0.0	1.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	18.1	3.7	2.5	0.0				10.3	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	28.2	20.1	6.3	0.0				44.0	0.0	29.4
LnGrp LOS			C	C	A					D		C
Approach Vol, veh/h		750			452						378	
Approach Delay, s/veh		28.2			12.6						40.2	
Approach LOS		C			B						D	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			9.5	48.5		21.6		58.0				
Change Period (Y+Rc), s			3.5	6.0		6.0		6.0				
Max Green Setting (Gmax), s			8.5	46.0		20.0		58.0				
Max Q Clear Time (g_c+I1), s			6.0	34.4		14.4		7.3				
Green Ext Time (p_c), s			0.1	8.1		1.3		5.1				
Intersection Summary												
HCM 7th Control Delay, s/veh			26.6									
HCM 7th LOS			C									

HCM 7th Signalized Intersection Summary
 1000: I-57 NB Off Ramp/I-57 NB On Ramp & Wilmington Rd

PM Peak Hour
 10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	355	150	0	305	70	80	0	115	0	0	0
Future Volume (veh/h)	0	355	150	0	305	70	80	0	115	0	0	0
Initial Q (Qb), 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				
Adj Sat Flow, veh/h/ln	1618	1722	1900	0	1707	1678	1455	0	1796			
Adj Flow Rate, veh/h	0	408	158	0	372	78	94	0	158			
Peak Hour Factor	0.80	0.87	0.95	0.95	0.82	0.90	0.85	0.95	0.73			
Percent Heavy Veh, %	19	12	0	0	13	15	30	0	7			
Cap, veh/h	499	680	263	0	787	165	228	0	250			
Arrive On Green	0.00	0.58	0.58	0.00	0.58	0.58	0.16	0.00	0.16			
Sat Flow, veh/h	1541	1182	458	0	1369	287	1386	0	1522			
Grp Volume(v), veh/h	0	0	566	0	0	450	94	0	158			
Grp Sat Flow(s),veh/h/ln	1541	0	1640	0	0	1656	1386	0	1522			
Q Serve(g_s), s	0.0	0.0	10.3	0.0	0.0	7.3	2.8	0.0	4.5			
Cycle Q Clear(g_c), s	0.0	0.0	10.3	0.0	0.0	7.3	2.8	0.0	4.5			
Prop In Lane	1.00		0.28	0.00		0.17	1.00		1.00			
Lane Grp Cap(c), veh/h	499	0	943	0	0	952	228	0	250			
V/C Ratio(X)	0.00	0.00	0.60	0.00	0.00	0.47	0.41	0.00	0.63			
Avail Cap(c_a), veh/h	914	0	2065	0	0	1510	602	0	661			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	6.4	0.0	0.0	5.7	17.2	0.0	17.9			
Incr Delay (d2), s/veh	0.0	0.0	2.8	0.0	0.0	1.7	2.5	0.0	5.5			
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	0.0	0.0	4.2	0.0	0.0	2.9	1.7	0.0	3.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	9.2	0.0	0.0	7.4	19.8	0.0	23.5			
LnGrp LOS			A			A	B		C			
Approach Vol, veh/h		566			450			252				
Approach Delay, s/veh		9.2			7.4			22.1				
Approach LOS		A			A			C				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		13.6		32.5			0.0	32.5				
Change Period (Y+Rc), s		6.0		6.0			3.5	6.0				
Max Green Setting (Gmax), s		20.0		58.0			12.5	42.0				
Max Q Clear Time (g_c+1), s		6.5		12.3			0.0	9.3				
Green Ext Time (p_c), s		1.4		14.2			0.0	9.2				
Intersection Summary												
HCM 7th Control Delay, s/veh			11.1									
HCM 7th LOS			B									

Intersection												
Intersection Delay, s/veh 21.7												
Intersection LOS C												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	205	40	65	5	50	0	85	295	5	0	255	240
Future Vol, veh/h	205	40	65	5	50	0	85	295	5	0	255	240
Peak Hour Factor	0.84	0.67	0.83	0.38	0.60	0.95	0.74	0.93	1.00	0.95	0.87	0.80
Heavy Vehicles, %	14	66	37	0	37	0	32	8	0	0	10	10
Mvmt Flow	244	60	78	13	83	0	115	317	5	0	293	300
Number of Lanes	1	1	0	1	1	0	0	2	0	0	2	0

Approach	EB	WB	NE	SW
Opposing Approach	WB	EB	SW	NE
Opposing Lanes	2	2	2	2
Conflicting Approach Left SW		NE	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right NE		SW	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay, s/veh 20		14.4	20.4	24.9
HCM LOS	C	B	C	C

Lane	NELn1	NELn2	EBLn1	EBLn2	WBLn1	WBLn2	SWLn1	SWLn2
Vol Left, %		37%	0%	100%	0%	100%	0%	0%
Vol Thru, %		63%	97%	0%	38%	0%	100%	26%
Vol Right, %		0%	3%	0%	62%	0%	0%	74%
Sign Control		Stop						
Traffic Vol by Lane		233	153	205	105	5	50	170
LT Vol		85	0	205	0	5	0	0
Through Vol		148	148	0	40	0	50	170
RT Vol		0	5	0	65	0	0	240
Lane Flow Rate		273	164	244	138	13	83	195
Geometry Grp		5	5	5	5	5	5	5
Degree of Util (X)		0.628	0.347	0.581	0.327	0.034	0.216	0.408
Departure Headway (Hd)		8.262	7.632	8.568	8.517	9.184	9.318	7.514
Convergence, Y/N		Yes						
Cap		438	471	422	422	389	385	479
Service Time		6.019	5.388	6.321	6.27	6.952	7.086	5.266
HCM Lane V/C Ratio		0.623	0.348	0.578	0.327	0.033	0.216	0.407
HCM Control Delay, s/veh		24	14.4	22.6	15.4	12.3	14.7	15.4
HCM Lane LOS		C	B	C	C	B	B	C
HCM 95th-tile Q		4.2	1.5	3.6	1.4	0.1	0.8	2

Intersection						
Int Delay, s/veh	7.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑	↗		↘	
Traffic Vol, veh/h	5	10	1	90	235	1
Future Vol, veh/h	5	10	1	90	235	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	25	63	75	69	85	42
Heavy Vehicles, %	2	2	2	16	27	2
Mvmt Flow	20	16	1	130	276	2

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	132	0	-	0	122 67
Stage 1	-	-	-	-	67 -
Stage 2	-	-	-	-	56 -
Critical Hdwy	4.12	-	-	-	6.67 6.22
Critical Hdwy Stg 1	-	-	-	-	5.67 -
Critical Hdwy Stg 2	-	-	-	-	5.67 -
Follow-up Hdwy	2.218	-	-	-	3.743 3.318
Pot Cap-1 Maneuver	1453	-	-	-	816 997
Stage 1	-	-	-	-	896 -
Stage 2	-	-	-	-	907 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1453	-	-	-	805 997
Mov Cap-2 Maneuver	-	-	-	-	805 -
Stage 1	-	-	-	-	884 -
Stage 2	-	-	-	-	907 -

Approach	EB	WB	SB
HCM Control Delay, s/v	4.19	0	11.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1453	-	-	-	807
HCM Lane V/C Ratio	0.014	-	-	-	0.346
HCM Control Delay (s/veh)	7.5	-	-	-	11.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	1.5

Intersection						
Int Delay, s/veh	2					
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Vol, veh/h	70	10	5	390	95	295
Future Vol, veh/h	70	10	5	390	95	295
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	480	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	58	100	88	73	88
Heavy Vehicles, %	17	2	5	27	15	15
Mvmt Flow	93	17	5	443	130	335

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	751	298	465	0	0
Stage 1	298	-	-	-	-
Stage 2	453	-	-	-	-
Critical Hdwy	6.57	6.22	4.15	-	-
Critical Hdwy Stg 1	5.57	-	-	-	-
Critical Hdwy Stg 2	5.57	-	-	-	-
Follow-up Hdwy	3.653	3.318	2.245	-	-
Pot Cap-1 Maneuver	358	742	1080	-	-
Stage 1	720	-	-	-	-
Stage 2	610	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	356	742	1080	-	-
Mov Cap-2 Maneuver	356	-	-	-	-
Stage 1	717	-	-	-	-
Stage 2	610	-	-	-	-

Approach	SB	SE	NW
HCM Control Delay, s/v	17.96	0.09	0
HCM LOS	C		

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SBLn1
Capacity (veh/h)	-	-	1080	-	387
HCM Lane V/C Ratio	-	-	0.005	-	0.285
HCM Control Delay (s/veh)	-	-	8.3	-	18
HCM Lane LOS	-	-	A	-	C
HCM 95th %tile Q(veh)	-	-	0	-	1.2

HCM 7th Signalized Intersection Summary
300: IL 53 & River Rd

AM Peak Hour
10/16/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	140	210	225	365	180	45
Future Volume (veh/h)	140	210	225	365	180	45
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1530	1366	1648	1953	1766	1189
Adj Flow Rate, veh/h	165	244	312	468	228	60
Peak Hour Factor	0.85	0.86	0.72	0.78	0.79	0.75
Percent Heavy Veh, %	25	36	17	3	15	48
Cap, veh/h	313	402	675	1273	849	701
Arrive On Green	0.22	0.22	0.26	1.00	0.48	0.48
Sat Flow, veh/h	1457	1158	1570	1953	1766	1007
Grp Volume(v), veh/h	165	244	312	468	228	60
Grp Sat Flow(s),veh/h/ln	1457	1158	1570	1953	1766	1007
Q Serve(g_s), s	9.0	15.7	9.2	0.0	6.9	1.7
Cycle Q Clear(g_c), s	9.0	15.7	9.2	0.0	6.9	1.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	313	402	675	1273	849	701
V/C Ratio(X)	0.53	0.61	0.46	0.37	0.27	0.09
Avail Cap(c_a), veh/h	405	475	861	1273	849	701
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.56	0.56	1.00	1.00
Uniform Delay (d), s/veh	31.3	24.3	7.0	0.0	13.9	4.4
Incr Delay (d2), s/veh	2.9	3.2	0.3	0.5	0.8	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.8	15.7	3.1	0.3	4.7	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	34.2	27.6	7.3	0.5	14.7	4.7
LnGrp LOS	C	C	A	A	B	A
Approach Vol, veh/h	409			780	288	
Approach Delay, s/veh	30.2			3.2	12.6	
Approach LOS	C			A	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		64.6		25.4	15.4	49.3
Change Period (Y+Rc), s		6.0		6.0	3.5	6.0
Max Green Setting (Gmax), s		53.0		25.0	22.5	27.0
Max Q Clear Time (g_c+I1), s		2.0		17.7	11.2	8.9
Green Ext Time (p_c), s		10.7		1.7	0.7	3.7
Intersection Summary						
HCM 7th Control Delay, s/veh			12.5			
HCM 7th LOS			B			

HCM 7th Signalized Intersection Summary
 400: IL 53 & Kankakee River Dr/Peotone Rd

AM Peak Hour
 10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	45	25	80	25	295	30	335	135	225	115	40
Future Volume (veh/h)	45	45	25	80	25	295	30	335	135	225	115	40
Initial Q (Qb), 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		No		No
Adj Sat Flow, veh/h/ln	1455	1663	1796	1722	1688	1693	1841	1870	1826	1470	1766	1263
Adj Flow Rate, veh/h	87	105	37	90	46	404	68	399	175	271	139	56
Peak Hour Factor	0.52	0.43	0.68	0.89	0.54	0.73	0.44	0.84	0.77	0.83	0.83	0.71
Percent Heavy Veh, %	30	16	7	12	20	14	4	2	5	29	15	43
Cap, veh/h	245	150	53	230	206	355	694	584	256	402	997	677
Arrive On Green	0.07	0.13	0.13	0.06	0.12	0.12	0.03	0.47	0.47	0.21	0.94	0.94
Sat Flow, veh/h	1386	1175	414	1640	1688	1434	1753	1232	541	1400	1766	1070
Grp Volume(v), veh/h	87	0	142	90	46	404	68	0	574	271	139	56
Grp Sat Flow(s),veh/h/ln	1386	0	1588	1640	1688	1434	1753	0	1773	1400	1766	1070
Q Serve(g_s), s	4.9	0.0	7.7	4.3	2.2	11.0	1.8	0.0	22.7	8.8	0.5	0.2
Cycle Q Clear(g_c), s	4.9	0.0	7.7	4.3	2.2	11.0	1.8	0.0	22.7	8.8	0.5	0.2
Prop In Lane	1.00		0.26	1.00		1.00	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	245	0	203	230	206	355	694	0	840	402	997	677
V/C Ratio(X)	0.35	0.00	0.70	0.39	0.22	1.14	0.10	0.00	0.68	0.67	0.14	0.08
Avail Cap(c_a), veh/h	252	0	203	247	206	355	702	0	840	514	997	677
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	31.5	0.0	37.6	32.0	35.6	33.9	11.3	0.0	18.4	12.2	1.1	0.8
Incr Delay (d2), s/veh	0.9	0.0	12.8	1.1	1.2	90.5	0.1	0.0	4.5	2.2	0.3	0.2
Initial Q Delay(d3), 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
%ile BackOfQ(95%),veh/ln	8.0	0.0	6.6	2.9	1.6	23.8	1.1	0.0	13.9	3.6	0.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	32.4	0.0	50.4	33.1	36.8	124.4	11.4	0.0	22.9	14.4	1.4	1.0
LnGrp LOS	C		D	C	D	F	B		C	B	A	A
Approach Vol, veh/h		229			540			642			466	
Approach Delay, s/veh		43.6			101.7			21.7			8.9	
Approach LOS		D			F			C			A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.8	48.6	9.1	17.5	6.6	56.8	9.6	17.0				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green Setting (Gmax), s	10.5	35.0	6.5	11.0	3.5	50.0	6.5	11.0				
Max Q Clear Time (g_c+I10), s	11.0	24.7	6.3	9.7	3.8	2.5	6.9	13.0				
Green Ext Time (p_c), s	0.5	5.7	0.0	0.1	0.0	3.5	0.0	0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh			44.2									
HCM 7th LOS			D									

Intersection												
Int Delay, s/veh	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	35	335	45	45	315	35	35	15	35	35	20	35
Future Vol, veh/h	35	335	45	45	315	35	35	15	35	35	20	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	56	56	56	67	67	67	10	10	10	2	2	2
Mvmt Flow	37	353	47	47	332	37	37	16	37	37	21	37

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	368	0	0	400	0	0	887	913	376	879	918	350
Stage 1	-	-	-	-	-	-	450	450	-	445	445	-
Stage 2	-	-	-	-	-	-	437	463	-	434	474	-
Critical Hdwy	4.66	-	-	4.77	-	-	7.2	6.6	6.3	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.2	5.6	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.2	5.6	-	6.12	5.52	-
Follow-up Hdwy	2.704	-	-	2.803	-	-	3.59	4.09	3.39	3.518	4.018	3.318
Pot Cap-1 Maneuver	946	-	-	880	-	-	256	265	653	268	271	693
Stage 1	-	-	-	-	-	-	573	558	-	592	575	-
Stage 2	-	-	-	-	-	-	583	551	-	600	558	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	946	-	-	880	-	-	198	235	653	210	240	693
Mov Cap-2 Maneuver	-	-	-	-	-	-	198	235	-	210	240	-
Stage 1	-	-	-	-	-	-	544	530	-	552	536	-
Stage 2	-	-	-	-	-	-	494	513	-	522	530	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.76			1.06			22.96			22.45		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	289	148	-	-	201	-	-	300
HCM Lane V/C Ratio	0.31	0.039	-	-	0.054	-	-	0.316
HCM Control Delay (s/veh)	23	9	0	-	9.3	0	-	22.4
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.3	0.1	-	-	0.2	-	-	1.3

Intersection												
Int Delay, s/veh	10.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Traffic Vol, veh/h	0	300	105	5	285	80	150	45	20	25	5	0
Future Vol, veh/h	0	300	105	5	285	80	150	45	20	25	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	250	-	-	290	-	-	280	-	-	280	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	87	83	50	77	77	70	59	42	75	75	95
Heavy Vehicles, %	51	22	10	0	20	31	4	3	0	88	11	0
Mvmt Flow	0	345	127	10	370	104	214	76	48	33	7	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	474	0	0	471	0	0	802	902	408	825	913	422
Stage 1	-	-	-	-	-	-	408	408	-	442	442	-
Stage 2	-	-	-	-	-	-	393	494	-	383	471	-
Critical Hdwy	4.61	-	-	4.1	-	-	7.14	6.53	6.2	7.98	6.61	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.14	5.53	-	6.98	5.61	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.14	5.53	-	6.98	5.61	-
Follow-up Hdwy	2.659	-	-	2.2	-	-	3.536	4.027	3.3	4.292	4.099	3.3
Pot Cap-1 Maneuver	875	-	-	1101	-	-	300	276	648	212	264	636
Stage 1	-	-	-	-	-	-	616	595	-	458	561	-
Stage 2	-	-	-	-	-	-	627	545	-	497	544	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	875	-	-	1101	-	-	290	274	648	141	262	636
Mov Cap-2 Maneuver	-	-	-	-	-	-	290	274	-	141	262	-
Stage 1	-	-	-	-	-	-	616	595	-	454	556	-
Stage 2	-	-	-	-	-	-	614	540	-	402	544	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0			0.17			36.6			35.19		
HCM LOS							E			E		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	290	352	875	-	-	1101	-	-	141	262
HCM Lane V/C Ratio	0.739	0.352	-	-	-	0.009	-	-	0.237	0.025
HCM Control Delay (s/veh)	45.8	20.7	0	-	-	8.3	-	-	38.4	19.1
HCM Lane LOS	E	C	A	-	-	A	-	-	E	C
HCM 95th %tile Q(veh)	5.4	1.5	0	-	-	0	-	-	0.9	0.1

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	100	320	10	10	305	40	10	10	10	25	10	40
Future Vol, veh/h	100	320	10	10	305	40	10	10	10	25	10	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	70	70	70	74	74	74	21	21	21	26	26	26
Mvmt Flow	109	348	11	11	332	43	11	11	11	27	11	43

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	375	0	0	359	0	0	929	967	353	946	951	353
Stage 1	-	-	-	-	-	-	571	571	-	375	375	-
Stage 2	-	-	-	-	-	-	359	397	-	571	576	-
Critical Hdwy	4.8	-	-	4.84	-	-	7.31	6.71	6.41	7.36	6.76	6.46
Critical Hdwy Stg 1	-	-	-	-	-	-	6.31	5.71	-	6.36	5.76	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.31	5.71	-	6.36	5.76	-
Follow-up Hdwy	2.83	-	-	2.866	-	-	3.689	4.189	3.489	3.734	4.234	3.534
Pot Cap-1 Maneuver	891	-	-	892	-	-	229	236	650	219	237	640
Stage 1	-	-	-	-	-	-	474	476	-	600	577	-
Stage 2	-	-	-	-	-	-	622	572	-	466	466	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	891	-	-	892	-	-	170	197	650	171	198	640
Mov Cap-2 Maneuver	-	-	-	-	-	-	170	197	-	171	198	-
Stage 1	-	-	-	-	-	-	402	403	-	591	568	-
Stage 2	-	-	-	-	-	-	560	563	-	378	395	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	2.23			0.26			22.35			22.25		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	240	416	-	-	50	-	-	289
HCM Lane V/C Ratio	0.136	0.122	-	-	0.012	-	-	0.282
HCM Control Delay (s/veh)	22.3	9.6	0	-	9.1	0	-	22.2
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.5	0.4	-	-	0	-	-	1.1

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	345	5	0	360	0	5	0	5	5	0	0
Future Vol, veh/h	0	345	5	0	360	0	5	0	5	5	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	86	50	95	87	95	25	95	25	50	95	95
Heavy Vehicles, %	0	26	0	100	26	0	17	0	61	0	0	0
Mvmt Flow	0	401	10	0	414	0	20	0	20	10	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	414	0	0	411	0	0	820	820	406	815	825	414
Stage 1	-	-	-	-	-	-	406	406	-	414	414	-
Stage 2	-	-	-	-	-	-	414	414	-	401	411	-
Critical Hdwy	4.1	-	-	5.1	-	-	7.27	6.5	6.81	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.27	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.27	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	3.1	-	-	3.653	4	3.849	3.5	4	3.3
Pot Cap-1 Maneuver	1156	-	-	770	-	-	277	312	535	299	310	643
Stage 1	-	-	-	-	-	-	593	601	-	620	597	-
Stage 2	-	-	-	-	-	-	587	597	-	629	598	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1156	-	-	770	-	-	277	312	535	287	310	643
Mov Cap-2 Maneuver	-	-	-	-	-	-	277	312	-	287	310	-
Stage 1	-	-	-	-	-	-	593	601	-	620	597	-
Stage 2	-	-	-	-	-	-	587	597	-	606	598	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0	16.07	17.98
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	365	1156	-	-	770	-	-	287
HCM Lane V/C Ratio	0.11	-	-	-	-	-	-	0.035
HCM Control Delay (s/veh)	16.1	0	-	-	0	-	-	18
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	0.1

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	100	275	0	0	275	40	0	5	0	20	0	40
Future Vol, veh/h	100	275	0	0	275	40	0	5	0	20	0	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	77	95	95	71	64	95	38	95	100	95	60
Heavy Vehicles, %	3	24	0	0	25	25	0	0	0	25	0	9
Mvmt Flow	132	357	0	0	387	63	0	13	0	20	0	67

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	450	0	0	357	0	0	1008	1070	357	1045	1039	419
Stage 1	-	-	-	-	-	-	620	620	-	419	419	-
Stage 2	-	-	-	-	-	-	387	450	-	627	620	-
Critical Hdwy	4.13	-	-	4.1	-	-	7.1	6.5	6.2	7.35	6.5	6.29
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.35	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.35	5.5	-
Follow-up Hdwy	2.227	-	-	2.2	-	-	3.5	4	3.3	3.725	4	3.381
Pot Cap-1 Maneuver	1105	-	-	1213	-	-	221	223	692	187	232	620
Stage 1	-	-	-	-	-	-	479	483	-	569	594	-
Stage 2	-	-	-	-	-	-	640	575	-	435	483	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1105	-	-	1213	-	-	168	190	692	150	198	620
Mov Cap-2 Maneuver	-	-	-	-	-	-	168	190	-	150	198	-
Stage 1	-	-	-	-	-	-	408	411	-	569	594	-
Stage 2	-	-	-	-	-	-	571	575	-	358	411	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	2.34			0			25.38			18.16		
HCM LOS							D			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	190	485	-	-	1213	-	-	360
HCM Lane V/C Ratio	0.069	0.119	-	-	-	-	-	0.241
HCM Control Delay (s/veh)	25.4	8.7	0	-	0	-	-	18.2
HCM Lane LOS	D	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	0.2	0.4	-	-	0	-	-	0.9

Intersection	
Intersection Delay, s/veh	80.9
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	25	210	55	15	185	25	75	280	10	35	220	15
Future Vol, veh/h	25	210	55	15	185	25	75	280	10	35	220	15
Peak Hour Factor	0.71	0.80	0.95	0.75	0.68	0.64	0.72	0.86	0.50	0.55	0.75	0.67
Heavy Vehicles, %	6	27	26	0	30	9	22	5	0	22	16	7
Mvmt Flow	35	263	58	20	272	39	104	326	20	64	293	22
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	56.4	47.9	131	73.1
HCM LOS	F	E	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	9%	7%	13%
Vol Thru, %	77%	72%	82%	81%
Vol Right, %	3%	19%	11%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	365	290	225	270
LT Vol	75	25	15	35
Through Vol	280	210	185	220
RT Vol	10	55	25	15
Lane Flow Rate	450	356	331	379
Geometry Grp	1	1	1	1
Degree of Util (X)	1.17	0.897	0.842	0.974
Departure Headway (Hd)	9.362	9.728	9.823	9.878
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	387	377	371	372
Service Time	7.457	7.728	7.823	7.878
HCM Lane V/C Ratio	1.163	0.944	0.892	1.019
HCM Control Delay, s/veh	131	56.4	47.9	73.1
HCM Lane LOS	F	F	E	F
HCM 95th-tile Q	17.6	9	7.7	11

HCM 7th TWSC
 900: I-57 SB On Ramp/I-57 SB Off Ramp & Wilmington Rd

AM Peak Hour
 10/16/2024

Intersection												
Int Delay, s/veh	5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↗					↖		↗
Traffic Vol, veh/h	0	245	65	100	295	0	0	0	0	80	0	110
Future Vol, veh/h	0	245	65	100	295	0	0	0	0	80	0	110
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Stop	Stop	Stop								
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	-	-	-	150	-	-	-	-	-	0	-	185
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	86	80	85	89	95	95	95	95	82	95	73
Heavy Vehicles, %	0	20	35	9	18	0	0	0	0	19	0	33
Mvmt Flow	0	285	81	118	331	0	0	0	0	98	0	151

Major/Minor	Major1			Major2			Minor2				
Conflicting Flow All	-	0	0	366	0	0			852	-	331
Stage 1	-	-	-	-	-	-			567	-	-
Stage 2	-	-	-	-	-	-			285	-	-
Critical Hdwy	-	-	-	4.19	-	-			6.59	-	6.53
Critical Hdwy Stg 1	-	-	-	-	-	-			5.59	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-			5.59	-	-
Follow-up Hdwy	-	-	-	2.281	-	-			3.671	-	3.597
Pot Cap-1 Maneuver	0	-	-	1155	-	0			309	0	644
Stage 1	0	-	-	-	-	0			536	0	-
Stage 2	0	-	-	-	-	0			726	0	-
Platoon blocked, %		-	-	-							
Mov Cap-1 Maneuver	-	-	-	1155	-	-			277	0	644
Mov Cap-2 Maneuver	-	-	-	-	-	-			277	0	-
Stage 1	-	-	-	-	-	-			536	0	-
Stage 2	-	-	-	-	-	-			652	0	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	2.22	17.23
HCM LOS			C

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1155	-	277	644
HCM Lane V/C Ratio	-	-	0.102	-	0.352	0.234
HCM Control Delay (s/veh)	-	-	8.5	-	24.9	12.3
HCM Lane LOS	-	-	A	-	C	B
HCM 95th %tile Q(veh)	-	-	0.3	-	1.5	0.9

HCM 7th TWSC
 1000: I-57 NB Off Ramp/I-57 NB On Ramp & Wilmington Rd

AM Peak Hour
 10/16/2024

Intersection												
Int Delay, s/veh	5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↘		↖		↗			
Traffic Vol, veh/h	50	155	0	0	305	110	105	0	100	0	0	0
Future Vol, veh/h	50	155	0	0	305	110	105	0	100	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Stop	-	-	None
Storage Length	150	-	-	-	-	-	0	-	185	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	72	96	95	95	93	86	72	95	67	95	95	95
Heavy Vehicles, %	20	19	0	0	14	7	16	0	10	0	0	0
Mvmt Flow	69	161	0	0	328	128	146	0	149	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	456	0	628
Stage 1	-	-	300
Stage 2	-	-	328
Critical Hdwy	4.3	-	6.56
Critical Hdwy Stg 1	-	-	5.56
Critical Hdwy Stg 2	-	-	5.56
Follow-up Hdwy	2.38	-	3.644
Pot Cap-1 Maneuver	1016	0	863
Stage 1	-	0	720
Stage 2	-	0	700
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1016	-	863
Mov Cap-2 Maneuver	-	-	0
Stage 1	-	-	671
Stage 2	-	-	700

Approach	EB	WB	NB
HCM Control Delay, s/v	2.65	0	14.62
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	396	863	1016	-	-	-
HCM Lane V/C Ratio	0.368	0.173	0.068	-	-	-
HCM Control Delay (s/veh)	19.3	10	8.8	-	-	-
HCM Lane LOS	C	B	A	-	-	-
HCM 95th %tile Q(veh)	1.7	0.6	0.2	-	-	-

Intersection	
Intersection Delay, s/veh	14
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↶	↷		↶	↷			↶↷			↶↷	
Traffic Vol, veh/h	150	25	35	0	55	10	55	235	5	5	110	205
Future Vol, veh/h	150	25	35	0	55	10	55	235	5	5	110	205
Peak Hour Factor	0.82	0.75	0.73	0.95	0.61	0.50	0.83	0.79	0.25	0.25	0.88	0.87
Heavy Vehicles, %	12	35	24	0	26	0	31	8	20	0	14	11
Mvmt Flow	183	33	48	0	90	20	66	297	20	20	125	236
Number of Lanes	1	1	0	1	1	0	0	2	0	0	2	0

Approach	EB	WB	NE	SW
Opposing Approach	WB	EB	SW	NE
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SW	NE	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NE	SW	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay, s/veh	14	12.8	14	14.3
HCM LOS	B	B	B	B

Lane	NELn1	NELn2	EBLn1	EBLn2	WBLn1	WBLn2	SWLn1	SWLn2
Vol Left, %	32%	0%	100%	0%	0%	0%	8%	0%
Vol Thru, %	68%	96%	0%	42%	100%	85%	92%	21%
Vol Right, %	0%	4%	0%	58%	0%	15%	0%	79%
Sign Control	Stop							
Traffic Vol by Lane	173	123	150	60	0	65	60	260
LT Vol	55	0	150	0	0	0	5	0
Through Vol	118	118	0	25	0	55	55	55
RT Vol	0	5	0	35	0	10	0	205
Lane Flow Rate	215	169	183	81	0	110	83	298
Geometry Grp	5	5	5	5	5	5	5	5
Degree of Util (X)	0.428	0.308	0.388	0.16	0	0.237	0.15	0.513
Departure Headway (Hd)	7.159	6.569	7.628	7.101	7.387	7.73	6.556	6.193
Convergence, Y/N	Yes							
Cap	499	543	468	501	0	467	543	578
Service Time	4.953	4.362	5.423	4.896	5.087	5.43	4.348	3.985
HCM Lane V/C Ratio	0.431	0.311	0.391	0.162	0	0.236	0.153	0.516
HCM Control Delay, s/veh	15.3	12.3	15.2	11.3	10.1	12.8	10.5	15.4
HCM Lane LOS	C	B	C	B	N	B	B	C
HCM 95th-tile Q	2.1	1.3	1.8	0.6	0	0.9	0.5	2.9

Intersection						
Int Delay, s/veh	8.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	20	1	135	340	1
Future Vol, veh/h	5	20	1	135	340	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	25	69	59	87	91	63
Heavy Vehicles, %	2	5	5	22	17	2
Mvmt Flow	20	29	2	155	374	2

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	157	0	-	0	148 79
Stage 1	-	-	-	-	79 -
Stage 2	-	-	-	-	69 -
Critical Hdwy	4.12	-	-	-	6.57 6.22
Critical Hdwy Stg 1	-	-	-	-	5.57 -
Critical Hdwy Stg 2	-	-	-	-	5.57 -
Follow-up Hdwy	2.218	-	-	-	3.653 3.318
Pot Cap-1 Maneuver	1423	-	-	-	810 981
Stage 1	-	-	-	-	907 -
Stage 2	-	-	-	-	917 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1423	-	-	-	798 981
Mov Cap-2 Maneuver	-	-	-	-	798 -
Stage 1	-	-	-	-	895 -
Stage 2	-	-	-	-	917 -

Approach	EB	WB	SB
HCM Control Delay, s/v	3.09	0	13.43
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1423	-	-	-	799
HCM Lane V/C Ratio	0.014	-	-	-	0.47
HCM Control Delay (s/veh)	7.6	-	-	-	13.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	2.5

Intersection						
Int Delay, s/veh	38.2					
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Vol, veh/h	175	25	10	585	150	250
Future Vol, veh/h	175	25	10	585	150	250
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	480	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	61	40	50	93	92	79
Heavy Vehicles, %	14	4	3	17	21	28
Mvmt Flow	287	63	20	629	163	316

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	990	321	479	0	-	0
Stage 1	321	-	-	-	-	-
Stage 2	669	-	-	-	-	-
Critical Hdwy	6.54	6.24	4.13	-	-	-
Critical Hdwy Stg 1	5.54	-	-	-	-	-
Critical Hdwy Stg 2	5.54	-	-	-	-	-
Follow-up Hdwy	3.626	3.336	2.227	-	-	-
Pot Cap-1 Maneuver	~260	715	1078	-	-	-
Stage 1	709	-	-	-	-	-
Stage 2	487	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~255	715	1078	-	-	-
Mov Cap-2 Maneuver	~255	-	-	-	-	-
Stage 1	696	-	-	-	-	-
Stage 2	487	-	-	-	-	-

Approach	SB	SE	NW
HCM Control Delay, s/v161.1		0.26	0
HCM LOS	F		

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SBLn1
Capacity (veh/h)	-	-	1078	-	288
HCM Lane V/C Ratio	-	-	0.019	-	1.213
HCM Control Delay (s/veh)	-	-	8.4	-	161.1
HCM Lane LOS	-	-	A	-	F
HCM 95th %tile Q(veh)	-	-	0.1	-	15.9

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 7th Signalized Intersection Summary
 300: IL 53 & River Rd

PM Peak Hour
 10/16/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	115	445	175	295	555	195
Future Volume (veh/h)	115	445	175	295	555	195
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1441	1589	1337	1813	1938	1589
Adj Flow Rate, veh/h	189	506	208	328	677	241
Peak Hour Factor	0.61	0.88	0.84	0.90	0.82	0.81
Percent Heavy Veh, %	31	21	38	12	4	21
Cap, veh/h	290	424	322	1188	993	974
Arrive On Green	0.21	0.21	0.21	1.00	0.51	0.51
Sat Flow, veh/h	1372	1346	1273	1813	1938	1346
Grp Volume(v), veh/h	189	506	208	328	677	241
Grp Sat Flow(s),veh/h/ln	1372	1346	1273	1813	1938	1346
Q Serve(g_s), s	11.3	19.0	7.0	0.0	23.6	5.4
Cycle Q Clear(g_c), s	11.3	19.0	7.0	0.0	23.6	5.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	290	424	322	1188	993	974
V/C Ratio(X)	0.65	1.19	0.65	0.28	0.68	0.25
Avail Cap(c_a), veh/h	290	424	493	1188	993	974
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.41	0.41	1.00	1.00
Uniform Delay (d), s/veh	32.5	30.8	11.9	0.0	16.4	4.2
Incr Delay (d2), s/veh	7.0	107.7	0.9	0.2	3.8	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.3	43.6	2.2	0.1	14.9	4.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	39.5	138.5	12.8	0.2	20.2	4.8
LnGrp LOS	D	F	B	A	C	A
Approach Vol, veh/h	695			536	918	
Approach Delay, s/veh	111.6			5.1	16.2	
Approach LOS	F			A	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		65.0		25.0	12.9	52.1
Change Period (Y+Rc), s		6.0		6.0	3.5	6.0
Max Green Setting (Gmax), s		59.0		19.0	21.5	34.0
Max Q Clear Time (g_c+I1), s		2.0		21.0	9.0	25.6
Green Ext Time (p_c), s		7.0		0.0	0.4	6.4
Intersection Summary						
HCM 7th Control Delay, s/veh			44.3			
HCM 7th LOS			D			

HCM 7th Signalized Intersection Summary
 400: IL 53 & Kankakee River Dr/Peotone Rd

PM Peak Hour
 10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	35	20	115	30	200	15	280	245	555	330	50
Future Volume (veh/h)	40	35	20	115	30	200	15	280	245	555	330	50
Initial Q (Qb), 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		
Adj Sat Flow, veh/h/ln	1248	1722	1752	1841	1657	1381	1604	1796	1781	1663	1938	1381
Adj Flow Rate, veh/h	56	53	40	137	43	278	20	301	350	590	379	56
Peak Hour Factor	0.72	0.66	0.50	0.84	0.70	0.72	0.75	0.93	0.70	0.94	0.87	0.89
Percent Heavy Veh, %	44	12	10	4	22	35	20	7	8	16	4	35
Cap, veh/h	205	87	65	283	221	397	428	304	353	410	1151	752
Arrive On Green	0.05	0.10	0.10	0.09	0.13	0.13	0.01	0.40	0.40	0.34	0.99	0.99
Sat Flow, veh/h	1188	911	687	1753	1657	1171	1527	757	881	1584	1938	1171
Grp Volume(v), veh/h	56	0	93	137	43	278	20	0	651	590	379	56
Grp Sat Flow(s),veh/h/ln	1188	0	1598	1753	1657	1171	1527	0	1638	1584	1938	1171
Q Serve(g_s), s	3.8	0.0	5.0	6.1	2.1	12.0	0.7	0.0	35.5	18.5	0.2	0.0
Cycle Q Clear(g_c), s	3.8	0.0	5.0	6.1	2.1	12.0	0.7	0.0	35.5	18.5	0.2	0.0
Prop In Lane	1.00		0.43	1.00		1.00	1.00		0.54	1.00		1.00
Lane Grp Cap(c), veh/h	205	0	152	283	221	397	428	0	657	410	1151	752
V/C Ratio(X)	0.27	0.00	0.61	0.48	0.19	0.70	0.05	0.00	0.99	1.44	0.33	0.07
Avail Cap(c_a), veh/h	207	0	152	296	221	397	468	0	657	410	1151	752
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.47	0.47	0.47
Uniform Delay (d), s/veh	34.6	0.0	39.1	31.3	34.7	25.8	15.6	0.0	26.8	20.8	0.2	0.1
Incr Delay (d2), s/veh	0.7	0.0	10.3	1.3	0.9	6.9	0.0	0.0	32.8	204.1	0.4	0.1
Initial Q Delay(d3), 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
%ile BackOfQ(95%),veh/ln	2.0	0.0	4.3	4.4	1.5	9.1	0.4	0.0	25.0	42.8	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.3	0.0	49.4	32.6	35.6	32.7	15.7	0.0	59.6	224.9	0.5	0.2
LnGrp LOS	D		D	C	D	C	B		E	F	A	A
Approach Vol, veh/h	149			458			671			1025		
Approach Delay, s/veh	44.1			32.9			58.3			129.7		
Approach LOS	D			C			E			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.0	42.1	11.3	14.6	4.7	59.4	7.9	18.0				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green Setting (Gmax), s	18.5	36.0	8.5	8.0	3.5	51.0	4.5	12.0				
Max Q Clear Time (g_c+Q), s	20.5	37.5	8.1	7.0	2.7	2.2	5.8	14.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.0	9.3	0.0	0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh				84.1								
HCM 7th LOS				F								

Intersection												
Int Delay, s/veh	9.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	35	750	45	45	315	35	35	15	35	35	20	35
Future Vol, veh/h	35	750	45	45	315	35	35	15	35	35	20	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	56	56	56	67	67	67	10	10	10	2	2	2
Mvmt Flow	37	789	47	47	332	37	37	16	37	37	21	37

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	368	0	0	837	0	0	1324	1350	813	1316	1355	350
Stage 1	-	-	-	-	-	-	887	887	-	445	445	-
Stage 2	-	-	-	-	-	-	437	463	-	871	911	-
Critical Hdwy	4.66	-	-	4.77	-	-	7.2	6.6	6.3	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.2	5.6	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.2	5.6	-	6.12	5.52	-
Follow-up Hdwy	2.704	-	-	2.803	-	-	3.59	4.09	3.39	3.518	4.018	3.318
Pot Cap-1 Maneuver	946	-	-	577	-	-	128	145	366	135	149	693
Stage 1	-	-	-	-	-	-	328	352	-	592	575	-
Stage 2	-	-	-	-	-	-	583	551	-	346	353	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	946	-	-	577	-	-	86	120	366	89	124	693
Mov Cap-2 Maneuver	-	-	-	-	-	-	86	120	-	89	124	-
Stage 1	-	-	-	-	-	-	304	326	-	531	515	-
Stage 2	-	-	-	-	-	-	474	494	-	274	327	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.38			1.34			72.34			63.79		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	136	75	-	-	201	-	-	149
HCM Lane V/C Ratio	0.66	0.039	-	-	0.082	-	-	0.635
HCM Control Delay (s/veh)	72.3	9	0	-	11.8	0	-	63.8
HCM Lane LOS	F	A	A	-	B	A	-	F
HCM 95th %tile Q(veh)	3.6	0.1	-	-	0.3	-	-	3.5

Intersection												
Int Delay, s/veh	147.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Vol, veh/h	0	580	210	25	325	15	75	15	15	115	65	10
Future Vol, veh/h	0	580	210	25	325	15	75	15	15	115	65	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	-	290	-	-	280	-	-	280	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	81	76	58	89	67	73	58	67	56	70	50
Heavy Vehicles, %	26	18	6	3	26	78	11	0	5	23	5	0
Mvmt Flow	0	716	276	43	365	22	103	26	22	205	93	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	388	0	0	992	0	0	1352	1328	854	1192	1455	376
Stage 1	-	-	-	-	-	-	854	854	-	463	463	-
Stage 2	-	-	-	-	-	-	498	474	-	729	992	-
Critical Hdwy	4.36	-	-	4.13	-	-	7.21	6.5	6.25	7.33	6.55	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.21	5.5	-	6.33	5.55	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.21	5.5	-	6.33	5.55	-
Follow-up Hdwy	2.434	-	-	2.227	-	-	3.599	4	3.345	3.707	4.045	3.3
Pot Cap-1 Maneuver	1051	-	-	693	-	-	122	157	354	~ 149	128	675
Stage 1	-	-	-	-	-	-	341	378	-	541	559	-
Stage 2	-	-	-	-	-	-	538	561	-	383	320	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	1051	-	-	693	-	-	~ 26	147	354	~ 109	120	675
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 26	147	-	~ 109	120	-
Stage 1	-	-	-	-	-	-	341	378	-	508	525	-
Stage 2	-	-	-	-	-	-	403	526	-	334	320	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0			1.05			\$ 1103.28			\$ 353.25		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	26	202	1051	-	-	693	-	-	109	141
HCM Lane V/C Ratio	3.896	0.239	-	-	-	0.062	-	-	1.884	0.803
HCM Control Delay (s/veh)	\$ 1608.1	28.4	0	-	-	10.5	-	-	\$ 496.7	92.2
HCM Lane LOS	F	D	A	-	-	B	-	-	F	F
HCM 95th %tile Q(veh)	12.6	0.9	0	-	-	0.2	-	-	16.7	5

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	38.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	100	655	10	10	345	35	10	10	10	65	15	145
Future Vol, veh/h	100	655	10	10	345	35	10	10	10	65	15	145
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	70	70	70	74	74	74	21	21	21	26	26	26
Mvmt Flow	109	712	11	11	375	38	11	11	11	71	16	158

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	413	0	0	723	0	0	1340	1370	717	1351	1356	394
Stage 1	-	-	-	-	-	-	935	935	-	416	416	-
Stage 2	-	-	-	-	-	-	405	435	-	935	940	-
Critical Hdwy	4.8	-	-	4.84	-	-	7.31	6.71	6.41	7.36	6.76	6.46
Critical Hdwy Stg 1	-	-	-	-	-	-	6.31	5.71	-	6.36	5.76	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.31	5.71	-	6.36	5.76	-
Follow-up Hdwy	2.83	-	-	2.866	-	-	3.689	4.189	3.489	3.734	4.234	3.534
Pot Cap-1 Maneuver	859	-	-	625	-	-	118	134	399	113	133	606
Stage 1	-	-	-	-	-	-	295	320	-	569	553	-
Stage 2	-	-	-	-	-	-	586	549	-	289	312	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	859	-	-	625	-	-	59	103	399	78	103	606
Mov Cap-2 Maneuver	-	-	-	-	-	-	59	103	-	78	103	-
Stage 1	-	-	-	-	-	-	232	252	-	556	540	-
Stage 2	-	-	-	-	-	-	411	537	-	212	246	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	1.28			0.28			55.59			228.71		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	103	235	-	-	45	-	-	184
HCM Lane V/C Ratio	0.318	0.127	-	-	0.017	-	-	1.327
HCM Control Delay (s/veh)	55.6	9.8	0	-	10.9	0	-	228.7
HCM Lane LOS	F	A	A	-	B	A	-	F
HCM 95th %tile Q(veh)	1.2	0.4	-	-	0.1	-	-	14.1

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	720	5	10	355	5	5	0	0	5	5	5
Future Vol, veh/h	0	720	5	10	355	5	5	0	0	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	75	38	50	92	25	25	95	95	25	25	50
Heavy Vehicles, %	0	19	0	0	24	0	20	0	51	0	69	0
Mvmt Flow	0	960	13	20	386	20	20	0	0	20	20	10

Major/Minor	Major1		Major2		Minor1			Minor2				
Conflicting Flow All	406	0	0	973	0	0	1402	1412	967	1396	1409	396
Stage 1	-	-	-	-	-	-	967	967	-	436	436	-
Stage 2	-	-	-	-	-	-	436	446	-	960	973	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.3	6.5	6.71	7.1	7.19	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.3	5.5	-	6.1	6.19	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.3	5.5	-	6.1	6.19	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.68	4	3.759	3.5	4.621	3.3
Pot Cap-1 Maneuver	1164	-	-	717	-	-	107	139	251	120	101	658
Stage 1	-	-	-	-	-	-	284	335	-	603	481	-
Stage 2	-	-	-	-	-	-	565	577	-	311	256	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	1164	-	-	717	-	-	81	134	251	115	97	658
Mov Cap-2 Maneuver	-	-	-	-	-	-	81	134	-	115	97	-
Stage 1	-	-	-	-	-	-	284	335	-	581	463	-
Stage 2	-	-	-	-	-	-	514	557	-	311	256	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0.48	63.02	50.67
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	81	1164	-	-	84	-	-	127
HCM Lane V/C Ratio	0.246	-	-	-	0.028	-	-	0.394
HCM Control Delay (s/veh)	63	0	-	-	10.2	0	-	50.7
HCM Lane LOS	F	A	-	-	B	A	-	F
HCM 95th %tile Q(veh)	0.9	0	-	-	0.1	-	-	1.7

Intersection												
Int Delay, s/veh	40.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	100	560	5	5	310	35	0	5	5	55	15	130
Future Vol, veh/h	100	560	5	5	310	35	0	5	5	55	15	130
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	78	25	50	88	56	95	25	25	82	58	75
Heavy Vehicles, %	3	21	0	21	27	16	22	0	0	3	9	3
Mvmt Flow	125	718	20	10	352	63	0	20	20	67	26	173

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	415	0	0	738	0	0	1363	1413	728	1381	1391	384
Stage 1	-	-	-	-	-	-	978	978	-	404	404	-
Stage 2	-	-	-	-	-	-	385	435	-	978	988	-
Critical Hdwy	4.13	-	-	4.31	-	-	7.32	6.5	6.2	7.13	6.59	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.32	5.5	-	6.13	5.59	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.32	5.5	-	6.13	5.59	-
Follow-up Hdwy	2.227	-	-	2.389	-	-	3.698	4	3.3	3.527	4.081	3.327
Pot Cap-1 Maneuver	1139	-	-	788	-	-	113	139	427	121	137	662
Stage 1	-	-	-	-	-	-	277	331	-	622	587	-
Stage 2	-	-	-	-	-	-	599	584	-	300	316	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1139	-	-	788	-	-	54	111	427	78	110	662
Mov Cap-2 Maneuver	-	-	-	-	-	-	54	111	-	78	110	-
Stage 1	-	-	-	-	-	-	225	269	-	611	578	-
Stage 2	-	-	-	-	-	-	416	574	-	215	257	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	1.24			0.23			31.26			235.16		
HCM LOS							D			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	177	259	-	-	41	-	-	197
HCM Lane V/C Ratio	0.227	0.11	-	-	0.013	-	-	1.354
HCM Control Delay (s/veh)	31.3	8.6	0	-	9.6	0	-	235.2
HCM Lane LOS	D	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	0.8	0.4	-	-	0	-	-	15.2

Intersection	
Intersection Delay, s/veh	250.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	35	475	100	20	175	30	80	270	15	45	415	30
Future Vol, veh/h	35	475	100	20	175	30	80	270	15	45	415	30
Peak Hour Factor	0.88	0.93	0.78	0.75	0.75	0.67	0.88	0.83	0.58	0.47	0.91	0.71
Heavy Vehicles, %	14	24	15	13	27	16	30	9	7	16	3	3
Mvmt Flow	40	511	128	27	233	45	91	325	26	96	456	42
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	369.6	62	149.8	286.6
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	6%	9%	9%
Vol Thru, %	74%	78%	78%	85%
Vol Right, %	4%	16%	13%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	365	610	225	490
LT Vol	80	35	20	45
Through Vol	270	475	175	415
RT Vol	15	100	30	30
Lane Flow Rate	442	679	305	594
Geometry Grp	1	1	1	1
Degree of Util (X)	1.176	1.735	0.826	1.535
Departure Headway (Hd)	13.59	11.217	14.626	12.103
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	270	333	250	309
Service Time	11.59	9.217	12.626	10.103
HCM Lane V/C Ratio	1.637	2.039	1.22	1.922
HCM Control Delay, s/veh	149.8	369.6	62	286.6
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	14.1	35.4	6.5	26.4

HCM 7th TWSC
 900: I-57 SB On Ramp/I-57 SB Off Ramp & Wilmington Rd

PM Peak Hour
 10/16/2024

Intersection												
Int Delay, s/veh	106.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↖					↖		↗
Traffic Vol, veh/h	0	590	85	160	215	0	0	0	0	215	0	90
Future Vol, veh/h	0	590	85	160	215	0	0	0	0	215	0	90
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	-	-	-	150	-	-	-	-	-	0	-	185
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	91	83	78	87	25	25	95	25	77	95	91
Heavy Vehicles, %	0	18	17	7	25	0	0	0	0	6	0	17
Mvmt Flow	0	648	102	205	247	0	0	0	0	279	0	99

Major/Minor	Major1			Major2			Minor2				
Conflicting Flow All	-	0	0	751	0	0			1306	-	247
Stage 1	-	-	-	-	-	-			657	-	-
Stage 2	-	-	-	-	-	-			648	-	-
Critical Hdwy	-	-	-	4.17	-	-			6.46	-	6.37
Critical Hdwy Stg 1	-	-	-	-	-	-			5.46	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-			5.46	-	-
Follow-up Hdwy	-	-	-	2.263	-	-			3.554	-	3.453
Pot Cap-1 Maneuver	0	-	-	836	-	0			~ 173	0	756
Stage 1	0	-	-	-	-	0			508	0	-
Stage 2	0	-	-	-	-	0			513	0	-
Platoon blocked, %		-	-	-	-	-					
Mov Cap-1 Maneuver	-	-	-	836	-	-			~ 131	0	756
Mov Cap-2 Maneuver	-	-	-	-	-	-			~ 131	0	-
Stage 1	-	-	-	-	-	-			508	0	-
Stage 2	-	-	-	-	-	-			387	0	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	4.85	\$ 439.76
HCM LOS			F

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	836	-	131	756
HCM Lane V/C Ratio	-	-	0.245	-	2.137	0.131
HCM Control Delay (s/veh)	-	-	10.7	-	\$ 591.8	10.5
HCM Lane LOS	-	-	B	-	F	B
HCM 95th %tile Q(veh)	-	-	1	-	23.1	0.4

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 7th TWSC
 1000: I-57 NB Off Ramp/I-57 NB On Ramp & Wilmington Rd

PM Peak Hour
 10/16/2024

Intersection												
Int Delay, s/veh	7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↘		↖		↗			
Traffic Vol, veh/h	150	355	0	0	305	70	80	0	115	0	0	0
Future Vol, veh/h	150	355	0	0	305	70	80	0	115	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Stop	-	-	None
Storage Length	150	-	-	-	-	-	0	-	185	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	87	95	95	82	90	85	95	73	95	95	95
Heavy Vehicles, %	19	12	0	0	13	15	30	0	7	0	0	0
Mvmt Flow	188	408	0	0	372	78	94	0	158	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	450	0	0
Stage 1	-	-	783
Stage 2	-	-	372
Critical Hdwy	4.29	-	6.7
Critical Hdwy Stg 1	-	-	5.7
Critical Hdwy Stg 2	-	-	5.7
Follow-up Hdwy	2.371	-	3.77
Pot Cap-1 Maneuver	1026	0	0
Stage 1	-	0	405
Stage 2	-	0	640
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1026	-	157
Mov Cap-2 Maneuver	-	-	157
Stage 1	-	-	331
Stage 2	-	-	640

Approach	EB	WB	NB
HCM Control Delay, s/v	2.92	0	29.4
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	157	633	1026	-	-	-
HCM Lane V/C Ratio	0.6	0.249	0.183	-	-	-
HCM Control Delay (s/veh)	57.6	12.6	9.3	-	-	-
HCM Lane LOS	F	B	A	-	-	-
HCM 95th %tile Q(veh)	3.2	1	0.7	-	-	-

Intersection	
Intersection Delay, s/veh	21.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↶	↷		↶	↷			↶↷			↶↷	
Traffic Vol, veh/h	205	40	65	5	50	0	85	295	5	0	255	240
Future Vol, veh/h	205	40	65	5	50	0	85	295	5	0	255	240
Peak Hour Factor	0.84	0.67	0.83	0.38	0.60	0.95	0.74	0.93	1.00	0.95	0.87	0.80
Heavy Vehicles, %	14	64	36	0	37	0	32	8	0	0	10	10
Mvmt Flow	244	60	78	13	83	0	115	317	5	0	293	300
Number of Lanes	1	1	0	1	1	0	0	2	0	0	2	0

Approach	EB	WB	NE	SW
Opposing Approach	WB	EB	SW	NE
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SW	NE	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NE	SW	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay, s/veh	20	14.4	20.4	24.9
HCM LOS	C	B	C	C

Lane	NELn1	NELn2	EBLn1	EBLn2	WBLn1	WBLn2	SWLn1	SWLn2
Vol Left, %	37%	0%	100%	0%	100%	0%	0%	0%
Vol Thru, %	63%	97%	0%	38%	0%	100%	100%	26%
Vol Right, %	0%	3%	0%	62%	0%	0%	0%	74%
Sign Control	Stop							
Traffic Vol by Lane	233	153	205	105	5	50	170	325
LT Vol	85	0	205	0	5	0	0	0
Through Vol	148	148	0	40	0	50	170	85
RT Vol	0	5	0	65	0	0	0	240
Lane Flow Rate	273	164	244	138	13	83	195	398
Geometry Grp	5	5	5	5	5	5	5	5
Degree of Util (X)	0.628	0.347	0.581	0.325	0.034	0.216	0.408	0.771
Departure Headway (Hd)	8.261	7.631	8.567	8.481	9.182	9.316	7.511	6.981
Convergence, Y/N	Yes							
Cap	438	471	422	424	389	385	479	517
Service Time	6.016	5.385	6.321	6.235	6.95	7.084	5.263	4.733
HCM Lane V/C Ratio	0.623	0.348	0.578	0.325	0.033	0.216	0.407	0.77
HCM Control Delay, s/veh	24	14.4	22.6	15.3	12.3	14.7	15.4	29.6
HCM Lane LOS	C	B	C	C	B	B	C	D
HCM 95th-tile Q	4.2	1.5	3.6	1.4	0.1	0.8	2	6.9

Intersection												
Int Delay, s/veh	4.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	335	45	45	315	35	35	15	35	35	20	35
Future Vol, veh/h	35	335	45	45	315	35	35	15	35	35	20	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	56	56	56	67	67	67	10	10	10	2	2	2
Mvmt Flow	37	353	47	47	332	37	37	16	37	37	21	37

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	368	0	0	400	0	0	887	913	376	879	918	350
Stage 1	-	-	-	-	-	-	450	450	-	445	445	-
Stage 2	-	-	-	-	-	-	437	463	-	434	474	-
Critical Hdwy	4.66	-	-	4.77	-	-	7.2	6.6	6.3	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.2	5.6	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.2	5.6	-	6.12	5.52	-
Follow-up Hdwy	2.704	-	-	2.803	-	-	3.59	4.09	3.39	3.518	4.018	3.318
Pot Cap-1 Maneuver	946	-	-	880	-	-	256	265	653	268	271	693
Stage 1	-	-	-	-	-	-	573	558	-	592	575	-
Stage 2	-	-	-	-	-	-	583	551	-	600	558	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	946	-	-	880	-	-	203	241	653	216	247	693
Mov Cap-2 Maneuver	-	-	-	-	-	-	203	241	-	216	247	-
Stage 1	-	-	-	-	-	-	551	537	-	561	544	-
Stage 2	-	-	-	-	-	-	502	521	-	528	536	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.76			1.06			22.4			21.89		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	295	946	-	-	880	-	-	307
HCM Lane V/C Ratio	0.303	0.039	-	-	0.054	-	-	0.309
HCM Control Delay (s/veh)	22.4	9	-	-	9.3	-	-	21.9
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1.2	0.1	-	-	0.2	-	-	1.3

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	100	320	10	10	305	40	10	10	10	25	10	40
Future Vol, veh/h	100	320	10	10	305	40	10	10	10	25	10	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	70	70	70	74	74	74	21	21	21	26	26	26
Mvmt Flow	109	348	11	11	332	43	11	11	11	27	11	43

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	375	0	0	359	0	0	929	967	353	946	951	353
Stage 1	-	-	-	-	-	-	571	571	-	375	375	-
Stage 2	-	-	-	-	-	-	359	397	-	571	576	-
Critical Hdwy	4.8	-	-	4.84	-	-	7.31	6.71	6.41	7.36	6.76	6.46
Critical Hdwy Stg 1	-	-	-	-	-	-	6.31	5.71	-	6.36	5.76	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.31	5.71	-	6.36	5.76	-
Follow-up Hdwy	2.83	-	-	2.866	-	-	3.689	4.189	3.489	3.734	4.234	3.534
Pot Cap-1 Maneuver	891	-	-	892	-	-	229	236	650	219	237	640
Stage 1	-	-	-	-	-	-	474	476	-	600	577	-
Stage 2	-	-	-	-	-	-	622	572	-	466	466	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	891	-	-	892	-	-	177	205	650	178	205	640
Mov Cap-2 Maneuver	-	-	-	-	-	-	177	205	-	178	205	-
Stage 1	-	-	-	-	-	-	416	418	-	593	570	-
Stage 2	-	-	-	-	-	-	562	565	-	392	409	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	2.23			0.26			21.68			21.57		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	248	891	-	-	892	-	-	298
HCM Lane V/C Ratio	0.131	0.122	-	-	0.012	-	-	0.274
HCM Control Delay (s/veh)	21.7	9.6	-	-	9.1	-	-	21.6
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.4	0.4	-	-	0	-	-	1.1

Intersection						
Int Delay, s/veh	7.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑	↗		↘	
Traffic Vol, veh/h	5	10	0	90	235	0
Future Vol, veh/h	5	10	0	90	235	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	25	63	75	69	85	42
Heavy Vehicles, %	0	0	0	16	27	0
Mvmt Flow	20	16	0	130	276	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	130	0	-	0	121 65
Stage 1	-	-	-	-	65 -
Stage 2	-	-	-	-	56 -
Critical Hdwy	4.1	-	-	-	6.67 6.2
Critical Hdwy Stg 1	-	-	-	-	5.67 -
Critical Hdwy Stg 2	-	-	-	-	5.67 -
Follow-up Hdwy	2.2	-	-	-	3.743 3.3
Pot Cap-1 Maneuver	1467	-	-	-	818 1004
Stage 1	-	-	-	-	898 -
Stage 2	-	-	-	-	907 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1467	-	-	-	807 1004
Mov Cap-2 Maneuver	-	-	-	-	807 -
Stage 1	-	-	-	-	885 -
Stage 2	-	-	-	-	907 -

Approach	EB	WB	SB
HCM Control Delay, s/v	4.17	0	11.77
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1467	-	-	-	807
HCM Lane V/C Ratio	0.014	-	-	-	0.343
HCM Control Delay (s/veh)	7.5	-	-	-	11.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	1.5

HCM 7th Signalized Intersection Summary
 200: River Rd & I-55 NB Ramps

AM Peak Hour
 10/16/2024



Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	70	10	5	390	95	295
Future Volume (veh/h)	70	10	5	390	95	295
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1633	1900	1826	1579	1678	1678
Adj Flow Rate, veh/h	93	17	5	443	130	335
Peak Hour Factor	0.75	0.58	1.00	0.88	0.73	0.88
Percent Heavy Veh, %	18	0	5	27	15	15
Cap, veh/h	125	23	371	842	175	451
Arrive On Green	0.10	0.10	0.00	0.53	0.42	0.42
Sat Flow, veh/h	1280	234	1739	1579	415	1070
Grp Volume(v), veh/h	111	0	5	443	0	465
Grp Sat Flow(s),veh/h/ln	1527	0	1739	1579	0	1485
Q Serve(g_s), s	2.3	0.0	0.0	5.9	0.0	8.6
Cycle Q Clear(g_c), s	2.3	0.0	0.0	5.9	0.0	8.6
Prop In Lane	0.84	0.15	1.00			0.72
Lane Grp Cap(c), veh/h	149	0	371	842	0	626
V/C Ratio(X)	0.75	0.00	0.01	0.53	0.00	0.74
Avail Cap(c_a), veh/h	846	0	552	2916	0	2423
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.3	0.0	6.0	4.9	0.0	7.9
Incr Delay (d2), s/veh	7.2	0.0	0.0	0.5	0.0	1.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	0.0	0.0	0.7	0.0	2.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	21.5	0.0	6.0	5.4	0.0	9.7
LnGrp LOS	C		A	A		A
Approach Vol, veh/h	111			448	465	
Approach Delay, s/veh	21.5			5.4	9.7	
Approach LOS	C			A	A	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	3.6	19.7		9.2		23.3
Change Period (Y+Rc), s	3.5	6.0		6.0		6.0
Max Green Setting (Gmax), s	3.5	53.0		18.0		60.0
Max Q Clear Time (g_c+I1), s	2.0	10.6		4.3		7.9
Green Ext Time (p_c), s	0.0	3.1		0.2		2.7
Intersection Summary						
HCM 7th Control Delay, s/veh			9.1			
HCM 7th LOS			A			

HCM 7th Signalized Intersection Summary
300: IL 53 & River Rd

AM Peak Hour
10/16/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	140	210	225	365	180	45
Future Volume (veh/h)	140	210	225	365	180	45
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1544	1381	1663	1953	1766	1189
Adj Flow Rate, veh/h	165	244	312	468	228	60
Peak Hour Factor	0.85	0.86	0.72	0.78	0.79	0.75
Percent Heavy Veh, %	24	35	16	3	15	48
Cap, veh/h	232	543	732	1384	997	728
Arrive On Green	0.16	0.16	0.11	0.71	0.56	0.56
Sat Flow, veh/h	1471	2060	1584	1953	1766	1007
Grp Volume(v), veh/h	165	244	312	468	228	60
Grp Sat Flow(s),veh/h/ln	1471	1030	1584	1953	1766	1007
Q Serve(g_s), s	9.6	8.9	6.8	8.3	5.8	1.6
Cycle Q Clear(g_c), s	9.6	8.9	6.8	8.3	5.8	1.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	232	543	732	1384	997	728
V/C Ratio(X)	0.71	0.45	0.43	0.34	0.23	0.08
Avail Cap(c_a), veh/h	425	813	926	1384	997	728
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.9	27.7	5.8	5.0	9.8	3.7
Incr Delay (d2), s/veh	8.3	1.2	0.4	0.7	0.5	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.7	9.2	2.9	4.3	3.6	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	44.2	28.9	6.2	5.7	10.3	3.9
LnGrp LOS	D	C	A	A	B	A
Approach Vol, veh/h	409			780	288	
Approach Delay, s/veh	35.1			5.9	9.0	
Approach LOS	D			A	A	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		69.8		20.2	13.0	56.8
Change Period (Y+Rc), s		6.0		6.0	3.5	6.0
Max Green Setting (Gmax), s		52.0		26.0	20.5	28.0
Max Q Clear Time (g_c+I1), s		10.3		11.6	8.8	7.8
Green Ext Time (p_c), s		10.2		2.6	0.7	4.0
Intersection Summary						
HCM 7th Control Delay, s/veh			14.6			
HCM 7th LOS			B			

HCM 7th Signalized Intersection Summary
 400: IL 53 & Kankakee River Dr/Peotone Rd

AM Peak Hour
 10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	45	25	80	25	295	30	335	135	225	115	40
Future Volume (veh/h)	45	45	25	80	25	295	30	335	135	225	115	40
Initial Q (Qb), 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										
Adj Sat Flow, veh/h/ln	1455	1663	1796	1737	1704	1707	1841	1870	1826	1470	1766	1263
Adj Flow Rate, veh/h	87	105	37	90	46	404	68	399	175	271	139	56
Peak Hour Factor	0.52	0.43	0.68	0.89	0.54	0.73	0.44	0.84	0.77	0.83	0.83	0.71
Percent Heavy Veh, %	30	16	7	11	19	13	4	2	5	29	15	43
Cap, veh/h	268	189	67	271	265	717	658	826	776	447	939	640
Arrive On Green	0.07	0.16	0.16	0.06	0.16	0.16	0.04	0.44	0.44	0.13	0.53	0.53
Sat Flow, veh/h	1386	1175	414	1654	1704	2547	1753	1870	1547	1400	1766	1070
Grp Volume(v), veh/h	87	0	142	90	46	404	68	399	175	271	139	56
Grp Sat Flow(s),veh/h/ln	1386	0	1588	1654	1704	1273	1753	1870	1547	1400	1766	1070
Q Serve(g_s), s	4.7	0.0	7.4	4.1	2.1	12.2	1.9	13.6	5.7	8.9	3.6	2.0
Cycle Q Clear(g_c), s	4.7	0.0	7.4	4.1	2.1	12.2	1.9	13.6	5.7	8.9	3.6	2.0
Prop In Lane	1.00		0.26	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	268	0	256	271	265	717	658	826	776	447	939	640
V/C Ratio(X)	0.32	0.00	0.55	0.33	0.17	0.56	0.10	0.48	0.23	0.61	0.15	0.09
Avail Cap(c_a), veh/h	292	0	265	291	265	717	664	826	776	559	939	640
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
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	0.0	34.8	29.5	33.0	27.6	12.8	17.9	12.6	11.7	10.7	7.7
Incr Delay (d2), s/veh	0.7	0.0	4.3	0.7	0.7	1.7	0.1	2.0	0.7	1.3	0.3	0.3
Initial Q Delay(d3), 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
%ile BackOfQ(95%),veh/ln	2.8	0.0	5.6	2.8	1.5	6.3	1.2	9.5	3.3	4.3	2.4	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.8	0.0	39.1	30.3	33.6	29.3	12.9	19.9	13.3	13.0	11.0	7.9
LnGrp LOS	C		D	C	C	C	B	B	B	B	B	A
Approach Vol, veh/h		229			540			642			466	
Approach Delay, s/veh		35.5			29.8			17.3			11.8	
Approach LOS		D			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.8	45.7	8.9	20.5	6.7	53.9	9.4	20.0				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green Setting (Gmax), s	10.5	31.0	6.5	15.0	3.5	46.0	7.5	14.0				
Max Q Clear Time (g_c+110), s	10.5	15.6	6.1	9.4	3.9	5.6	6.7	14.2				
Green Ext Time (p_c), s	0.5	6.9	0.0	0.5	0.0	3.3	0.0	0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh			21.8									
HCM 7th LOS			C									

HCM 7th Signalized Intersection Summary
 500: Old Chicago Rd & Peotone Rd

AM Peak Hour
 10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	300	105	5	285	80	150	45	20	25	5	0
Future Volume (veh/h)	0	300	105	5	285	80	150	45	20	25	5	0
Initial Q (Qb), 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										
Adj Sat Flow, veh/h/ln	1129	1559	1752	1900	1633	1470	1841	1856	1900	566	1722	1900
Adj Flow Rate, veh/h	0	345	127	10	370	104	214	76	48	33	7	0
Peak Hour Factor	0.95	0.87	0.83	0.50	0.77	0.77	0.70	0.59	0.42	0.75	0.75	0.95
Percent Heavy Veh, %	52	23	10	0	18	29	4	3	0	90	12	0
Cap, veh/h	249	580	750	329	545	153	550	260	164	198	233	0
Arrive On Green	0.00	0.37	0.37	0.01	0.44	0.44	0.13	0.24	0.24	0.02	0.14	0.00
Sat Flow, veh/h	1076	1559	1485	1810	1226	345	1753	1063	671	539	1722	0
Grp Volume(v), veh/h	0	345	127	10	0	474	214	0	124	33	7	0
Grp Sat Flow(s),veh/h/ln	1076	1559	1485	1810	0	1571	1753	0	1735	539	1722	0
Q Serve(g_s), s	0.0	9.6	2.5	0.2	0.0	13.0	5.2	0.0	3.1	1.3	0.2	0.0
Cycle Q Clear(g_c), s	0.0	9.6	2.5	0.2	0.0	13.0	5.2	0.0	3.1	1.3	0.2	0.0
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.39	1.00		0.00
Lane Grp Cap(c), veh/h	249	580	750	329	0	699	550	0	425	198	233	0
V/C Ratio(X)	0.00	0.59	0.17	0.03	0.00	0.68	0.39	0.00	0.29	0.17	0.03	0.00
Avail Cap(c_a), veh/h	317	1269	1406	432	0	1279	754	0	578	240	319	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
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	13.7	7.2	10.5	0.0	11.9	14.9	0.0	16.6	20.5	20.3	0.0
Incr Delay (d2), s/veh	0.0	4.4	0.5	0.0	0.0	5.2	0.5	0.0	0.8	0.4	0.1	0.0
Initial Q Delay(d3), 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
%ile BackOfQ(95%),veh/ln	0.0	5.6	1.0	0.1	0.0	7.1	2.9	0.0	1.9	0.6	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	18.1	7.7	10.5	0.0	17.2	15.3	0.0	17.4	20.9	20.4	0.0
LnGrp LOS		B	A	B		B	B		B	C	C	
Approach Vol, veh/h		472			484			338			40	
Approach Delay, s/veh		15.3			17.0			16.1			20.8	
Approach LOS		B			B			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.8	19.2	3.9	26.1	10.7	13.3	0.0	30.0				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green Setting (Gmax), s	5.5	18.0	3.5	44.0	13.5	10.0	3.5	44.0				
Max Q Clear Time (g_c+1), s	13.3	5.1	2.2	11.6	7.2	2.2	0.0	15.0				
Green Ext Time (p_c), s	0.0	0.7	0.0	8.3	0.3	0.0	0.0	9.1				
Intersection Summary												
HCM 7th Control Delay, s/veh			16.3									
HCM 7th LOS			B									

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	345	5	0	360	0	5	0	5	5	0	0
Future Vol, veh/h	0	345	5	0	360	0	5	0	5	5	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	86	50	95	87	95	25	95	25	50	95	95
Heavy Vehicles, %	0	25	0	100	24	0	17	0	60	0	0	0
Mvmt Flow	0	401	10	0	414	0	20	0	20	10	0	0

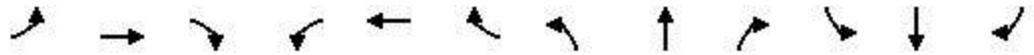
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	414	0	0	411	0	0	820	820	406	815	825	414
Stage 1	-	-	-	-	-	-	406	406	-	414	414	-
Stage 2	-	-	-	-	-	-	414	414	-	401	411	-
Critical Hdwy	4.1	-	-	5.1	-	-	7.27	6.5	6.8	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.27	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.27	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	3.1	-	-	3.653	4	3.84	3.5	4	3.3
Pot Cap-1 Maneuver	1156	-	-	770	-	-	277	312	536	299	310	643
Stage 1	-	-	-	-	-	-	593	601	-	620	597	-
Stage 2	-	-	-	-	-	-	587	597	-	629	598	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1156	-	-	770	-	-	277	312	536	287	310	643
Mov Cap-2 Maneuver	-	-	-	-	-	-	277	312	-	287	310	-
Stage 1	-	-	-	-	-	-	593	601	-	620	597	-
Stage 2	-	-	-	-	-	-	587	597	-	606	598	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0			0			16.06			17.98		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	365	1156	-	-	770	-	-	287
HCM Lane V/C Ratio	0.109	-	-	-	-	-	-	0.035
HCM Control Delay (s/veh)	16.1	0	-	-	0	-	-	18
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	0.1

HCM 7th Signalized Intersection Summary
700: Cedar Rd & Wilmington Rd

AM Peak Hour
10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	275	0	0	275	40	0	5	0	20	0	40
Future Volume (veh/h)	100	275	0	0	275	40	0	5	0	20	0	40
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1856	1530	1900	1900	1530	1530	1900	1900	1900	1544	1900	1767
Adj Flow Rate, veh/h	132	357	0	0	387	62	0	13	0	20	0	67
Peak Hour Factor	0.76	0.77	0.95	0.95	0.71	0.64	0.95	0.38	0.95	1.00	0.95	0.60
Percent Heavy Veh, %	3	25	0	0	25	25	0	0	0	24	0	9
Cap, veh/h	500	938	0	652	607	97	0	239	0	126	17	155
Arrive On Green	0.07	0.61	0.00	0.00	0.47	0.47	0.00	0.13	0.00	0.13	0.00	0.13
Sat Flow, veh/h	1767	1530	0	1810	1286	206	0	1900	0	234	133	1232
Grp Volume(v), veh/h	132	357	0	0	0	449	0	13	0	87	0	0
Grp Sat Flow(s),veh/h/ln	1767	1530	0	1810	0	1492	0	1900	0	1600	0	0
Q Serve(g_s), s	1.6	5.4	0.0	0.0	0.0	10.4	0.0	0.3	0.0	0.2	0.0	0.0
Cycle Q Clear(g_c), s	1.6	5.4	0.0	0.0	0.0	10.4	0.0	0.3	0.0	2.2	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.14	0.00		0.00	0.23		0.77
Lane Grp Cap(c), veh/h	500	938	0	652	0	704	0	239	0	297	0	0
V/C Ratio(X)	0.26	0.38	0.00	0.00	0.00	0.64	0.00	0.05	0.00	0.29	0.00	0.00
Avail Cap(c_a), veh/h	712	1766	0	786	0	1561	0	745	0	714	0	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
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.3	4.5	0.0	0.0	0.0	9.2	0.0	17.7	0.0	18.5	0.0	0.0
Incr Delay (d2), s/veh	0.3	1.2	0.0	0.0	0.0	4.4	0.0	0.2	0.0	1.2	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	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	1.3	0.0	0.0	0.0	4.7	0.0	0.2	0.0	1.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	6.6	5.7	0.0	0.0	0.0	13.6	0.0	17.9	0.0	19.7	0.0	0.0
LnGrp LOS	A	A				B		B		B		
Approach Vol, veh/h		489			449			13				87
Approach Delay, s/veh		5.9			13.6			17.9				19.7
Approach LOS		A			B			B				B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.8	0.0	34.1		11.8	6.5	27.6				
Change Period (Y+Rc), s		6.0	3.5	6.0		6.0	3.5	6.0				
Max Green Setting (Gmax), s		18.0	3.5	53.0		18.0	8.5	48.0				
Max Q Clear Time (g_c+I1), s		2.3	0.0	7.4		4.2	3.6	12.4				
Green Ext Time (p_c), s		0.0	0.0	7.4		0.5	0.1	9.2				
Intersection Summary												
HCM 7th Control Delay, s/veh			10.5									
HCM 7th LOS			B									

HCM 7th Signalized Intersection Summary
800: US 52 & Wilmington Rd

AM Peak Hour
10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	25	210	55	15	185	25	75	280	10	35	220	15
Future Volume (veh/h)	25	210	55	15	185	25	75	280	10	35	220	15
Initial Q (Qb), 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										
Adj Sat Flow, veh/h/ln	1811	1515	1530	1900	1455	1767	1589	1841	1900	1574	1678	1796
Adj Flow Rate, veh/h	35	262	58	20	272	39	104	326	20	64	293	22
Peak Hour Factor	0.71	0.80	0.95	0.75	0.68	0.64	0.72	0.86	0.50	0.55	0.75	0.67
Percent Heavy Veh, %	6	26	25	0	30	9	21	4	0	22	15	7
Cap, veh/h	257	353	78	259	356	51	336	531	33	320	437	33
Arrive On Green	0.02	0.29	0.29	0.01	0.29	0.29	0.07	0.31	0.31	0.04	0.28	0.28
Sat Flow, veh/h	1725	1201	266	1810	1245	178	1513	1716	105	1499	1541	116
Grp Volume(v), veh/h	35	0	320	20	0	311	104	0	346	64	0	315
Grp Sat Flow(s),veh/h/ln	1725	0	1467	1810	0	1423	1513	0	1822	1499	0	1657
Q Serve(g_s), s	0.8	0.0	11.0	0.4	0.0	11.1	2.7	0.0	9.0	1.7	0.0	9.4
Cycle Q Clear(g_c), s	0.8	0.0	11.0	0.4	0.0	11.1	2.7	0.0	9.0	1.7	0.0	9.4
Prop In Lane	1.00		0.18	1.00		0.13	1.00		0.06	1.00		0.07
Lane Grp Cap(c), veh/h	257	0	431	259	0	407	336	0	564	320	0	470
V/C Ratio(X)	0.14	0.00	0.74	0.08	0.00	0.76	0.31	0.00	0.61	0.20	0.00	0.67
Avail Cap(c_a), veh/h	326	0	816	347	0	791	410	0	1046	379	0	892
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
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.8	0.0	17.8	14.8	0.0	18.2	13.5	0.0	16.4	13.8	0.0	17.7
Incr Delay (d2), s/veh	0.2	0.0	5.3	0.1	0.0	6.3	0.5	0.0	4.9	0.3	0.0	7.4
Initial Q Delay(d3), 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
%ile BackOfQ(95%),veh/ln	0.5	0.0	6.2	0.3	0.0	6.3	1.3	0.0	6.5	0.8	0.0	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	15.0	0.0	23.1	14.9	0.0	24.5	14.0	0.0	21.3	14.1	0.0	25.1
LnGrp LOS	B		C	B		C	B		C	B		C
Approach Vol, veh/h		355			331			450			379	
Approach Delay, s/veh		22.3			23.9			19.7			23.3	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.8	23.2	4.3	22.4	7.3	21.8	4.8	21.9				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green Setting (Gmax), s	4.5	32.0	3.5	31.0	6.5	30.0	3.5	31.0				
Max Q Clear Time (g_c+1), s	13.5	11.0	2.4	13.0	4.7	11.4	2.8	13.1				
Green Ext Time (p_c), s	0.0	5.2	0.0	2.9	0.0	4.4	0.0	2.8				
Intersection Summary												
HCM 7th Control Delay, s/veh			22.1									
HCM 7th LOS			C									

HCM 7th Signalized Intersection Summary
 900: I-57 SB On Ramp/I-57 SB Off Ramp & Wilmington Rd

AM Peak Hour
 10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻		↻	↻					↻		↻
Traffic Volume (veh/h)	0	245	65	100	295	0	0	0	0	80	0	110
Future Volume (veh/h)	0	245	65	100	295	0	0	0	0	80	0	110
Initial Q (Qb), 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		
Adj Sat Flow, veh/h/ln	0	1618	1396	1767	1648	0				1618	0	1411
Adj Flow Rate, veh/h	0	285	81	118	331	0				98	0	151
Peak Hour Factor	0.95	0.86	0.80	0.85	0.89	0.95				0.82	0.95	0.73
Percent Heavy Veh, %	0	19	34	9	17	0				19	0	33
Cap, veh/h	0	472	134	468	881	0				296	0	229
Arrive On Green	0.00	0.39	0.39	0.07	0.53	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	1212	344	1682	1648	0				1541	0	1196
Grp Volume(v), veh/h	0	0	366	118	331	0				98	0	151
Grp Sat Flow(s),veh/h/ln	0	0	1556	1682	1648	0				1541	0	1196
Q Serve(g_s), s	0.0	0.0	8.2	1.7	5.1	0.0				2.4	0.0	5.1
Cycle Q Clear(g_c), s	0.0	0.0	8.2	1.7	5.1	0.0				2.4	0.0	5.1
Prop In Lane	0.00		0.22	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	0	606	468	881	0				296	0	229
V/C Ratio(X)	0.00	0.00	0.60	0.25	0.38	0.00				0.33	0.00	0.66
Avail Cap(c_a), veh/h	0	0	1383	684	1916	0				948	0	736
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	10.7	7.2	5.9	0.0				15.3	0.0	16.4
Incr Delay (d2), s/veh	0.0	0.0	4.4	0.3	1.2	0.0				1.4	0.0	6.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/lr	0.0	0.0	4.7	0.6	2.1	0.0				1.5	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	15.1	7.5	7.2	0.0				16.7	0.0	23.1
LnGrp LOS			B	A	A					B		C
Approach Vol, veh/h		366			449						249	
Approach Delay, s/veh		15.1			7.3						20.6	
Approach LOS		B			A						C	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			6.4	23.1		14.4		29.5				
Change Period (Y+Rc), s			3.5	6.0		6.0		6.0				
Max Green Setting (Gmax), s			8.5	39.0		27.0		51.0				
Max Q Clear Time (g_c+I1), s			3.7	10.2		7.1		7.1				
Green Ext Time (p_c), s			0.1	6.9		1.7		6.9				
Intersection Summary												
HCM 7th Control Delay, s/veh			13.1									
HCM 7th LOS			B									

HCM 7th Signalized Intersection Summary
 1000: I-57 NB Off Ramp/I-57 NB On Ramp & Wilmington Rd

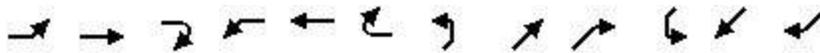
AM Peak Hour
 10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	155	0	0	305	110	105	0	100	0	0	0
Future Volume (veh/h)	50	155	0	0	305	110	105	0	100	0	0	0
Initial Q (Qb), 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					
Adj Sat Flow, veh/h/ln	1604	1618	0	0	1693	1796	1663	0	1752			
Adj Flow Rate, veh/h	69	161	0	0	328	128	146	0	149			
Peak Hour Factor	0.72	0.96	0.95	0.95	0.93	0.86	0.72	0.95	0.67			
Percent Heavy Veh, %	20	19	0	0	14	7	16	0	10			
Cap, veh/h	411	930	0	0	535	209	270	0	253			
Arrive On Green	0.04	0.57	0.00	0.00	0.46	0.46	0.17	0.00	0.17			
Sat Flow, veh/h	1527	1618	0	0	1159	452	1584	0	1485			
Grp Volume(v), veh/h	69	161	0	0	0	456	146	0	149			
Grp Sat Flow(s),veh/h/ln	1527	1618	0	0	0	1611	1584	0	1485			
Q Serve(g_s), s	1.0	2.2	0.0	0.0	0.0	10.0	4.0	0.0	4.4			
Cycle Q Clear(g_c), s	1.0	2.2	0.0	0.0	0.0	10.0	4.0	0.0	4.4			
Prop In Lane	1.00		0.00	0.00		0.28	1.00		1.00			
Lane Grp Cap(c), veh/h	411	930	0	0	0	744	270	0	253			
V/C Ratio(X)	0.17	0.17	0.00	0.00	0.00	0.61	0.54	0.00	0.59			
Avail Cap(c_a), veh/h	531	1928	0	0	0	1610	741	0	695			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	6.8	4.7	0.0	0.0	0.0	9.5	17.8	0.0	18.0			
Incr Delay (d2), s/veh	0.2	0.4	0.0	0.0	0.0	3.8	3.6	0.0	4.6			
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	0.3	0.8	0.0	0.0	0.0	5.4	2.8	0.0	3.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	7.0	5.1	0.0	0.0	0.0	13.3	21.4	0.0	22.6			
LnGrp LOS	A	A				B	C		C			
Approach Vol, veh/h		230			456			295				
Approach Delay, s/veh		5.7			13.3			22.0				
Approach LOS		A			B			C				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		14.0		33.0			5.3	27.7				
Change Period (Y+Rc), s		6.0		6.0			3.5	6.0				
Max Green Setting (Gmax), s		22.0		56.0			5.5	47.0				
Max Q Clear Time (g_c+I1), s		6.4		4.2			3.0	12.0				
Green Ext Time (p_c), s		1.8		3.1			0.0	9.7				
Intersection Summary												
HCM 7th Control Delay, s/veh				14.1								
HCM 7th LOS				B								

HCM 7th Signalized Intersection Summary
1100: IL 50 & Wilmington Rd

AM Peak Hour
10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	150	25	35	0	55	10	55	235	5	5	110	205
Future Volume (veh/h)	150	25	35	0	55	10	55	235	5	5	110	205
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1722	1381	1530	1900	1515	1900	1441	1781	1604	1900	1693	1737
Adj Flow Rate, veh/h	183	33	48	0	90	20	66	297	20	20	125	236
Peak Hour Factor	0.82	0.75	0.73	0.95	0.61	0.50	0.83	0.79	0.25	0.25	0.88	0.87
Percent Heavy Veh, %	12	35	25	0	26	0	31	8	20	0	14	11
Cap, veh/h	440	174	253	348	179	40	335	1068	72	455	485	433
Arrive On Green	0.12	0.34	0.34	0.00	0.15	0.15	0.04	0.33	0.33	0.01	0.30	0.30
Sat Flow, veh/h	1640	509	740	1810	1200	267	1372	3219	216	1810	1608	1434
Grp Volume(v), veh/h	183	0	81	0	0	110	66	155	162	20	125	236
Grp Sat Flow(s),veh/h/ln	1640	0	1248	1810	0	1467	1372	1692	1743	1810	1608	1434
Q Serve(g_s), s	4.3	0.0	2.3	0.0	0.0	3.4	1.6	3.4	3.4	0.4	2.9	6.8
Cycle Q Clear(g_c), s	4.3	0.0	2.3	0.0	0.0	3.4	1.6	3.4	3.4	0.4	2.9	6.8
Prop In Lane	1.00		0.59	1.00		0.18	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	440	0	427	348	0	219	335	561	578	455	485	433
V/C Ratio(X)	0.42	0.00	0.19	0.00	0.00	0.50	0.20	0.28	0.28	0.04	0.26	0.55
Avail Cap(c_a), veh/h	751	0	778	472	0	561	536	1089	1122	593	873	779
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
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.6	0.0	11.5	0.0	0.0	19.4	11.7	12.2	12.2	11.8	13.1	14.5
Incr Delay (d2), s/veh	0.6	0.0	0.5	0.0	0.0	3.8	0.3	1.2	1.2	0.0	1.3	4.9
Initial Q Delay(d3), 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
%ile BackOfQ(95%),veh/ln	2.3	0.0	1.0	0.0	0.0	2.2	0.8	2.2	2.2	0.2	1.8	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	14.2	0.0	12.0	0.0	0.0	23.2	12.0	13.5	13.4	11.8	14.4	19.4
LnGrp LOS	B		B			C	B	B	B	B	B	B
Approach Vol, veh/h		264			110			383			381	
Approach Delay, s/veh		13.5			23.2			13.2			17.4	
Approach LOS		B			C			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.2	22.5	0.0	23.0	5.7	21.0	9.6	13.4				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green Setting (Gmax), s	4.5	32.0	3.5	31.0	9.5	27.0	15.5	19.0				
Max Q Clear Time (g_c+1), s	12.4	5.4	0.0	4.3	3.6	8.8	6.3	5.4				
Green Ext Time (p_c), s	0.0	5.3	0.0	0.7	0.1	5.3	0.3	0.7				
Intersection Summary												
HCM 7th Control Delay, s/veh			15.6									
HCM 7th LOS			B									

Intersection												
Int Delay, s/veh	30.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	100	655	10	10	345	35	10	10	10	65	15	145
Future Vol, veh/h	100	655	10	10	345	35	10	10	10	65	15	145
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	70	70	70	74	74	74	21	21	21	26	26	26
Mvmt Flow	109	712	11	11	375	38	11	11	11	71	16	158

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	413	0	0	723	0	0	1340	1370	717	1351	1356	394
Stage 1	-	-	-	-	-	-	935	935	-	416	416	-
Stage 2	-	-	-	-	-	-	405	435	-	935	940	-
Critical Hdwy	4.8	-	-	4.84	-	-	7.31	6.71	6.41	7.36	6.76	6.46
Critical Hdwy Stg 1	-	-	-	-	-	-	6.31	5.71	-	6.36	5.76	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.31	5.71	-	6.36	5.76	-
Follow-up Hdwy	2.83	-	-	2.866	-	-	3.689	4.189	3.489	3.734	4.234	3.534
Pot Cap-1 Maneuver	859	-	-	625	-	-	118	134	399	113	133	606
Stage 1	-	-	-	-	-	-	295	320	-	569	553	-
Stage 2	-	-	-	-	-	-	586	549	-	289	312	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	859	-	-	625	-	-	66	115	399	87	114	606
Mov Cap-2 Maneuver	-	-	-	-	-	-	66	115	-	87	114	-
Stage 1	-	-	-	-	-	-	257	280	-	559	543	-
Stage 2	-	-	-	-	-	-	413	540	-	236	273	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	1.28			0.28			49.05			182		
HCM LOS							E			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	113	859	-	-	625	-	-	201
HCM Lane V/C Ratio	0.287	0.127	-	-	0.017	-	-	1.217
HCM Control Delay (s/veh)	49	9.8	-	-	10.9	-	-	182
HCM Lane LOS	E	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	1.1	0.4	-	-	0.1	-	-	12.7

Intersection												
Int Delay, s/veh	8.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	750	45	45	315	35	35	15	35	35	20	35
Future Vol, veh/h	35	750	45	45	315	35	35	15	35	35	20	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	56	56	56	67	67	67	10	10	10	2	2	2
Mvmt Flow	37	789	47	47	332	37	37	16	37	37	21	37

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	368	0	0	837	0	0	1324	1350	813	1316	1355	350
Stage 1	-	-	-	-	-	-	887	887	-	445	445	-
Stage 2	-	-	-	-	-	-	437	463	-	871	911	-
Critical Hdwy	4.66	-	-	4.77	-	-	7.2	6.6	6.3	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.2	5.6	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.2	5.6	-	6.12	5.52	-
Follow-up Hdwy	2.704	-	-	2.803	-	-	3.59	4.09	3.39	3.518	4.018	3.318
Pot Cap-1 Maneuver	946	-	-	577	-	-	128	145	366	135	149	693
Stage 1	-	-	-	-	-	-	328	352	-	592	575	-
Stage 2	-	-	-	-	-	-	583	551	-	346	353	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	946	-	-	577	-	-	92	128	366	95	132	693
Mov Cap-2 Maneuver	-	-	-	-	-	-	92	128	-	95	132	-
Stage 1	-	-	-	-	-	-	315	338	-	544	528	-
Stage 2	-	-	-	-	-	-	486	506	-	285	340	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.38			1.34			65.25			57.28		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	143	946	-	-	577	-	-	158
HCM Lane V/C Ratio	0.627	0.039	-	-	0.082	-	-	0.6
HCM Control Delay (s/veh)	65.3	9	-	-	11.8	-	-	57.3
HCM Lane LOS	F	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	3.4	0.1	-	-	0.3	-	-	3.2

Intersection						
Int Delay, s/veh	8.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	20	0	135	340	0
Future Vol, veh/h	5	20	0	135	340	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	25	69	59	87	91	63
Heavy Vehicles, %	0	5	5	22	16	0
Mvmt Flow	20	29	0	155	374	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	155	0	-	0	147 78
Stage 1	-	-	-	-	78 -
Stage 2	-	-	-	-	69 -
Critical Hdwy	4.1	-	-	-	6.56 6.2
Critical Hdwy Stg 1	-	-	-	-	5.56 -
Critical Hdwy Stg 2	-	-	-	-	5.56 -
Follow-up Hdwy	2.2	-	-	-	3.644 3.3
Pot Cap-1 Maneuver	1437	-	-	-	814 989
Stage 1	-	-	-	-	911 -
Stage 2	-	-	-	-	919 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1437	-	-	-	803 989
Mov Cap-2 Maneuver	-	-	-	-	803 -
Stage 1	-	-	-	-	899 -
Stage 2	-	-	-	-	919 -

Approach	EB	WB	SB
HCM Control Delay, s/v	3.08	0	13.33
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1437	-	-	-	803
HCM Lane V/C Ratio	0.014	-	-	-	0.466
HCM Control Delay (s/veh)	7.5	-	-	-	13.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	2.5

HCM 7th Signalized Intersection Summary
 200: River Rd & I-55 NB Ramps

PM Peak Hour
 10/16/2024



Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	175	25	10	585	150	250
Future Volume (veh/h)	175	25	10	585	150	250
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1693	1841	1856	1750	1589	1500
Adj Flow Rate, veh/h	287	62	20	629	163	316
Peak Hour Factor	0.61	0.40	0.50	0.93	0.92	0.79
Percent Heavy Veh, %	14	4	3	16	21	27
Cap, veh/h	344	74	266	860	196	380
Arrive On Green	0.27	0.27	0.01	0.49	0.41	0.41
Sat Flow, veh/h	1294	279	1767	1750	483	937
Grp Volume(v), veh/h	350	0	20	629	0	479
Grp Sat Flow(s),veh/h/ln	1578	0	1767	1750	0	1420
Q Serve(g_s), s	10.3	0.0	0.3	14.1	0.0	14.9
Cycle Q Clear(g_c), s	10.3	0.0	0.3	14.1	0.0	14.9
Prop In Lane	0.82	0.18	1.00			0.66
Lane Grp Cap(c), veh/h	419	0	266	860	0	576
V/C Ratio(X)	0.83	0.00	0.08	0.73	0.00	0.83
Avail Cap(c_a), veh/h	766	0	365	1913	0	1351
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.1	0.0	10.2	10.0	0.0	13.2
Incr Delay (d2), s/veh	4.4	0.0	0.1	1.2	0.0	3.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.7	0.0	0.1	6.2	0.0	6.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	21.5	0.0	10.3	11.2	0.0	16.3
LnGrp LOS	C		B	B		B
Approach Vol, veh/h	350			649	479	
Approach Delay, s/veh	21.5			11.2	16.3	
Approach LOS	C			B	B	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	4.2	26.1		19.1		30.3
Change Period (Y+Rc), s	3.5	6.0		6.0		6.0
Max Green Setting (Gmax), s	3.5	47.0		24.0		54.0
Max Q Clear Time (g_c+I1), s	2.3	16.9		12.3		16.1
Green Ext Time (p_c), s	0.0	3.1		0.9		4.1
Intersection Summary						
HCM 7th Control Delay, s/veh			15.3			
HCM 7th LOS			B			

HCM 7th Signalized Intersection Summary
300: IL 53 & River Rd

PM Peak Hour
10/16/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	115	445	175	295	555	195
Future Volume (veh/h)	115	445	175	295	555	195
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1455	1604	1366	1828	1938	1589
Adj Flow Rate, veh/h	189	506	208	328	677	241
Peak Hour Factor	0.61	0.88	0.84	0.90	0.82	0.81
Percent Heavy Veh, %	30	20	36	11	4	21
Cap, veh/h	298	740	318	1191	1005	988
Arrive On Green	0.22	0.22	0.09	0.65	0.52	0.52
Sat Flow, veh/h	1386	2392	1301	1828	1938	1346
Grp Volume(v), veh/h	189	506	208	328	677	241
Grp Sat Flow(s),veh/h/ln	1386	1196	1301	1828	1938	1346
Q Serve(g_s), s	11.2	16.7	6.3	6.9	23.3	5.2
Cycle Q Clear(g_c), s	11.2	16.7	6.3	6.9	23.3	5.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	298	740	318	1191	1005	988
V/C Ratio(X)	0.63	0.68	0.65	0.28	0.67	0.24
Avail Cap(c_a), veh/h	308	756	391	1191	1005	988
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.1	27.2	13.8	6.7	16.0	3.9
Incr Delay (d2), s/veh	5.9	3.3	2.8	0.6	3.6	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.1	16.5	2.8	3.9	14.7	4.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	38.0	30.6	16.6	7.2	19.6	4.5
LnGrp LOS	D	C	B	A	B	A
Approach Vol, veh/h	695			536	918	
Approach Delay, s/veh	32.6			10.9	15.7	
Approach LOS	C			B	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		64.6		25.4	12.0	52.7
Change Period (Y+Rc), s		6.0		6.0	3.5	6.0
Max Green Setting (Gmax), s		58.0		20.0	13.5	41.0
Max Q Clear Time (g_c+I1), s		8.9		18.7	8.3	25.3
Green Ext Time (p_c), s		6.8		0.7	0.3	10.9
Intersection Summary						
HCM 7th Control Delay, s/veh			19.9			
HCM 7th LOS			B			

HCM 7th Signalized Intersection Summary
400: IL 53 & Kankakee River Dr/Peotone Rd

PM Peak Hour
10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	35	20	115	30	200	15	280	245	555	330	50
Future Volume (veh/h)	40	35	20	115	30	200	15	280	245	555	330	50
Initial Q (Qb), 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										
Adj Sat Flow, veh/h/ln	1248	1722	1752	1841	1672	1396	1604	1796	1781	1663	1938	1381
Adj Flow Rate, veh/h	56	53	40	137	43	278	20	301	350	590	379	56
Peak Hour Factor	0.72	0.66	0.50	0.84	0.70	0.72	0.75	0.93	0.70	0.94	0.87	0.89
Percent Heavy Veh, %	44	12	10	4	21	34	20	7	8	16	4	35
Cap, veh/h	201	81	61	275	213	797	392	642	672	642	1161	759
Arrive On Green	0.05	0.09	0.09	0.09	0.13	0.13	0.01	0.36	0.36	0.26	0.60	0.60
Sat Flow, veh/h	1188	911	687	1753	1672	2082	1527	1796	1510	1584	1938	1171
Grp Volume(v), veh/h	56	0	93	137	43	278	20	301	350	590	379	56
Grp Sat Flow(s),veh/h/ln	1188	0	1598	1753	1672	1041	1527	1796	1510	1584	1938	1171
Q Serve(g_s), s	3.8	0.0	5.1	6.1	2.1	8.6	0.8	11.6	15.1	19.5	8.8	1.6
Cycle Q Clear(g_c), s	3.8	0.0	5.1	6.1	2.1	8.6	0.8	11.6	15.1	19.5	8.8	1.6
Prop In Lane	1.00		0.43	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	201	0	142	275	213	797	392	642	672	642	1161	759
V/C Ratio(X)	0.28	0.00	0.65	0.50	0.20	0.35	0.05	0.47	0.52	0.92	0.33	0.07
Avail Cap(c_a), veh/h	242	0	142	307	213	797	431	642	672	775	1161	759
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
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.1	0.0	39.7	31.7	35.2	19.8	18.1	22.3	18.1	13.3	9.0	5.8
Incr Delay (d2), s/veh	0.7	0.0	13.9	1.4	1.0	0.6	0.1	2.5	2.9	14.3	0.7	0.2
Initial Q Delay(d3), 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
%ile BackOfQ(95%),veh/ln	2.0	0.0	4.5	4.5	1.5	3.4	0.4	8.5	8.7	12.3	5.9	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.8	0.0	53.5	33.1	36.1	20.3	18.1	24.8	20.9	27.6	9.7	6.0
LnGrp LOS	D		D	C	D	C	B	C	C	C	A	A
Approach Vol, veh/h		149			458			671			1025	
Approach Delay, s/veh		46.9			25.6			22.6			19.8	
Approach LOS		D			C			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	36.5	38.1	11.4	14.0	4.7	59.9	7.9	17.5				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green Setting (Gmax), s	30.5	23.0	9.5	8.0	3.5	50.0	7.5	10.0				
Max Q Clear Time (g_c+Y), s	21.5	17.1	8.1	7.1	2.8	10.8	5.8	10.6				
Green Ext Time (p_c), s	1.4	3.5	0.0	0.1	0.0	8.8	0.0	0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh			23.5									
HCM 7th LOS			C									

HCM 7th Signalized Intersection Summary
500: Old Chicago Rd & Peotone Rd

PM Peak Hour
10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	580	210	25	325	15	75	15	15	115	65	10
Future Volume (veh/h)	0	580	210	25	325	15	75	15	15	115	65	10
Initial Q (Qb), 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										
Adj Sat Flow, veh/h/ln	1515	1618	1811	1856	1544	818	1752	1900	1826	1559	1826	1900
Adj Flow Rate, veh/h	0	716	276	43	365	22	103	26	22	205	93	20
Peak Hour Factor	0.95	0.81	0.76	0.58	0.89	0.67	0.73	0.58	0.67	0.56	0.70	0.50
Percent Heavy Veh, %	26	19	6	3	24	73	10	0	5	23	5	0
Cap, veh/h	455	856	912	213	855	52	311	91	77	352	226	49
Arrive On Green	0.00	0.53	0.53	0.02	0.59	0.59	0.07	0.10	0.10	0.13	0.16	0.16
Sat Flow, veh/h	1443	1618	1535	1767	1442	87	1668	951	804	1485	1456	313
Grp Volume(v), veh/h	0	716	276	43	0	387	103	0	48	205	0	113
Grp Sat Flow(s),veh/h/ln	1443	1618	1535	1767	0	1529	1668	0	1755	1485	0	1770
Q Serve(g_s), s	0.0	31.2	7.4	0.9	0.0	11.5	4.6	0.0	2.1	10.1	0.0	4.8
Cycle Q Clear(g_c), s	0.0	31.2	7.4	0.9	0.0	11.5	4.6	0.0	2.1	10.1	0.0	4.8
Prop In Lane	1.00		1.00	1.00		0.06	1.00		0.46	1.00		0.18
Lane Grp Cap(c), veh/h	455	856	912	213	0	907	311	0	168	352	0	275
V/C Ratio(X)	0.00	0.84	0.30	0.20	0.00	0.43	0.33	0.00	0.29	0.58	0.00	0.41
Avail Cap(c_a), veh/h	514	930	983	247	0	907	311	0	189	352	0	297
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
Upstream Filter(l)	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	16.6	8.4	14.9	0.0	9.3	31.3	0.0	35.1	27.7	0.0	31.8
Incr Delay (d2), s/veh	0.0	9.5	0.9	0.5	0.0	1.5	0.6	0.0	2.0	2.4	0.0	2.1
Initial Q Delay(d3), 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
%ile BackOfQ(95%),veh/ln	0.0	16.6	3.6	0.5	0.0	5.7	3.1	0.0	1.7	6.2	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	26.2	9.2	15.3	0.0	10.7	31.9	0.0	37.1	30.2	0.0	33.9
LnGrp LOS		C	A	B		B	C		D	C		C
Approach Vol, veh/h		992			430			151				318
Approach Delay, s/veh		21.5			11.2			33.6				31.5
Approach LOS		C			B			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	14.0	5.4	50.2	9.0	19.0	0.0	55.6				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green Setting (Gmax), s	10.5	9.0	3.5	48.0	5.5	14.0	3.5	48.0				
Max Q Clear Time (g_c+1/2I), s	11.2	4.1	2.9	33.2	6.6	6.8	0.0	13.5				
Green Ext Time (p_c), s	0.0	0.1	0.0	10.9	0.0	0.4	0.0	7.5				
Intersection Summary												
HCM 7th Control Delay, s/veh				21.8								
HCM 7th LOS				C								

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	720	5	10	355	5	5	0	0	5	5	5
Future Vol, veh/h	0	720	5	10	355	5	5	0	0	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	75	38	50	92	25	25	95	95	25	25	50
Heavy Vehicles, %	0	19	0	0	22	0	20	0	50	0	69	0
Mvmt Flow	0	960	13	20	386	20	20	0	0	20	20	10

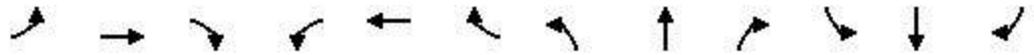
Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	406	0	0	973	0	0	1402	1412	967	1396	1409	396
Stage 1	-	-	-	-	-	-	967	967	-	436	436	-
Stage 2	-	-	-	-	-	-	436	446	-	960	973	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.3	6.5	6.7	7.1	7.19	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.3	5.5	-	6.1	6.19	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.3	5.5	-	6.1	6.19	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.68	4	3.75	3.5	4.621	3.3
Pot Cap-1 Maneuver	1164	-	-	717	-	-	107	139	252	120	101	658
Stage 1	-	-	-	-	-	-	284	335	-	603	481	-
Stage 2	-	-	-	-	-	-	565	577	-	311	256	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	1164	-	-	717	-	-	81	134	252	115	97	658
Mov Cap-2 Maneuver	-	-	-	-	-	-	81	134	-	115	97	-
Stage 1	-	-	-	-	-	-	284	335	-	581	463	-
Stage 2	-	-	-	-	-	-	514	557	-	311	256	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0.48	63.02	50.67
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	81	1164	-	-	84	-	-	127
HCM Lane V/C Ratio	0.246	-	-	-	0.028	-	-	0.394
HCM Control Delay (s/veh)	63	0	-	-	10.2	0	-	50.7
HCM Lane LOS	F	A	-	-	B	A	-	F
HCM 95th %tile Q(veh)	0.9	0	-	-	0.1	-	-	1.7

HCM 7th Signalized Intersection Summary
700: Cedar Rd & Wilmington Rd

PM Peak Hour
10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	560	5	5	310	35	0	5	5	55	15	130
Future Volume (veh/h)	100	560	5	5	310	35	0	5	5	55	15	130
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1856	1574	1900	1589	1500	1648	1559	1900	1900	1856	1767	1856
Adj Flow Rate, veh/h	125	718	20	10	352	62	0	20	20	67	26	173
Peak Hour Factor	0.80	0.78	0.25	0.50	0.88	0.56	0.95	0.25	0.25	0.82	0.58	0.75
Percent Heavy Veh, %	3	22	0	21	27	17	23	0	0	3	9	3
Cap, veh/h	512	864	24	220	647	114	0	188	188	123	51	208
Arrive On Green	0.05	0.57	0.57	0.01	0.52	0.52	0.00	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1767	1524	42	1513	1242	219	0	872	872	285	235	967
Grp Volume(v), veh/h	125	0	738	10	0	414	0	0	40	266	0	0
Grp Sat Flow(s),veh/h/ln	1767	0	1566	1513	0	1460	0	0	1743	1487	0	0
Q Serve(g_s), s	2.2	0.0	28.5	0.2	0.0	14.0	0.0	0.0	1.4	9.0	0.0	0.0
Cycle Q Clear(g_c), s	2.2	0.0	28.5	0.2	0.0	14.0	0.0	0.0	1.4	12.5	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.15	0.00		0.50	0.25		0.65
Lane Grp Cap(c), veh/h	512	0	888	220	0	761	0	0	376	382	0	0
V/C Ratio(X)	0.24	0.00	0.83	0.05	0.00	0.54	0.00	0.00	0.11	0.70	0.00	0.00
Avail Cap(c_a), veh/h	549	0	1041	280	0	931	0	0	520	503	0	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
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.3	0.0	13.1	12.6	0.0	11.8	0.0	0.0	23.2	27.5	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	8.9	0.1	0.0	2.8	0.0	0.0	0.3	5.2	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	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.1	0.0	13.9	0.1	0.0	7.1	0.0	0.0	0.9	7.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	8.6	0.0	22.0	12.7	0.0	14.6	0.0	0.0	23.5	32.7	0.0	0.0
LnGrp LOS	A		C	B		B			C	C		
Approach Vol, veh/h		863			424			40			266	
Approach Delay, s/veh		20.1			14.6			23.5			32.7	
Approach LOS		C			B			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		21.9	4.1	47.8		21.9	7.4	44.4				
Change Period (Y+Rc), s		6.0	3.5	6.0		6.0	3.5	6.0				
Max Green Setting (Gmax), s		22.0	3.5	49.0		22.0	5.5	47.0				
Max Q Clear Time (g_c+I1), s		3.4	2.2	30.5		14.5	4.2	16.0				
Green Ext Time (p_c), s		0.2	0.0	11.3		1.4	0.0	7.9				
Intersection Summary												
HCM 7th Control Delay, s/veh			20.8									
HCM 7th LOS			C									

HCM 7th Signalized Intersection Summary
800: US 52 & Wilmington Rd

PM Peak Hour
10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	35	475	100	20	175	30	80	270	15	45	415	30
Future Volume (veh/h)	35	475	100	20	175	30	80	270	15	45	415	30
Initial Q (Qb), 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										
Adj Sat Flow, veh/h/ln	1707	1559	1693	1693	1500	1648	1470	1767	1796	1678	1856	1856
Adj Flow Rate, veh/h	40	511	128	27	233	45	91	325	26	96	456	42
Peak Hour Factor	0.88	0.93	0.78	0.75	0.75	0.67	0.88	0.83	0.58	0.47	0.91	0.71
Percent Heavy Veh, %	13	23	14	14	27	17	29	9	7	15	3	3
Cap, veh/h	403	512	128	110	512	99	165	484	39	261	501	46
Arrive On Green	0.02	0.43	0.43	0.02	0.42	0.42	0.04	0.30	0.30	0.04	0.30	0.30
Sat Flow, veh/h	1626	1203	301	1612	1221	236	1400	1614	129	1598	1674	154
Grp Volume(v), veh/h	40	0	639	27	0	278	91	0	351	96	0	498
Grp Sat Flow(s),veh/h/ln	1626	0	1505	1612	0	1457	1400	0	1743	1598	0	1828
Q Serve(g_s), s	1.2	0.0	36.9	0.8	0.0	11.9	3.5	0.0	15.4	3.5	0.0	22.8
Cycle Q Clear(g_c), s	1.2	0.0	36.9	0.8	0.0	11.9	3.5	0.0	15.4	3.5	0.0	22.8
Prop In Lane	1.00		0.20	1.00		0.16	1.00		0.07	1.00		0.08
Lane Grp Cap(c), veh/h	403	0	640	110	0	610	165	0	522	261	0	547
V/C Ratio(X)	0.10	0.00	1.00	0.24	0.00	0.46	0.55	0.00	0.67	0.37	0.00	0.91
Avail Cap(c_a), veh/h	432	0	640	148	0	620	165	0	541	261	0	567
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
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.7	0.0	25.0	21.7	0.0	18.2	25.8	0.0	26.7	22.2	0.0	29.3
Incr Delay (d2), s/veh	0.1	0.0	35.2	1.1	0.0	1.1	3.8	0.0	6.8	0.9	0.0	21.6
Initial Q Delay(d3), 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
%ile BackOfQ(95%),veh/ln	0.7	0.0	24.0	0.5	0.0	6.6	2.4	0.0	10.9	2.3	0.0	17.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	14.8	0.0	60.1	22.9	0.0	19.3	29.7	0.0	33.5	23.1	0.0	50.9
LnGrp LOS	B		E	C		B	C		C	C		D
Approach Vol, veh/h		679			305			442			594	
Approach Delay, s/veh		57.5			19.6			32.7			46.4	
Approach LOS		E			B			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.0	32.1	4.9	43.0	7.0	32.1	5.5	42.4				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green Setting (Gmax), s	3.5	27.0	3.5	37.0	3.5	27.0	3.5	37.0				
Max Q Clear Time (g_c+1), s	15.5	17.4	2.8	38.9	5.5	24.8	3.2	13.9				
Green Ext Time (p_c), s	0.0	3.2	0.0	0.0	0.0	1.2	0.0	2.7				
Intersection Summary												
HCM 7th Control Delay, s/veh			43.1									
HCM 7th LOS			D									

HCM 7th Signalized Intersection Summary
 900: I-57 SB On Ramp/I-57 SB Off Ramp & Wilmington Rd

PM Peak Hour
 10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻		↻	↻					↻		↻
Traffic Volume (veh/h)	0	590	85	160	215	0	0	0	0	215	0	90
Future Volume (veh/h)	0	590	85	160	215	0	0	0	0	215	0	90
Initial Q (Qb), 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		
Adj Sat Flow, veh/h/ln	0	1648	1663	1796	1544	0				1811	0	1648
Adj Flow Rate, veh/h	0	648	102	205	247	0				279	0	99
Peak Hour Factor	0.95	0.91	0.83	0.78	0.87	0.25				0.77	0.95	0.91
Percent Heavy Veh, %	0	17	16	7	24	0				6	0	17
Cap, veh/h	0	742	117	306	1009	0				338	0	274
Arrive On Green	0.00	0.53	0.53	0.08	0.65	0.00				0.20	0.00	0.20
Sat Flow, veh/h	0	1390	219	1711	1544	0				1725	0	1397
Grp Volume(v), veh/h	0	0	750	205	247	0				279	0	99
Grp Sat Flow(s),veh/h/ln	0	0	1609	1711	1544	0				1725	0	1397
Q Serve(g_s), s	0.0	0.0	32.4	4.0	5.3	0.0				12.4	0.0	4.9
Cycle Q Clear(g_c), s	0.0	0.0	32.4	4.0	5.3	0.0				12.4	0.0	4.9
Prop In Lane	0.00		0.14	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	0	858	306	1009	0				338	0	274
V/C Ratio(X)	0.00	0.00	0.87	0.67	0.24	0.00				0.83	0.00	0.36
Avail Cap(c_a), veh/h	0	0	929	359	1125	0				433	0	351
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	16.2	16.4	5.7	0.0				30.7	0.0	27.7
Incr Delay (d2), s/veh	0.0	0.0	12.0	3.8	0.6	0.0				13.3	0.0	1.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/lr	0.0	0.0	18.1	3.7	2.5	0.0				10.3	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	28.2	20.1	6.3	0.0				44.0	0.0	29.4
LnGrp LOS			C	C	A					D		C
Approach Vol, veh/h		750			452						378	
Approach Delay, s/veh		28.2			12.6						40.2	
Approach LOS		C			B						D	
Timer - Assigned Phs			3	4	6	8						
Phs Duration (G+Y+Rc), s			9.5	48.5	21.6	58.0						
Change Period (Y+Rc), s			3.5	6.0	6.0	6.0						
Max Green Setting (Gmax), s			8.5	46.0	20.0	58.0						
Max Q Clear Time (g_c+I1), s			6.0	34.4	14.4	7.3						
Green Ext Time (p_c), s			0.1	8.1	1.3	5.1						
Intersection Summary												
HCM 7th Control Delay, s/veh			26.6									
HCM 7th LOS			C									

HCM 7th Signalized Intersection Summary
 1000: I-57 NB Off Ramp/I-57 NB On Ramp & Wilmington Rd

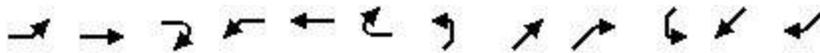
PM Peak Hour
 10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	355	150	0	305	70	80	0	115	0	0	0
Future Volume (veh/h)	0	355	150	0	305	70	80	0	115	0	0	0
Initial Q (Qb), 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				
Adj Sat Flow, veh/h/ln	1618	1722	1900	0	1707	1678	1455	0	1796			
Adj Flow Rate, veh/h	0	408	158	0	372	78	94	0	158			
Peak Hour Factor	0.80	0.87	0.95	0.95	0.82	0.90	0.85	0.95	0.73			
Percent Heavy Veh, %	19	12	0	0	13	15	30	0	7			
Cap, veh/h	499	680	263	0	787	165	228	0	250			
Arrive On Green	0.00	0.58	0.58	0.00	0.58	0.58	0.16	0.00	0.16			
Sat Flow, veh/h	1541	1182	458	0	1369	287	1386	0	1522			
Grp Volume(v), veh/h	0	0	566	0	0	450	94	0	158			
Grp Sat Flow(s),veh/h/ln	1541	0	1640	0	0	1656	1386	0	1522			
Q Serve(g_s), s	0.0	0.0	10.3	0.0	0.0	7.3	2.8	0.0	4.5			
Cycle Q Clear(g_c), s	0.0	0.0	10.3	0.0	0.0	7.3	2.8	0.0	4.5			
Prop In Lane	1.00		0.28	0.00		0.17	1.00		1.00			
Lane Grp Cap(c), veh/h	499	0	943	0	0	952	228	0	250			
V/C Ratio(X)	0.00	0.00	0.60	0.00	0.00	0.47	0.41	0.00	0.63			
Avail Cap(c_a), veh/h	914	0	2065	0	0	1510	602	0	661			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	6.4	0.0	0.0	5.7	17.2	0.0	17.9			
Incr Delay (d2), s/veh	0.0	0.0	2.8	0.0	0.0	1.7	2.5	0.0	5.5			
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	0.0	0.0	4.2	0.0	0.0	2.9	1.7	0.0	3.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	9.2	0.0	0.0	7.4	19.8	0.0	23.5			
LnGrp LOS			A			A	B		C			
Approach Vol, veh/h		566			450			252				
Approach Delay, s/veh		9.2			7.4			22.1				
Approach LOS		A			A			C				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		13.6		32.5			0.0	32.5				
Change Period (Y+Rc), s		6.0		6.0			3.5	6.0				
Max Green Setting (Gmax), s		20.0		58.0			12.5	42.0				
Max Q Clear Time (g_c+1), s		6.5		12.3			0.0	9.3				
Green Ext Time (p_c), s		1.4		14.2			0.0	9.2				
Intersection Summary												
HCM 7th Control Delay, s/veh			11.1									
HCM 7th LOS			B									

HCM 7th Signalized Intersection Summary
 1100: IL 50 & Wilmington Rd

PM Peak Hour
 10/16/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↔	↗		↔	↗		↔	↕		↔	↗	
Traffic Volume (veh/h)	205	40	65	5	50	0	85	295	5	0	255	240
Future Volume (veh/h)	205	40	65	5	50	0	85	295	5	0	255	240
Initial Q (Qb), 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										
Adj Sat Flow, veh/h/ln	1693	922	1352	1900	1352	1900	1426	1781	1900	1900	1752	1752
Adj Flow Rate, veh/h	244	60	78	13	83	0	115	317	5	0	293	300
Peak Hour Factor	0.84	0.67	0.83	0.38	0.60	0.95	0.74	0.93	1.00	0.95	0.87	0.80
Percent Heavy Veh, %	14	66	37	0	37	0	32	8	0	0	10	10
Cap, veh/h	449	99	129	291	169	0	324	1607	25	485	570	509
Arrive On Green	0.16	0.27	0.27	0.01	0.13	0.00	0.07	0.47	0.47	0.00	0.34	0.34
Sat Flow, veh/h	1612	364	473	1810	1352	0	1358	3410	54	1810	1664	1485
Grp Volume(v), veh/h	244	0	138	13	83	0	115	157	165	0	293	300
Grp Sat Flow(s),veh/h/ln	1612	0	837	1810	1352	0	1358	1692	1772	1810	1664	1485
Q Serve(g_s), s	7.7	0.0	9.0	0.4	3.6	0.0	3.2	3.4	3.4	0.0	8.8	10.5
Cycle Q Clear(g_c), s	7.7	0.0	9.0	0.4	3.6	0.0	3.2	3.4	3.4	0.0	8.8	10.5
Prop In Lane	1.00		0.57	1.00		0.00	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	449	0	228	291	169	0	324	798	835	485	570	509
V/C Ratio(X)	0.54	0.00	0.60	0.04	0.49	0.00	0.35	0.20	0.20	0.00	0.51	0.59
Avail Cap(c_a), veh/h	592	0	346	374	301	0	430	1022	1070	583	847	755
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
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	17.7	0.0	19.9	23.7	25.7	0.0	12.0	9.7	9.7	0.0	16.5	17.0
Incr Delay (d2), s/veh	1.0	0.0	5.4	0.1	4.7	0.0	0.7	0.6	0.5	0.0	3.3	5.0
Initial Q Delay(d3), 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
%ile BackOfQ(95%),veh/ln	4.6	0.0	3.3	0.3	2.3	0.0	1.5	2.1	2.1	0.0	6.1	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.8	0.0	25.4	23.8	30.3	0.0	12.7	10.2	10.2	0.0	19.8	22.0
LnGrp LOS	B		C	C	C		B	B	B		B	C
Approach Vol, veh/h		382			96			437			593	
Approach Delay, s/veh		21.2			29.4			10.9			20.9	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	0.0	35.6	4.1	23.1	8.1	27.5	13.4	13.9				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green Setting (Gmax), s	3.5	38.0	3.5	26.0	9.5	32.0	15.5	14.0				
Max Q Clear Time (g_c+1), s	3.5	5.4	2.4	11.0	5.2	12.5	9.7	5.6				
Green Ext Time (p_c), s	0.0	5.9	0.0	1.0	0.1	9.1	0.3	0.3				
Intersection Summary												
HCM 7th Control Delay, s/veh			18.6									
HCM 7th LOS			B									

Appendix F

Roundabout Alternatives: Operational Summary & Reports

No.	Intersection	Existing Traffic Control	Peak Hour	2023 TRAFFIC VOLUMES: IMPROVEMENTS					2035 TRAFFIC VOLUMES: IMPROVEMENTS					2050 TRAFFIC VOLUMES: IMPROVEMENTS										
				EB LOS	WB LOS	NB LOS	SB LOS	Intersection LOS	Recommended Improvements	EB LOS	WB LOS	NB LOS	SB LOS	Intersection LOS	Recommended Improvements	EB LOS	WB LOS	NB LOS	SB LOS	Intersection LOS	Recommended Improvements			
1	River Rd & I-55 SB Ramps	Two-way Stop Controlled	AM PM																					
2	River Rd & I-55 NB Ramps	Two-way Stop Controlled	AM PM																A C	A A	A A	- -	A B	
3	IL 53 & River Rd	Signalized	AM PM																					
4	IL 53 & Kankakee River Dr/Peotone Rd	Signalized	AM PM																					
5	Old Chicago Rd & Peotone Rd	Two-way Stop Controlled	AM PM																A C	A A	A A	B B	A B	Add 1 new lane to West approach
6	Warner Bridge Rd & Peotone Rd	Two-way Stop Controlled	AM PM																					
7	Cedar Rd & Wilmington Rd	Two-way Stop Controlled	AM PM																A B	A A	A A	A A	A B	
8	US 52 & Wilmington Rd	All-way Stop Controlled	AM PM	A B	A A	A B	A A	A B	Roundabout added.	A C	A A	A C	A B	A C		B E	B B	A D	A B	A C	B C	Add 1 new lane to West approach		
9	I-57 SB Ramps & Wilmington Rd	Two-way Stop Controlled	AM PM	A A	A B	- -	A A	A A	Roundabout added.	A C	A A	- -	A A	A B		A D	A A	- -	B B	A C	A C	Add 1 new lane to West approach		
10	I-57 NB Ramps & Wilmington Rd	Two-way Stop Controlled	AM PM	A A	A A	A A	- -	A A	Roundabout added.	A A	A A	A B	- -	A A		A A	A B	A B	- -	A A	A A			
11	IL 50 & Wilmington Rd	All-way Stop Controlled	AM PM																A B	A B	A B	A B	A B	Roundabout added.

LANE SUMMARY

Site: 101 [US-52 and Wilmington Rd. AM-2019 (Site Folder: 2019 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Prob. Adj. Block.	
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]						[Veh]	[Dist]			ft	%
South: US-52															
Lane 1 ^d	312	6.7	312	6.7	1010	0.309	100	6.6	LOS A	1.5	40.4	Full	1600	0.0	0.0
Approach	312	6.7	312	6.7		0.309		6.6	LOS A	1.5	40.4				
East: Wilmington Rd.															
Lane 1 ^d	171	25.0	171	25.0	729	0.234	100	7.6	LOS A	0.8	25.3	Full	1600	0.0	0.0
Approach	171	25.0	171	25.0		0.234		7.6	LOS A	0.8	25.3				
North: US-52															
Lane 1 ^d	205	15.4	205	15.4	896	0.229	100	6.3	LOS A	0.9	26.7	Full	1600	0.0	0.0
Approach	205	15.4	205	15.4		0.229		6.3	LOS A	0.9	26.7				
West: Wilmington Rd.															
Lane 1 ^d	207	23.7	207	23.7	849	0.243	100	6.8	LOS A	1.0	28.4	Full	1600	0.0	0.0
Approach	207	23.7	207	23.7		0.243		6.8	LOS A	1.0	28.4				
All Vehicles	895	16.1	895	16.1		0.309		6.8	LOS A	1.5	40.4				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stoptline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)											
South: US-52											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From S						Cap. veh/h	v/c	%	%	No.	
To Exit:	W	N	E								
Lane 1	57	251	4	312	6.7	1010	0.309	100	NA	NA	
Approach	57	251	4	312	6.7		0.309				
East: Wilmington Rd.											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From E						Cap. veh/h	v/c	%	%	No.	
To Exit:	S	W	N								
Lane 1	10	141	20	171	25.0	729	0.234	100	NA	NA	

Approach	10	141	20	171	25.0		0.234				
North: US-52											
Mov. From N To Exit:	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL Ov.	Ov. Lane No.	
	E	S	W			Cap. veh/h	v/c	%	%		
Lane 1	24	173	9	205	15.4	896	0.229	100	NA	NA	
Approach	24	173	9	205	15.4		0.229				
West: Wilmington Rd.											
Mov. From W To Exit:	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL Ov.	Ov. Lane No.	
	N	E	S			Cap. veh/h	v/c	%	%		
Lane 1	22	143	41	207	23.7	849	0.243	100	NA	NA	
Approach	22	143	41	207	23.7		0.243				
Total %HV Deg. Satn (v/c)											
All Vehicles	895	16.1		0.309							

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis												
	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Flow Rate	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay
		ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis				
	Initial Queued Demand	Residual Queued Demand	Time for Residual Demand to Clear	Duration of Oversatn
	veh	veh	sec	sec
South: US-52				
Lane 1	0.0	0.0	0.0	0.0
East: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0
North: US-52				
Lane 1	0.0	0.0	0.0	0.0
West: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0

LANE SUMMARY

Site: 101 [US-52 and Wilmington Rd. PM-2019 (Site Folder: 2019 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Prob. Adj. Block.	
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]						[Veh]	[Dist]			%	%
South: US-52															
Lane 1 ^d	309	11.2	309	11.2	734	0.420	100	10.4	LOS B	2.2	60.4	Full	1600	0.0	0.0
Approach	309	11.2	309	11.2		0.420		10.4	LOS B	2.2	60.4				
East: Wilmington Rd.															
Lane 1 ^d	173	23.5	173	23.5	723	0.239	100	7.7	LOS A	0.9	25.7	Full	1600	0.0	0.0
Approach	173	23.5	173	23.5		0.239		7.7	LOS A	0.9	25.7				
North: US-52															
Lane 1 ^d	378	4.0	378	4.0	1017	0.372	100	7.4	LOS A	2.0	51.9	Full	1600	0.0	0.0
Approach	378	4.0	378	4.0		0.372		7.4	LOS A	2.0	51.9				
West: Wilmington Rd.															
Lane 1 ^d	436	20.7	436	20.7	730	0.597	100	14.7	LOS B	5.0	144.3	Full	1600	0.0	0.0
Approach	436	20.7	436	20.7		0.597		14.7	LOS B	5.0	144.3				
All Vehicles	1296	13.9	1296	13.9		0.597		10.6	LOS B	5.0	144.3				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stoptline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)										
South: US-52										
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL Ov.	Ov. Lane No.
From S						Cap. veh/h	v/c	%	%	
To Exit:	W	N	E							
Lane 1	57	245	8	309	11.2	734	0.420	100	NA	NA
Approach	57	245	8	309	11.2		0.420			
East: Wilmington Rd.										
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL Ov.	Ov. Lane No.
From E						Cap. veh/h	v/c	%	%	
To Exit:	S	W	N							
Lane 1	13	134	26	173	23.5	723	0.239	100	NA	NA

Approach	13	134	26	173	23.5		0.239				
North: US-52											
Mov. From N To Exit:	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL Ov.	Ov. Lane No.	
	E	S	W			Cap. veh/h	v/c	%	%		
Lane 1	30	326	22	378	4.0	1017	0.372	100	NA	NA	
Approach	30	326	22	378	4.0		0.372				
West: Wilmington Rd.											
Mov. From W To Exit:	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL Ov.	Ov. Lane No.	
	N	E	S			Cap. veh/h	v/c	%	%		
Lane 1	30	327	78	436	20.7	730	0.597	100	NA	NA	
Approach	30	327	78	436	20.7		0.597				
Total %HV Deg. Satn (v/c)											
All Vehicles	1296	13.9			0.597						

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis												
Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec	
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: US-52				
Lane 1	0.0	0.0	0.0	0.0
East: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0
North: US-52				
Lane 1	0.0	0.0	0.0	0.0
West: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0

LANE SUMMARY

Site: 101 [I-57 SB and Wilmington Rd. AM-2019 (Site Folder: 2019 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]	veh/h	v/c	%	sec		[Veh]	[Dist] ft		ft	%	%
East: Wilmington Rd.															
Lane 1 ^d	310	14.7	310	14.7	1216	0.255	100	4.2	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	310	14.7	310	14.7		0.255		4.2	LOS A	0.0	0.0				
North: I-57 SB Exit															
Lane 1 ^d	130	27.4	130	27.4	709	0.184	100	7.1	LOS A	0.6	18.9	Full	1600	0.0	0.0
Approach	130	27.4	130	27.4		0.184		7.1	LOS A	0.6	18.9				
West: Wilmington Rd.															
Lane 1 ^d	213	22.9	213	22.9	943	0.226	100	6.0	LOS A	0.9	27.2	Full	1600	0.0	0.0
Approach	213	22.9	213	22.9		0.226		6.0	LOS A	0.9	27.2				
All Vehicles	653	19.9	653	19.9		0.255		5.4	LOS A	0.9	27.2				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stoptline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)											
East: Wilmington Rd.											
Mov.	L2	T1	Total	%HV			Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From E To Exit:	S	W			Cap. veh/h	v/c	%	%	%	No.	
Lane 1	89	221	310	14.7	1216	0.255	100	NA	NA		
Approach	89	221	310	14.7		0.255					
North: I-57 SB Exit											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From N To Exit:	E	S	W			Cap. veh/h	v/c	%	%	No.	
Lane 1	50	1	79	130	27.4	709	0.184	100	NA	NA	
Approach	50	1	79	130	27.4		0.184				
West: Wilmington Rd.											
Mov.	T1	R2	Total	%HV			Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From W To Exit:	E	S			Cap. veh/h	v/c	%	%	%	No.	

Lane 1	158	55	213	22.9	943	0.226	100	NA	NA
Approach	158	55	213	22.9		0.226			
Total %HV Deg.Satn (v/c)									
All Vehicles	653	19.9		0.255					

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis											
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate % veh/h	Critical Gap sec	Follow-up Headway sec	Lane Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec	
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
East: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0
North: I-57 SB Exit				
Lane 1	0.0	0.0	0.0	0.0
West: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0

SIDRA INTERSECTION 9.1 | Copyright © 2000-2022 Akcelik and Associates Pty Ltd | sidrasolutions.com
 Organisation: KIMLEY-HORN & ASSOCIATES INC | Licence: NETWORK / Enterprise Level 2 | Processed: Thursday, July 11, 2024 8:52:37 AM
 Project: C:\Users\Daniel.Carberry\Documents\Wilmington-Peotone\SIDRA Analysis\W-P_Roundabout_Analysis.sip9

LANE SUMMARY

Site: 101 [I-57 SB and Wilmington Rd. PM-2019 (Site Folder: 2019 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]	veh/h	v/c	%	sec		[Veh]	[Dist] ft		ft	%	%
East: Wilmington Rd.															
Lane 1 ^d	301	16.0	301	16.0	1204	0.250	100	4.2	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	301	16.0	301	16.0		0.250		4.2	LOS A	0.0	0.0				
North: I-57 SB Exit															
Lane 1 ^d	207	9.6	207	9.6	861	0.240	100	6.7	LOS A	1.0	27.5	Full	1600	0.0	0.0
Approach	207	9.6	207	9.6		0.240		6.7	LOS A	1.0	27.5				
West: Wilmington Rd.															
Lane 1 ^d	459	16.8	459	16.8	842	0.545	100	11.8	LOS B	4.3	121.1	Full	1600	0.0	0.0
Approach	459	16.8	459	16.8		0.545		11.8	LOS B	4.3	121.1				
All Vehicles	966	15.0	966	15.0		0.545		8.4	LOS A	4.3	121.1				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)											
East: Wilmington Rd.											
Mov.	L2	T1	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane		
From E To Exit:	S	W			Cap. veh/h	v/c	%	%	No.		
Lane 1	142	159	301	16.0	1204	0.250	100	NA	NA		
Approach	142	159	301	16.0		0.250					
North: I-57 SB Exit											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From N To Exit:	E	S	W			Cap. veh/h	v/c	%	%	No.	
Lane 1	138	1	67	207	9.6	861	0.240	100	NA	NA	
Approach	138	1	67	207	9.6		0.240				
West: Wilmington Rd.											
Mov.	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane		
From W To Exit:	E	S			Cap. veh/h	v/c	%	%	No.		

Lane 1	383	76	459	16.8	842	0.545	100	NA	NA
Approach	383	76	459	16.8	0.545				
Total %HV Deg.Satn (v/c)									
All Vehicles	966	15.0	0.545						

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis											
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane % veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec	
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
East: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0
North: I-57 SB Exit				
Lane 1	0.0	0.0	0.0	0.0
West: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0

SIDRA INTERSECTION 9.1 | Copyright © 2000-2022 Akcelik and Associates Pty Ltd | sidrasolutions.com
 Organisation: KIMLEY-HORN & ASSOCIATES INC | Licence: NETWORK / Enterprise Level 2 | Processed: Thursday, July 11, 2024 8:52:38 AM
 Project: C:\Users\Daniel.Carberry\Documents\Wilmington-Peotone\SIDRA Analysis\W-P_Roundabout_Analysis.sip9

LANE SUMMARY

Site: 101 [I-57 NB and Wilmington Rd. AM-2019 (Site Folder: 2019 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]	veh/h	v/c	%	sec		[Veh]	[Dist] ft		ft	%	%
South: I-57 NB Exit															
Lane 1 ^d	173	12.8	173	12.8	941	0.184	100	5.6	LOS A	0.8	20.8	Full	1600	0.0	0.0
Approach	173	12.8	173	12.8		0.184		5.6	LOS A	0.8	20.8				
East: Wilmington Rd.															
Lane 1 ^d	382	11.4	382	11.4	1035	0.369	100	7.2	LOS A	1.9	53.1	Full	1600	0.0	0.0
Approach	382	11.4	382	11.4		0.369		7.2	LOS A	1.9	53.1				
West: Wilmington Rd.															
Lane 1 ^d	201	19.3	201	19.3	1173	0.171	100	3.9	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	201	19.3	201	19.3		0.171		3.9	LOS A	0.0	0.0				
All Vehicles	755	13.8	755	13.8		0.369		6.0	LOS A	1.9	53.1				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)											
South: I-57 NB Exit											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From S To Exit:	W	N	E			Cap. veh/h	v/c	%	%	No.	
Lane 1	82	1	90	173	12.8	941	0.184	100	NA	NA	
Approach	82	1	90	173	12.8		0.184				
East: Wilmington Rd.											
Mov.	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane		
From E To Exit:	W	N			Cap. veh/h	v/c	%	%	No.		
Lane 1	239	142	382	11.4	1035	0.369	100	NA	NA		
Approach	239	142	382	11.4		0.369					
West: Wilmington Rd.											
Mov.	L2	T1	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane		
From W To Exit:	N	E			Cap. veh/h	v/c	%	%	No.		

Lane 1	60	141	201	19.3	1173	0.171	100	NA	NA
Approach	60	141	201	19.3		0.171			
Total %HV Deg.Satn (v/c)									
All Vehicles	755	13.8		0.369					

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis											
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane % veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: I-57 NB Exit				
Lane 1	0.0	0.0	0.0	0.0
East: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0
West: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0

LANE SUMMARY

Site: 101 [I-57 NB and Wilmington Rd. PM-2019 (Site Folder: 2019 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Prob. Adj. Block.	
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]						[Veh]	[Dist]			ft	%
South: I-57 NB Exit															
Lane 1 ^d	166	15.3	166	15.3	607	0.274	100	9.5	LOS A	1.0	27.8	Full	1600	0.0	0.0
Approach	166	15.3	166	15.3		0.274		9.5	LOS A	1.0	27.8				
East: Wilmington Rd.															
Lane 1 ^d	327	13.5	327	13.5	856	0.382	100	8.6	LOS A	1.8	50.1	Full	1600	0.0	0.0
Approach	327	13.5	327	13.5		0.382		8.6	LOS A	1.8	50.1				
West: Wilmington Rd.															
Lane 1 ^d	516	14.7	516	14.7	1217	0.424	100	5.1	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	516	14.7	516	14.7		0.424		5.1	LOS A	0.0	0.0				
All Vehicles	1010	14.4	1010	14.4		0.424		7.0	LOS A	1.8	50.1				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Sieglösch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)											
South: I-57 NB Exit											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From S To Exit:	W	N	E			Cap. veh/h	v/c	%	%	No.	
Lane 1	63	1	102	166	15.3	607	0.274	100	NA	NA	
Approach	63	1	102	166	15.3		0.274				
East: Wilmington Rd.											
Mov.	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane		
From E To Exit:	W	N			Cap. veh/h	v/c	%	%	No.		
Lane 1	241	86	327	13.5	856	0.382	100	NA	NA		
Approach	241	86	327	13.5		0.382					
West: Wilmington Rd.											
Mov.	L2	T1	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane		
From W To Exit:	N	E			Cap. veh/h	v/c	%	%	No.		

Lane 1	196	321	516	14.7		1217	0.424	100	NA	NA
Approach	196	321	516	14.7			0.424			
Total %HV Deg.Satn (v/c)										
All Vehicles	1010	14.4		0.424						

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis											
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane % veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec	
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: I-57 NB Exit				
Lane 1	0.0	0.0	0.0	0.0
East: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0
West: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0

SIDRA INTERSECTION 9.1 | Copyright © 2000-2022 Akcelik and Associates Pty Ltd | sidrasolutions.com
 Organisation: KIMLEY-HORN & ASSOCIATES INC | Licence: NETWORK / Enterprise Level 2 | Processed: Thursday, July 11, 2024 8:52:39 AM
 Project: C:\Users\Daniel.Carberry\Documents\Wilmington-Peotone\SIDRA Analysis\W-P_Roundabout_Analysis.sip9

LANE SUMMARY

Site: 101 [I-55 NB and River Rd. AM-2035 (Site Folder: 2035 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Prob. Adj. Block.	
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]						[Veh]	[Dist]			ft	%
East: River Rd.															
Lane 1 ^d	495	15.0	495	15.0	1197	0.413	100	5.9	LOS A	2.6	71.9	Full	1600	0.0	0.0
Approach	495	15.0	495	15.0		0.413		5.9	LOS A	2.6	71.9				
North: I-55 NB Ramp															
Lane 1 ^d	76	15.4	76	15.4	1085	0.070	100	3.9	LOS A	0.3	7.5	Full	1600	0.0	0.0
Approach	76	15.4	76	15.4		0.070		3.9	LOS A	0.3	7.5				
West: River Rd.															
Lane 1 ^d	375	26.4	375	26.4	1011	0.371	100	7.3	LOS A	1.9	56.2	Full	1600	0.0	0.0
Approach	375	26.4	375	26.4		0.371		7.3	LOS A	1.9	56.2				
All Vehicles	946	19.5	946	19.5		0.413		6.3	LOS A	2.6	71.9				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)										
East: River Rd.										
Mov.	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov.	Ov. Lane No.
From E To Exit:	W	N			Cap. veh/h	v/c	%	%		
Lane 1	82	413	495	15.0	1197	0.413	100	NA	NA	
Approach	82	413	495	15.0		0.413				
North: I-55 NB Ramp										
Mov.	L2	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov.	Ov. Lane No.
From N To Exit:	E	W			Cap. veh/h	v/c	%	%		
Lane 1	65	11	76	15.4	1085	0.070	100	NA	NA	
Approach	65	11	76	15.4		0.070				
West: River Rd.										
Mov.	L2	T1	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov.	Ov. Lane No.
From W To Exit:	N	E			Cap. veh/h	v/c	%	%		

Lane 1	11	364	375	26.4	1011	0.371	100	NA	NA
Approach	11	364	375	26.4	0.371				
Total %HV Deg.Satn (v/c)									
All Vehicles	946	19.5	0.413						

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis											
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane % veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
East: River Rd.				
Lane 1	0.0	0.0	0.0	0.0
North: I-55 NB Ramp				
Lane 1	0.0	0.0	0.0	0.0
West: River Rd.				
Lane 1	0.0	0.0	0.0	0.0

SIDRA INTERSECTION 9.1 | Copyright © 2000-2022 Akcelik and Associates Pty Ltd | sidrasolutions.com
 Organisation: KIMLEY-HORN & ASSOCIATES INC | Licence: NETWORK / Enterprise Level 2 | Processed: Thursday, July 11, 2024 8:52:40 AM
 Project: C:\Users\Daniel.Carberry\Documents\Wilmington-Peotone\SIDRA Analysis\W-P_Roundabout_Analysis.sip9

LANE SUMMARY

Site: 101 [I-55 NB and River Rd. PM-2035 (Site Folder: 2035 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Prob. Adj. Block.	
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]						[Veh]	[Dist]			ft	%
East: River Rd.															
Lane 1 ^d	478	25.4	478	25.4	1104	0.433	100	6.4	LOS A	2.6	77.3	Full	1600	0.0	0.0
Approach	478	25.4	478	25.4		0.433		6.4	LOS A	2.6	77.3				
North: I-55 NB Ramp															
Lane 1 ^d	185	12.8	185	12.8	1032	0.179	100	5.1	LOS A	0.8	21.0	Full	1600	0.0	0.0
Approach	185	12.8	185	12.8		0.179		5.1	LOS A	0.8	21.0				
West: River Rd.															
Lane 1 ^d	560	15.7	560	15.7	972	0.576	100	11.2	LOS B	4.0	113.9	Full	1600	0.0	0.0
Approach	560	15.7	560	15.7		0.576		11.2	LOS B	4.0	113.9				
All Vehicles	1223	19.1	1223	19.1		0.576		8.4	LOS A	4.0	113.9				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)										
East: River Rd.										
Mov.	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov.	Ov. Lane No.
From E To Exit:	W	N			Cap. veh/h	v/c	%	%		
Lane 1	130	348	478	25.4	1104	0.433	100	NA	NA	
Approach	130	348	478	25.4		0.433				
North: I-55 NB Ramp										
Mov.	L2	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov.	Ov. Lane No.
From N To Exit:	E	W			Cap. veh/h	v/c	%	%		
Lane 1	163	22	185	12.8	1032	0.179	100	NA	NA	
Approach	163	22	185	12.8		0.179				
West: River Rd.										
Mov.	L2	T1	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov.	Ov. Lane No.
From W To Exit:	N	E			Cap. veh/h	v/c	%	%		

Lane 1	11	549	560	15.7	972	0.576	100	NA	NA
Approach	11	549	560	15.7	0.576				
Total %HV Deg.Satn (v/c)									
All Vehicles	1223	19.1	0.576						

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis											
Exit Lane Number	Short Lane Length ft	Percent Opng in Lane % veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec		
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
East: River Rd.				
Lane 1	0.0	0.0	0.0	0.0
North: I-55 NB Ramp				
Lane 1	0.0	0.0	0.0	0.0
West: River Rd.				
Lane 1	0.0	0.0	0.0	0.0

SIDRA INTERSECTION 9.1 | Copyright © 2000-2022 Akcelik and Associates Pty Ltd | sidrasolutions.com
 Organisation: KIMLEY-HORN & ASSOCIATES INC | Licence: NETWORK / Enterprise Level 2 | Processed: Thursday, July 11, 2024 8:52:40 AM
 Project: C:\Users\Daniel.Carberry\Documents\Wilmington-Peotone\SIDRA Analysis\W-P_Roundabout_Analysis.sip9

LANE SUMMARY

Site: 101 [Old Chicago Rd. and Peotone Rd. AM-2035 (Site Folder: 2035 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Prob. Adj. Block.	
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]						[Veh]	[Dist]			ft	%
South: Old Chicago Rd.															
Lane 1 ^d	185	3.5	185	3.5	882	0.209	100	6.2	LOS A	0.9	23.6	Full	1600	0.0	0.0
Approach	185	3.5	185	3.5		0.209		6.2	LOS A	0.9	23.6				
East: Peotone Rd.															
Lane 1 ^d	321	19.6	321	19.6	949	0.338	100	7.3	LOS A	1.6	45.8	Full	1600	0.0	0.0
Approach	321	19.6	321	19.6		0.338		7.3	LOS A	1.6	45.8				
North: Old Chicago Rd.															
Lane 1 ^d	34	74.5	34	74.5	423	0.080	100	9.6	LOS A	0.2	6.4	Full	1600	0.0	0.0
Approach	34	74.5	34	74.5		0.080		9.6	LOS A	0.2	6.4				
West: Peotone Rd.															
Lane 1 ^d	392	19.3	392	19.3	1088	0.361	100	6.7	LOS A	1.9	55.0	Full	1600	0.0	0.0
Approach	392	19.3	392	19.3		0.361		6.7	LOS A	1.9	55.0				
All Vehicles	932	18.2	932	18.2		0.361		6.9	LOS A	1.9	55.0				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)											
South: Old Chicago Rd.											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane No.	
From S						Cap. veh/h	v/c	%	%		
To Exit:	W	N	E								
Lane 1	136	33	16	185	3.5	882	0.209	100	NA	NA	
Approach	136	33	16	185	3.5		0.209				
East: Peotone Rd.											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane No.	
From E						Cap. veh/h	v/c	%	%		
To Exit:	S	W	N								
Lane 1	5	261	54	321	19.6	949	0.338	100	NA	NA	

Approach	5	261	54	321	19.6		0.338				
North: Old Chicago Rd.											
Mov.	L2	T1	R2	Total	%HV		Deg.	Lane	Prob.	Ov.	
From N							Satn	Util.	SL	Ov.	Lane
To Exit:	E	S	W			Cap.	v/c	%	%	No.	
						veh/h					
Lane 1	27	5	1	34	74.5	423	0.080	100	NA	NA	
Approach	27	5	1	34	74.5		0.080				
West: Peotone Rd.											
Mov.	L2	T1	R2	Total	%HV		Deg.	Lane	Prob.	Ov.	
From W							Satn	Util.	SL	Ov.	Lane
To Exit:	N	E	S			Cap.	v/c	%	%	No.	
						veh/h					
Lane 1	1	277	114	392	19.3	1088	0.361	100	NA	NA	
Approach	1	277	114	392	19.3		0.361				
Total %HV Deg.Satn (v/c)											
All Vehicles	932	18.2					0.361				

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis												
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate % veh/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec	
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Old Chicago Rd.				
Lane 1	0.0	0.0	0.0	0.0
East: Peotone Rd.				
Lane 1	0.0	0.0	0.0	0.0
North: Old Chicago Rd.				
Lane 1	0.0	0.0	0.0	0.0
West: Peotone Rd.				
Lane 1	0.0	0.0	0.0	0.0

LANE SUMMARY

Site: 101 [Old Chicago Rd. and Peotone Rd. PM-2035 (Site Folder: 2035 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Prob. Adj. Block.	
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]						[Veh]	[Dist]			ft	%
South: Old Chicago Rd.															
Lane 1 ^d	98	8.1	98	8.1	545	0.180	100	8.9	LOS A	0.6	16.8	Full	1600	0.0	0.0
Approach	98	8.1	98	8.1		0.180		8.9	LOS A	0.6	16.8				
East: Peotone Rd.															
Lane 1 ^d	337	23.9	337	23.9	1015	0.332	100	6.8	LOS A	1.6	47.3	Full	1600	0.0	0.0
Approach	337	23.9	337	23.9		0.332		6.8	LOS A	1.6	47.3				
North: Old Chicago Rd.															
Lane 1 ^d	190	15.0	190	15.0	698	0.273	100	8.4	LOS A	1.0	29.4	Full	1600	0.0	0.0
Approach	190	15.0	190	15.0		0.273		8.4	LOS A	1.0	29.4				
West: Peotone Rd.															
Lane 1 ^d	767	15.1	767	15.1	923	0.832	100	22.9	LOS C	20.3	569.8	Full	1600	0.0	0.0
Approach	767	15.1	767	15.1		0.832		22.9	LOS C	20.3	569.8				
All Vehicles	1392	16.7	1392	16.7		0.832		16.0	LOS C	20.3	569.8				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stoptline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)											
South: Old Chicago Rd.											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From S						Cap. veh/h	v/c	%	%	No.	
To Exit:	W	N	E								
Lane 1	71	11	16	98	8.1	545	0.180	100	NA	NA	
Approach	71	11	16	98	8.1		0.180				
East: Peotone Rd.											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From E						Cap. veh/h	v/c	%	%	No.	
To Exit:	S	W	N								
Lane 1	27	299	11	337	23.9	1015	0.332	100	NA	NA	

Approach	27	299	11	337	23.9		0.332				
North: Old Chicago Rd.											
Mov. From N To Exit:	L2	T1	R2	Total	%HV		Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.	
	E	S	W			Cap. veh/h					
Lane 1	109	71	11	190	15.0	698	0.273	100	NA	NA	
Approach	109	71	11	190	15.0		0.273				
West: Peotone Rd.											
Mov. From W To Exit:	L2	T1	R2	Total	%HV		Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.	
	N	E	S			Cap. veh/h					
Lane 1	1	538	228	767	15.1	923	0.832	100	NA	NA	
Approach	1	538	228	767	15.1		0.832				
Total %HV Deg. Satn (v/c)											
All Vehicles	1392	16.7					0.832				

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis												
Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec	
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Old Chicago Rd.				
Lane 1	0.0	0.0	0.0	0.0
East: Peotone Rd.				
Lane 1	0.0	0.0	0.0	0.0
North: Old Chicago Rd.				
Lane 1	0.0	0.0	0.0	0.0
West: Peotone Rd.				
Lane 1	0.0	0.0	0.0	0.0

LANE SUMMARY

Site: 101 [Cedar Rd. and Wilmington Rd. AM-2035 (Site Folder: 2035 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]	veh/h	v/c	%	sec		[Veh]	[Dist] ft		ft	%	%
South: Cedar Rd.															
Lane 1 ^d	8	0.0	8	0.0	846	0.009	100	4.3	LOS A	0.0	0.9	Full	1600	0.0	0.0
Approach	8	0.0	8	0.0		0.009		4.3	LOS A	0.0	0.9				
East: Wilmington Rd.															
Lane 1 ^d	284	24.9	284	24.9	979	0.290	100	6.5	LOS A	1.3	38.5	Full	1600	0.0	0.0
Approach	284	24.9	284	24.9		0.290		6.5	LOS A	1.3	38.5				
North: Cedar Rd.															
Lane 1 ^d	55	14.7	55	14.7	852	0.065	100	4.8	LOS A	0.2	6.5	Full	1600	0.0	0.0
Approach	55	14.7	55	14.7		0.065		4.8	LOS A	0.2	6.5				
West: Wilmington Rd.															
Lane 1 ^d	382	19.0	382	19.0	1136	0.336	100	6.0	LOS A	1.8	50.9	Full	1600	0.0	0.0
Approach	382	19.0	382	19.0		0.336		6.0	LOS A	1.8	50.9				
All Vehicles	728	20.8	728	20.8		0.336		6.1	LOS A	1.8	50.9				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)										
South: Cedar Rd.										
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane No.
From S						Cap. veh/h	v/c	%	%	
To Exit:	W	N	E							
Lane 1	1	5	1	8	0.0	846	0.009	100	NA	NA
Approach	1	5	1	8	0.0		0.009			
East: Wilmington Rd.										
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane No.
From E						Cap. veh/h	v/c	%	%	
To Exit:	S	W	N							
Lane 1	1	245	38	284	24.9	979	0.290	100	NA	NA

Approach	1	245	38	284	24.9		0.290				
North: Cedar Rd.											
Mov.	L2	T1	R2	Total	%HV		Deg.	Lane	Prob.	Ov.	
From N							Satn	Util.	SL	Ov.	Lane
To Exit:	E	S	W			Cap.	v/c	%	%	No.	
						veh/h					
Lane 1	22	1	33	55	14.7	852	0.065	100	NA	NA	
Approach	22	1	33	55	14.7		0.065				
West: Wilmington Rd.											
Mov.	L2	T1	R2	Total	%HV		Deg.	Lane	Prob.	Ov.	
From W							Satn	Util.	SL	Ov.	Lane
To Exit:	N	E	S			Cap.	v/c	%	%	No.	
						veh/h					
Lane 1	103	277	1	382	19.0	1136	0.336	100	NA	NA	
Approach	103	277	1	382	19.0		0.336				
Total %HV Deg.Satn (v/c)											
All Vehicles	728	20.8					0.336				

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis												
	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Flow Rate	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay
		ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis				
	Initial Queued Demand	Residual Queued Demand	Time for Residual Demand to Clear	Duration of Oversatn
	veh	veh	sec	sec
South: Cedar Rd.				
Lane 1	0.0	0.0	0.0	0.0
East: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0
North: Cedar Rd.				
Lane 1	0.0	0.0	0.0	0.0
West: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0

LANE SUMMARY

Site: 101 [Cedar Rd. and Wilmington Rd. PM-2035 (Site Folder: 2035 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]	veh/h	v/c	%	sec		[Veh]	[Dist] ft		ft	%	%
South: Cedar Rd.															
Lane 1 ^d	12	2.1	12	2.1	556	0.022	100	6.7	LOS A	0.1	1.9	Full	1600	0.0	0.0
Approach	12	2.1	12	2.1		0.022		6.7	LOS A	0.1	1.9				
East: Wilmington Rd.															
Lane 1 ^d	315	25.9	315	25.9	971	0.325	100	7.0	LOS A	1.5	44.9	Full	1600	0.0	0.0
Approach	315	25.9	315	25.9		0.325		7.0	LOS A	1.5	44.9				
North: Cedar Rd.															
Lane 1 ^d	185	3.4	185	3.4	916	0.202	100	5.9	LOS A	0.9	22.9	Full	1600	0.0	0.0
Approach	185	3.4	185	3.4		0.202		5.9	LOS A	0.9	22.9				
West: Wilmington Rd.															
Lane 1 ^d	674	18.9	674	18.9	1077	0.626	100	11.1	LOS B	5.2	149.8	Full	1600	0.0	0.0
Approach	674	18.9	674	18.9		0.626		11.1	LOS B	5.2	149.8				
All Vehicles	1186	18.2	1186	18.2		0.626		9.2	LOS A	5.2	149.8				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stoptline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)											
South: Cedar Rd.											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From S						Cap. veh/h	v/c	%	%	No.	
To Exit:	W	N	E								
Lane 1	1	5	5	12	2.1	556	0.022	100	NA	NA	
Approach	1	5	5	12	2.1		0.022				
East: Wilmington Rd.											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From E						Cap. veh/h	v/c	%	%	No.	
To Exit:	S	W	N								
Lane 1	5	277	33	315	25.9	971	0.325	100	NA	NA	

Approach	5	277	33	315	25.9		0.325				
North: Cedar Rd.											
Mov. From N To Exit:	L2	T1	R2	Total	%HV		Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.	
	E	S	W				Cap. veh/h				
Lane 1	54	11	120	185	3.4		916	0.202	100	NA	NA
Approach	54	11	120	185	3.4			0.202			
West: Wilmington Rd.											
Mov. From W To Exit:	L2	T1	R2	Total	%HV		Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.	
	N	E	S				Cap. veh/h				
Lane 1	103	565	5	674	18.9		1077	0.626	100	NA	NA
Approach	103	565	5	674	18.9			0.626			
Total %HV Deg. Satn (v/c)											
All Vehicles	1186	18.2						0.626			

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis												
Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate % veh/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec		
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Cedar Rd.				
Lane 1	0.0	0.0	0.0	0.0
East: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0
North: Cedar Rd.				
Lane 1	0.0	0.0	0.0	0.0
West: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0

LANE SUMMARY

Site: 101 [US-52 and Wilmington Rd. AM-2035 (Site Folder: 2035 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Prob. Adj. Block.	
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]						[Veh]	[Dist]			ft	%
South: US-52															
Lane 1 ^d	353	7.3	353	7.3	897	0.394	100	8.5	LOS A	2.0	52.8	Full	1600	0.0	0.0
Approach	353	7.3	353	7.3		0.394		8.5	LOS A	2.0	52.8				
East: Wilmington Rd.															
Lane 1 ^d	217	25.7	217	25.7	684	0.318	100	9.2	LOS A	1.2	35.6	Full	1600	0.0	0.0
Approach	217	25.7	217	25.7		0.318		9.2	LOS A	1.2	35.6				
North: US-52															
Lane 1 ^d	266	15.7	266	15.7	818	0.326	100	8.1	LOS A	1.4	39.6	Full	1600	0.0	0.0
Approach	266	15.7	266	15.7		0.326		8.1	LOS A	1.4	39.6				
West: Wilmington Rd.															
Lane 1 ^d	288	23.9	288	23.9	773	0.373	100	9.2	LOS A	1.6	46.9	Full	1600	0.0	0.0
Approach	288	23.9	288	23.9		0.373		9.2	LOS A	1.6	46.9				
All Vehicles	1125	17.1	1125	17.1		0.394		8.7	LOS A	2.0	52.8				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stoptline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)										
South: US-52										
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL Ov.	Ov. Lane No.
From S To Exit:	W	N	E			Cap. veh/h	v/c	%	%	
Lane 1	71	272	11	353	7.3	897	0.394	100	NA	NA
Approach	71	272	11	353	7.3		0.394			
East: Wilmington Rd.										
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL Ov.	Ov. Lane No.
From E To Exit:	S	W	N			Cap. veh/h	v/c	%	%	
Lane 1	16	179	22	217	25.7	684	0.318	100	NA	NA

Approach	16	179	22	217	25.7		0.318				
North: US-52											
Mov. From N To Exit:	L2	T1	R2	Total	%HV		Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.	
	E	S	W				Cap. veh/h				
Lane 1	38	217	11	266	15.7		818	0.326	100	NA	NA
Approach	38	217	11	266	15.7			0.326			
West: Wilmington Rd.											
Mov. From W To Exit:	L2	T1	R2	Total	%HV		Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.	
	N	E	S				Cap. veh/h				
Lane 1	27	207	54	288	23.9		773	0.373	100	NA	NA
Approach	27	207	54	288	23.9			0.373			
Total %HV Deg. Satn (v/c)											
All Vehicles	1125	17.1			0.394						

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis												
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: US-52				
Lane 1	0.0	0.0	0.0	0.0
East: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0
North: US-52				
Lane 1	0.0	0.0	0.0	0.0
West: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0

LANE SUMMARY

Site: 101 [US-52 and Wilmington Rd. PM-2035 (Site Folder: 2035 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Prob. Adj. Block.	
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]						[Veh]	[Dist]			ft	%
South: US-52															
Lane 1 ^d	348	13.3	348	13.3	579	0.601	100	18.0	LOS C	3.8	105.4	Full	1600	0.0	0.0
Approach	348	13.3	348	13.3		0.601		18.0	LOS C	3.8	105.4				
East: Wilmington Rd.															
Lane 1 ^d	217	24.5	217	24.5	673	0.323	100	9.4	LOS A	1.2	36.0	Full	1600	0.0	0.0
Approach	217	24.5	217	24.5		0.323		9.4	LOS A	1.2	36.0				
North: US-52															
Lane 1 ^d	473	4.1	473	4.1	936	0.505	100	10.1	LOS B	3.6	94.0	Full	1600	0.0	0.0
Approach	473	4.1	473	4.1		0.505		10.1	LOS B	3.6	94.0				
West: Wilmington Rd.															
Lane 1 ^d	592	21.0	592	21.0	647	0.916	100	41.4	LOS E	17.0	495.9	Full	1600	0.0	0.0
Approach	592	21.0	592	21.0		0.916		41.4	LOS E	17.0	495.9				
All Vehicles	1630	14.9	1630	14.9		0.916		23.1	LOS C	17.0	495.9				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)										
South: US-52										
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL Ov.	Ov. Lane No.
From S To Exit:	W	N	E			Cap. veh/h	v/c	%	%	
Lane 1	76	261	11	348	13.3	579	0.601	100	NA	NA
Approach	76	261	11	348	13.3		0.601			
East: Wilmington Rd.										
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL Ov.	Ov. Lane No.
From E To Exit:	S	W	N			Cap. veh/h	v/c	%	%	
Lane 1	16	168	33	217	24.5	673	0.323	100	NA	NA

Approach	16	168	33	217	24.5		0.323				
North: US-52											
Mov. From N To Exit:	L2	T1	R2	Total	%HV		Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.	
	E	S	W				Cap. veh/h				
Lane 1	43	402	27	473	4.1		936	0.505	100	NA	NA
Approach	43	402	27	473	4.1			0.505			
West: Wilmington Rd.											
Mov. From W To Exit:	L2	T1	R2	Total	%HV		Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.	
	N	E	S				Cap. veh/h				
Lane 1	33	462	98	592	21.0		647	0.916	100	NA	NA
Approach	33	462	98	592	21.0			0.916			
Total %HV Deg. Satn (v/c)											
All Vehicles	1630	14.9						0.916			

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis												
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate % veh/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec	
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: US-52				
Lane 1	0.0	0.0	0.0	0.0
East: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0
North: US-52				
Lane 1	0.0	0.0	0.0	0.0
West: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0

LANE SUMMARY

Site: 101 [I-57 SB and Wilmington Rd. AM-2035 (Site Folder: 2035 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]	veh/h	v/c	%	sec		[Veh]	[Dist] ft		ft	%	%
East: Wilmington Rd.															
Lane 1 ^d	364	14.9	364	14.9	1215	0.300	100	4.5	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	364	14.9	364	14.9		0.300		4.5	LOS A	0.0	0.0				
North: I-57 SB Exit															
Lane 1 ^d	170	27.0	170	27.0	658	0.258	100	8.6	LOS A	0.9	27.1	Full	1600	0.0	0.0
Approach	170	27.0	170	27.0		0.258		8.6	LOS A	0.9	27.1				
West: Wilmington Rd.															
Lane 1 ^d	277	22.5	277	22.5	907	0.305	100	7.2	LOS A	1.3	39.2	Full	1600	0.0	0.0
Approach	277	22.5	277	22.5		0.305		7.2	LOS A	1.3	39.2				
All Vehicles	811	20.0	811	20.0		0.305		6.3	LOS A	1.3	39.2				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)											
East: Wilmington Rd.											
Mov.	L2	T1	Total	%HV			Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From E To Exit:	S	W			Cap. veh/h	v/c	%	%	No.		
Lane 1	98	266	364	14.9	1215	0.300	100	NA	NA		
Approach	98	266	364	14.9		0.300					
North: I-57 SB Exit											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From N To Exit:	E	S	W			Cap. veh/h	v/c	%	%	No.	
Lane 1	71	1	98	170	27.0	658	0.258	100	NA	NA	
Approach	71	1	98	170	27.0		0.258				
West: Wilmington Rd.											
Mov.	T1	R2	Total	%HV			Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From W To Exit:	E	S			Cap. veh/h	v/c	%	%	No.		

Lane 1	212	65	277	22.5	907	0.305	100	NA	NA
Approach	212	65	277	22.5		0.305			
Total %HV Deg.Satn (v/c)									
All Vehicles	811	20.0		0.305					

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis											
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate % veh/h	Critical Gap sec	Follow-up Headway sec	Lane Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec	
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
East: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0
North: I-57 SB Exit				
Lane 1	0.0	0.0	0.0	0.0
West: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0

SIDRA INTERSECTION 9.1 | Copyright © 2000-2022 Akcelik and Associates Pty Ltd | sidrasolutions.com
 Organisation: KIMLEY-HORN & ASSOCIATES INC | Licence: NETWORK / Enterprise Level 2 | Processed: Thursday, July 11, 2024 8:52:44 AM
 Project: C:\Users\Daniel.Carberry\Documents\Wilmington-Peotone\SIDRA Analysis\W-P_Roundabout_Analysis.sip9

LANE SUMMARY

Site: 101 [I-57 SB and Wilmington Rd. PM-2035 (Site Folder: 2035 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]	veh/h	v/c	%	sec		[Veh]	[Dist] ft		ft	%	%
East: Wilmington Rd.															
Lane 1 ^d	353	16.4	353	16.4	1200	0.295	100	4.5	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	353	16.4	353	16.4		0.295		4.5	LOS A	0.0	0.0				
North: I-57 SB Exit															
Lane 1 ^d	267	9.3	267	9.3	805	0.332	100	8.3	LOS A	1.5	39.9	Full	1600	0.0	0.0
Approach	267	9.3	267	9.3		0.332		8.3	LOS A	1.5	39.9				
West: Wilmington Rd.															
Lane 1 ^d	598	16.9	598	16.9	779	0.768	100	21.4	LOS C	11.4	322.2	Full	1600	0.0	0.0
Approach	598	16.9	598	16.9		0.768		21.4	LOS C	11.4	322.2				
All Vehicles	1218	15.1	1218	15.1		0.768		13.6	LOS B	11.4	322.2				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)										
East: Wilmington Rd.										
Mov.	L2	T1	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From E					Cap. veh/h	v/c	%	%	No.	
To Exit:	S	W								
Lane 1	158	196	353	16.4	1200	0.295	100	NA	NA	
Approach	158	196	353	16.4		0.295				
North: I-57 SB Exit										
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane
From N					Cap. veh/h	v/c	%	%	No.	
To Exit:	E	S	W							
Lane 1	185	1	82	267	9.3	805	0.332	100	NA	NA
Approach	185	1	82	267	9.3		0.332			
West: Wilmington Rd.										
Mov.	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From W					Cap. veh/h	v/c	%	%	No.	
To Exit:	E	S								

Lane 1	511	87	598	16.9	779	0.768	100	NA	NA
Approach	511	87	598	16.9	779	0.768	100	NA	NA
Total %HV Deg.Satn (v/c)									
All Vehicles	1218	15.1		0.768					

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis											
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane % veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
East: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0
North: I-57 SB Exit				
Lane 1	0.0	0.0	0.0	0.0
West: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0

LANE SUMMARY

Site: 101 [I-57 NB and Wilmington Rd. PM-2035 (Site Folder: 2035 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]	veh/h	v/c	%	sec		[Veh]	[Dist] ft		ft	%	%
South: I-57 NB Exit															
Lane 1 ^d	191	16.8	191	16.8	610	0.313	100	10.1	LOS B	1.2	33.8	Full	1600	0.0	0.0
Approach	191	16.8	191	16.8		0.313		10.1	LOS B	1.2	33.8				
East: Wilmington Rd.															
Lane 1 ^d	375	13.4	375	13.4	865	0.434	100	9.4	LOS A	2.2	61.1	Full	1600	0.0	0.0
Approach	375	13.4	375	13.4		0.434		9.4	LOS A	2.2	61.1				
West: Wilmington Rd.															
Lane 1 ^d	500	14.4	500	14.4	1219	0.410	100	5.0	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	500	14.4	500	14.4		0.410		5.0	LOS A	0.0	0.0				
All Vehicles	1066	14.5	1066	14.5		0.434		7.5	LOS A	2.2	61.1				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)											
South: I-57 NB Exit											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From S To Exit:	W	N	E			Cap. veh/h	v/c	%	%	No.	
Lane 1	82	1	109	191	16.8	610	0.313	100	NA	NA	
Approach	82	1	109	191	16.8		0.313				
East: Wilmington Rd.											
Mov.	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane		
From E To Exit:	W	N			Cap. veh/h	v/c	%	%	No.		
Lane 1	299	76	375	13.4	865	0.434	100	NA	NA		
Approach	299	76	375	13.4		0.434					
West: Wilmington Rd.											
Mov.	L2	T1	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane		
From W To Exit:	N	E			Cap. veh/h	v/c	%	%	No.		

Lane 1	168	332	500	14.4		1219	0.410	100	NA	NA
Approach	168	332	500	14.4			0.410			
Total %HV Deg.Satn (v/c)										
All Vehicles	1066	14.5		0.434						

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis											
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane % veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: I-57 NB Exit				
Lane 1	0.0	0.0	0.0	0.0
East: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0
West: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0

SIDRA INTERSECTION 9.1 | Copyright © 2000-2022 Akcelik and Associates Pty Ltd | sidrasolutions.com
 Organisation: KIMLEY-HORN & ASSOCIATES INC | Licence: NETWORK / Enterprise Level 2 | Processed: Thursday, July 11, 2024 8:52:46 AM
 Project: C:\Users\Daniel.Carberry\Documents\Wilmington-Peotone\SIDRA Analysis\W-P_Roundabout_Analysis.sip9

LANE SUMMARY

Site: 101 [I-57 NB and Wilmington Rd. AM-2035 (Site Folder: 2035 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Prob. Adj. Block.	
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]						[Veh]	[Dist]			%	%
South: I-57 NB Exit															
Lane 1 ^d	197	13.1	197	13.1	938	0.210	100	5.9	LOS A	0.9	24.4	Full	1600	0.0	0.0
Approach	197	13.1	197	13.1		0.210		5.9	LOS A	0.9	24.4				
East: Wilmington Rd.															
Lane 1 ^d	418	11.9	418	11.9	1009	0.415	100	8.0	LOS A	2.3	62.4	Full	1600	0.0	0.0
Approach	418	11.9	418	11.9		0.415		8.0	LOS A	2.3	62.4				
West: Wilmington Rd.															
Lane 1 ^d	201	19.3	201	19.3	1173	0.171	100	3.9	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	201	19.3	201	19.3		0.171		3.9	LOS A	0.0	0.0				
All Vehicles	816	14.0	816	14.0		0.415		6.5	LOS A	2.3	62.4				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)											
South: I-57 NB Exit											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From S To Exit:	W	N	E			Cap. veh/h	v/c	%	%	No.	
Lane 1	103	1	92	197	13.1	938	0.210	100	NA	NA	
Approach	103	1	92	197	13.1		0.210				
East: Wilmington Rd.											
Mov.	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane		
From E To Exit:	W	N			Cap. veh/h	v/c	%	%	No.		
Lane 1	293	125	418	11.9	1009	0.415	100	NA	NA		
Approach	293	125	418	11.9		0.415					
West: Wilmington Rd.											
Mov.	L2	T1	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane		
From W To Exit:	N	E			Cap. veh/h	v/c	%	%	No.		

Lane 1	54	147	201	19.3	1173	0.171	100	NA	NA
Approach	54	147	201	19.3		0.171			
Total %HV Deg.Satn (v/c)									
All Vehicles	816	14.0		0.415					

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis											
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane % veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: I-57 NB Exit				
Lane 1	0.0	0.0	0.0	0.0
East: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0
West: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0

SIDRA INTERSECTION 9.1 | Copyright © 2000-2022 Akcelik and Associates Pty Ltd | sidrasolutions.com
 Organisation: KIMLEY-HORN & ASSOCIATES INC | Licence: NETWORK / Enterprise Level 2 | Processed: Thursday, July 11, 2024 8:52:46 AM
 Project: C:\Users\Daniel.Carberry\Documents\Wilmington-Peotone\SIDRA Analysis\W-P_Roundabout_Analysis.sip9

LANE SUMMARY

Site: 101 [I-50 and Wilmington Rd. AM-2050 (Site Folder: 2050 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Prob. Adj. Block.	
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]						[Veh]	[Dist]			%	%
South: IL-50															
Lane 1 ^d	321	12.5	321	12.5	960	0.334	100	7.2	LOS A	1.6	44.4	Full	1600	0.0	0.0
Approach	321	12.5	321	12.5		0.334		7.2	LOS A	1.6	44.4				
East: Wilmington Rd.															
Lane 1 ^d	72	21.7	72	21.7	601	0.119	100	7.4	LOS A	0.4	10.9	Full	1600	0.0	0.0
Approach	72	21.7	72	21.7		0.119		7.4	LOS A	0.4	10.9				
North: IL-50															
Lane 1 ^d	348	11.9	348	11.9	1045	0.333	100	6.7	LOS A	1.7	46.3	Full	1600	0.0	0.0
Approach	348	11.9	348	11.9		0.333		6.7	LOS A	1.7	46.3				
West: Wilmington Rd.															
Lane 1 ^d	228	16.7	228	16.7	1013	0.225	100	5.6	LOS A	1.0	27.7	Full	1600	0.0	0.0
Approach	228	16.7	228	16.7		0.225		5.6	LOS A	1.0	27.7				
All Vehicles	968	13.9	968	13.9		0.334		6.7	LOS A	1.7	46.3				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stoptline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)											
South: IL-50											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From S						Cap. veh/h	v/c	%	%	No.	
To Exit:	W	N	E								
Lane 1	60	255	5	321	12.5	960	0.334	100	NA	NA	
Approach	60	255	5	321	12.5		0.334				
East: Wilmington Rd.											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From E						Cap. veh/h	v/c	%	%	No.	
To Exit:	S	W	N								
Lane 1	1	60	11	72	21.7	601	0.119	100	NA	NA	

Approach	1	60	11	72	21.7		0.119				
North: IL-50											
Mov.	L2	T1	R2	Total	%HV		Deg.	Lane	Prob.	Ov.	
From N							Satn	Util.	SL	Ov.	Lane
To Exit:	E	S	W			Cap.	v/c	%	%	No.	
						veh/h					
Lane 1	5	120	223	348	11.9	1045	0.333	100	NA	NA	
Approach	5	120	223	348	11.9		0.333				
West: Wilmington Rd.											
Mov.	L2	T1	R2	Total	%HV		Deg.	Lane	Prob.	Ov.	
From W							Satn	Util.	SL	Ov.	Lane
To Exit:	N	E	S			Cap.	v/c	%	%	No.	
						veh/h					
Lane 1	163	27	38	228	16.7	1013	0.225	100	NA	NA	
Approach	163	27	38	228	16.7		0.225				
Total %HV Deg.Satn (v/c)											
All Vehicles	968	13.9		0.334							

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis												
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate % veh/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec	
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: IL-50				
Lane 1	0.0	0.0	0.0	0.0
East: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0
North: IL-50				
Lane 1	0.0	0.0	0.0	0.0
West: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0

LANE SUMMARY

Site: 101 [I-50 and Wilmington Rd. PM-2050 (Site Folder: 2050 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Prob. Adj. Block.	
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]						[Veh]	[Dist]			ft	%
South: IL-50															
Lane 1 ^d	418	13.2	418	13.2	848	0.494	100	10.7	LOS B	3.3	90.1	Full	1600	0.0	0.0
Approach	418	13.2	418	13.2		0.494		10.7	LOS B	3.3	90.1				
East: Wilmington Rd.															
Lane 1 ^d	61	33.0	61	33.0	417	0.146	100	10.8	LOS B	0.4	11.7	Full	1600	0.0	0.0
Approach	61	33.0	61	33.0		0.146		10.8	LOS B	0.4	11.7				
North: IL-50															
Lane 1 ^d	539	10.0	539	10.0	1010	0.534	100	10.0	LOS B	3.5	93.3	Full	1600	0.0	0.0
Approach	539	10.0	539	10.0		0.534		10.0	LOS B	3.5	93.3				
West: Wilmington Rd.															
Lane 1 ^d	337	25.1	337	25.1	766	0.440	100	10.4	LOS B	2.3	67.7	Full	1600	0.0	0.0
Approach	337	25.1	337	25.1		0.440		10.4	LOS B	2.3	67.7				
All Vehicles	1355	15.8	1355	15.8		0.534		10.4	LOS B	3.5	93.3				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)											
South: IL-50											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane No.	
From S To Exit:	W	N	E			Cap. veh/h	v/c	%	%		
Lane 1	92	321	5	418	13.2	848	0.494	100	NA	NA	
Approach	92	321	5	418	13.2		0.494				
East: Wilmington Rd.											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane No.	
From E To Exit:	S	W	N			Cap. veh/h	v/c	%	%		
Lane 1	5	54	1	61	33.0	417	0.146	100	NA	NA	

Approach	5	54	1	61	33.0		0.146			
North: IL-50										
Mov.	L2	T1	R2	Total	%HV		Deg.	Lane	Prob.	Ov.
From N							Satn	Util.	SL	Lane
To Exit:	E	S	W			Cap.	v/c	%	%	No.
						veh/h				
Lane 1	1	277	261	539	10.0	1010	0.534	100	NA	NA
Approach	1	277	261	539	10.0		0.534			
West: Wilmington Rd.										
Mov.	L2	T1	R2	Total	%HV		Deg.	Lane	Prob.	Ov.
From W							Satn	Util.	SL	Lane
To Exit:	N	E	S			Cap.	v/c	%	%	No.
						veh/h				
Lane 1	223	43	71	337	25.1	766	0.440	100	NA	NA
Approach	223	43	71	337	25.1		0.440			
Total %HV Deg.Satn (v/c)										
All Vehicles	1355	15.8					0.534			

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis												
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: IL-50				
Lane 1	0.0	0.0	0.0	0.0
East: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0
North: IL-50				
Lane 1	0.0	0.0	0.0	0.0
West: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0

LANE SUMMARY

Site: 101 [I-55 NB and River Rd. AM-2050 (Site Folder: 2050 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Prob. Adj. Block.	
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]						[Veh]	[Dist]			ft	%
East: River Rd.															
Lane 1 ^d	424	15.0	424	15.0	1205	0.352	100	5.1	LOS A	2.0	55.8	Full	1600	0.0	0.0
Approach	424	15.0	424	15.0		0.352		5.1	LOS A	2.0	55.8				
North: I-55 NB Ramp															
Lane 1 ^d	87	14.9	87	14.9	1059	0.082	100	4.1	LOS A	0.3	8.8	Full	1600	0.0	0.0
Approach	87	14.9	87	14.9		0.082		4.1	LOS A	0.3	8.8				
West: River Rd.															
Lane 1 ^d	429	26.7	429	26.7	993	0.432	100	8.2	LOS A	2.3	70.8	Full	1600	0.0	0.0
Approach	429	26.7	429	26.7		0.432		8.2	LOS A	2.3	70.8				
All Vehicles	940	20.3	940	20.3		0.432		6.5	LOS A	2.3	70.8				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)										
East: River Rd.										
Mov.	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov.	Ov. Lane No.
From E To Exit:	W	N			Cap. veh/h	v/c	%	%		
Lane 1	103	321	424	15.0	1205	0.352	100	NA	NA	
Approach	103	321	424	15.0		0.352				
North: I-55 NB Ramp										
Mov.	L2	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov.	Ov. Lane No.
From N To Exit:	E	W			Cap. veh/h	v/c	%	%		
Lane 1	76	11	87	14.9	1059	0.082	100	NA	NA	
Approach	76	11	87	14.9		0.082				
West: River Rd.										
Mov.	L2	T1	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov.	Ov. Lane No.
From W To Exit:	N	E			Cap. veh/h	v/c	%	%		

Lane 1	5	424	429	26.7	993	0.432	100	NA	NA
Approach	5	424	429	26.7	0.432				
Total %HV Deg.Satn (v/c)									
All Vehicles	940	20.3	0.432						

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis											
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane % veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
East: River Rd.				
Lane 1	0.0	0.0	0.0	0.0
North: I-55 NB Ramp				
Lane 1	0.0	0.0	0.0	0.0
West: River Rd.				
Lane 1	0.0	0.0	0.0	0.0

SIDRA INTERSECTION 9.1 | Copyright © 2000-2022 Akcelik and Associates Pty Ltd | sidrasolutions.com
 Organisation: KIMLEY-HORN & ASSOCIATES INC | Licence: NETWORK / Enterprise Level 2 | Processed: Thursday, July 11, 2024 8:52:48 AM
 Project: C:\Users\Daniel.Carberry\Documents\Wilmington-Peotone\SIDRA Analysis\W-P_Roundabout_Analysis.sip9

LANE SUMMARY

Site: 101 [I-55 NB and River Rd. PM-2050 (Site Folder: 2050 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Prob. Adj. Block.	
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]						[Veh]	[Dist]			ft	%
East: River Rd.															
Lane 1 ^d	435	25.4	435	25.4	1104	0.394	100	6.1	LOS A	2.2	65.8	Full	1600	0.0	0.0
Approach	435	25.4	435	25.4		0.394		6.1	LOS A	2.2	65.8				
North: I-55 NB Ramp															
Lane 1 ^d	217	12.8	217	12.8	988	0.220	100	5.7	LOS A	1.0	26.4	Full	1600	0.0	0.0
Approach	217	12.8	217	12.8		0.220		5.7	LOS A	1.0	26.4				
West: River Rd.															
Lane 1 ^d	647	16.8	647	16.8	929	0.696	100	15.3	LOS C	10.0	283.7	Full	1600	0.0	0.0
Approach	647	16.8	647	16.8		0.696		15.3	LOS C	10.0	283.7				
All Vehicles	1299	19.0	1299	19.0		0.696		10.6	LOS B	10.0	283.7				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)										
East: River Rd.										
Mov.	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov.	Ov. Lane No.
From E To Exit:	W	N			Cap. veh/h	v/c	%	%		
Lane 1	163	272	435	25.4	1104	0.394	100	NA	NA	
Approach	163	272	435	25.4		0.394				
North: I-55 NB Ramp										
Mov.	L2	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov.	Ov. Lane No.
From N To Exit:	E	W			Cap. veh/h	v/c	%	%		
Lane 1	190	27	217	12.8	988	0.220	100	NA	NA	
Approach	190	27	217	12.8		0.220				
West: River Rd.										
Mov.	L2	T1	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov.	Ov. Lane No.
From W To Exit:	N	E			Cap. veh/h	v/c	%	%		

Lane 1	11	636	647	16.8	929	0.696	100	NA	NA
Approach	11	636	647	16.8	0.696				
Total %HV Deg.Satn (v/c)									
All Vehicles	1299	19.0	0.696						

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis											
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate % veh/h	Critical Gap sec	Follow-up Headway sec	Lane Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec	
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
East: River Rd.				
Lane 1	0.0	0.0	0.0	0.0
North: I-55 NB Ramp				
Lane 1	0.0	0.0	0.0	0.0
West: River Rd.				
Lane 1	0.0	0.0	0.0	0.0

SIDRA INTERSECTION 9.1 | Copyright © 2000-2022 Akcelik and Associates Pty Ltd | sidrasolutions.com
 Organisation: KIMLEY-HORN & ASSOCIATES INC | Licence: NETWORK / Enterprise Level 2 | Processed: Thursday, July 11, 2024 8:52:49 AM
 Project: C:\Users\Daniel.Carberry\Documents\Wilmington-Peotone\SIDRA Analysis\W-P_Roundabout_Analysis.sip9

LANE SUMMARY

Site: 101 [Old Chicago Rd. and Peotone Rd. AM-2050 (Site Folder: 2050 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Prob. Adj. Block.	
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]						[Veh]	[Dist]			ft	%
South: Old Chicago Rd.															
Lane 1 ^d	228	3.5	228	3.5	831	0.275	100	7.3	LOS A	1.2	31.9	Full	1600	0.0	0.0
Approach	228	3.5	228	3.5		0.275		7.3	LOS A	1.2	31.9				
East: Peotone Rd.															
Lane 1 ^d	402	22.1	402	22.1	878	0.458	100	9.7	LOS A	2.3	68.7	Full	1600	0.0	0.0
Approach	402	22.1	402	22.1		0.458		9.7	LOS A	2.3	68.7				
North: Old Chicago Rd.															
Lane 1 ^d	34	72.7	34	72.7	374	0.090	100	11.0	LOS B	0.2	6.9	Full	1600	0.0	0.0
Approach	34	72.7	34	72.7		0.090		11.0	LOS B	0.2	6.9				
West: Peotone Rd.															
Lane 1 ^d	441	19.0	441	19.0	1092	0.404	100	7.2	LOS A	2.3	65.7	Full	1600	0.0	0.0
Approach	441	19.0	441	19.0		0.404		7.2	LOS A	2.3	65.7				
All Vehicles	1105	18.6	1105	18.6		0.458		8.3	LOS A	2.3	68.7				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)											
South: Old Chicago Rd.											
Mov.	L2	T1	R2	Total	%HV	Cap.	Deg.	Lane	Prob.	Ov.	
From S						veh/h	Satn	Util.	SL	Ov.	Lane
To Exit:	W	N	E				v/c	%	%	%	No.
Lane 1	163	49	16	228	3.5	831	0.275	100	NA	NA	
Approach	163	49	16	228	3.5		0.275				
East: Peotone Rd.											
Mov.	L2	T1	R2	Total	%HV	Cap.	Deg.	Lane	Prob.	Ov.	
From E						veh/h	Satn	Util.	SL	Ov.	Lane
To Exit:	S	W	N				v/c	%	%	%	No.
Lane 1	5	310	87	402	22.1	878	0.458	100	NA	NA	

Approach	5	310	87	402	22.1		0.458				
North: Old Chicago Rd.											
Mov.	L2	T1	R2	Total	%HV		Deg.	Lane	Prob.	Ov.	
From N							Satn	Util.	SL	Ov.	Lane
To Exit:	E	S	W			Cap.	v/c	%	%	No.	
						veh/h					
Lane 1	27	5	1	34	72.7	374	0.090	100	NA	NA	
Approach	27	5	1	34	72.7		0.090				
West: Peotone Rd.											
Mov.	L2	T1	R2	Total	%HV		Deg.	Lane	Prob.	Ov.	
From W							Satn	Util.	SL	Ov.	Lane
To Exit:	N	E	S			Cap.	v/c	%	%	No.	
						veh/h					
Lane 1	1	326	114	441	19.0	1092	0.404	100	NA	NA	
Approach	1	326	114	441	19.0		0.404				
Total %HV Deg.Satn (v/c)											
All Vehicles	1105	18.6			0.458						

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis												
	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Flow Rate	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay
		ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis				
	Initial Queued Demand	Residual Queued Demand	Time for Residual Demand to Clear	Duration of Oversatn
	veh	veh	sec	sec
South: Old Chicago Rd.				
Lane 1	0.0	0.0	0.0	0.0
East: Peotone Rd.				
Lane 1	0.0	0.0	0.0	0.0
North: Old Chicago Rd.				
Lane 1	0.0	0.0	0.0	0.0
West: Peotone Rd.				
Lane 1	0.0	0.0	0.0	0.0

LANE SUMMARY

Site: 101 [Old Chicago Rd. and Peotone Rd. PM-2050 (Site Folder: 2050 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Prob. Adj. Block.	
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]						[Veh]	[Dist]			ft	%
South: Old Chicago Rd.															
Lane 1 ^d	120	8.4	120	8.4	471	0.254	100	11.4	LOS B	0.9	23.5	Full	1600	0.0	0.0
Approach	120	8.4	120	8.4		0.254		11.4	LOS B	0.9	23.5				
East: Peotone Rd.															
Lane 1 ^d	397	26.6	397	26.6	971	0.408	100	8.1	LOS A	2.1	63.4	Full	1600	0.0	0.0
Approach	397	26.6	397	26.6		0.408		8.1	LOS A	2.1	63.4				
North: Old Chicago Rd.															
Lane 1 ^d	207	15.6	207	15.6	625	0.330	100	10.2	LOS B	1.3	37.2	Full	1600	0.0	0.0
Approach	207	15.6	207	15.6		0.330		10.2	LOS B	1.3	37.2				
West: Peotone Rd.															
Lane 1 ^d	860	14.8	860	14.8	904	0.951	100	37.9	LOS E	35.9	1004.2	Full	1600	0.0	0.0
Approach	860	14.8	860	14.8		0.951		37.9	LOS E	35.9	1004.2				
All Vehicles	1583	17.4	1583	17.4		0.951		24.8	LOS C	35.9	1004.2				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)											
South: Old Chicago Rd.											
Mov.	L2	T1	R2	Total	%HV	Cap.	Deg.	Lane	Prob.	Ov.	
From S						veh/h	Satn	Util.	SL	Ov.	Lane
To Exit:	W	N	E				v/c	%	%	%	No.
Lane 1	82	16	22	120	8.4	471	0.254	100	NA	NA	
Approach	82	16	22	120	8.4		0.254				
East: Peotone Rd.											
Mov.	L2	T1	R2	Total	%HV	Cap.	Deg.	Lane	Prob.	Ov.	
From E						veh/h	Satn	Util.	SL	Ov.	Lane
To Exit:	S	W	N				v/c	%	%	%	No.
Lane 1	27	353	16	397	26.6	971	0.408	100	NA	NA	

Approach	27	353	16	397	26.6		0.408				
North: Old Chicago Rd.											
Mov. From N To Exit:	L2	T1	R2	Total	%HV		Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.	
	E	S	W			Cap. veh/h					
Lane 1	125	71	11	207	15.6	625	0.330	100	NA	NA	
Approach	125	71	11	207	15.6		0.330				
West: Peotone Rd.											
Mov. From W To Exit:	L2	T1	R2	Total	%HV		Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.	
	N	E	S			Cap. veh/h					
Lane 1	1	630	228	860	14.8	904	0.951	100	NA	NA	
Approach	1	630	228	860	14.8		0.951				
Total %HV Deg. Satn (v/c)											
All Vehicles	1583	17.4					0.951				

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis												
Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec	
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Old Chicago Rd.				
Lane 1	0.0	0.0	0.0	0.0
East: Peotone Rd.				
Lane 1	0.0	0.0	0.0	0.0
North: Old Chicago Rd.				
Lane 1	0.0	0.0	0.0	0.0
West: Peotone Rd.				
Lane 1	0.0	0.0	0.0	0.0

LANE SUMMARY

Site: 101 [Cedar Rd. and Wilmington Rd. AM-2050 (Site Folder: 2050 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]	veh/h	v/c	%	sec		[Veh]	[Dist]		ft	%	%
South: Cedar Rd.															
Lane 1 ^d	8	0.0	8	0.0	820	0.009	100	4.5	LOS A	0.0	0.9	Full	1600	0.0	0.0
Approach	8	0.0	8	0.0		0.009		4.5	LOS A	0.0	0.9				
East: Wilmington Rd.															
Lane 1 ^d	343	24.9	343	24.9	972	0.353	100	7.3	LOS A	1.7	50.6	Full	1600	0.0	0.0
Approach	343	24.9	343	24.9		0.353		7.3	LOS A	1.7	50.6				
North: Cedar Rd.															
Lane 1 ^d	66	14.1	66	14.1	793	0.084	100	5.4	LOS A	0.3	8.2	Full	1600	0.0	0.0
Approach	66	14.1	66	14.1		0.084		5.4	LOS A	0.3	8.2				
West: Wilmington Rd.															
Lane 1 ^d	409	18.4	409	18.4	1141	0.358	100	6.2	LOS A	2.0	56.0	Full	1600	0.0	0.0
Approach	409	18.4	409	18.4		0.358		6.2	LOS A	2.0	56.0				
All Vehicles	826	20.6	826	20.6		0.358		6.6	LOS A	2.0	56.0				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)										
South: Cedar Rd.										
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane
From S						Cap. veh/h	v/c	%	%	No.
To Exit:	W	N	E							
Lane 1	1	5	1	8	0.0	820	0.009	100	NA	NA
Approach	1	5	1	8	0.0		0.009			
East: Wilmington Rd.										
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane
From E						Cap. veh/h	v/c	%	%	No.
To Exit:	S	W	N							
Lane 1	1	299	43	343	24.9	972	0.353	100	NA	NA

Approach	1	299	43	343	24.9		0.353				
North: Cedar Rd.											
Mov. From N To Exit:	L2	T1	R2	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.	
	E	S	W								
Lane 1	22	1	43	66	14.1	793	0.084	100	NA	NA	
Approach	22	1	43	66	14.1		0.084				
West: Wilmington Rd.											
Mov. From W To Exit:	L2	T1	R2	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.	
	N	E	S								
Lane 1	109	299	1	409	18.4	1141	0.358	100	NA	NA	
Approach	109	299	1	409	18.4		0.358				
Total %HV Deg. Satn (v/c)											
All Vehicles	826	20.6					0.358				

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis												
Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec	
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Cedar Rd.				
Lane 1	0.0	0.0	0.0	0.0
East: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0
North: Cedar Rd.				
Lane 1	0.0	0.0	0.0	0.0
West: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0

LANE SUMMARY

Site: 101 [Cedar Rd. and Wilmington Rd. PM-2050 (Site Folder: 2050 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]	veh/h	v/c	%	sec		[Veh]	[Dist] ft		ft	%	%
South: Cedar Rd.															
Lane 1 ^d	12	2.0	12	2.0	514	0.023	100	7.3	LOS A	0.1	2.1	Full	1600	0.0	0.0
Approach	12	2.0	12	2.0		0.023		7.3	LOS A	0.1	2.1				
East: Wilmington Rd.															
Lane 1 ^d	380	25.8	380	25.8	965	0.394	100	7.9	LOS A	2.0	59.5	Full	1600	0.0	0.0
Approach	380	25.8	380	25.8		0.394		7.9	LOS A	2.0	59.5				
North: Cedar Rd.															
Lane 1 ^d	217	3.5	217	3.5	844	0.258	100	7.0	LOS A	1.2	29.7	Full	1600	0.0	0.0
Approach	217	3.5	217	3.5		0.258		7.0	LOS A	1.2	29.7				
West: Wilmington Rd.															
Lane 1 ^d	723	20.7	723	20.7	1047	0.690	100	13.2	LOS B	6.4	187.7	Full	1600	0.0	0.0
Approach	723	20.7	723	20.7		0.690		13.2	LOS B	6.4	187.7				
All Vehicles	1333	19.2	1333	19.2		0.690		10.6	LOS B	6.4	187.7				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)											
South: Cedar Rd.											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From S						Cap. veh/h	v/c	%	%	No.	
To Exit:	W	N	E								
Lane 1	1	5	5	12	2.0	514	0.023	100	NA	NA	
Approach	1	5	5	12	2.0		0.023				
East: Wilmington Rd.											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From E						Cap. veh/h	v/c	%	%	No.	
To Exit:	S	W	N								
Lane 1	5	337	38	380	25.8	965	0.394	100	NA	NA	

Approach	5	337	38	380	25.8		0.394				
North: Cedar Rd.											
Mov.	L2	T1	R2	Total	%HV		Deg.	Lane	Prob.	Ov.	
From N							Satn	Util.	SL	Ov.	Lane
To Exit:	E	S	W			Cap.	v/c	%	%	No.	
						veh/h					
Lane 1	60	16	141	217	3.5	844	0.258	100	NA	NA	
Approach	60	16	141	217	3.5		0.258				
West: Wilmington Rd.											
Mov.	L2	T1	R2	Total	%HV		Deg.	Lane	Prob.	Ov.	
From W							Satn	Util.	SL	Ov.	Lane
To Exit:	N	E	S			Cap.	v/c	%	%	No.	
						veh/h					
Lane 1	109	609	5	723	20.7	1047	0.690	100	NA	NA	
Approach	109	609	5	723	20.7		0.690				
Total %HV Deg.Satn (v/c)											
All Vehicles	1333	19.2			0.690						

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis												
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate % veh/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec	
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Cedar Rd.				
Lane 1	0.0	0.0	0.0	0.0
East: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0
North: Cedar Rd.				
Lane 1	0.0	0.0	0.0	0.0
West: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0

LANE SUMMARY

Site: 101 [US-52 and Wilmington Rd. AM-2050 (Site Folder: 2050 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]	veh/h	v/c	%	sec		[Veh]	[Dist] ft		ft	%	%
South: US-52															
Lane 1 ^d	397	8.4	397	8.4	857	0.463	100	10.0	LOS A	2.8	75.9	Full	1600	0.0	0.0
Approach	397	8.4	397	8.4		0.463		10.0	LOS A	2.8	75.9				
East: Wilmington Rd.															
Lane 1 ^d	245	25.7	245	25.7	642	0.381	100	10.8	LOS B	1.6	49.3	Full	1600	0.0	0.0
Approach	245	25.7	245	25.7		0.381		10.8	LOS B	1.6	49.3				
North: US-52															
Lane 1 ^d	293	16.3	293	16.3	773	0.380	100	9.3	LOS A	1.7	47.6	Full	1600	0.0	0.0
Approach	293	16.3	293	16.3		0.380		9.3	LOS A	1.7	47.6				
West: Wilmington Rd.															
Lane 1 ^d	315	25.0	315	25.0	739	0.426	100	10.5	LOS B	2.1	63.4	Full	1600	0.0	0.0
Approach	315	25.0	315	25.0		0.426		10.5	LOS B	2.1	63.4				
All Vehicles	1250	17.8	1250	17.8		0.463		10.1	LOS B	2.8	75.9				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)											
South: US-52											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From S						Cap. veh/h	v/c	%	%	No.	
To Exit:	W	N	E								
Lane 1	82	304	11	397	8.4	857	0.463	100	NA	NA	
Approach	82	304	11	397	8.4		0.463				
East: Wilmington Rd.											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From E						Cap. veh/h	v/c	%	%	No.	
To Exit:	S	W	N								
Lane 1	16	201	27	245	25.7	642	0.381	100	NA	NA	

Approach	16	201	27	245	25.7		0.381				
North: US-52											
Mov. From N To Exit:	L2	T1	R2	Total	%HV		Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.	
	E	S	W				veh/h				
Lane 1	38	239	16	293	16.3		773	0.380	100	NA	NA
Approach	38	239	16	293	16.3			0.380			
West: Wilmington Rd.											
Mov. From W To Exit:	L2	T1	R2	Total	%HV		Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.	
	N	E	S				veh/h				
Lane 1	27	228	60	315	25.0		739	0.426	100	NA	NA
Approach	27	228	60	315	25.0			0.426			
Total %HV Deg. Satn (v/c)											
All Vehicles	1250	17.8						0.463			

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis												
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: US-52				
Lane 1	0.0	0.0	0.0	0.0
East: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0
North: US-52				
Lane 1	0.0	0.0	0.0	0.0
West: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0

LANE SUMMARY

Site: 101 [US-52 and Wilmington Rd. PM-2050 (Site Folder: 2050 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]	veh/h	v/c	%	sec		[Veh]	[Dist] ft		ft	%	%
South: US-52															
Lane 1 ^d	397	13.3	397	13.3	571	0.695	100	22.6	LOS C	5.2	144.4	Full	1600	0.0	0.0
Approach	397	13.3	397	13.3		0.695		22.6	LOS C	5.2	144.4				
East: Wilmington Rd.															
Lane 1 ^d	245	24.3	245	24.3	629	0.389	100	11.2	LOS B	1.7	50.8	Full	1600	0.0	0.0
Approach	245	24.3	245	24.3		0.389		11.2	LOS B	1.7	50.8				
North: US-52															
Lane 1 ^d	533	4.2	533	4.2	895	0.595	100	12.5	LOS B	5.7	148.2	Full	1600	0.0	0.0
Approach	533	4.2	533	4.2		0.595		12.5	LOS B	5.7	148.2				
West: Wilmington Rd.															
Lane 1 ^d	663	22.0	663	22.0	592	1.120	100	97.0	LOS F	37.9	1113.0	Full	1600	0.0	0.0
Approach	663	22.0	663	22.0		1.120		97.0	LOS F	37.9	1113.0				
All Vehicles	1837	15.2	1837	15.2		1.120		45.0	LOS E	37.9	1113.0				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stoptline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)										
South: US-52										
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane No.
From S To Exit:	W	N	E			Cap. veh/h	v/c	%	%	
Lane 1	82	304	11	397	13.3	571	0.695	100	NA	NA
Approach	82	304	11	397	13.3		0.695			
East: Wilmington Rd.										
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane No.
From E To Exit:	S	W	N			Cap. veh/h	v/c	%	%	
Lane 1	22	190	33	245	24.3	629	0.389	100	NA	NA

Approach	22	190	33	245	24.3		0.389				
North: US-52											
Mov. From N To Exit:	L2	T1	R2	Total	%HV		Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.	
	E	S	W				Cap. veh/h				
Lane 1	49	451	33	533	4.2		895	0.595	100	NA	NA
Approach	49	451	33	533	4.2			0.595			
West: Wilmington Rd.											
Mov. From W To Exit:	L2	T1	R2	Total	%HV		Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.	
	N	E	S				Cap. veh/h				
Lane 1	38	516	109	663	22.0		592	1.120	100	NA	NA
Approach	38	516	109	663	22.0			1.120			
Total %HV Deg. Satn (v/c)											
All Vehicles	1837	15.2		1.120							

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis												
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: US-52				
Lane 1	0.0	0.0	0.0	0.0
East: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0
North: US-52				
Lane 1	0.0	0.0	0.0	0.0
West: Wilmington Rd.				
Lane 1	0.0	17.7	107.9	NA

LANE SUMMARY

Site: 101 [I-57 SB and Wilmington Rd. AM-2050 (Site Folder: 2050 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]	veh/h	v/c	%	sec		[Veh]	[Dist] ft		ft	%	%
East: Wilmington Rd.															
Lane 1 ^d	429	15.7	429	15.7	1206	0.356	100	4.8	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	429	15.7	429	15.7		0.356		4.8	LOS A	0.0	0.0				
North: I-57 SB Exit															
Lane 1 ^d	208	27.0	208	27.0	596	0.348	100	10.9	LOS B	1.4	41.2	Full	1600	0.0	0.0
Approach	208	27.0	208	27.0		0.348		10.9	LOS B	1.4	41.2				
West: Wilmington Rd.															
Lane 1 ^d	337	23.1	337	23.1	869	0.388	100	8.6	LOS A	1.8	53.3	Full	1600	0.0	0.0
Approach	337	23.1	337	23.1		0.388		8.6	LOS A	1.8	53.3				
All Vehicles	974	20.7	974	20.7		0.388		7.4	LOS A	1.8	53.3				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)										
East: Wilmington Rd.										
Mov.	L2	T1	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From E To Exit:	S	W			Cap. veh/h	v/c	%	%	No.	
Lane 1	109	321	429	15.7	1206	0.356	100	NA	NA	
Approach	109	321	429	15.7		0.356				
North: I-57 SB Exit										
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane
From N To Exit:	E	S	W			Cap. veh/h	v/c	%	%	No.
Lane 1	87	1	120	208	27.0	596	0.348	100	NA	NA
Approach	87	1	120	208	27.0		0.348			
West: Wilmington Rd.										
Mov.	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From W To Exit:	E	S			Cap. veh/h	v/c	%	%	No.	

Lane 1	266	71	337	23.1	869	0.388	100	NA	NA
Approach	266	71	337	23.1		0.388			
Total %HV Deg.Satn (v/c)									
All Vehicles	974	20.7		0.388					

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis											
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate % veh/h	Critical Gap sec	Follow-up Headway sec	Lane Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec	
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
East: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0
North: I-57 SB Exit				
Lane 1	0.0	0.0	0.0	0.0
West: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0

SIDRA INTERSECTION 9.1 | Copyright © 2000-2022 Akcelik and Associates Pty Ltd | sidrasolutions.com
 Organisation: KIMLEY-HORN & ASSOCIATES INC | Licence: NETWORK / Enterprise Level 2 | Processed: Thursday, July 11, 2024 8:52:53 AM
 Project: C:\Users\Daniel.Carberry\Documents\Wilmington-Peotone\SIDRA Analysis\W-P_Roundabout_Analysis.sip9

LANE SUMMARY

Site: 101 [I-57 SB and Wilmington Rd. PM-2050 (Site Folder: 2050 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Adj.	Prob. Block.
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]	veh/h	v/c	%	sec		[Veh]	[Dist] ft		ft	%	%
East: Wilmington Rd.															
Lane 1 ^d	408	17.3	408	17.3	1191	0.342	100	4.7	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	408	17.3	408	17.3		0.342		4.7	LOS A	0.0	0.0				
North: I-57 SB Exit															
Lane 1 ^d	333	9.2	333	9.2	748	0.445	100	10.7	LOS B	2.6	69.1	Full	1600	0.0	0.0
Approach	333	9.2	333	9.2		0.445		10.7	LOS B	2.6	69.1				
West: Wilmington Rd.															
Lane 1 ^d	734	17.9	734	17.9	709	1.034	100	64.4	LOS F	34.4	982.9	Full	1600	0.0	0.0
Approach	734	17.9	734	17.9		1.034		64.4	LOS F	34.4	982.9				
All Vehicles	1474	15.8	1474	15.8		1.034		35.8	LOS E	34.4	982.9				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)											
East: Wilmington Rd.											
Mov.	L2	T1	Total	%HV			Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From E					Cap. veh/h	v/c	%	%	No.		
To Exit:	S	W									
Lane 1	174	234	408	17.3	1191	0.342	100	NA	NA		
Approach	174	234	408	17.3		0.342					
North: I-57 SB Exit											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From N					Cap. veh/h	v/c	%	%	No.		
To Exit:	E	S	W								
Lane 1	234	1	98	333	9.2	748	0.445	100	NA	NA	
Approach	234	1	98	333	9.2		0.445				
West: Wilmington Rd.											
Mov.	T1	R2	Total	%HV			Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From W					Cap. veh/h	v/c	%	%	No.		
To Exit:	E	S									

Lane 1	641	92	734	17.9	709	1.034	100	NA	NA
Approach	641	92	734	17.9		1.034			
Total %HV Deg.Satn (v/c)									
All Vehicles	1474	15.8		1.034					

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis											
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate % veh/h	Critical Gap sec	Follow-up Headway sec	Lane Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec	
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
East: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0
North: I-57 SB Exit				
Lane 1	0.0	0.0	0.0	0.0
West: Wilmington Rd.				
Lane 1	0.0	6.1	30.9	NA

LANE SUMMARY

Site: 101 [I-57 NB and Wilmington Rd. AM-2050 (Site Folder: 2050 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Prob. Adj. Block.	
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]						[Veh]	[Dist]			ft	%
South: I-57 NB Exit															
Lane 1 ^d	224	13.0	224	13.0	911	0.246	100	6.4	LOS A	1.1	29.1	Full	1600	0.0	0.0
Approach	224	13.0	224	13.0		0.246		6.4	LOS A	1.1	29.1				
East: Wilmington Rd.															
Lane 1 ^d	451	12.1	451	12.1	992	0.455	100	8.8	LOS A	2.6	71.1	Full	1600	0.0	0.0
Approach	451	12.1	451	12.1		0.455		8.8	LOS A	2.6	71.1				
West: Wilmington Rd.															
Lane 1 ^d	223	19.2	223	19.2	1173	0.190	100	4.0	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	223	19.2	223	19.2		0.190		4.0	LOS A	0.0	0.0				
All Vehicles	898	14.1	898	14.1		0.455		7.0	LOS A	2.6	71.1				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)											
South: I-57 NB Exit											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From S To Exit:	W	N	E			Cap. veh/h	v/c	%	%	No.	
Lane 1	114	1	109	224	13.0	911	0.246	100	NA	NA	
Approach	114	1	109	224	13.0		0.246				
East: Wilmington Rd.											
Mov.	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane		
From E To Exit:	W	N			Cap. veh/h	v/c	%	%	No.		
Lane 1	332	120	451	12.1	992	0.455	100	NA	NA		
Approach	332	120	451	12.1		0.455					
West: Wilmington Rd.											
Mov.	L2	T1	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane		
From W To Exit:	N	E			Cap. veh/h	v/c	%	%	No.		

Lane 1	54	168	223	19.2		1173	0.190	100	NA	NA
Approach	54	168	223	19.2			0.190			
Total %HV Deg.Satn (v/c)										
All Vehicles	898	14.1		0.455						

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis											
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane % veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Capacity Flow Rate veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec	
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: I-57 NB Exit				
Lane 1	0.0	0.0	0.0	0.0
East: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0
West: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0

SIDRA INTERSECTION 9.1 | Copyright © 2000-2022 Akcelik and Associates Pty Ltd | sidrasolutions.com
 Organisation: KIMLEY-HORN & ASSOCIATES INC | Licence: NETWORK / Enterprise Level 2 | Processed: Thursday, July 11, 2024 8:52:54 AM
 Project: C:\Users\Daniel.Carberry\Documents\Wilmington-Peotone\SIDRA Analysis\W-P_Roundabout_Analysis.sip9

LANE SUMMARY

Site: 101 [I-57 NB and Wilmington Rd. PM-2050 (Site Folder: 2050 Signal Warrants)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site
 Site Category: (None)
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Prob. Adj. Block.	
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]						[Veh]	[Dist]			ft	%
South: I-57 NB Exit															
Lane 1 ^d	213	16.4	213	16.4	575	0.371	100	11.7	LOS B	1.6	44.9	Full	1600	0.0	0.0
Approach	213	16.4	213	16.4		0.371		11.7	LOS B	1.6	44.9				
East: Wilmington Rd.															
Lane 1 ^d	408	13.4	408	13.4	864	0.472	100	10.1	LOS B	2.8	78.6	Full	1600	0.0	0.0
Approach	408	13.4	408	13.4		0.472		10.1	LOS B	2.8	78.6				
West: Wilmington Rd.															
Lane 1 ^d	549	14.1	549	14.1	1222	0.449	100	5.2	LOS A	0.0	0.0	Full	1600	0.0	0.0
Approach	549	14.1	549	14.1		0.449		5.2	LOS A	0.0	0.0				
All Vehicles	1170	14.2	1170	14.2		0.472		8.1	LOS A	2.8	78.6				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)											
South: I-57 NB Exit											
Mov.	L2	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From S To Exit:	W	N	E			Cap. veh/h	v/c	%	%	No.	
Lane 1	87	1	125	213	16.4	575	0.371	100	NA	NA	
Approach	87	1	125	213	16.4		0.371				
East: Wilmington Rd.											
Mov.	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane		
From E To Exit:	W	N			Cap. veh/h	v/c	%	%	No.		
Lane 1	332	76	408	13.4	864	0.472	100	NA	NA		
Approach	332	76	408	13.4		0.472					
West: Wilmington Rd.											
Mov.	L2	T1	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane		
From W To Exit:	N	E			Cap. veh/h	v/c	%	%	No.		

Lane 1	163	386	549	14.1		1222	0.449	100	NA	NA
Approach	163	386	549	14.1			0.449			
Total %HV Deg.Satn (v/c)										
All Vehicles	1170	14.2		0.472						

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis											
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane % veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec	
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: I-57 NB Exit				
Lane 1	0.0	0.0	0.0	0.0
East: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0
West: Wilmington Rd.				
Lane 1	0.0	0.0	0.0	0.0

Appendix G

Interchange Alternatives: Operational Summary & Reports

HCM 7th Signalized Intersection Summary

AM Peak Hour

09/25/2024

						
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	10	10	10	390	375	10
Future Volume (veh/h)	10	10	10	390	375	10
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1500	1678	1870
Adj Flow Rate, veh/h	11	11	11	443	426	11
Peak Hour Factor	0.95	0.95	0.95	0.88	0.88	0.95
Percent Heavy Veh, %	2	2	2	27	15	2
Cap, veh/h	37	37	606	881	1498	39
Arrive On Green	0.05	0.05	0.01	0.59	0.47	0.47
Sat Flow, veh/h	806	806	1781	1500	3259	82
Grp Volume(v), veh/h	23	0	11	443	214	223
Grp Sat Flow(s),veh/h/ln	1685	0	1781	1500	1594	1663
Q Serve(g_s), s	0.4	0.0	0.1	5.7	2.7	2.7
Cycle Q Clear(g_c), s	0.4	0.0	0.1	5.7	2.7	2.7
Prop In Lane	0.48	0.48	1.00			0.05
Lane Grp Cap(c), veh/h	78	0	606	881	752	785
V/C Ratio(X)	0.30	0.00	0.02	0.50	0.28	0.28
Avail Cap(c_a), veh/h	617	0	890	3023	2774	2895
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.1	0.0	3.8	4.0	5.3	5.3
Incr Delay (d2), s/veh	4.4	0.0	0.0	2.0	0.9	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.0	0.0	1.9	0.8	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	19.5	0.0	3.8	6.0	6.2	6.2
LnGrp LOS	B		A	A	A	A
Approach Vol, veh/h	23			454	437	
Approach Delay, s/veh	19.5			5.9	6.2	
Approach LOS	B			A	A	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		25.2		7.5	3.8	21.5
Change Period (Y+Rc), s		6.0		6.0	3.5	6.0
Max Green Setting (Gmax), s		66.0		12.0	5.5	57.0
Max Q Clear Time (g_c+I1), s		7.7		2.4	2.1	4.7
Green Ext Time (p_c), s		11.6		0.0	0.0	9.1
Intersection Summary						
HCM 7th Control Delay, s/veh			6.4			
HCM 7th LOS			A			

HCM 7th Signalized Intersection Summary
PM Peak Hour

09/25/2024

						
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	10	10	10	585	375	10
Future Volume (veh/h)	10	10	10	585	375	10
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1870	1870	1856	1648	1485	1870
Adj Flow Rate, veh/h	11	11	20	629	475	11
Peak Hour Factor	0.95	0.95	0.50	0.93	0.79	0.95
Percent Heavy Veh, %	2	2	3	17	28	2
Cap, veh/h	36	36	642	1119	1645	38
Arrive On Green	0.04	0.04	0.01	0.68	0.58	0.58
Sat Flow, veh/h	806	806	1767	1648	2893	65
Grp Volume(v), veh/h	23	0	20	629	237	249
Grp Sat Flow(s),veh/h/ln	1685	0	1767	1648	1411	1473
Q Serve(g_s), s	0.6	0.0	0.2	8.6	3.7	3.7
Cycle Q Clear(g_c), s	0.6	0.0	0.2	8.6	3.7	3.7
Prop In Lane	0.48	0.48	1.00			0.04
Lane Grp Cap(c), veh/h	75	0	642	1119	823	860
V/C Ratio(X)	0.31	0.00	0.03	0.56	0.29	0.29
Avail Cap(c_a), veh/h	388	0	759	2582	1983	2071
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.1	0.0	3.2	3.6	4.5	4.5
Incr Delay (d2), s/veh	4.8	0.0	0.0	2.0	0.9	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.0	0.1	3.0	1.0	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	24.9	0.0	3.2	5.7	5.4	5.4
LnGrp LOS	C		A	A	A	A
Approach Vol, veh/h	23			649	486	
Approach Delay, s/veh	24.9			5.6	5.4	
Approach LOS	C			A	A	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		35.5		7.9	4.1	31.3
Change Period (Y+Rc), s		6.0		6.0	3.5	6.0
Max Green Setting (Gmax), s		68.0		10.0	3.5	61.0
Max Q Clear Time (g_c+I1), s		10.6		2.6	2.2	5.7
Green Ext Time (p_c), s		18.9		0.0	0.0	10.6
Intersection Summary						
HCM 7th Control Delay, s/veh			5.9			
HCM 7th LOS			A			

Lanes, Volumes, Timings

AM Peak Hour

900:

10/15/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑									↑↑	
Traffic Volume (vph)	0	245	0	0	0	0	0	0	0	0	295	0
Future Volume (vph)	0	245	0	0	0	0	0	0	0	0	295	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	3008	0	0	0	0	0	0	0	0	3059	0
Flt Permitted												
Satd. Flow (perm)	0	3008	0	0	0	0	0	0	0	0	3059	0
Right Turn on Red	No		No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		231			197			250			174	
Travel Time (s)		4.5			3.8			4.9			3.4	
Peak Hour Factor	0.95	0.86	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.89	0.95
Heavy Vehicles (%)	2%	20%	2%	2%	2%	2%	2%	2%	2%	2%	18%	2%
Adj. Flow (vph)	0	285	0	0	0	0	0	0	0	0	331	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	285	0	0	0	0	0	0	0	0	331	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2									2	
Detector Template		Thru									Thru	
Leading Detector (ft)		100									100	
Trailing Detector (ft)		0									0	
Detector 1 Position(ft)		0									0	
Detector 1 Size(ft)		6									6	
Detector 1 Type		Cl+Ex									Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0									0.0	
Detector 1 Queue (s)		0.0									0.0	
Detector 1 Delay (s)		0.0									0.0	
Detector 2 Position(ft)		94									94	
Detector 2 Size(ft)		6									6	
Detector 2 Type		Cl+Ex									Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0									0.0	
Turn Type		NA									NA	
Protected Phases		3 4									1 2	
Permitted Phases												
Detector Phase		3 4									1 2	
Switch Phase												

Lane Group	Ø1	Ø2	Ø3	Ø4
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Lane Util. Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				
Number of Detectors				
Detector Template				
Leading Detector (ft)				
Trailing Detector (ft)				
Detector 1 Position(ft)				
Detector 1 Size(ft)				
Detector 1 Type				
Detector 1 Channel				
Detector 1 Extend (s)				
Detector 1 Queue (s)				
Detector 1 Delay (s)				
Detector 2 Position(ft)				
Detector 2 Size(ft)				
Detector 2 Type				
Detector 2 Channel				
Detector 2 Extend (s)				
Turn Type				
Protected Phases	1	2	3	4
Permitted Phases				
Detector Phase				
Switch Phase				

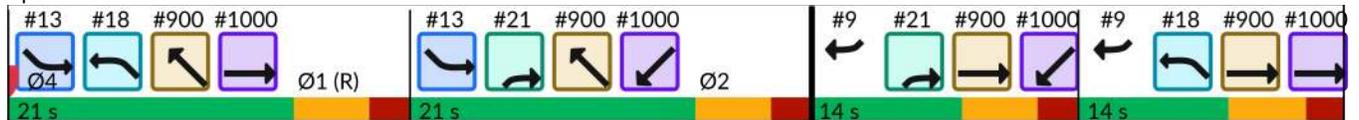


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Minimum Initial (s)												
Minimum Split (s)												
Total Split (s)												
Total Split (%)												
Maximum Green (s)												
Yellow Time (s)												
All-Red Time (s)												
Lost Time Adjust (s)												
Total Lost Time (s)												
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)												
Recall Mode												
Act Effct Green (s)		22.0									36.0	
Actuated g/C Ratio		0.31									0.51	
v/c Ratio		0.30									0.21	
Control Delay (s/veh)		19.3									16.9	
Queue Delay		0.0									0.0	
Total Delay (s/veh)		19.3									16.9	
LOS		B									B	
Approach Delay (s/veh)		19.3									16.9	
Approach LOS		B									B	

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	53 (76%), Referenced to phase 1:SEL, Start of Green
Natural Cycle:	70
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.39
Intersection Signal Delay (s/veh):	18.0
Intersection LOS:	B
Intersection Capacity Utilization:	29.3%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 900:



Lane Group	Ø1	Ø2	Ø3	Ø4
Minimum Initial (s)	15.0	15.0	8.0	8.0
Minimum Split (s)	21.0	21.0	14.0	14.0
Total Split (s)	21.0	21.0	14.0	14.0
Total Split (%)	30%	30%	20%	20%
Maximum Green (s)	15.0	15.0	8.0	8.0
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes
Vehicle Extension (s)	7.0	7.0	5.0	5.0
Recall Mode	C-Min	Min	None	None
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay (s/veh)				
Queue Delay				
Total Delay (s/veh)				
LOS				
Approach Delay (s/veh)				
Approach LOS				
Intersection Summary				

Lanes, Volumes, Timings
1000:

AM Peak Hour
10/15/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑									↑↑	
Traffic Volume (vph)	0	155	0	0	0	0	0	0	0	0	305	0
Future Volume (vph)	0	155	0	0	0	0	0	0	0	0	305	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	3034	0	0	0	0	0	0	0	0	3167	0
Flt Permitted												
Satd. Flow (perm)	0	3034	0	0	0	0	0	0	0	0	3167	0
Right Turn on Red			No			No			No	No		No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		218			212			181			188	
Travel Time (s)		4.2			4.1			3.5			3.7	
Peak Hour Factor	0.95	0.96	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.93	0.95
Heavy Vehicles (%)	2%	19%	2%	2%	2%	2%	2%	2%	2%	2%	14%	2%
Adj. Flow (vph)	0	161	0	0	0	0	0	0	0	0	328	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	161	0	0	0	0	0	0	0	0	328	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2									2	
Detector Template		Thru									Thru	
Leading Detector (ft)		100									100	
Trailing Detector (ft)		0									0	
Detector 1 Position(ft)		0									0	
Detector 1 Size(ft)		6									6	
Detector 1 Type		Cl+Ex									Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0									0.0	
Detector 1 Queue (s)		0.0									0.0	
Detector 1 Delay (s)		0.0									0.0	
Detector 2 Position(ft)		94									94	
Detector 2 Size(ft)		6									6	
Detector 2 Type		Cl+Ex									Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0									0.0	
Turn Type		NA									NA	
Protected Phases		1 4									2 3	
Permitted Phases												
Detector Phase		1 4									2 3	
Switch Phase												

Lane Group	Ø1	Ø2	Ø3	Ø4
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Lane Util. Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				
Number of Detectors				
Detector Template				
Leading Detector (ft)				
Trailing Detector (ft)				
Detector 1 Position(ft)				
Detector 1 Size(ft)				
Detector 1 Type				
Detector 1 Channel				
Detector 1 Extend (s)				
Detector 1 Queue (s)				
Detector 1 Delay (s)				
Detector 2 Position(ft)				
Detector 2 Size(ft)				
Detector 2 Type				
Detector 2 Channel				
Detector 2 Extend (s)				
Turn Type				
Protected Phases	1	2	3	4
Permitted Phases				
Detector Phase				
Switch Phase				

Lanes, Volumes, Timings

AM Peak Hour

1000:

10/15/2024

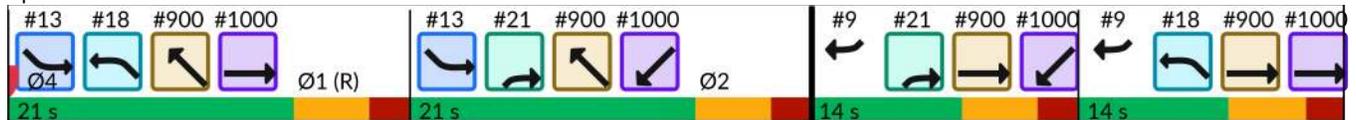


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)												
Minimum Split (s)												
Total Split (s)												
Total Split (%)												
Maximum Green (s)												
Yellow Time (s)												
All-Red Time (s)												
Lost Time Adjust (s)												
Total Lost Time (s)												
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)												
Recall Mode												
Act Effct Green (s)		29.0									29.0	
Actuated g/C Ratio		0.41									0.41	
v/c Ratio		0.13									0.25	
Control Delay (s/veh)		7.9									14.0	
Queue Delay		0.0									0.0	
Total Delay (s/veh)		7.9									14.0	
LOS		A									B	
Approach Delay (s/veh)		7.9									14.0	
Approach LOS		A									B	

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	53 (76%), Referenced to phase 1:SEL, Start of Green
Natural Cycle:	70
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.39
Intersection Signal Delay (s/veh):	12.0
Intersection LOS:	B
Intersection Capacity Utilization:	35.0%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 1000:



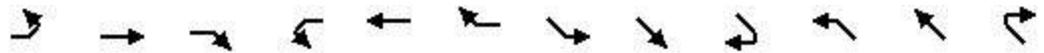
Lane Group	Ø1	Ø2	Ø3	Ø4
Minimum Initial (s)	15.0	15.0	8.0	8.0
Minimum Split (s)	21.0	21.0	14.0	14.0
Total Split (s)	21.0	21.0	14.0	14.0
Total Split (%)	30%	30%	20%	20%
Maximum Green (s)	15.0	15.0	8.0	8.0
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes
Vehicle Extension (s)	7.0	7.0	5.0	5.0
Recall Mode	C-Min	Min	None	None
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay (s/veh)				
Queue Delay				
Total Delay (s/veh)				
LOS				
Approach Delay (s/veh)				
Approach LOS				
Intersection Summary				

Lanes, Volumes, Timings

PM Peak Hour

900:

10/15/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑									↑↑	
Traffic Volume (vph)	0	590	0	0	0	0	0	0	0	0	215	0
Future Volume (vph)	0	590	0	0	0	0	0	0	0	0	215	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	3059	0	0	0	0	0	0	0	0	2888	0
Flt Permitted												
Satd. Flow (perm)	0	3059	0	0	0	0	0	0	0	0	2888	0
Right Turn on Red	No		No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		231			197			250			174	
Travel Time (s)		4.5			3.8			4.9			3.4	
Peak Hour Factor	0.95	0.91	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.87	0.95
Heavy Vehicles (%)	2%	18%	2%	2%	2%	2%	2%	2%	2%	2%	25%	2%
Adj. Flow (vph)	0	648	0	0	0	0	0	0	0	0	247	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	648	0	0	0	0	0	0	0	0	247	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2									2	
Detector Template		Thru									Thru	
Leading Detector (ft)		100									100	
Trailing Detector (ft)		0									0	
Detector 1 Position(ft)		0									0	
Detector 1 Size(ft)		6									6	
Detector 1 Type		Cl+Ex									Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0									0.0	
Detector 1 Queue (s)		0.0									0.0	
Detector 1 Delay (s)		0.0									0.0	
Detector 2 Position(ft)		94									94	
Detector 2 Size(ft)		6									6	
Detector 2 Type		Cl+Ex									Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0									0.0	
Turn Type		NA									NA	
Protected Phases		3 4									1 2	
Permitted Phases												
Detector Phase		3 4									1 2	
Switch Phase												

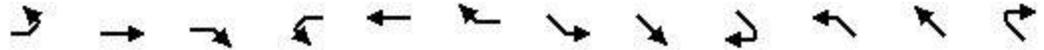
Lane Group	Ø1	Ø2	Ø3	Ø4
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Lane Util. Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				
Number of Detectors				
Detector Template				
Leading Detector (ft)				
Trailing Detector (ft)				
Detector 1 Position(ft)				
Detector 1 Size(ft)				
Detector 1 Type				
Detector 1 Channel				
Detector 1 Extend (s)				
Detector 1 Queue (s)				
Detector 1 Delay (s)				
Detector 2 Position(ft)				
Detector 2 Size(ft)				
Detector 2 Type				
Detector 2 Channel				
Detector 2 Extend (s)				
Turn Type				
Protected Phases	1	2	3	4
Permitted Phases				
Detector Phase				
Switch Phase				

Lanes, Volumes, Timings

PM Peak Hour

900:

10/15/2024

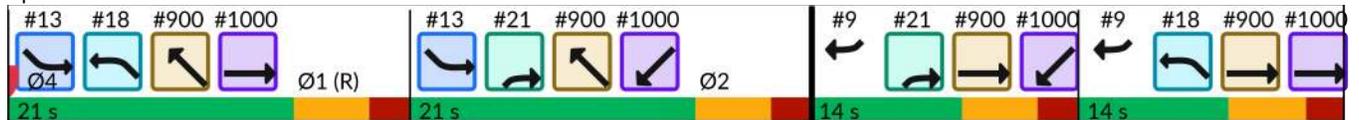


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Minimum Initial (s)												
Minimum Split (s)												
Total Split (s)												
Total Split (%)												
Maximum Green (s)												
Yellow Time (s)												
All-Red Time (s)												
Lost Time Adjust (s)												
Total Lost Time (s)												
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)												
Recall Mode												
Act Effct Green (s)		22.0									36.0	
Actuated g/C Ratio		0.31									0.51	
v/c Ratio		0.67									0.17	
Control Delay (s/veh)		25.1									18.9	
Queue Delay		0.0									0.0	
Total Delay (s/veh)		25.1									18.9	
LOS		C									B	
Approach Delay (s/veh)		25.1									18.9	
Approach LOS		C									B	

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	53 (76%), Referenced to phase 1:SEL, Start of Green
Natural Cycle:	70
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.67
Intersection Signal Delay (s/veh):	23.4
Intersection LOS:	C
Intersection Capacity Utilization:	38.8%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 900:



Lane Group	Ø1	Ø2	Ø3	Ø4
Minimum Initial (s)	15.0	15.0	8.0	8.0
Minimum Split (s)	21.0	21.0	14.0	14.0
Total Split (s)	21.0	21.0	14.0	14.0
Total Split (%)	30%	30%	20%	20%
Maximum Green (s)	15.0	15.0	8.0	8.0
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes
Vehicle Extension (s)	7.0	7.0	5.0	5.0
Recall Mode	C-Min	Min	None	None
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay (s/veh)				
Queue Delay				
Total Delay (s/veh)				
LOS				
Approach Delay (s/veh)				
Approach LOS				
Intersection Summary				

Lanes, Volumes, Timings

PM Peak Hour

1000:

10/15/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑									↑↑	
Traffic Volume (vph)	0	355	0	0	0	0	0	0	0	0	305	0
Future Volume (vph)	0	355	0	0	0	0	0	0	0	0	305	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	3223	0	0	0	0	0	0	0	0	3195	0
Flt Permitted												
Satd. Flow (perm)	0	3223	0	0	0	0	0	0	0	0	3195	0
Right Turn on Red			No			No			No	No		No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		218			212			181			188	
Travel Time (s)		4.2			4.1			3.5			3.7	
Peak Hour Factor	0.95	0.87	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.82	0.95
Heavy Vehicles (%)	2%	12%	2%	2%	2%	2%	2%	2%	2%	2%	13%	2%
Adj. Flow (vph)	0	408	0	0	0	0	0	0	0	0	372	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	408	0	0	0	0	0	0	0	0	372	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2									2	
Detector Template		Thru									Thru	
Leading Detector (ft)		100									100	
Trailing Detector (ft)		0									0	
Detector 1 Position(ft)		0									0	
Detector 1 Size(ft)		6									6	
Detector 1 Type		Cl+Ex									Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0									0.0	
Detector 1 Queue (s)		0.0									0.0	
Detector 1 Delay (s)		0.0									0.0	
Detector 2 Position(ft)		94									94	
Detector 2 Size(ft)		6									6	
Detector 2 Type		Cl+Ex									Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0									0.0	
Turn Type		NA									NA	
Protected Phases		1 4									2 3	
Permitted Phases												
Detector Phase		1 4									2 3	
Switch Phase												

Lane Group	Ø1	Ø2	Ø3	Ø4
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Lane Util. Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Enter Blocked Intersection				
Lane Alignment				
Median Width(ft)				
Link Offset(ft)				
Crosswalk Width(ft)				
Two way Left Turn Lane				
Headway Factor				
Turning Speed (mph)				
Number of Detectors				
Detector Template				
Leading Detector (ft)				
Trailing Detector (ft)				
Detector 1 Position(ft)				
Detector 1 Size(ft)				
Detector 1 Type				
Detector 1 Channel				
Detector 1 Extend (s)				
Detector 1 Queue (s)				
Detector 1 Delay (s)				
Detector 2 Position(ft)				
Detector 2 Size(ft)				
Detector 2 Type				
Detector 2 Channel				
Detector 2 Extend (s)				
Turn Type				
Protected Phases	1	2	3	4
Permitted Phases				
Detector Phase				
Switch Phase				

Lanes, Volumes, Timings

PM Peak Hour

1000:

10/15/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Minimum Initial (s)												
Minimum Split (s)												
Total Split (s)												
Total Split (%)												
Maximum Green (s)												
Yellow Time (s)												
All-Red Time (s)												
Lost Time Adjust (s)												
Total Lost Time (s)												
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)												
Recall Mode												
Act Effct Green (s)		29.0									29.0	
Actuated g/C Ratio		0.41									0.41	
v/c Ratio		0.31									0.28	
Control Delay (s/veh)		9.5									14.3	
Queue Delay		0.0									0.0	
Total Delay (s/veh)		9.5									14.3	
LOS		A									B	
Approach Delay (s/veh)		9.5									14.3	
Approach LOS		A									B	

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	53 (76%), Referenced to phase 1:SEL, Start of Green
Natural Cycle:	70
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.67
Intersection Signal Delay (s/veh):	11.8
Intersection LOS:	B
Intersection Capacity Utilization:	35.0%
ICU Level of Service:	A
Analysis Period (min):	15

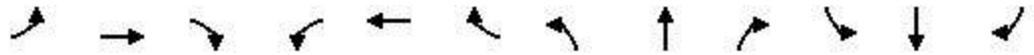
Splits and Phases: 1000:



Lane Group	Ø1	Ø2	Ø3	Ø4
Minimum Initial (s)	15.0	15.0	8.0	8.0
Minimum Split (s)	21.0	21.0	14.0	14.0
Total Split (s)	21.0	21.0	14.0	14.0
Total Split (%)	30%	30%	20%	20%
Maximum Green (s)	15.0	15.0	8.0	8.0
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes
Vehicle Extension (s)	7.0	7.0	5.0	5.0
Recall Mode	C-Min	Min	None	None
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay (s/veh)				
Queue Delay				
Total Delay (s/veh)				
LOS				
Approach Delay (s/veh)				
Approach LOS				
Intersection Summary				

HCM 7th Signalized Intersection Summary
 900: I-57 SB On Ramp/I-57 SB Off Ramp & Wilmington Rd

AM Peak Hour
 10/14/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↑	↑	↑					↑		↑
Traffic Volume (veh/h)	0	245	65	100	295	0	0	0	0	80	0	110
Future Volume (veh/h)	0	245	65	100	295	0	0	0	0	80	0	110
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	0	1604	1381	1767	1633	0				1618	0	1411
Adj Flow Rate, veh/h	0	285	81	118	331	0				98	0	151
Peak Hour Factor	0.95	0.86	0.80	0.85	0.89	0.95				0.82	0.95	0.73
Percent Heavy Veh, %	0	20	35	9	18	0				19	0	33
Cap, veh/h	0	580	424	501	839	0				304	0	236
Arrive On Green	0.00	0.36	0.36	0.07	0.51	0.00				0.20	0.00	0.20
Sat Flow, veh/h	0	1604	1171	1682	1633	0				1541	0	1196
Grp Volume(v), veh/h	0	285	81	118	331	0				98	0	151
Grp Sat Flow(s),veh/h/ln	0	1604	1171	1682	1633	0				1541	0	1196
Q Serve(g_s), s	0.0	5.7	2.0	1.6	5.1	0.0				2.3	0.0	4.8
Cycle Q Clear(g_c), s	0.0	5.7	2.0	1.6	5.1	0.0				2.3	0.0	4.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	580	424	501	839	0				304	0	236
V/C Ratio(X)	0.00	0.49	0.19	0.24	0.39	0.00				0.32	0.00	0.64
Avail Cap(c_a), veh/h	0	1354	989	734	1852	0				1153	0	895
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.3	9.1	6.9	6.2	0.0				14.3	0.0	15.3
Incr Delay (d2), s/veh	0.0	3.0	1.0	0.2	1.4	0.0				1.3	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	0.0
%ile BackOfQ(95%),veh/ln	0.0	3.2	0.8	0.6	2.1	0.0				1.4	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	13.2	10.1	7.1	7.5	0.0				15.6	0.0	21.4
LnGrp LOS		B	B	A	A					B		C
Approach Vol, veh/h		366			449						249	
Approach Delay, s/veh		12.5			7.4						19.1	
Approach LOS		B			A						B	
Timer - Assigned Phs			3	4		6			8			
Phs Duration (G+Y+Rc), s			6.3	21.0		14.2			27.3			
Change Period (Y+Rc), s			3.5	6.0		6.0			6.0			
Max Green Setting (Gmax), s			8.5	35.0		31.0			47.0			
Max Q Clear Time (g_c+I1), s			3.6	7.7		6.8			7.1			
Green Ext Time (p_c), s			0.1	6.1		1.8			6.7			
Intersection Summary												
HCM 7th Control Delay, s/veh			11.9									
HCM 7th LOS			B									

HCM 7th Signalized Intersection Summary
 1000: I-57 NB Off Ramp & Wilmington Rd

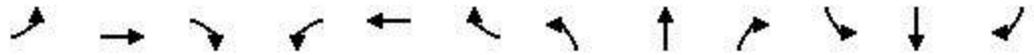
AM Peak Hour
 10/14/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑	↖	↗
Traffic Volume (veh/h)	155	50	110	305	105	100
Future Volume (veh/h)	155	50	110	305	105	100
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1618	1604	1796	1693	1663	1752
Adj Flow Rate, veh/h	161	69	128	328	146	149
Peak Hour Factor	0.96	0.72	0.86	0.93	0.72	0.67
Percent Heavy Veh, %	19	20	7	14	16	10
Cap, veh/h	590	496	624	883	295	277
Arrive On Green	0.36	0.36	0.07	0.52	0.19	0.19
Sat Flow, veh/h	1618	1359	1711	1693	1584	1485
Grp Volume(v), veh/h	161	69	128	328	146	149
Grp Sat Flow(s),veh/h/ln	1618	1359	1711	1693	1584	1485
Q Serve(g_s), s	2.9	1.4	1.7	4.7	3.4	3.7
Cycle Q Clear(g_c), s	2.9	1.4	1.7	4.7	3.4	3.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	590	496	624	883	295	277
V/C Ratio(X)	0.27	0.14	0.21	0.37	0.49	0.54
Avail Cap(c_a), veh/h	1298	1090	937	1934	1193	1119
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.2	8.7	6.2	5.8	15.0	15.1
Incr Delay (d2), s/veh	1.1	0.6	0.2	1.2	2.7	3.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	0.6	0.6	1.9	2.3	2.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	10.4	9.3	6.4	7.0	17.7	18.6
LnGrp LOS	B	A	A	A	B	B
Approach Vol, veh/h	230			456	295	
Approach Delay, s/veh	10.1			6.8	18.2	
Approach LOS	B			A	B	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		13.7	6.5	21.0		27.5
Change Period (Y+Rc), s		6.0	3.5	6.0		6.0
Max Green Setting (Gmax), s		31.0	10.5	33.0		47.0
Max Q Clear Time (g_c+I1), s		5.7	3.7	4.9		6.7
Green Ext Time (p_c), s		2.2	0.1	3.6		6.7
Intersection Summary						
HCM 7th Control Delay, s/veh			11.0			
HCM 7th LOS			B			

HCM 7th Signalized Intersection Summary
 900: I-57 SB On Ramp/I-57 SB Off Ramp & Wilmington Rd

PM Peak Hour
 10/14/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↘	↑					↘		↗
Traffic Volume (veh/h)	0	590	85	160	215	0	0	0	0	215	0	90
Future Volume (veh/h)	0	590	85	160	215	0	0	0	0	215	0	90
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	0	1633	1648	1796	1530	0				1811	0	1648
Adj Flow Rate, veh/h	0	648	102	205	247	0				279	0	99
Peak Hour Factor	0.95	0.91	0.83	0.78	0.87	0.25				0.77	0.95	0.91
Percent Heavy Veh, %	0	18	17	7	25	0				6	0	17
Cap, veh/h	0	825	706	358	968	0				352	0	285
Arrive On Green	0.00	0.51	0.51	0.08	0.63	0.00				0.20	0.00	0.20
Sat Flow, veh/h	0	1633	1397	1711	1530	0				1725	0	1397
Grp Volume(v), veh/h	0	648	102	205	247	0				279	0	99
Grp Sat Flow(s),veh/h/ln	0	1633	1397	1711	1530	0				1725	0	1397
Q Serve(g_s), s	0.0	23.9	2.9	3.9	5.2	0.0				11.3	0.0	4.5
Cycle Q Clear(g_c), s	0.0	23.9	2.9	3.9	5.2	0.0				11.3	0.0	4.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	825	706	358	968	0				352	0	285
V/C Ratio(X)	0.00	0.79	0.14	0.57	0.26	0.00				0.79	0.00	0.35
Avail Cap(c_a), veh/h	0	999	854	395	1164	0				516	0	417
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	14.9	9.7	12.8	5.9	0.0				27.8	0.0	25.1
Incr Delay (d2), s/veh	0.0	7.4	0.4	1.6	0.6	0.0				9.0	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	0.0
%ile BackOfQ(95%),veh/ln	0.0	13.6	1.5	2.2	2.4	0.0				9.1	0.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	22.3	10.1	14.5	6.6	0.0				36.8	0.0	26.6
LnGrp LOS		C	B	B	A					D		C
Approach Vol, veh/h		750			452						378	
Approach Delay, s/veh		20.7			10.1						34.2	
Approach LOS		C			B						C	
Timer - Assigned Phs			3	4		6			8			
Phs Duration (G+Y+Rc), s			9.4	43.2		21.0			52.6			
Change Period (Y+Rc), s			3.5	6.0		6.0			6.0			
Max Green Setting (Gmax), s			7.5	45.0		22.0			56.0			
Max Q Clear Time (g_c+I1), s			5.9	25.9		13.3			7.2			
Green Ext Time (p_c), s			0.1	11.3		1.7			5.0			
Intersection Summary												
HCM 7th Control Delay, s/veh			20.9									
HCM 7th LOS			C									

HCM 7th Signalized Intersection Summary
 1000: I-57 NB Off Ramp & Wilmington Rd

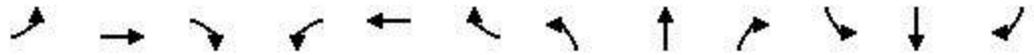
PM Peak Hour
 10/14/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑	↘	↗
Traffic Volume (veh/h)	355	150	70	305	80	115
Future Volume (veh/h)	355	150	70	305	80	115
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	1722	1618	1678	1707	1455	1796
Adj Flow Rate, veh/h	408	188	78	372	94	158
Peak Hour Factor	0.87	0.80	0.90	0.82	0.85	0.73
Percent Heavy Veh, %	12	19	15	13	30	7
Cap, veh/h	779	621	433	975	234	257
Arrive On Green	0.45	0.45	0.04	0.57	0.17	0.17
Sat Flow, veh/h	1722	1372	1598	1707	1386	1522
Grp Volume(v), veh/h	408	188	78	372	94	158
Grp Sat Flow(s),veh/h/ln	1722	1372	1598	1707	1386	1522
Q Serve(g_s), s	7.8	4.0	1.1	5.5	2.8	4.4
Cycle Q Clear(g_c), s	7.8	4.0	1.1	5.5	2.8	4.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	779	621	433	975	234	257
V/C Ratio(X)	0.52	0.30	0.18	0.38	0.40	0.61
Avail Cap(c_a), veh/h	1567	1248	624	1960	751	824
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.1	8.0	6.3	5.4	17.1	17.8
Incr Delay (d2), s/veh	2.5	1.3	0.2	1.1	2.4	5.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.3	1.7	0.4	2.2	1.7	2.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	11.6	9.3	6.5	6.6	19.5	22.8
LnGrp LOS	B	A	A	A	B	C
Approach Vol, veh/h	596			450	252	
Approach Delay, s/veh	10.9			6.6	21.6	
Approach LOS	B			A	C	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		13.8	5.5	26.9		32.4
Change Period (Y+Rc), s		6.0	3.5	6.0		6.0
Max Green Setting (Gmax), s		25.0	7.5	42.0		53.0
Max Q Clear Time (g_c+I1), s		6.4	3.1	9.8		7.5
Green Ext Time (p_c), s		1.7	0.0	11.0		8.0
Intersection Summary						
HCM 7th Control Delay, s/veh			11.4			
HCM 7th LOS			B			

HCM 7th Signalized Intersection Summary
 900: I-57 SB On Ramp/I-57 SB Off Ramp & Wilmington Rd

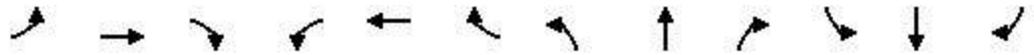
AM Peak Hour
 10/14/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻		↻	↻					↻		↻
Traffic Volume (veh/h)	0	245	65	100	295	0	0	0	0	80	0	110
Future Volume (veh/h)	0	245	65	100	295	0	0	0	0	80	0	110
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	0	1618	1396	1767	1648	0				1618	0	1411
Adj Flow Rate, veh/h	0	285	81	118	331	0				98	0	151
Peak Hour Factor	0.95	0.86	0.80	0.85	0.89	0.95				0.82	0.95	0.73
Percent Heavy Veh, %	0	19	34	9	17	0				19	0	33
Cap, veh/h	0	472	134	468	881	0				296	0	229
Arrive On Green	0.00	0.39	0.39	0.07	0.53	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	1212	344	1682	1648	0				1541	0	1196
Grp Volume(v), veh/h	0	0	366	118	331	0				98	0	151
Grp Sat Flow(s),veh/h/ln	0	0	1556	1682	1648	0				1541	0	1196
Q Serve(g_s), s	0.0	0.0	8.2	1.7	5.1	0.0				2.4	0.0	5.1
Cycle Q Clear(g_c), s	0.0	0.0	8.2	1.7	5.1	0.0				2.4	0.0	5.1
Prop In Lane	0.00		0.22	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	0	606	468	881	0				296	0	229
V/C Ratio(X)	0.00	0.00	0.60	0.25	0.38	0.00				0.33	0.00	0.66
Avail Cap(c_a), veh/h	0	0	1383	684	1916	0				948	0	736
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	10.7	7.2	5.9	0.0				15.3	0.0	16.4
Incr Delay (d2), s/veh	0.0	0.0	4.4	0.3	1.2	0.0				1.4	0.0	6.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	4.7	0.6	2.1	0.0				1.5	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	15.1	7.5	7.2	0.0				16.7	0.0	23.1
LnGrp LOS			B	A	A					B		C
Approach Vol, veh/h		366			449						249	
Approach Delay, s/veh		15.1			7.3						20.6	
Approach LOS		B			A						C	
Timer - Assigned Phs			3	4	6			8				
Phs Duration (G+Y+Rc), s			6.4	23.1	14.4			29.5				
Change Period (Y+Rc), s			3.5	6.0	6.0			6.0				
Max Green Setting (Gmax), s			8.5	39.0	27.0			51.0				
Max Q Clear Time (g_c+I1), s			3.7	10.2	7.1			7.1				
Green Ext Time (p_c), s			0.1	6.9	1.7			6.9				
Intersection Summary												
HCM 7th Control Delay, s/veh			13.1									
HCM 7th LOS			B									

HCM 7th Signalized Intersection Summary
 1000: I-57 NB Off Ramp/I-57 NB On Ramp & Wilmington Rd

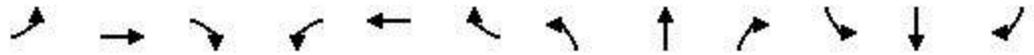
AM Peak Hour
 10/14/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖		↖		↗			
Traffic Volume (veh/h)	50	155	0	0	305	110	105	0	100	0	0	0
Future Volume (veh/h)	50	155	0	0	305	110	105	0	100	0	0	0
Initial Q (Qb), 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				
Adj Sat Flow, veh/h/ln	1604	1618	0	0	1693	1796	1663	0	1752			
Adj Flow Rate, veh/h	69	161	0	0	328	128	146	0	149			
Peak Hour Factor	0.72	0.96	0.95	0.95	0.93	0.86	0.72	0.95	0.67			
Percent Heavy Veh, %	20	19	0	0	14	7	16	0	10			
Cap, veh/h	411	930	0	0	535	209	270	0	253			
Arrive On Green	0.04	0.57	0.00	0.00	0.46	0.46	0.17	0.00	0.17			
Sat Flow, veh/h	1527	1618	0	0	1159	452	1584	0	1485			
Grp Volume(v), veh/h	69	161	0	0	0	456	146	0	149			
Grp Sat Flow(s),veh/h/ln	1527	1618	0	0	0	1611	1584	0	1485			
Q Serve(g_s), s	1.0	2.2	0.0	0.0	0.0	10.0	4.0	0.0	4.4			
Cycle Q Clear(g_c), s	1.0	2.2	0.0	0.0	0.0	10.0	4.0	0.0	4.4			
Prop In Lane	1.00		0.00	0.00		0.28	1.00		1.00			
Lane Grp Cap(c), veh/h	411	930	0	0	0	744	270	0	253			
V/C Ratio(X)	0.17	0.17	0.00	0.00	0.00	0.61	0.54	0.00	0.59			
Avail Cap(c_a), veh/h	531	1928	0	0	0	1610	741	0	695			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	6.8	4.7	0.0	0.0	0.0	9.5	17.8	0.0	18.0			
Incr Delay (d2), s/veh	0.2	0.4	0.0	0.0	0.0	3.8	3.6	0.0	4.6			
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	0.3	0.8	0.0	0.0	0.0	5.4	2.8	0.0	3.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	7.0	5.1	0.0	0.0	0.0	13.3	21.4	0.0	22.6			
LnGrp LOS	A	A				B	C		C			
Approach Vol, veh/h		230			456			295				
Approach Delay, s/veh		5.7			13.3			22.0				
Approach LOS		A			B			C				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		14.0		33.0			5.3	27.7				
Change Period (Y+Rc), s		6.0		6.0			3.5	6.0				
Max Green Setting (Gmax), s		22.0		56.0			5.5	47.0				
Max Q Clear Time (g_c+I1), s		6.4		4.2			3.0	12.0				
Green Ext Time (p_c), s		1.8		3.1			0.0	9.7				
Intersection Summary												
HCM 7th Control Delay, s/veh				14.1								
HCM 7th LOS				B								

HCM 7th Signalized Intersection Summary
 900: I-57 SB On Ramp/I-57 SB Off Ramp & Wilmington Rd

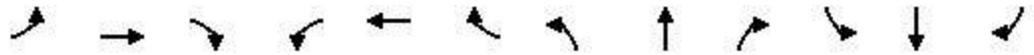
PM Peak Hour
 10/14/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	590	85	160	215	0	0	0	0	215	0	90
Future Volume (veh/h)	0	590	85	160	215	0	0	0	0	215	0	90
Initial Q (Qb), 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	
Adj Sat Flow, veh/h/ln	0	1648	1663	1796	1544	0				1811	0	1648
Adj Flow Rate, veh/h	0	648	102	205	247	0				279	0	99
Peak Hour Factor	0.95	0.91	0.83	0.78	0.87	0.25				0.77	0.95	0.91
Percent Heavy Veh, %	0	17	16	7	24	0				6	0	17
Cap, veh/h	0	742	117	306	1009	0				338	0	274
Arrive On Green	0.00	0.53	0.53	0.08	0.65	0.00				0.20	0.00	0.20
Sat Flow, veh/h	0	1390	219	1711	1544	0				1725	0	1397
Grp Volume(v), veh/h	0	0	750	205	247	0				279	0	99
Grp Sat Flow(s),veh/h/ln	0	0	1609	1711	1544	0				1725	0	1397
Q Serve(g_s), s	0.0	0.0	32.4	4.0	5.3	0.0				12.4	0.0	4.9
Cycle Q Clear(g_c), s	0.0	0.0	32.4	4.0	5.3	0.0				12.4	0.0	4.9
Prop In Lane	0.00		0.14	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	0	858	306	1009	0				338	0	274
V/C Ratio(X)	0.00	0.00	0.87	0.67	0.24	0.00				0.83	0.00	0.36
Avail Cap(c_a), veh/h	0	0	929	359	1125	0				433	0	351
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	16.2	16.4	5.7	0.0				30.7	0.0	27.7
Incr Delay (d2), s/veh	0.0	0.0	12.0	3.8	0.6	0.0				13.3	0.0	1.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	18.1	3.7	2.5	0.0				10.3	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	28.2	20.1	6.3	0.0				44.0	0.0	29.4
LnGrp LOS			C	C	A					D		C
Approach Vol, veh/h		750			452						378	
Approach Delay, s/veh		28.2			12.6						40.2	
Approach LOS		C			B						D	
Timer - Assigned Phs			3	4	6			8				
Phs Duration (G+Y+Rc), s			9.5	48.5	21.6			58.0				
Change Period (Y+Rc), s			3.5	6.0	6.0			6.0				
Max Green Setting (Gmax), s			8.5	46.0	20.0			58.0				
Max Q Clear Time (g_c+I1), s			6.0	34.4	14.4			7.3				
Green Ext Time (p_c), s			0.1	8.1	1.3			5.1				
Intersection Summary												
HCM 7th Control Delay, s/veh			26.6									
HCM 7th LOS			C									

HCM 7th Signalized Intersection Summary
 1000: I-57 NB Off Ramp/I-57 NB On Ramp & Wilmington Rd

PM Peak Hour
 10/14/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷			↶		↶		↷			
Traffic Volume (veh/h)	0	355	150	0	305	70	80	0	115	0	0	0
Future Volume (veh/h)	0	355	150	0	305	70	80	0	115	0	0	0
Initial Q (Qb), 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				
Adj Sat Flow, veh/h/ln	1618	1722	1900	0	1707	1678	1455	0	1796			
Adj Flow Rate, veh/h	0	408	158	0	372	78	94	0	158			
Peak Hour Factor	0.80	0.87	0.95	0.95	0.82	0.90	0.85	0.95	0.73			
Percent Heavy Veh, %	19	12	0	0	13	15	30	0	7			
Cap, veh/h	499	680	263	0	787	165	228	0	250			
Arrive On Green	0.00	0.58	0.58	0.00	0.58	0.58	0.16	0.00	0.16			
Sat Flow, veh/h	1541	1182	458	0	1369	287	1386	0	1522			
Grp Volume(v), veh/h	0	0	566	0	0	450	94	0	158			
Grp Sat Flow(s),veh/h/ln	1541	0	1640	0	0	1656	1386	0	1522			
Q Serve(g_s), s	0.0	0.0	10.3	0.0	0.0	7.3	2.8	0.0	4.5			
Cycle Q Clear(g_c), s	0.0	0.0	10.3	0.0	0.0	7.3	2.8	0.0	4.5			
Prop In Lane	1.00		0.28	0.00		0.17	1.00		1.00			
Lane Grp Cap(c), veh/h	499	0	943	0	0	952	228	0	250			
V/C Ratio(X)	0.00	0.00	0.60	0.00	0.00	0.47	0.41	0.00	0.63			
Avail Cap(c_a), veh/h	914	0	2065	0	0	1510	602	0	661			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	6.4	0.0	0.0	5.7	17.2	0.0	17.9			
Incr Delay (d2), s/veh	0.0	0.0	2.8	0.0	0.0	1.7	2.5	0.0	5.5			
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	0.0	0.0	4.2	0.0	0.0	2.9	1.7	0.0	3.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	9.2	0.0	0.0	7.4	19.8	0.0	23.5			
LnGrp LOS			A			A	B		C			
Approach Vol, veh/h		566			450			252				
Approach Delay, s/veh		9.2			7.4			22.1				
Approach LOS		A			A			C				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		13.6		32.5			0.0	32.5				
Change Period (Y+Rc), s		6.0		6.0			3.5	6.0				
Max Green Setting (Gmax), s		20.0		58.0			12.5	42.0				
Max Q Clear Time (g_c+I1), s		6.5		12.3			0.0	9.3				
Green Ext Time (p_c), s		1.4		14.2			0.0	9.2				
Intersection Summary												
HCM 7th Control Delay, s/veh				11.1								
HCM 7th LOS				B								

Exhibit 5J: Safety Analysis

Memorandum



December 5, 2024



Date: December 5, 2024

To: Will County Division of Transportation
Christina Kupkowski, PE

From: Burns & McDonnell
Cheryl Kelley, PE

Subject: Wilmington-Peotone PEL Proposed Safety Analysis
Wilmington, Will County, Illinois

Burns & McDonnell has performed predictive crash analysis as part of the Wilmington-Peotone PEL Study for the Will County Division of Transportation (WCDOT). Rapid growth has been occurring across Will County, altering the traffic dynamic, and challenging the roadway infrastructure. This project will evaluate the existing and future travel demand as well as the characteristics of the existing corridor to determine their impact on mobility throughout the area. A key element of this study is to assess the impacts of the proposed improvements on safety.

The purpose of this Memorandum is to summarize the safety analysis of proposed improvements compared to a no-change model to supplement the safety-related scores in the alternative rankings.

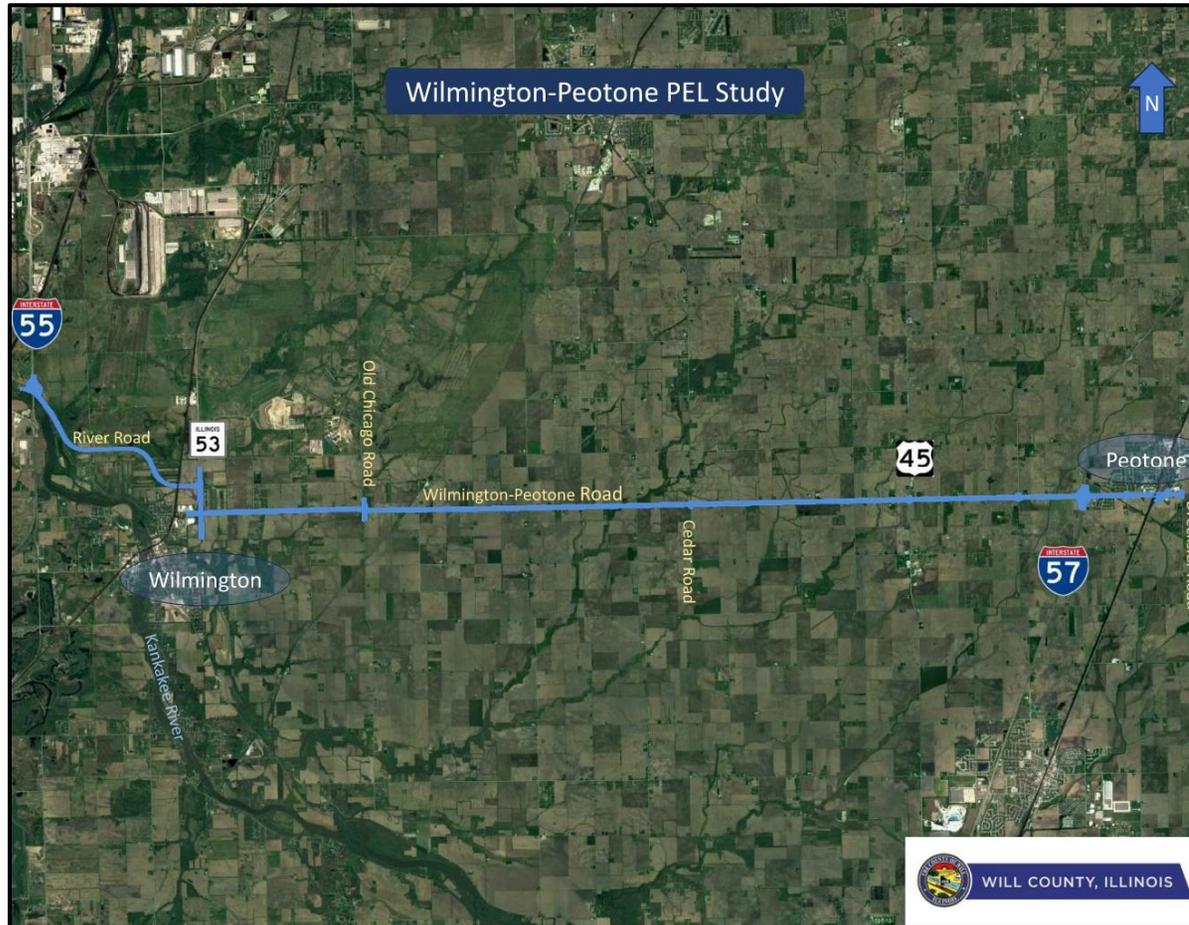
Project Background

PROJECT LOCATION

The Wilmington-Peotone Corridor project includes River Road from I-55 to IL Route 53 (IL 53), IL 53 from River Road to Wilmington-Peotone Road, and Wilmington-Peotone Road from IL 53 to Drecksler Road. The Wilmington-Peotone Corridor is 22 miles long within the project limits. Land use varies throughout the area but is largely agricultural. The project limits include two interchanges, two signalized intersections, and 29 unsignalized intersections. There are two at-grade railroad crossings and a crossing with the Wauponsee Trail.

The project location is displayed in **Figure 1**.

Figure 1: Project Location



Memorandum

PREVIOUS EXISTING CRASH ANALYSIS SUMMARY

The segment analysis was split into three corridors: River Road, IL 53, and Wilmington-Peotone Road. Each road has its own characteristics, with River Road having wider shoulders and a horizontal alignment with curves. IL 53 is a heavily trafficked roadway with a very short length as part of this project and two busy intersections. Wilmington-Peotone Road is the bulk of this analysis, with a straight road, narrow shoulders, and a variety of stop-controlled intersections. Figures 2 through 4 show summary tables of crash types by road. In all segments, there were a high number of front-to-rear and turning crashes.

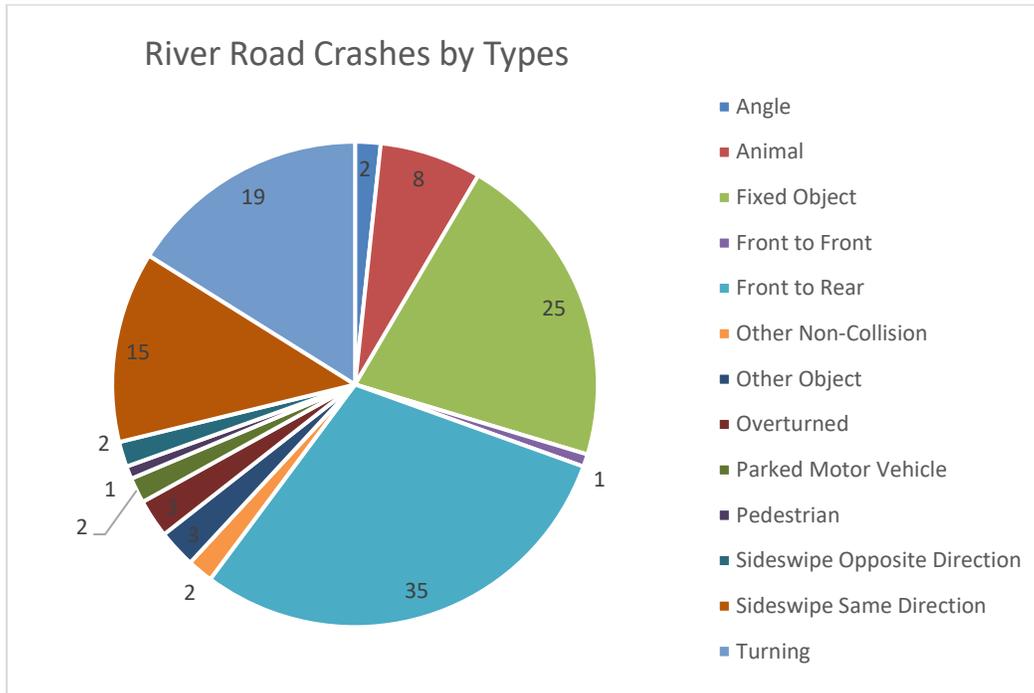


Figure 2: River Road crashes by types

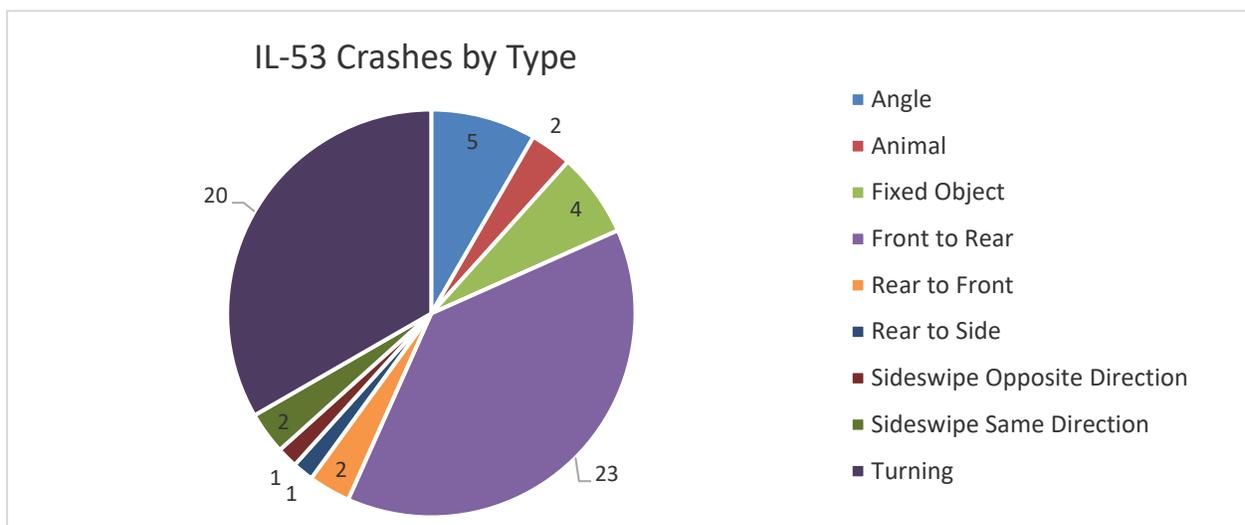


Figure 3: IL Route 53 crashes by type

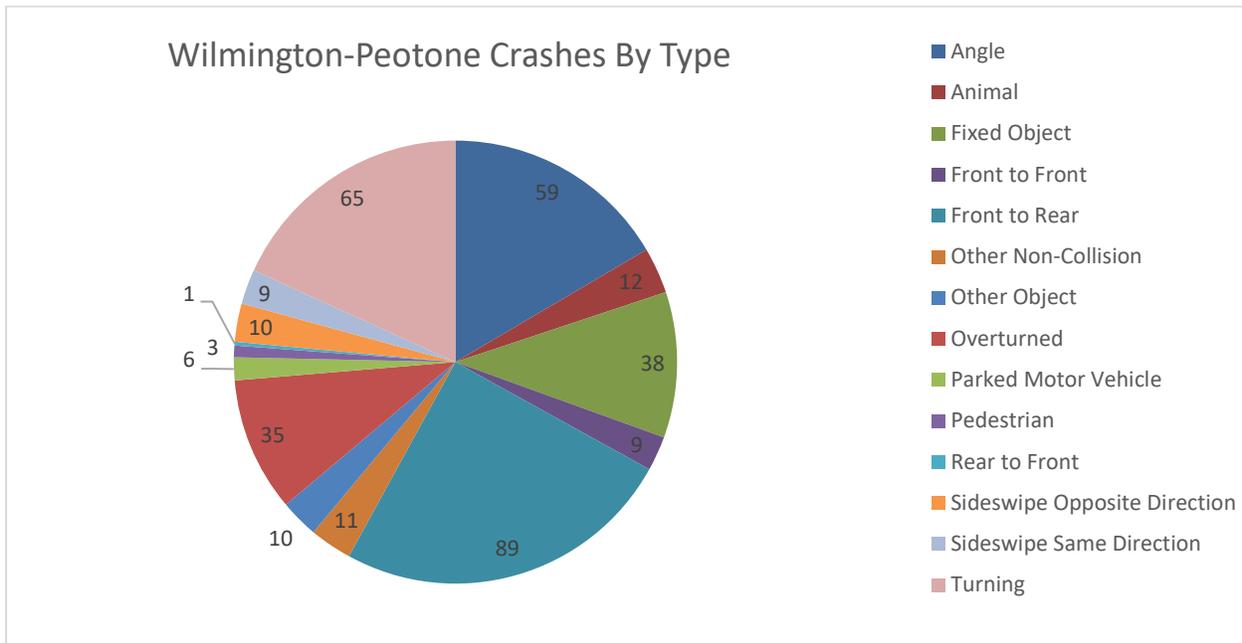


Figure 4: Wilmington-Peotone Crashes by type

From 2018 to 2022, 535 crashes were reported within the project limits. In this time frame, trends were identified within the project limits. Rear ends were the most common at both intersections and along the mainline. This can be common at intersections that experience congestion, where there is unexpected stopping, and along corridors that lack channelization. Semi-trucks were involved in 20% of all crashes, most often being rear-end and turning. The presence of trucks and large farm equipment could be contributing to rear-end crashes, with vehicles behind large trucks unable to see what is occurring in front of them. Fixed object crashes were also prevalent along the corridor and contributed to a high number of injury crashes. With minimal shoulders through the majority of the corridor, the tight roadway can be unforgiving to vehicles when they do not have time to stop and there is no shoulder to provide a refuge which could be contributing to both rear end and fixed object crashes.

Hot spot locations identified included: the Wilmington-Peotone Road and US Route 45 intersection experienced the largest number of crashes, followed by the I-55 and River Road interchange, River Road/IL 53 intersection, IL 53/Wilmington-Peotone Road intersection, and the I-57 and Wilmington-Peotone Road interchange.

A Highway Safety Manual analysis was completed for a rural, two-lane roadway using existing conditions and volumes to compare crashes experienced against predicted crashes. The ISATe (Enhanced Interchange Safety Analysis Tool) model was used to evaluate the ramp terminals at both the I-55 interchange with N River Road and the I-57 interchange on Wilmington-Peotone Road. At the N River Road and IL Route 53 intersection, which is a signalized 3-leg intersection, both the IDOT Crash Prediction Tool as well as the updated spreadsheet available from the FHWA were used for analysis. Wilmington-Peotone Road from IL Route 53 to S Indian Trail Road had an overall higher number of observed crashes than the predicted crashes. Wilmington-Peotone Road from Warner Bridge Road to S Cedar Road experienced a higher number of fatal/injury crashes than the model predicted. Nearly twice as many crashes were observed at intersections compared to those predicted by the models. Intersections of note include N River Road and IL Route 53, IL Route 53 and Wilmington-Peotone Road, and US Route 45 and Wilmington-

Memorandum (cont'd)

Peotone Road. The interchange terminals for both northbound and southbound I-57 also experienced several more crashes than predicted by the model. Refer to the **Wilmington-Peotone PEL Crash Memorandum**, which provides comparisons of the observed crashes to the model-calibrated crashes.

Additional Information

Since the crash memorandum was completed, we have also received a crash review from the Will County Sheriff's department. This review focused only on the portion of Wilmington-Peotone Road in Will County from IL 53 to 88th Avenue. In their review of data from January 2017 to October 2024, they observed six fatal crashes in the 2022-2024 time period, up from the four fatal crashes that occurred in the 2017-2021 time period. The increase in fatal crashes has alarmed officials and residents alike. The sheriff's department has recommended the following:

1. Lighting along the roadway.
 - a. Given the rural nature of the corridor, lighting has not currently been proposed as a concept. BMcD's review of more detailed crash information from 2018-2022 showed the majority of crashes occurred in daylight. As design progresses in future phases, lighting can be evaluated as an additional option in conjunction with the concepts described in the following section.
2. Widening the roadway to allow for safe traffic stops. Along the entire roadway would be preferred but would accept a few wider areas along the roadway for safe areas for semi-trucks to be pulled over.
 - a. Improvements to the typical section, including widening the travel lanes and shoulders have been considered and are described in more detail in the following section.
3. A Will County Ordinance for overlength trucks with larger fines.
 - a. This is a regulatory change that is outside of the scope of this roadway study.

Methodology for Future Analysis

In predicting crashes for the future, a mindful approach was needed to ensure correct comparisons were made between a no-build option and proposed alternatives. The following will outline the approach taken for segments, intersections, and ramp terminals. All analyses used the future traffic volumes (AADTs) and occurred over a 27-year time period, 2023-2050.

All analyses considered total crashes, fatal/injury crashes, and property damage only (PDO) crashes as part of the Drive to Zero campaign focuses on reduction of fatal/injury crash severities.

Segment Crash Prediction

Segment analysis utilized the IHSDM (Interactive Highway Safety Design Model). This model used Illinois calibration factors when comparing the no-build to proposed improvements including shoulder widening and passing lanes along the corridor.

Intersection Crash Prediction

Intersection crash prediction utilized the HSM spreadsheet tools. Calibration factors were not used in the intersection analysis as the *AASHTO Highway Safety Manual Illinois User Guide* did not have enough sites to perform calibrations for signalized intersections and recommended a default calibration factor of 1.0. Because the calibration factor from 2006 to 2008 data for four-leg intersections with stop control was

Memorandum (cont'd)

0.99 and calibrated models generally should not be compared to uncalibrated models, only uncalibrated models were used in the analysis of no-build intersection models against improved intersections.

For roundabout analysis, CMFs were applied to the predicted number of crashes at the stop-controlled intersections or ramp terminals. Two CMFs were used in each evaluation based on what was available in the CMF Clearinghouse, with consideration to the CMF's rating and applicability. For Interchange roundabouts, a different CMF was applied for fatal/injury crashes (CMF ID 9449) and PDO crashes (CMF ID 9447), while for the intersections, fatal/injury (CMF ID 228) and all severity crashes (CMF ID 227) CMFs were used. From there, total crash reduction was calculated for ramp terminal intersections and PDO crashes were calculated for intersection applications.

Interchange Crash Prediction

Interchanges were analyzed using Interchange Safety Analysis Tool Enhanced (ISATe). No calibration factor was available for these types of facilities, so comparisons focus on the percent reduction in crashes. In the case of signaling ramp terminals, a CMF was used as stop-controlled to signalized control consistently produced an increase in crashes. In reviewing states that have calibrated these models (Kansas, Pennsylvania, and Virginia), calibration factors for stop-controlled intersections were consistently higher and intersections with signals were consistently lower, indicating that calibration is essential if comparing a stop-controlled ramp terminal to a signalized ramp terminal. This is likely due to the sample locations used in the creation of these models.

Signalization CMFs at the interchange ramps used CMF ID 7967, applied to total, fatal/injury, and PDO crashes.

Segment Improvements Analysis

The segment analysis focused on longitudinal improvements along the corridor to address the safety concerns noted above. The concepts range from widening shoulders and flattening sideslopes to adding passing lanes and realigning River Road to Wilmington-Peotone Road as described in the following section.

Typical Section Improvements

Given the high occurrence of rear-end and fixed object crashes, typical section improvements were assessed along Wilmington-Peotone Road from IL 53 to I-57 to provide a safe buffer space to roadside hazards as well as a refuge area for vehicles in need and law enforcement. Improvements included widening shoulders and flattening sideslopes as can be seen in Figure 5 and Figure 6 below.

Compared to the no-build option, providing a 12' lane and 10' shoulder with a 4:1 side slope reduced the total number of predicted crashes by 19%. Increasing the side slope to 6:1 increases that reduction by 5%. Fatal and injury crashes see a slightly higher reduction in crashes in each analysis. While these percentages may seem small compared to some of proposed intersection improvements, they will result in a larger overall number in reduction of crashes due to the higher amount of segment crashes observed along Wilmington-Peotone Road compared to each individual intersection.

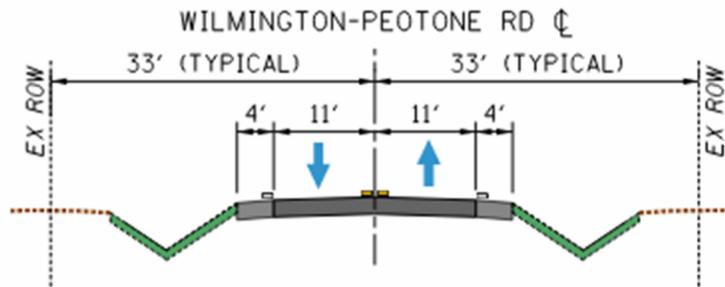


Figure 5: Existing Wilmington-Peotone Road Typical Section

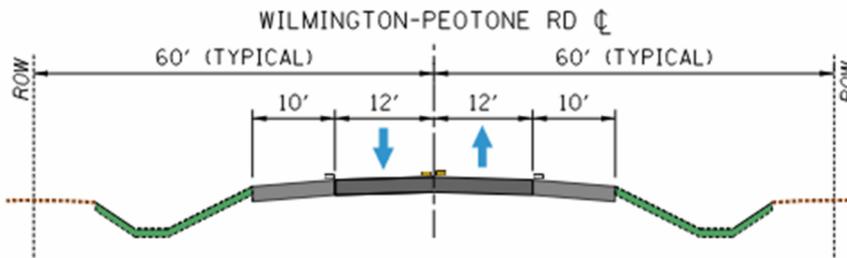


Figure 6: Proposed Wilmington-Peotone Road Typical Section

Wilmington-Peotone Road Segments									
	Total Crashes			Fatal/Injury Crashes			PDO Crashes		
	No Build	4:1	6:1	No Build	4:1	6:1	No Build	4:1	6:1
Total crashes per year	56.9	46.0	43.0	18.2	14.5	13.6	38.6	31.4	29.4
Percent change from no build		19%	24%		20%	26%		19%	24%

Table 1: Comparison to No-Build for Segment Crashes

Passing Lane Improvements

The next segment alternative that was evaluated was to add passing lanes along Wilmington-Peotone Road between IL Route 53 and I-57. There is a high occurrence of passing along the corridor, which we know based on input from stakeholders, including law enforcement as well as those who live along the corridor. This creates a safety concern with a tight cross-section and large numbers of large vehicles including trucks and slow-moving farm equipment leading to unsafe passing maneuvers and can be seen with the high number of overturning crashes along Wilmington-Peotone Road. Passing lanes would provide a safe space to get around slow-moving traffic and break up platoons created along the roadway. The exact layout of the passing lanes would be determined during a Phase I study; however, for this analysis it is assumed there will be three passing lanes in either direction throughout the corridor. The addition of passing lanes with improved shoulders and sideslopes throughout the corridor provided a 28% reduction in overall crashes compared to the no-build alternative.



Figure 7: Potential Passing Lane Locations

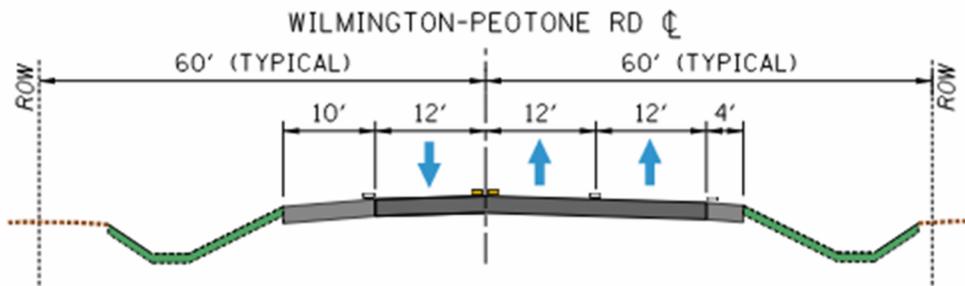


Figure 8: Proposed Passing Lane Typical Section

Table 2: Roadway Improvements with Passing Lanes Compared to No Build

Wilmington-Peotone Road Segments						
	Total Crashes		Fatal/Injury Crashes		PDO Crashes	
	No Build	6:1 with Passing Lane	No Build	6:1 with Passing Lane	No Build	6:1 with Passing Lane
Crashes per year	56.9	40.9	18.2	12.9	38.6	28.0
Percent change from no build		28%		29%		28%

An interim analysis was also completed, reviewing the addition of passing lanes with improved shoulders and sideslopes on the passing lanes only and the remaining roadway unaffected; there is potential to construct passing lanes first in advance of any other determined improvements given that improvements are in more spot locations as opposed to throughout the entire length of the study. This is estimated to provide a 6% decrease in crashes compared to the no-build alternative.

Memorandum (cont'd)

Table 3: Passing Lane Improvements Only

Wilmington-Peotone Passing Lanes Only						
	Total Crashes		Fatal/Injury Crashes		PDO Crashes	
	No Build	Passing Lane	No Build	Passing Lane	No Build	Passing Lane
Crashes per year	56.9	53.4	18.2	17.1	38.6	36.3
Percent change from no-build		6%		6%		6%

Realignments

In addition to the improvements to the typical sections, alternatives to bypass the IL 53 intersection hotspots were analyzed as both IL 53 intersections were noted hot spots for crashes with rear ends, angle, and turning crashes as the most common types. These realignments were intended to help the flow of traffic and reduce conflicts at these intersections.

Red Realignment

The red realignment shown below realigns Wilmington-Peotone and River Road to bypass both IL 53 intersections, allowing for the predominate “through” movement from Wilmington-Peotone to IL 53 to River Road and I-55, avoiding the IL 53 intersections. The road network would otherwise remain in place, with local vehicles continuing to use the existing intersections. With estimates to the redistribution of traffic volumes based on existing traffic patterns, the new alignment was compared to the no-build option. There is a 6% reduction in total crashes and 8% reduction in fatal/injury crashes.

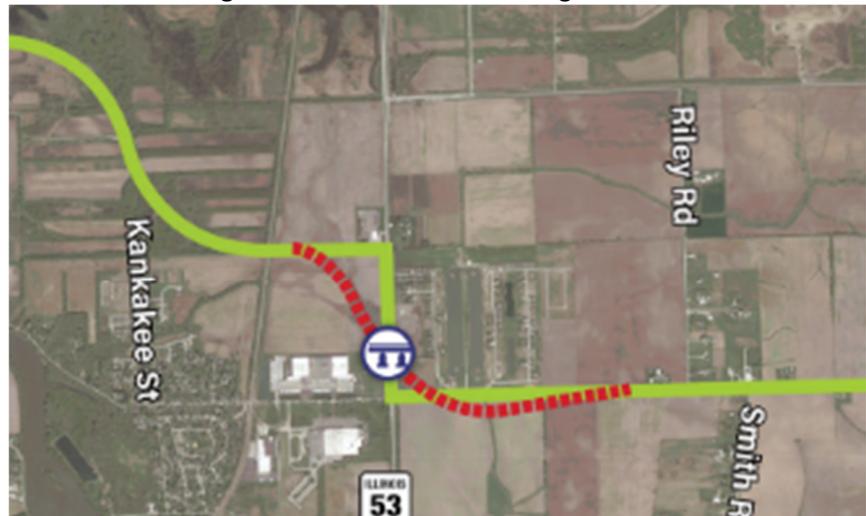


Figure 9: Proposed Red Realignment

Table 4: Red Alternative Compared to No Build

Wilmington-Peotone Road Red Realignment - 2023-2050						
	Total Crashes		FI Crashes		PDO Crashes	
	No Build	Red Alternative	No Build	Red Alternative	No Build	Red Alternative
Crashes per year	15.7	14.7	5.3	4.9	10.5	9.9
Percent change from no build		6%		8%		6%

Memorandum (cont'd)

Orange Realignment

The second realignment option, using the orange alignment shown below, also realigns Wilmington-Peotone and River Road. In this realignment, a through movement is provided at IL 53 and River Road to eliminate the need for those traveling east-west between I-55 and I-57 to turn through two intersections at IL 53. This removes the “through” traffic turning through the IL 53 and Wilmington-Peotone intersection and creates a through movement for those vehicles at the River Road and IL 53 intersection. This movement would likely decrease some of the turning and angle crashes, the second and third most common types of crashes at this intersection (rear ends were first).

While it still requires traveling through an intersection, fewer tighter curves are introduced and the volumes of turning traffic through the intersection are reduced. This realignment provides a 23% overall reduction in crashes in 2023-2050 time period.



Figure 10: Proposed Orange Realignment

Table 5: Orange Alternative Compared to No Build

Wilmington-Peotone Road Orange Realignment - 2023-2050						
	Total Crashes		FI Crashes		PDO Crashes	
	No Build	Orange Alternative	No Build	Orange Alternative	No Build	Orange Alternative
Crashes per year	17.2	13.2	5.7	4.4	11.4	9.0
Percent change from no build		23%		23%		22%

Memorandum (cont'd)

East Realignment at IL Route 50

There is also a realignment option on the east side of the project corridor at IL Route 50 and Wilmington-Peotone Road. This proposed realignment would improve the intersection angle of the existing skewed intersection and provide the opportunity to grade separate the railroad crossing to the west. The removal of the at-grade railroad crossing was not captured in the proposed as no crashes occurred there in the crash history reviewed. The change in AADTs at the existing and proposed intersections and realignment contributed to the predicted decrease in crashes.



Figure 11: Proposed East Realignment with IL Route 50

Table 6: Proposed East Realignment with IL Route 50 Compared to No Build

Realignment with IL Route 50 - 2023-2050						
	Total Crashes		FI Crashes		PDO Crashes	
	No Build	Realigned IL Rt 50	No Build	Realigned IL Rt 50	No Build	Realigned IL Rt 50
Crashes per year	2.14	1.38	0.64	0.49	1.50	0.90
Percent change from no build		35%		23%		40%

Other Mainline Improvements

River Road Grade Separation

River Road has an at-grade crossing with a Union Pacific Railroad (UPRR) near the IL 53 and River Road intersection. This crossing has no crash history in the last five years, but railroad crossings are inherently dangerous. According to Operation Lifesaver, in 2023, there were a total of 2,192 vehicle-train collisions of which 766 were injuries and 247 were fatalities. Removing the chance of a vehicle-train collision would increase the safety of the corridor.

Memorandum (cont'd)

Profile Improvements

Profile improvements to eliminate deficient vertical geometry and improve sight distance are also under consideration. This has been something not well studied in the HSM and does not have many CMFs available in the CMF Clearinghouse. In the HSM, grade improvements are a CMF based on percent grade. The ranges go from 0-3%, 3%-6%, and greater than 6%. While the terrain is rolling, the grades generally stay below 3% with a few exceptions and therefore any improvements would not be shown in the model. However, increasing sight distance to current standard would generally be considered a safety improvement.

Intersection Improvements Analysis

Turn Lane Analysis

Adding turn lanes to an intersection improves safety by removing stopped vehicles from the mainline to reduce rear-end crashes. A separate turn lane also provides space for a vehicle to slow to appropriate speeds for turning, allowing drivers to maintain control of their vehicle. Beyond safety, it also allows for a greater capacity of traffic to pass through the intersection and improved traffic flow. The following intersections were analyzed for impacts of additional turn lanes.

River Road & IL 53

At the River Road and IL 53 intersection, an additional eastbound right-turn lane was proposed due to the high turning movement at this location, creating a dual right-turn lane on the eastbound leg. As dual right-turn lanes (DRT) are still relatively new, no research on their safety has been completed to apply to the intersection improvements. In the *Development of Guidelines for Triple Left and Dual Right-Turn Lanes: Technical Report*, completed by the Texas Transportation Institute (TTI), found in their review of DRTs that “a well-designed DRT lane does not cause significantly higher crash frequency or severity compared to single right-turn lanes.” In this analysis, it is assumed that no increase in crashes will occur with an additional right-turn lane. However, this would create more conflict points with pedestrians. Currently, this intersection has one pedestrian crossing on the south leg, but it is rarely used as the sidewalk ends abruptly in the southwest corner. If this sidewalk is to be extended, further discussion on a DRT should be had.

IL 53 & Wilmington-Peotone Road

At the IL 53 and Wilmington-Peotone Road intersection, an additional westbound right-turn lane was proposed, creating a dual right-turn lane on the westbound leg. This would fall under the same assumption as had for the River Road & IL 53 intersection where the roadway improvements would not be expected to increase crashes. In addition to the DRT on the westbound lane, a proposed addition of a northbound right-turn lane is proposed. Overall, the addition of a single right-turn lane would provide a 4% reduction in crashes.

Table 7: IL Route 53 and Wilmington-Peotone Turn Lane Improvements Compared to No Build

IL Route 53 & Wilmington-Peotone Road Turn Lane Improvements - 2023-2050						
	Total Crashes		FI Crashes		PDO Crashes	
	No Build	NB RT	No Build	NB RT	No Build	NB RT
Crashes per Year	5.26	5.03	1.79	1.71	3.47	3.32
Percent change from no build		4%		4%		5%

Indian Trail Road & Wilmington-Peotone Road

Eastbound and westbound left-turn lanes are proposed at Indian Trail Road, which has a deficient vertical curve and limited sight distance. No traffic counts were collected at Indian Trail Road, and the safety review found 2 crashes, one minor injury and the other PDO in the five-year study period. A CMF was the main consideration for the impact of the proposed turn lanes as we cannot predict intersection crashes without the side road volume. The left-turn CMF for this intersection type estimates a 48% reduction in crashes when two left-turn lanes are added to a 4-leg, minor road stop control intersection.

Old Chicago Road & Wilmington-Peotone Road

Old Chicago Road has four existing left-turn lanes, and the option of adding one right-turn lane was evaluated given the traffic patterns through the intersection. Overall, the addition of the turn lanes showed a 14% drop in crashes throughout.

Table 8: Old Chicago Road Turn Lane Improvements compared to No Build

Old Chicago Road & Wilmington-Peotone Road Turn Lane Improvements - 2023-2050						
	Total Crashes		FI Crashes		PDO Crashes	
	No Build	1 RT	No Build	1 RT	No Build	1 RT
Crashes per year	2.39	2.05	1.03	0.89	1.36	1.17
Percent change from no build		14%		14%		14%

Symerton Road & Wilmington-Peotone Road

Consideration of adding eastbound and westbound left-turn lanes to Symerton Road were also considered. No traffic counts were collected for Symerton Road, so a CMF was the main consideration of the impact of the proposed turn lanes. The left-turn CMF for this intersection type estimates a 48% reduction in crashes when two left-turn lanes are added to a 4-leg, minor road stop control intersection. There was one minor injury crash at this intersection during the five-year study period.

Cedar Avenue & Wilmington-Peotone Road

Cedar Avenue has some sight distance issues and the existing dual stop signs with flashing beacons on the minor road indicate a history of crashes, which confirms the observed vs. actual crashes noted in the preliminary crash review, with 18 observed crashes in the five year period, with only 13 crashes predicted. Adding a northbound and southbound left-turn lane to the Cedar Avenue intersection will decrease overall crashes by 48% and fatal/injury crashes by 50%.

Table 9: Cedar Road Turn Lane Improvements Compared to No-Build

Cedar Road & Wilmington-Peotone Road Turn Lane Improvements - 2023-2050						
	Total Crashes		FI Crashes		PDO Crashes	
	No Build	NB/SB LT	No Build	NB/SB LT	No Build	NB/SB LT
Crashes per year	6.46	3.36	2.88	1.45	3.58	1.91
Percent change from no build		48%		50%		47%

Memorandum (cont'd)

US-45/52 and Wilmington-Peotone Road

As the intersection with the most observed crashes on Wilmington-Peotone Road, adding four left-turns at the US-45/52 intersection was analyzed. This analysis suggest there will be an estimated 53% reduction in crashes overall.

Table 10: US-45/52 Turn Lane Improvements Compared to No Build

US-45/52 & Wilmington-Peotone Road Turn Lane Improvements - 2023-2050						
	Total Crashes		FI Crashes		PDO Crashes	
	No Build	4 LT	No Build	4 LT	No Build	4 LT
Crashes per year	9.36	4.44	4.16	1.91	5.20	2.46
Percent change from no build		53%		54%		53%

IL Route 50 & Wilmington-Peotone Road

The addition of two left-turn lanes to the heavily skewed existing intersection was considered as part of the potential improvements. As this intersection is an all-way stop, the HSM shows no change in reduction of crashes. It is expected that this would only help in terms of capacity.

Table 11: IL Route 50 Turn Lane Improvements Compared to No Build

IL Route 50 & Wilmington-Peotone Road Turn Lane Improvements - 2023-2050						
	Total Crashes		FI Crashes		PDO Crashes	
	No Build	2 LTs	No Build	2 LTs	No Build	2 LTs
Crashes per year	1.91	1.91	0.53	0.53	1.38	1.38
Percent change from no build		0%		0%		0%

Signalization

Signalizing an intersection not only helps in the operations of an intersection, they also reduce fatal/injury crashes by limiting the opportunity of T-bone crashes with protected left-turn movements allowed by the signal. In some of the analyses, an increase in PDO crashes will be seen as there is an increase in rear-end crashes for signals. Overall, the reduction in fatal/injury crashes with the additional capacity improvements can make a signal a beneficial improvement.

Old Chicago Road & Wilmington-Peotone Road

Adding a signal to the intersection was evaluated. A slight increase in crashes overall would be expected, though a decrease in fatal/injury crashes is seen. Though the change in crashes is small overall, a signal may be needed here if warranted operationally.

Table 12: Signalization of Old Chicago Intersection Compared to No Build

Old Chicago Rd & Wilmington-Peotone Road Control Improvements - 2023-2050						
	Total Crashes		FI Crashes		PDO Crashes	
	No Build	Signalized	No Build	Signalized	No Build	Signalized
Crashes per Year	2.39	2.51	1.03	0.99	1.36	1.52
Percent change from no build		-5%		4%		-12%

Memorandum (cont'd)

Cedar Avenue & Wilmington Peotone Road

Cedar Avenue had a higher than expected amount of observed crashes and was evaluated for the possibility of adding a traffic signal to help reduce crashes. Adding a signal to the intersection sees a slight decrease to overall crashes, and 24% decrease in fatal/injury crashes.

Table 13: Signalization of Cedar Road Intersection Compared to No Build

Cedar Rd & Wilmington-Peotone Road Control Improvements - 2023-2050						
	Total Crashes		FI Crashes		PDO Crashes	
	No Build	Signalized	No Build	Signalized	No Build	Signalized
Crashes per Year	6.85	6.57	2.95	2.23	3.90	4.34
Percent change from no build		4%		24%		-11%

US-45/52 & Wilmington-Peotone Road

Adding a signal, with no additional turn lane, to the intersection was evaluated and resulted in a 27% reduction in crashes overall, with a 44% reduction in fatal/injury crashes.

Table 14 : Signalization of US-45/52 Compared to No Build

US-45/52 & Wilmington-Peotone Road Control Improvements - 2023-2050						
	Total Crashes		FI Crashes		PDO Crashes	
	No Build	Signalized	No Build	Signalized	No Build	Signalized
Crashes per year	9.39	6.85	4.18	2.33	5.21	4.53
Percent change from no build		27%		44%		13%

IL Route 50 & Wilmington-Peotone Road

Adding a signal to the IL Route 50 intersection could be expected to reduce crashes by 39%.

Table 15: Signalization of IL Route 50 Compared to No Build

IL Route 50 & Wilmington-Peotone Road Control Improvements - 2023-2050						
	Total Crashes		FI Crashes		PDO Crashes	
	No Build	Signalized	No Build	Signalized	No Build	Signalized
Crashes per year	2.69	1.65	1.03	0.63	1.69	1.04
Percent change from no build		39%		39%		39%

Memorandum (cont'd)

Roundabouts

Roundabouts reduce fatal/injury crashes due to the removal of the right-angle crash conflict point, and in many cases, have been seen to reduce fatal crashes to zero after installation. A CMF was applied in all roundabout evaluations as there is no model that can be compared to the base HSM intersection equations.

While each intersection sees the same percent decrease with the installation of a roundabout, the US-45/52 intersection sees the highest reduction in crashes predicted overall.

Table 16: Roundabout Analyses Compared to No Build Option

Roundabout Analyses - 2023-2050						
	Total Crashes		FI Crashes		PDO Crashes	
	No Build	Roundabout	No Build	Roundabout	No Build	Roundabout
Old Chicago Rd & Wilmington-Peotone Road						
Crashes per year	2.39	1.34	1.03	0.19	1.36	1.15
Percent change from no build		44%		82%		15%
Cedar Rd & Wilmington-Peotone Road						
Crashes per year	6.85	3.84	2.95	0.53	3.90	3.30
Percent change from no build		44%		82%		15%
US-45/52 & Wilmington-Peotone Road						
Crashes per year	9.39	5.26	4.18	0.75	5.21	4.50
Percent change from no build		44%		82%		13%
IL Route 50 & Wilmington-Peotone Road						
Crashes per year	2.69	1.51	1.03	0.19	1.69	1.32
Percent change from no build		44%		82%		22%

Memorandum (cont'd)

Interchange Improvements Analysis

I-55 & River Road Interchange

Ramp Terminal Signalization

At the River Road and I-55 Ramp terminals, adding a signal to the existing terminals was considered. The northbound terminal had a higher crash rate than expected. ISATe was used to estimate the no-build condition, but a CMF for signalization was used to estimate the number of crashes with a signal as ramp terminal evaluations are not calibrated for Illinois. Overall, a reduction in crashes can be expected with implementation of a signal.

Table 17: Signalization of I-55 Ramp Terminals Compared to No Build

I-55 Signalized Terminals 2023-2050						
	Total Crashes		FI Crashes		PDO Crashes	
	No Build	Signalized	No Build	Signalized	No Build	Signalized
Crashes per year	2.21	1.24	1.25	0.70	0.96	0.54
Percent change from no build		44%		44%		44%

Ramp Terminal Roundabouts

Converting the ramp terminals to roundabouts was also reviewed. The CMFs available for roundabout ramp terminals do not show as large of a decrease in crashes as a roundabout at an intersection. The study the CMF originated from (*Safety Evaluation of Roundabouts at Freeway Ramp Terminals and HSM Calibration* by Jacob A. Berry) noted that 49.2% of crashes at a single-lane roundabout occurred on the exit ramp approach. They noted that the speed differential between the highway to the speed needed for the roundabout is the cause of this, and a shorter ramp length due to the space a roundabout takes up could also contribute where the roundabouts are added but ramp lengths not increased. A total reduction in crashes of 29% is estimated with a 33% reduction in fatal/injury crashes.

Table 18: Roundabout at I-55 Ramp Terminals

I-55 Roundabout Terminals - 2023-2050						
	Total Crashes		FI Crashes		PDO Crashes	
	No Build	Roundabout	No Build	Roundabout	No Build	Roundabout
Crashes per year	2.21	1.57	1.25	0.84	0.96	0.73
Percent change from no build		29%		33%		23%

Memorandum (cont'd)

Improved Partial Cloverleaf Interchange

In addition to the traffic control described above, several interchange re-configurations were developed at the I-55 interchange. The first consisted of improvements to the ramp curvature, matching the existing interchange configuration as shown below. The radii of the existing curves are tight and do not meet criteria making them difficult to navigate. The interchange experiences a high number of fixed object crashes, improving the curve radii would make it easier to navigate the loop ramps.

The larger radii on the curves reduce crashes by 16% when considering the ramps only, excluding the ramp termini. Based on CMFs, a 44% reduction in crashes at the ramp termini could also be expected with the addition of traffic signals.



Figure 12: Proposed Partial Cloverleaf Improvements

Table 19: Comparison of Improved Parclo to No Build

I-55 Expanded Parclo - 2023-2050						
	Total Crashes		FI Crashes		PDO Crashes	
	No Build	Expanded Parclo	No Build	Expanded Parclo	No Build	Expanded Parclo
Crashes per year	3.32	2.77	1.35	1.14	1.97	1.63
Percent change from no build		16%		16%		17%

Memorandum (cont'd)

Trumpet Interchange

A trumpet interchange was also considered. This concept converts the interchange to free-flow and eliminates the conflict points at the current ramp terminals. It would add additional traveled way to the low volume of cars continuing on River Road which would need to travel along the existing frontage roads and cross I-55 at a new grade separated crossing. Intersection crashes were included in this analysis to help account for the reduction in ramp terminal intersections. All intersections were evaluated as unsignalized. The modeled trumpet interchange and redirected River Road saw a 35% reduction in crashes overall and a 44% reduction in fatal/injury crashes.

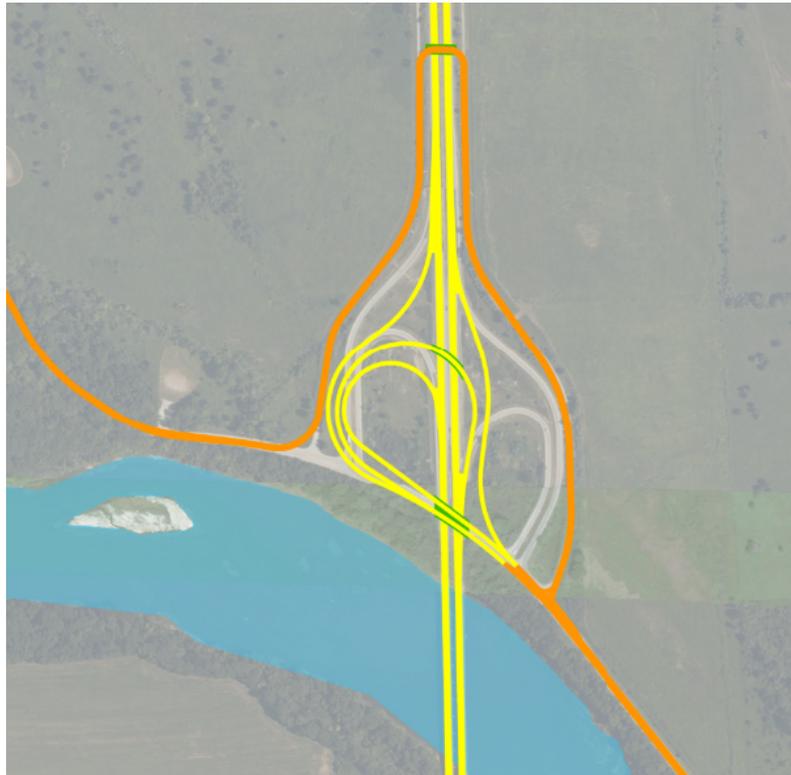


Figure 13: Proposed Trumpet Interchange Improvements

Table 20: Comparison of proposed Trumpet to No Build

I-55 and River Rd - 2023-2050						
	Total Crashes		FI Crashes		PDO Crashes	
	No Build	Trumpet	No Build	Trumpet	No Build	Trumpet
Crashes per year	5.24	3.43	2.49	1.39	2.75	2.04
Percent change from no build		35%		44%		26%

Memorandum (cont'd)

I-57 & Wilmington-Peotone Interchange

I-57 Ramp Terminals Signalization

The I-57 Ramp Terminals with Wilmington-Peotone Road followed the same procedure as the I-55 ramp terminals analysis. Overall, a reduction in crashes can be expected with implementation of a signal.

Table 21: Signalization of I-57 Ramp Terminals Compared to No Build

I-57 Ramp Terminals and Wilmington-Peotone - Signalized - 2023-2050						
	Total Crashes		FI Crashes		PDO Crashes	
	No Build	Signalized	No Build	Signalized	No Build	Signalized
Crashes per year	2.08	1.16	0.71	0.40	1.37	0.77
Percent change from no build		44%		44%		44%

Ramp Terminal Roundabouts

Converting the ramp terminals to roundabouts was also analyzed with the procedure again following the same as the I-55 ramp terminals analysis. A total reduction of 27% percent of crashes is expected with a 33% reduction in fatal/injury crashes.

I-57 Roundabout Terminals - 2023-2050						
	Total Crashes		FI Crashes		PDO Crashes	
	No Build	Roundabout	No Build	Roundabout	No Build	Roundabout
Crashes per year	2.08	1.53	0.71	0.48	1.37	1.05
Percent change from no build		27%		33%		23%

Memorandum (cont'd)

Improved Diamond Interchange

Additionally, three separate interchange configurations were developed at the I-57 interchange to address existing geometric deficiencies. The first consisted of keeping the diamond configuration and re-aligning the ramps to remove skew at the interchange ramp terminals. The existing ramp intersections, especially the northbound entrance ramp, includes a skew angle which can be difficult to navigate. With the improved intersection angle, some smaller curve radii, which still meet design criteria, were introduced in order to avoid impacts to the detention pond abutting the IDOT ROW. Analysis showed a slight increase in crashes; this is assumed to be due to the tighter curves in the ramps outweighing the skew corrections and longer ramp approaches to meet current standards.



Figure 14: Proposed Improved Diamond Improvements

Table 22: Comparison of Improved Diamond to No Build

I-57 and Wilmington-Peotone - Improved Diamond - 2023-2050						
	Total Crashes		FI Crashes		PDO Crashes	
	No Build	Improved Diamond	No Build	Improved Diamond	No Build	Improved Diamond
Crashes per year	3.38	3.63	1.31	1.41	2.07	2.22
Percent change from no build		-8%		-8%		-8%

Memorandum (cont'd)

Partial Cloverleaf Interchange

The next proposed design change was adding a parclo to the northbound ramp terminals. As noted above, there is a detention pond in the northeast quadrant as well as an I-57 bridge providing access to the farmland on either side of the highway which would be impacted by the adjusted diamond design. A partial cloverleaf was evaluated in order to minimize impacts to the structure and pond. This overall resulted in a predicted increase in crashes. This is assumed to be due to the tighter ramp curvature and different ramp terminal.



Figure 15: Proposed Partial Cloverleaf Improvements

Table 23: Proposed Parclo compared to No Build

I-57 and Wilmington-Peotone - ParClo - 2023-2050						
	Total Crashes		FI Crashes		PDO Crashes	
	No Build	ParClo	No Build	ParClo	No Build	ParClo
Crashes per year	3.38	4.44	1.31	1.82	2.07	2.62
Percent change from no build		-32%		-39%		-27%

Memorandum (cont'd)

Diverging Diamond Interchange

A Diverging Diamond Interchange (DDI) is the final interchange configuration under consideration. Turning and angle crashes accounted for 41% of all crashes at this interchange followed by rear-ends at 24%. DDIs cross all lanes of traffic over to reduce the number of signal phases needed, allowing for more efficient operations of traffic through the interchange and removes many conflict points for angle crashes. A CMF was applied to ramp terminal predicted crashes to best predict the reduction in crashes with a DDI.

A reduction in crashes is seen overall, with the largest reduction to fatal/injury crashes.

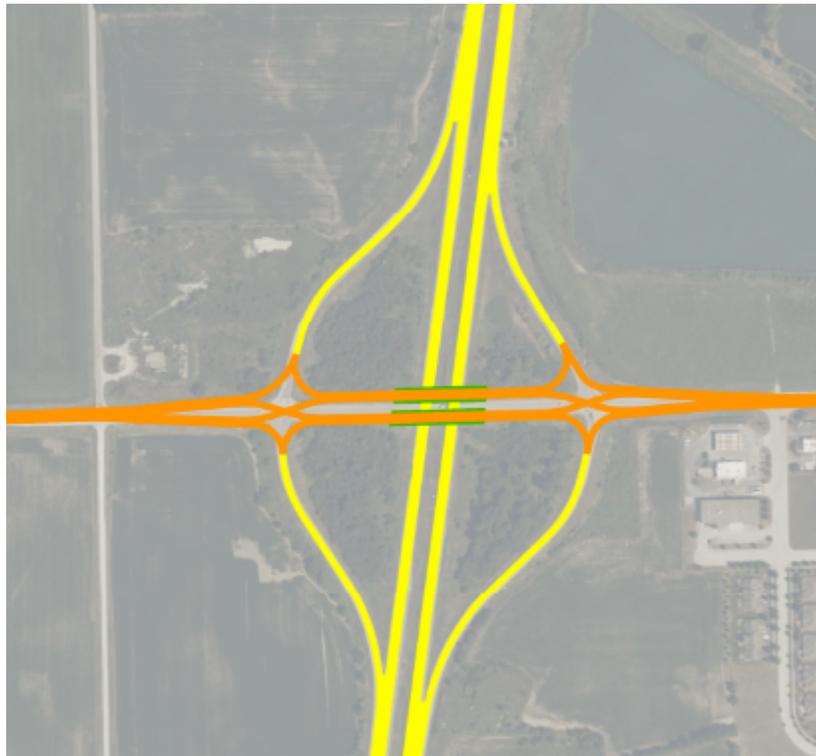


Figure 16: Proposed DDI Improvements

Table 24: Comparison of DDI to No Build

I-57 DDI - 2023-2050						
	Total Crashes		FI Crashes		PDO Crashes	
	No Build	DDI	No Build	DDI	No Build	DDI
Crashes per year	3.38	3.03	1.31	0.97	2.07	2.05
Percent change from no build		10%		26%		1%

Memorandum (cont'd)

CONCLUSIONS

Several alternatives along the corridor were considered to aid in determining the optimal improvements. A summary table of percent increase/decrease for each option is shown below. This data as well as the information described in the memo have been used to determine the safety scores for each alternative as part of the concert evaluation. In reviewing the safety impacts of each option, keep in mind that though some options have smaller crash reduction percentages, they may still have a large impact if there is a large number of crashes occurring at that location.

Table 25: Summary Table of Proposed Segment Improvements

2023-2050			
Improvement	% Decrease Total	% Decrease Fatal/Injury	% Decrease PDO
Segment Improvements			
4:1 Sideslopes	19%	20%	19%
6:1 Sideslopes	24%	26%	24%
6:1 Sideslopes with Passing Lanes	28%	29%	28%
Passing Lanes Only	6%	6%	6%
Red Realignment	6%	8%	6%
Orange Realignment	23%	23%	22%
East IL Route 50 Realignment	35%	23%	40%
River Road RR Grade Separation	N/A	N/A	N/A
Profile Improvements	N/A	N/A	N/A

Table 26: Summary Table of Proposed Intersection Improvements

2023-2050			
Improvement	% Decrease Total	% Decrease Fatal/Injury	% Decrease PDO
Intersection Improvements			
River Road & IL-53			
Dual Right-Turn	N/A	N/A	N/A
IL-53 and Wilmington-Peotone Road			
Dual Right-Turn	N/A	N/A	N/A
Northbound Right-Turn	4%	4%	5%
Indian Trail Road and Wilmington-Peotone Road			
2 Left-Turn Lanes	48%	48%	48%
Old Chicago Road and Wilmington-Peotone Road			
1 Right-Turn Lane	14%	14%	14%
Signalize	-5%	4%	-12%
Signalize + 4 Right-Turn Lanes	-6%	15%	-22%
Roundabout	44%	82%	15%

Memorandum (cont'd)

Table 26 (cont.): Summary Table of Proposed Intersection Improvements

2023-2050			
Improvement	% Decrease Total	% Decrease Fatal/Injury	% Decrease PDO
Intersection Improvements			
Symerton Road and Wilmington-Peotone Road			
2 Left-Turn Lanes	48%	48%	48%
Cedar Road and Wilmington-Peotone Road			
2 Left-Turn Lanes	48%	50%	47%
Signalize	4%	24%	-11%
Signalize + 2 Left-Turn Lanes	36%	50%	24%
Roundabout	44%	82%	15%
US-45/52 and Wilmington-Peotone Road			
Signalize	27%	44%	13%
Signalize + 4 Left-Turn Lanes	67%	75%	0%
Roundabout	44%	82%	13%
IL Route 50 and Wilmington-Peotone Road			
Signalize	39%	39%	39%
Roundabout	44%	82%	22%

Table 27: Summary Table of Proposed Interchange Improvements

2023-2050			
Improvement	% Decrease Total	% Decrease Fatal/Injury	% Decrease PD
Interchange Improvements			
I-55 and River Road			
Signalize Ramp Terminals	44%	44%	44%
Roundabouts at Ramp Terminals	29%	33%	23%
Expanded Parclo	16%	16%	17%
Trumpet	35%	44%	26%
I-57 and Wilmington-Peotone Road			
Signalize Ramp Terminals	44%	44%	44%
Roundabouts at Ramp Terminals	27%	33%	23%
Improved Diamond	-8%	-8%	-8%
Parclo	-32%	-39%	-27%
DDI	10%	26%	1%

Exhibit 5K: Concept Evaluation

Date: April 30, 2025
To: Christina Kupkowski, WCDOT
From: Katie Leska, Burns & McDonnell
Subject: Wilmington-Peotone PEL Concept Evaluation

Introduction

The Will County Division of Transportation (WCDOT) has tasked Burns & McDonnell to study potential improvements to the Wilmington-Peotone corridor. The project limits extend along River Road from the River Road and I-55 interchange to IL Route 53 (IL 53), along IL 53 between River Road and Wilmington-Peotone Road, and along Wilmington-Peotone Road from IL 53 to Drecksler Road. The key deliverable of this Wilmington-Peotone Planning and Environmental Linkages (PEL) study is the selection of Alternatives to be Carried Forward into future Phase I studies. The purpose of this memorandum is to summarize the selection process.

Evaluation Criteria

The concept evaluation process is driven by the Purpose and Need statement; the full document includes extensive context related to the data collection. In summary:

- The **purpose** of this project is to improve safety, enhance mobility for all users through providing an efficient east-west connection, and support current and future travel demand throughout the corridor.
- The **needs** for this project are to address deficiencies in the existing roadway and multimodal infrastructure and accommodate growth in local and regional traffic to improve mobility throughout the county.

Criteria	Weight
Safety	5
Traffic Operations	3
Environmental Effects	*2/3
ROW Impacts	2
Stakeholder Input	2
Multimodal Potential	1
Constructability	1
EV Potential	1
Drainage Impacts	1
Cost	1

**See Environmental Effect discussion below*

Criteria were developed and weighted in coordination with WCDOT to determine the concept to best address the needs of this unique corridor as can be seen to the left. Each alternative was assigned a score for each criteria, which was then multiplied by the respective weight and added together to provide the final scores. Final scores were used to determine which build alternatives, in addition to the no-build, are recommended as Alternatives to be Carried Forward for additional evaluation as part of a future Phase I study.

Each alternative was scored based on the criteria as defined below:

- **Safety:** Scores were determined based on the calculated predicted yearly reduction in crash percentage following the Interactive Highway Safety Design Model (IHSM), Interchange Safety Analysis Tool Enhanced (ISATe) and Highway Safety Manual (HSM) crash equations. *Alternatives that produced larger reductions*

*in yearly crashes received higher scores. Additional information on the methodology used to determine the predicted crashes is included in the **Proposed Safety Analysis**, under a separate cover.*

- **Traffic Operations:** Scores were determined based on the effect on level of service, major-movement delay, and effect on capacity. *Alternatives that produced a higher Level of Service (LOS) or lower travel times and delay received higher scores. Additional information on the methodology used to determine LOS, delay and travel times are included in the **Traffic Demand Modeling and Analysis Tech Memo**, under a separate cover.*
- **Environmental Effects:** Scores were determined based on the impact to wetlands and streams, tree clearing, and grassland bird habitat impacted. The weight for the environmental effects varies given the concentration of sensitive environmental resources on the west end of the corridor with Midewin National Tallgrass Prairie, the Kankakee River, and the Des Plaines Fish and Wildlife Conservation area. The weight for the I-55 interchange, surrounded by these resources, is higher at a “3” in order to capture the additional environmental effects in this area; all other categories had a weight of “2”. *Alternatives that produced lower environmental impacts received higher scores.*
- **Right-of-Way (ROW) Impacts:** Scores were determined based on the total ROW required for the alternative in addition to the relative number of parcels and businesses impacted and/or displaced. *Alternatives that required the least amount of ROW and lowest relative number of impacted parcels and businesses received higher scores.*
- **Stakeholder Input:** Scores were determined based on the stakeholder input received at the first and second Public Meetings as well as at stakeholder meetings with community groups, business groups, and IDOT. *Alternatives that received more positive feedback from Stakeholders received higher scores. A summary of feedback received from Stakeholders at the Public Meetings is included in the **Public Meeting #1 Newsletter** and **Public Meeting #2 Newsletter**, under a separate cover.*
- **Multimodal Potential:** Scores were determined based on how easily pedestrian and bicycle access is accommodated in the concept alternatives. *Alternatives with accommodations for multimodal access or safer crossings for bicycle and pedestrian traffic received higher scores.*
- **Constructability:** Scores were determined based on how easily the alternative could be constructed considering maintenance of traffic, railroad coordination, and impacts to critical utilities. *Alternatives that would be more easily constructed received higher scores.*
- **Electric Vehicle (EV) Potential:** The goal of this category is to ensure that concepts developed as part of this PEL study do not preclude the addition of improvements recommended as part of the Will County Alternative Fuel Readiness Plan. The Fuel Readiness Plan was not ready for review and consideration during the concept evaluation and is **not** scored in the concept evaluation table. EV potential will be considered in future phases.
- **Drainage Impacts:** Scores were determined based on the likely impacts to drainage patterns and floodplain in the area, including consideration of potential need for expensive infrastructure (e.g., inline detention). *Alternatives that would least likely impact the drainage patterns and/or require expensive infrastructure received higher scores.*

- **Cost:** Scores were determined based on the cost of the improvements, at this time cost considerations considered roadway pavement, shoulder pavement, and structures. *Alternatives that resulted in lower costs received higher scores.*

The full concept evaluation tables and scores can be found in **Attachment A: Concept Evaluation Tables**.

Concept Evaluation

The evaluation was broken up into 3 categories: segments, intersections, and interchanges. Segment alternatives include longitudinal updates to the typical section, horizontal alignment, and profile along the corridor. Intersection alternatives focused on specific intersection locations and considered potential turn lanes as well as traffic control. Interchange alternatives addressed any deficiencies in the existing interchange configuration and ramp intersections at the I-55 and I-57 interchanges. The below sections discuss the results of the concept evaluation

1. Segments

The segment alternatives primarily focus on addressing deficiencies along Wilmington-Peotone Road and inefficiencies in east-west mobility as well as one grade separation along River Road. Evaluated concepts include: the No-Build, a Widened 2-lane Cross Section, Passing Lanes, a River Road Railroad Grade Separation, the Orange Realignment north of Wilmington-Peotone Road, the Red Realignment south of Wilmington-Peotone Road, and Profile Improvements. Additional information on the evaluated alternatives and final scoring can be found in **Attachment B: Segment Basis of Design Technical Sheets**.

The **Red Realignment** build alternative received the same score as the no-build alternative, showing no improvement, given excessive right-of-way (ROW) impacts and **is not recommended** to be carried forward into a Phase I study.

The No-Build concept tied for the lowest overall score of 32 due to its current safety and mobility concerns. The No-Build does not meet the Purpose and Need of this project; therefore, an improvement in the study area is warranted. The No-Build Concept will be carried through the Alternatives to be Carried Forward per NEPA guidance.

All other build alternatives performed better than the no-build alternative and **are recommended** as Alternatives to be Carried Forward into future Phase I studies following their evaluation.

2. Intersections

The intersection alternatives focus on improving traffic operations and enhancing safety at 8 intersections: River Rd & IL 53, IL 53 & Wilmington-Peotone Rd, Wilmington-Peotone Rd & Indian Trail Rd, Wilmington-Peotone Rd & Symerton Rd, Wilmington-Peotone Rd & Old Chicago Rd, Wilmington-Peotone Road & Cedar Rd, Wilmington-Peotone Rd & US 45/52, and Wilmington-Peotone Rd & IL 50. Evaluated concepts include: the No-Build, Turn Lanes, Traffic Signals, Roundabouts, and one realignment option at IL 50. Not all concepts were considered for evaluation at each intersection. Traffic Signals were evaluated using standard and Strategic Regional Arterial (SRA) traffic signal warrants. Given the entire corridor's designation as an SRA route, any alternatives that did not meet SRA traffic signal warrants were considered to be fatally flawed. Roundabouts were considered only at locations where volumes could be accommodated by a roundabout. Additional information on the specific intersection locations and

concepts evaluated and final scoring can be found in ***Attachment B: Intersection Basis of Design Technical Sheets***.

The **IL Route 50 Traffic Signals** does not meet SRA traffic signal warrants and **is not recommended** for consideration as an Alternative to be Carried Forward.

All other build alternatives **are recommended** as Alternatives to be Carried Forward into future Phase I studies following their evaluation.

The No-Build concept had the lowest overall score of all concepts at every intersection location. The No-Build does not meet the Purpose and Need of this project; therefore, an improvement in the study area is warranted. The No-Build Concept will be carried through the Alternatives to be Carried Forward per NEPA guidance.

3. Interchanges

The I-55 and I-57 interchange alternatives focus on addressing ramp deficiencies and enhancing safety at the ramp terminals. Improvement along I-55 and I-57 were not included as part of this study.

Evaluated alternatives for the I-55 interchange include: No-Build, Ramp Intersection Traffic Signals, Ramp Intersection Roundabouts, an Expanded Partial Cloverleaf Interchange, and a Trumpet Interchange.

While the **I-55 Trumpet Interchange** build alternative performed marginally better, only 2 points higher, than the no-build alternative, it **is not recommended** to be carried forward into a Phase I study given the high cost and significant impacts associated with its construction. Additionally, the **I-55 traffic signals** do not meet SRA traffic signal warrants and **are not recommended** as Alternatives to be Carried Forward. Following concept evaluation and coordination, IDOT indicated that the impact to the IDOT frontage roads is considered a fatal flaw and the **I-55 Parclo Interchange is no longer recommended** to be carried forward into a Phase I study.

The No-Build concept had the lowest overall score of 43. The No-Build does not meet the Purpose and Need of this project; therefore, an improvement in the study area is warranted. The No-Build Concept will be carried through the Alternatives to be Carried Forward per NEPA guidance.

The I-55 Roundabouts performed better than the no-build alternative and **is recommended** as an Alternative to be Carried Forward into future Phase I studies following their evaluation. Additional information on the evaluated alternatives and final scoring can be found in ***Attachment B: Interchange Basis of Design Technical Sheets***.

Evaluated build alternatives for the I-57 interchange include: No-Build, Ramp Intersection Traffic Signals, Ramp Intersection Roundabouts, an Expanded Diamond Interchange, a Partial Cloverleaf Interchange (Parclo), and a Diverging Diamond Interchange.

The Parclo Interchange received a safety score of zero, the same as the no-build, and is thus fatally flawed in that it does not address one of the major objectives of the project. The **Parclo Interchange is not recommended** to be carried forward into a Phase I study. Following the evaluation, IDOT noted additional concern regarding the Diverging Diamond interchange and the additional infrastructure required given the traffic volumes. The Diverging Diamond Interchange is thus fatally flawed as I-57 is an IDOT facility. The **Diverging Diamond Interchange is not recommended** to be carried forward into a Phase I study.

The No-Build concept received the lowest overall score of 35 due to its current safety and mobility concerns. The No-Build does not meet the Purpose and Need of this project; therefore, an improvement in the study area is warranted. The No-Build Concept will be carried through the Alternatives to be Carried Forward per NEPA guidance.

All other I-57 build alternatives performed better than the no-build alternative and **are recommended** as Alternatives to be Carried Forward into future Phase I studies following their evaluation. Additional information on the evaluated alternatives and final scoring can be found in **Attachment B: Interchange Basis of Design Technical Sheets**.

Conclusion

Alternatives to be Carried Forward were determined following the evaluation of each build and non-build alternatives. A summary of Concept Scoring and the Alternatives to be Carried Forward for each category is included below. Additional information and final scoring on the evaluated segment, intersection, and interchange alternatives can be found in **Attachment B: Basis of Design Technical Sheets**.

Segments

The **Red Realignment** build alternative performed the same as the no-build alternative and is not recommended to be carried forward into a Phase I study. All other segment build alternatives are recommended as Alternatives to be Carried Forward.

Table 1: Segment Summary Table

Denotes alternative NOT to be carried forward							
Alternative	Passing Lanes	Widened Cross Section	Profile Improvements	Realignment (ORANGE)	Railroad Grade Separation	Realignment (RED)	No-Build
Final Score	49	49	44	44	39	32	32

Intersections

The **IL Route 50 traffic signal** is fatally flawed in that it does not meet SRA traffic signal warrants and is not recommended to be carried forward into a Phase I study. All other build alternatives for each analyzed intersection are recommended as Alternatives to be Carried Forward into future Phase I studies.

Table 2: Intersection Summary Table

Denotes alternative NOT to be carried forward					
River Rd & IL 53					
Alternative	Turn Lane (EB/WB LT)			No-Build	
Final Score	49			32	
IL 53 & Wilmington-Peotone Rd					
Alternative	Turn Lane (EB/WB LT)			No-Build	
Final Score	47			32	
Wilmington-Peotone Rd. & Indian Trail Rd.					
Alternative	Turn Lane (EB/WB LT)			No-Build	
Final Score	49			32	
Wilmington-Peotone Rd. & Symerton Rd.					
Alternative	Turn Lane (EB/WB LT)			No-Build	
Final Score	47			32	
Wilmington-Peotone Rd. & Old Chicago Rd.					
Alternative	Traffic Signal	Roundabout	Turn Lane	No-Build	
Final Score	55	48	42	34	
Wilmington-Peotone Rd. & Cedar Rd.					
Alternative	Traffic Signal	Roundabout	Turn Lane	No-Build	
Final Score	54	51	49	35	
Wilmington-Peotone Rd. & US 45/52					
Alternative	Traffic Signal	Roundabout	Turn Lane	No-Build	
Final Score	54	50	40	29	
Wilmington-Peotone Rd. & IL 50					
Alternative	Roundabout	Realignment	Turn Lane	No-Build	Traffic Signals
Final Score	50	44	40	38	0

Interchanges

The I-55 **Trumpet Interchange**, **Expanded Parclo Interchange**, and **Traffic Signals** build alternatives are not recommended to be carried forward into a Phase I study. The I-55 Roundabouts build alternative is recommended as Alternatives to be Carried Forward.

Table 3: I-55 Interchange Summary Table

Denotes alternative NOT to be carried forward					
Alternative	Roundabouts	Expanded Parclo Interchange	Trumpet Interchange	No-Build	Traffic Signals
Final Score	53	47	45	43	0

The I-57 **Parclo Interchange** and **Diverging Diamond Interchange** build alternatives are not recommended to be carried forward into a Phase I study. All other I-55 build alternatives are recommended as Alternatives to be Carried Forward.

Table 4: I-57 Interchange Summary Table

Denotes alternative NOT to be carried forward						
Alternative	Traffic Signal	Diverging Diamond Interchange	Roundabouts	Diamond Interchange	Parclo Interchange	No-Build
Final Score	60	53	51	44	39	35

Attachment A: Concept Evaluation Tables

Segments								
Criteria	Weight	No Build	Widened Cross Section	Passing Lanes	Railroad Grade Separation	Realignment (orange)	Realignment (red)	Profile improvements
Safety	5	0	4	4	1	3	2	2
Traffic Operations	3	1	2	3	3	3	3	2
Environmental Effects	2	4	3	2	3	1	0	3
ROW Impacts	2	4	2	2	3	1	0	3
Stakeholder Input	2	1	2	2	3	2	2	3
Multimodal Potential	1	0	3	2	3	3	3	2
Constructability	1	4	2	2	1	3	2	2
EV Potential	1	To be considered in Phase I						
Drainage Impacts	1	3	2	2	3	3	3	3
Cost	1	4	2	2	0	3	1	3
TOTAL		32	49	49	39	44	32	44

Scoring Rubric	
Score	
0	Little or no improvement or the most impactful compared to other concepts
1	
2	
3	
4	

Intersections

River Rd / IL 53			
Criteria	Weight	No Build	Turn Lane - EB RT
Safety	5	0	1
Traffic Operations	3	3	4
Environmental Effects	2	4	4
ROW Impacts	2	4	2
Stakeholder Input	2	2	3
Multimodal Potential	1	2	2
Constructability	1	4	3
EV Potential	1	To be considered in Phase I	
Drainage Impacts	1	3	3
Cost	1	4	3
TOTAL		42	46

Indian Trail / Wilmington-Peotone Rd			
Criteria	Weight	No Build	Turn Lane - EB/WB LT
Safety	5	0	3
Traffic Operations	3	1	1
Environmental Effects	2	4	4
ROW Impacts	2	4	3
Stakeholder Input	2	1	4
Multimodal Potential	1	0	0
Constructability	1	4	3
EV Potential	1	To be considered in Phase I	
Drainage Impacts	1	3	3
Cost	1	4	3
TOTAL		32	49

IL 53 / Wilmington-Peotone Rd			
Criteria	Weight	No Build	Turn Lane - WB & NB RT
Safety	5	0	2
Traffic Operations	3	2	3
Environmental Effects	2	4	4
ROW Impacts	2	4	4
Stakeholder Input	2	2	3
Multimodal Potential	1	2	2
Constructability	1	4	3
EV Potential	1	To be considered in Phase I	
Drainage Impacts	1	3	2
Cost	1	4	3
TOTAL		39	51

Symerton Rd / Wilmington-Peotone Rd			
Criteria	Weight	No Build	Turn Lane - EB/WB LT
Safety	5	0	3
Traffic Operations	3	1	1
Environmental Effects	2	4	4
ROW Impacts	2	4	2
Stakeholder Input	2	1	4
Multimodal Potential	1	0	0
Constructability	1	4	3
EV Potential	1	To be considered in Phase I	
Drainage Impacts	1	3	3
Cost	1	4	3
TOTAL		32	47

Old Chicago / Wilmington-Peotone Rd					
Criteria	Weight	No Build	Traffic Signal	Turn Lane - EB RT	Roundabout
Safety	5	0	2	2	4
Traffic Operations	3	1	4	1	4
Environmental Effects	2	4	4	3	2
ROW Impacts	2	4	4	4	2
Stakeholder Input	2	1	3	3	1
Multimodal Potential	1	2	3	2	4
Constructability	1	4	3	2	0
EV Potential	1	To be considered in Phase I			
Drainage Impacts	1	3	3	3	2
Cost	1	4	2	2	0
TOTAL		34	55	42	48

Scoring Rubric	
Score	
0	Little improvement or most impacts compared to other concepts
1	
2	
3	
4	Most improvement or least impacts compared to other concepts

Intersections

Cedar Rd / Wilmington-Peotone Rd					
Criteria	Weight	No Build	Traffic Signal	Turn Lane - EB/WB LT	Roundabout
Safety	5	0	2	3	4
Traffic Operations	3	2	3	2	4
Environmental Effects	2	4	4	4	3
ROW Impacts	2	4	4	3	2
Stakeholder Input	2	1	4	3	1
Multimodal Potential	1	0	3	0	4
Constructability	1	4	3	3	1
EV Potential	1	To be considered in Phase I			
Drainage Impacts	1	3	3	3	2
Cost	1	4	2	2	0
TOTAL		35	54	49	51

Scoring Rubric	
Score	
0	Little improvement or most impacts compared to other concepts
1	
2	
3	
4	Most improvement or least impacts compared to other concepts

US 45/52 / Wilmington-Peotone Rd					
Criteria	Weight	No Build	Traffic Signal	Turn Lane - NB/SB/EB/WB LT	Roundabout
Safety	5	0	2	3	4
Traffic Operations	3	0	3	0	3
Environmental Effects	2	4	4	3	4
ROW Impacts	2	4	4	2	2
Stakeholder Input	2	1	4	4	1
Multimodal Potential	1	0	3	0	4
Constructability	1	4	3	3	1
EV Potential	1	To be considered in Phase I			
Drainage Impacts	1	3	3	3	2
Cost	1	4	2	1	0
TOTAL		29	54	40	50

IL 50 / Wilmington-Peotone Rd						
Criteria	Weight	No Build	Traffic Signal	Turn Lane - NB/SB LT	Roundabout	IL 50 Realignment
Safety	5	0		0	4	3
Traffic Operations	3	3		3	4	3
Environmental Effects	2	4		4	4	3
ROW Impacts	2	4		3	1	1
Stakeholder Input	2	1		4	1	2
Multimodal Potential	1	0		0	4	2
Constructability	1	4		3	0	2
EV Potential	1	To be considered in Phase I				
Drainage Impacts	1	3		3	2	2
Cost	1	4		3	0	2
TOTAL		38	0	40	50	44

I-55 Interchange						
Criteria	Weight	No Build	Traffic Signal	Roundabouts	Expanded Parclo	Trumpet
Safety	5	0		2	2	3
Traffic Operations	3	2		4	2	4
Environmental Effects	3	4		3	3	2
ROW Impacts	2	4		4	3	3
Stakeholder Input	2	2		2	3	1
Multimodal Potential	1	2		3	2	2
Constructability	1	4		2	3	0
EV Potential	1	To be considered in Phase I				
Drainage Impacts	1	3		2	3	2
Cost	1	4		3	2	0
TOTAL		43	0	53	47	45

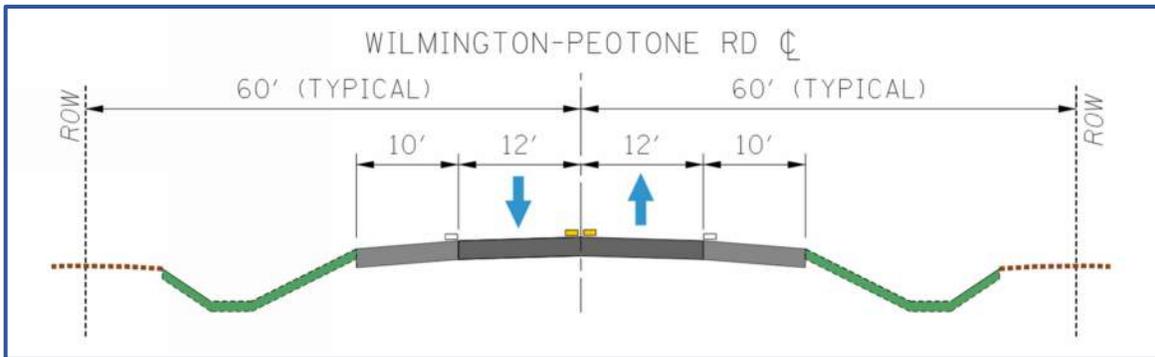
I-57 Interchange							
Criteria	Weight	No-build	Traffic Signal	Roundabouts	Diamond	Parclo	DDI
Safety	5	0	3	2	1	0	4
Traffic Operations	3	2	3	4	3	4	4
Environmental Effects	2	4	4	4	4	3	4
ROW Impacts	2	4	4	4	3	3	3
Stakeholder Input	2	1	4	2	3	2	0
Multimodal Potential	1	0	3	3	3	3	3
Constructability	1	4	3	2	2	3	2
EV Potential	1	To be considered in Phase I					
Drainage Impacts	1	3	3	2	3	3	2
Cost	1	4	3	2	2	2	0
TOTAL		35	60	51	44	39	53

Scoring Rubric	
Score	
0	Little or no improvement or the most impactful compared to other concepts
1	
2	
3	
4	

Attachment B: Basis of Design Technical Sheets

Standard Cross-Section

Description: The standard cross-section consists of improvements to the typical section along Wilmington-Peotone Road providing 12-foot travel lanes and a 10' shoulder. Given the high occurrence of rear-ends, fixed object, and overturning crashes along Wilmington-Peotone Road, a wider cross-section will provide a safe space for cars to pull over in times of need as well as a location for police to enforce the law. The existing roadway is very straight and open and speeding was noted as the top concern by those that use the corridor frequently. The ability to allow for better enforcement will help reduce speeds along the roadway. In addition to the wider shoulder, improved ditch slopes will also help to improve safety and reduce fixed object and overturning crashes.



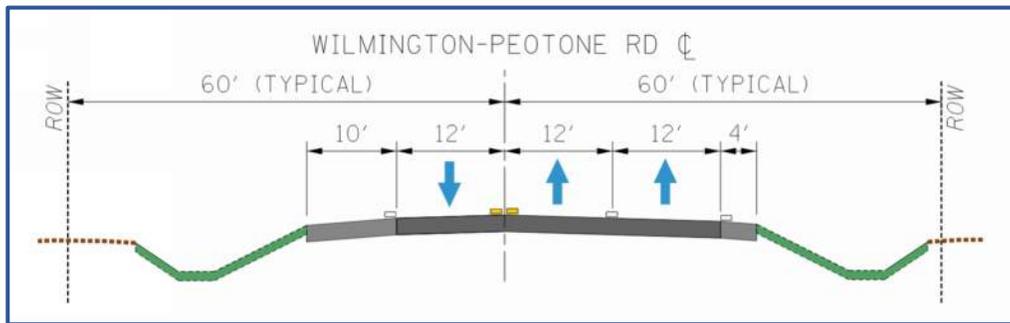
Evaluation

Benefits	Concerns
<ul style="list-style-type: none"> • 19-24% reduction in crashes per year • Widened shoulder provides refuge for vehicles in need, a safe location for law enforcement, and additional pavement and buffer to roadside hazards such as steep ditches • Eliminated deficient cross-section by making the typical section meet criteria • 10' shoulder can safely accommodate bicycles and pedestrians 	<ul style="list-style-type: none"> • Additional ROW needs to meet WCDOT standards and accommodate the wider cross-section while providing drainage for additional impermeable surfaces • Utility relocations along Wilmington-Peotone Road and staging or detours required along the existing road for construction

Overall Score	
49	<p>The standard cross-section received the highest score, along with the passing lanes, of the segment alternative with a significant improvement in safety attributed to addition of a shoulder and wider travel lanes providing a safe buffer space to roadside hazards as well as a location for law enforcement to address speeding along Wilmington-Peotone Road. The standard cross-section is recommended to be considered as an Alternative to be Carried Forward in future Phase I studies.</p>

Passing Lanes

Description: The passing lanes concept includes the addition of between 2 and 4 passing lanes in both directions along Wilmington-Peotone Road. The passing lanes will be 12' wide with a 4' shoulder along the auxiliary lane. The corridor experiences a high number of overturned crashes (18% of all crashes during the study period). Overturning crashes can occur on a segment of high-speed roadway when a driver over-corrects and runs off the road, especially if the side slope is not forgiving. The shoulder width is only 4 feet at most for the majority of Wilmington-Peotone Road, not leaving much room for correction maneuvers at the posted speeds. Seeing how much of Wilmington-Peotone Road is a passing zone, overturns may be related to incorrect judgement of passing distance or passing speeds. Given the large percentage of trucks and large vehicles as well as farm equipment using the corridor, the passing lanes also provide an opportunity for vehicles to get around slower moving traffic and to break up platoons.



Evaluation

Benefits	Concerns
<ul style="list-style-type: none"> • 28% reduction in crashes; the corridor has a history of passing in unsafe locations and overturned crashes • Improved traffic flow with safe locations to pass slow-moving traffic • Eliminated deficient cross-section by making the typical section meet criteria 	<ul style="list-style-type: none"> • Additional ROW needs to accommodate the wider cross-section • Wider pavement, but minimal shoulder for multi-modal accommodations in passing lane areas • Utility relocations along Wilmington-Peotone Road required along the existing road for construction

Overall Score	<p>The passing lanes alternative received the highest score of all segment alternatives, along with the standard cross section. While traffic volumes do not warrant a four-lane cross-section, passing lanes will provide safe areas to pass slower moving vehicles offering a significant safety benefit along the corridor which experiences a high occurrence of unsafe passing. Passing Lanes are recommended to be considered as an Alternative to be Carried Forward in future Phase I studies.</p>
49	

Railroad Grade Separation



Description: A railroad grade separation has been evaluated at the existing at-grade crossing of River Road and the Union Pacific Railroad. The existing crossing can experience backups on a yearly basis for maintenance and create issues with large vehicles having nowhere to turn around. Providing a grade separated crossing would eliminate the impact to vehicular traffic by elevating River Road over the railroad. While there is not a shown history of crashes in this location, eliminating a conflict point between the railroad and users of River Road would also provide a safety benefit.

Evaluation

Benefits	Concerns
<ul style="list-style-type: none"> Minimal and localized ROW impacts Minimal drainage impacts with no major change in impervious area and no floodplain impacts. 	<ul style="list-style-type: none"> While there is a safety benefit from providing a grade separation, it does not address the biggest concerns along the corridor Given the location within Midewin property, realignments to maintain traffic during construction could create environmental concerns High cost for a spot improvement

<p>Overall Score</p> <p>39</p>	<p>The railroad grade separation provides some improvement compared to the no-build. With a lack of safety concerns noted in the crash data received, it does not address the most pressing needs identified along the corridor but would provide a safety benefit. While not the highest score, the railroad grade separation does some improvement and is recommended for consideration for future Phase I studies along River Road.</p>
--	---

Wilmington-Peotone Road realignment – Orange



Description: The Wilmington-Peotone corridor is one of few east-west connections in southern Will County. The corridor follows three different roadways given that there is no one continuous east-west route in the area requiring two turns through two traffic signals in order to travel east-west. The Wilmington-Peotone Road Orange realignment would create a continuous through route without the need to make turns. It would realign Wilmington-Peotone Road north of the Water's Edge subdivision and tie back into the existing alignment west near Riley

Road. The existing traffic signal at River Road and IL Route 53 would remain but those looking to access Wilmington-Peotone Road, the majority of users, would no longer need to make any turns across through traffic. This provides a traffic benefit by improving mobility for the major traffic movements and a safety benefit by reducing the number of vehicles crossing through traffic.

Evaluation

Benefits	Concerns
<ul style="list-style-type: none"> • 23% reduction in crashes per year • Eliminates the need to turn through two crash hot spot intersections • Reduced conflict points with one less intersection for major traffic movement • Improved traffic operations with the major east-west movement no longer needing to wait to turn 	<ul style="list-style-type: none"> • ROW impacts to farmland east of the existing subdivision • Wetland and stream impacts through the existing farmland

Overall Score	By eliminating the need to make multiple turns through two hot spots for crashes along the corridor and improving east-west mobility, this alternative addresses the Purpose and Need of the project. The Orange Realignment is recommended to be considered as an Alternative to be Carried Forward in future Phase I studies.
44	

Wilmington-Peotone Realignment - Red



Description: The Wilmington-Peotone corridor follows three different roadways given that there is not one continuous east-west route in the area. This requires making two turns through traffic signals in order to travel east-west within the County. The purpose of the Wilmington-Peotone Road realignments is to provide a continuous east-west route which will no longer need to maneuver through existing traffic signals. The Red realignment alternative includes a grade

separation over IL Route 53 eliminating the need to travel and turn through two highly trafficked intersections. The realignment will cross over IL Route 53 and tie back into the existing Wilmington-Peotone Road before Riley Road. A connection will remain between IL Route 53 and Wilmington-Peotone Road but the east-west movement will be free-flow. Since the time this alternative was created, a new Love's development has been approved by the City of Wilmington increasing the impacts of realigning to the south.

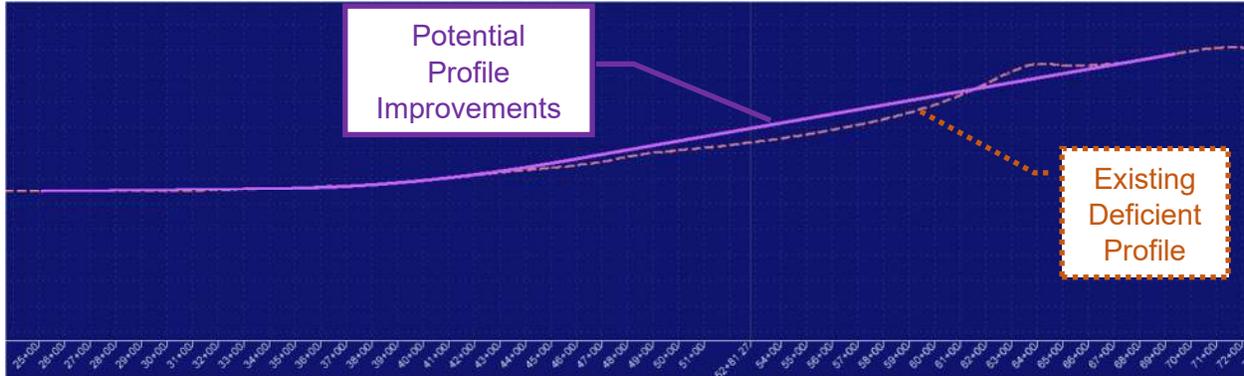
Evaluation

Benefits	Concerns
<ul style="list-style-type: none"> • 6% reduction in crashes per year • Eliminates the need to turn through two crash hot spot intersections • Reduced conflict points with one less intersection for major traffic movement • Improved traffic operations with the major east-west movement no longer needing to wait to turn 	<ul style="list-style-type: none"> • Excessive ROW impacts with the new addition of a Love's in the southwest quadrant of the River and IL 53 intersection • Environmental concerns give the proximity to Midewin and presence of wetlands in the realignment area • Additional costs associated with new bridge

Overall Score	The red realignment option showed not improvement to the no-build alternative given the number of impacts to future developments and wetlands and is not recommended to continue forward into a Phase I Study.
32	

Profile Improvements

Description: The existing Wilmington-Peotone Road profile includes sections of rolling hills and deficient vertical geometry along the 18 mile stretch which do not meet criteria for the high speeds along the roadway impacting the sight distance and creating safety concerns. Deficient vertical geometry includes grades that exceed the maximum grade criteria for the corridor and vertical curves that do not provide sufficient sight distance. Improving the profile to provide better sight distance and shallow grades will help improve safety by eliminating blind curves which can make access to the road from side roads and driveways difficult.

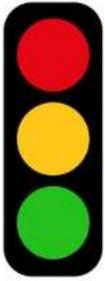


Evaluation

Benefits	Concerns
<ul style="list-style-type: none"> Improved sight distance provides a safety benefit by eliminating blind curves Few concerns related to environmental and drainage impacts 	<ul style="list-style-type: none"> Neutral traffic benefits with eliminating deficient geometry Re-grading will likely require additional ROW in areas with profile adjustments

Overall Score	Profile improvements show an improvement compared to the no-build alternative. On their own the profile improvements will likely not address all the concerns of the corridor but can be combined with typical section improvements to best meet the Purpose and Need. Profile Improvements are recommended to be considered as an Alternative to be Carried Forward in future Phase I studies.
44	

Intersection Basis of Design Traffic Signals



Description: The installation of traffic signals at intersections provides traffic control which can provide an improvement to the traffic operations at existing intersections. It can also provide a safety benefit by reducing the number of severe and injury crashes, but overall does not generally show a decrease in crashes as a result of an increase in property damage only crashes. Traffic signal warrants were performed for three different scenarios to determine how quickly improvements would be beneficial at different location: current traffic, interim 2035 traffic volumes, and future 2050 traffic volumes. The traffic signal provides an easily constructable solution that reduces impacts to the surrounding area.

Evaluation

Benefits	Concerns
<ul style="list-style-type: none"> • Significant reduction in severe and injury crashes • Improved traffic operations • Minimal ROW, drainage, and environmental impacts • Improved safety for active transportation by providing a safe crossing of side roads 	<ul style="list-style-type: none"> • Little overall change in project crashes with an increase in property damage only crashes • Introduces new stop conditions which users may not expect along the corridor

Overall Score	Old Chicago Road & Wilmington-Peotone Road (2035)
55	The Old Chicago Road intersection meets traffic signal warrants in the 2035 interim traffic condition; while it does not meet warrants in the existing condition projected traffic growth in the coming years would benefit from the addition of traffic control in this location.
Cedar Road & Wilmington-Peotone Road (2035)	
54	The Cedar Road intersection meets traffic signal warrants using interim 2035 traffic volumes given expected growth in the surrounding area
US Route 45/52 & Wilmington-Peotone Road (2022)	
54	The US Route 45/52 intersection is currently a 4-way stop sign that experiences serious delays during peak periods. Traffic signals warrants are met in the existing condition given the high traffic volumes. This intersection experienced the largest number of crashes of any location along the entire corridor and is listed as critical in the IDOT safety tiers; the addition of a traffic signal could help to reduce the number of turning and angle crashes which made up 39% of all crash types during the study period.
IL Route 50 & Wilmington-Peotone Road	
0	Given its designation as a Strategic Regional Arterial (SRA), more stringent traffic signal warrant criteria must be met for a traffic signal to be proposed. The IL Route 50 intersection does not meet SRA criteria and is not recommended for consideration as an Alternative to be Carried Forward.
<p>Overall, traffic signals provide a significant improvement to the no-build and are recommended as an Alternative to be Carried Forward as part of future Phase I studies with the exception of the IL Route 50 intersection.</p>	

Intersection Basis of Design Turn Lanes

Description: The addition of turn lanes can provide a safety benefit by moving slowing, turning traffic out of the path of high speed through traffic. Various layouts are evaluated depending on the locations and traffic pattern as described below. Turn lanes can be built on their own or combined with traffic signals in the future.

Evaluation

Benefits	Concerns
<ul style="list-style-type: none"> Improved safety with the addition of turn lanes Localized impacts can result in minimal environmental concerns 	<ul style="list-style-type: none"> Neutral or minimal traffic impacts Additional ROW needed for new pavement width. No improvements for multimodal traffic

Overall Score	River Road & IL Route 53 (EB Right Turn Lane)
46	The existing intersection includes left turn lanes and a single eastbound right turn lane. Future projected traffic volumes would benefit from a second eastbound right turn lane with the majority of traffic looking to travel east-west along Wilmington-Peotone Road. The widened pavement in this area can be built without major environmental, ROW, drainage, or utility impacts.
IL Route 53 & Wilmington-Peotone Road (WB & NB Right Turn Lanes)	
51	The addition of a second westbound right turn lane as well as a northbound right turn lane would provide a safety and traffic benefit to those using the corridor to get east-west throughout the county. This area is adjacent to the residential subdivision, but in general there is room to provide the additional turn lane without major impacts to the area.
Indian Trail Road & Wilmington-Peotone Road (EB & WB Left Turn Lanes)	
49	The Indian Trail Road intersection is situated near the top of a rolling hill section with limited sight distance making it difficult for through traffic to anticipate vehicles stopped waiting to turn left onto Indian Trail. Providing turn lanes would allow those users to get out of the way of through traffic without significant impacts to the surrounding area
Old Chicago Road & Wilmington-Peotone Road (EB Right Turn Lane)	
42	The existing intersection includes eastbound and westbound left turn lanes. Proposed improvements include the addition of an eastbound right turn lane to accommodate the growing number of traffic using Old Chicago Road to travel to the south. The proximity to Jordan creek would require a widened bridge adding cost to the improvements as well as drainage impacts.
Symerton Road & Wilmington-Peotone Road (EB & WB Left Turn Lanes)	
47	Symerton Road provides access to the Village of Symerton. Left turn lanes would provide a safe space for those waiting to turn to get out of the way of high speed east-west traffic
Cedar Road & Wilmington-Peotone Road (EB & WB Left Turn Lanes)	
49	Eastbound and westbound left turn lanes can be added at the Cedar Road intersection without major impacts to and homes given there are not building in the near vicinity.
US Route 45/52 & Wilmington-Peotone Road (EB, WB, NB, & SB Left Turn Lanes)	
40	Providing turn lanes at the US Route 45/52 intersection can be done without any major ROW, environmental or drainage impacts. The additional of turn lanes provides a significant safety benefit but does not provide a traffic improvement and would be best utilized along with a traffic signal.
IL Route 50 & Wilmington-Peotone Road (NB & SB Left Turn Lanes)	
40	Adding additional left turn lanes at a 4-way, multi-lane stop does not show a significant improvement in safety, but a larger increase is shown when built with a signal. Improvements would need to be made to avoid impacts to the surround businesses.
Overall, additional turn lanes provide a significant improvement to the no-build and are recommended as an Alternative to be Carried Forward as part of future Phase I studies.	

Intersection Basis of Design Roundabout



Description: Roundabouts provided the largest improvement in safety compared to traffic signals and turn lanes by reducing the number of conflict points from 32 to 8. Roundabouts also result in less severe crashes by eliminating the need to cross opposing traffic. The footprint of a roundabout is significantly larger than the other solutions and can create ROW and drainage concerns as well as environmental impacts depending on the location.

Evaluation

Benefits	Concerns
<ul style="list-style-type: none"> Greatest safety improvements with reduced conflict points and slowed traffic Improved traffic operations 	<ul style="list-style-type: none"> ROW, environmental, and drainage impacts vary depending on location given the larger footprint needed Higher cost for additional pavement

Overall Score	Old Chicago Road & Wilmington-Peotone Road
48	Given the proximity to Jordan Creek, a roundabout at the Old Chicago Road intersection would be shifted to the east and would require widening or reconstruction of both roadway bridges increasing the cost and impacts to the surrounding properties.
Cedar Road & Wilmington-Peotone Road	
51	The Cedar Road roundabout provides a significant safety and traffic benefit and does not have surrounding constraints that would deter from the additional footprint needed to provide a roundabout even though it is the highest cost solution.
US Route 45/52 & Wilmington-Peotone Road	
50	A roundabout would provide a 44% reduction in overall crashes and an 82% reduction in severe and fatal crashes at the intersection that experience the most crashes of any other intersection in the corridor. It requires additional ROW and costs as well as drainage with the addition of pavement but performs similarly traffic-wise to a traffic signal and offers the greatest safety benefit.
IL Route 50 & Wilmington-Peotone Road	
50	The IL Route 50 roundabout scores high in safety, traffic operations, environmental effects, and multimodal potential. Given the more built out surrounding area, it requires additional ROW impacts as well as cost and will be more difficult to construct. But would provide an opportunity to utilize much of the existing intersection location and to remove the concerns with the skew angle.
Roundabouts provide a significant improvement to the no-build and are recommended as an Alternative to be Carried Forward as part of future Phase I studies.	

Intersection Basis of Design IL Route 50 realignment



Description: The existing IL Route 50 and Wilmington-Peotone Road intersection includes a skew angle that does not meet criteria and makes turning, especially for large vehicles, difficult without encroaching into other lanes of traffic. Realigning Wilmington-Peotone Road to the south provides a 90 degree angle with IL Route 50 to make turning movements safer and easier. This intersection is identified as “high” on the IDOT 2020 safety tiers. The realignment of Wilmington-Peotone Road could be designed to create a T-intersection as shown to the left or to continue south of the car dealership and end at Drecksler Road depending on future developments and

access needs east of IL Route 50. The realignment presents an opportunity to grade separate the existing at-grade crossing of the Canadian National Railroad which would provide a safety benefit by separating railroad and vehicular traffic.

Evaluation

Benefits	Concerns
<ul style="list-style-type: none"> • 15% reduction in crashes per year • Eliminated deficient intersection geometry • Minimal environmental impacts • Reduced travel times experienced with the realigned intersection. 	<ul style="list-style-type: none"> • ROW required for realignment • Additional coordination needed with the railroad for a realigned at-grade crossing or a potential grade separation • Low scores received by the public

Overall Score	Realigning Wilmington-Peotone Road to provide an improved intersections angle scores higher than the no-build solution by improving safety and traffic operations, but involves additional impacts compared to other alternatives. The IL Route 50 realignment is recommended as an Alternative to be Carried Forward as part of future Phase I studies.
44	

Interchange Basis of Design



I-55 Partial Cloverleaf

Description: The partial cloverleaf at the I-55 interchange includes re-aligning the existing ramps within the existing IDOT ROW. The interchange includes multiple curve radii that do not meet current standards that can be difficult for vehicles, especially large trucks, to navigate and currently experiences a high number of fixed object crashes. The interchange is surrounded by environmental resources with the Kankakee River to the South, Des Plaines Fish and Wildlife Conservation Area to the East, and the Midewin National Tallgrass Prairie to the West. The partial cloverleaf would provide larger curve radii and improve the intersection angles at the ramp intersections by utilizing the space currently used for frontage roads which are currently not in use within the IDOT ROW.

Evaluation

Benefits	Concerns
<ul style="list-style-type: none"> • 16% reduction in crashes per year • Larger ramp radii are easier for vehicles, especially trucks, to navigate and meet current design standards • Improved intersection angles between ramps and River Road • Minimal ROW needs • The construction can be staged to maintain traffic throughout by building outside ramps first and moving inward 	<ul style="list-style-type: none"> • Coordination needed with the environmental resources in the area to ensure no adverse effects • Requires closure of existing IDOT frontage roads

Overall Score	The expanded partial cloverleaf keeps the same interchange configuration as the existing condition but re-aligns ramps with deficient geometry to provide larger curves that are easier to navigate. Following coordination and evaluation, IDOT identified closure of the IDOT frontage roads as a fatal flaw. As such, the partial cloverleaf is not recommended as an Alternative to be Carried Forward.
47	

Interchange Basis of Design

I-55 Trumpet



Description: The trumpet interchange involves converting the existing interchange into a free-flow interchange. The vast majority of traffic between I-55 and River Road is travelling to the east and the trumpet interchange makes all of those movements free-flow eliminating the conflict points at the ramp intersections. A new grade separation over I-55 will be included to maintain the connection to River Road west of the interchange. There are numerous sensitive environmental resources surrounding the interchange: Des Plaines Fish and Wildlife Conservation Area, Midewin National Tallgrass Prairie, and the Kankakee River. By converting to a free-flow interchange, the conflict points at the previous ramp intersections are eliminated providing a significant improvement to the safety of the interchange. Similar to the partial cloverleaf, the Trumpet interchange would require closure of the existing frontage roads which are not currently in use.

Evaluation

Benefits	Concerns
<ul style="list-style-type: none"> • 35% reduction in crashes per year • Elimination of conflict points at ramp intersections • Improved traffic with free-flow operations • Minimal ROW needs • Larger ramp radii to meet criteria and are easier for vehicles to navigate 	<ul style="list-style-type: none"> • Constructability concerns with complete reconfiguration which would likely require a closure of the interchange • Highest Cost Alternative • Coordination needed with the environmental resources in the area to ensure no adverse effects • Requires closure of existing IDOT frontage roads

Overall Score	The trumpet interchange creates a free-flow interchange eliminating the ramp intersections and provided the greatest traffic operations at this location within the environmental constraints of the area. Building the trumpet interchange will likely require closure of the interchange which is not feasible and considered a fatal flaw. The trumpet interchange is not recommended to be considered as an Alternative to be Carried Forward.
45	

Interchange Basis of Design

I-55 Traffic Signals



Description: The installation of traffic signals at the I-55 ramp terminals was investigated for its ability to improve safety and traffic operations while maintaining the existing configuration. Traffic signals can provide a safety benefit by reducing the number of severe and injury crashes. The interchange is surrounded by environmental resources with the Kankakee River to the South, Des Plaines Fish and Wildlife Conservation Area to the East, and the Midewin National Tallgrass Prairie to the West. While the installation of traffic signals were evaluated as a potentially easily constructable solution that eliminates impacts to the surrounding area by utilizing existing IDOT ROW, the I-55 ramp intersections do not meet traffic signal warrants and are not a feasible solution for this interchange.

Evaluation

Benefits	Concerns
<ul style="list-style-type: none"> • 44% reduction in crashes per year • No ROW, drainage, or environmental impacts • Low cost compared to reconfiguring the interchange ramps 	<ul style="list-style-type: none"> • Does not meet SRA traffic signal warrants • Does not address substandard curve radii that can be difficult for vehicles to navigate • Introduces new stop conditions which users may not expect

Overall Score	Given the corridor's designation as a Strategic Regional Arterial (SRA), more stringent traffic signal warrant criteria must be met for a traffic signal to be proposed. The I-55 ramp intersections do not meet SRA criteria and are not recommended for consideration as an Alternative to be Carried Forward.
0	

Interchange Basis of Design

I-55 Roundabouts



Description: The installation of roundabouts is being considered at the I-55 interchange ramp terminals in an effort to improve the safety and traffic operations of the interchange. While roundabouts generally provided an improvement in safety compared to traffic signals, due to the high speeds along I-55 and the short distance to slow down the safety benefits are lesser at interchange ramp intersections. There are numerous sensitive environmental resources surrounding the interchange: Des Plaines Fish and Wildlife Conservation Area, Midwin National Tallgrass Prairie, and the Kankakee River. The roundabouts would utilize the existing IDOT ROW, which includes the frontage road intersection footprints, but may be designed to maintain access to the roads.

Evaluation

Benefits	Concerns
<ul style="list-style-type: none"> • 29% reduction in crashes per year • Safety improvements associated with a reduction in conflict points and slowed traffic • Improved traffic operations • Minimal ROW needs • Lower cost compared to ramp reconfiguration options 	<ul style="list-style-type: none"> • Does not address substandard curve radii that can be difficult for vehicles to navigate • May requires closure of existing IDOT frontage roads • While becoming more common, roundabouts at ramp termini may be an unconventional design to some • Drainage impacts given the larger footprint needed

Overall Score	<p>The interchange is a hot spot for crashes along the corridor with the public noting difficulty turning from the ramps onto Wilmington-Peotone Road. Roundabouts improve traffic flow by eliminating stop conditions and provide safety benefits by eliminating the need for drivers to cross opposing traffic. Roundabouts are recommended as an Alternative to be Carried Forward.</p>
53	

Interchange Basis of Design

I-57 Diamond



Description: The existing I-57 interchange is a diamond interchange. The ramp terminals currently include skew angles that make turns difficult for vehicles, especially large trucks. The diamond interchange concept includes realigning the ramp terminals and ramps to provide a better angle for access to and from I-57. In realigning the northbound entrance ramp, the skew between I-57 and Wilmington-Peotone Road also presents some challenges by pushing the gore location further to the north. There is an existing bridge allowing access to the farmland across I-57 which will need to be reconstructed or widened as part of the improvements in order to provide the required design speeds along the ramp.

Evaluation

Benefits	Concerns
<ul style="list-style-type: none"> Improved ramp intersection geometry and maintains the current conventional interchange configuration Minimal environmental concerns No major ROW or drainage concerns 	<ul style="list-style-type: none"> Minimal safety improvement overall with the introduction of smaller curve radii Higher cost associated with the bridge impacts due to the northbound entrance ramp gore shift

Overall Score	By keeping the same interchange configuration, the goals\ of the I-57 interchange is to minimize the number of improvements to be made while addressing the deficiencies of the existing ramps. The skew of I-57 creates additional cost give the existing structure north of the interchange and adjacent detention basin but still provides an improvement from the no-build. The diamond interchange is recommended to be carrier forward as an Alternative to be Carried Forward.
44	

Interchange Basis of Design

I-57 Partial Cloverleaf



Description: When the design team looked at maintaining the current configuration and improving the ramp intersections, there were unanticipated impacts in the northeast quadrant. In an effort to reduce the intersections skew and reduce impacts and cost, a partial cloverleaf was developed to move the northbound entrance ramp away from the existing structure and detention basin. The geometry introduces tighter curves than existing but is able to meet loop ramp criteria without impacting the businesses in the southeast quadrant.

Evaluation

Benefits	Concerns
<ul style="list-style-type: none"> No major environmental or drainage issues Does not impact the I-57 structure to the north by shifting the northbound entrance to the south 	<ul style="list-style-type: none"> A projected increase in crashes due to the introduction smaller curve radii along the new loop ramp Additional ROW needed in southeast quadrant for the loop ramp

Overall Score	The goal of the parclo interchange was to provide improvements to the ramp skew angles without adding the additional cost of the structure rewidening and potential drainage impacts to the detention basin. The tighter ramp geometry ends up resulting in a negative impact on safety resulting in a score that is lesser than the no-build. As such, the partial cloverleaf is not recommended for consideration as an Alternative to be Carried Forward.
39	

Interchange Basis of Design



I-57 Diverging Diamond

Description: A diverging diamond (DDI) is being considered at the I-57 interchange in an effort to improve the safety of the interchange and eliminate deficiencies without excessive impacts outside of the interchange area. A DDI reduces the number of conflict points at intersections by creating two cross-over intersections and making all turn movements beyond those free-flow. At this specific location, it can be designed to improve the intersections angles without extending improvements to the gore along I-57. This interchange has been identified as a hot spot for crashes along the corridor with a high number of turning & angle crashes as well as rear-ends.

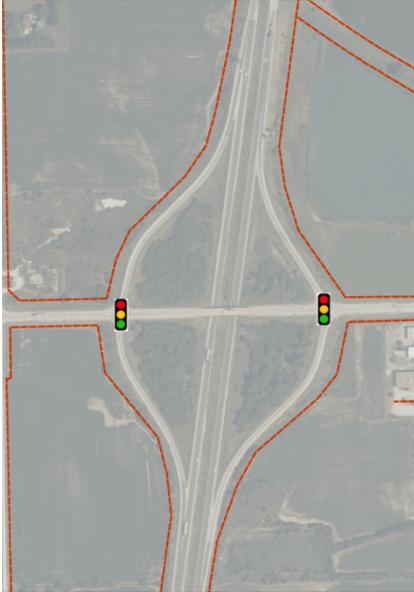
Evaluation

Benefits	Concerns
<ul style="list-style-type: none"> • Greatest safety benefit of all I-57 interchange alternatives with a reduction in conflict points at the cross-over intersections • Fewer ramp impacts than the other two interchange alternatives • Minimal environmental or ROW concerns • Can be designed and constructed to maintain traffic on the new second bridge during construction 	<ul style="list-style-type: none"> • While becoming more common, a DDI can still be an unconventional design to some • Highest Cost Alternative • IDOT concerns with the additional infrastructure for the traffic volumes

Overall Score	The diverging diamond provides the greatest safety benefit of all interchange alternatives as well as a small footprint for the proposed improvements. It also involves the highest cost and IDOT has noted concerns with the level of infrastructure. The diverging diamond is not recommended as an Alternative to be Carried Forward given additional IDOT concerns following evaluation; I-57 is an IDOT facility and a lack of support due to the additional infrastructure is thus a fatal flaw.
53	

Interchange Basis of Design

I-57 Traffic Signals



Description: The installation of traffic signals is being considered at the I-57 ramp terminals in an effort to improve safety and traffic operations while maintaining the existing configuration. The I-57 interchange has been identified as a hot spot for crashes with a high number of turning & angle crashes. This aligns with public concerns noting difficulty turning from the ramps onto Wilmington-Peotone Road due to sight distance concerns and difficulty finding gaps between through traffic. The installation of traffic signals at the intersections can provide a safety benefit by reducing the number of severe and injury crashes .

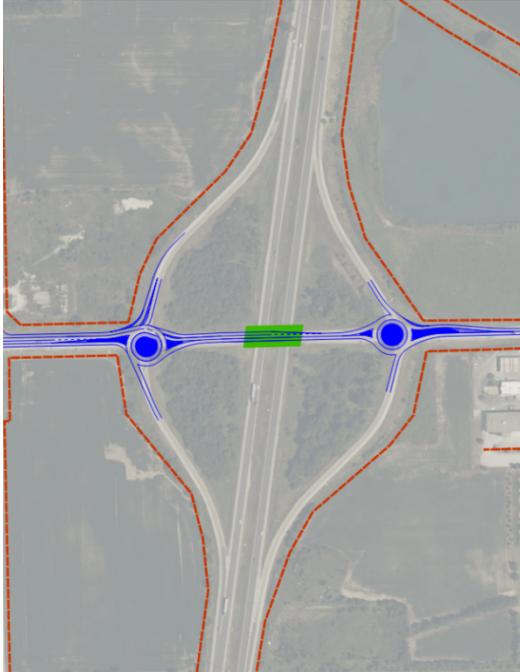
Evaluation

Benefits	Concerns
<ul style="list-style-type: none"> • Safety improvement associated with the additional traffic control • Improved traffic operations • No ROW, drainage, or environmental impacts • Low cost compared to the interchange reconfigurations 	<ul style="list-style-type: none"> • Does not reduce the number of conflict points which cause turning and angle crashes

Overall Score	The I-57 Ramp intersections currently meet traffic signal warrants with existing traffic volumes, and installation of traffic signals would be an easily constructable solution that does not impact the surrounding area. Traffic signals are recommended for consideration as an Alternative to be Carried Forward.
60	

Interchange Basis of Design

I-57 Roundabouts



Description: The installation of roundabouts is being considered at the I-57 interchange ramp terminals in an effort to improve the safety and traffic operations of the interchange. While roundabouts generally provide an improvement in safety compared to traffic signals, due to the high speeds along I-57 and the short distance to slow down the safety benefits are lesser at interchange ramp intersections. Roundabouts will eliminate conflict points, somewhat similar to a diverging diamond interchange without requiring a second structure and lesser ramp impacts. This interchange has been identified as a hot spot for crashes with a high number of turning & angle crashes. Roundabouts result in less severe crashes by eliminating the need to cross opposing traffic.

Evaluation

Benefits	Concerns
<ul style="list-style-type: none"> • 27% reduction in crashes per year with a reduction of conflict points at the ramp intersections • Minimal environmental or ROW concerns associated with the more localized improvements at the ramp intersections 	<ul style="list-style-type: none"> • While becoming more common, roundabouts at ramp termini may be an unconventional design to some • Additional costs associated with bridge widening • Drainage impacts given the larger footprint needed

Overall Score	The interchange is a hot spot for crashes along the corridor with the public noting difficulty turning from the ramps onto Wilmington-Peotone Road. Roundabouts provide safety benefits by eliminating the need for drivers to cross opposing traffic without the additional cost of a diverging diamond interchange. Roundabouts are recommended for consideration as an Alternative to be Carried Forward.
51	