



# Appendix 2.6-5

## Capacity Analysis Worksheets – Full Build

Lanes, Volumes, Timings  
55: Merrick Ave & Corporate Dr

FB B MIT Saturday Evening  
03/31/2025



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	262	260	153	1068	1016	151
Future Volume (vph)	262	260	153	1068	1016	151
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor			1.00		1.00	
Flt		0.850			0.981	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3351	1615	1770	3539	3379	0
Flt Permitted	0.950		0.179			
Satd. Flow (perm)	3351	1615	333	3539	3379	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		39			36	
Link Speed (mph)	40			40	40	
Link Distance (ft)	683			417	550	
Travel Time (s)	11.6			7.1	9.4	
Confl. Peds. (#/hr)			3			3
Confl. Bikes (#/hr)		1				
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	0%	2%	2%	5%	1%
Adj. Flow (vph)	285	283	166	1161	1104	164
Shared Lane Traffic (%)						
Lane Group Flow (vph)	285	283	166	1161	1268	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	22			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.04	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	2	2	2	0	0	
Detector Template						
Leading Detector (ft)	46	46	46	0	0	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	20	20	20	0	0	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	26	26	26			
Detector 2 Size(ft)	20	20	20			
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0			
Turn Type	Prot	pt+ov	pm+pt	NA	NA	

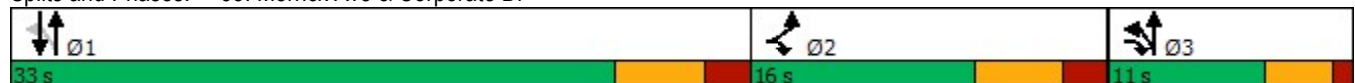


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Protected Phases	2	2 3	3	1 3	1	
Permitted Phases			1 3			
Detector Phase	2	2 3	3	1 3	1	
Switch Phase						
Minimum Initial (s)	3.0		5.0		8.0	
Minimum Split (s)	14.0		9.0		14.0	
Total Split (s)	16.0		11.0		33.0	
Total Split (%)	26.7%		18.3%		55.0%	
Maximum Green (s)	10.0		7.0		27.0	
Yellow Time (s)	4.0		3.0		4.0	
All-Red Time (s)	2.0		1.0		2.0	
Lost Time Adjust (s)	0.0		0.0		0.0	
Total Lost Time (s)	6.0		4.0		6.0	
Lead/Lag	Lag				Lead	
Lead-Lag Optimize?	Yes				Yes	
Vehicle Extension (s)	3.0		2.0		0.2	
Recall Mode	None		None		Min	
Walk Time (s)	6.0					
Flash Dont Walk (s)	14.0					
Pedestrian Calls (#/hr)	1					
Act Effct Green (s)	11.0	22.2	31.6	33.7	22.4	
Actuated g/C Ratio	0.19	0.39	0.56	0.59	0.39	
v/c Ratio	0.44	0.43	0.45	0.55	0.94	
Control Delay	23.0	14.0	9.7	8.8	31.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	23.0	14.0	9.7	8.8	31.2	
LOS	C	B	A	A	C	
Approach Delay	18.5			8.9	31.2	
Approach LOS	B			A	C	

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	56.9
Natural Cycle:	60
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.94
Intersection Signal Delay:	19.6
Intersection LOS:	B
Intersection Capacity Utilization:	62.2%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 55: Merrick Ave & Corporate Dr

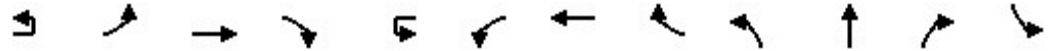


Lanes, Volumes, Timings

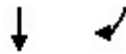
FB B MIT Weekday PM peak hour

2: Glen Curtiss Blvd/Nassau Coliseum Access & Hempstead Tpke

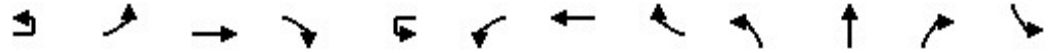
04/25/2025



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations		↔↔	↑↑↑	↗		↔↔	↑↑↑	↗	↔↔	↗	↗	↔↔
Traffic Volume (vph)	19	10	1959	384	46	364	1755	254	251	7	559	182
Future Volume (vph)	19	10	1959	384	46	364	1755	254	251	7	559	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	13	11	11	12	13	13	12	12	10
Storage Length (ft)		275		225		500		275	475		0	250
Storage Lanes		2		1		2		1	1		1	1
Taper Length (ft)		75				195			80			75
Lane Util. Factor	0.91	0.97	0.91	1.00	0.91	0.97	0.91	1.00	0.97	0.95	0.95	0.97
Ped Bike Factor		1.00		0.99		1.00		0.99	1.00			
Frt				0.850				0.850		0.854	0.850	
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	3385	5085	1605	0	3326	5085	1669	3479	1541	1534	2918
Flt Permitted		0.950				0.950			0.950			0.950
Satd. Flow (perm)	0	3383	5085	1582	0	3324	5085	1647	3476	1541	1534	2918
Right Turn on Red				Yes				Yes			No	
Satd. Flow (RTOR)				225				225				
Link Speed (mph)			50				50			40		
Link Distance (ft)			413				657			646		
Travel Time (s)			5.6				9.0			11.0		
Confl. Peds. (#/hr)		3		7		7		3	1			
Confl. Bikes (#/hr)								2				
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	2%	4%	0%	2%	2%	0%	4%	0%	0%	12%
Adj. Flow (vph)	20	11	2084	409	49	387	1867	270	267	7	595	194
Shared Lane Traffic (%)											49%	
Lane Group Flow (vph)	0	31	2084	409	0	436	1867	270	267	299	303	194
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	Left	Left	Right	Left
Median Width(ft)			36				36			24		
Link Offset(ft)			0				0			0		
Crosswalk Width(ft)			50				16			56		
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.00	0.96	1.04	1.04	1.00	0.96	0.96	1.00	1.00	1.09
Turning Speed (mph)	9	15		9	9	15		9	15		9	15
Number of Detectors	1	2	2	1	1	2	2	1	2	2	2	2
Detector Template	Left			Right	Left			Right				
Leading Detector (ft)	20	50	156	6	20	50	156	6	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	6	20	20	6	6	20	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		30	150			30	150		30	30	30	30
Detector 2 Size(ft)		20	6			20	6		20	20	20	20
Detector 2 Type		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex



Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	19	9
Future Volume (vph)	19	9
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	10	11
Storage Length (ft)		0
Storage Lanes		0
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Ped Bike Factor	0.99	
Frt	0.950	
Flt Protected		
Satd. Flow (prot)	1675	0
Flt Permitted		
Satd. Flow (perm)	1675	0
Right Turn on Red		No
Satd. Flow (RTOR)		
Link Speed (mph)	30	
Link Distance (ft)	308	
Travel Time (s)	7.0	
Confl. Peds. (#/hr)		1
Confl. Bikes (#/hr)		
Peak Hour Factor	0.94	0.94
Heavy Vehicles (%)	0%	0%
Adj. Flow (vph)	20	10
Shared Lane Traffic (%)		
Lane Group Flow (vph)	30	0
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	24	
Link Offset(ft)	0	
Crosswalk Width(ft)	30	
Two way Left Turn Lane		
Headway Factor	1.09	1.04
Turning Speed (mph)		9
Number of Detectors	2	
Detector Template		
Leading Detector (ft)	50	
Trailing Detector (ft)	0	
Detector 1 Position(ft)	0	
Detector 1 Size(ft)	20	
Detector 1 Type	Cl+Ex	
Detector 1 Channel		
Detector 1 Extend (s)	0.0	
Detector 1 Queue (s)	0.0	
Detector 1 Delay (s)	0.0	
Detector 2 Position(ft)	30	
Detector 2 Size(ft)	20	
Detector 2 Type	Cl+Ex	

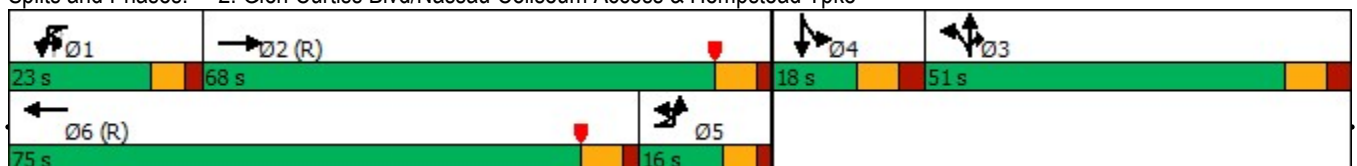


Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Detector 2 Channel												
Detector 2 Extend (s)		0.0	0.0			0.0	0.0		0.0	0.0	0.0	0.0
Turn Type	Prot	Prot	NA	Free	Prot	Prot	NA	Free	Split	NA	custom	Split
Protected Phases	5	5	2		1	1	6		3	3	3	4
Permitted Phases				Free				Free			1	
Detector Phase	5	5	2		1	1	6		3	3	3	4
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0		10.0	10.0	10.0		7.0	7.0	7.0	7.0
Minimum Split (s)	16.0	16.0	44.0		16.0	16.0	44.0		51.0	51.0	51.0	15.0
Total Split (s)	16.0	16.0	68.0		23.0	23.0	75.0		51.0	51.0	51.0	18.0
Total Split (%)	10.0%	10.0%	42.5%		14.4%	14.4%	46.9%		31.9%	31.9%	31.9%	11.3%
Maximum Green (s)	10.0	10.0	61.0		17.0	17.0	68.0		43.0	43.0	43.0	10.0
Yellow Time (s)	4.0	4.0	5.0		4.0	4.0	5.0		5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0	2.0		3.0	3.0	3.0	3.0
Lost Time Adjust (s)		0.0	0.0			0.0	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	7.0			6.0	7.0		8.0	8.0	8.0	8.0
Lead/Lag	Lag	Lag	Lag		Lead	Lead	Lead		Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes		Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	1.0		2.0	2.0	1.0		3.0	3.0	3.0	3.0
Recall Mode	None	None	C-Max		None	None	C-Max		None	None	None	None
Walk Time (s)			7.0				7.0		7.0	7.0	7.0	
Flash Dont Walk (s)			30.0				30.0		36.0	36.0	36.0	
Pedestrian Calls (#/hr)			0				0		1	1	1	
Act Effct Green (s)		10.0	61.0	160.0		23.9	78.1	160.0	36.1	36.1	66.0	10.0
Actuated g/C Ratio		0.06	0.38	1.00		0.15	0.49	1.00	0.23	0.23	0.41	0.06
v/c Ratio		0.15	1.08	0.26		0.88	0.75	0.16	0.34	0.86	0.48	1.07
Control Delay		46.2	64.7	0.2		84.1	37.5	0.2	52.1	82.3	37.6	153.1
Queue Delay		0.0	10.5	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		46.2	75.2	0.2		84.1	37.5	0.2	52.1	82.3	37.6	153.1
LOS		D	E	A		F	D	A	D	F	D	F
Approach Delay			62.7				41.5			57.4		
Approach LOS			E				D			E		

Intersection Summary

Area Type: Other  
 Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.08  
 Intersection Signal Delay: 56.1  
 Intersection Capacity Utilization 102.6%  
 Analysis Period (min) 15  
 Intersection LOS: E  
 ICU Level of Service G

Splits and Phases: 2: Glen Curtiss Blvd/Nassau Coliseum Access & Hempstead Tpke





Lane Group	SBT	SBR
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Detector Phase	4	
Switch Phase		
Minimum Initial (s)	7.0	
Minimum Split (s)	15.0	
Total Split (s)	18.0	
Total Split (%)	11.3%	
Maximum Green (s)	10.0	
Yellow Time (s)	5.0	
All-Red Time (s)	3.0	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	8.0	
Lead/Lag	Lead	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	3.0	
Recall Mode	None	
Walk Time (s)		
Flash Dont Walk (s)		
Pedestrian Calls (#/hr)		
Act Effct Green (s)	10.0	
Actuated g/C Ratio	0.06	
v/c Ratio	0.29	
Control Delay	79.1	
Queue Delay	0.0	
Total Delay	79.1	
LOS	E	
Approach Delay	143.2	
Approach LOS	F	
<b>Intersection Summary</b>		