

Lanes, Volumes, Timings

3: Prince of Wales & Meadowlands/Hog's Back

08/08/2017

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	278	31	520	634	198	41	378	502	138	581	123
Future Volume (vph)	81	278	31	520	634	198	41	378	502	138	581	123
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	60.0		0.0	75.0		5.0	50.0		70.0	60.0		0.0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (m)	25.0			25.0			25.0			25.0		
Lane Util. Factor	1.00	0.95	0.95	0.91	0.91	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.985			0.967				0.850		0.974	
Flt Protected	0.950			0.950	0.996		0.950			0.950		
Satd. Flow (prot)	1695	3339	0	1543	3128	0	1695	3390	1517	1695	3302	0
Flt Permitted	0.950			0.950	0.996		0.950			0.950		
Satd. Flow (perm)	1695	3339	0	1543	3128	0	1695	3390	1517	1695	3302	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			32				528		20	
Link Speed (k/h)		50			50			50		50		
Link Distance (m)		351.1			523.7			428.7		435.6		
Travel Time (s)		25.3			37.7			30.9		31.4		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	85	293	33	547	667	208	43	398	528	145	612	129
Shared Lane Traffic (%)				14%								
Lane Group Flow (vph)	85	326	0	470	952	0	43	398	528	145	741	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(m)		3.7			3.7			3.7		3.7		
Link Offset(m)		0.0			0.0			0.0		0.0		
Crosswalk Width(m)		1.5			1.5			1.5		1.5		
Two way Left Turn Lane												
Headway Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1		1	1		1	0	0	1	1	
Detector Template	Left			Left					Right	Left		
Leading Detector (m)	15.0	15.0		6.1	1.8		14.0	0.0	0.0	6.1	1.8	
Trailing Detector (m)	0.0	0.0		0.0	0.0		7.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		7.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	15.0	15.0		6.1	1.8		7.0	1.8	6.1	6.1	1.8	
Detector 1 Type	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	
Detector 1 Queue (s)	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	
Turn Type	Split	NA		Split	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	28.0	28.0		43.0	43.0		12.0	27.0	27.0	12.0	27.0	
Total Split (s)	28.0	28.0		43.0	43.0		12.0	27.0	27.0	12.0	27.0	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	25.5%	25.5%		39.1%	39.1%		10.9%	24.5%	24.5%	10.9%	24.5%	
Maximum Green (s)	21.7	21.7		36.7	36.7		6.4	20.6	20.6	6.4	20.6	
Yellow Time (s)	3.3	3.3		3.7	3.7		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.0	3.0		2.6	2.6		2.3	3.1	3.1	2.3	3.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.3	6.3		6.3	6.3		5.6	6.4	6.4	5.6	6.4	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Flash Dont Walk (s)	13.0	13.0		13.0	13.0			13.0	13.0		13.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effct Green (s)	15.8	15.8		38.5	38.5		6.1	20.6	20.6	10.5	29.5	
Actuated g/C Ratio	0.14	0.14		0.35	0.35		0.06	0.19	0.19	0.10	0.27	
v/c Ratio	0.35	0.67		0.87	0.85		0.46	0.63	0.74	0.90	0.83	
Control Delay	45.5	49.8		51.4	40.6		66.0	46.2	10.6	101.9	48.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	45.5	49.8		51.4	40.6		66.0	46.2	10.6	101.9	48.5	
LOS	D	D		D	D		E	D	B	F	D	
Approach Delay		48.9			44.1			27.7			57.2	
Approach LOS		D			D			C			E	
Queue Length 50th (m)	16.7	34.3		96.1	93.7		9.1	41.7	0.0	-42.9	-98.3	
Queue Length 95th (m)	30.0	46.5		#168.5	#138.0		20.7	57.8	32.8	#81.8	#135.7	
Internal Link Dist (m)		327.1			499.7			404.7			411.6	
Turn Bay Length (m)	60.0			75.0			50.0		70.0	60.0		
Base Capacity (vph)	334	666		551	1139		98	634	713	161	898	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.25	0.49		0.85	0.84		0.44	0.63	0.74	0.90	0.83	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 66 (60%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 43.5

Intersection LOS: D

Intersection Capacity Utilization 82.3%

ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 3: Prince of Wales & Meadowlands/Hog's Back

