

Appendix F

Existing Synchro Reports

Lanes, Volumes, Timings
1: Private Access/Eighth Line & Steeles Avenue

2024 Existing AM
12/13/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	658	8	32	670	12	11	0	7	49	3	218
Future Volume (vph)	67	658	8	32	670	12	11	0	7	49	3	218
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	110.0		70.0	130.0		0.0	145.0		35.0	30.0		0.0
Storage Lanes	1		1	1		0	2		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.97	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.97	1.00				0.98		0.99		
Frt			0.850		0.997			0.850			0.852	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1656	3438	997	1752	3354	0	2274	1585	0	1805	1572	0
Flt Permitted	0.231			0.354			0.950			0.752		
Satd. Flow (perm)	403	3438	964	651	3354	0	2274	1585	0	1419	1572	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			126		1			249			245	
Link Speed (k/h)		60			60			60			70	
Link Distance (m)		485.6			1450.0			261.5			3093.2	
Travel Time (s)		29.1			87.0			15.7			159.1	
Confl. Peds. (#/hr)			5	5					5	5		
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	9%	5%	62%	3%	7%	25%	54%	0%	0%	0%	0%	3%
Adj. Flow (vph)	75	739	9	36	753	13	12	0	8	55	3	245
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	739	9	36	766	0	12	8	0	55	248	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA		Perm	NA	
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases	2		2	6						4		
Detector Phase	5	2	2	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0		10.0	10.0		8.0	8.0	
Minimum Split (s)	11.5	30.0	30.0	11.5	30.0		17.0	35.0		35.0	35.0	
Total Split (s)	16.9	58.5	58.5	13.0	54.6		26.0	58.5		32.5	32.5	
Total Split (%)	13.0%	45.0%	45.0%	10.0%	42.0%		20.0%	45.0%		25.0%	25.0%	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	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	0.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0		7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes			Yes	Yes	
Recall Mode	None	Min	Min	None	Min		None	Min		Min	Min	
Act Effect Green (s)	32.5	27.3	27.3	29.6	22.0		10.5	13.2		10.9	10.9	
Actuated g/C Ratio	0.56	0.47	0.47	0.51	0.38		0.18	0.23		0.19	0.19	
v/c Ratio	0.19	0.46	0.02	0.08	0.60		0.03	0.01		0.21	0.50	
Control Delay	8.0	13.9	0.0	7.5	19.0		26.2	0.0		26.6	8.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	8.0	13.9	0.0	7.5	19.0		26.2	0.0		26.6	8.7	
LOS	A	B	A	A	B		C	A		C	A	
Approach Delay		13.2			18.5			15.7			11.9	

Lanes, Volumes, Timings
1: Private Access/Eighth Line & Steeles Avenue

2024 Existing AM
12/13/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	B			B			B			B		
Queue Length 50th (m)	2.6	18.7	0.0	1.2	33.0		0.5	0.0		4.9	0.3	
Queue Length 95th (m)	12.8	70.8	0.0	7.3	78.7		3.5	0.0		19.1	20.0	
Internal Link Dist (m)	461.6			1426.0			237.5			3069.2		
Turn Bay Length (m)	110.0		70.0	130.0			145.0			30.0		
Base Capacity (vph)	523	3106	883	527	2855		780	1438		653	855	
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	0.14	0.24	0.01	0.07	0.27		0.02	0.01		0.08	0.29	

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 58.1

Natural Cycle: 95

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 15.2

Intersection LOS: B

Intersection Capacity Utilization 52.6%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 1: Private Access/Eighth Line & Steeles Avenue

 Ø1	 Ø2	 Ø3	 Ø4
13 s	58.5 s	26 s	32.5 s
 Ø5	 Ø6	 Ø7	 Ø8
16.9 s	54.6 s	52.5 s	

Lanes, Volumes, Timings
2: Eighth Line & 5 Side Road

2024 Existing AM
12/13/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	111	3	19	147	7	0	34	2	66	258	57
Future Volume (vph)	17	111	3	19	147	7	0	34	2	66	258	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.995			0.993			0.980	
Flt Protected		0.994			0.994						0.991	
Satd. Flow (prot)	0	1811	0	0	1817	0	0	1671	0	0	1822	0
Flt Permitted		0.994			0.994						0.991	
Satd. Flow (perm)	0	1811	0	0	1817	0	0	1671	0	0	1822	0
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		569.4			634.2			3093.2			1267.0	
Travel Time (s)		34.2			38.1			159.1			65.2	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	11%	3%	0%	0%	2%	42%	0%	11%	50%	1%	1%	3%
Adj. Flow (vph)	19	126	3	22	167	8	0	39	2	75	293	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	148	0	0	197	0	0	41	0	0	433	0
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	45.8%											
Analysis Period (min)	15											
	ICU Level of Service A											

HCM Unsignalized Intersection Capacity Analysis 2: Eighth Line & 5 Side Road

2024 Existing AM
12/13/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	17	111	3	19	147	7	0	34	2	66	258	57
Future Volume (vph)	17	111	3	19	147	7	0	34	2	66	258	57
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	19	126	3	22	167	8	0	39	2	75	293	65
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	148	197	41	433								
Volume Left (vph)	19	22	0	75								
Volume Right (vph)	3	8	2	65								
Hadj (s)	0.08	0.06	0.19	-0.03								
Departure Headway (s)	5.6	5.5	5.7	4.9								
Degree Utilization, x	0.23	0.30	0.07	0.59								
Capacity (veh/h)	589	607	550	704								
Control Delay (s)	10.2	10.8	9.1	14.7								
Approach Delay (s)	10.2	10.8	9.1	14.7								
Approach LOS	B	B	A	B								
Intersection Summary												
Delay				12.7								
Level of Service				B								
Intersection Capacity Utilization				45.8%	ICU Level of Service	A						
Analysis Period (min)				15								

Lanes, Volumes, Timings
1: Private Access/Eighth Line & Steeles Avenue

2024 Existing PM
12/13/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	181	965	17	158	795	282	198	23	202	33	29	129
Future Volume (vph)	181	965	17	158	795	282	198	23	202	33	29	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	110.0		70.0	130.0		0.0	145.0		35.0	30.0		0.0
Storage Lanes	1		1	1		0	2		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.97	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.95		0.99		0.99	0.98		0.99	0.98	
Frt			0.850		0.961			0.865			0.877	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3505	1538	1805	3340	0	3502	1610	0	1703	1550	0
Flt Permitted	0.087			0.145			0.950			0.601		
Satd. Flow (perm)	164	3505	1467	276	3340	0	3464	1610	0	1069	1550	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			126		44			230			136	
Link Speed (k/h)		60			60			50			70	
Link Distance (m)		485.6			1450.0			261.5			3093.2	
Travel Time (s)		29.1			87.0			18.8			159.1	
Confl. Peds. (#/hr)	5		10	10		5	6		8	8		6
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	1%	3%	5%	0%	4%	0%	0%	0%	0%	6%	0%	7%
Adj. Flow (vph)	206	1097	19	180	903	320	225	26	230	38	33	147
Shared Lane Traffic (%)												
Lane Group Flow (vph)	206	1097	19	180	1223	0	225	256	0	38	180	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Prot	NA		Perm	NA	
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases	2		2	6						4		
Detector Phase	5	2	2	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0		10.0	10.0		8.0	8.0	
Minimum Split (s)	11.5	30.0	30.0	11.5	30.0		17.0	35.0		35.0	35.0	
Total Split (s)	16.9	54.6	54.6	16.9	54.6		39.0	58.5		19.5	19.5	
Total Split (%)	13.0%	42.0%	42.0%	13.0%	42.0%		30.0%	45.0%		15.0%	15.0%	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	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	0.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0		7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes			Yes	Yes	
Recall Mode	None	Min	Min	None	Min		None	Min		Min	Min	
Act Effect Green (s)	60.7	46.0	46.0	57.1	44.2		13.2	30.1		9.8	9.8	
Actuated g/C Ratio	0.58	0.44	0.44	0.55	0.42		0.13	0.29		0.09	0.09	
v/c Ratio	0.70	0.71	0.03	0.58	0.85		0.51	0.41		0.38	0.67	
Control Delay	35.6	27.4	0.1	18.8	33.0		47.8	7.6		58.1	27.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	35.6	27.4	0.1	18.8	33.0		47.8	7.6		58.1	27.4	
LOS	D	C	A	B	C		D	A		E	C	
Approach Delay		28.2			31.1			26.4			32.8	

Lanes, Volumes, Timings
1: Private Access/Eighth Line & Steeles Avenue

2024 Existing PM
12/13/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	C			C			C			C		
Queue Length 50th (m)	24.7	97.5	0.0	15.3	115.6		24.2	4.2		8.1	9.3	
Queue Length 95th (m)	#60.8	134.1	0.0	30.4	155.7		37.0	21.9		19.5	32.0	
Internal Link Dist (m)	461.6			1426.0			237.5			3069.2		
Turn Bay Length (m)	110.0		70.0	130.0			145.0			30.0		
Base Capacity (vph)	298	1655	759	348	1597		1087	919		129	307	
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	0.69	0.66	0.03	0.52	0.77		0.21	0.28		0.29	0.59	

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 104.1

Natural Cycle: 105

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 29.5

Intersection LOS: C

Intersection Capacity Utilization 84.3%

ICU Level of Service E

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 1: Private Access/Eighth Line & Steeles Avenue

 Ø1	 Ø2	 Ø3	 Ø4
16.9 s	54.6 s	39 s	19.5 s
 Ø5	 Ø6	 Ø7	 Ø8
16.9 s	54.6 s	52.5 s	

Lanes, Volumes, Timings
2: Eighth Line & 5 Side Road

2024 Existing PM
12/13/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	87	5	88	185	27	4	378	59	15	73	17
Future Volume (vph)	91	87	5	88	185	27	4	378	59	15	73	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.988			0.982			0.978	
Flt Protected		0.976			0.986						0.993	
Satd. Flow (prot)	0	1796	0	0	1792	0	0	1858	0	0	1739	0
Flt Permitted		0.976			0.986						0.993	
Satd. Flow (perm)	0	1796	0	0	1792	0	0	1858	0	0	1739	0
Link Speed (k/h)		60			60			70			70	
Link Distance (m)		569.4			634.2			3093.2			1267.0	
Travel Time (s)		34.2			38.1			159.1			65.2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	4%	2%	0%	5%	3%	0%	0%	0%	3%	13%	5%	5%
Adj. Flow (vph)	100	96	5	97	203	30	4	415	65	16	80	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	201	0	0	330	0	0	484	0	0	115	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 48.5%

ICU Level of Service A

Analysis Period (min) 15

HCM Unsignalized Intersection Capacity Analysis2: Eighth Line & 5 Side Road

2024 Existing PM
12/13/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	91	87	5	88	185	27	4	378	59	15	73	17
Future Volume (vph)	91	87	5	88	185	27	4	378	59	15	73	17
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	100	96	5	97	203	30	4	415	65	16	80	19
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	201	330	484	115								
Volume Left (vph)	100	97	4	16								
Volume Right (vph)	5	30	65	19								
Hadj (s)	0.13	0.06	-0.07	0.03								
Departure Headway (s)	6.7	6.3	5.8	6.8								
Degree Utilization, x	0.37	0.58	0.78	0.22								
Capacity (veh/h)	469	524	599	452								
Control Delay (s)	13.6	17.6	26.7	11.6								
Approach Delay (s)	13.6	17.6	26.7	11.6								
Approach LOS	B	C	D	B								
Intersection Summary												
Delay				20.2								
Level of Service				C								
Intersection Capacity Utilization				48.5%	ICU Level of Service	A						
Analysis Period (min)				15								