



Le mardi 31 mai 2011

Madame Marie-Josée Harvey
Coordonnatrice du secrétariat de la commission
Bureau d'audience publique en environnement

N/Réf. : Étude d'Évaluation Environnementale pour l'élargissement du chemin Pink
entre la rue de la Gravité et le corridor Deschênes

Objet : Dépôt des réponses aux demandes de précision de la commission concernant la
série de questions émise le 24 mai 2011

Madame Harvey,

Par la présente, la Ville de Gatineau dépose, à la commission les précisions demandées
suite au dépôt des réponses de la série de questions émises le 24 mai dernier.

Tout d'abord, nous avons numéroté les documents déposés afin de faciliter les références
futures.

Questions :

- 1) *Il a été indiqué, lors de l'audience publique, que l'ouverture du boulevard des
Allumettières a amélioré les conditions de circulation au carrefour Pink/Saint-Raymond.
Pouvez-vous fournir les débits et les rapports volume/capacité actuels (ou les niveaux de
service) à ce carrefour pour les périodes de pointe ?*

Vous trouverez aux pages 1 et 2 du fichier annexé les débits, les rapports volume/capacité
et les niveaux de service au carrefour St-Raymond/Pink pour les périodes de pointe
actuelles.

- 2) *Pouvez-vous fournir les débits et les rapports volume/capacité (ou les niveaux de service) aux carrefours du chemin Pink situés dans la zone d'étude de même qu'au carrefour Pink/Saint-Raymond avec le projet d'élargissement du chemin Pink aux horizons 2012 et 2025 pour les périodes de pointe ?*

Vous trouverez aux pages 3 à 11 du fichier annexé les débits, les rapports volume/capacité et les niveaux de service des carrefours du chemin Pink pour la période de la pointe am 2012.

Vous trouverez aux pages 12 à 20 du fichier annexé les débits, les rapports volume/capacité et les niveaux de service des carrefours du chemin Pink pour la période de la pointe pm 2012.

Vous trouverez aux pages 21 à 29 du fichier annexé les débits, les rapports volume/capacité et les niveaux de service des carrefours du chemin Pink pour la période de la pointe am 2025.

Vous trouverez aux pages 30 à 38 du fichier annexé les débits, les rapports volume/capacité et les niveaux de service des carrefours du chemin Pink pour la période de la pointe pm 2025.

- 4) *Fournir les rapports volume/capacité correspondant à chaque niveau de service désigné par les lettres A à F et les délais qui y sont associés (secondes/véhicule).*

Vous trouverez à la page 39 les délais associés aux niveaux de service mentionnés dans l'étude.

En espérant le tout conforme à vos attentes, veuillez agréer, Monsieur, mes salutations distinguées.



Carol Hébert, ing.
Responsable de la section
transport
Service de l'urbanisme et
du développement
durable
Ville de Gatineau



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↗	↖	↖	↕	↕	↖
Volume (vph)	1052	130	63	878	468	363
Satd. Flow (prot)	3433	1842	1652	3725	3539	1842
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1842	1652	3725	3539	1842
Satd. Flow (RTOR)		129				374
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	103%	103%	103%	103%	103%	103%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)					0	
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	1084	134	65	904	482	374
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1084	134	65	904	482	374
Turn Type		Free	Prot			Free
Protected Phases	4		5	2	6	
Permitted Phases		Free				Free
Minimum Initial (s)	10.0		3.0	10.0	3.0	
Minimum Split (s)	25.0		8.0	25.0	30.0	
Total Split (s)	30.0	0.0	26.0	60.0	34.0	0.0
Total Split (%)	33.3%	0.0%	28.9%	66.7%	37.8%	0.0%
Maximum Green (s)	25.0		21.0	55.0	29.0	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Total Lost Time (s)	3.0	3.0	4.0	3.0	3.0	3.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		6.0	4.0	0.2	
Minimum Gap (s)	3.0		3.0	3.0	0.2	
Time Before Reduce (s)	0.0		0.0	0.0	0.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0	
Recall Mode	Max		None	None	Max	
Walk Time (s)					5.0	
Flash Dont Walk (s)					20.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	27.3	77.8	12.4	44.5	31.3	77.8
Actuated g/C Ratio	0.35	1.00	0.16	0.57	0.40	1.00
v/c Ratio	0.90	0.07	0.25	0.42	0.34	0.20
Control Delay	39.3	0.1	32.2	9.9	18.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.3	0.1	32.2	9.9	18.1	0.2
LOS	D	A	C	A	B	A
Approach Delay	35.0			11.4	10.3	
Approach LOS	C			B	B	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 77.8
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 20.5
 Intersection Capacity Utilization 62.6%
 Analysis Period (min) 60
 Intersection LOS: C
 ICU Level of Service B

Splits and Phases: 36: Pink & SAINT-RAYMOND #1

↑ ø2 60 s	↖ ø4 30 s
↖ ø5 26 s	↓ ø6 34 s

HCM-Intersections
36: Pink & SAINT-RAYMOND #1

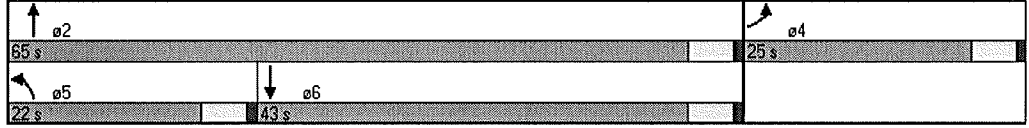
Chemin Pink Actuel
Heure pointe PM



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↗	↗	↖	↕↕	↕↕	↗
Volume (vph)	424	92	176	637	1173	906
Satd. Flow (prot)	3433	1842	1652	3725	3539	1842
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1842	1652	3725	3539	1842
Satd. Flow (RTOR)		95				757
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	103%	103%	103%	103%	103%	103%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)					0	
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	437	95	181	656	1208	933
Shared Lane Traffic (%)						
Lane Group Flow (vph)	437	95	181	656	1208	933
Turn Type		Free	Prot			Free
Protected Phases	4		5	2	6	
Permitted Phases		Free				Free
Minimum Initial (s)	10.0		3.0	10.0	3.0	
Minimum Split (s)	25.0		8.0	30.0	30.0	
Total Split (s)	25.0	0.0	22.0	65.0	43.0	0.0
Total Split (%)	27.8%	0.0%	24.4%	72.2%	47.8%	0.0%
Maximum Green (s)	20.0		17.0	60.0	38.0	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Total Lost Time (s)	3.0	3.0	4.0	3.0	3.0	3.0
Lead/Lag			Lead			Lag
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		6.0	4.0	0.2	
Minimum Gap (s)	3.0		3.0	3.0	0.2	
Time Before Reduce (s)	0.0		0.0	0.0	0.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0	
Recall Mode	None		None	Max	Max	
Walk Time (s)					5.0	
Flash Dont Walk (s)					20.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	19.4	87.5	16.5	62.1	41.6	87.5
Actuated g/C Ratio	0.22	1.00	0.19	0.71	0.48	1.00
v/c Ratio	0.57	0.05	0.58	0.25	0.72	0.51
Control Delay	33.5	0.1	40.9	5.0	22.3	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.5	0.1	40.9	5.0	22.3	1.0
LOS	C	A	D	A	C	A
Approach Delay	27.5			12.8	13.0	
Approach LOS	C			B	B	

Intersection Summary
 Cycle Length: 90
 Actuated Cycle Length: 87.5
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 15.2
 Intersection LOS: B
 Intersection Capacity Utilization 65.9%
 ICU Level of Service C
 Analysis Period (min) 60

Splits and Phases: 36: Pink & SAINT-RAYMOND #1

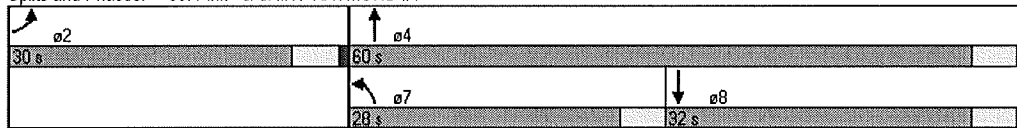


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↗	↗	↖	↑↑	↑↑	↗
Volume (vph)	1052	130	63	878	468	363
Satd. Flow (prot)	3433	1842	1652	3725	3539	1842
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1842	1652	3725	3539	1842
Satd. Flow (RTOR)		129				385
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	108%	108%	106%	106%	106%	106%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)					0	
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	1136	140	67	931	496	385
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1136	140	67	931	496	385
Turn Type		Free	Prot			Free
Protected Phases	2		7	4	8	
Permitted Phases		Free		4		Free
Minimum Initial (s)	10.0		8.0	10.0	4.0	
Minimum Split (s)	25.0		14.0	25.0	21.0	
Total Split (s)	30.0	0.0	28.0	60.0	32.0	0.0
Total Split (%)	33.3%	0.0%	31.1%	66.7%	35.6%	0.0%
Maximum Green (s)	25.0		24.0	55.0	27.0	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.0		0.0	1.0	1.0	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		6.0	4.0	3.0	
Minimum Gap (s)	3.0		3.0	3.0	3.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0	
Recall Mode	C-Max		None	None	None	
Walk Time (s)					5.0	
Flash Dont Walk (s)					11.0	
Pedestrian Calls (#/hr)					0	
Act Effect Green (s)	47.8	90.0	12.9	36.2	22.8	90.0
Actuated g/C Ratio	0.53	1.00	0.14	0.40	0.25	1.00
v/c Ratio	0.62	0.08	0.28	0.62	0.55	0.21
Control Delay	8.5	0.1	36.7	22.9	32.1	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.5	0.1	36.7	22.9	32.1	0.3
LOS	A	A	D	C	C	A
Approach Delay	7.6			23.8	18.2	
Approach LOS	A			C	B	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 86 (96%), Referenced to phase 2:EBL and 6:, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.62
 Intersection Signal Delay: 15.7
 Intersection Capacity Utilization 64.8%
 Analysis Period (min) 60
 Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 36: Pink & SAINT-RAYMOND #1





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↗	
Volume (vph)	1242	20	31	353	17	220
Satd. Flow (prot)	3362	0	1733	3104	1615	0
Flt Permitted			0.108		0.996	
Satd. Flow (perm)	3362	0	197	3104	1615	0
Satd. Flow (RTOR)	3				69	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	102%	102%	100%	100%	104%	104%
Heavy Vehicles (%)	6%	5%	3%	15%	6%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						0
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	1267	20	31	353	18	229
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1287	0	31	353	247	0
Turn Type			Perm			
Protected Phases	4			8	2	
Permitted Phases			8			
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	25.0		21.0	21.0	30.0	
Total Split (s)	58.0	0.0	58.0	58.0	32.0	0.0
Total Split (%)	64.4%	0.0%	64.4%	64.4%	35.6%	0.0%
Maximum Green (s)	53.0		53.0	53.0	27.0	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Minimum Gap (s)	3.0		3.0	3.0	3.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0	
Recall Mode	None		None	None	C-Min	
Walk Time (s)	5.0				5.0	
Flash Dont Walk (s)	15.0				20.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	46.5		46.5	46.5	37.5	
Actuated g/C Ratio	0.52		0.52	0.52	0.42	
v/c Ratio	0.74		0.30	0.22	0.35	
Control Delay	18.9		17.4	10.0	15.8	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	18.9		17.4	10.0	15.8	
LOS	B		B	A	B	
Approach Delay	18.9			10.6	15.8	
Approach LOS	B			B	B	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 19 (21%), Referenced to phase 2:NBL and 6:, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 16.9
 Intersection Capacity Utilization 57.5%
 Analysis Period (min) 60
 Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 519: Pink & De la Sapinière

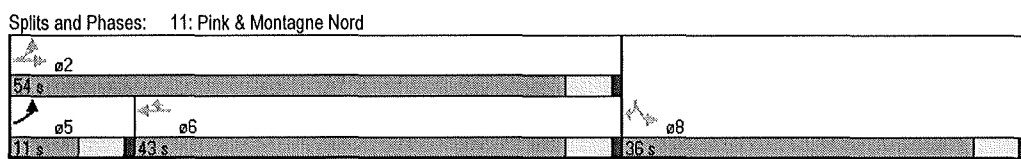
← φ2	→ φ4
32 s	58 s
	← φ8
	58 s

5



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↗	↗	↘	↘	↗
Volume (vph)	20	880	324	73	363	22
Satd. Flow (prot)	1606	3466	3051	1479	1767	1353
Flt Permitted	0.506				0.950	
Satd. Flow (perm)	856	3466	3051	1479	1767	1353
Satd. Flow (RTOR)				75		23
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	103%	103%	103%	103%	103%	103%
Heavy Vehicles (%)	0%	3%	17%	8%	1%	18%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)	0					
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	21	906	334	75	374	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	906	334	75	374	23
Turn Type	custom			custom		custom
Protected Phases	5					
Permitted Phases	2	2	6	6	8	8
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	30.0	30.0	21.0	21.0
Total Split (s)	11.0	54.0	43.0	43.0	36.0	36.0
Total Split (%)	12.2%	60.0%	47.8%	47.8%	40.0%	40.0%
Maximum Green (s)	6.0	49.0	38.0	38.0	31.0	31.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Min	C-Min	None	None
Walk Time (s)		5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0	20.0	20.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effct Green (s)	57.9	57.9	53.4	53.4	26.1	26.1
Actuated g/C Ratio	0.64	0.64	0.59	0.59	0.29	0.29
v/c Ratio	0.03	0.41	0.18	0.08	0.73	0.06
Control Delay	4.7	4.9	8.5	5.2	37.4	8.3
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay	4.7	5.0	8.5	5.2	37.4	8.3
LOS	A	A	A	A	D	A
Approach Delay		5.0	7.9		35.7	
Approach LOS		A	A		D	

Intersection Summary
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 12.7
 Intersection Capacity Utilization 52.4%
 Analysis Period (min) 60
 Intersection LOS: B
 ICU Level of Service A





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	
Volume (vph)	581	15	38	232	23	135
Satd. Flow (prot)	3455	0	1530	3305	1601	0
Flt Permitted			0.361		0.993	
Satd. Flow (perm)	3455	0	581	3305	1598	0
Satd. Flow (RTOR)	3				148	
Confl. Peds. (#/hr)					13	13
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	110%	110%	110%	110%	110%	110%
Heavy Vehicles (%)	3%	0%	5%	8%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)			0			
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	639	16	42	255	25	148
Shared Lane Traffic (%)						
Lane Group Flow (vph)	655	0	42	255	173	0
Turn Type			custom			
Protected Phases			1			
Permitted Phases	2		6	6	4	
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	30.0		10.0	25.0	30.0	
Total Split (s)	40.0	0.0	20.0	60.0	30.0	0.0
Total Split (%)	44.4%	0.0%	22.2%	66.7%	33.3%	0.0%
Maximum Green (s)	35.0		15.0	55.0	25.0	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Total Lost Time (s)	4.0	3.0	4.0	4.0	4.0	3.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Minimum Gap (s)	3.0		3.0	3.0	3.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0	
Recall Mode	C-Max		None	C-Max	None	
Walk Time (s)	5.0			5.0	5.0	
Flash Dont Walk (s)	15.0			15.0	20.0	
Pedestrian Calls (#/hr)	2			0	13	
Act Effct Green (s)	63.5		70.5	70.5	11.5	
Actuated g/C Ratio	0.71		0.78	0.78	0.13	
v/c Ratio	0.27		0.08	0.10	0.52	
Control Delay	3.8		1.0	0.6	13.6	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	3.8		1.0	0.6	13.6	
LOS	A		A	A	B	
Approach Delay	3.8			0.6	13.6	
Approach LOS	A			A	B	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 16 (18%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.52
 Intersection Signal Delay: 4.5
 Intersection Capacity Utilization 46.4%
 Analysis Period (min) 60
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 13: Pink & de la Gravité

↵ ø1	↔ ø2	↵ ø4
20 s	40 s	30 s
↵ ø5		
60 s		

7



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Volume (vph)	8	606	93	79	287	3	47	1	142	1	6	8
Satd. Flow (prot)	1190	3353	0	1608	2969	0	1785	1523	0	0	1534	0
Flt Permitted	0.565			0.257			0.748				0.990	
Satd. Flow (perm)	708	3353	0	435	2969	0	1405	1523	0	0	1523	0
Satd. Flow (RTOR)		24			1			151			8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%
Heavy Vehicles (%)	50%	5%	0%	11%	20%	33%	0%	0%	5%	0%	0%	25%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	8	642	99	84	304	3	50	1	151	1	6	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	741	0	84	307	0	50	152	0	0	15	0
Turn Type	custom			custom			Perm			custom		
Protected Phases	5			1				4				
Permitted Phases	2	2		6	6		4	4		8	8	
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	30.0		9.0	25.0		30.0	30.0		30.0	30.0	
Total Split (s)	11.0	43.0	0.0	13.0	45.0	0.0	34.0	34.0	0.0	34.0	34.0	0.0
Total Split (%)	12.2%	47.8%	0.0%	14.4%	50.0%	0.0%	37.8%	37.8%	0.0%	37.8%	37.8%	0.0%
Maximum Green (s)	6.0	38.0		8.0	40.0		29.0	29.0		29.0	29.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max		Max	Max		Max	Max	
Walk Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)		15.0			15.0		20.0	20.0		20.0	20.0	
Pedestrian Calls (#/hr)		0			0		2	2		2	2	
Act Effct Green (s)	45.6	40.9		50.4	48.8		29.0	29.0			29.0	
Actuated g/C Ratio	0.51	0.45		0.56	0.54		0.32	0.32			0.32	
v/c Ratio	0.02	0.48		0.25	0.19		0.11	0.26			0.03	
Control Delay	9.0	18.7		8.1	9.1		22.4	5.2			15.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	9.0	18.7		8.1	9.1		22.4	5.2			15.1	
LOS	A	B		A	A		C	A			B	
Approach Delay		18.5			8.9			9.5			15.1	
Approach LOS		B			A			A			B	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 52 (58%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.48
 Intersection Signal Delay: 14.4
 Intersection Capacity Utilization 47.5%
 Analysis Period (min) 60
 Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 1: Pink & Des Grives

↖ ø1	↗ ø2	↖ ø4
13 s	43 s	34 s
↖ ø5	↗ ø6	↖ ø8
11 s	45 s	34 s



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↑↑		↘	
Volume (veh/h)	6	654	323	11	47	40
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	7	719	323	11	47	40
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (m)		184	275			
pX, platoon unblocked					0.90	
vC, conflicting volume	334				701	167
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	334				456	167
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				90	95
cM capacity (veh/h)	1237				484	854
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	7	360	360	215	119	87
Volume Left	7	0	0	0	0	47
Volume Right	0	0	0	0	11	40
cSH	1237	1700	1700	1700	1700	604
Volume to Capacity	0.01	0.21	0.21	0.13	0.07	0.14
Queue Length 95th (m)	0.1	0.0	0.0	0.0	0.0	4.0
Control Delay (s)	7.9	0.0	0.0	0.0	0.0	12.0
Lane LOS	A					B
Approach Delay (s)	0.1			0.0		12.0
Approach LOS						B
Intersection Summary						
Average Delay			1.0			
Intersection Capacity Utilization			31.6%		ICU Level of Service	A
Analysis Period (min)			60			

	→	↘	↙	←	↖	↗	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↑↑		↘	↑↑	↘	↗	
Volume (veh/h)	460	72	56	279	41	135	
Sign Control	Free		Free		Stop		
Grade	0%		0%		0%		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	488	76	56	279	72	236	
Pedestrians							
Lane Width (m)							
Walking Speed (m/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None		None				
Median storage (veh)							
Upstream signal (m)							
pX, platoon unblocked							
vC, conflicting volume			564		777	282	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			564		777	282	
tC, single (s)			4.1		6.8	6.9	
tC, 2 stage (s)							
tF (s)			2.2		3.5	3.3	
p0 queue free %			94		77	67	
cM capacity (veh/h)			1004		315	715	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	325	239	56	140	140	72	236
Volume Left	0	0	56	0	0	72	0
Volume Right	0	76	0	0	0	0	236
cSH	1700	1700	1004	1700	1700	315	715
Volume to Capacity	0.19	0.14	0.06	0.08	0.08	0.23	0.33
Queue Length 95th (m)	0.0	0.0	1.4	0.0	0.0	7.0	11.8
Control Delay (s)	0.0	0.0	8.8	0.0	0.0	19.8	12.5
Lane LOS			A			C	B
Approach Delay (s)	0.0		1.5		14.2		
Approach LOS					B		
Intersection Summary							
Average Delay			4.0				
Intersection Capacity Utilization			37.2%		ICU Level of Service		A
Analysis Period (min)	60						

10



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↘	↑↑		↘	↑		↘	↑	
Volume (veh/h)	8	518	536	16	312	10	28	0	82	8	1	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour 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
Hourly flow rate (vph)	8	549	568	17	331	11	29	0	86	8	1	1
Pedestrians		1			1							
Lane Width (m)		3.5			3.5							
Walking Speed (m/s)		0.9			0.9							
Percent Blockage		0			0							
Right turn flare (veh)												
Median type		None			None							
Median storage veh												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	341			1117			1052	1225	560	749	1504	172
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	341			1117			1052	1225	560	749	1504	172
tC, single (s)	4.1			4.2			7.7	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			82	100	82	97	99	100
cM capacity (veh/h)	1229			598			164	174	471	239	116	841
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2			
Volume Total	283	843	17	220	121	29	86	8	2			
Volume Left	8	0	17	0	0	29	0	8	0			
Volume Right	0	568	0	0	11	0	86	0	1			
cSH	1229	1700	598	1700	1700	164	471	239	204			
Volume to Capacity	0.01	0.50	0.03	0.13	0.07	0.18	0.18	0.03	0.01			
Queue Length 95th (m)	0.2	0.0	0.7	0.0	0.0	5.2	5.3	0.8	0.2			
Control Delay (s)	0.3	0.0	11.2	0.0	0.0	31.7	14.3	20.6	22.8			
Lane LOS	A		B			D	B	C	C			
Approach Delay (s)	0.1		0.5			18.7		21.0				
Approach LOS						C		C				
Intersection Summary												
Average Delay			1.6									
Intersection Capacity Utilization			55.0%			ICU Level of Service			A			
Analysis Period (min)			60									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	148	37	164	72	44	19	102	173	133	150	14
Satd. Flow (prot)	1606	2687	0	1447	2505	0	1023	2460	0	1545	2980	0
Flt Permitted	0.675			0.540			0.644			0.176		
Satd. Flow (perm)	1141	2687	0	823	2505	0	694	2460	0	286	2980	0
Satd. Flow (RTOR)		33			46			438			12	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	104%	104%	104%	104%	104%	104%	253%	253%	253%	104%	104%	104%
Heavy Vehicles (%)	0%	14%	24%	11%	24%	16%	57%	24%	15%	4%	5%	21%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												0
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	10	154	38	171	75	46	48	258	438	138	156	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	192	0	171	121	0	48	696	0	138	171	0
Turn Type	custom			custom			custom			custom		
Protected Phases	5			1			7			3		
Permitted Phases	2	2		6	6		4	4		8	8	
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	30.0		9.0	30.0		9.0	30.0		9.0	30.0	
Total Split (s)	9.0	30.0	0.0	15.0	36.0	0.0	9.0	30.0	0.0	15.0	36.0	0.0
Total Split (%)	10.0%	33.3%	0.0%	16.7%	40.0%	0.0%	10.0%	33.3%	0.0%	16.7%	40.0%	0.0%
Maximum Green (s)	4.0	25.0		10.0	31.0		4.0	25.0		10.0	31.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		20.0			20.0			20.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	29.4	25.3		39.5	37.9		19.5	15.5		29.6	24.6	
Actuated g/C Ratio	0.37	0.32		0.50	0.48		0.25	0.20		0.37	0.31	
v/c Ratio	0.02	0.22		0.35	0.10		0.26	0.84		0.55	0.18	
Control Delay	13.8	19.1		15.6	10.3		20.7	21.5		25.3	19.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	13.8	19.1		15.6	10.3		20.7	21.5		25.3	19.8	
LOS	B	B		B	B		C	C		C	B	
Approach Delay		18.8			13.4			21.5			22.2	
Approach LOS		B			B			C			C	

Intersection Summary
 Cycle Length: 90
 Actuated Cycle Length: 79.3
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 19.7
 Intersection LOS: B
 Intersection Capacity Utilization 65.4%
 ICU Level of Service C
 Analysis Period (min) 60

Splits and Phases: 4: Pink & Vanier

ø1	ø2	ø3	ø4
15 s	30 s	15 s	30 s
ø5	ø6	ø7	ø8
9 s	36 s	9 s	36 s

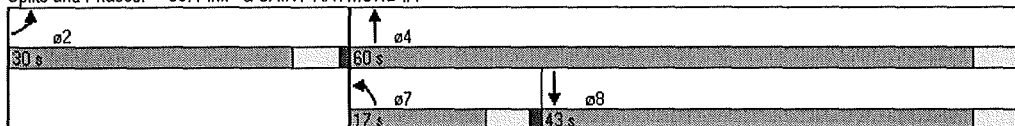


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↗	↖	↖	↑↑	↑↑	↖
Volume (vph)	424	92	176	637	1173	906
Satd. Flow (prot)	3242	1824	1604	3689	3539	1842
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3242	1824	1604	3689	3539	1842
Satd. Flow (RTOR)			99			756
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	108%	108%	106%	106%	106%	106%
Heavy Vehicles (%)	8%	3%	5%	3%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)					0	
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	458	99	187	675	1243	960
Shared Lane Traffic (%)						
Lane Group Flow (vph)	458	99	187	675	1243	960
Turn Type		Free	Prot			Free
Protected Phases	2		7	4	8	
Permitted Phases		Free		4		Free
Minimum Initial (s)	10.0		8.0	10.0	4.0	
Minimum Split (s)	25.0		14.0	25.0	30.0	
Total Split (s)	30.0	0.0	17.0	60.0	43.0	0.0
Total Split (%)	33.3%	0.0%	18.9%	66.7%	47.8%	0.0%
Maximum Green (s)	25.0		12.0	55.0	38.0	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Total Lost Time (s)	3.0	3.0	4.0	3.0	3.0	3.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	4.0		6.0	4.0	3.0	
Minimum Gap (s)	3.0		3.0	3.0	3.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0	
Recall Mode	C-Max		None	None	None	
Walk Time (s)					5.0	
Flash Dont Walk (s)					20.0	
Pedestrian Calls (#/hr)					0	
Act Effect Green (s)	28.4	90.0	13.0	55.6	38.6	90.0
Actuated g/C Ratio	0.32	1.00	0.14	0.62	0.43	1.00
v/c Ratio	0.45	0.05	0.81	0.30	0.82	0.52
Control Delay	30.0	0.1	68.8	8.3	28.0	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.0	0.1	68.8	8.3	28.0	1.1
LOS	C	A	E	A	C	A
Approach Delay	24.7			21.4	16.3	
Approach LOS	C			C	B	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 86 (96%), Referenced to phase 2:EBL and 6:, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 18.8
 Intersection LOS: B
 Intersection Capacity Utilization 67.8%
 ICU Level of Service C
 Analysis Period (min) 60

Splits and Phases: 36: Pink & SAINT-RAYMOND #1

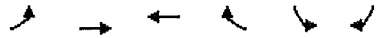


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵↵	
Volume (vph)	523	29	193	1180	77	59
Satd. Flow (prot)	3292	0	1785	3433	1713	0
Flt Permitted			0.396		0.972	
Satd. Flow (perm)	3292	0	744	3433	1713	0
Satd. Flow (RTOR)	8				44	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	102%	102%	104%	104%	104%	104%
Heavy Vehicles (%)	8%	0%	0%	4%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)		0				0
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	533	30	201	1227	80	61
Shared Lane Traffic (%)						
Lane Group Flow (vph)	563	0	201	1227	141	0
Turn Type	custom					
Protected Phases			1		4	
Permitted Phases	2		6	6		
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	30.0		9.0	25.0	30.0	
Total Split (s)	41.0	0.0	18.0	59.0	31.0	0.0
Total Split (%)	45.6%	0.0%	20.0%	65.6%	34.4%	0.0%
Maximum Green (s)	36.0		13.0	54.0	26.0	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Minimum Gap (s)	3.0		3.0	3.0	3.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0	
Recall Mode	C-Min		None	C-Max	Min	
Walk Time (s)	5.0			5.0	5.0	
Flash Dont Walk (s)	15.0			15.0	20.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effct Green (s)	58.4		71.4	71.4	12.6	
Actuated g/C Ratio	0.65		0.79	0.79	0.14	
v/c Ratio	0.26		0.28	0.45	0.51	
Control Delay	9.6		3.3	4.1	30.1	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	9.6		3.3	4.1	30.1	
LOS	A		A	A	C	
Approach Delay	9.6			4.0	30.1	
Approach LOS	A			A	C	

Intersection Summary
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.51
 Intersection Signal Delay: 7.2
 Intersection LOS: A
 Intersection Capacity Utilization 48.8%
 ICU Level of Service A
 Analysis Period (min) 60

Splits and Phases: 519: Pink & De La Sapinière

ø1	ø2	ø4
18 s	41 s	31 s
ø6		
59 s		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↑↑	↗	↘	↗
Volume (vph)	26	425	815	367	137	29
Satd. Flow (prot)	1516	3570	3466	1581	1733	1551
Flt Permitted	0.289				0.950	
Satd. Flow (perm)	461	3570	3466	1581	1733	1551
Satd. Flow (RTOR)				378		30
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	103%	103%	103%	103%	103%	103%
Heavy Vehicles (%)	6%	0%	3%	1%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)	0					
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	27	438	839	378	141	30
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	438	839	378	141	30
Turn Type	custom			custom	custom	
Protected Phases	5					
Permitted Phases	2	2	6	6	8	8
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	30.0	30.0	30.0	30.0
Total Split (s)	10.0	60.0	50.0	50.0	30.0	30.0
Total Split (%)	11.1%	66.7%	55.6%	55.6%	33.3%	33.3%
Maximum Green (s)	5.0	55.0	45.0	45.0	25.0	25.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Min	C-Min	Min	Min
Walk Time (s)			5.0	5.0	5.0	5.0
Flash Dont Walk (s)			20.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)			0	0	0	0
Act Effct Green (s)	69.4	69.4	64.8	64.8	14.6	14.6
Actuated g/C Ratio	0.77	0.77	0.72	0.72	0.16	0.16
w/c Ratio	0.06	0.16	0.34	0.30	0.50	0.11
Control Delay	2.4	2.0	4.1	0.7	39.9	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.4	2.0	4.1	0.7	39.9	11.7
LOS	A	A	A	A	D	B
Approach Delay		2.0	3.0		35.0	
Approach LOS		A	A		C	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
 Control Type: Actuated-Coordinated
 Maximum w/c Ratio: 0.50
 Intersection Signal Delay: 5.7
 Intersection Capacity Utilization 37.7%
 Analysis Period (min) 60
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 11: Pink & Montagne Nord

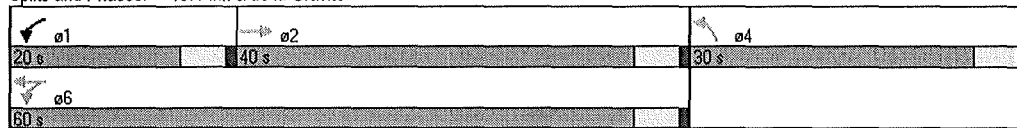
 a2 60 s	 a5 10 s	 a6 50 s	 a8 30 s
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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	
Volume (vph)	318	20	150	690	31	38
Satd. Flow (prot)	3262	0	1700	3368	1563	0
Flti Permitted			0.497		0.978	
Satd. Flow (perm)	3262	0	889	3368	1553	0
Satd. Flow (RTOR)	8				42	
Confl. Peds. (#/hr)					13	13
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	110%	110%	110%	110%	110%	110%
Heavy Vehicles (%)	9%	0%	5%	6%	0%	13%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						0
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	350	22	165	759	34	42
Shared Lane Traffic (%)						
Lane Group Flow (vph)	372	0	165	759	76	0
Turn Type			custom			
Protected Phases			1			
Permitted Phases	2		6	6	4	
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	30.0		10.0	25.0	30.0	
Total Split (s)	40.0	0.0	20.0	60.0	30.0	0.0
Total Split (%)	44.4%	0.0%	22.2%	66.7%	33.3%	0.0%
Maximum Green (s)	35.0		15.0	55.0	25.0	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Total Lost Time (s)	4.0	3.0	4.0	4.0	4.0	3.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Minimum Gap (s)	3.0		3.0	3.0	3.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0	
Recall Mode	C-Max		None	C-Max	None	
Walk Time (s)	5.0			5.0	5.0	
Flash Dont Walk (s)	15.0			15.0	20.0	
Pedestrian Calls (#/hr)	2			0	13	
Act Effect Green (s)	59.7		72.6	73.4	11.5	
Actuated g/C Ratio	0.66		0.81	0.82	0.13	
v/c Ratio	0.17		0.21	0.28	0.32	
Control Delay	4.8		1.8	1.3	20.4	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	4.8		1.8	1.3	20.4	
LOS	A		A	A	C	
Approach Delay	4.8			1.4	20.4	
Approach LOS	A			A	C	

Intersection Summary
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 16 (18%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.32
 Intersection Signal Delay: 3.4
 Intersection LOS: A
 Intersection Capacity Utilization 40.2%
 ICU Level of Service A
 Analysis Period (min) 60

Splits and Phases: 13: Pink & de la Gravité

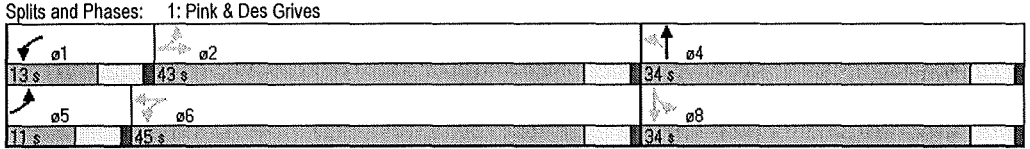




Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑	↑↑		↵	
Volume (veh/h)	45	410	767	40	20	22
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	50	451	798	42	20	22
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (m)		184	275			
pX, platoon unblocked						
vC, conflicting volume	839				1143	420
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	839				1143	420
IC, single (s)	4.1				6.8	7.1
IC, 2 stage (s)						
IF (s)	2.2				3.5	3.4
p0 queue free %	94				89	96
cM capacity (veh/h)	804				185	561
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	50	226	226	532	307	42
Volume Left	50	0	0	0	0	20
Volume Right	0	0	0	0	42	22
cSH	804	1700	1700	1700	1700	285
Volume to Capacity	0.06	0.13	0.13	0.31	0.18	0.15
Queue Length 95th (m)	1.6	0.0	0.0	0.0	0.0	4.1
Control Delay (s)	9.8	0.0	0.0	0.0	0.0	19.8
Lane LOS	A					C
Approach Delay (s)	1.0			0.0		19.8
Approach LOS						C
Intersection Summary						
Average Delay			1.0			
Intersection Capacity Utilization			40.0%		ICU Level of Service	A
Analysis Period (min)			60			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	↖
Volume (vph)	3	386	113	199	573	2	92	1	121	6	2	3
Satd. Flow (prot)	1785	3263	0	1750	2976	0	1750	1523	0	0	1761	0
Flt Permitted	0.421			0.355			0.750				0.904	
Satd. Flow (perm)	791	3263	0	654	2976	0	1382	1523	0	0	1636	0
Satd. Flow (RTOR)		53						128			3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%	106%
Heavy Vehicles (%)	0%	5%	8%	2%	20%	7%	2%	0%	5%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	3	409	120	211	607	2	98	1	128	6	2	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	3	529	0	211	609	0	98	129	0	0	11	0
Turn Type	custom			custom			Perm			custom		
Protected Phases	5			1				4				
Permitted Phases	2	2		6	6		4	4		8	8	
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	30.0		9.0	25.0		30.0	30.0		30.0	30.0	
Total Split (s)	11.0	43.0	0.0	13.0	45.0	0.0	34.0	34.0	0.0	34.0	34.0	0.0
Total Split (%)	12.2%	47.8%	0.0%	14.4%	50.0%	0.0%	37.8%	37.8%	0.0%	37.8%	37.8%	0.0%
Maximum Green (s)	6.0	38.0		8.0	40.0		29.0	29.0		29.0	29.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max		Max	Max		Max	Max	
Walk Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)		15.0			15.0		20.0	20.0		20.0	20.0	
Pedestrian Calls (#/hr)		0			0		2	2		2	2	
Act Effct Green (s)	43.7	38.1		50.4	48.8		29.0	29.0		29.0	29.0	
Actuated g/C Ratio	0.49	0.42		0.56	0.54		0.32	0.32		0.32	0.32	
v/c Ratio	0.01	0.37		0.46	0.38		0.22	0.22		0.22	0.02	
Control Delay	8.7	16.8		8.4	8.9		23.9	5.4		18.5	18.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	8.7	16.8		8.4	8.9		23.9	5.4		18.5	18.5	
LOS	A	B		A	A		C	A		B	B	
Approach Delay		16.8			8.8			13.4			18.5	
Approach LOS		B			A			B			B	

Intersection Summary
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 52 (58%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.46
 Intersection Signal Delay: 12.2
 Intersection LOS: B
 Intersection Capacity Utilization 48.1%
 ICU Level of Service A
 Analysis Period (min) 60



HCM-Intersections sans feux
8: Pink & Du Conservatoire

Chemin Pink Horizon 2012
Heure pointe PM

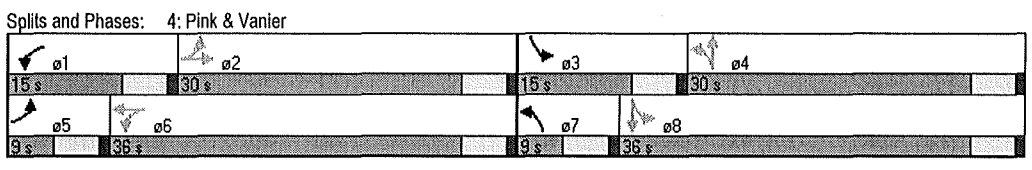
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑	↑↑		↑	↑		↑	↑	
Volume (veh/h)	1	317	22	34	580	3	10	0	21	33	1	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1	336	23	36	615	3	11	0	22	33	1	4
Pedestrians		1			1							
Lane Width (m)		3.5			3.5							
Walking Speed (m/s)		1.2			1.2							
Percent Blockage		0			0							
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	618			359			735	1040	181	882	1050	310
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	618			359			735	1040	181	882	1050	310
tC, single (s)	4.1			4.1			7.7	6.5	8.3	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	4.0	3.5	4.0	3.3
p0 queue free %	100			97			96	100	97	86	100	99
cM capacity (veh/h)	972			1210			284	225	652	230	222	691
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2			
Volume Total	169	191	36	410	208	11	22	33	5			
Volume Left	1	0	36	0	0	11	0	33	0			
Volume Right	0	23	0	0	3	0	22	0	4			
cSH	972	1700	1210	1700	1700	284	652	230	486			
Volume to Capacity	0.00	0.11	0.03	0.24	0.12	0.04	0.03	0.14	0.01			
Queue Length 95th (m)	0.0	0.0	0.7	0.0	0.0	0.9	0.8	4.0	0.2			
Control Delay (s)	0.1	0.0	8.1	0.0	0.0	18.2	10.7	23.3	12.5			
Lane LOS	A		A			C	B	C	B			
Approach Delay (s)	0.0		0.4			13.1		21.9				
Approach LOS						B		C				
Intersection Summary												
Average Delay			1.4									
Intersection Capacity Utilization			45.3%			ICU Level of Service			A			
Analysis Period (min)			60									

Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↑↑		↖	↑↑	↖	↗	
Volume (veh/h)	415	52	82	564	45	43	
Sign Control	Free		Free		Stop		
Grade	0%		0%		0%		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	432	54	85	587	79	75	
Pedestrians							
Lane Width (m)							
Walking Speed (m/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None		None				
Median storage (veh)							
Upstream signal (m)							
pX, platoon unblocked							
vC, conflicting volume			486		922	243	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			486		922	243	
tC, single (s)			4.1		7.1	7.2	
tC, 2 stage (s)							
tF (s)			2.2		3.6	3.4	
p0 queue free %			92		66	90	
cM capacity (veh/h)			1081		230	725	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	288	198	85	293	293	79	75
Volume Left	0	0	85	0	0	79	0
Volume Right	0	54	0	0	0	0	75
cSH	1700	1700	1081	1700	1700	230	725
Volume to Capacity	0.17	0.12	0.08	0.17	0.17	0.34	0.10
Queue Length 95th (m)	0.0	0.0	2.1	0.0	0.0	12.3	2.8
Control Delay (s)	0.0	0.0	8.6	0.0	0.0	28.8	10.5
Lane LOS			A			D	B
Approach Delay (s)	0.0		1.1				19.9
Approach LOS							C
Intersection Summary							
Average Delay			2.9				
Intersection Capacity Utilization			32.7%		ICU Level of Service		A
Analysis Period (min)			60				

20

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↕	↘	↙	↕	↘	↙	↕	↘	↙	↕	↘
Volume (vph)	19	87	13	253	197	101	32	193	201	74	146	24
Satd. Flow (prot)	1385	2623	0	1545	2813	0	1199	2484	0	1560	3000	0
Flt Permitted	0.563			0.585			0.640			0.269		
Satd. Flow (perm)	821	2623	0	951	2813	0	808	2484	0	442	3000	0
Satd. Flow (RTOR)		14			105			209			22	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	104%	104%	104%	104%	104%	104%	104%	104%	104%	104%	104%	104%
Heavy Vehicles (%)	16%	16%	46%	4%	5%	15%	34%	12%	15%	3%	5%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)			0									
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	20	90	14	263	205	105	33	201	209	77	152	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	20	104	0	263	310	0	33	410	0	77	177	0
Turn Type	custom			custom			custom			custom		
Protected Phases	5			1			7			3		
Permitted Phases	2	2		6	6		4	4		8	8	
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	30.0		9.0	30.0		9.0	30.0		9.0	30.0	
Total Split (s)	9.0	30.0	0.0	15.0	36.0	0.0	9.0	30.0	0.0	15.0	36.0	0.0
Total Split (%)	10.0%	33.3%	0.0%	16.7%	40.0%	0.0%	10.0%	33.3%	0.0%	16.7%	40.0%	0.0%
Maximum Green (s)	4.0	25.0		10.0	31.0		4.0	25.0		10.0	31.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		20.0			20.0			20.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	29.7	25.6		40.2	37.0		14.7	11.7		21.9	18.6	
Actuated g/C Ratio	0.41	0.35		0.56	0.51		0.20	0.16		0.30	0.26	
v/c Ratio	0.05	0.11		0.43	0.21		0.18	0.71		0.30	0.22	
Control Delay	11.4	17.4		13.6	9.4		19.3	21.9		20.1	19.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	11.4	17.4		13.6	9.4		19.3	21.9		20.1	19.2	
LOS	B	B		B	A		B	C		C	B	
Approach Delay		16.5			11.4			21.7			19.5	
Approach LOS		B			B			C			B	

Intersection Summary
 Cycle Length: 90
 Actuated Cycle Length: 72.3
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.71
 Intersection Signal Delay: 16.6
 Intersection Capacity Utilization 53.7%
 Analysis Period (min) 60
 Intersection LOS: B
 ICU Level of Service A

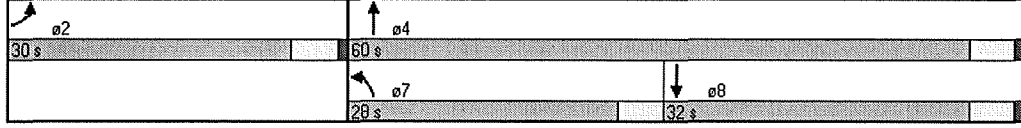


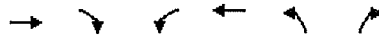


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↗	↖	↖	↑↑	↑↑	↖
Volume (vph)	1052	130	63	878	468	363
Satd. Flow (prot)	3433	1842	1652	3725	3539	1842
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1842	1652	3725	3539	1842
Satd. Flow (RTOR)		130				421
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	150%	150%	116%	116%	116%	116%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)					0	
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	1578	195	73	1018	543	421
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1578	195	73	1018	543	421
Turn Type		Free	Prot			Free
Protected Phases	2		7	4	8	
Permitted Phases		Free		4		Free
Minimum Initial (s)	10.0		8.0	10.0	4.0	
Minimum Split (s)	25.0		14.0	25.0	21.0	
Total Split (s)	30.0	0.0	28.0	60.0	32.0	0.0
Total Split (%)	33.3%	0.0%	31.1%	66.7%	35.6%	0.0%
Maximum Green (s)	25.0		24.0	55.0	27.0	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.0		0.0	1.0	1.0	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		6.0	4.0	3.0	
Minimum Gap (s)	3.0		3.0	3.0	3.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0	
Recall Mode	C-Max		None	None	None	
Walk Time (s)					5.0	
Flash Dont Walk (s)					11.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	45.8	90.0	13.2	38.2	24.6	90.0
Actuated g/C Ratio	0.51	1.00	0.15	0.42	0.27	1.00
v/c Ratio	0.90	0.11	0.30	0.64	0.56	0.23
Control Delay	33.1	0.1	36.8	22.0	30.9	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.1	0.1	36.8	22.0	30.9	0.3
LOS	C	A	D	C	C	A
Approach Delay	29.5			23.0	17.6	
Approach LOS	C			C	B	

Intersection Summary
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 86 (96%), Referenced to phase 2:EBL and 6:, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 24.6
 Intersection Capacity Utilization 79.8%
 Analysis Period (min) 60
 Intersection LOS: C
 ICU Level of Service D

Splits and Phases: 36: Pink & SAINT-RAYMOND #1



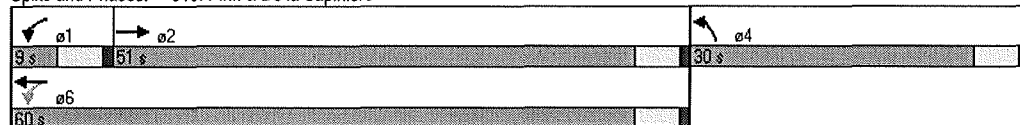


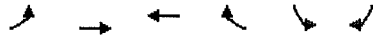
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Volume (vph)	1242	20	31	353	17	220
Satd. Flow (prot)	3362	0	1733	3104	1616	0
Flt Permitted			0.072		0.996	
Satd. Flow (perm)	3362	0	131	3104	1616	0
Satd. Flow (RTOR)	3				103	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	130%	130%	130%	130%	130%	130%
Heavy Vehicles (%)	6%	5%	3%	15%	6%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						0
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	1615	26	40	459	22	286
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1641	0	40	459	308	0
Turn Type			pm+pt			
Protected Phases	2		1	6	4	
Permitted Phases			6	6		
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	30.0		9.0	21.0	30.0	
Total Split (s)	51.0	0.0	9.0	60.0	30.0	0.0
Total Split (%)	56.7%	0.0%	10.0%	66.7%	33.3%	0.0%
Maximum Green (s)	46.0		4.0	55.0	25.0	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Minimum Gap (s)	3.0		3.0	3.0	3.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0	
Recall Mode	C-Min		None	C-Max	Min	
Walk Time (s)	5.0			5.0	5.0	
Flash Dont Walk (s)	20.0			11.0	20.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effect Green (s)	58.4		64.7	64.7	19.3	
Actuated g/C Ratio	0.65		0.72	0.72	0.21	
v/c Ratio	0.75		0.17	0.21	0.72	
Control Delay	15.2		8.3	7.0	31.3	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	15.2		8.3	7.0	31.3	
LOS	B		A	A	C	
Approach Delay	15.2			7.1	31.3	
Approach LOS	B			A	C	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.75
 Intersection Signal Delay: 15.6
 Intersection Capacity Utilization 71.0%
 Analysis Period (min) 60
 Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 519: Pink & De la Sapinière



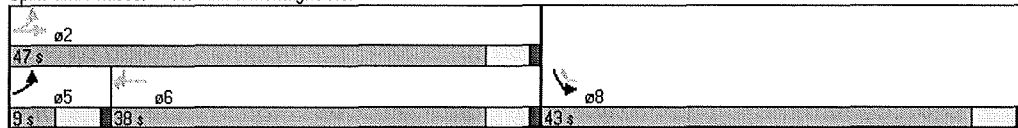


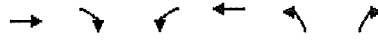
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↗	↗	↘	↘	↗
Volume (vph)	20	880	324	73	363	22
Satd. Flow (prot)	1606	3466	3051	1479	1767	1353
Flt Permitted	0.446				0.950	
Satd. Flow (perm)	754	3466	3051	1479	1767	1353
Satd. Flow (RTOR)				84		25
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	115%	140%	130%	115%	115%	115%
Heavy Vehicles (%)	0%	3%	17%	8%	1%	18%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)	0					
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	23	1232	421	84	417	25
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	1232	421	84	417	25
Turn Type	custom			custom		custom
Protected Phases	5				8	
Permitted Phases	2	2	6	8		6
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	9.0	21.0	30.0	25.0	25.0	30.0
Total Split (s)	9.0	47.0	38.0	43.0	43.0	38.0
Total Split (%)	10.0%	52.2%	42.2%	47.8%	47.8%	42.2%
Maximum Green (s)	4.0	42.0	33.0	38.0	38.0	33.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead		Lag		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Max	C-Min	None	None	C-Min
Walk Time (s)		5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0	20.0	15.0	15.0	20.0
Pedestrian Calls (#/hr)		0	0	0	0	0
Act Effct Green (s)	55.0	55.0	50.4	29.0	29.0	50.4
Actuated g/C Ratio	0.61	0.61	0.56	0.32	0.32	0.56
v/c Ratio	0.04	0.58	0.25	0.16	0.73	0.03
Control Delay	10.8	10.6	10.0	7.9	34.9	6.8
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay	10.8	10.7	10.0	7.9	34.9	6.8
LOS	B	B	A	A	C	A
Approach Delay		10.7	9.6		33.3	
Approach LOS		B	A		C	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 15.0
 Intersection Capacity Utilization 63.8%
 Analysis Period (min) 60
 Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 11: Pink & Montagne Nord





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑↑	↗	
Volume (vph)	581	15	38	232	23	135
Satd. Flow (prot)	3455	0	1530	3305	1601	0
Flt Permitted			0.216		0.993	
Satd. Flow (perm)	3455	0	348	3305	1598	0
Satd. Flow (RTOR)	3				236	
Confl. Peds. (#/hr)					13	13
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	175%	175%	175%	175%	175%	175%
Heavy Vehicles (%)	3%	0%	5%	8%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)			0			
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	1017	26	66	406	40	236
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1043	0	66	406	276	0
Tum Type			custom			
Protected Phases			1			
Permitted Phases	2		6	6	4	
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	30.0		10.0	25.0	30.0	
Total Split (s)	40.0	0.0	20.0	60.0	30.0	0.0
Total Split (%)	44.4%	0.0%	22.2%	66.7%	33.3%	0.0%
Maximum Green (s)	35.0		15.0	55.0	25.0	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Total Lost Time (s)	4.0	3.0	4.0	4.0	4.0	3.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Minimum Gap (s)	3.0		3.0	3.0	3.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0	
Recall Mode	C-Max		None	C-Max	None	
Walk Time (s)	5.0			5.0	5.0	
Flash Dont Walk (s)	15.0			15.0	20.0	
Pedestrian Calls (#/hr)	2			0	13	
Act Effct Green (s)	60.4		69.9	69.9	12.1	
Actuated g/C Ratio	0.67		0.78	0.78	0.13	
v/c Ratio	0.45		0.18	0.16	0.66	
Control Delay	5.8		3.0	0.4	15.0	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	5.8		3.0	0.4	15.0	
LOS	A		A	A	B	
Approach Delay	5.8			0.7	15.0	
Approach LOS	A			A	B	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 16 (18%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.66
 Intersection Signal Delay: 5.9
 Intersection Capacity Utilization 61.6%
 Analysis Period (min) 60
 Intersection LOS: A
 ICU Level of Service B

Splits and Phases: 13: Pink & de la Gravité

↖ σ1	→ σ2	↗ σ4
20 s	40 s	30 s
↖ σ6		
60 s		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Volume (vph)	8	606	93	79	287	3	47	1	142	1	6	8
Satd. Flow (prot)	1190	3353	0	1608	2966	0	1785	1523	0	0	1538	0
Flt Permitted	0.528			0.186			0.745				0.991	
Satd. Flow (perm)	661	3353	0	315	2966	0	1400	1523	0	0	1529	0
Satd. Flow (RTOR)		23			1			185			10	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	130%	130%	130%	130%	130%	130%	130%	130%	130%	130%	130%	130%
Heavy Vehicles (%)	50%	5%	0%	11%	20%	33%	0%	0%	5%	0%	0%	25%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	10	788	121	103	373	4	61	1	185	1	8	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	909	0	103	377	0	61	186	0	0	19	0
Turn Type	custom			custom			Perm			custom		
Protected Phases	5			1				4				
Permitted Phases	2	2		6	6		4	4		8	8	
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Spill (s)	9.0	30.0		9.0	25.0		30.0	30.0		30.0	30.0	
Total Split (s)	11.0	43.0	0.0	13.0	45.0	0.0	34.0	34.0	0.0	34.0	34.0	0.0
Total Split (%)	12.2%	47.8%	0.0%	14.4%	50.0%	0.0%	37.8%	37.8%	0.0%	37.8%	37.8%	0.0%
Maximum Green (s)	6.0	38.0		8.0	40.0		29.0	29.0		29.0	29.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max		Max	Max		Max	Max	
Walk Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)		15.0			15.0		20.0	20.0		20.0	20.0	
Pedestrian Calls (#/hr)		0			0		2	2		2	2	
Act Effct Green (s)	45.4	40.8		50.4	48.8		29.0	29.0		29.0	29.0	
Actuated g/C Ratio	0.50	0.45		0.56	0.54		0.32	0.32		0.32	0.32	
v/c Ratio	0.03	0.59		0.36	0.23		0.14	0.30		0.04	0.04	
Control Delay	9.1	20.8		9.8	6.9		22.7	5.1		14.6	14.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	9.1	20.8		9.8	6.9		22.7	5.1		14.6	14.6	
LOS	A	C		A	A		C	A		B	B	
Approach Delay		20.6			7.6			9.4			14.6	
Approach LOS		C			A			A			B	

Intersection Summary
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 52 (58%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.59
 Intersection Signal Delay: 15.1
 Intersection LOS: B
 Intersection Capacity Utilization 55.3%
 ICU Level of Service B
 Analysis Period (min) 60

Splits and Phases: 1: Pink & Des Grives

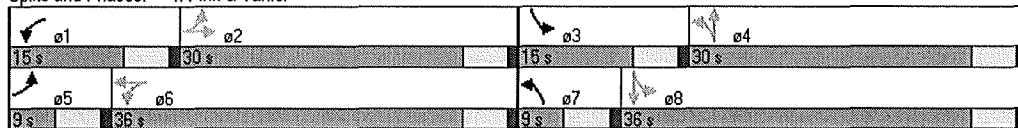
↖ φ1	↗ φ2	↖ φ4
13 s	43 s	34 s
↖ φ5	↗ φ6	↖ φ8
11 s	45 s	34 s

	↖	→	↘	↙	←	↖	↙	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Volume (vph)	10	148	37	164	72	44	19	102	173	133	150	14
Satd. Flow (prot)	1606	2686	0	1447	2504	0	1023	2460	0	1545	2981	0
Flt Permitted	0.659			0.518			0.622			0.157		
Satd. Flow (perm)	1114	2686	0	789	2504	0	670	2460	0	255	2981	0
Satd. Flow (RTOR)		34			55			471			12	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	126%	126%	126%	126%	126%	126%	300%	300%	300%	126%	126%	126%
Heavy Vehicles (%)	0%	14%	24%	11%	24%	16%	57%	24%	15%	4%	5%	21%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												0
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	13	186	47	207	91	55	57	306	519	168	189	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	233	0	207	146	0	57	825	0	168	207	0
Turn Type	custom			custom			custom			custom		
Protected Phases	5			1			7			3		
Permitted Phases	2	2		6	6		4	4		8	8	
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	30.0		9.0	30.0		9.0	30.0		9.0	30.0	
Total Split (s)	9.0	30.0	0.0	15.0	36.0	0.0	9.0	30.0	0.0	15.0	36.0	0.0
Total Split (%)	10.0%	33.3%	0.0%	16.7%	40.0%	0.0%	10.0%	33.3%	0.0%	16.7%	40.0%	0.0%
Maximum Green (s)	4.0	25.0		10.0	31.0		4.0	25.0		10.0	31.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		20.0			20.0			20.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	29.2	25.2		39.8	38.1		23.4	19.3		33.9	27.0	
Actuated g/C Ratio	0.35	0.30		0.47	0.45		0.28	0.23		0.40	0.32	
v/c Ratio	0.03	0.28		0.46	0.12		0.28	0.89		0.67	0.21	
Control Delay	14.8	21.5		18.9	10.8		21.1	27.5		31.5	20.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	14.8	21.5		18.9	10.8		21.1	27.5		31.5	20.5	
LOS	B	C		B	B		C	C		C	C	
Approach Delay		21.2			15.6			27.1			25.4	
Approach LOS		C			B			C			C	

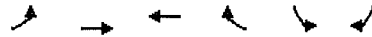
Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 83.8
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 23.8
 Intersection LOS: C
 Intersection Capacity Utilization 75.1%
 ICU Level of Service D
 Analysis Period (min) 60

Splits and Phases: 4: Pink & Vanier



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↓	↑↑		↓	↑		↓	↑	
Volume (veh/h)	8	518	536	16	312	10	28	0	82	8	1	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour 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
Hourly flow rate (vph)	11	684	708	21	412	13	37	0	108	8	1	1
Pedestrians		1			1							
Lane Width (m)		3.5			3.5							
Walking Speed (m/s)		0.9			0.9							
Percent Blockage		0			0							
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	425			1391			1309	1526	697	933	1873	214
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	425			1391			1309	1526	697	933	1873	214
tC, single (s)	4.1			4.2			7.7	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			95			64	100	72	95	99	100
cM capacity (veh/h)	1145			468			103	112	383	152	67	791
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2			
Volume Total	352	1049	21	275	150	37	108	8	2			
Volume Left	11	0	21	0	0	37	0	8	0			
Volume Right	0	708	0	0	13	0	108	0	1			
cSH	1145	1700	468	1700	1700	103	383	152	124			
Volume to Capacity	0.01	0.62	0.05	0.16	0.09	0.36	0.28	0.05	0.02			
Queue Length 95th (m)	0.2	0.0	1.1	0.0	0.0	12.8	9.4	1.3	0.4			
Control Delay (s)	0.3	0.0	13.1	0.0	0.0	59.1	18.1	30.0	34.5			
Lane LOS	A		B			F	C	D	D			
Approach Delay (s)	0.1		0.6			28.5		30.9				
Approach LOS						D		D				
Intersection Summary												
Average Delay			2.4									
Intersection Capacity Utilization			65.1%			ICU Level of Service				C		
Analysis Period (min)			60									



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑	↑↵		↵	
Volume (veh/h)	6	654	323	11	47	40
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	8	889	439	15	51	44
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (m)		184	275			
pX, platoon unblocked					0.85	
vC, conflicting volume	454				908	227
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	454				533	227
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
fF (s)	2.2				3.5	3.3
p0 queue free %	99				87	94
cM capacity (veh/h)	1117				406	782
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	8	445	445	293	161	95
Volume Left	8	0	0	0	0	51
Volume Right	0	0	0	0	15	44
cSH	1117	1700	1700	1700	1700	521
Volume to Capacity	0.01	0.26	0.26	0.17	0.09	0.18
Queue Length 95th (m)	0.2	0.0	0.0	0.0	0.0	5.3
Control Delay (s)	8.2	0.0	0.0	0.0	0.0	13.4
Lane LOS	A					B
Approach Delay (s)	0.1			0.0		13.4
Approach LOS						B
Intersection Summary						
Average Delay			0.9			
Intersection Capacity Utilization			36.8%	ICU Level of Service	A	
Analysis Period (min)			60			

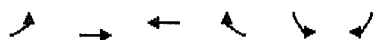
	→	↘	↙	←	↖	↗	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↑↑		↖	↑↑	↖	↖	
Volume (veh/h)	460	72	56	279	41	200	
Sign Control	Free			Free	Stop		
Grade	0%			0%	0%		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	607	95	74	368	123	600	
Pedestrians							
Lane Width (m)							
Walking Speed (m/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None			None			
Median storage veh							
Upstream signal (m)							
pX, platoon unblocked							
vC, conflicting volume			702		987	351	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			702		987	351	
tC, single (s)			4.1		6.8	6.9	
tC, 2 stage (s)							
tF (s)			2.2		3.5	3.3	
p0 queue free %			92		45	7	
cM capacity (veh/h)			891		224	645	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	405	297	74	184	184	123	600
Volume Left	0	0	74	0	0	123	0
Volume Right	0	95	0	0	0	0	600
cSH	1700	1700	891	1700	1700	224	645
Volume to Capacity	0.24	0.17	0.08	0.11	0.11	0.55	0.93
Queue Length 95th (m)	0.0	0.0	2.2	0.0	0.0	27.3	166.2
Control Delay (s)	0.0	0.0	9.4	0.0	0.0	40.1	63.0
Lane LOS			A			E	F
Approach Delay (s)	0.0		1.6			59.1	
Approach LOS						F	
Intersection Summary							
Average Delay			23.3				
Intersection Capacity Utilization			63.6%		ICU Level of Service		B
Analysis Period (min)			60				



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↗	↗	↖	↑↑	↑↑	↗
Volume (vph)	424	92	176	637	1173	906
Satd. Flow (prot)	3242	1773	1604	3689	3574	1860
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3242	1773	1604	3689	3574	1860
Satd. Flow (RTOR)		138				756
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	150%	150%	116%	116%	116%	116%
Heavy Vehicles (%)	8%	6%	5%	3%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)					0	
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	636	138	204	739	1361	1051
Shared Lane Traffic (%)						
Lane Group Flow (vph)	636	138	204	739	1361	1051
Turn Type		Free	Prot			Free
Protected Phases	2		7	4	8	
Permitted Phases		Free		4		Free
Detector Phase	2		7	4	8	
Switch Phase						
Minimum Initial (s)	10.0		8.0	10.0	4.0	
Minimum Split (s)	25.0		14.0	25.0	21.0	
Total Split (s)	30.0	0.0	28.0	60.0	32.0	0.0
Total Split (%)	33.3%	0.0%	31.1%	66.7%	35.6%	0.0%
Maximum Green (s)	25.0		23.0	55.0	27.0	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	-2.0	-1.0	-1.0	-2.0	-2.0	-1.0
Total Lost Time (s)	3.0	3.0	4.0	3.0	3.0	3.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		6.0	4.0	3.0	
Minimum Gap (s)	3.0		3.0	3.0	3.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0	
Recall Mode	C-Max		None	None	None	
Walk Time (s)					5.0	
Flash Dont Walk (s)					11.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	27.0	90.0	19.8	57.0	33.2	90.0
Actuated g/C Ratio	0.30	1.00	0.22	0.63	0.37	1.00
v/c Ratio	0.65	0.08	0.58	0.32	1.03	0.57
Control Delay	27.6	0.1	37.8	8.0	115.6	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.6	0.1	37.8	8.0	115.6	1.3
LOS	C	A	D	A	F	A
Approach Delay	22.7			14.5	65.8	
Approach LOS	C			B	E	

Intersection Summary	
Cycle Length:	90
Actuated Cycle Length:	90
Offset:	86 (96%), Referenced to phase 2:EBL and 6:, Start of Green
Natural Cycle:	70
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.03
Intersection Signal Delay:	46.0
Intersection LOS:	D
Intersection Capacity Utilization:	77.1%
ICU Level of Service:	D
Analysis Period (min):	60

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↓		↖	↑↑	↗	
Volume (vph)	523	29	193	1180	77	59
Satd. Flow (prot)	3292	0	1785	3433	1720	0
Flt Permitted			0.319		0.973	
Satd. Flow (perm)	3292	0	599	3433	1720	0
Satd. Flow (RTOR)	8				44	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	130%	130%	130%	130%	130%	130%
Heavy Vehicles (%)	8%	0%	0%	4%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						0
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	680	38	251	1534	100	77
Shared Lane Traffic (%)						
Lane Group Flow (vph)	718	0	251	1534	177	0
Turn Type			pm+pt			
Protected Phases	2		1	6	4	
Permitted Phases			6			
Detector Phase	2		1	6	4	
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	30.0		9.0	21.0	30.0	
Total Split (s)	44.0	0.0	16.0	60.0	30.0	0.0
Total Split (%)	48.9%	0.0%	17.8%	66.7%	33.3%	0.0%
Maximum Green (s)	39.0		11.0	55.0	25.0	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	-2.0	-1.0	-2.0	-2.0	-2.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Minimum Gap (s)	3.0		3.0	3.0	3.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0	
Recall Mode	C-Min		None	None	Min	
Walk Time (s)	5.0				5.0	
Flash Dont Walk (s)	20.0				20.0	
Pedestrian Calls (#/hr)	0				0	
Act Effct Green (s)	55.4		69.5	69.5	14.5	
Actuated g/C Ratio	0.62		0.77	0.77	0.16	
v/c Ratio	0.35		0.41	0.58	0.57	
Control Delay	10.0		4.8	5.3	32.5	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	10.0		4.8	5.3	32.5	
LOS	A		A	A	C	
Approach Delay	10.0			5.2	32.5	
Approach LOS	A			A	C	
Intersection Summary						
Cycle Length: 90						
Actuated Cycle Length: 90						
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Green						
Natural Cycle: 70						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 0.58						
Intersection Signal Delay: 8.3						
Intersection Capacity Utilization 59.3%						
Analysis Period (min) 60						
Intersection LOS: A						
ICU Level of Service B						



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↕	↕	↗	↘	↗
Volume (vph)	26	425	815	367	137	29
Satd. Flow (prot)	1606	3368	3051	1551	1733	1395
Flt Permitted	0.243				0.950	
Satd. Flow (perm)	411	3368	3051	1551	1733	1395
Satd. Flow (RTOR)				348		33
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	115%	140%	130%	115%	115%	115%
Heavy Vehicles (%)	0%	6%	17%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)	0					0
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	30	595	1060	422	158	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	30	595	1060	422	158	33
Turn Type	custom			custom		Perm
Protected Phases					8	
Permitted Phases	2	2	6	6		8
Detector Phase	2	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	21.0	21.0	30.0	30.0	30.0	30.0
Total Split (s)	46.0	46.0	46.0	46.0	44.0	44.0
Total Split (%)	51.1%	51.1%	51.1%	51.1%	48.9%	48.9%
Maximum Green (s)	41.0	41.0	41.0	41.0	39.0	39.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	C-Max	C-Max	C-Min	C-Min	Min	Min
Walk Time (s)			5.0	5.0	5.0	5.0
Flash Dont Walk (s)			20.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)			0	0	0	0
Act Effct Green (s)	68.3	68.3	68.3	68.3	15.7	15.7
Actuated g/C Ratio	0.76	0.76	0.76	0.76	0.17	0.17
v/c Ratio	0.10	0.23	0.46	0.33	0.52	0.12
Control Delay	3.2	2.5	2.6	0.8	39.5	11.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.2	2.5	2.6	0.8	39.5	11.2
LOS	A	A	A	A	D	B
Approach Delay		2.5	2.1		34.6	
Approach LOS		A	A		C	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 88 (98%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.52
 Intersection Signal Delay: 4.9
 Intersection Capacity Utilization 44.7%
 Analysis Period (min) 60
 Intersection LOS: A
 ICU Level of Service A

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↙	
Volume (vph)	218	20	95	389	31	38
Satd. Flow (prot)	3228	0	1516	3368	1566	0
Flt Permitted			0.469		0.978	
Satd. Flow (perm)	3228	0	748	3368	1556	0
Satd. Flow (RTOR)	13				66	
Confl. Peds. (#/hr)					13	13
Confl. Bikes (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	175%	175%	175%	175%	175%	175%
Heavy Vehicles (%)	10%	0%	6%	6%	0%	13%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)			0			
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	382	35	166	681	54	66
Shared Lane Traffic (%)						
Lane Group Flow (vph)	417	0	166	681	120	0
Turn Type			custom			
Protected Phases			1			
Permitted Phases	2		6	6	4	
Detector Phase	2		1	6	4	
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	30.0		10.0	25.0	30.0	
Total Split (s)	40.0	0.0	20.0	60.0	30.0	0.0
Total Split (%)	44.4%	0.0%	22.2%	66.7%	33.3%	0.0%
Maximum Green (s)	35.0		15.0	55.0	25.0	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	3.0	4.0	4.0	4.0	3.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Minimum Gap (s)	3.0		3.0	3.0	3.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0	
Recall Mode	C-Max		None	C-Max	None	
Walk Time (s)	5.0			5.0	5.0	
Flash Dont Walk (s)	15.0			15.0	20.0	
Pedestrian Calls (#/hr)	2			0	13	
Act Effct Green (s)	56.3		69.7	69.7	12.3	
Actuated g/C Ratio	0.63		0.77	0.77	0.14	
v/c Ratio	0.21		0.25	0.26	0.45	
Control Delay	5.0		1.5	0.8	21.3	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	5.0		1.5	0.8	21.3	
LOS	A		A	A	C	
Approach Delay	5.0			1.0	21.3	
Approach LOS	A			A	C	
Intersection Summary						
Cycle Length: 90						
Actuated Cycle Length: 90						
Offset: 16 (18%), Referenced to phase 2:EBT and 6:WBTL, Start of Green						
Natural Cycle: 70						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 0.45						
Intersection Signal Delay: 3.9						
Intersection LOS: A						
Intersection Capacity Utilization 43.3%						
ICU Level of Service A						
Analysis Period (min) 60						

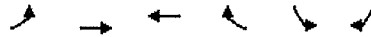
HCM-Intersections avec feux
1: Pink & Des Grives

Chemin Pink Horizon 2025
Heure pointe PM

	↖	→	↗	↖	←	↖	↖	↑	↗	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗		↖	↖↗			↕	
Volume (vph)	3	386	113	199	573	3	92	1	121	6	2	3
Satd. Flow (prot)	1785	3220	0	1750	3334	0	1750	1509	0	0	1764	0
Flt Permitted	0.359			0.290			0.748				0.890	
Satd. Flow (perm)	675	3220	0	534	3334	0	1378	1509	0	0	1612	0
Satd. Flow (RTOR)		52			1			157				4
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	130%	130%	130%	130%	130%	130%	130%	130%	130%	130%	130%	130%
Heavy Vehicles (%)	0%	8%	4%	2%	7%	0%	2%	0%	6%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	4	502	147	259	745	4	120	1	157	8	3	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	649	0	259	749	0	120	158	0	0	15	0
Turn Type	custom			custom			Perm			custom		
Protected Phases	5			1				4				
Permitted Phases	2	2		6	6		4	4		8	8	
Detector Phase	5	2		1	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	30.0		9.0	25.0		30.0	30.0		30.0	30.0	
Total Split (s)	11.0	43.0	0.0	13.0	45.0	0.0	34.0	34.0	0.0	34.0	34.0	0.0
Total Split (%)	12.2%	47.8%	0.0%	14.4%	50.0%	0.0%	37.8%	37.8%	0.0%	37.8%	37.8%	0.0%
Maximum Green (s)	6.0	38.0		8.0	40.0		29.0	29.0		29.0	29.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (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
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max		Max	Max		Max	Max	
Walk Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)		15.0			15.0		20.0	20.0		20.0	20.0	
Pedestrian Calls (#/hr)		0			0		2	2		2	2	
Act Effct Green (s)	43.6	38.0		50.4	48.8		29.0	29.0			29.0	
Actuated g/C Ratio	0.48	0.42		0.56	0.54		0.32	0.32			0.32	
v/c Ratio	0.01	0.47		0.64	0.41		0.27	0.27			0.03	
Control Delay	8.8	18.4		17.3	12.4		24.7	5.2			17.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	8.8	18.4		17.3	12.4		24.7	5.2			17.9	
LOS	A	B		B	B		C	A			B	
Approach Delay		18.4			13.7			13.6			17.9	
Approach LOS		B			B			B			B	
Intersection Summary												
Cycle Length: 90												
Actuated Cycle Length: 90												
Offset: 52 (58%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 70												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.64												
Intersection Signal Delay: 15.3												
Intersection LOS: B												
Intersection Capacity Utilization 56.2%												
ICU Level of Service B												
Analysis Period (min) 60												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	87	13	253	197	101	32	193	201	74	146	24
Satd. Flow (prot)	1385	2499	0	1545	2822	0	1199	2612	0	1560	3000	0
Flt Permitted	0.529			0.571			0.574			0.126		
Satd. Flow (perm)	771	2499	0	928	2822	0	724	2612	0	207	3000	0
Satd. Flow (RTOR)		16			105			337			22	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour 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
Growth Factor	126%	126%	126%	126%	126%	126%	300%	300%	300%	126%	126%	126%
Heavy Vehicles (%)	16%	16%	46%	4%	5%	14%	34%	12%	15%	3%	5%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0										0
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	24	110	16	319	248	127	96	579	603	93	184	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	24	126	0	319	375	0	96	1182	0	93	214	0
Turn Type	custom			custom			custom			custom		
Protected Phases	5			1			7			3		
Permitted Phases	2	2		6	6		4	4		8	8	
Detector Phase	5	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.0	28.0		9.0	28.0		9.0	28.0		9.0	28.0	
Total Split (s)	9.0	30.0	0.0	12.0	33.0	0.0	12.0	39.0	0.0	9.0	36.0	0.0
Total Split (%)	10.0%	33.3%	0.0%	13.3%	36.7%	0.0%	13.3%	43.3%	0.0%	10.0%	40.0%	0.0%
Maximum Green (s)	4.0	25.0		7.0	28.0		7.0	34.0		4.0	31.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (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
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	Max		None	Max		None	None		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		18.0			18.0			18.0			18.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	29.1	25.0		36.3	33.5		39.5	34.1		34.8	31.7	
Actuated g/C Ratio	0.33	0.28		0.41	0.38		0.45	0.39		0.39	0.36	
v/c Ratio	0.09	0.17		0.74	0.33		0.27	0.97		0.65	0.20	
Control Delay	17.1	22.2		34.6	16.0		15.7	52.7		40.1	18.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	17.1	22.2		34.6	16.0		15.7	52.7		40.1	18.8	
LOS	B	C		C	B		B	D		D	B	
Approach Delay		21.4			24.5			49.9			25.3	
Approach LOS		C			C			D			C	

Intersection Summary
 Cycle Length: 90
 Actuated Cycle Length: 88.2
 Natural Cycle: 90
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.97
 Intersection Signal Delay: 37.8
 Intersection Capacity Utilization 85.3%
 Analysis Period (min) 60
 Intersection LOS: D
 ICU Level of Service E



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↑↑		↘	
Volume (veh/h)	45	410	767	40	20	22
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	61	558	1043	54	22	24
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type						
		None	None			
Median storage (veh)						
Upstream signal (m)						
		184	275			
pX, platoon unblocked						
vC, conflicting volume						
	1098				1472	549
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol						
	1098				1472	549
tC, single (s)						
	4.1				6.8	7.2
tC, 2 stage (s)						
tF (s)						
	2.2				3.5	3.4
p0 queue free %						
	90				80	95
cM capacity (veh/h)						
	644				109	448
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	61	279	279	695	402	46
Volume Left	61	0	0	0	0	22
Volume Right	0	0	0	0	54	24
cSH	644	1700	1700	1700	1700	180
Volume to Capacity	0.10	0.16	0.16	0.41	0.24	0.25
Queue Length 95th (m)	2.5	0.0	0.0	0.0	0.0	8.1
Control Delay (s)	11.2	0.0	0.0	0.0	0.0	31.8
Lane LOS	B					D
Approach Delay (s)	1.1			0.0		31.8
Approach LOS						D
Intersection Summary						
Average Delay			1.2			
Intersection Capacity Utilization			47.3%		ICU Level of Service	A
Analysis Period (min)			60			

	→	↘	↙	←	↖	↗	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↑↑		↘	↑↑	↘	↗	
Volume (veh/h)	515	52	82	464	45	43	
Sign Control	Free		Free		Stop		
Grade	0%		0%		0%		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Hourly flow rate (vph)	680	69	108	612	135	129	
Pedestrians							
Lane Width (m)							
Walking Speed (m/s)							
Percent Blockage							
Right turn flare (veh)							
Median type	None		None				
Median storage (veh)							
Upstream signal (m)							
pX, platoon unblocked							
vC, conflicting volume			748		1237	374	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			748		1237	374	
tC, single (s)			4.1		7.1	7.1	
tC, 2 stage (s)							
tF (s)			2.2		3.6	3.4	
p0 queue free %			87		0	78	
cM capacity (veh/h)			856		134	595	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	453	295	108	306	306	135	129
Volume Left	0	0	108	0	0	135	0
Volume Right	0	69	0	0	0	0	129
cSH	1700	1700	856	1700	1700	134	595
Volume to Capacity	0.27	0.17	0.13	0.18	0.18	1.01	0.22
Queue Length 95th (m)	0.0	0.0	3.5	0.0	0.0	115.7	6.6
Control Delay (s)	0.0	0.0	9.8	0.0	0.0	256.9	12.7
Lane LOS			A			F	B
Approach Delay (s)	0.0		1.5				138.6
Approach LOS							F
Intersection Summary							
Average Delay			21.7				
Intersection Capacity Utilization			44.5%		ICU Level of Service		A
Analysis Period (min)			60				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑	↑↑		↑	↑		↑	↑	
Volume (veh/h)	1	417	22	34	480	3	10	1	21	33	1	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour 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
Hourly flow rate (vph)	1	550	29	45	634	4	13	1	28	33	1	4
Pedestrians		1			1							
Lane Width (m)		3.5			3.5							
Walking Speed (m/s)		0.9			0.9							
Percent Blockage		0			0							
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	638			579			980	1295	291	1033	1307	320
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	638			579			980	1295	291	1033	1307	320
tC, single (s)	4.1			4.1			7.7	6.5	8.3	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	4.0	3.5	4.0	3.3
p0 queue free %	100			96			93	99	95	81	99	99
cM capacity (veh/h)	956			1004			184	156	536	172	154	681
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2			
Volume Total	277	304	45	422	215	13	29	33	5			
Volume Left	1	0	45	0	0	13	0	33	0			
Volume Right	0	29	0	0	4	0	28	0	4			
cSH	956	1700	1004	1700	1700	184	483	172	404			
Volume to Capacity	0.00	0.18	0.04	0.25	0.13	0.07	0.06	0.19	0.01			
Queue Length 95th (m)	0.0	0.0	1.1	0.0	0.0	1.8	1.5	5.6	0.3			
Control Delay (s)	0.1	0.0	8.8	0.0	0.0	26.1	12.9	30.8	14.0			
Lane LOS	A		A			D	B	D	B			
Approach Delay (s)	0.0		0.6			17.0		28.6				
Approach LOS						C		D				
Intersection Summary												
Average Delay			1.6									
Intersection Capacity Utilization			52.5%			ICU Level of Service			A			
Analysis Period (min)			60									

Table 4-1 Signalized Intersection Level of Service (2000 HCM)

LOS	Control Delay Per Vehicle (s)
A	≤ 10
B	> 10 and ≤ 20
C	> 20 and ≤ 35
D	> 35 and ≤ 55
E	> 55 and ≤ 80
F	> 80

Signing Settings

For an unsignalized two-way stopped controlled (TWSC) or all-way stop-controlled (AWSC) intersection, the Level of Service for the intersection is calculated by taking the Intersection Delay and converting it to a letter using Table 4-2.

Table 4-2 TWSC & AWSC Level of Service Criteria (2000 HCM)

LOS	Control Delay Per Vehicle(s)
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

The LOS criteria for TWSC and AWSC intersections are different than that used for a signalized intersection. The primary reason for this is that drivers expect different levels of performance between signalized and unsignalized intersections.

Intersection Capacity Utilization

Intersection Capacity Utilization is the 2003 (ICU 2003) for the intersection. Full details of the ICU 2003 can be found in the topic, Intersection Capacity (ICU) Report (see page 15-11). A full description of ICU 2003 along with commentary and instructions is available in the reference book, **Intersection Capacity Utilization 2003** available from Trafficware.