



November 25, 2021

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 M4P 1E4

Re: City of Mississauga Comments from Their Review of Our Traffic Impact Study for the Yee Hong Mavis – Retirement Residence & Life Lease Development 5510 Mavis Road, City of Mississauga

We are in receipt City of Mississauga comments related to our Traffic Study Report submitted in support of the Yee Hong Mavis – Retirement Residence & Life Lease Development 5510 Mavis Road, City of Mississauga. This addendum letter report is in response to the following comments under the Traffic Review Section, Comments Reference # 40, (i) through (vi).

No.	Comment	Response
(i)	2.5 Baseline Peak Hour Traffic Volumes- Clarification is required as to why a 6.9% growth rate was applied per annum exclusively for the intersection of Father D'Souza Drive and Avonwick Avenue. The concern is surrounding the variation of the 1.5% growth rate VS. 6.9% growth rate.	City informed the study to use the historical growth rate to factor up the 2014 TMCs for Father D'Souza Drive/Mavis Road/Avonwick Avenue intersection to represent 2021. The City provided both Major (Mavis Road) and Minor (Father D'Souza Drive and Avonwick Avenue) Road historical volumes. As such, separate growth rate was applied for Major and Minor Road approaches (since the detailed analysis is provided for Mavis Road/Father D'Souza Drive/Avonwick Avenue intersection) and the affected upstream/downstream intersection volumes were balanced using the higher number, so that the study analysis carried out will be on the "worst case" scenario.
(ii)	Exhibit 2.2: Baseline/Existing (2021) Traffic Volumes: There is a miscalculation for the AM and PM peak period total volumes for the intersection of Preston Manor Drive and Lafayette Drive, for the NB approach. In addition to this, please also review: the totals	Due to adding up of numbers with decimals, the sum of approach volumes will be/are off by + or – 1. The enclosed Exhibit 2.2 shows revised volumes.



	for: (a) the AM peak period volumes for the NB approach at the intersection of Mavis and Matheson (b) the PM peak period volumes for the SB approach of the intersection of Father D'Souza Drive and Mavis Road. Please revise accordingly	
(iii)	Table 3.1: Projected Vehicle Trip Generation by Proposed Development: Both columns indicate Weekday AM Peak Hour; please revise to differentiate the AM Peak VS. PM Peak. For the Weekday AM Peak Hour, the "Total" and "In" Vehicle Trips columns; the Total Site Trip Generation does not reflect the correct total. Please review and revise. Likewise, for the secondary Weekday AM Peak Hour column shown, the "Total" and "Out" Vehicle Trips columns; the Total Site Trip Generation does not reflect the correct total. Please review and revise.	Due to adding up of numbers with decimals, the sum of approach volumes will be/are off by + or – 1. See enclosed revised Table 3.1
(iv)	Sample calculations for the v/c ratio are to be provided in a subsequent submission	The City accepts calculations from softwares, Synchro and HCM, which the study utilized and the detailed work sheets for each of the intersection capacity analysis, including the variables used to calculate the v/c ratio are provided in the study Appendix B. It is noted that the v/c ratio calculations for a signalized intersections involve more than simply dividing the inputted volume by the theoretical capacity of the lane/intersection. For more information on Synchro methodology, the software User Guide provides some explanation to its methodology.
(v)	Please provide justification for PHF of 1.0 used in synchro analysis for the intersection of Mavis and Matheson	There was a transcribing error. The PHF 0.93 was calculated for Mavis and Matheson intersection under the PM peak hour. The updated intersection capacity analysis for Existing, Future Background and Total are provided (see enclosed) and detailed work sheets are provided in the Technical Appendix A , following the texts of this report.
(vi)	The Future Background and Future Total analysis indicate intersections with LOS F and subsequently large delays; the recommendation delineates revised traffic signal plans to accommodate for the delays. Please provide the ideal split timing changes required within the current allocated cycle length."	The study made reference and provided adjusted signal timing plan that allows for permitted and protected phasing for northbound and southbound left turn movements on Mavis Road at Father D'Souza/Avonwick Avenue intersection for Existing conditions. The results for Future Background and Future Total analysis that



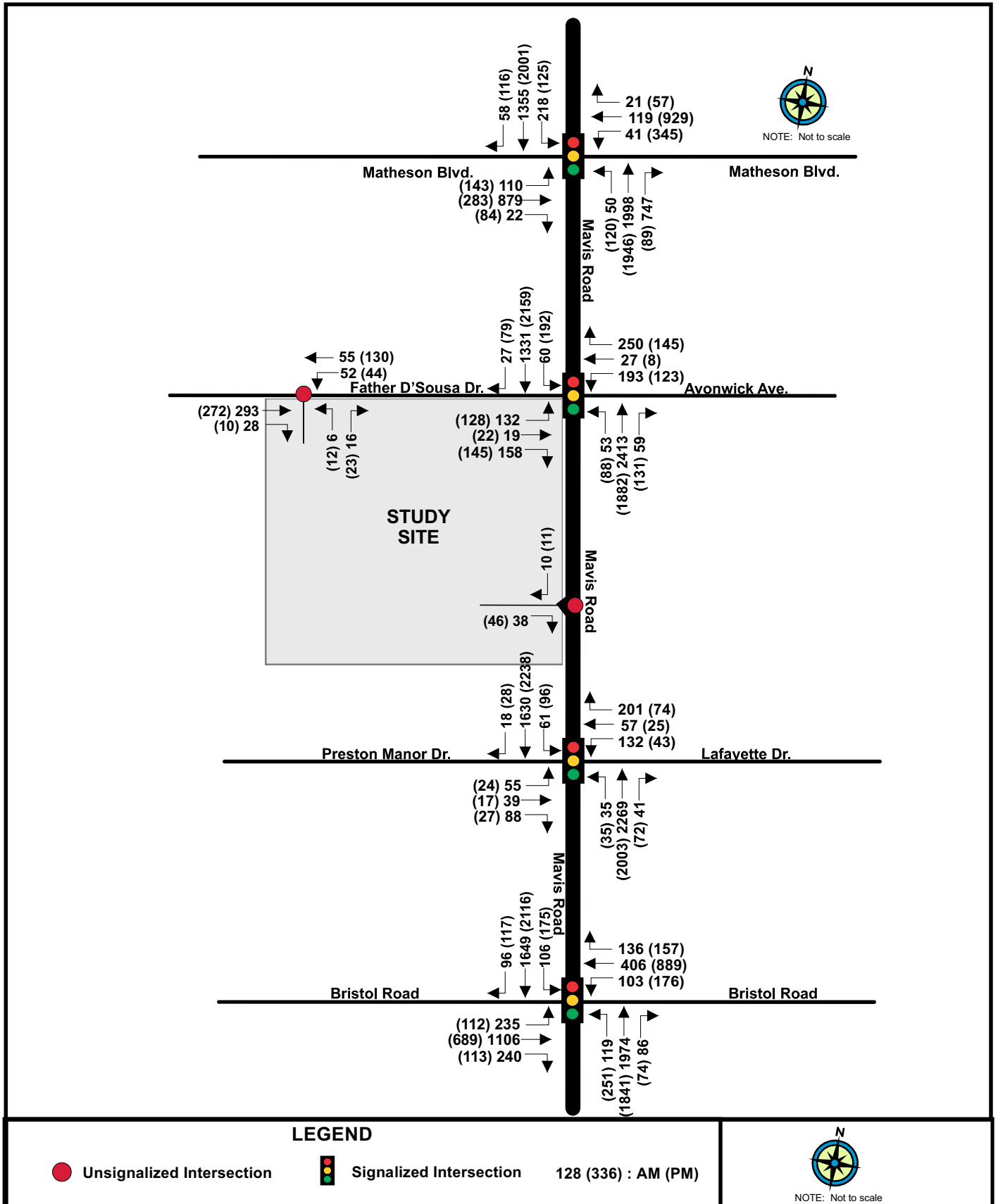
		allows for permitted and protected phasing for northbound and southbound left turn movements (under existing Signal Timing Plan) for Mavis Road at Father D'Souza/Avonwick Avenue intersection is provided in (enclosed) Table 4.1B and 4.2B . The detailed work sheets are provided in the Technical Appendix A , following the texts of this report.
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If you require further information or discussion, please do not hesitate to contact us at your convenience.

Yours truly,

Seo-Woon (Swan) Im, B.E.S.
Tranplan Associates

Exhibit 2.2: Baseline/Existing (2021) Traffic Volumes



In reference to Comment (iii)

Table 3.1: Projected Vehicle Trip Generation by Proposed Development

LAND USE	WEEKDAY AM PEAK HOUR				WEEKDAY PM PEAK HOUR			
	ITE Trip Generation Manual - 10 th Edition	Vehicle Trips			ITE Trip Generation Manual - 10 th Edition	Vehicle Trips		
		Total	In	Out		Total	In	Out
Independent Living 134 Units	Senior Adult Living LU (252) - 0.2 Trips/Unit	26	35% 9	65% 17	Senior Adult Living LU (252) - 0.26 Trips/Unit	35	55% 19	45% 16
Independent Supportive Living 104 Units	Senior Adult Living LU (252) - 0.2 Trips/Unit	21	35% 7	65% 14	Senior Adult Living LU (252) - 0.26 Trips/Unit	27	55% 15	45% 12
Life Lease 243 Units	Senior Adult Living LU (252) - 0.2 Trips/Unit	49	35% 17	65% 32	Senior Adult Living LU (252) - 0.26 Trips/Unit	63	55% 35	45% 28
Total Site Trip Generation		96	33	63		125	69	56

Note: numbers do not add up exactly due to rounding

In reference to Comment (v)

Table 2.2: Summary of Intersection Capacity Analysis: Existing Conditions

Intersection	Existing Conditions							
	AM Peak				PM Peak			
	LOS	Delay	95th Queue	v/c	LOS	Delay	95th Queue	v/c
Mavis Rd. & Father D'Souza Dr./Avonwick Ave. (Signals)								
EB - L	C	31.8	29.9	0.57	D	37.2	31.3	0.59
EB - TR	C	23.6	33.0	0.45	C	33.6	37.5	0.57
WB - L	C	33.0	40.5	0.65	D	35.8	30.3	0.57
WB - TR	C	33.9	54.1	0.71	C	32.9	34.9	0.55
NB - L	C	20.5	17.5	0.35	F	88.2	#30.2	0.89
NB - TR	C	25.6	#194.0	0.93	B	11.3	101.5	0.68
SB - L	D	48.1	#29.8	0.62	F	492.1	#76.2	1.98
SB - TR	B	12.4	70.2	0.53	B	12.7	121.5	0.74
Intersection Average	C	23.0			C	33.9		
Father D'Souza Drive & Yee Hong Driveway (TWSC)								
EB - TR	-	0.0	0.0	0.20	-	0.0	0.0	0.18
WB - LT	A	4.2	1.2	0.05	A	2.3	1.0	0.04
NB - LR	B	10.9	0.9	0.04	B	11.1	1.5	0.06
Mavis Road & Yee Hong RIRO Driveway (TWSC)								
SB - TR	-	0.0	0.0	0.22	-	0.0	0.0	0.32
EB - R	A	9.1	1.1	0.04	B	10.5	1.8	0.07
Mavis Rd. & Matheson Blvd. (Signals)								
Intersection Average	F	102.6			F	138.8		
Mavis Rd. & Preston Manor Drive (Signals)								
Intersection Average	B	18.5			B	11.2		
Mavis Rd. & Bristol Road (Signals)								
Intersection Average	F	141.4			F	140.4		

NOTE: Delay in seconds (as per Synchro Signalized intersection report; 95th percentile queue in metres for signalized intersection (Queue shown is maximum after two cycles) and # indicates 95th percentile volume exceeds capacity, queue may be longer; 95th percentile queue in metres for signalized and for unsignalized intersections as provided in Synchro detail and HCM 2000 outputs, see Appendix B

In reference to Comment (v)

Table 4.1: Summary of Intersection Capacity Analysis: Background Conditions

Intersection	2026 Background Conditions							
	AM Peak				PM Peak			
Mavis Rd. & Father D'Souza Dr./Avonwick Ave. (Signals)	LOS	Delay	95th Queue	v/c	LOS	Delay	95th Queue	v/c
EB - L	C	33.5	32.1	0.62	D	37.2	32.9	0.61
EB - TR	C	23.5	35.0	0.47	C	33.4	39.4	0.59
WB - L	C	33.2	42.9	0.67	D	35.9	31.9	0.59
WB - TR	C	33.7	57.4	0.73	C	32.7	36.7	0.57
NB - L	C	30.1	#24.4	0.45	F	99.8	#32.9	0.94
NB - TR	D	39.2	#213.4	1.01	B	13.2	120.5	0.74
SB - L	E	56.0	#32.5	0.68	F	525.7	#80.1	2.06
SB - TR	B	13.8	80.0	0.58	B	14.7	#157.9	0.79
Intersection Average	C	30.6			D	36.8		
Father D'Souza Drive & Yee Hong Driveway (TWSC)	LOS	Delay	95th Queue	v/c	LOS	Delay	95th Queue	v/c
EB - TR	-	0.0	0.0	0.22	-	0.0	0.0	0.20
WB - LT	A	4.0	1.2	0.05	A	2.3	1.0	0.04
NB - LR	B	11.2	0.9	0.04	B	11.4	1.6	0.06
Mavis Road & Yee Hong RIRO Driveway (TWSC)	LOS	Delay	95th Queue	v/c	LOS	Delay	95th Queue	v/c
SB - TR	-	0.0	0.0	0.24	-	0.0	0.0	0.33
EB - R	A	9.3	1.2	0.05	B	10.9	2.0	0.08
Mavis Rd. & Matheson Blvd. (Signals)	LOS	Delay	95th Queue	v/c	LOS	Delay	95th Queue	v/c
Intersection Average	F	144.1			F	201.4		
Mavis Rd. & Preston Manor Drive (Signals)	LOS	Delay	95th Queue	v/c	LOS	Delay	95th Queue	v/c
Intersection Average	C	21.0			B	12.2		
Mavis Rd. & Bristol Road (Signals)	LOS	Delay	95th Queue	v/c	LOS	Delay	95th Queue	v/c
Intersection Average	F	169.2			F	168.4		

NOTE: Delay in seconds (as per Synchro Signalized intersection report; 95th percentile queue in metres for signalized intersection (Queue shown is maximum after two cycles) and # indicates 95th percentile volume exceeds capacity, queue may be longer; 95th percentile queue in metres for signalized and for unsignalized intersections as provided in Synchro detail and HCM 2000 outputs, see Appendix B

In reference to Comment (v)

Table 4.2: Summary of Intersection Capacity Analysis: Total Conditions

Intersection	2026 Total Conditions							
	AM Peak				PM Peak			
	LOS	Delay	95th Queue	v/c	LOS	Delay	95th Queue	v/c
Mavis Rd. & Father D'Souza Dr./Avonwick Ave. (Signals)								
EB - L	D	39.8	38.0	0.72	D	37.5	38.5	0.67
EB - TR	C	24.9	39.1	0.52	C	29.8	39.4	0.55
WB - L	D	35.1	43.6	0.70	C	30.8	30.1	0.53
WB - TR	C	33.7	57.4	0.73	C	28.3	34.5	0.50
NB - L	D	45.0	#35.1	0.64	F	185.0	#46.5	1.22
NB - TR	D	39.2	#213.4	1.01	B	15.7	#149.0	0.78
SB - L	E	56.0	#32.5	0.68	F	529.6	#81.2	2.06
SB - TR	B	13.8	80.6	0.59	B	18.1	#174.7	0.85
Intersection Average	C	31.1			D	41.0		
Father D'Souza Drive & Yee Hong Driveway (TWSC)								
EB - TR	-	0.0	0.0	0.22	-	0.0	0.0	0.20
WB - LT	A	5.1	2.0	0.08	A	4.4	2.9	0.11
NB - LR	B	11.3	3.0	0.11	B	11.8	3.9	0.14
Mavis Road & Yee Hong RIRO Driveway (TWSC)								
SB - TR	-	0.0	0.0	0.24	-	0.0	0.0	0.33
EB - R	A	9.4	1.8	0.07	B	11.5	2.7	0.10
Mavis Rd. & Matheson Blvd. (Signals)								
Intersection Average	F	146.4			F	209.5		
Mavis Rd. & Preston Manor Drive (Signals)								
Intersection Average	C	21.2			B	12.3		
Mavis Rd. & Bristol Road (Signals)								
Intersection Average	F	174.1			F	172.8		

NOTE: Delay in seconds (as per Synchro Signalized intersection report; 95th percentile queue in metres for signalized intersection (Queue shown is maximum after two cycles) and # indicates 95th percentile volume exceeds capacity, queue may be longer; 95th percentile queue in metres for signalized and for unsignalized intersections as provided in Synchro detail and HCM 2000 outputs, see Appendix B

In reference to Comment (vi)

Table 4.1B: Comparison Between Signal Timing Plans: Background

Intersection	PM Peak Hour - 2026 Background Conditions				PM Peak Hour - 2026 Background Conditions			
	No SB & NB Left Turn Phasing				With SB & NB Protected and Permitted Phasing			
Mavis Rd. & Father D'Souza Dr./Avonwick Ave. (Signals)	LOS	Delay	95th Queue	v/c	LOS	Delay	95th Queue	v/c
NB - L	F	99.8	#32.9	0.94	A	9.5	12.0	0.34
SB - L	F	525.7	#80.1	2.06	B	17.2	33.5	0.61
Intersection Average	D	36.8			D	39.6		

NOTE: Delay in seconds (as per Synchro Signalized intersection report; 95th percentile queue in metres for signalized intersection (Queue shown is maximum after two cycles) and # indicates 95th percentile volume exceeds capacity, queue may be longer; 95th percentile queue in metres for signalized and for unsignalized intersections as provided in Synchro detail and HCM 2000 outputs, see Appendix B

Table 4.2B: Comparison Between Signal Timing Plans: 2026 Total

Intersection	PM Peak Hour - 2026 Total Conditions				PM Peak Hour - 2026 Total Conditions			
	No SB & NB Left Turn Phasing				With SB & NB Protected and Permitted Phasing			
Mavis Rd. & Father D'Souza Dr./Avonwick Ave. (Signals)	LOS	Delay	95th Queue	v/c	LOS	Delay	95th Queue	v/c
NB - L	F	185.0	#46.5	1.22	B	11.7	17.4	0.41
SB - L	F	529.6	#81.2	2.06	B	18.1	35.5	0.61
Intersection Average	C	41.0			E	63.1		

NOTE: Delay in seconds (as per Synchro Signalized intersection report; 95th percentile queue in metres for signalized intersection (Queue shown is maximum after two cycles) and # indicates 95th percentile volume exceeds capacity, queue may be longer; 95th percentile queue in metres for signalized and for unsignalized intersections as provided in Synchro detail and HCM 2000 outputs, see Appendix B

TECHNICAL APPENDIX

**APPENDIX A: Synchro Intersection
Capacity Work Sheets/Summaries**

Matheson Blvd. / Mavis Road

Intersection Capacity Work























Sheets/Summaries:

PM Peak Hour with PM Peak Hour Factor

(PHF) = 0.93

Yee Hong Mavis Retirement Home
6: Mavis Road & Matheson Blvd.

Existing (2021) Traffic Volumes
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	143	283	84	345	929	57	120	1946	89	125	2000	116
Future Volume (vph)	143	283	84	345	929	57	120	1946	89	125	2000	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	55.0		0.0	30.0		110.0	35.0		0.0
Storage Lanes	1		0	2		0	1		1	1		0
Taper Length (m)	25.0			35.0			45.0			40.0		
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	0.91	1.00	1.00	0.91	0.91
Ped Bike Factor	0.99				1.00				0.98		1.00	
Frt		0.966			0.991				0.850		0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3419	0	3433	3499	0	1770	5085	1583	1770	5036	0
Flt Permitted	0.249			0.950			0.076			0.076		
Satd. Flow (perm)	460	3419	0	3433	3499	0	142	5085	1549	142	5036	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27			6				78			6
Link Speed (k/h)		50			50			50				50
Link Distance (m)		163.1			206.2			301.9				287.0
Travel Time (s)		11.7			14.8			21.7				20.7
Confl. Peds. (#/hr)	25					25	13		7	7		13
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	154	304	90	371	999	61	129	2092	96	134	2151	125
Shared Lane Traffic (%)												
Lane Group Flow (vph)	154	394	0	371	1060	0	129	2092	96	134	2276	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.2			7.2			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Prot	NA		pm+pt	NA	custom	pm+pt	NA	

Yee Hong Mavis Retirement Home
6: Mavis Road & Matheson Blvd.

Existing (2021) Traffic Volumes
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		8		7	4		5	2	2	1	6	
Permitted Phases	8				7		2		7	6		
Detector Phase	8	8		7	4		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		7.0	8.0		5.0	8.0	8.0	10.0	8.0	
Minimum Split (s)	44.0	44.0		24.0	44.0		9.5	41.5	41.5	14.0	41.5	
Total Split (s)	65.0	65.0		27.0	92.0		11.0	53.0	53.0	15.0	57.0	
Total Split (%)	40.6%	40.6%		16.9%	57.5%		6.9%	33.1%	33.1%	9.4%	35.6%	
Maximum Green (s)	58.0	58.0		22.0	85.0		6.5	45.5	45.5	12.0	49.5	
Yellow Time (s)	4.0	4.0		3.0	4.0		3.5	5.0	5.0	3.0	5.0	
All-Red Time (s)	3.0	3.0		2.0	3.0		1.0	2.5	2.5	0.0	2.5	
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)	7.0	7.0		5.0	7.0		4.5	7.5	7.5	3.0	7.5	
Lead/Lag	Lag	Lag		Lead			Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)	15.0	15.0		0.0	15.0			14.0	14.0		14.0	
Flash Dont Walk (s)	22.0	22.0		0.0	22.0			20.0	20.0		20.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effct Green (s)	52.3	52.3		20.7	78.1		65.3	52.9	71.2	67.9	52.5	
Actuated g/C Ratio	0.33	0.33		0.13	0.49		0.41	0.33	0.44	0.42	0.33	
v/c Ratio	1.03	0.35		0.83	0.62		0.79	1.24	0.13	0.76	1.37	
Control Delay	131.4	37.9		84.5	31.1		67.2	157.9	7.6	59.6	212.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	131.4	37.9		84.5	31.1		67.2	157.9	7.6	59.6	212.5	
LOS	F	D		F	C		E	F	A	E	F	
Approach Delay		64.2			45.0			146.6			204.0	
Approach LOS		E			D			F			F	
Queue Length 50th (m)	49.4	46.3		62.9	122.0		~34.2	~347.8	3.3	28.7	~381.5	
Queue Length 95th (m)	#98.9	61.0		82.1	143.5		#81.5	#376.2	14.7	#61.2	#409.0	
Internal Link Dist (m)		139.1			182.2			277.9			263.0	
Turn Bay Length (m)	50.0			55.0			30.0		110.0	35.0		
Base Capacity (vph)	166	1256		472	1861		163	1682	743	182	1656	
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	0.93	0.31		0.79	0.57		0.79	1.24	0.13	0.74	1.37	

Intersection Summary

Area Type: Other
 Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.37
 Intersection Signal Delay: 138.8
 Intersection Capacity Utilization 107.0%
 Intersection LOS: F
 ICU Level of Service G

Analysis Period (min) 15

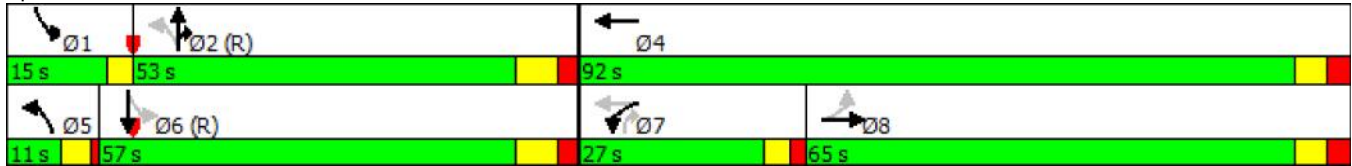
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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























Queue shown is maximum after two cycles.

Splits and Phases: 6: Mavis Road & Matheson Blvd.

























Yee Hong Mavis Retirement Home
6: Mavis Road & Matheson Blvd.

Existing (2021) Traffic Volumes
PM Peak Hour

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	143	283	84	345	929	57	120	1946	89	125	2000	116	
Future Volume (vph)	143	283	84	345	929	57	120	1946	89	125	2000	116	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	7.0	7.0		5.0	7.0		4.5	7.5	7.5	3.0	7.5		
Lane Util. Factor	1.00	0.95		0.97	0.95		1.00	0.91	1.00	1.00	0.91		
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.99	1.00	1.00		
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00		
Frt	1.00	0.97		1.00	0.99		1.00	1.00	0.85	1.00	0.99		
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1757	3418		3433	3500		1770	5085	1574	1770	5035		
Flt Permitted	0.25	1.00		0.95	1.00		0.08	1.00	1.00	0.08	1.00		
Satd. Flow (perm)	460	3418		3433	3500		141	5085	1574	142	5035		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Adj. Flow (vph)	154	304	90	371	999	61	129	2092	96	134	2151	125	
RTOR Reduction (vph)	0	18	0	0	3	0	0	0	42	0	4	0	
Lane Group Flow (vph)	154	376	0	371	1057	0	129	2092	54	134	2272	0	
Confl. Peds. (#/hr)	25					25	13		7	7		13	
Turn Type	Perm	NA		Prot	NA		pm+pt	NA	custom	pm+pt		NA	
Protected Phases		8		7	4		5	2	2	1		6	
Permitted Phases	8				7		2		7	6			
Actuated Green, G (s)	52.4	52.4		20.7	78.1		63.3	52.9	73.6	64.0		52.5	
Effective Green, g (s)	52.4	52.4		20.7	78.1		63.3	52.9	73.6	64.0		52.5	
Actuated g/C Ratio	0.33	0.33		0.13	0.49		0.40	0.33	0.46	0.40		0.33	
Clearance Time (s)	7.0	7.0		5.0	7.0		4.5	7.5	7.5	3.0		7.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	150	1119		444	1708		161	1681	797	173		1652	
v/s Ratio Prot		0.11		c0.11	0.30		0.05	0.41	0.02	c0.06		c0.45	
v/s Ratio Perm	c0.33						0.26		0.01	0.25			
v/c Ratio	1.03	0.34		0.84	0.62		0.80	1.24	0.07	0.77		1.38	
Uniform Delay, d1	53.8	40.7		68.0	30.0		39.5	53.5	24.1	39.1		53.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00		1.00	
Incremental Delay, d2	80.7	0.2		12.8	0.7		24.1	115.2	0.0	19.2		172.8	
Delay (s)	134.5	40.8		80.8	30.7		63.7	168.8	24.1	58.3		226.5	
Level of Service	F	D		F	C		E	F	C	E		F	
Approach Delay (s)		67.2			43.7			156.9				217.2	
Approach LOS		E			D			F				F	
Intersection Summary													
HCM 2000 Control Delay			147.1									HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio			1.12										
Actuated Cycle Length (s)			160.0									Sum of lost time (s)	24.0
Intersection Capacity Utilization			107.0%									ICU Level of Service	G
Analysis Period (min)			15										
c Critical Lane Group													

Yee Hong Mavis Retirement Home
6: Mavis Road & Matheson Blvd.

Future (2026) Background Traffic Volumes
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	305	90	372	1001	62	129	2097	95	131	2091	122
Future Volume (vph)	154	305	90	372	1001	62	129	2097	95	131	2091	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	55.0		0.0	30.0		110.0	35.0		0.0
Storage Lanes	1		0	2		0	1		1	1		0
Taper Length (m)	25.0			35.0			45.0			40.0		
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	0.91	1.00	1.00	0.91	0.91
Ped Bike Factor	0.99				1.00				0.98		1.00	
Frt		0.966			0.991				0.850		0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3419	0	3433	3498	0	1770	5085	1583	1770	5036	0
Flt Permitted	0.230			0.950			0.087			0.082		
Satd. Flow (perm)	426	3419	0	3433	3498	0	162	5085	1549	153	5036	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27			6				78			6
Link Speed (k/h)		50			50			50				50
Link Distance (m)		163.1			206.2			301.9				287.0
Travel Time (s)		11.7			14.8			21.7				20.7
Confl. Peds. (#/hr)	25					25	13		7	7		13
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	166	328	97	400	1076	67	139	2255	102	141	2248	131
Shared Lane Traffic (%)												
Lane Group Flow (vph)	166	425	0	400	1143	0	139	2255	102	141	2379	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.2			7.2			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Prot	NA		pm+pt	NA	custom	pm+pt	NA	

Yee Hong Mavis Retirement Home
6: Mavis Road & Matheson Blvd.

Future (2026) Background Traffic Volumes
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		8		7	4		5	2	2	1	6	
Permitted Phases	8				7		2		7	6		
Detector Phase	8	8		7	4		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		7.0	8.0		5.0	8.0	8.0	10.0	8.0	
Minimum Split (s)	44.0	44.0		24.0	44.0		9.5	41.5	41.5	14.0	41.5	
Total Split (s)	65.0	65.0		27.0	92.0		11.0	53.0	53.0	15.0	57.0	
Total Split (%)	40.6%	40.6%		16.9%	57.5%		6.9%	33.1%	33.1%	9.4%	35.6%	
Maximum Green (s)	58.0	58.0		22.0	85.0		6.5	45.5	45.5	12.0	49.5	
Yellow Time (s)	4.0	4.0		3.0	4.0		3.5	5.0	5.0	3.0	5.0	
All-Red Time (s)	3.0	3.0		2.0	3.0		1.0	2.5	2.5	0.0	2.5	
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)	7.0	7.0		5.0	7.0		4.5	7.5	7.5	3.0	7.5	
Lead/Lag	Lag	Lag		Lead			Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)	15.0	15.0		0.0	15.0			14.0	14.0		14.0	
Flash Dont Walk (s)	22.0	22.0		0.0	22.0			20.0	20.0		20.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effct Green (s)	58.6	58.6		21.4	85.0		55.4	45.9	64.8	64.8	49.5	
Actuated g/C Ratio	0.37	0.37		0.13	0.53		0.35	0.29	0.40	0.40	0.31	
v/c Ratio	1.06	0.33		0.87	0.61		1.15	1.55	0.15	0.79	1.52	
Control Delay	138.5	35.1		87.7	27.7		160.2	286.7	8.3	63.8	275.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	138.5	35.1		87.7	27.7		160.2	286.7	8.3	63.8	275.9	
LOS	F	D		F	C		F	F	A	E	F	
Approach Delay		64.2			43.3			268.3			264.1	
Approach LOS		E			D			F			F	
Queue Length 50th (m)	~61.6	50.8		68.4	136.3		~36.9	~389.1	4.4	30.3	~408.0	
Queue Length 95th (m)	#112.9	66.1		#94.3	159.3		#85.6	#416.6	16.3	#65.0	#435.0	
Internal Link Dist (m)		139.1			182.2			277.9			263.0	
Turn Bay Length (m)	50.0			55.0			30.0		110.0	35.0		
Base Capacity (vph)	156	1270		472	1861		121	1459	683	183	1562	
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	1.06	0.33		0.85	0.61		1.15	1.55	0.15	0.77	1.52	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	145
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.55
Intersection Signal Delay:	201.4
Intersection Capacity Utilization:	110.9%
Intersection LOS:	F
ICU Level of Service:	H

Analysis Period (min) 15

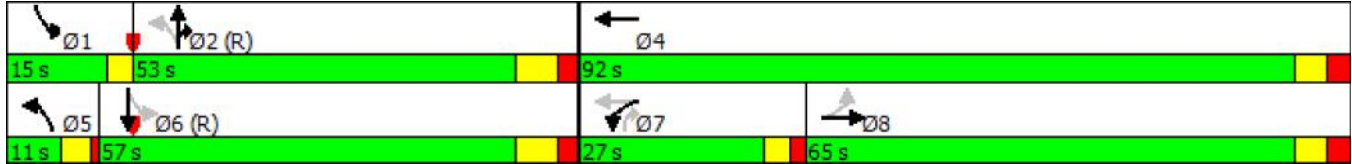
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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























Queue shown is maximum after two cycles.

Splits and Phases: 6: Mavis Road & Matheson Blvd.

























Yee Hong Mavis Retirement Home
6: Mavis Road & Matheson Blvd.

Future (2026) Background Traffic Volumes
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	305	90	372	1001	62	129	2097	95	131	2091	122
Future Volume (vph)	154	305	90	372	1001	62	129	2097	95	131	2091	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		5.0	7.0		4.5	7.5	7.5	3.0	7.5	
Lane Util. Factor	1.00	0.95		0.97	0.95		1.00	0.91	1.00	1.00	0.91	
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.99	1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1759	3418		3433	3499		1770	5085	1572	1770	5035	
Flt Permitted	0.23	1.00		0.95	1.00		0.09	1.00	1.00	0.08	1.00	
Satd. Flow (perm)	427	3418		3433	3499		162	5085	1572	152	5035	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	166	328	97	400	1076	67	139	2255	102	141	2248	131
RTOR Reduction (vph)	0	17	0	0	3	0	0	0	45	0	4	0
Lane Group Flow (vph)	166	408	0	400	1140	0	139	2255	57	141	2375	0
Confl. Peds. (#/hr)	25					25	13		7	7		13
Turn Type	Perm	NA		Prot	NA		pm+pt	NA	custom	pm+pt	NA	
Protected Phases		8		7	4		5	2	2	1	6	
Permitted Phases	8				7		2		7	6		
Actuated Green, G (s)	58.6	58.6		21.4	85.0		52.4	45.9	67.3	60.5	49.5	
Effective Green, g (s)	58.6	58.6		21.4	85.0		52.4	45.9	67.3	60.5	49.5	
Actuated g/C Ratio	0.37	0.37		0.13	0.53		0.33	0.29	0.42	0.38	0.31	
Clearance Time (s)	7.0	7.0		5.0	7.0		4.5	7.5	7.5	3.0	7.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	156	1251		459	1858		118	1458	734	174	1557	
v/s Ratio Prot		0.12		c0.12	0.33		c0.05	0.44	0.02	c0.06	c0.47	
v/s Ratio Perm	c0.39						0.34		0.01	0.25		
v/c Ratio	1.06	0.33		0.87	0.61		1.18	1.55	0.08	0.81	1.53	
Uniform Delay, d1	50.7	36.5		68.0	26.1		49.3	57.0	27.8	40.4	55.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	90.1	0.2		16.4	0.6		138.5	249.4	0.0	24.0	239.7	
Delay (s)	140.8	36.6		84.4	26.7		187.7	306.5	27.8	64.4	294.9	
Level of Service	F	D		F	C		F	F	C	E	F	
Approach Delay (s)		65.9			41.6			288.5			282.0	
Approach LOS		E			D			F			F	
Intersection Summary												
HCM 2000 Control Delay			214.5			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			1.21									
Actuated Cycle Length (s)			160.0			Sum of lost time (s)			24.0			
Intersection Capacity Utilization			110.9%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												

Yee Hong Mavis Retirement Home
6: Mavis Road & Matheson Blvd.

Future (2026) Total Traffic Volumes
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	305	90	372	1001	62	129	2131	95	131	2132	122
Future Volume (vph)	154	305	90	372	1001	62	129	2131	95	131	2132	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		0.0	55.0		0.0	30.0		110.0	35.0		0.0
Storage Lanes	1		0	2		0	1		1	1		0
Taper Length (m)	25.0			35.0			45.0			40.0		
Lane Util. Factor	1.00	0.95	0.95	0.97	0.95	0.95	1.00	0.91	1.00	1.00	0.91	0.91
Ped Bike Factor	0.99				1.00				0.98		1.00	
Frt		0.966			0.991				0.850		0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3419	0	3433	3498	0	1770	5085	1583	1770	5036	0
Flt Permitted	0.230			0.950			0.087			0.082		
Satd. Flow (perm)	426	3419	0	3433	3498	0	162	5085	1549	153	5036	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27			6				78			6
Link Speed (k/h)		50			50			50				50
Link Distance (m)		163.1			206.2			301.9				287.0
Travel Time (s)		11.7			14.8			21.7				20.7
Confl. Peds. (#/hr)	25					25	13		7	7		13
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	166	328	97	400	1076	67	139	2291	102	141	2292	131
Shared Lane Traffic (%)												
Lane Group Flow (vph)	166	425	0	400	1143	0	139	2291	102	141	2423	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.2			7.2			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Prot	NA		pm+pt	NA	custom	pm+pt	NA	

Yee Hong Mavis Retirement Home
6: Mavis Road & Matheson Blvd.

Future (2026) Total Traffic Volumes
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		8		7	4		5	2	2	1	6	
Permitted Phases	8				7		2		7	6		
Detector Phase	8	8		7	4		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0		7.0	8.0		5.0	8.0	8.0	10.0	8.0	
Minimum Split (s)	44.0	44.0		24.0	44.0		9.5	41.5	41.5	14.0	41.5	
Total Split (s)	65.0	65.0		27.0	92.0		11.0	53.0	53.0	15.0	57.0	
Total Split (%)	40.6%	40.6%		16.9%	57.5%		6.9%	33.1%	33.1%	9.4%	35.6%	
Maximum Green (s)	58.0	58.0		22.0	85.0		6.5	45.5	45.5	12.0	49.5	
Yellow Time (s)	4.0	4.0		3.0	4.0		3.5	5.0	5.0	3.0	5.0	
All-Red Time (s)	3.0	3.0		2.0	3.0		1.0	2.5	2.5	0.0	2.5	
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)	7.0	7.0		5.0	7.0		4.5	7.5	7.5	3.0	7.5	
Lead/Lag	Lag	Lag		Lead			Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)	15.0	15.0		0.0	15.0			14.0	14.0		14.0	
Flash Dont Walk (s)	22.0	22.0		0.0	22.0			20.0	20.0		20.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	
Act Effct Green (s)	58.6	58.6		21.4	85.0		55.4	45.9	64.8	64.8	49.5	
Actuated g/C Ratio	0.37	0.37		0.13	0.53		0.35	0.29	0.40	0.40	0.31	
v/c Ratio	1.06	0.33		0.87	0.61		1.15	1.57	0.15	0.79	1.55	
Control Delay	138.5	35.1		87.7	27.7		160.2	297.1	8.3	63.8	287.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	138.5	35.1		87.7	27.7		160.2	297.1	8.3	63.8	287.9	
LOS	F	D		F	C		F	F	A	E	F	
Approach Delay		64.2			43.3			278.0			275.5	
Approach LOS		E			D			F			F	
Queue Length 50th (m)	~61.6	50.8		68.4	136.3		~36.9	~398.3	4.4	30.3	~419.3	
Queue Length 95th (m)	#112.9	66.1		#94.3	159.3		#85.6	#425.5	16.3	#65.0	#445.8	
Internal Link Dist (m)		139.1			182.2			277.9			263.0	
Turn Bay Length (m)	50.0			55.0			30.0		110.0	35.0		
Base Capacity (vph)	156	1270		472	1861		121	1459	683	183	1562	
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	1.06	0.33		0.85	0.61		1.15	1.57	0.15	0.77	1.55	

Intersection Summary	
Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	145
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.57
Intersection Signal Delay:	209.5
Intersection Capacity Utilization:	111.7%
Intersection LOS:	F
ICU Level of Service:	H

Analysis Period (min) 15

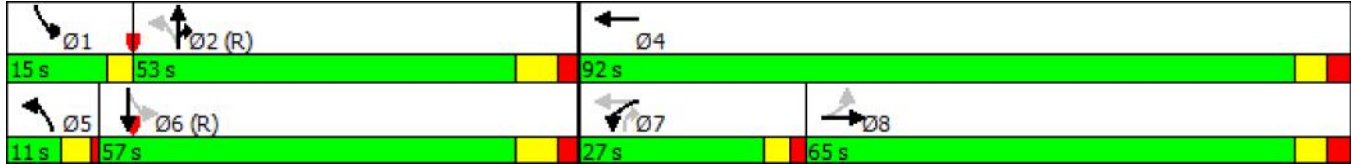
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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























Queue shown is maximum after two cycles.

Splits and Phases: 6: Mavis Road & Matheson Blvd.



Yee Hong Mavis Retirement Home
6: Mavis Road & Matheson Blvd.

Future (2026) Total Traffic Volumes
PM Peak Hour

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	154	305	90	372	1001	62	129	2131	95	131	2132	122	
Future Volume (vph)	154	305	90	372	1001	62	129	2131	95	131	2132	122	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	7.0	7.0		5.0	7.0		4.5	7.5	7.5	3.0	7.5		
Lane Util. Factor	1.00	0.95		0.97	0.95		1.00	0.91	1.00	1.00	0.91		
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.99	1.00	1.00		
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00		
Frt	1.00	0.97		1.00	0.99		1.00	1.00	0.85	1.00	0.99		
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1759	3418		3433	3499		1770	5085	1572	1770	5036		
Flt Permitted	0.23	1.00		0.95	1.00		0.09	1.00	1.00	0.08	1.00		
Satd. Flow (perm)	427	3418		3433	3499		162	5085	1572	152	5036		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Adj. Flow (vph)	166	328	97	400	1076	67	139	2291	102	141	2292	131	
RTOR Reduction (vph)	0	17	0	0	3	0	0	0	45	0	4	0	
Lane Group Flow (vph)	166	408	0	400	1140	0	139	2291	57	141	2419	0	
Confl. Peds. (#/hr)	25					25	13		7	7		13	
Turn Type	Perm	NA		Prot	NA		pm+pt	NA	custom	pm+pt		NA	
Protected Phases		8		7	4		5	2	2	1		6	
Permitted Phases	8				7		2		7	6			
Actuated Green, G (s)	58.6	58.6		21.4	85.0		52.4	45.9	67.3	60.5		49.5	
Effective Green, g (s)	58.6	58.6		21.4	85.0		52.4	45.9	67.3	60.5		49.5	
Actuated g/C Ratio	0.37	0.37		0.13	0.53		0.33	0.29	0.42	0.38		0.31	
Clearance Time (s)	7.0	7.0		5.0	7.0		4.5	7.5	7.5	3.0		7.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	156	1251		459	1858		118	1458	734	174		1558	
v/s Ratio Prot		0.12		c0.12	0.33		c0.05	0.45	0.02	c0.06		c0.48	
v/s Ratio Perm	c0.39						0.34		0.01	0.25			
v/c Ratio	1.06	0.33		0.87	0.61		1.18	1.57	0.08	0.81		1.55	
Uniform Delay, d1	50.7	36.5		68.0	26.1		49.3	57.0	27.8	40.4		55.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00		1.00	
Incremental Delay, d2	90.1	0.2		16.4	0.6		138.5	260.5	0.0	24.0		251.8	
Delay (s)	140.8	36.6		84.4	26.7		187.7	317.5	27.8	64.4		307.1	
Level of Service	F	D		F	C		F	F	C	E		F	
Approach Delay (s)		65.9			41.6			298.7				293.8	
Approach LOS		E			D			F				F	
Intersection Summary													
HCM 2000 Control Delay			223.1									HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio			1.22										
Actuated Cycle Length (s)			160.0									Sum of lost time (s)	24.0
Intersection Capacity Utilization			111.7%									ICU Level of Service	H
Analysis Period (min)			15										
c Critical Lane Group													

Father D'Souza Road / Mavis Road /
Avonwick Road Intersection Capacity

Work Sheets/Summaries:

Protected and Permitted Phasing for
Northbound and Southbound Left Turn
Lanes on Mavis Road

Yee Hong Mavis Retirement Home
3: Mavis Road & Father D'Souza Drive/Avonwick Avenue

Future (2026) Background Traffic Volumes
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	137	24	156	132	9	156	94	2028	141	202	2269	83
Future Volume (vph)	137	24	156	132	9	156	94	2028	141	202	2269	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	18.0		0.0	18.0		0.0	30.0		0.0	70.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	20.0			25.0			40.0			35.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor	0.97	0.98		0.99	0.95			0.99			1.00	
Frt		0.870			0.858			0.990			0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1615	0	1787	1535	0	1805	4962	0	1770	5045	0
Flt Permitted	0.649			0.639			0.125			0.114		
Satd. Flow (perm)	1182	1615	0	1188	1535	0	238	4962	0	212	5045	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		163			163			15			7	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		123.1			174.3			244.8			301.9	
Travel Time (s)		8.9			12.5			17.6			21.7	
Confl. Peds. (#/hr)	54		20	20		54	31		45	45		31
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	0%	0%	1%	0%	1%	0%	3%	0%	2%	2%	3%
Adj. Flow (vph)	143	25	163	138	9	163	98	2113	147	210	2364	86
Shared Lane Traffic (%)												
Lane Group Flow (vph)	143	188	0	138	172	0	98	2260	0	210	2450	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Yee Hong Mavis Retirement Home
3: Mavis Road & Father D'Souza Drive/Avonwick Avenue

Future (2026) Background Traffic Volumes
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	8	8		4	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		5.0	8.0		5.0	8.0	
Minimum Split (s)	36.0	36.0		36.0	36.0		9.5	27.0		9.5	27.0	
Total Split (s)	36.0	36.0		36.0	36.0		9.5	27.5		9.5	27.5	
Total Split (%)	49.3%	49.3%		49.3%	49.3%		13.0%	37.7%		13.0%	37.7%	
Maximum Green (s)	29.0	29.0		29.0	29.0		6.5	20.5		6.5	20.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	5.0		3.0	5.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0		3.0	7.0		3.0	7.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	12.0	12.0		12.0	12.0			8.0			8.0	
Flash Dont Walk (s)	17.0	17.0		17.0	17.0			12.0			12.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	14.3	14.3		14.3	14.3		43.0	32.0		48.4	36.3	
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.59	0.44		0.66	0.50	
v/c Ratio	0.62	0.42		0.59	0.40		0.34	1.04		0.61	0.97	
Control Delay	37.4	8.6		36.1	7.5		9.5	53.2		17.2	35.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	37.4	8.6		36.1	7.5		9.5	53.2		17.2	35.1	
LOS	D	A		D	A		A	D		B	D	
Approach Delay		21.0			20.2			51.4			33.7	
Approach LOS		C			C			D			C	
Queue Length 50th (m)	19.1	3.0		18.3	1.1		4.2	~121.5		9.7	~127.1	
Queue Length 95th (m)	32.9	16.7		31.9	14.4		12.0	#201.3		33.5	#207.2	
Internal Link Dist (m)		99.1			150.3			220.8			277.9	
Turn Bay Length (m)	18.0			18.0			30.0			70.0		
Base Capacity (vph)	469	739		471	708		297	2183		346	2515	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.30	0.25		0.29	0.24		0.33	1.04		0.61	0.97	

Intersection Summary

Area Type: Other
 Cycle Length: 73
 Actuated Cycle Length: 73
 Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.04
 Intersection Signal Delay: 39.6
 Intersection LOS: D

Yee Hong Mavis Retirement Home
 3: Mavis Road & Father D'Souza Drive/Avonwick Avenue

Future (2026) Background Traffic Volumes
 PM Peak Hour

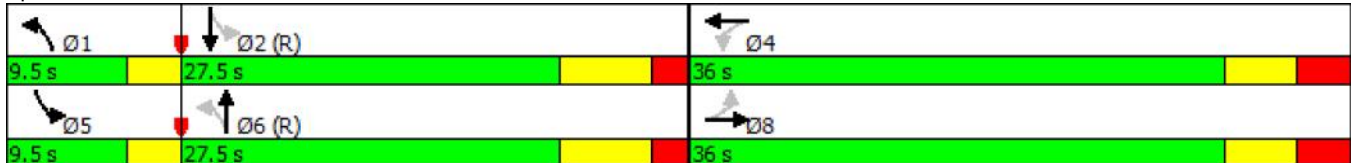
Intersection Capacity Utilization 104.7% ICU Level of Service G

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.























95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: Mavis Road & Father D'Souza Drive/Avonwick Avenue



Yee Hong Mavis Retirement Home
3: Mavis Road & Father D'Souza Drive/Avonwick Avenue























Future (2026) Background Traffic Volumes
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	137	24	156	132	9	156	94	2028	141	202	2269	83
Future Volume (vph)	137	24	156	132	9	156	94	2028	141	202	2269	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	0.98		1.00	0.95		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.97	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.87		1.00	0.86		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1730	1614		1766	1535		1805	4964		1770	5043	
Flt Permitted	0.65	1.00		0.64	1.00		0.12	1.00		0.11	1.00	
Satd. Flow (perm)	1181	1614		1188	1535		238	4964		213	5043	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	143	25	162	138	9	162	98	2112	147	210	2364	86
RTOR Reduction (vph)	0	131	0	0	131	0	0	8	0	0	4	0
Lane Group Flow (vph)	143	57	0	138	41	0	98	2252	0	210	2446	0
Confl. Peds. (#/hr)	54		20	20		54	31		45	45		31
Heavy Vehicles (%)	1%	0%	0%	1%	0%	1%	0%	3%	0%	2%	2%	3%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	14.3	14.3		14.3	14.3		37.9	32.0		44.7	35.8	
Effective Green, g (s)	14.3	14.3		14.3	14.3		37.9	32.0		44.7	35.8	
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.52	0.44		0.61	0.49	
Clearance Time (s)	7.0	7.0		7.0	7.0		3.0	7.0		3.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	231	316		232	300		250	2176		337	2473	
v/s Ratio Prot		0.04			0.03		0.03	0.45		c0.08	c0.49	
v/s Ratio Perm	c0.12			0.12			0.17			0.30		
v/c Ratio	0.62	0.18		0.59	0.14		0.39	1.03		0.62	0.99	
Uniform Delay, d1	26.9	24.5		26.7	24.2		14.0	20.5		13.6	18.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.9	0.3		4.1	0.2		1.0	28.9		3.6	15.7	
Delay (s)	31.7	24.7		30.8	24.5		15.0	49.4		17.2	34.2	
Level of Service	C	C		C	C		B	D		B	C	
Approach Delay (s)		27.8			27.3			48.0			32.8	
Approach LOS		C			C			D			C	
Intersection Summary												
HCM 2000 Control Delay			38.5				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.88									
Actuated Cycle Length (s)			73.0				Sum of lost time (s)			17.0		
Intersection Capacity Utilization			104.7%				ICU Level of Service			G		
Analysis Period (min)			15									

c Critical Lane Group

Yee Hong Mavis Retirement Home
3: Mavis Road & Father D'Souza Drive/Avonwick Avenue

Future (2026) Total Traffic Volumes
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	171	24	168	132	9	156	122	2028	141	202	2269	124
Future Volume (vph)	171	24	168	132	9	156	122	2028	141	202	2269	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	18.0		0.0	18.0		0.0	30.0		0.0	70.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	20.0			25.0			40.0			35.0		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor	0.97	0.98		0.99	0.95			0.99			1.00	
Frt		0.869			0.858			0.990			0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1612	0	1787	1535	0	1805	4962	0	1770	5022	0
Flt Permitted	0.649			0.629			0.133			0.121		
Satd. Flow (perm)	1182	1612	0	1170	1535	0	253	4962	0	225	5022	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		175			163			15			11	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		123.1			174.3			244.8			301.9	
Travel Time (s)		8.9			12.5			17.6			21.7	
Confl. Peds. (#/hr)	54		20	20		54	31		45	45		31
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	0%	0%	1%	0%	1%	0%	3%	0%	2%	2%	3%
Adj. Flow (vph)	178	25	175	138	9	163	127	2113	147	210	2364	129
Shared Lane Traffic (%)												
Lane Group Flow (vph)	178	200	0	138	172	0	127	2260	0	210	2493	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Yee Hong Mavis Retirement Home
3: Mavis Road & Father D'Souza Drive/Avonwick Avenue

Future (2026) Total Traffic Volumes
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	8	8		4	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		5.0	8.0		5.0	8.0	
Minimum Split (s)	36.0	36.0		36.0	36.0		9.5	27.0		9.5	27.0	
Total Split (s)	36.0	36.0		36.0	36.0		9.5	27.5		9.5	27.5	
Total Split (%)	49.3%	49.3%		49.3%	49.3%		13.0%	37.7%		13.0%	37.7%	
Maximum Green (s)	29.0	29.0		29.0	29.0		6.5	20.5		6.5	20.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	5.0		3.0	5.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0		3.0	7.0		3.0	7.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)	12.0	12.0		12.0	12.0			8.0			8.0	
Flash Dont Walk (s)	17.0	17.0		17.0	17.0			12.0			12.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	16.4	16.4		16.4	16.4		41.7	30.0		45.9	33.7	
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.57	0.41		0.63	0.46	
v/c Ratio	0.67	0.40		0.53	0.37		0.41	1.10		0.61	1.07	
Control Delay	37.5	7.4		30.8	6.5		11.7	79.6		18.1	66.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	37.5	7.4		30.8	6.5		11.7	79.6		18.1	66.4	
LOS	D	A		C	A		B	E		B	E	
Approach Delay		21.6			17.3			76.0			62.7	
Approach LOS		C			B			E			E	
Queue Length 50th (m)	23.6	2.9		17.6	1.0		6.2	~139.5		10.8	~155.8	
Queue Length 95th (m)	38.5	16.1		30.1	13.5		17.4	#208.2		35.5	#229.0	
Internal Link Dist (m)		99.1			150.3			220.8			277.9	
Turn Bay Length (m)	18.0			18.0			30.0			70.0		
Base Capacity (vph)	469	745		464	708		312	2048		344	2321	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.38	0.27		0.30	0.24		0.41	1.10		0.61	1.07	

Intersection Summary

Area Type:	Other
Cycle Length:	73
Actuated Cycle Length:	73
Offset:	0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle:	100
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.10
Intersection Signal Delay:	63.1
Intersection LOS:	E

Yee Hong Mavis Retirement Home
 3: Mavis Road & Father D'Souza Drive/Avonwick Avenue

Future (2026) Total Traffic Volumes
 PM Peak Hour

Intersection Capacity Utilization 106.6% ICU Level of Service G

Analysis Period (min) 15

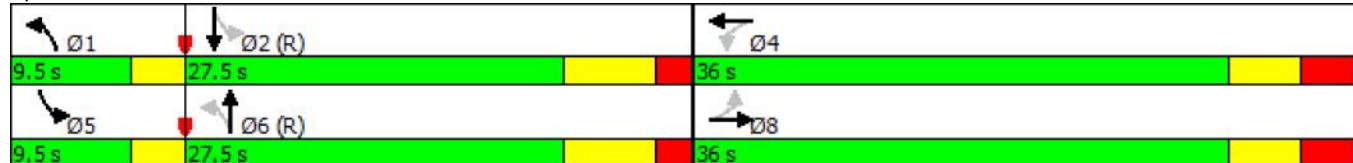
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 3: Mavis Road & Father D'Souza Drive/Avonwick Avenue



Yee Hong Mavis Retirement Home
3: Mavis Road & Father D'Souza Drive/Avonwick Avenue

Future (2026) Total Traffic Volumes
PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	171	24	168	132	9	156	122	2028	141	202	2269	124
Future Volume (vph)	171	24	168	132	9	156	122	2028	141	202	2269	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0		7.0	7.0		3.0	7.0		3.0	7.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.91		1.00	0.91	
Frbp, ped/bikes	1.00	0.98		1.00	0.95		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.97	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.87		1.00	0.86		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1730	1612		1767	1535		1805	4964		1770	5024	
Flt Permitted	0.65	1.00		0.63	1.00		0.13	1.00		0.12	1.00	
Satd. Flow (perm)	1181	1612		1170	1535		253	4964		226	5024	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	178	25	175	138	9	162	127	2112	147	210	2364	129
RTOR Reduction (vph)	0	136	0	0	126	0	0	9	0	0	6	0
Lane Group Flow (vph)	178	64	0	138	46	0	127	2251	0	210	2487	0
Confl. Peds. (#/hr)	54		20	20		54	31		45	45		31
Heavy Vehicles (%)	1%	0%	0%	1%	0%	1%	0%	3%	0%	2%	2%	3%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	16.4	16.4		16.4	16.4		36.6	30.0		42.6	33.0	
Effective Green, g (s)	16.4	16.4		16.4	16.4		36.6	30.0		42.6	33.0	
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.50	0.41		0.58	0.45	
Clearance Time (s)	7.0	7.0		7.0	7.0		3.0	7.0		3.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	265	362		262	344		267	2040		334	2271	
v/s Ratio Prot		0.04			0.03		0.04	0.45		c0.08	c0.50	
v/s Ratio Perm	c0.15			0.12			0.20			0.28		
v/c Ratio	0.67	0.18		0.53	0.13		0.48	1.10		0.63	1.10	
Uniform Delay, d1	25.8	22.9		24.9	22.6		14.7	21.5		13.7	20.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.5	0.2		1.9	0.2		1.3	54.6		3.7	50.5	
Delay (s)	32.4	23.1		26.8	22.8		16.1	76.1		17.4	70.5	
Level of Service	C	C		C	C		B	E		B	E	
Approach Delay (s)		27.5			24.6			72.9			66.4	
Approach LOS		C			C			E			E	
Intersection Summary												
HCM 2000 Control Delay			64.3									E
HCM 2000 Volume to Capacity ratio			0.94									
Actuated Cycle Length (s)			73.0								17.0	
Intersection Capacity Utilization			106.6%									G
Analysis Period (min)			15									
c Critical Lane Group												