TRANSPORTATION PLANNERS AND ENGINEERS

Harris Street
Complete Street Assessment

Final **V2**

Prepared for

City of Pitt Meadow
Aplin & Martin Consultants Ltd.

Date

July 08, 2025

Project No.

04-24-0264

Bunt & Associates acknowledges and respects the Traditional Territories upon which our work spans, and from which we benefit. We are grateful for the unique cultures and histories of Indigenous Peoples that enrich our understanding and connection to the lands we call home. We honour learning, listening, and truth in our journey to reconciliation.

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Written with respect and gratitude for the Traditional Territories upon which we work and live.

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1. INTRODUCTION

1.1 Study Purpose & Objectives

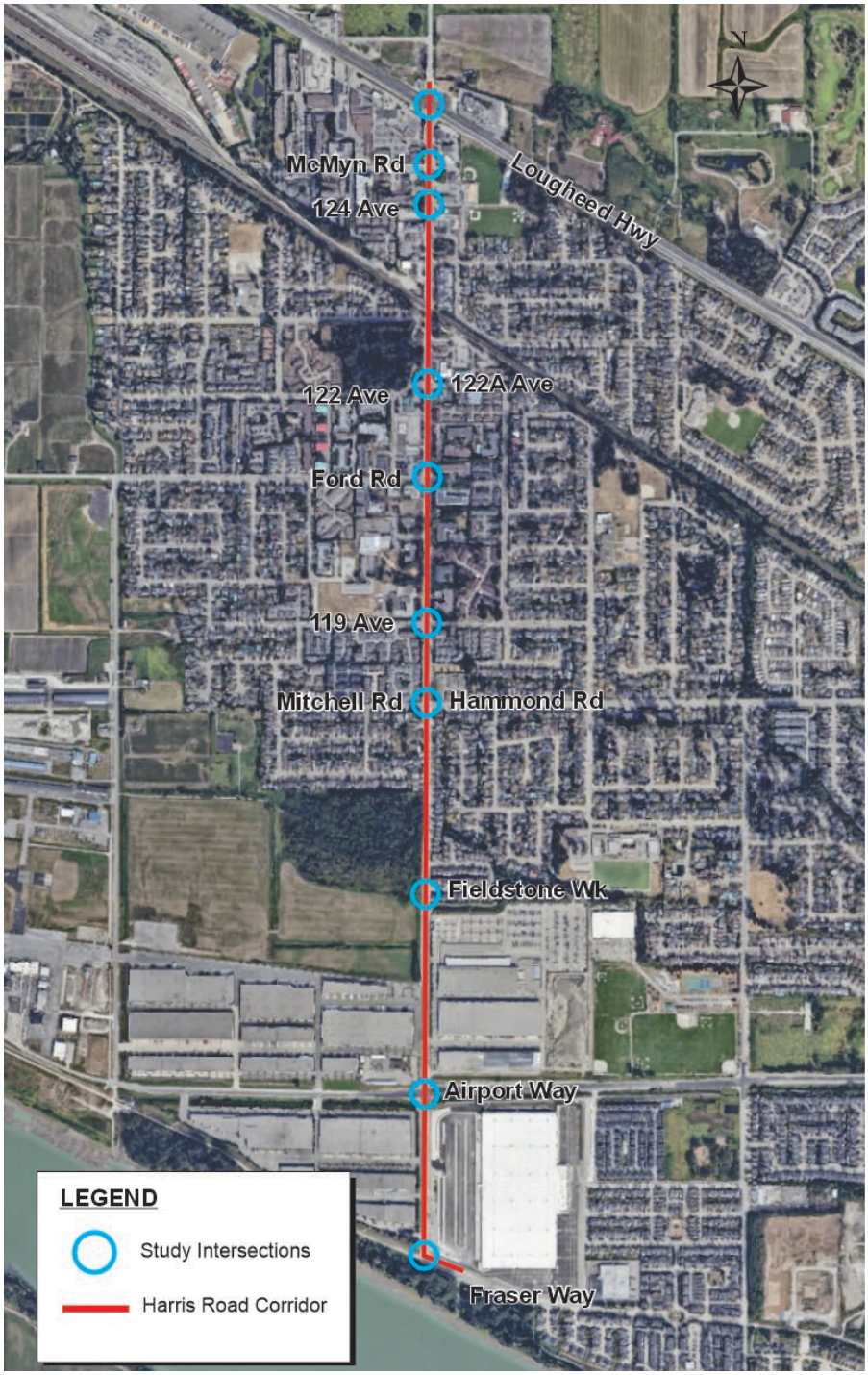
Bunt & Associates (Bunt) has been retained by Aplin Martin Consultants Ltd. (Aplin Martin) to conduct a traffic operation study for Harris Road corridor improvement, located in the City of Pitt Meadows, BC. The city has selected four cross section options developed by Aplin Martin for the Harris Road Corridor improvement which are included in **Appendix A**. The purpose of this study is to provide a traffic operation review of the four Improvement Options that can be used as part of the criteria in the corridor improvements' selection process.

1.2 Study Scope & Area

The Harris Road corridor study area spans approximately three kilometres between Lougheed Highway and Fraser Way. The site context is displayed in **Figure 1.1**. Bunt study scope is as follows:

- Data Collection and Review
    - Gather existing traffic counts for the study intersections from the past three years from the City of Pitt Meadows.
    - Identify intersections that require updated traffic counts and collect traffic counts at required intersections with both cameras and personnel using JAMAR boards.
    - Obtain signal timing plans from the City of Pitt Meadows and The BC Ministry of Transportation and Transit (BC MoTT).
- Harris Road Analysis
    - Identify the common AM and PM peak hour of the corridor to be analyzed. Use a combined peak hour of greatest total traffic volume in 15-minute increments.
    - Model the existing conditions utilizing the collected traffic counts and signal timing plans using Synchro 11 software for the four Improvement Options for the weekday AM and PM peak hours.
    - Adjust Synchro 11 parameters to best calibrate existing conditions.
    - Evaluate operating performance of the four Improvement Options and identify potential opportunities and constraints for the development of various Improvement Options.
    - Provide recommendations and mitigation options at points of weakness along Harris Road.
    - Summarize the analysis findings to inform future decision making.

Figure 1.1: Site Context



2. TRAFFIC VOLUMES

2.1 Data Collection

Traffic volume data was collected by Bunt at 10 intersections, displayed in **Figure 1.1** above. Cameras and personnel using JAMAR boards were used to perform traffic volume counts. Count data was collected on Wednesday January 8, 2025 to represent AM and PM peak hour volume data. Full data collected during traffic counts can be found in **Appendix B**.

2.2 Peak Hour Volumes

Peak hour volumes were extracted from count data using a common peak hour for the AM and PM. The common peak hour was determined using 15-minute increments and selected by the hour with the greatest total vehicle movements of all 10 counted intersections. The AM peak hour is 7:45-8:45am, and the PM peak hour is 4:15-5:15pm. Because existing volumes were used in analysis no growth factor was applied to volumes. AM and PM Peak Hour Volumes are displayed in **Exhibit 2.1**.

Exhibit 2.1: Harris Road Peak Hour Volumes (Original Figure to be inserted)

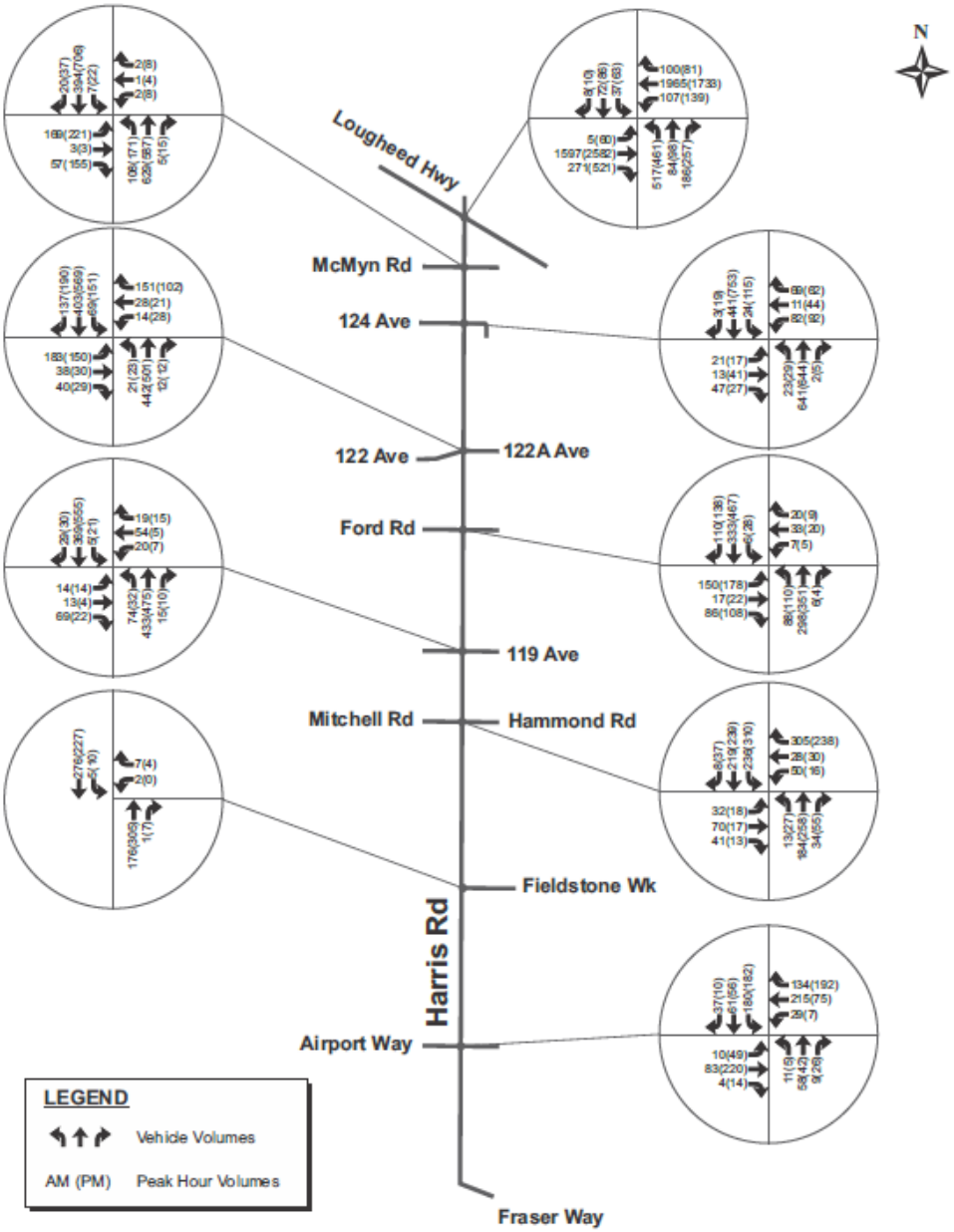


Exhibit 2.1
Existing Traffic Volumes

3. COMPLETE STREET ANALYSIS

3.1 Performance Thresholds

The existing operations of study area intersections and access points were assessed using the methods outlined in the 2000 Highway Capacity Manual (HCM), using the Synchro 11 analysis software. The traffic operations were assessed using the performance measures of Level of Service (LOS) and volume-to-capacity (V/C) ratio.

The LOS rating is based on average vehicle delay and ranges from "A" to "F" based on the quality of operation at the intersection. LOS "A" represents optimal, minimal delay conditions while a LOS "F" represents an over-capacity condition with considerable congestion and/or delay. Delay is calculated in seconds and is based on the average intersection delay per vehicle.

Table 3.1 below summarizes the LOS thresholds for the six Levels of Service, for both signalized and unsignalized intersections.

Table 3.1: Intersection Level of Service Thresholds

LEVEL OF SERVICE	AVERAGE CONTROL DELAY PER VEHICLE (SECONDS)	
	SIGNALIZED	UNSIGNALIZED
A	≤10	≤10
B	>10 and ≤20	>10 and ≤15
C	>20 and ≤35	>15 and ≤25
D	>35 and ≤55	>25 and ≤35
E	>55 and ≤80	>35 and ≤50
F	>80	>50

Source: Highway Capacity Manual

The volume to capacity (V/C) ratio of an intersection represents ratio between the demand volume and the available capacity. A V/C ratio less than 0.85 indicates that there is sufficient capacity to accommodate demands and generally represents reasonable traffic conditions in suburban settings. A V/C value between 0.85 and 0.95 indicates an intersection is approaching practical capacity; a V/C ratio over 0.95 indicates that traffic demands are close to exceeding the available capacity, resulting in saturated conditions. A V/C ratio over 1.0 indicates a very congested intersection where drivers may have to wait through several signal cycles. In downtown and Town Centre contexts, during peak demand periods, V/C ratios over 0.90 and even 1.0 are common.

The performance thresholds that were used to trigger consideration of change to roadway Improvement Options to support roadway or traffic control improvements employed in this study are listed below:

Signalized Intersections:

- Overall intersection Level of Service = LOS D or better;
- Overall intersection V/C ratio = 0.85 or less;
- Individual movement Level of Service = LOS E or better; and,
- Individual movement V/C ratio = 0.90 or less.

Unsignalized Intersections:

- Individual movement Level of Service = LOS E or better, unless the volume is very low in which case LOS F is acceptable.

In interpreting of the analysis results, note that the HCM methodology reports perform differently for various types of intersection traffic control. In this report, the performance reporting convention is as follows:

- For signalized intersections: HCM 2000 output for overall LOS and V/C as well as individual movement LOS and V/C is reported. 95th Percentile Queues are reported as estimated by Synchro followed by SimTraffic, the micro-simulation module of the Synchro software;

- For unsignalized stop controlled intersections (presented in **Appendix C**): HCM 2000 LOS and V/C output is reported just for individual lanes as the HCM methodology does not report overall performance. SimTraffic estimated queues and delays have also been reported, as the HCM 2000 methodology does not directly consider the gaps afforded by adjacent signalized intersections;

The performance reporting conventions noted above have been consistently applied throughout this document and the detailed outputs of Synchro reports are provided in **Appendix C.**

3.2 Analysis Assumptions

The following assumptions were used to complete Synchro 11 analysis:

- Vehicle volumes were applied to each movement based on counted traffic data.
- The peak hour factor (PHF) was adjusted for each intersection based on traffic data.
- A standard heavy vehicle percentage (HV%) was applied at 5% across all intersections.
- Bike and Pedestrian volumes were applied based on counted data. However, a minimum of 5 was applied for all movements with pedestrian crossings or bicycle lanes.

For this analysis it has been assumed that Harris Road & Lougheed Highway operates at a three-lane highway eastbound. Although one lane is a high occupancy vehicle (HOV) lane, observations have determined that there is consistent vehicle volume comparable to the other eastbound through lanes. Therefore, this lane has been modelled as a typical through lane.

3.3 Adjusted Flow Rate

Initial Synchro 11 analysis was performed to calibrate model settings. Initial calibration used a standard saturated flow rate of 1900 vehicles per hour per lane (vphpl) at all intersections. This flow rate resulted in a V/C greater than 1 for multiple movements at Harris Road & Lougheed Highway. Observations indicate that the intersection is operational therefore, a V/C greater than 1 is not an accurate representation of conditions. To ensure that the V/C is representative of existing conditions the saturated flow rate was adjusted at Harris Road & Lougheed Highway in both the AM and PM peak hour to 2200 vphpl. This saturated flow rate adjustment is typical in the area and necessary to represent existing conditions.

3.4 Signal Timing

Existing signal timing plans were used to develop existing operations of study area intersections using Synchro 11. Signal timing plans were provided directly from the City of Pitt Meadows and BC MoTT. Signals along the study corridor are uncoordinated; therefore, consideration of offset timing or master signal plans was not required in analysis. Following initial Synchro 11 calibration, the signal timing at Harris Road & Lougheed Highway was changed from existing timing plan to optimize conditions. Signal timing settings were optimized using the 'Optimize Cycle Length' and 'Optimize Splits' functions within Synchro 11.

3.5 Synchro 11 Analysis

The results of Synchro 11 analysis are displayed below in **Table 3.2** through **Table 3.10**. Improvement Options have been identified in tables below and combined when multiple Improvement Options provide the same results. Complete Synchro reports are provided in **Appendix C**.

Table 3.2: Intersection Analysis – Harris Road & Lougheed Highway

OPTION	MOVEMENT	AM			PM		
		LOS	V/C	95TH Q (M)	LOS	V/C	95TH Q (M)
All Options (Signalized)	*OVERALL*	*D*	*0.91*	-	*D*	*0.93*	-
	EBL	**E**	**0.29**	**6**	**F**	**0.64**	**35**
	EBT	C	0.63	158	D	0.98	345
	EBR	C	0.22	31	C	0.54	104
	WBL	E	0.62	51	**F**	**0.94**	**89**
	WBT	D	0.96	382	D	0.91	338
	WBR	B	0.06	6	B	0.05	3
	NBL	**F**	**0.94**	**165**	**F**	**0.98**	**159**
	NBT	E	0.90	160	**F**	**0.95**	**157**
	NBR	D	0.12	21	D	0.39	51
	SBL	E	0.29	22	E	0.44	35
	SBT/R	E	0.29	19	E	0.31	24

Table 3.3: Intersection Analysis - Harris Road & McMyn Road

OPTION	MOVEMENT	AM			PM		
		LOS	V/C	95TH Q (M)	LOS	V/C	95TH Q (M)
All Options (Signalized)	*OVERALL*	*B*	*0.57*	-	*B*	*0.73*	-
	EBT	C	0.60	37	C	0.74	53
	EBR	B	0.04	<5	C	0.12	12
	WBT	B	<0.02	<5	B	0.04	6
	NBL	A	0.25	17	B	0.53	28
	NBT	B	0.46	59	B	0.43	56
	SBL	A	0.03	<5	B	0.08	5
	SBT/R	B	0.39	41	C	0.69	79

Table 3.4: Intersection Analysis - Harris Road & 124 Avenue

OPTION	MOVEMENT	AM			PM		
		LOS	V/C	95TH Q (M)	LOS	V/C	95TH Q (M)
Options 1, 2, & 3 (Signalized)	*OVERALL*	*B*	*0.57*	-	*B*	*0.66*	-
	EBL/T/R	B	0.14	13	B	0.18	17
	WBL/T/R	B	0.44	30	C	0.54	43
	NBL	A	0.08	7	B	0.16	10
	NBT/R	B	0.53	59	B	0.62	63
	SBL	A	0.10	5	A	0.38	17
	SBT/R	A	0.27	28	A	0.47	52
Option 4 (Signalized)	*OVERALL*	*A*	*0.52*	-	*B*	*0.54*	-
	EBL	B	0.09	7	B	0.08	6
	EBT/R	B	0.08	9	C	0.15	14
	WBL	B	0.36	19	C	0.41	23
	WBT/R	B	0.09	10	C	0.20	16
	NBL	A	0.07	7	B	0.13	10
	NBT/R	B	0.49	59	B	0.52	63
	SBL	A	0.09	5	A	0.32	17
	SBT/R	A	0.25	28	A	0.41	52

Table 3.5: Intersection Analysis - Harris Road & 122 / 122A Avenue

OPTION	MOVEMENT	AM			PM		
		LOS	V/C	95TH Q (M)	LOS	V/C	95TH Q (M)
Option 1 (Signalized)	*OVERALL*	*B*	*0.64*	-	*B*	*0.63*	-
	EBL	C	0.76	38	C	0.62	35
	EBT/R	B	0.14	11	B	0.11	11
	WBL/T/R	B	0.25	15	C	0.25	18
	NBL	B	0.08	5	B	0.09	6
	NBT/R	B	0.44	44	B	0.43	52
	SBL	A	0.23	13	A	0.38	25
	SBT/R	B	0.49	50	B	0.54	74
Option 2 & 3 (Signalized)	*OVERALL*	*B*	*0.69*	-	*B*	*0.69*	-
	EBL/T/R	C	0.75	55	B	0.61	48
	WBL/T/R	C	0.22	15	B	0.21	19
	NBL	C	0.10	5	B	0.12	6
	NBT/R	C	0.53	44	B	0.51	52
	SBL	C	0.26	13	B	0.44	25
	SBT/R	C	0.55	50	B	0.63	74
Option 4 (Signalized)	*OVERALL*	*B*	*0.64*	-	*B*	*0.64*	-
	EBL	C	0.78	39	C	0.65	36
	EBT/R	B	0.14	11	B	0.11	11
	WBL	B	0.05	<5	B	0.11	9
	WBT/R	B	0.21	13	B	0.15	14
	NBL	B	0.08	5	B	0.09	6
	NBT/R	B	0.43	44	B	0.42	52
	SBL	A	0.22	13	A	0.38	25
	SBT/R	B	0.49	50	B	0.54	74

Table 3.6: Intersection Analysis - Harris Road & Ford Drive

OPTION	MOVEMENT	AM			PM		
		LOS	V/C	95TH Q (M)	LOS	V/C	95TH Q (M)
Option 1 (Signalized)	*OVERALL*	*B*	*0.51*	-	*B*	*0.57*	-
	EBL	C	0.74	29	C	0.65	33
	EBT/R	B	0.14	9	B	0.15	12
	WBL/T/R	B	0.17	10	B	0.08	7
	NBL	A	0.27	12	A	0.35	15
	NBT/R	A	0.25	25	A	0.29	28
	SBL	A	0.02	<5	A	0.09	5
	SBT/R	B	0.43	33	B	0.57	48
Option 2 & 3 (Signalized)	*OVERALL*	*B*	*0.50*	-	*B*	*0.57*	-
	EBL	C	0.73	29	C	0.64	33
	EBT/R	B	0.15	9	B	0.15	12
	WBL	B	0.15	9	B	0.07	6
	WBT/R	B	0.02	<5	B	<0.02	<5
	NBL	A	0.27	12	A	0.35	15
	NBT/R	A	0.25	25	A	0.29	28
	SBL	A	0.02	<5	A	0.09	5
	SBT/R	B	0.43	33	B	0.57	48
Option 4 (Signalized)	*OVERALL*	*B*	*0.50*	-	*B*	*0.56*	-
	EBL	C	0.73	29	C	0.64	33
	EBT/R	B	0.15	9	B	0.15	12
	WBL/T	B	0.15	9	B	0.07	6
	WBR	C	<0.02	<5	B	<0.02	<5
	NBL	A	0.26	12	A	0.34	15
	NBT/R	A	0.25	25	A	0.29	28
	SBL	A	0.02	<5	A	0.08	5
	SBT/R	B	0.43	33	B	0.57	48

Table 3.7: Intersection Analysis - Harris Road & 119 Avenue

OPTION	MOVEMENT	AM			PM		
		LOS	V/C	95TH Q (M)	LOS	V/C	95TH Q (M)
Options 1, 2, & 3 (Signalized)	*OVERALL*	*B*	*0.47*	-	*A*	*0.49*	-
	EBT	B	0.12	7	C	0.10	6
	WBT	B	0.20	11	C	0.07	5
	NBL	A	0.34	17	A	0.08	9
	NBT	A	0.38	33	A	0.25	36
	SBL	A	0.02	<5	A	0.05	6
	SBT	B	0.60	64	A	0.53	127
	SBR	A	0.03	<5	C	<0.02	<5
Option 4 (Signalized)	*OVERALL*	*B*	*0.34*	-	*A*	*0.31*	-
	EBL/R/T	B	0.12	7	B	0.09	6
	WBL/R/T	B	0.18	11	B	0.06	<5
	NBL	A	0.31	16	A	0.09	8
	NBT/R	A	0.41	33	A	0.27	36
	SBL	A	0.02	<5	A	0.05	6
	SBT/R	A	0.38	29	A	0.33	45

Table 3.8: Intersection Analysis - Harris Road & Mitchell Road / Hammond Road

OPTION	MOVEMENT	AM			PM		
		LOS	V/C	95TH Q (M)	LOS	V/C	95TH Q (M)
Options 1, 2, & 3 (Signalized))	*OVERALL*	*B*	*0.65*	-	*B*	*0.62*	-
	EBL/T/R	B	0.42	24	B	0.15	11
	WBT	B	0.29	16	B	0.17	12
	WBR	A	0.27	8	A	0.18	14
	NBL	B	0.06	5	B	0.10	9
	NBT	B	0.49	39	B	0.56	58
	NBR	B	0.03	<5	B	0.04	<5
	SBL	B	0.61	37	A	0.62	64
	SBT	A	0.30	32	A	0.28	37
	SBR	A	<0.02	<5	A	0.03	<5
Option 4 (Signalized)	*OVERALL*	*B*	*0.65*	-	*B*	*0.61*	-
	EBL/T/R	B	0.41	24	B	0.15	11
	WBL/T	B	0.29	16	B	0.17	12
	WBR (channelized)	B	0.27	8	B	0.18	14
	NBL	B	0.07	5	B	0.11	9
	NBT	B	0.50	39	B	0.56	58
	NBR	B	0.03	<5	B	0.04	<5
	SBL	B	0.60	37	A	0.62	63
	SBT/R	B	0.17	15	A	0.16	18

Table 3.9: Intersection Analysis - Harris Road & Fieldstone Walk

OPTION	MOVEMENT	AM			PM		
		LOS	V/C	95TH Q (M)	LOS	V/C	95TH Q (M)
All Options (WB Stop)	*OVERALL*	*A*	-	-	*A*	-	-
	WBL/R	B	<0.02	<5	B	<0.02	<5
	NBT/R	A	0.11	<5	A	0.23	<5
	SBL/T	A	<0.02	<5	A	<0.02	<5

Table 3.10: Intersection Analysis - Harris Road & Airport Way

OPTION	MOVEMENT	AM			PM		
		LOS	V/C	95TH Q (M)	LOS	V/C	95TH Q (M)
All Options (Signalized)	*OVERALL*	*B*	*0.41*	-	*C*	*0.36*	-
	EBL	B	0.03	5	B	0.11	15
	EBT/R	B	0.09	14	B	0.21	33
	WBL	B	0.07	10	C	0.03	<5
	WBT/R	B	0.29	37	C	0.21	18
	NBL	C	0.06	<5	C	0.03	<5
	NBT	C	0.25	20	C	0.18	17
	NBR	C	0.01	<5	C	0.02	<5
	SBL	B	0.44	37	C	0.47	43
	SBT/R	B	0.19	23	C	0.14	20

The results of Synchro 11 analysis display that there are no significant differences in performance between roadway Improvement Options. All four Improvement Options do not meet performance thresholds at Harris Road and Lougheed Highway. This is due to delays greater than 80 seconds and not due to excessive queue lengths. All other intersections meet performance thresholds between all four Improvement Options. The variance in performance of intersection analysis between Improvement Options is discussed further in **Section 3.6**.

3.6 Improvement Option Performance Variance

Between all Improvement Options four of nine analyzed intersections produce the same results when modelled using Synchro 11. These intersections are as follows:

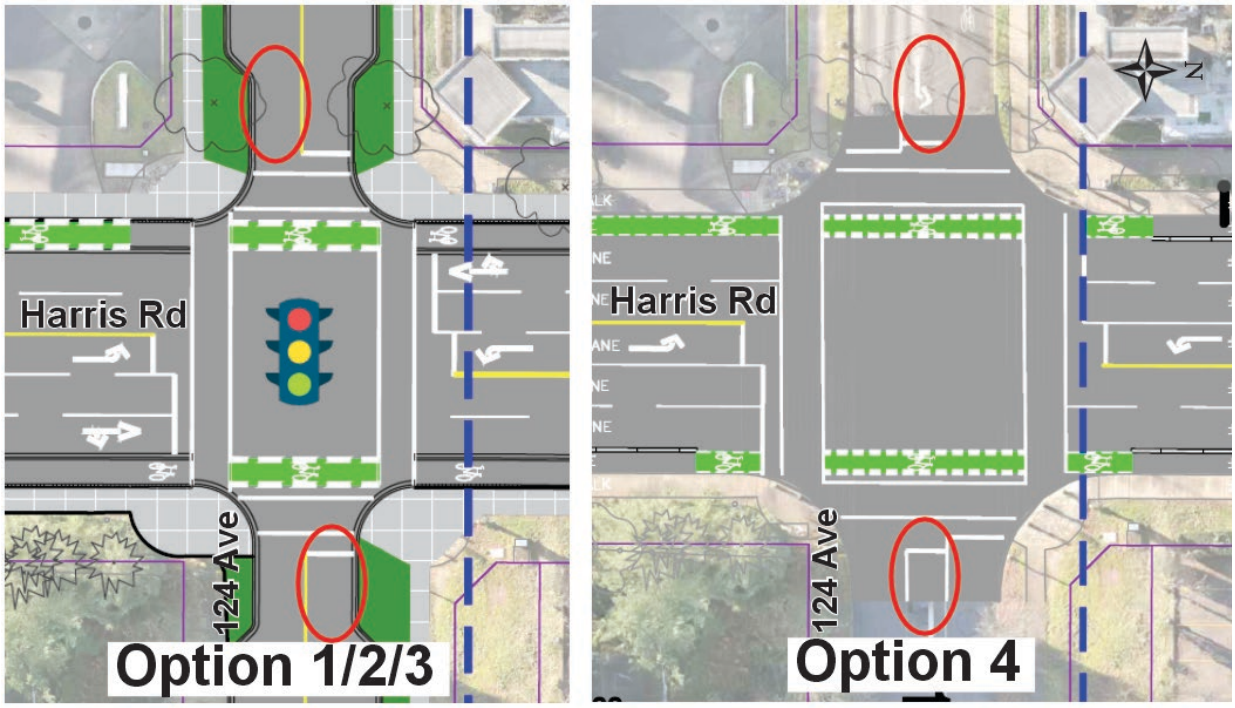
- Harris Road & Lougheed Highway
- Harris Road & McMyn Road
- Harris Road & Fieldstone Walk
- Harris Road & Airport Way

The remaining five intersections vary in geometric design between Improvement Options and therefore produce differing results when modelled using Synchro 11. When modelled using Synchro 11 Improvement Options 2 and 3 produce the same results, Options 1 and 4 produce unique results dependant on the intersection being analyzed. The following summarized the variance between intersection geometry and Synchro 11 analysis results between Improvement Options.

Harris Road & 124 Avenue

Option 4 differs from all other Improvement Options at Harris Road & 124 Avenue. The difference in intersection geometric designs between Options 1, 2, and 3 and Option 4 are displayed in **Figure 3.1.**

Figure 3.1: Harris Road & 124 Avenue Improvement Options



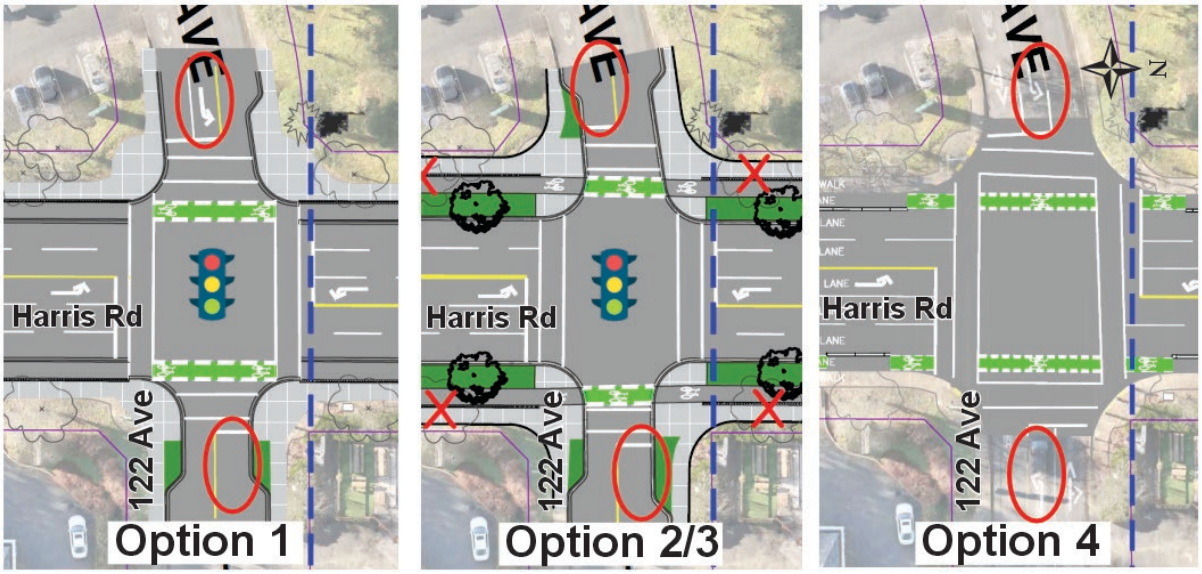
On Harris Road the northbound and southbound lane alignment is consistent between all Improvement Options but has differing lane widths in Option 4 applied in analysis. On Options 1,2, and 3, 124 Avenue has one westbound lane (WBL/T/R) and one eastbound lane (EBL/T/R) compared to Option 4 which has two westbound lanes including a left turning lane (WBL, WBT/R) and two eastbound lanes including a left turning lane (EBL, EBT/R).

These variances do not result in significant differences to intersection performance between Improvement Options. At Harris Road & 124 Avenue the overall level of service (LOS) differs one letter rating (A and B) during the AM peak hour and remains consistent during the PM peak hour.

Harris Road & 122/122 A Avenue

At Harris Road & 112/122A Avenue geometric design and intersection performance varies between Option 1, Options 2/3, and Option 4. The difference in intersection geometric designs between Options are displayed in **Figure 3.2.**

Figure 3.2: Harris Road & 122/122A Avenue Improvement Options



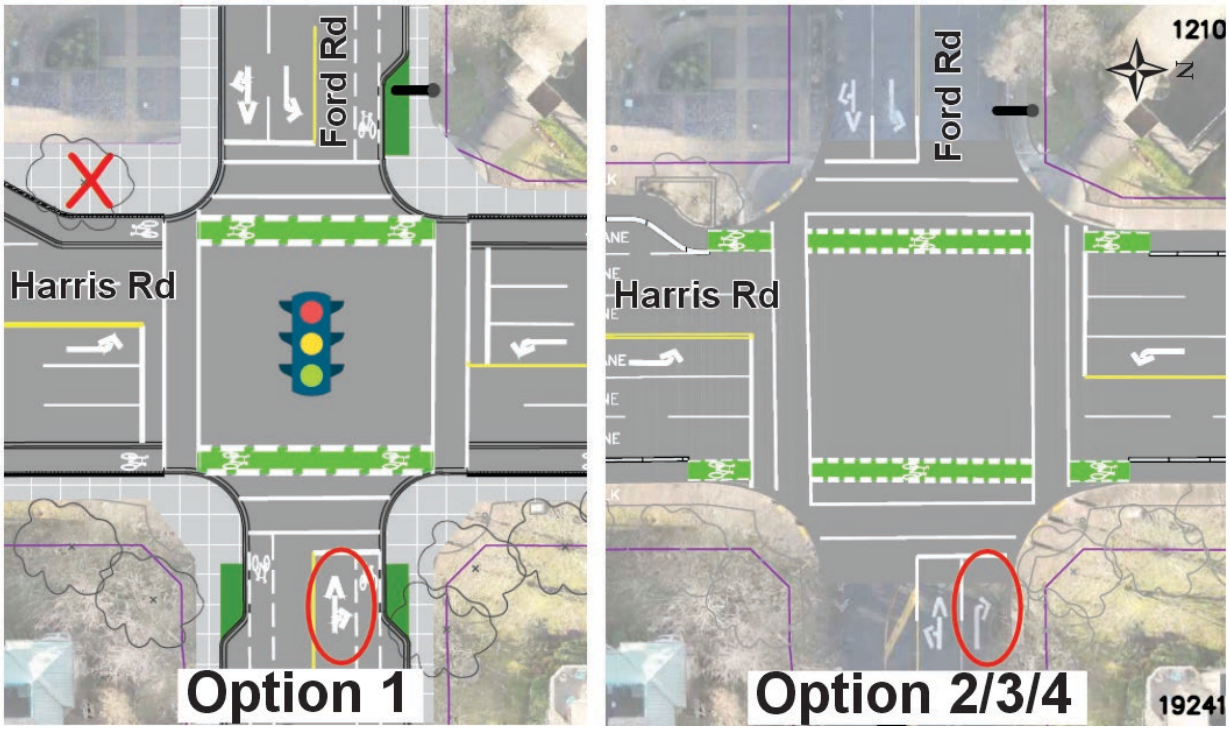
On Harris Road the northbound and southbound lane alignment is consistent between all Improvement Options but has differing lane widths in Option 4. It should be noted that although this variance is not visible in **Figure 3.2**, it is applied in analysis and is displayed in **Table 3.5** displaying Synchro 11 results. On 122A Avenue in the westbound direction Option 4 differs from Options 1,2, and 3. Options 1, 2, and 3 have one lane shared westbound lane (WBL/T/R) compared to Option 4 which has one westbound left lane (WBL) and one shared westbound through/right lane (WBT/R). Options 2/3 eastbound direction on 122 Avenue differs from Options 1 and 4. Options 2/3 have one lane shared eastbound lane (EBL/T/R) compared to Options 1 and 4 which have two eastbound lanes: one eastbound left lane (EBL) and one shared eastbound through/right lane (EBT/R).

These variances do not result in significant differences in intersection performance between Improvement Options. At Harris Road & 122/122A Avenue the overall level of service (LOS) remains consistent during the AM and PM peak hours.

Harris Road & Ford Road

Option 1 differs from all other Improvement Options at Harris Road & Ford Road. The difference in intersection geometric designs between Option 1 and Options 2, 3, and 4 are displayed in **Figure 3.3.**

Figure 3.3: Harris Road & Ford Road Improvement Options



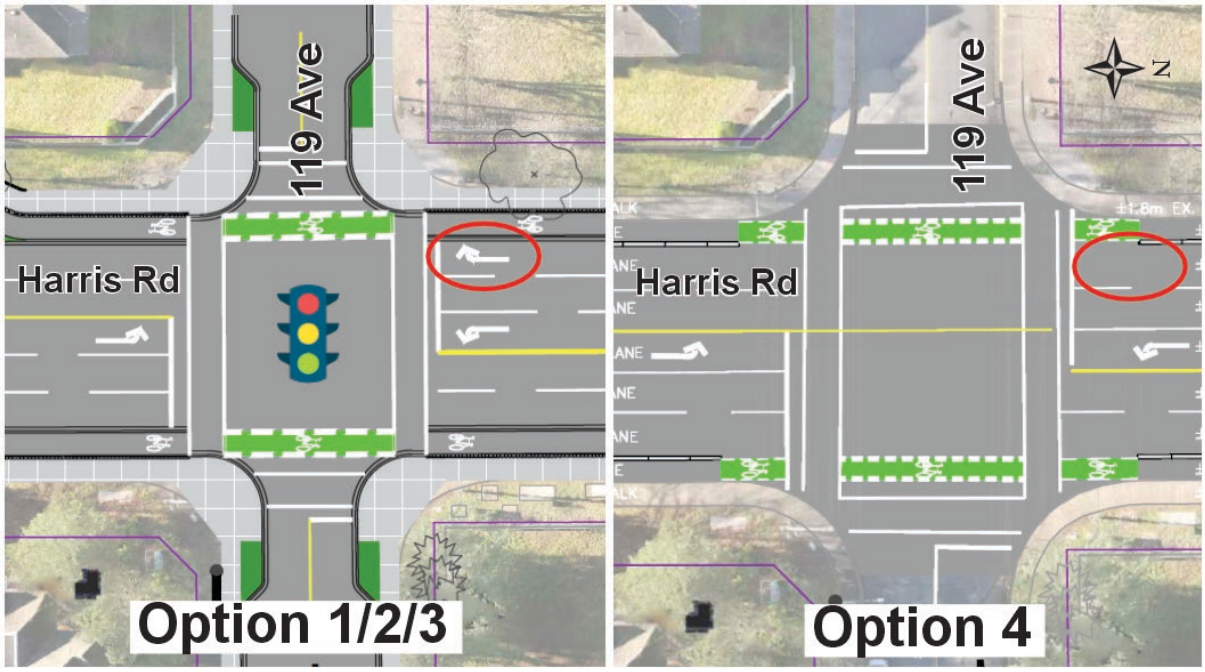
At Harris Road & Ford Road the eastbound, southbound, and northbound lane alignment remains consistent between all options, but there is a difference in lane widths in the southbound direction. It should be noted that although this variance is not visible in **Figure 3.3**, it is applied in analysis and is displayed in **Table 3.6** Synchro 11 results. In Option 1 there is one westbound lane (WBL/T/R) compared to all other options which have two westbound lanes including one separate westbound right lane (WBL/T, WBR).

These variances do not result in significant differences in intersection performance between Improvement Options. At Harris Road & Ford Road the overall level of service (LOS) remains consistent during the AM and PM peak hours.

Harris Road & 119 Avenue

Option 4 differs from all other Improvement Options at Harris Road & 119 Avenue. The difference in intersection geometric designs between Options 1, 2, and 3 and Option 4 are displayed in **Figure 3.4.**

Figure 3.4: Harris Road & 119 Avenue Improvement Options



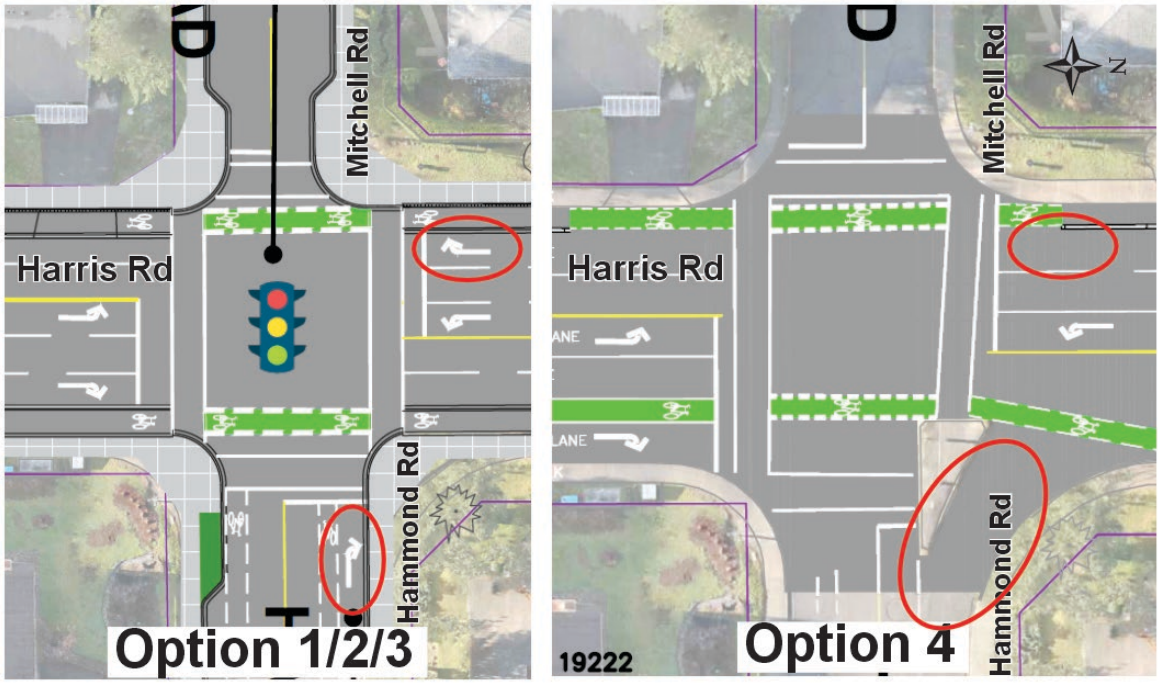
At Harris Road & 119 Avenue the eastbound, westbound, and northbound lane geometry remains consistent between all options. The southbound lane alignment on Harris Road has 3 lanes: one left (SBL), one through (SBT), but differs with a right turn only lane (SBR) for Options 1,2, and 3 and a shared through/right lane (SBT/R) for Option 4. There is also a difference in lane widths in the southbound direction applied to analysis.

These variances do not result in significant differences in intersection performance between Improvement Options. At Harris Road & 119 Avenue the overall level of service (LOS) remains consistent during the AM and PM peak hours.

Harris Road & Mitchell Road/Hammond Road

Option 4 differs from all other Improvement Options at Harris Road & Mitchell Road/Hammond Road. The difference in intersection geometric designs between Options 1, 2, and 3 and Option 4 are displayed in **Figure 3.5.**

Figure 3.5: Harris Road & Mitchell Road/Hammond Road Improvement Options



On Harris Road the northbound lane alignment is consistent between all Improvement Options but has differing lane widths in Option 4. The southbound lane alignment on Harris Road is 3 lanes: one left (SBL), one through (SBT), but differs with a right turn only lane (SBR) for Options 1,2, and 3 and a shared through/right lane (SBT/R) for Option 4. The eastbound lane geometry on Mitchell Road remains consistent between all options. On Hammond Road there is a shared westbound left turn and through lane (WBL/T) and a westbound right turn only lane (WBR). In Options 4 the westbound right lane is channelized compared to a stopping westbound right turn lane in all other Improvement Options.

These variances do not result in significant differences to intersection performance between Improvement Options. At Harris Road & Mitchell Road/Hammond Road the overall level of service (LOS) remains consistent between Improvement Options during the AM and PM peak hours.

The analysis indicates that the inclusion of a channelized island for the eastbound right-turning traffic on Hammond Road does not significantly improve the operational capacity of this movement, compared to the designation right-turn lane in Options 1-3. Existing Conditions include the channelized island and right turn.

3.7 Mitigation Options

Mitigations can be added to the proposed Improvement Options at Harris Road & Lougheed Highway to reduce delays impacting capacity analysis. Mitigation options include altering signal timing and converting the bus only lane to a high occupancy vehicle (HOV) lane.

Although 'optimized' signal timing was used in Synchro 11 analysis, alterations can still be made to reduce delays at Harris Road & Lougheed Highway. Synchro 11 signal timing optimization features are set to prioritize through traffic ahead of turning traffic. Therefore, signal timing plans can be further altered to allow for increased turning capacity. Specifically, allowing increased time for northbound left turns onto Lougheed Highway.

By converting the proposed dedicated bus only northbound left turn lane at Harris Road & Lougheed to a HOV lane, delays in the northbound direction will be reduced. A conversion to HOV will allow for reduced traffic in the northbound turning lanes by not eliminating that lane completely to commuter traffic during the AM and PM peak hours. However, this lane will be offered to fewer vehicles compared to regular lanes still allowing priority to buses while reducing intersection delays and encouraging carpooling.

4. CONCLUSIONS & RECOMMENDATIONS

4.1 Summary of Findings

Using Synchro 11 to preform capacity analysis on the four Improvement Options provided for the Harris Road Corridor, the model does not show significant difference in performance between Improvement Options.

Synchro 11 results show that significant delays occur for all options at Harris Road & Lougheed Highway. Specifically, northbound left and eastbound left movements during both the AM and PM peak hours, and northbound through and westbound left movements in the PM peak hour. These delays are the same between Improvement Options.

4.2 Recommendations

It is the recommendation of Bunt & Associates that of the four Harris Road Improvement Options, no option is assessed as better than another based on traffic capacity performance alone. All four Improvement Options preform similarly when evaluated using traffic capacity modeling and analysis. However, each Improvement Option will provide additional advantages and disadvantages to the City of Pitt Meadows.

Options 1 and 3 widen the corridor to provide bike lanes along the study corridor with no median separating vehicle and cycle traffic. Option 2 widens the corridor to provide bike lanes along the entire study corridor with a median separating vehicle and cycle traffic from Fieldstone Walk to McMyn Road.

Option 4 provides bike lanes along corridor the entire study corridor with no median separating vehicle and cycle traffic north of Fieldstone Walk, and a need for cyclists to merge with traffic on the railway crossing. It is understood that generally separated bike lanes containing a median are most attractive to cyclists and other vulnerable commuters, and the need to merge with traffic will deter cyclists. Additionally, it is generally understood that increased widening of a corridor will increase costs incurred in implementing improvements.

Therefore, it is recommended that The City of Pitt Meadows select an Improvement Option based on factors other than traffic capacity performance such as commuter safety, implementation ease and cost, and the recommendations of Aplin Martin. Additionally, the recommendation is maintained that in future improvement studies changes are made at Harris Road & Lougheed Highway to increase capacity allowance.

APPENDIX A

Harris Street Improvement Options

City of Pitt Meadows THE Natural PLACE

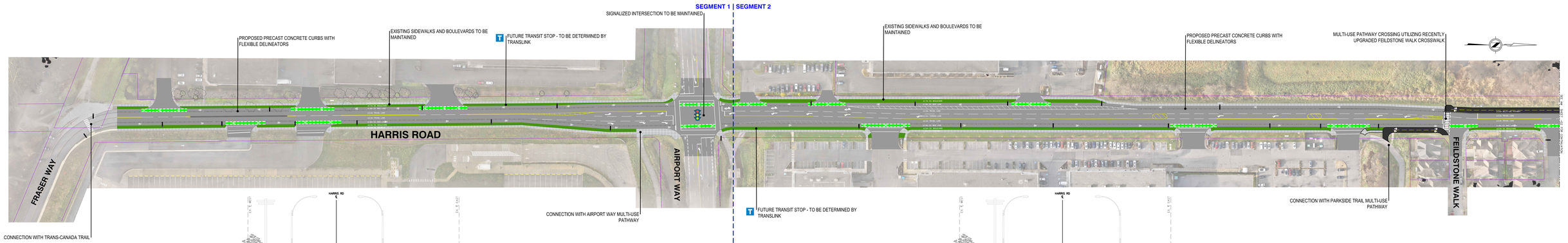
HARRIS ROAD COMPLETE STREET FEASIBILITY STUDY

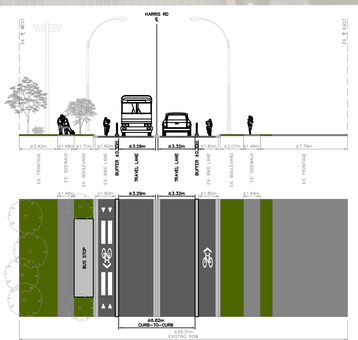
OPTION 1 - SEGMENT 1 & 2 (FRASER WAY TO FIELDSTONE WALK)

MARCH 2025

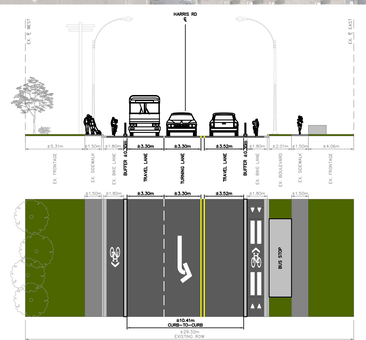
SHEET 01 OF 03

APLIN MARTIN
ENGINEERING ARCHITECTURE PLANNING SURVEYING





HARRIS ROAD SEGMENT 1 (FRASER WAY TO AIRPORT WAY)
TYPICAL CROSS SECTION



HARRIS ROAD SEGMENT 2 (AIRPORT WAY TO FIELDSTONE WALK)
TYPICAL CROSS SECTION

LEGEND

- CONCRETE SIDEWALK
- ASPAHLT
- ASPAHLT MULTI-USE PATHWAY
- LANDSCAPING / GRASS
- EXISTING STREETLIGHT
- TRAFFIC SIGNAL
- EXISTING TREE REMOVAL
- PROPOSED TREE
- FUTURE TRANSIT STOP
- EXISTING TRANSIT STOP

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THE Natural PLACE

HARRIS ROAD COMPLETE STREET FEASIBILITY STUDY

OPTION 1 - SEGMENT 3 & 4 (FIELDSTONE WALK TO FORD ROAD)

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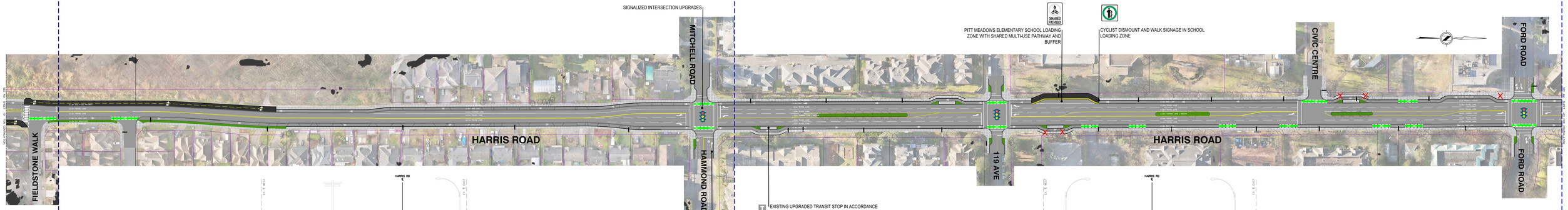
SHEET 02 OF 03

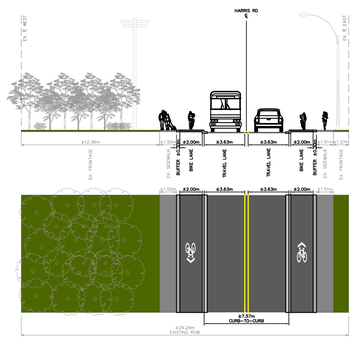
APLIN MARTIN
ENGINEERING ARCHITECTURE PLANNING SURVEYING

SEGMENT 2 | SEGMENT 3

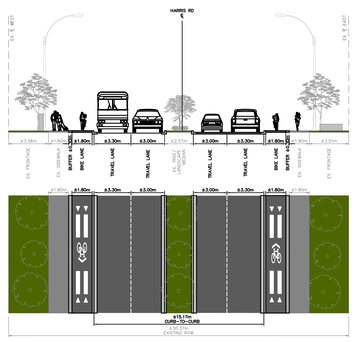
SEGMENT 3 | SEGMENT 4

SEGMENT 4





HARRIS ROAD SEGMENT 3 (FIELDSTONE WALK TO HAMMOND RD) TYPICAL CROSS SECTION



HARRIS ROAD SEGMENT 4 (HAMMOND ROAD TO FORD ROAD) TYPICAL CROSS SECTION

LEGEND

- CONCRETE SIDEWALK
- ASPAHLT
- ASPAHLT MULTI-USE PATHWAY
- LANDSCAPING / GRASS
- EXISTING STREETLIGHT
- TRAFFIC SIGNAL
- EXISTING TREE REMOVAL
- PROPOSED TREE
- FUTURE TRANSIT STOP
- EXISTING TRANSIT STOP

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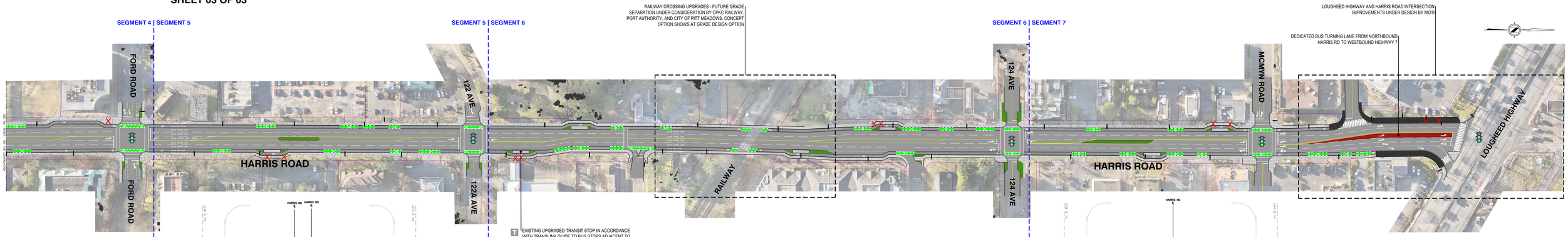
HARRIS ROAD COMPLETE STREET FEASIBILITY STUDY

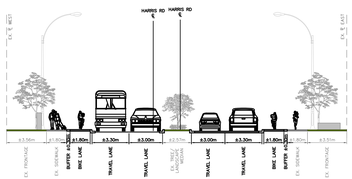
OPTION 1 - SEGMENT 5 TO 7 (FORD RD TO LOUGHEED HIGHWAY)

MARCH 2025

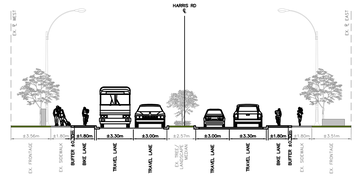
SHEET 03 OF 03

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HARRIS ROAD SEGMENT 5 (FORD ROAD TO 122 AVE)
TYPICAL CROSS SECTION



HARRIS ROAD SEGMENT 7 (124 AVE TO LOUGHEED HIGHWAY)
TYPICAL CROSS SECTION

LEGEND

- CONCRETE SIDEWALK
- ASPAHLT
- ASPAHLT MULTI-USE PATHWAY
- LANDSCAPING / GRASS
- EXISTING STREETLIGHT
- TRAFFIC SIGNAL
- EXISTING TREE REMOVAL
- PROPOSED TREE
- FUTURE TRANSIT STOP
- EXISTING TRANSIT STOP

City of Pitt Meadows
THE Natural PLACE

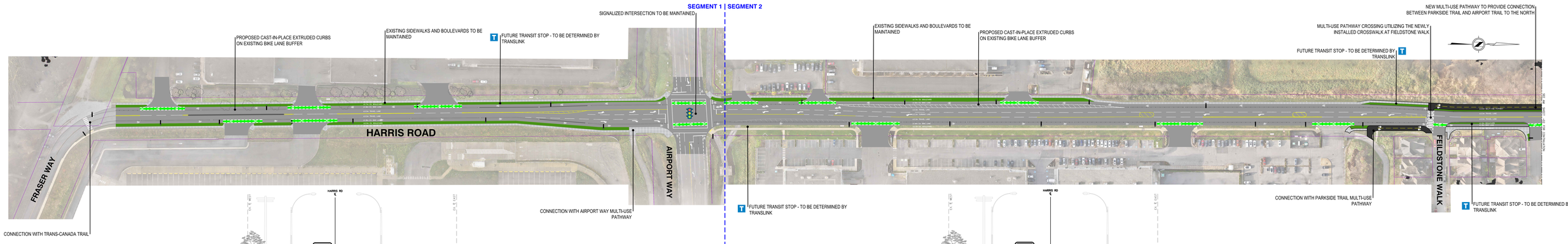
HARRIS ROAD COMPLETE STREET FEASIBILITY STUDY

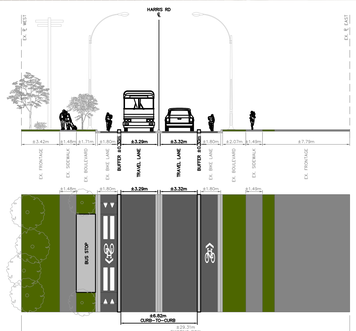
OPTION 2 - SEGMENT 1 & 2 (FRASER WAY TO FIELDSTONE WALK)

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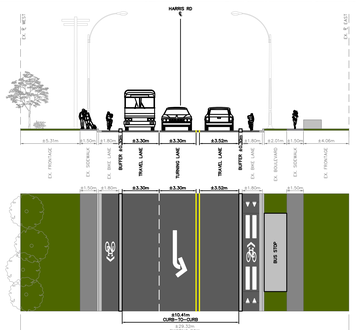
SHEET 01 OF 03

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HARRIS ROAD SEGMENT 1 (FRASER WAY TO AIRPORT WAY)
TYPICAL CROSS SECTION



HARRIS ROAD SEGMENT 2 (AIRPORT WAY TO FIELDSTONE WALK)
TYPICAL CROSS SECTION

LEGEND

- CONCRETE SIDEWALK
- ASPAHLT
- ASPAHLT MULTI-USE PATHWAY
- LANDSCAPING / GRASS
- EXISTING STREETLIGHT
- TRAFFIC SIGNAL
- EXISTING TREE REMOVAL
- PROPOSED TREE
- FUTURE TRANSIT STOP
- EXISTING TRANSIT STOP

City of Pitt Meadows THE Natural PLACE

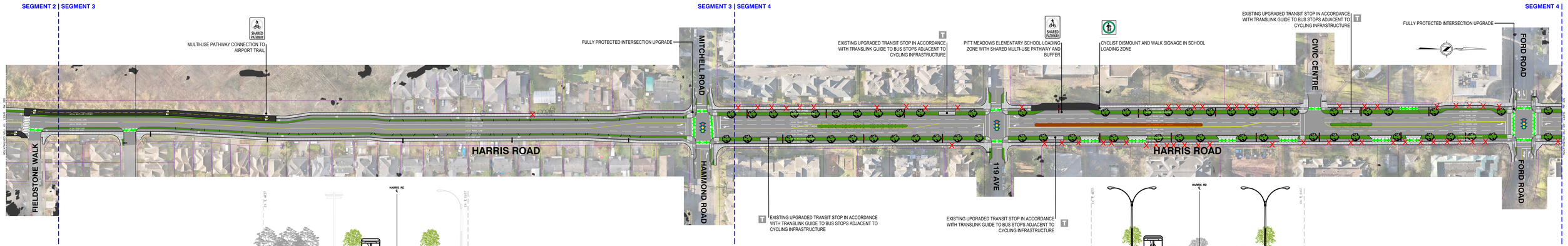
HARRIS ROAD COMPLETE STREET FEASIBILITY STUDY

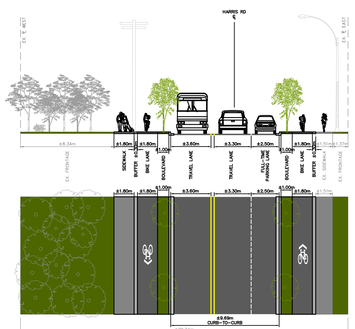
OPTION 2 - SEGMENT 3 & 4 (FIELDSTONE WALK TO FORD ROAD)

MARCH 2025

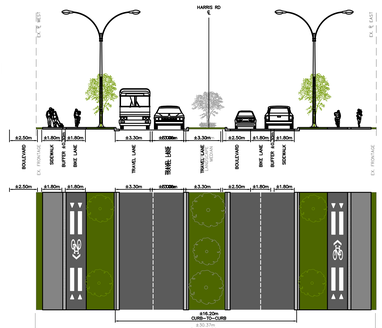
SHEET 02 OF 03

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HARRIS ROAD SEGMENT 3 (FIELDSTONE WALK TO HAMMOND RD) TYPICAL CROSS SECTION



HARRIS ROAD SEGMENT 4 (HAMMOND ROAD TO FORD ROAD) TYPICAL CROSS SECTION

LEGEND

- CONCRETE SIDEWALK
- ASPAHLT
- ASPAHLT MULTI-USE PATHWAY
- LANDSCAPING / GRASS
- EXISTING STREETLIGHT
- TRAFFIC SIGNAL
- EXISTING TREE REMOVAL
- PROPOSED TREE
- FUTURE TRANSIT STOP
- EXISTING TRANSIT STOP

City of Pitt Meadows
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HARRIS ROAD COMPLETE STREET FEASIBILITY STUDY

OPTION 2 - SEGMENT 5 TO 7 (FORD RD TO LOUGHEED HIGHWAY)

MARCH 2025

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ENGINEERING ARCHITECTURE PLANNING SURVEYING

SEGMENT 4 | SEGMENT 5

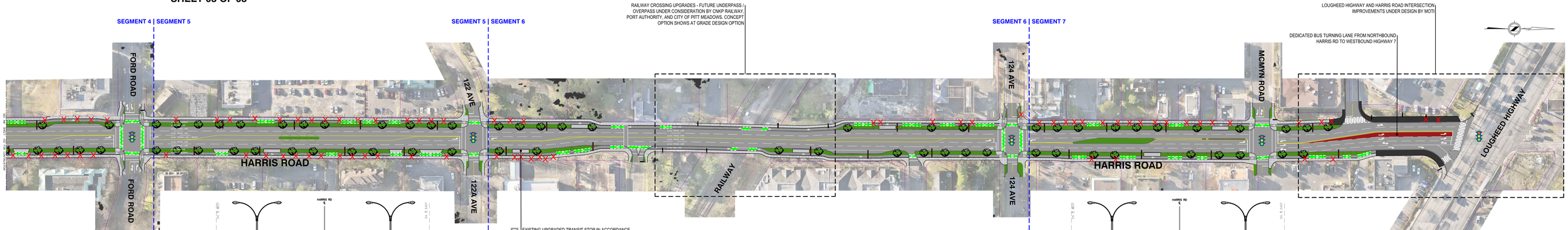
SEGMENT 5 | SEGMENT 6

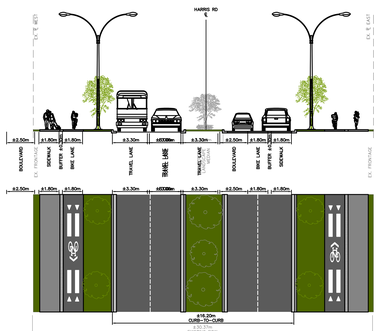
SEGMENT 6 | SEGMENT 7

RAILWAY CROSSING UPGRADES - FUTURE UNDERPASS / OVERPASS UNDER CONSIDERATION BY CNKP RAILWAY, PORT AUTHORITY, AND CITY OF PITT MEADOWS. CONCEPT OPTION SHOWS AT GRADE DESIGN OPTION

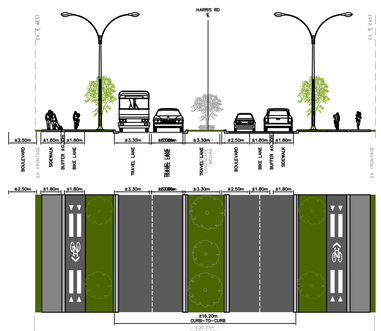
LOUGHEED HIGHWAY AND HARRIS ROAD INTERSECTION IMPROVEMENTS UNDER DESIGN BY MOTI

DEDICATED BUS TURNING LANE FROM NORTHBOUND HARRIS RD TO WESTBOUND HIGHWAY 7





HARRIS ROAD SEGMENT 5 (FORD ROAD TO 122 AVE)
TYPICAL CROSS SECTION



HARRIS ROAD SEGMENT 7 (124 AVE TO LOUGHEED HIGHWAY)
TYPICAL CROSS SECTION

LEGEND

- CONCRETE SIDEWALK
- ASPAHLT
- ASPAHLT MULTI-USE PATHWAY
- LANDSCAPING / GRASS
- EXISTING STREETLIGHT
- TRAFFIC SIGNAL
- EXISTING TREE REMOVAL
- PROPOSED TREE
- FUTURE TRANSIT STOP
- EXISTING TRANSIT STOP

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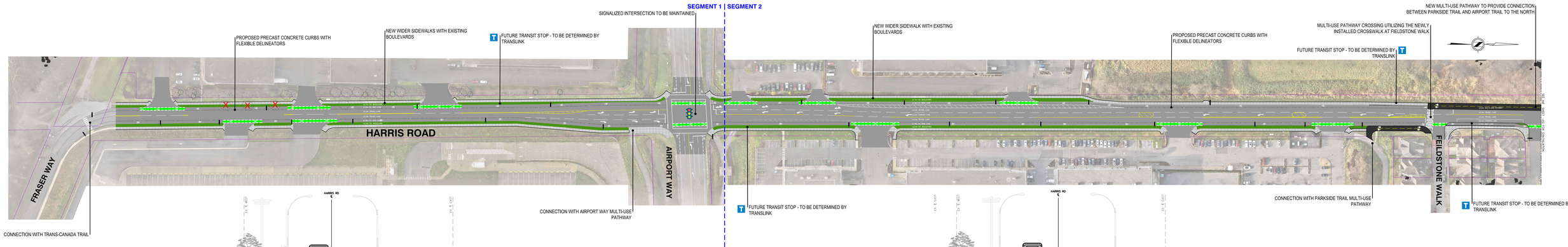
HARRIS ROAD COMPLETE STREET FEASIBILITY STUDY

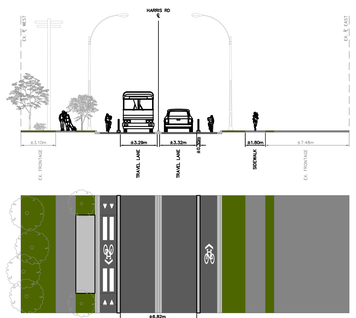
OPTION 3 - SEGMENT 1 & 2 (FRASER WAY TO FIELDSTONE WALK)

MARCH 2025

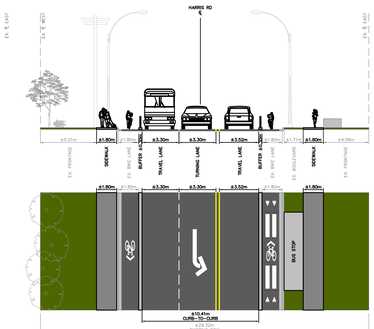
SHEET 01 OF 03

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HARRIS ROAD SEGMENT 1 (FRASER WAY TO AIRPORT WAY)
TYPICAL CROSS SECTION



HARRIS ROAD SEGMENT 2 (AIRPORT WAY TO FIELDSTONE WALK)
TYPICAL CROSS SECTION

LEGEND

- CONCRETE SIDEWALK
- ASPAHLT
- ASPAHLT MULTI-USE PATHWAY
- LANDSCAPING / GRASS
- EXISTING STREETLIGHT
- TRAFFIC SIGNAL
- EXISTING TREE REMOVAL
- PROPOSED TREE
- FUTURE TRANSIT STOP
- EXISTING TRANSIT STOP

HARRIS ROAD COMPLETE STREET FEASIBILITY STUDY

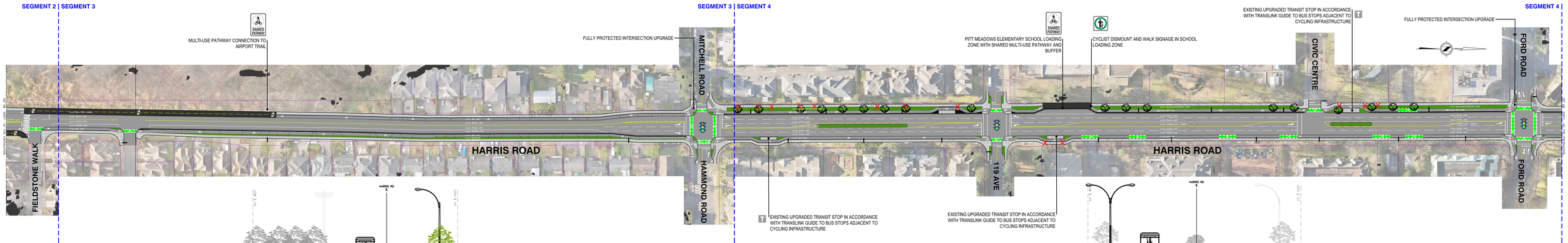
OPTION 3 - SEGMENT 3 & 4 (FIELDSTONE WALK TO FORD ROAD)

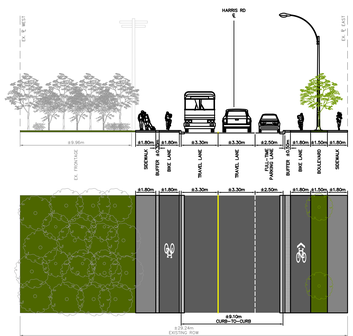
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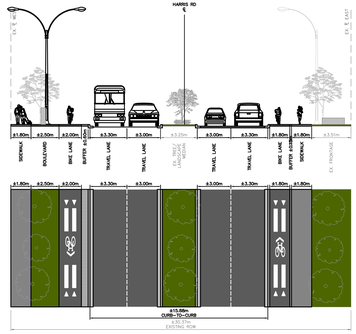
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HARRIS ROAD SEGMENT 3 (FIELDSTONE WALK TO HAMMOND RD) TYPICAL CROSS SECTION



HARRIS ROAD SEGMENT 4 (HAMMOND ROAD TO FORD ROAD) TYPICAL CROSS SECTION

LEGEND

- CONCRETE SIDEWALK
- ASPAHLT
- ASPAHLT MULTI-USE PATHWAY
- LANDSCAPING / GRASS
- EXISTING STREETLIGHT
- TRAFFIC SIGNAL
- EXISTING TREE REMOVAL
- PROPOSED TREE
- FUTURE TRANSIT STOP
- EXISTING TRANSIT STOP

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HARRIS ROAD COMPLETE STREET FEASIBILITY STUDY

OPTION 3 - SEGMENT 5 TO 7 (FORD RD TO LOUGHEED HIGHWAY)

MARCH 2025

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ENGINEERING ARCHITECTURE PLANNING SURVEYING

SEGMENT 4 | SEGMENT 5

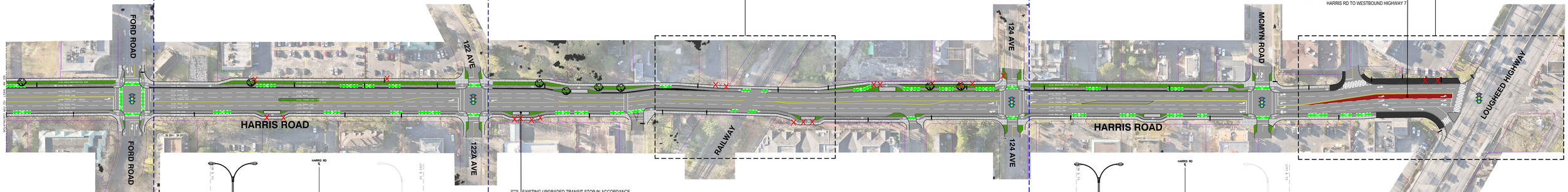
SEGMENT 5 | SEGMENT 6

SEGMENT 6 | SEGMENT 7

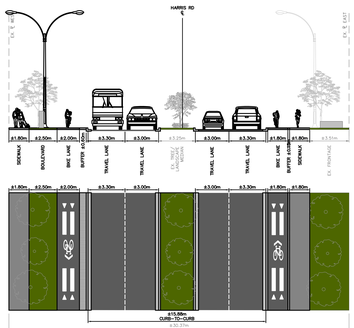
RAILWAY CROSSING UPGRADES - FUTURE UNDERPASS / OVERPASS UNDER CONSIDERATION BY CNKP RAILWAY, PORT AUTHORITY, AND CITY OF PITT MEADOWS. CONCEPT OPTION SHOWS AT GRADE DESIGN OPTION

LOUGHEED HIGHWAY AND HARRIS ROAD INTERSECTION IMPROVEMENTS UNDER DESIGN BY MOTI

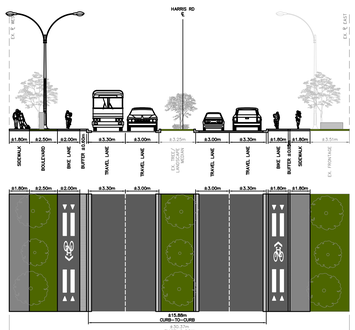
DEDICATED BUS TURNING LANE FROM NORTHBOUND HARRIS RD TO WESTBOUND HIGHWAY 7



T EXISTING UPGRADED TRANSIT STOP IN ACCORDANCE WITH TRANSLINK GUIDE TO BUS STOPS ADJACENT TO CYCLING INFRASTRUCTURE



HARRIS ROAD SEGMENT 5 (FORD ROAD TO 122 AVE)
TYPICAL CROSS SECTION



HARRIS ROAD SEGMENT 7 (124 AVE TO LOUGHEED HIGHWAY)
TYPICAL CROSS SECTION

LEGEND

- CONCRETE SIDEWALK
- ASPAHLT
- ASPAHLT MULTI-USE PATHWAY
- LANDSCAPING / GRASS
- EXISTING STREETLIGHT
- TRAFFIC SIGNAL
- EXISTING TREE REMOVAL
- PROPOSED TREE
- FUTURE TRANSIT STOP
- EXISTING TRANSIT STOP

City of Pitt Meadows
THE Natural PLACE

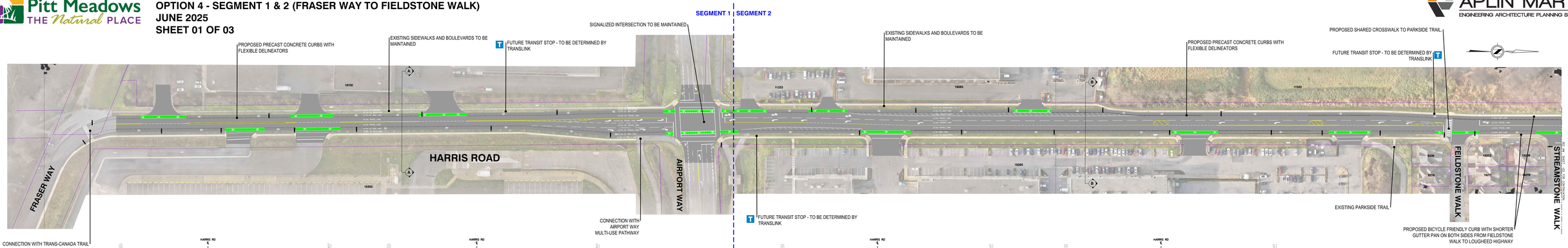
HARRIS ROAD COMPLETE STREET FEASIBILITY STUDY

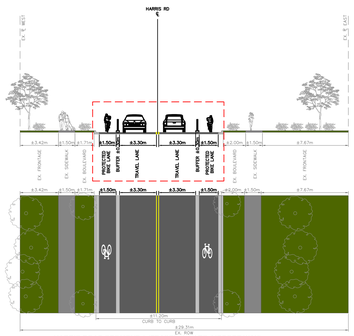
OPTION 4 - SEGMENT 1 & 2 (FRASER WAY TO FIELDSTONE WALK)

JUNE 2025

SHEET 01 OF 03

APLIN MARTIN
ENGINEERING ARCHITECTURE PLANNING SURVEYING

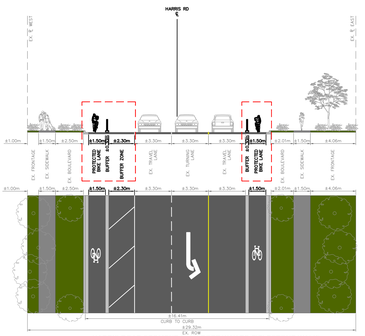




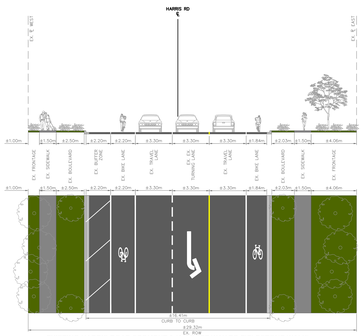
HARRIS ROAD SEGMENT 1 (FRASER WAY TO AIRPORT WAY)
TYPICAL CROSS SECTION A



EXISTING HARRIS ROAD SEGMENT 1 (FRASER WAY TO AIRPORT WAY)
TYPICAL CROSS SECTION A



HARRIS ROAD SEGMENT 2 (AIRPORT WAY TO FIELDSTONE WALK)
TYPICAL CROSS SECTION B



EXISTING HARRIS ROAD SEGMENT 2 (AIRPORT WAY TO FIELDSTONE WALK)
TYPICAL CROSS SECTION B

LEGEND

- CONCRETE SIDEWALK
- ASPAHLT
- ASPAHLT MULTI-USE PATHWAY
- LANDSCAPING / GRASS
- DRIVEWAY
- EXISTING STREETLIGHT
- PROPOSED STREETLIGHT
- TRAFFIC SIGNAL
- EXISTING TREE REMOVAL
- PROPOSED TREE
- FUTURE TRANSIT STOP
- EXISTING TRANSIT STOP
- PROPOSED DESIGN AREA

City of Pitt Meadows THE Natural PLACE

HARRIS ROAD COMPLETE STREET FEASIBILITY STUDY

OPTION 4 - SEGMENT 3 & 4 (FIELDSTONE WALK TO FORD ROAD)

JUNE 2025

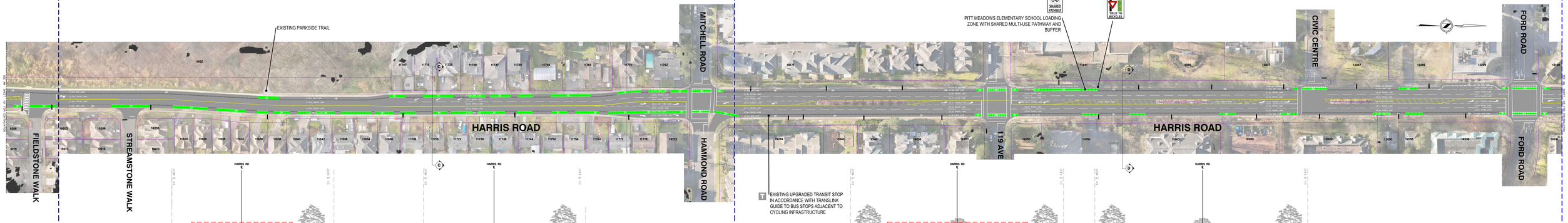
SHEET 02 OF 03

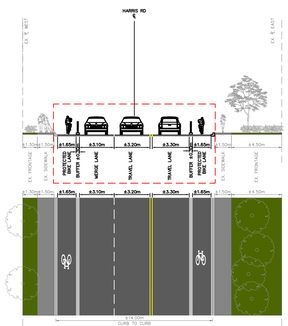
APLIN MARTIN
ENGINEERING ARCHITECTURE PLANNING SURVEYING

SEGMENT 2 | SEGMENT 3

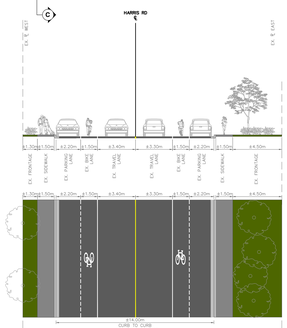
SEGMENT 3 | SEGMENT 4

SEGMENT 4

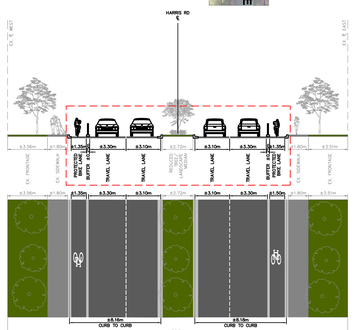




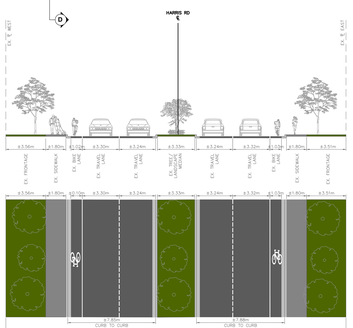
HARRIS ROAD SEGMENT 3 (FIELDSTONE WALK TO HAMMOND RD) CROSS SECTION C



EXISTING HARRIS ROAD SEGMENT 3 (FIELDSTONE WALK TO HAMMOND RD) CROSS SECTION C



HARRIS ROAD SEGMENT 4 (HAMMOND ROAD TO FORD ROAD) TYPICAL CROSS SECTION D



EXISTING HARRIS ROAD SEGMENT 4 (HAMMOND ROAD TO FORD ROAD) TYPICAL CROSS SECTION D

LEGEND

- CONCRETE SIDEWALK
- ASPAHLT
- ASPAHLT MULTI-USE PATHWAY
- LANDSCAPING / GRASS
- DRIVEWAY
- EXISTING STREETLIGHT
- PROPOSED STREETLIGHT
- TRAFFIC SIGNAL
- EXISTING TREE REMOVAL
- PROPOSED TREE
- FUTURE TRANSIT STOP
- EXISTING TRANSIT STOP
- PROPOSED DESIGN AREA

City of Pitt Meadows
THE Natural PLACE

HARRIS ROAD COMPLETE STREET FEASIBILITY STUDY

OPTION 4 - SEGMENT 5 TO 7 (FORD RD TO LOUGHEED HIGHWAY)

JUNE 2025

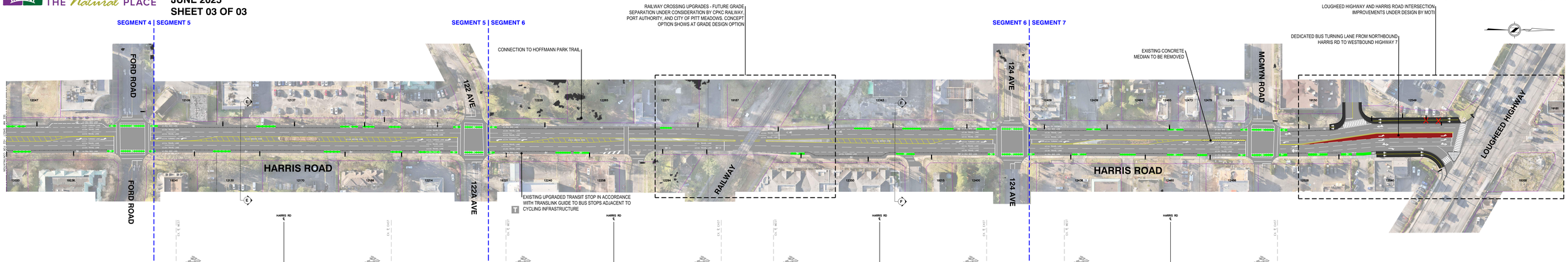
SHEET 03 OF 03

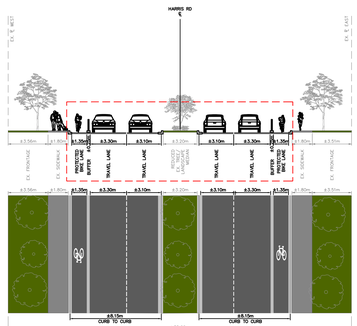
APLIN MARTIN
ENGINEERING ARCHITECTURE PLANNING SURVEYING

SEGMENT 4 | SEGMENT 5

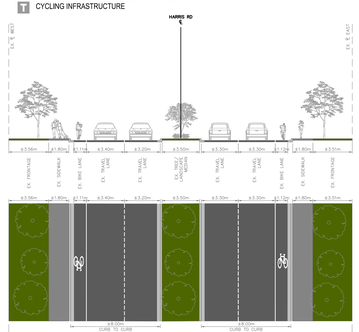
SEGMENT 5 | SEGMENT 6

SEGMENT 6 | SEGMENT 7

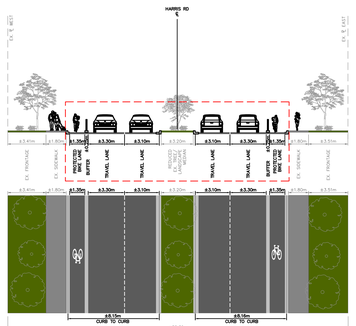




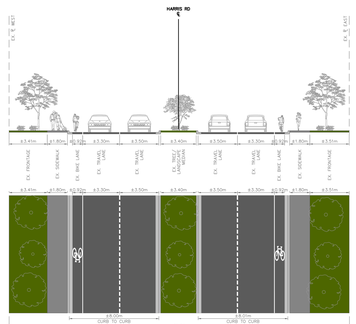
HARRIS ROAD SEGMENT 5 (FORD ROAD TO 122 AVE)
TYPICAL CROSS SECTION E



EXISTING HARRIS ROAD SEGMENT 5 (FORD ROAD TO 122 AVE)
TYPICAL CROSS SECTION E



HARRIS ROAD SEGMENT 7 (124 AVE TO LOUGHEED HIGHWAY)
TYPICAL CROSS SECTION F



EXISTING HARRIS ROAD SEGMENT 7 (124 AVE TO LOUGHEED HIGHWAY)
TYPICAL CROSS SECTION F

LEGEND

- CONCRETE SIDEWALK
- ASPAHLT
- ASPAHLT MULTI-USE PATHWAY
- LANDSCAPING / GRASS
- DRIVEWAY
- EXISTING STREETLIGHT
- PROPOSED STREETLIGHT
- TRAFFIC SIGNAL
- EXISTING TREE REMOVAL
- PROPOSED TREE
- FUTURE TRANSIT STOP
- EXISTING TRANSIT STOP
- PROPOSED DESIGN AREA

The attached information is provided to support the agency's review process and shall not be distributed to other parties without written consent from Bunt & Associates Engineering Ltd.

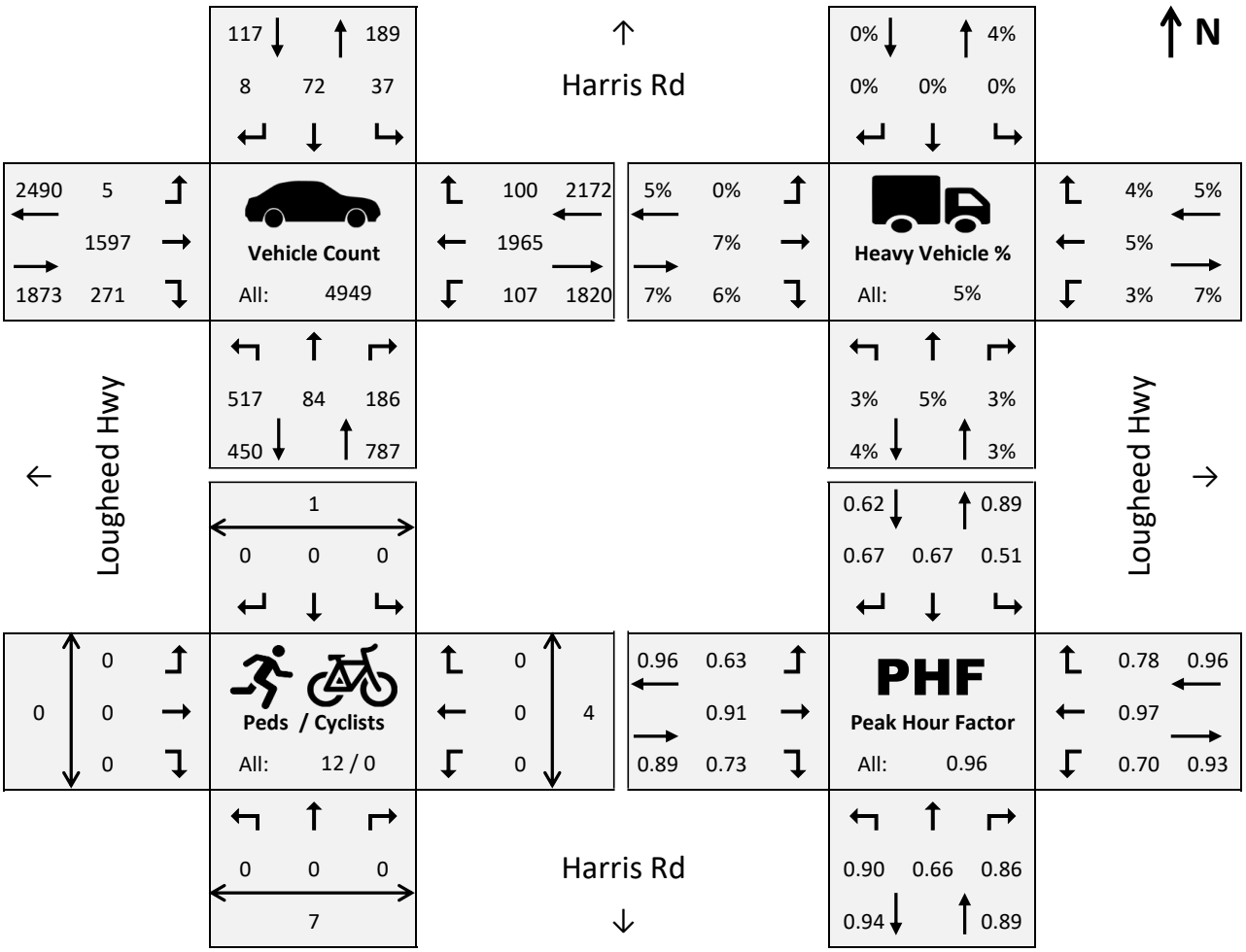
APPENDIX B

Traffic Data

Harris Rd @ Lougheed Hwy – Pitt Meadows, BC

Project#:	04-24-0264	**Weather:**		**Analysis Period:**	7:45 - 8:45
Date:	Jan 08, 2025 (Wed)	**Road Cond:**		**Intersection Peak:**	7:30 - 8:30
Notes:					

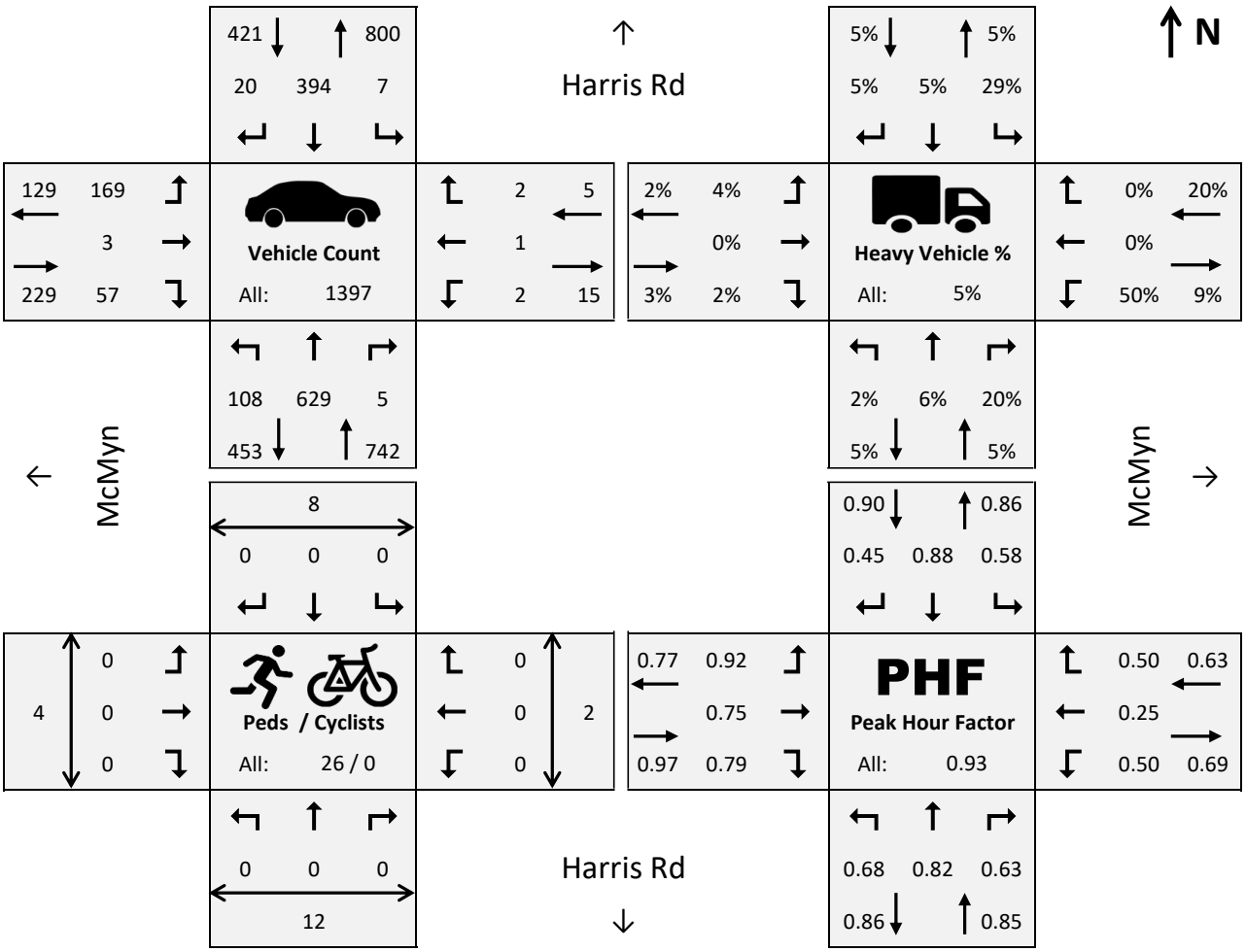
TIME	AUTOMOBILE COUNT												PEDESTRIANS			
INTERVAL	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W
7:00 - 7:15	157	21	28	10	5	3	1	291	42	20	491	28	0	3	3	0
7:15 - 7:30	127	17	33	7	3	5	0	334	69	15	514	16	0	4	6	0
7:30 - 7:45	73	9	37	8	10	2	2	475	61	15	573	26	1	4	5	0
7:45 - 8:00	143	16	43	3	7	1	1	432	93	20	506	26	0	2	0	0
8:00 - 8:15	130	17	36	8	21	2	2	437	65	23	508	32	0	2	2	0
8:15 - 8:30	108	19	53	18	27	2	1	369	59	26	446	22	0	3	1	0
8:30 - 8:45	136	32	54	8	17	3	1	359	54	38	505	20	1	0	1	0
8:45 - 9:00	76	13	40	16	14	2	3	322	65	51	414	24	0	0	2	0
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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Harris Rd @ McMyn – Pitt Meadows, BC

Project#:	04-24-0264	**Weather:**	Sunny	**Analysis Period:**	7:45 - 8:45
Date:	Jan 08, 2025 (Wed)	**Road Cond:**	Dry	**Intersection Peak:**	7:45 - 8:45
Notes:					

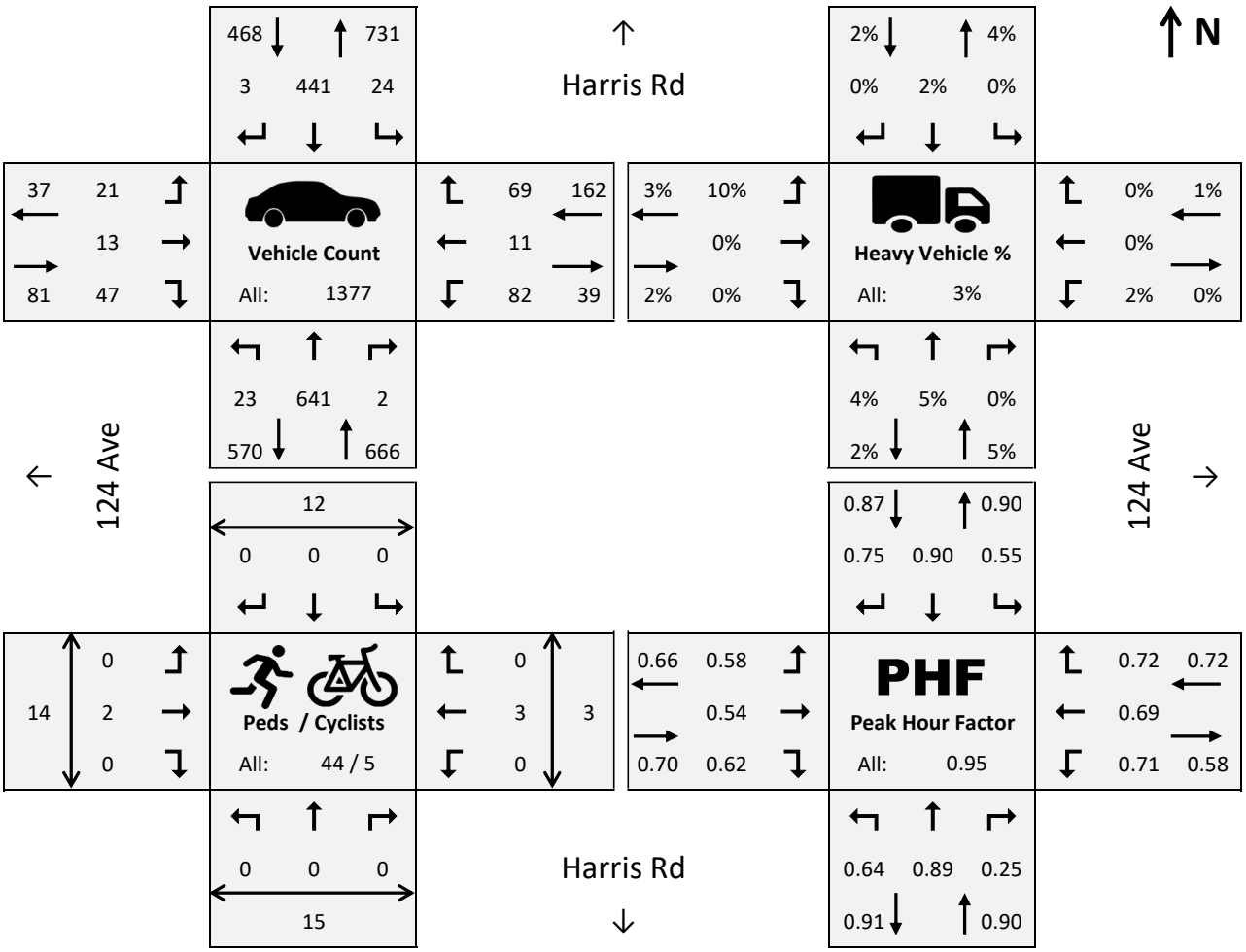
TIME	AUTOMOBILE COUNT												PEDESTRIANS			
INTERVAL	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W
7:00 - 7:15	14	149	0	0	54	3	31	0	7	0	0	0	1	1	2	2
7:15 - 7:30	14	129	2	0	73	4	43	0	7	0	1	0	1	4	2	1
7:30 - 7:45	4	70	1	4	84	3	37	0	9	0	0	1	2	1	1	0
7:45 - 8:00	25	191	2	0	96	5	41	1	14	0	1	0	1	1	1	1
8:00 - 8:15	13	124	2	3	112	2	41	0	18	1	0	1	4	0	1	0
8:15 - 8:30	40	138	1	1	103	2	41	1	16	0	0	0	2	2	0	1
8:30 - 8:45	30	176	0	3	83	11	46	1	9	1	0	1	1	9	0	2
8:45 - 9:00	44	91	4	3	90	11	35	1	15	1	0	1	2	0	1	4
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Harris Rd @ 124 Ave – Pitt Meadows, BC

Project#:	04-24-0264	**Weather:**	Sunny	**Analysis Period:**	7:45 - 8:45
Date:	Jan 08, 2025 (Wed)	**Road Cond:**	Dry	**Intersection Peak:**	7:45 - 8:45
Notes:					

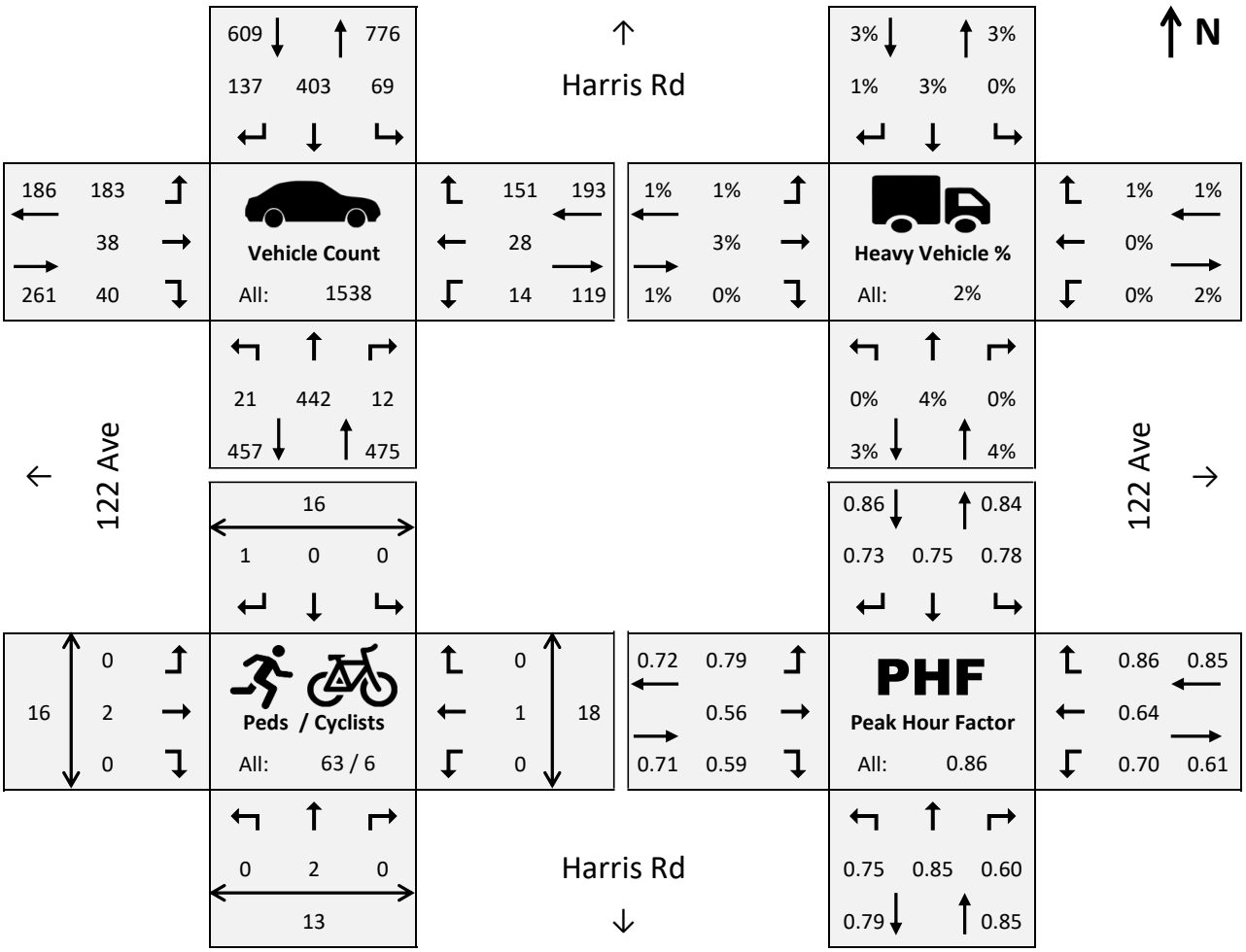
TIME	AUTOMOBILE COUNT												PEDESTRIANS			
INTERVAL	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W
7:00 - 7:15	1	145	0	2	58	2	5	0	1	5	4	12	3	4	3	2
7:15 - 7:30	0	130	1	5	81	0	6	1	0	8	0	15	3	1	3	1
7:30 - 7:45	2	63	0	13	57	1	3	4	2	13	2	15	1	3	0	0
7:45 - 8:00	5	180	0	11	122	1	2	4	8	12	0	14	2	2	0	3
8:00 - 8:15	3	128	2	5	121	0	6	1	12	18	4	18	2	2	2	3
8:15 - 8:30	9	163	0	6	114	1	4	6	19	23	4	13	5	6	0	6
8:30 - 8:45	6	170	0	2	84	1	9	2	8	29	3	24	3	5	1	2
8:45 - 9:00	5	113	1	9	102	2	2	4	5	14	5	16	0	4	3	5
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Harris Rd @ 122 Ave – Pitt Meadows, BC

Project#:	04-24-0264	**Weather:**		**Analysis Period:**	7:45 - 8:45
Date:	Jan 08, 2025 (Wed)	**Road Cond:**		**Intersection Peak:**	7:45 - 8:45
Notes:					

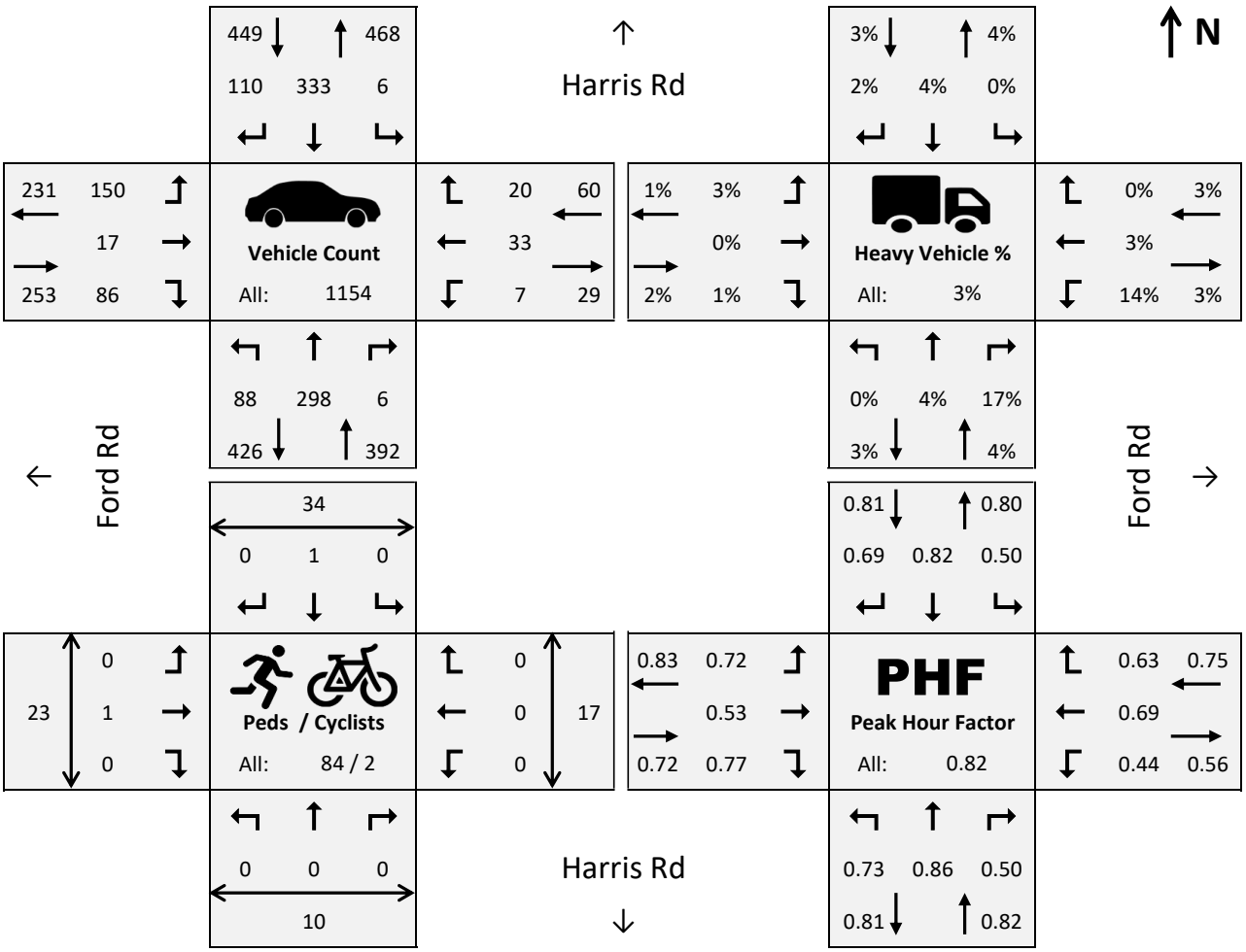
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INTERVAL	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W
7:00 - 7:15	1	96	2	11	43	11	24	6	2	4	0	29	2	0	3	2
7:15 - 7:30	7	89	7	7	66	11	22	3	3	4	5	24	3	2	8	2
7:30 - 7:45	2	51	2	3	22	4	17	3	13	1	2	12	2	2	5	3
7:45 - 8:00	7	111	5	18	134	26	41	4	5	5	6	34	8	1	9	3
8:00 - 8:15	5	90	3	22	83	37	38	11	8	4	7	36	1	1	3	2
8:15 - 8:30	7	130	2	13	99	47	58	17	17	2	11	44	2	7	5	4
8:30 - 8:45	2	111	2	16	87	27	46	6	10	3	4	37	5	4	1	7
8:45 - 9:00	3	79	3	8	78	21	39	4	7	2	1	22	1	1	2	2
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Harris Rd @ Ford Rd – Pitt Meadows, BC

Project#:	04-24-0264	**Weather:**		**Analysis Period:**	7:45 - 8:45
Date:	Jan 08, 2025 (Wed)	**Road Cond:**		**Intersection Peak:**	7:45 - 8:45
Notes:					

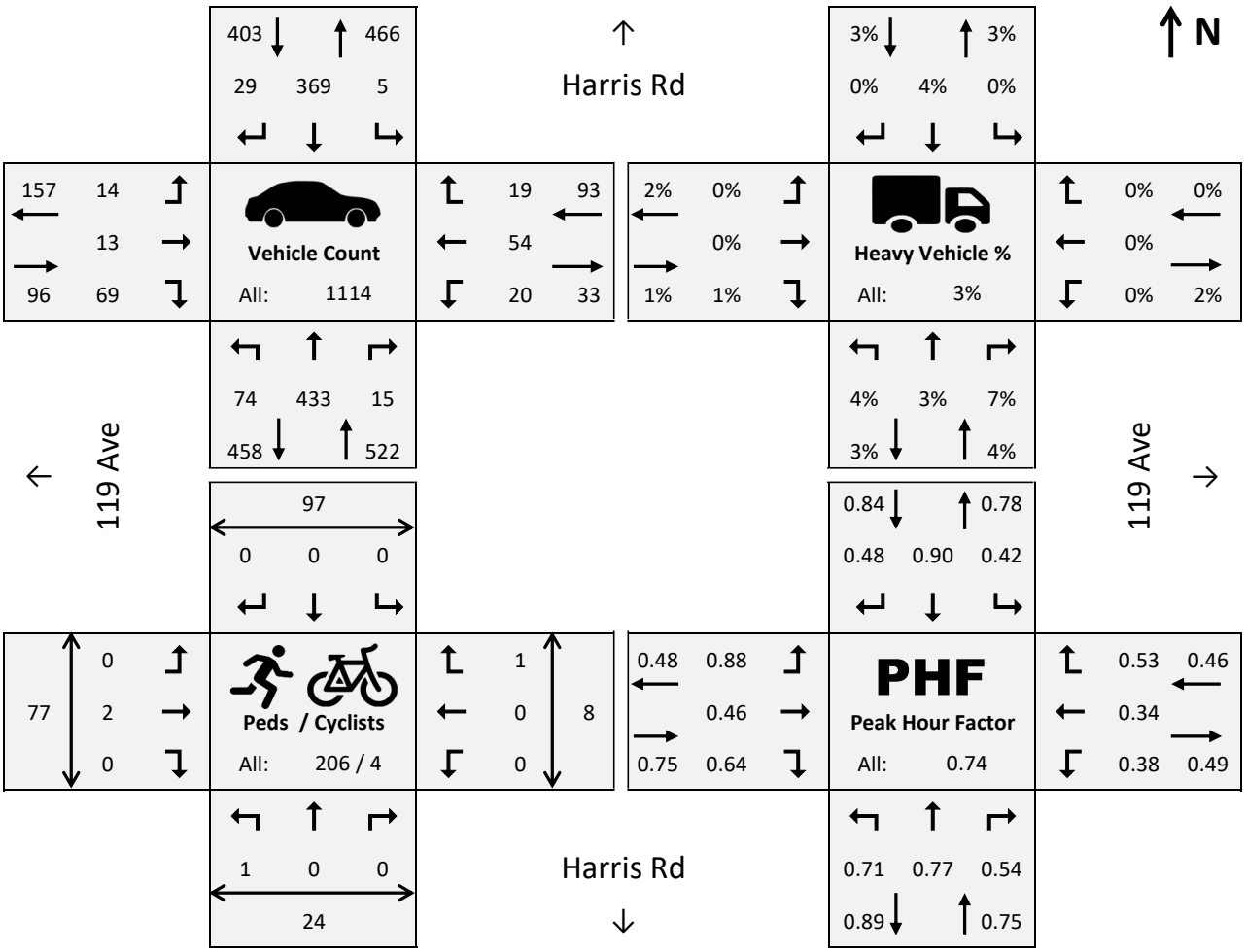
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INTERVAL	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W
7:00 - 7:15	12	71	0	1	38	7	22	1	10	3	0	5	1	1	2	0
7:15 - 7:30	9	87	1	0	58	14	12	0	15	1	2	2	5	1	5	2
7:30 - 7:45	18	69	4	2	32	7	22	0	13	0	2	5	2	5	3	2
7:45 - 8:00	24	67	3	3	96	40	27	3	16	0	6	6	5	2	1	2
8:00 - 8:15	14	76	1	1	80	22	27	4	21	4	6	2	16	4	9	1
8:15 - 8:30	30	87	2	2	101	21	52	8	28	3	9	8	6	2	3	12
8:30 - 8:45	20	68	0	0	56	27	44	2	21	0	12	4	7	2	4	8
8:45 - 9:00	18	59	2	5	66	28	27	0	11	2	7	5	1	4	3	6
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Harris Rd @ 119 Ave – Pitt Meadows, BC

Project#:	04-24-0264	**Weather:**		**Analysis Period:**	7:45 - 8:45
Date:	Jan 08, 2025 (Wed)	**Road Cond:**		**Intersection Peak:**	7:45 - 8:45
Notes:					

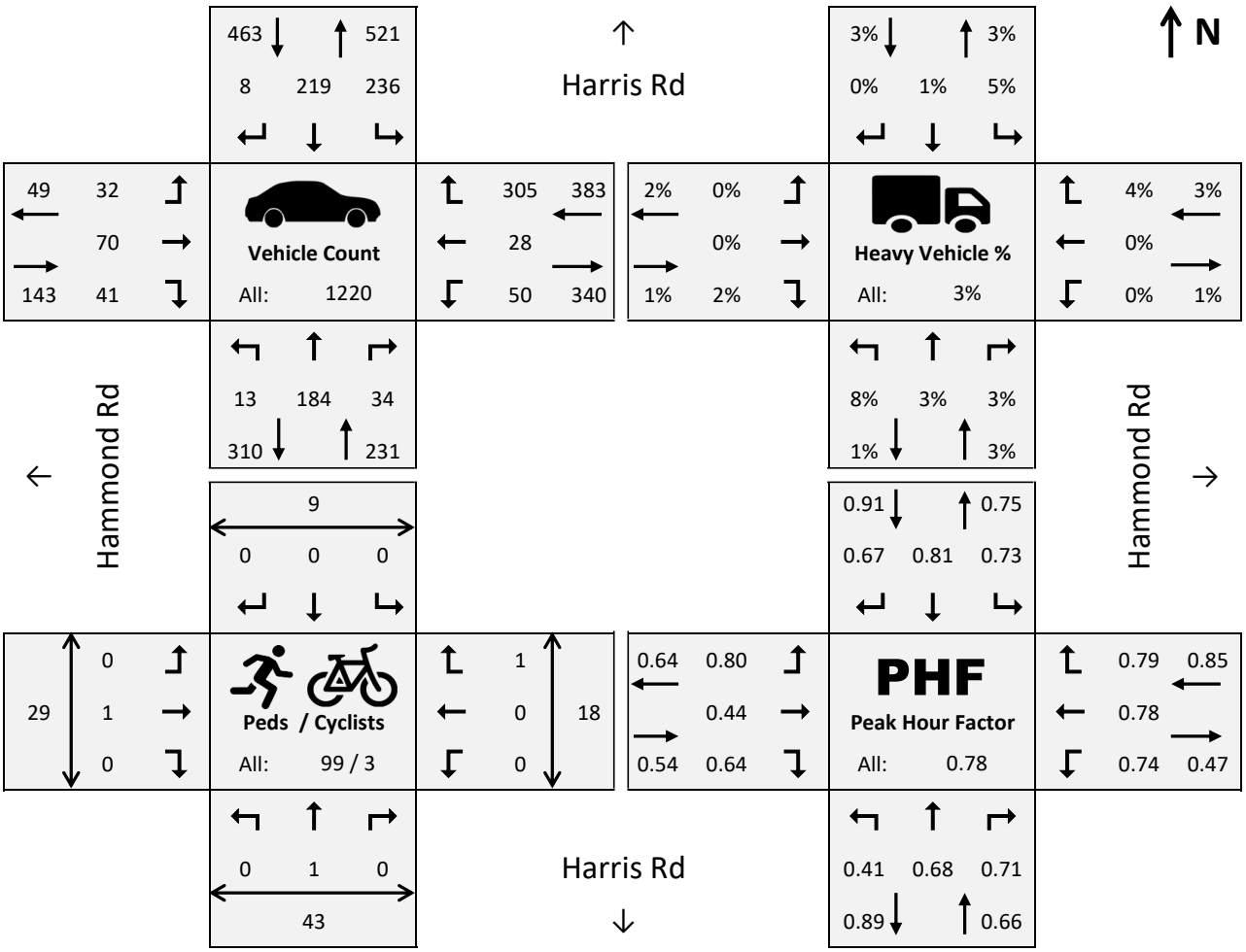
TIME	AUTOMOBILE COUNT												PEDESTRIANS			
INTERVAL	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W
7:00 - 7:15	6	68	0	0	49	3	10	0	13	5	2	3	2	0	0	0
7:15 - 7:30	7	99	2	2	74	3	3	0	10	4	0	4	3	2	2	5
7:30 - 7:45	4	93	2	0	47	0	5	0	10	2	0	6	4	0	0	1
7:45 - 8:00	12	101	0	3	101	7	4	3	9	1	2	2	5	1	1	2
8:00 - 8:15	13	104	3	0	94	5	4	1	13	1	7	2	6	3	2	19
8:15 - 8:30	26	140	7	2	103	15	3	7	20	5	40	6	70	17	1	50
8:30 - 8:45	23	88	5	0	71	2	3	2	27	13	5	9	16	3	4	6
8:45 - 9:00	8	92	1	2	77	5	5	1	9	0	3	1	1	2	2	10
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Harris Rd @ Hammond Rd – Pitt Meadows, BC

Project#:	04-24-0264	**Weather:**		**Analysis Period:**	7:45 - 8:45
Date:	Jan 08, 2025 (Wed)	**Road Cond:**		**Intersection Peak:**	7:45 - 8:45
Notes:					

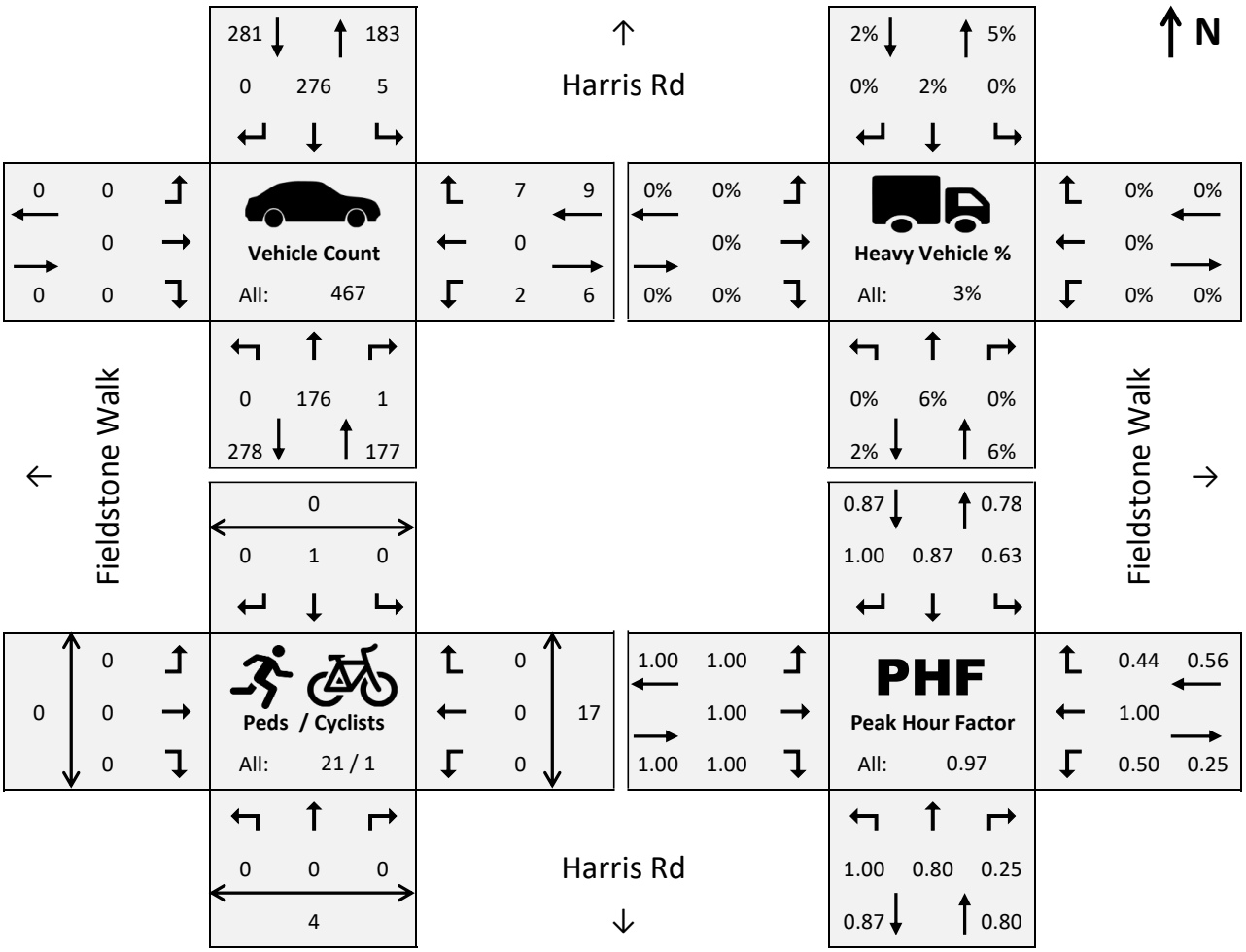
TIME	AUTOMOBILE COUNT												PEDESTRIANS			
INTERVAL	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W
7:00 - 7:15	1	23	1	21	55	1	5	4	5	5	1	43	1	3	3	3
7:15 - 7:30	1	44	1	24	64	0	10	5	7	9	3	59	3	7	8	6
7:30 - 7:45	2	38	3	26	30	1	3	3	4	8	3	54	2	6	2	2
7:45 - 8:00	4	37	4	40	68	0	7	5	6	13	7	65	0	5	2	1
8:00 - 8:15	0	48	11	53	52	2	8	12	6	12	4	68	0	13	3	9
8:15 - 8:30	8	68	12	81	43	3	10	40	16	8	8	96	7	19	12	16
8:30 - 8:45	1	31	7	62	56	3	7	13	13	17	9	76	2	6	1	3
8:45 - 9:00	0	44	0	39	45	1	2	6	3	4	7	54	0	4	1	4
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Harris Rd @ Fieldstone Walk – Pitt Meadows, BC

Project#:	04-24-0264	**Weather:**	Sunny	**Analysis Period:**	7:45 - 8:45
Date:	Jan 08, 2025 (Wed)	**Road Cond:**	Dry	**Intersection Peak:**	7:45 - 8:45
Notes:					

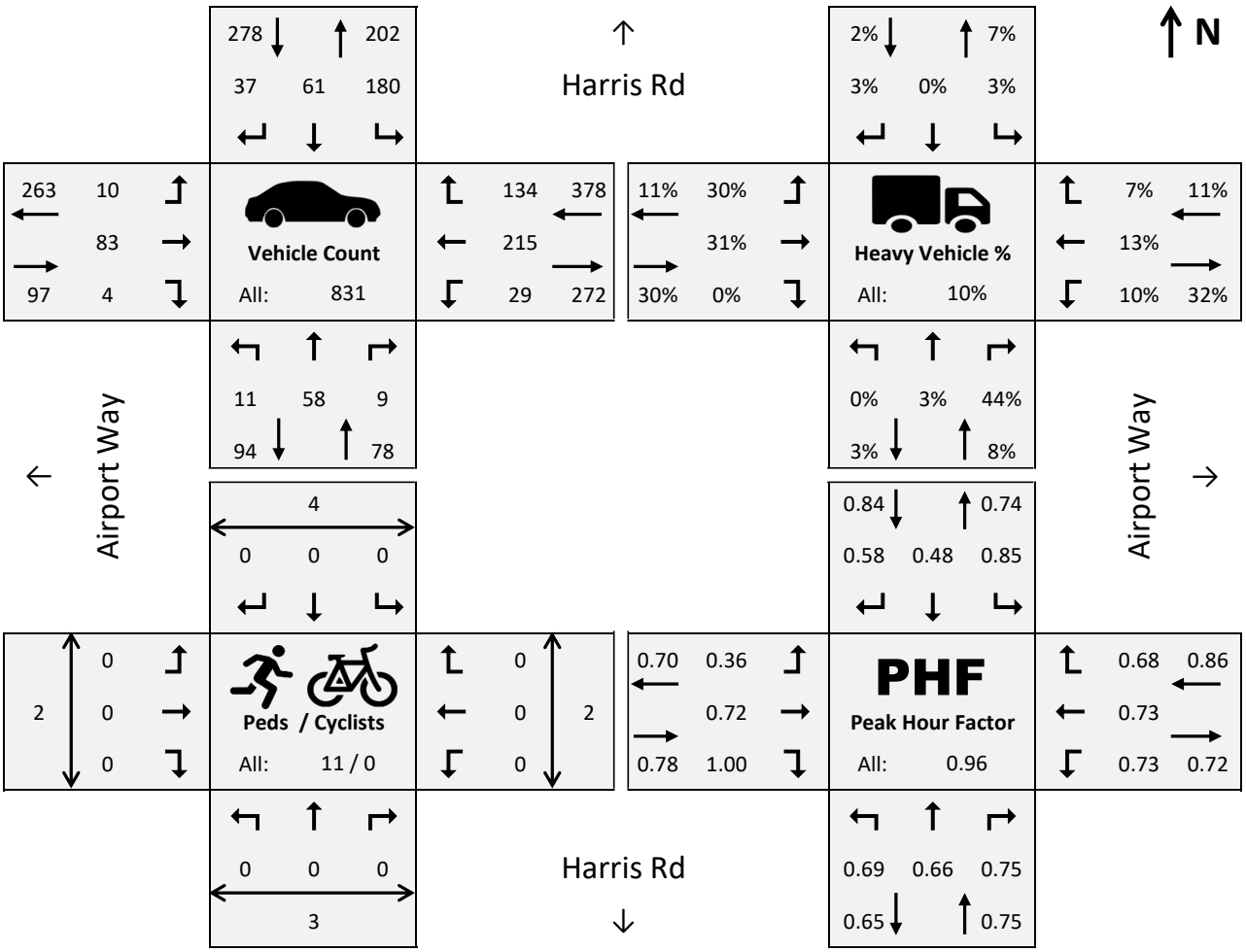
TIME	AUTOMOBILE COUNT												PEDESTRIANS			
INTERVAL	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W
7:00 - 7:15	0	26	0	1	75	0	0	0	0	0	0	2	0	0	2	0
7:15 - 7:30	0	37	0	1	77	0	0	0	0	1	0	1	0	1	9	0
7:30 - 7:45	0	35	0	1	38	0	0	0	0	1	0	1	0	3	0	0
7:45 - 8:00	0	40	0	0	78	0	0	0	0	1	0	1	0	2	8	0
8:00 - 8:15	0	46	0	1	69	0	0	0	0	0	0	2	0	1	4	0
8:15 - 8:30	0	55	0	2	50	0	0	0	0	0	0	4	0	0	1	0
8:30 - 8:45	0	35	1	2	79	0	0	0	0	1	0	0	0	1	4	0
8:45 - 9:00	0	41	0	0	47	0	0	0	0	1	0	0	0	0	3	0
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Harris Rd @ Airport Way – Pitt Meadows, BC

Project#:	04-24-0264	**Weather:**		**Analysis Period:**	7:45 - 8:45
Date:	Jan 08, 2025 (Wed)	**Road Cond:**		**Intersection Peak:**	7:45 - 8:45
Notes:					

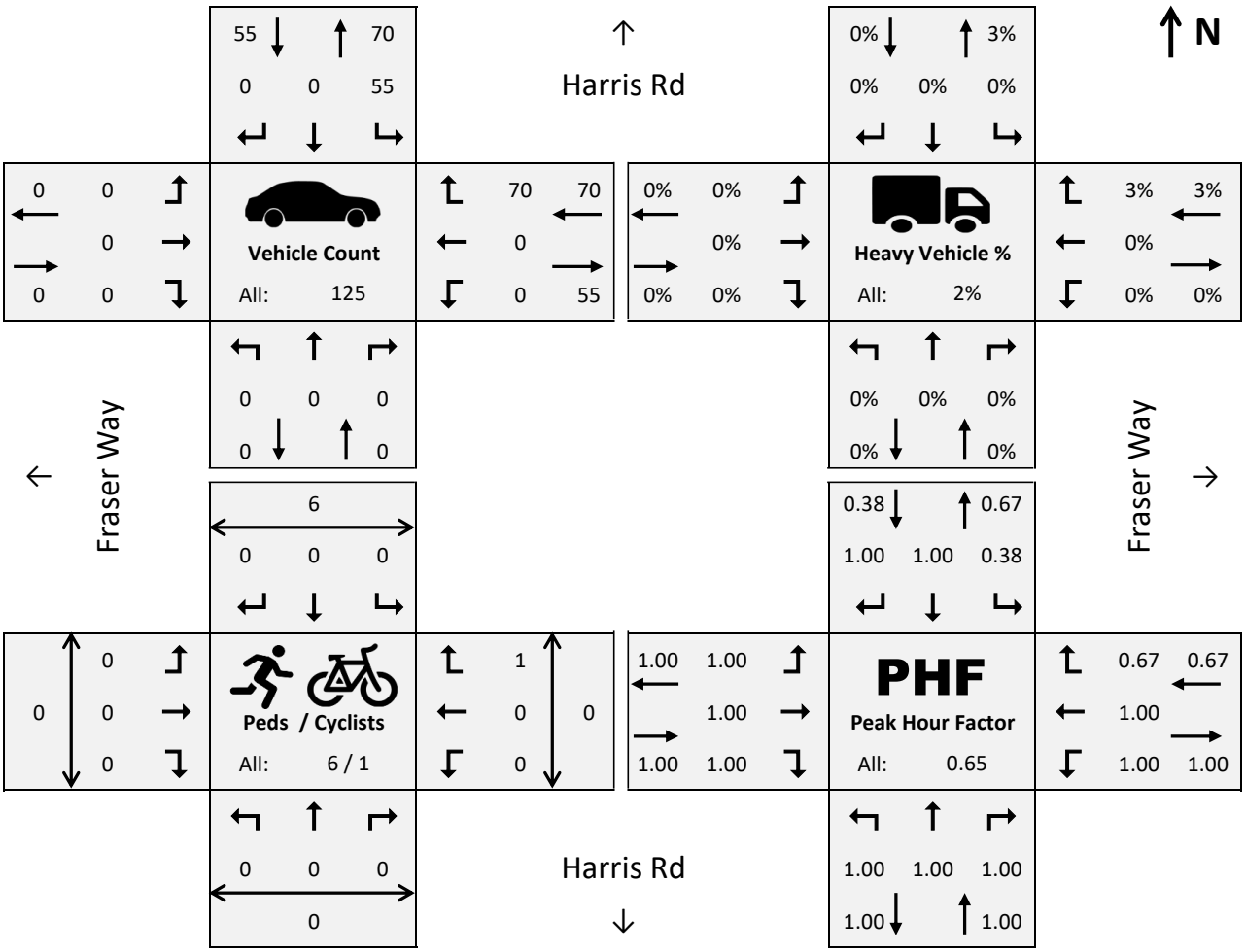
TIME	AUTOMOBILE COUNT												PEDESTRIANS			
INTERVAL	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W
7:00 - 7:15	1	4	1	42	11	13	1	18	1	4	28	24	0	0	1	0
7:15 - 7:30	0	5	0	46	5	11	1	11	0	1	41	42	0	0	1	1
7:30 - 7:45	1	10	1	26	7	7	3	20	2	4	54	31	2	0	0	2
7:45 - 8:00	4	9	2	39	14	16	7	15	1	10	74	26	0	0	0	0
8:00 - 8:15	2	22	2	53	9	8	1	16	1	10	60	25	3	0	2	1
8:15 - 8:30	2	18	2	42	6	8	1	23	1	6	43	49	1	0	0	0
8:30 - 8:45	3	9	3	46	32	5	1	29	1	3	38	34	0	3	0	1
8:45 - 9:00	0	13	0	31	9	3	0	19	0	3	29	40	1	0	0	2
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Harris Rd @ Fraser Way – Pitt Meadows, BC

Project#:	04-24-0264	**Weather:**	Sunny	**Analysis Period:**	7:45 - 8:45
Date:	Jan 08, 2025 (Wed)	**Road Cond:**	Dry	**Intersection Peak:**	7:45 - 8:45
Notes:					

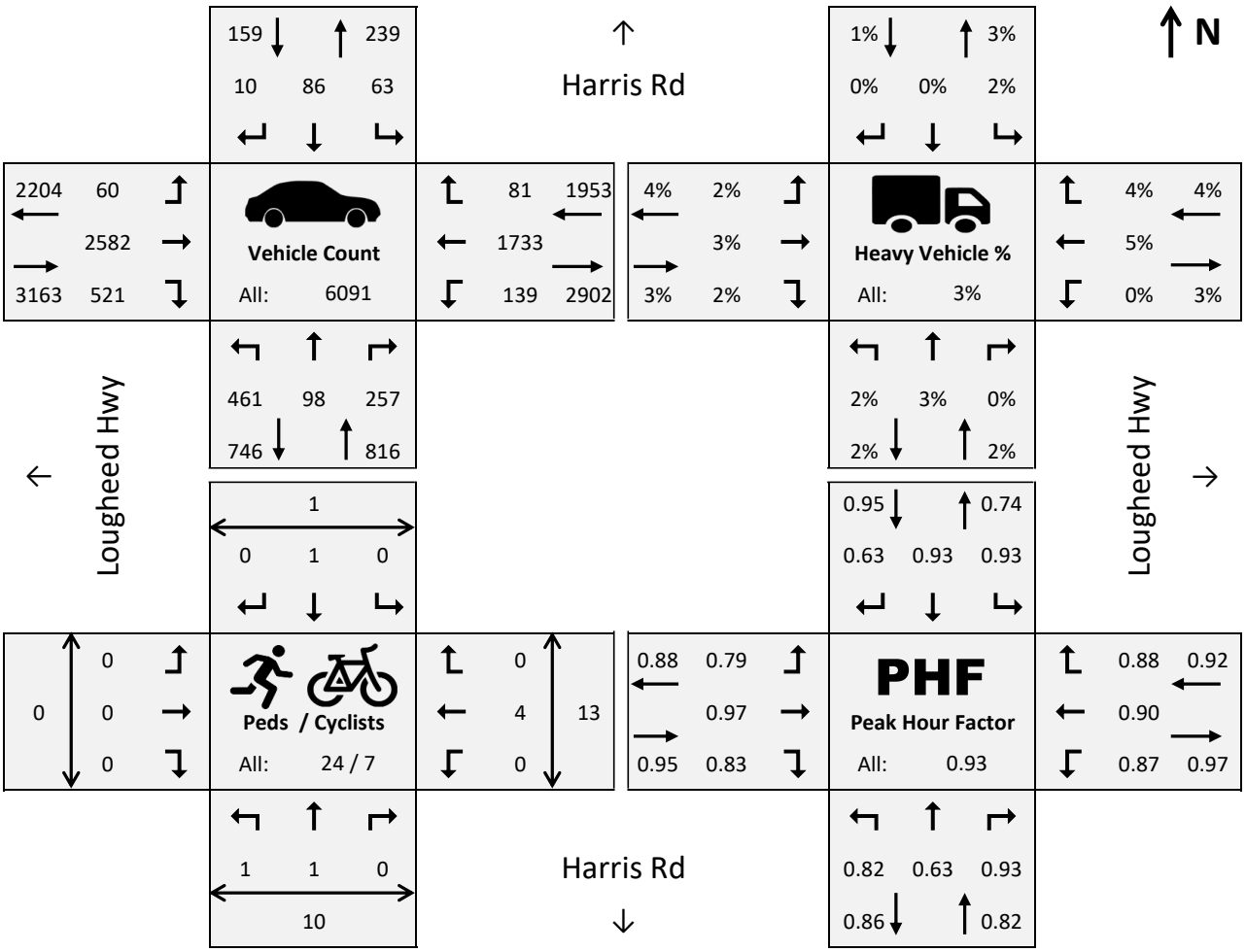
TIME	AUTOMOBILE COUNT												PEDESTRIANS			
INTERVAL	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W
7:00 - 7:15	0	0	0	7	0	0	0	0	0	0	0	4	1	0	0	0
7:15 - 7:30	0	0	0	4	0	0	0	0	0	0	0	5	0	0	0	0
7:30 - 7:45	0	0	0	5	0	0	0	0	0	0	0	10	1	0	0	0
7:45 - 8:00	0	0	0	7	0	0	0	0	0	0	0	14	3	0	0	0
8:00 - 8:15	0	0	0	7	0	0	0	0	0	0	0	26	2	0	0	0
8:15 - 8:30	0	0	0	5	0	0	0	0	0	0	0	18	0	0	0	0
8:30 - 8:45	0	0	0	36	0	0	0	0	0	0	0	12	1	0	0	0
8:45 - 9:00	0	0	0	9	0	0	0	0	0	0	0	12	0	0	0	0
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Harris Rd @ Lougheed Hwy – Pitt Meadows, BC

Project#:	04-24-0264	**Weather:**		**Analysis Period:**	16:15 - 17:15
Date:	Jan 08, 2025 (Wed)	**Road Cond:**		**Intersection Peak:**	16:15 - 17:15
Notes:					

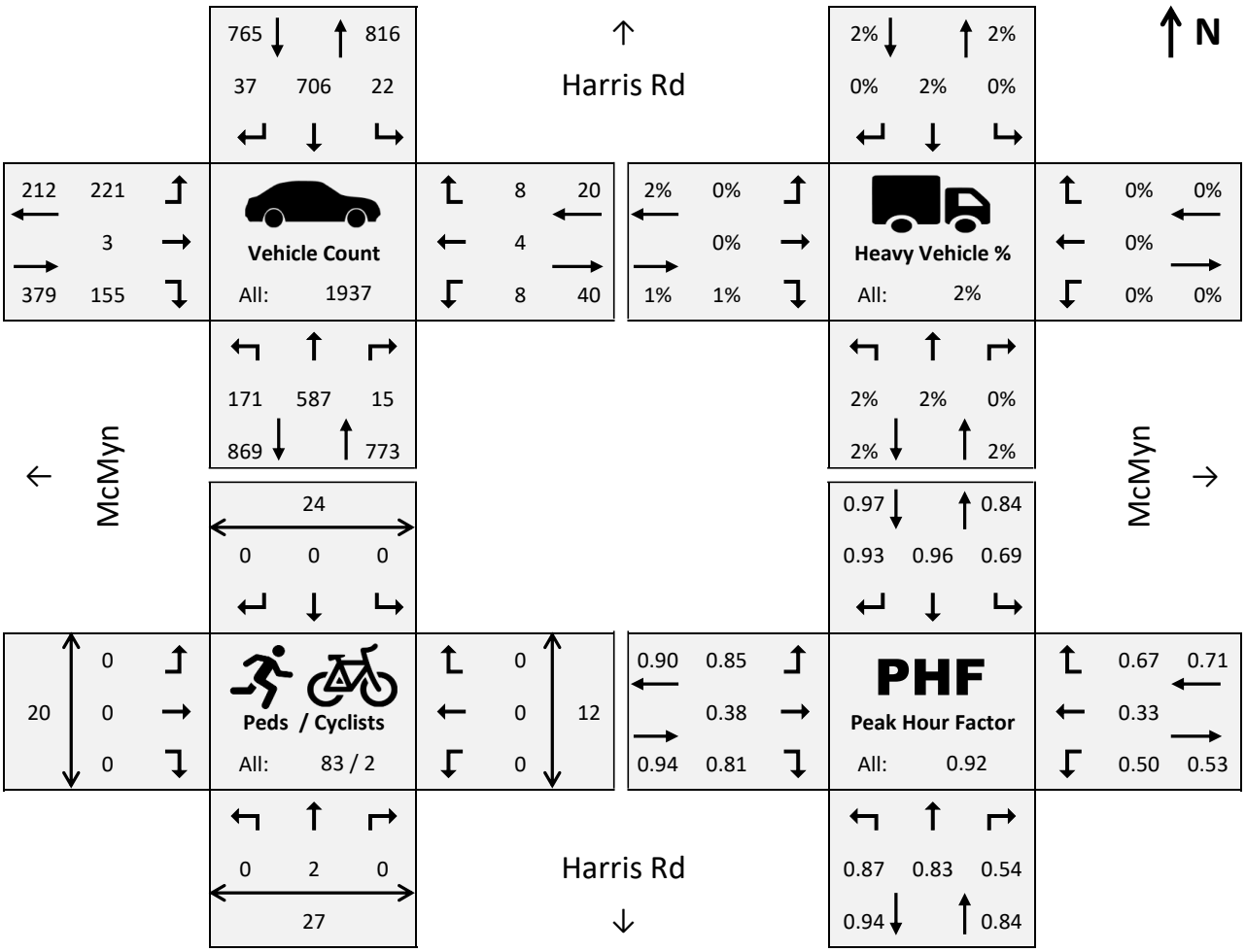
TIME	AUTOMOBILE COUNT												PEDESTRIANS			
INTERVAL	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W
15:00 - 15:15	87	29	59	21	16	0	12	624	92	41	374	25	1	0	2	0
15:15 - 15:30	86	21	57	19	25	4	15	605	123	53	332	25	1	4	4	0
15:30 - 15:45	83	16	58	17	17	3	14	663	108	37	442	23	1	5	3	0
15:45 - 16:00	90	16	50	13	21	4	21	637	118	44	400	21	1	5	3	1
16:00 - 16:15	58	21	65	19	14	5	21	653	118	31	393	22	1	3	6	0
16:15 - 16:30	141	39	69	16	19	4	19	663	128	28	482	23	1	3	3	0
16:30 - 16:45	100	19	64	17	22	3	14	659	156	40	459	23	0	5	3	0
16:45 - 17:00	105	20	57	14	23	1	16	631	128	32	409	19	0	2	4	0
17:00 - 17:15	115	20	67	16	22	2	11	629	109	39	383	16	0	0	3	0
17:15 - 17:30	98	16	38	20	16	0	15	619	114	42	413	13	0	0	2	1
17:30 - 17:45	105	14	57	8	19	1	13	590	125	44	376	19	0	1	1	0
17:45 - 18:00	104	15	62	7	14	3	11	483	90	44	389	20	0	2	1	0
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Harris Rd @ McMyn – Pitt Meadows, BC

Project#:	04-24-0264	**Weather:**	Sunny	**Analysis Period:**	16:15 - 17:15
Date:	Jan 08, 2025 (Wed)	**Road Cond:**	Dry	**Intersection Peak:**	16:15 - 17:15
Notes:					

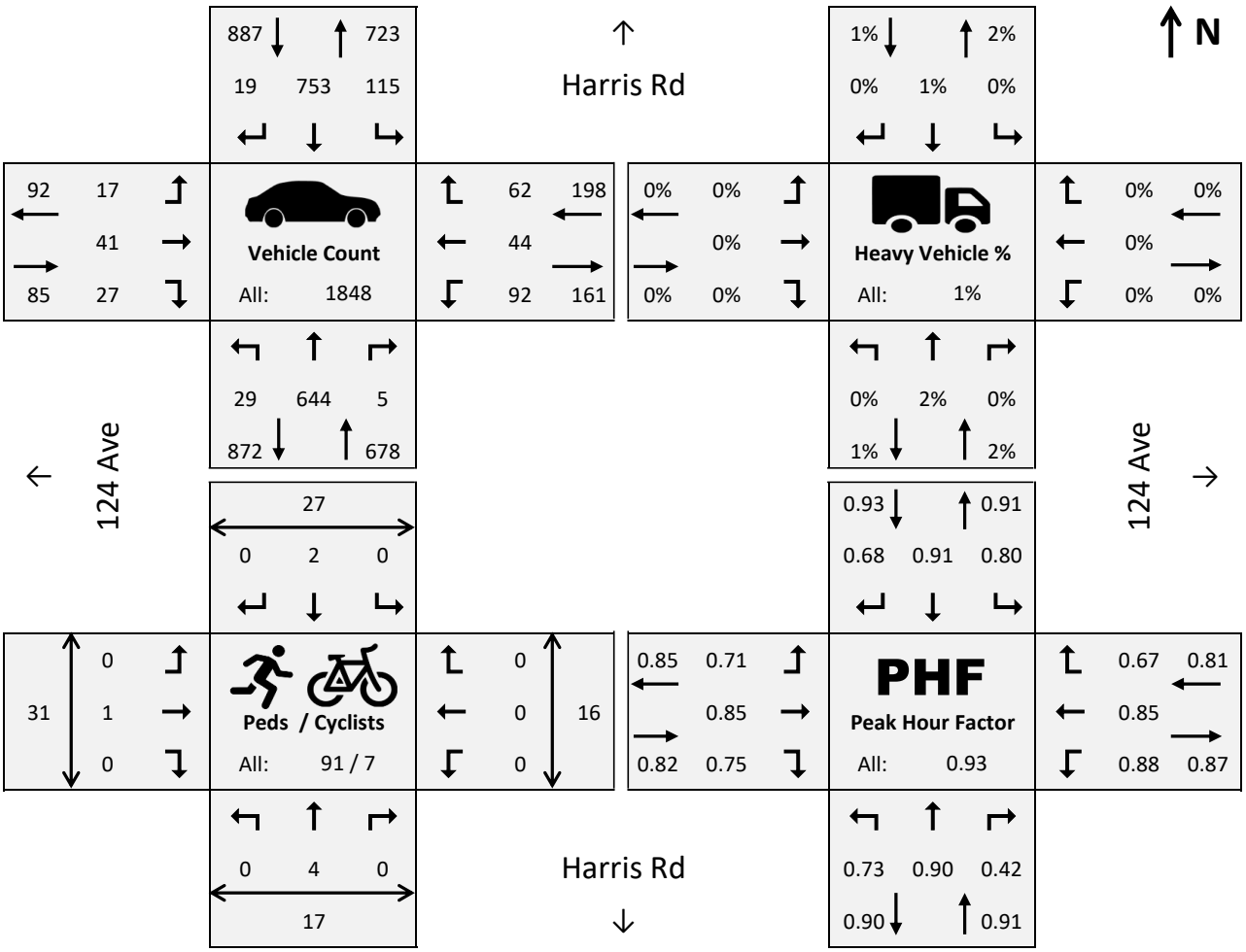
TIME	AUTOMOBILE COUNT												PEDESTRIANS			
INTERVAL	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W
15:00 - 15:15	33	123	5	3	118	9	57	3	37	2	4	5	3	21	4	14
15:15 - 15:30	35	111	2	3	173	11	40	0	33	1	0	1	9	5	7	16
15:30 - 15:45	38	121	2	3	153	5	34	0	30	1	1	2	2	7	0	6
15:45 - 16:00	49	119	2	7	169	13	33	0	35	3	0	0	9	7	5	11
16:00 - 16:15	30	68	0	4	121	11	69	1	30	0	1	2	11	3	5	5
16:15 - 16:30	48	176	6	5	180	8	65	2	32	1	3	2	8	7	3	10
16:30 - 16:45	42	151	0	6	182	9	45	0	40	3	1	3	7	6	5	4
16:45 - 17:00	32	116	2	3	183	10	53	0	48	0	0	1	4	6	2	2
17:00 - 17:15	49	144	7	8	161	10	58	1	35	4	0	2	5	8	2	4
17:15 - 17:30	35	116	4	3	156	12	47	1	40	2	1	2	6	12	3	3
17:30 - 17:45	42	134	1	4	160	13	46	1	31	0	0	1	5	4	0	1
17:45 - 18:00	45	116	4	4	125	13	46	1	43	1	2	1	3	4	1	0
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Harris Rd @ 124 Ave – Pitt Meadows, BC

Project#:	04-24-0264	**Weather:**	Sunny	**Analysis Period:**	16:15 - 17:15
Date:	Jan 08, 2025 (Wed)	**Road Cond:**	Dry	**Intersection Peak:**	16:15 - 17:15
Notes:					

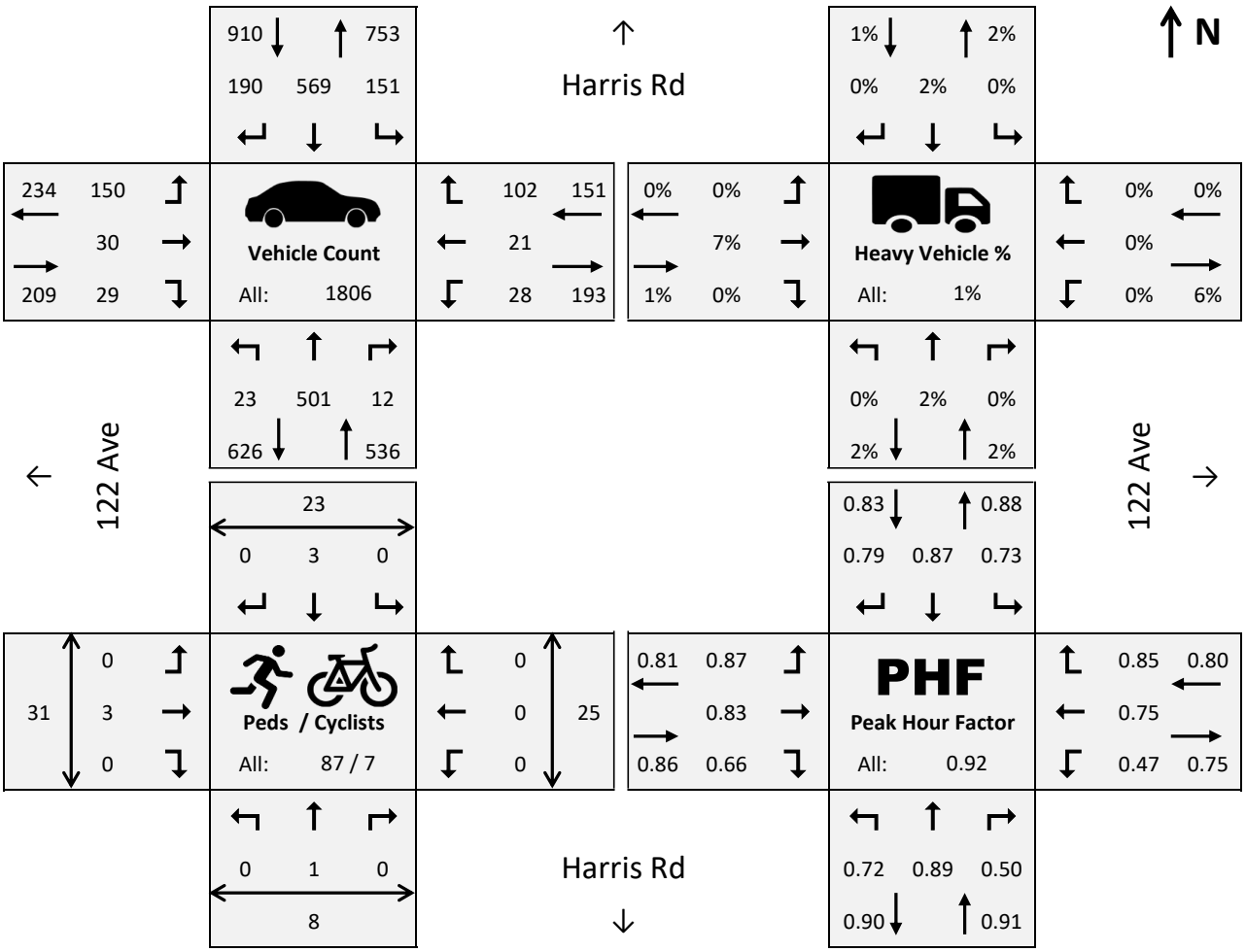
TIME	AUTOMOBILE COUNT												PEDESTRIANS			
INTERVAL	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W
15:00 - 15:15	4	132	5	21	139	3	2	8	3	12	12	13	3	4	3	10
15:15 - 15:30	7	137	6	19	184	0	1	6	6	24	2	14	16	4	14	5
15:30 - 15:45	3	142	2	36	139	2	5	2	4	22	10	9	5	0	4	5
15:45 - 16:00	4	124	3	20	200	2	3	8	10	15	5	18	10	5	4	9
16:00 - 16:15	5	108	2	19	105	4	6	8	3	21	11	12	3	0	2	0
16:15 - 16:30	8	163	0	24	207	7	6	11	9	26	12	23	3	2	3	19
16:30 - 16:45	10	174	3	36	186	3	2	11	6	22	13	10	6	5	8	8
16:45 - 17:00	8	128	1	33	181	3	5	12	4	26	9	13	10	3	2	0
17:00 - 17:15	3	179	1	22	179	6	4	7	8	18	10	16	8	7	3	4
17:15 - 17:30	4	128	3	24	173	4	6	2	13	21	2	10	5	4	2	3
17:30 - 17:45	6	157	0	23	163	0	3	4	8	20	5	18	2	5	4	0
17:45 - 18:00	4	149	0	17	147	3	4	2	9	17	2	12	3	5	1	3
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Harris Rd @ 122 Ave – Pitt Meadows, BC

Project#:	04-24-0264	**Weather:**		**Analysis Period:**	16:15 - 17:15
Date:	Jan 08, 2025 (Wed)	**Road Cond:**		**Intersection Peak:**	16:15 - 17:15
Notes:					

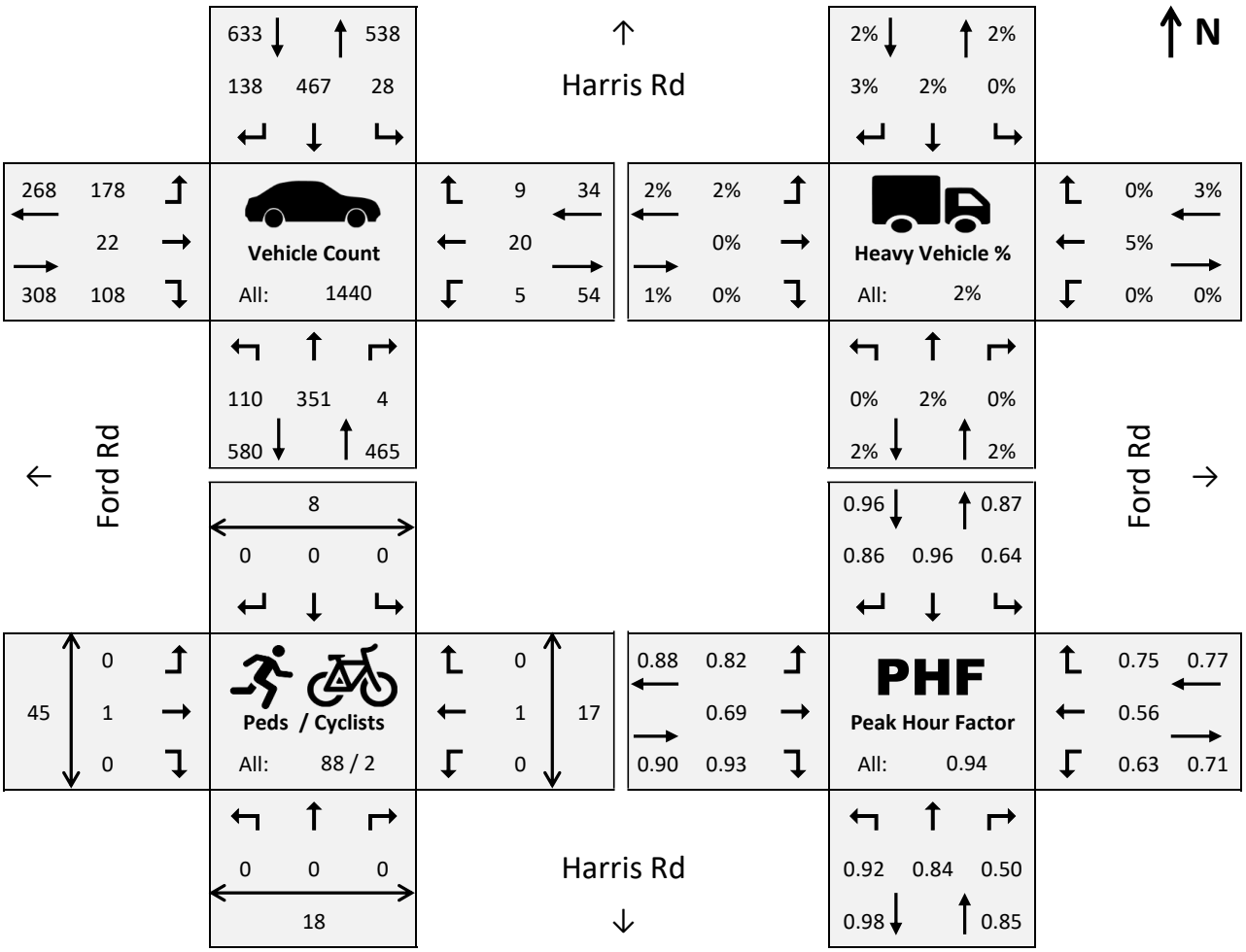
TIME	AUTOMOBILE COUNT												PEDESTRIANS			
INTERVAL	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W
15:00 - 15:15	6	104	2	22	96	29	30	7	3	4	5	29	7	6	10	11
15:15 - 15:30	3	108	2	40	139	51	29	1	4	4	7	24	2	1	6	4
15:30 - 15:45	8	116	4	23	108	29	31	8	11	6	4	25	6	1	8	4
15:45 - 16:00	6	101	3	30	134	54	31	11	3	3	6	25	2	5	5	4
16:00 - 16:15	7	82	3	13	55	23	36	7	13	3	9	25	0	4	4	3
16:15 - 16:30	5	121	3	52	163	60	41	7	8	2	7	20	7	0	3	11
16:30 - 16:45	6	141	1	41	142	42	43	6	5	6	7	30	6	4	12	10
16:45 - 17:00	8	112	6	24	139	47	24	9	5	5	5	22	6	3	2	5
17:00 - 17:15	4	127	2	34	125	41	42	8	11	15	2	30	4	1	8	5
17:15 - 17:30	8	118	5	27	128	44	22	4	7	2	3	10	3	7	7	8
17:30 - 17:45	6	111	3	25	106	39	35	5	4	14	5	19	6	2	1	11
17:45 - 18:00	5	117	1	24	116	29	34	1	4	2	4	17	0	1	0	4
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Harris Rd @ Ford Rd – Pitt Meadows, BC

Project#:	04-24-0264	**Weather:**		**Analysis Period:**	16:15 - 17:15
Date:	Jan 08, 2025 (Wed)	**Road Cond:**		**Intersection Peak:**	16:15 - 17:15
Notes:					

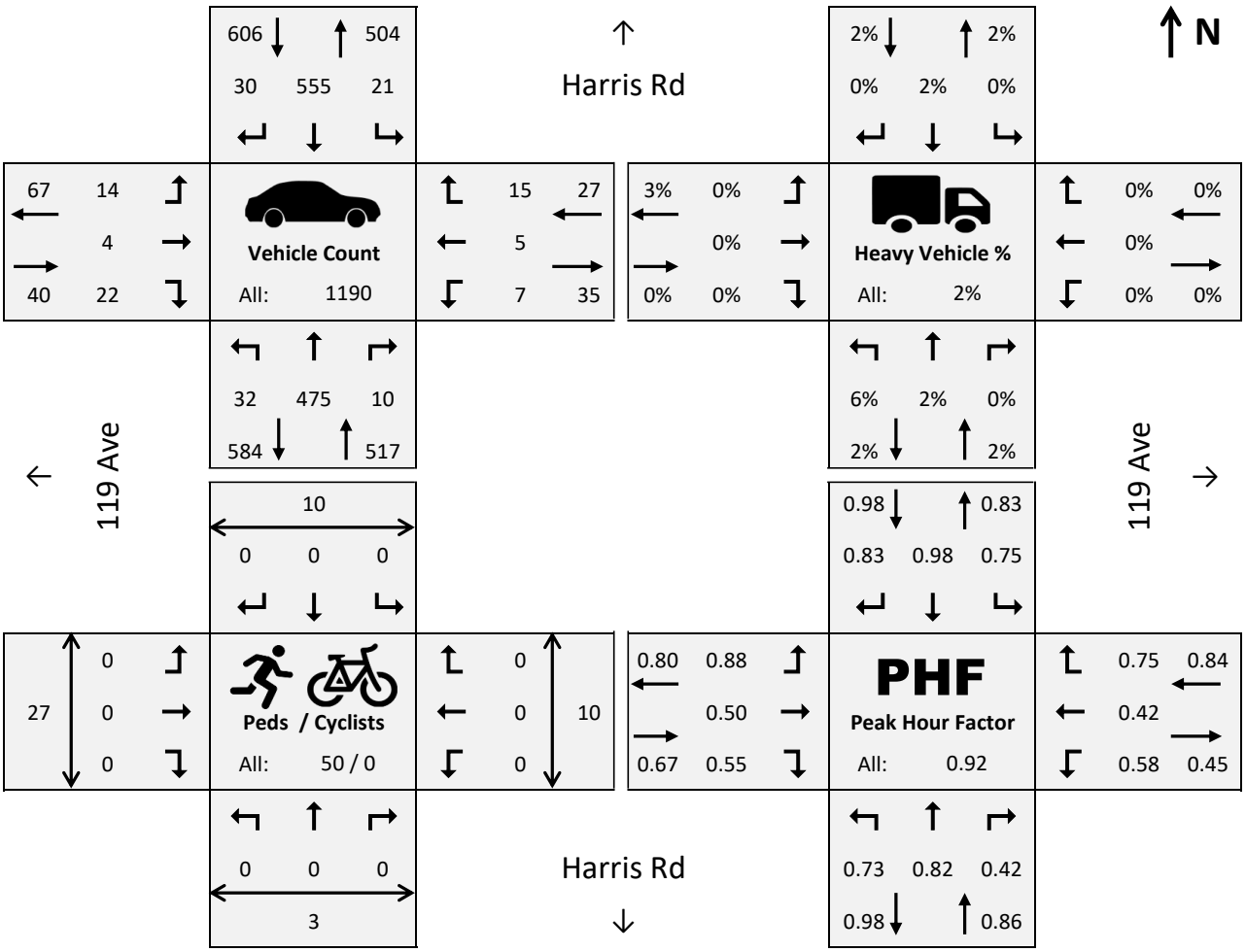
TIME	AUTOMOBILE COUNT												PEDESTRIANS			
INTERVAL	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W
15:00 - 15:15	15	77	2	3	91	24	34	3	15	3	4	4	25	6	13	11
15:15 - 15:30	20	78	0	5	107	40	42	4	8	0	4	5	10	2	2	16
15:30 - 15:45	27	86	1	9	80	36	51	3	27	0	4	3	9	8	7	8
15:45 - 16:00	33	70	4	3	98	35	37	9	33	2	8	10	4	5	1	7
16:00 - 16:15	35	81	3	7	65	20	36	3	33	1	5	2	4	3	2	8
16:15 - 16:30	27	76	0	6	114	40	37	6	26	1	9	1	1	3	5	8
16:30 - 16:45	30	105	2	11	115	32	47	5	29	1	5	2	2	4	4	12
16:45 - 17:00	25	81	1	5	116	30	54	3	29	1	2	3	1	5	2	8
17:00 - 17:15	28	89	1	6	122	36	40	8	24	2	4	3	4	6	6	17
17:15 - 17:30	26	94	2	3	96	32	29	2	21	1	4	5	5	5	4	4
17:30 - 17:45	14	90	2	6	99	39	40	3	22	2	5	3	5	4	4	6
17:45 - 18:00	27	87	2	3	95	28	35	3	16	0	4	5	6	2	3	10
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Harris Rd @ 119 Ave – Pitt Meadows, BC

Project#:	04-24-0264	**Weather:**		**Analysis Period:**	16:15 - 17:15
Date:	Jan 08, 2025 (Wed)	**Road Cond:**		**Intersection Peak:**	16:15 - 17:15
Notes:					

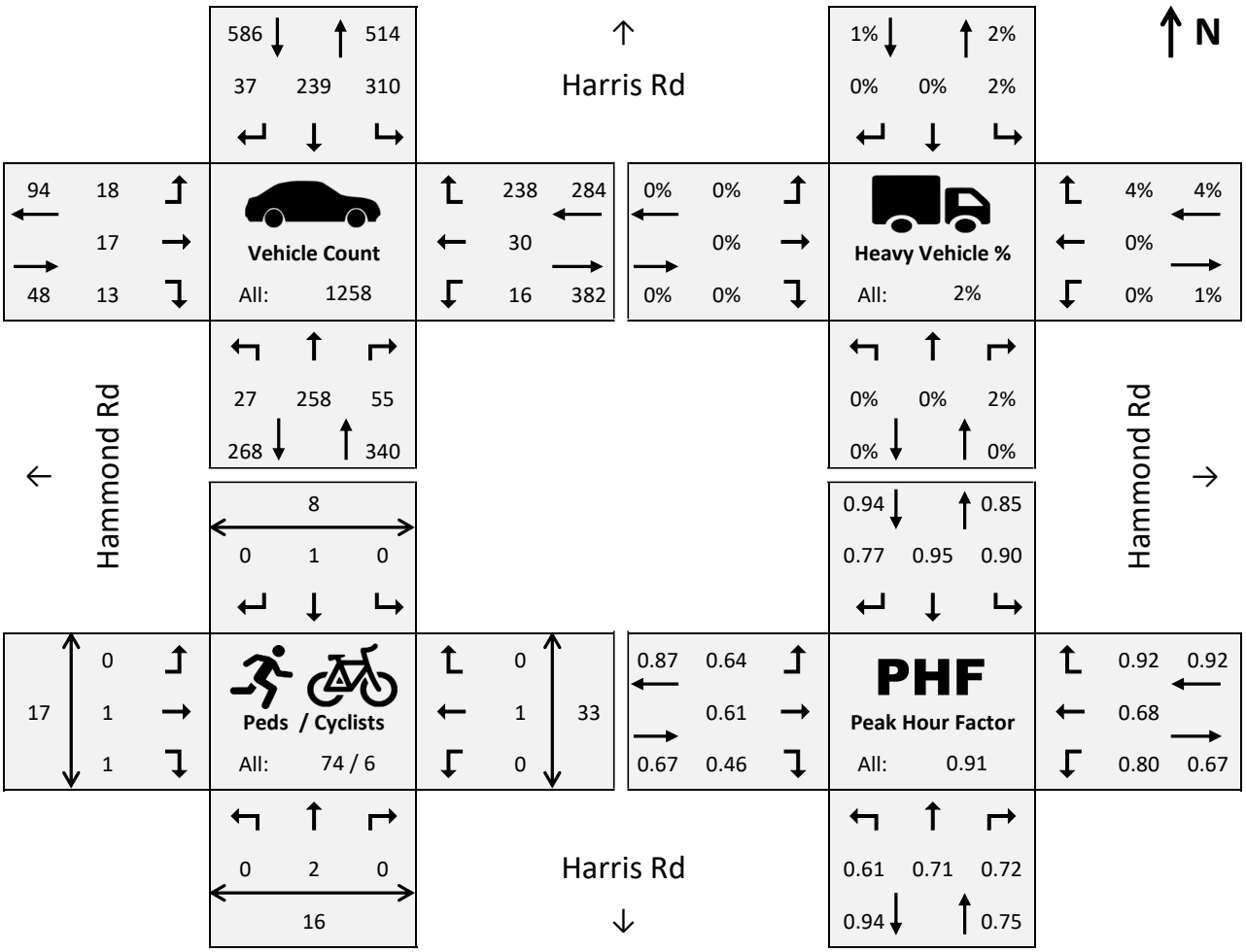
TIME	AUTOMOBILE COUNT												PEDESTRIANS			
INTERVAL	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W
15:00 - 15:15	8	111	2	1	98	5	5	2	15	1	1	1	15	14	9	22
15:15 - 15:30	11	87	2	5	88	8	3	0	14	0	2	4	4	6	2	9
15:30 - 15:45	10	120	2	2	95	8	6	0	6	1	1	4	3	1	0	4
15:45 - 16:00	8	101	2	8	109	8	5	3	7	2	1	5	3	3	2	4
16:00 - 16:15	10	124	5	3	99	2	4	3	16	3	1	4	6	0	2	6
16:15 - 16:30	11	115	3	6	137	9	2	1	3	1	1	3	1	1	1	10
16:30 - 16:45	6	144	0	5	137	7	4	1	10	2	3	3	5	1	2	6
16:45 - 17:00	7	106	6	3	140	7	4	2	4	1	1	5	2	0	3	4
17:00 - 17:15	8	110	1	7	141	7	4	0	5	3	0	4	2	1	4	7
17:15 - 17:30	7	114	2	1	99	8	8	1	5	1	1	7	1	0	1	5
17:30 - 17:45	6	120	3	4	111	14	5	0	9	1	0	1	1	2	3	3
17:45 - 18:00	11	117	1	8	93	6	7	2	8	0	0	3	1	1	4	4
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Harris Rd @ Hammond Rd – Pitt Meadows, BC

Project#:	04-24-0264	**Weather:**		**Analysis Period:**	16:15 - 17:15
Date:	Jan 08, 2025 (Wed)	**Road Cond:**		**Intersection Peak:**	16:15 - 17:15
Notes:					

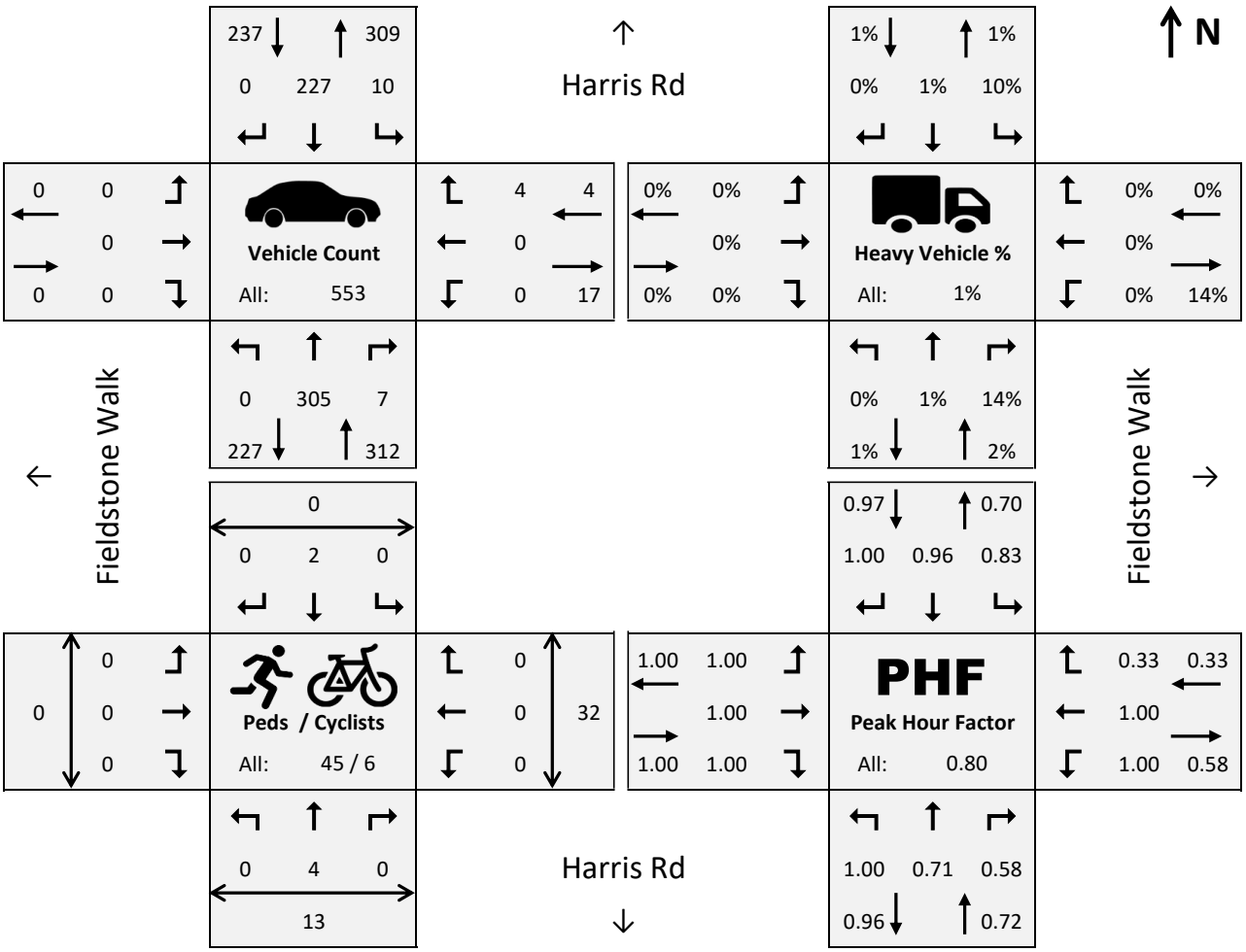
TIME	AUTOMOBILE COUNT												PEDESTRIANS			
INTERVAL	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W
15:00 - 15:15	1	50	6	62	47	3	6	7	5	7	8	60	6	14	15	14
15:15 - 15:30	3	55	8	47	50	8	3	2	2	7	3	56	2	3	4	3
15:30 - 15:45	4	62	10	49	46	6	3	7	3	3	6	62	3	3	7	2
15:45 - 16:00	7	44	5	60	52	7	4	2	2	10	12	57	7	1	6	0
16:00 - 16:15	3	87	22	73	43	2	6	7	2	5	9	49	2	6	9	5
16:15 - 16:30	11	62	15	77	60	9	4	3	6	5	7	62	2	5	9	4
16:30 - 16:45	4	91	19	83	56	9	4	7	7	5	5	56	1	1	3	6
16:45 - 17:00	3	54	8	64	60	12	7	5	0	1	11	55	0	4	8	5
17:00 - 17:15	9	51	13	86	63	7	3	2	0	5	7	65	5	6	13	2
17:15 - 17:30	6	49	10	53	44	12	6	3	5	7	10	72	1	2	4	1
17:30 - 17:45	2	66	10	54	54	12	7	8	4	4	0	51	0	4	6	5
17:45 - 18:00	4	53	4	61	41	1	5	3	4	5	3	71	1	3	8	2
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Harris Rd @ Fieldstone Walk – Pitt Meadows, BC

Project#:	04-24-0264	**Weather:**	Sunny	**Analysis Period:**	16:15 - 17:15
Date:	Jan 08, 2025 (Wed)	**Road Cond:**	Dry	**Intersection Peak:**	16:00 - 17:00
Notes:					

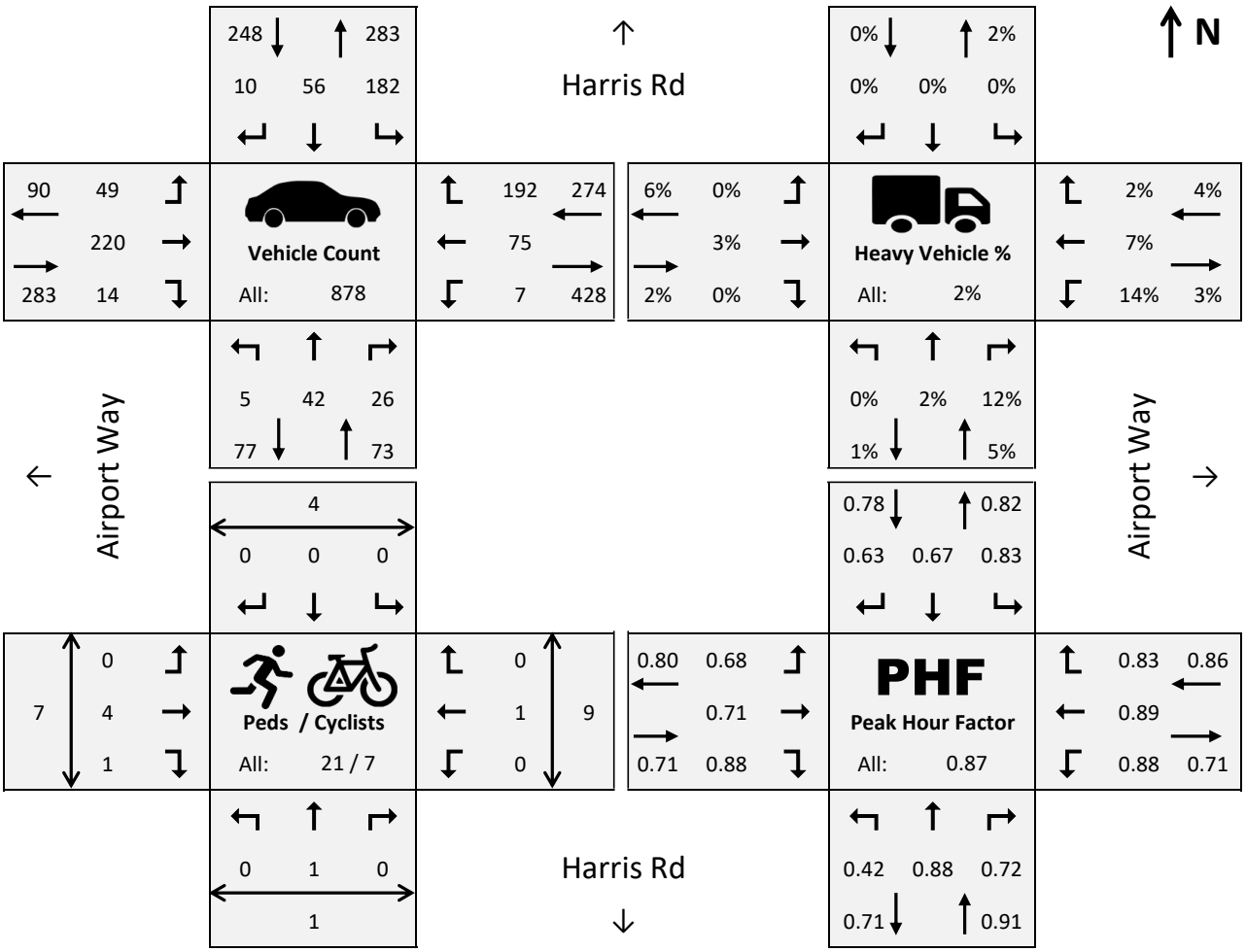
TIME	AUTOMOBILE COUNT												PEDESTRIANS			
INTERVAL	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W
15:00 - 15:15	0	54	0	0	45	0	0	0	0	3	0	0	0	0	0	0
15:15 - 15:30	0	51	2	0	43	0	0	0	0	0	0	0	0	1	5	0
15:30 - 15:45	0	70	0	2	44	0	0	0	0	0	0	0	0	0	3	0
15:45 - 16:00	0	55	1	0	53	0	0	0	0	0	0	0	0	0	7	0
16:00 - 16:15	0	98	0	0	38	0	0	0	0	0	0	2	0	0	4	0
16:15 - 16:30	0	77	3	2	54	0	0	0	0	0	0	1	0	3	11	0
16:30 - 16:45	0	107	2	3	57	0	0	0	0	0	0	3	0	1	8	0
16:45 - 17:00	0	61	1	2	59	0	0	0	0	0	0	0	0	6	5	0
17:00 - 17:15	0	60	1	3	57	0	0	0	0	0	0	0	0	3	8	0
17:15 - 17:30	0	68	3	1	40	0	0	0	0	1	0	0	0	0	4	0
17:30 - 17:45	0	74	0	3	52	0	0	0	0	0	0	2	0	1	8	0
17:45 - 18:00	0	51	0	0	43	0	0	0	0	3	0	1	0	0	1	0
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Harris Rd @ Airport Way – Pitt Meadows, BC

Project#:	04-24-0264	**Weather:**		**Analysis Period:**	16:15 - 17:15
Date:	Jan 08, 2025 (Wed)	**Road Cond:**		**Intersection Peak:**	16:00 - 17:00
Notes:					

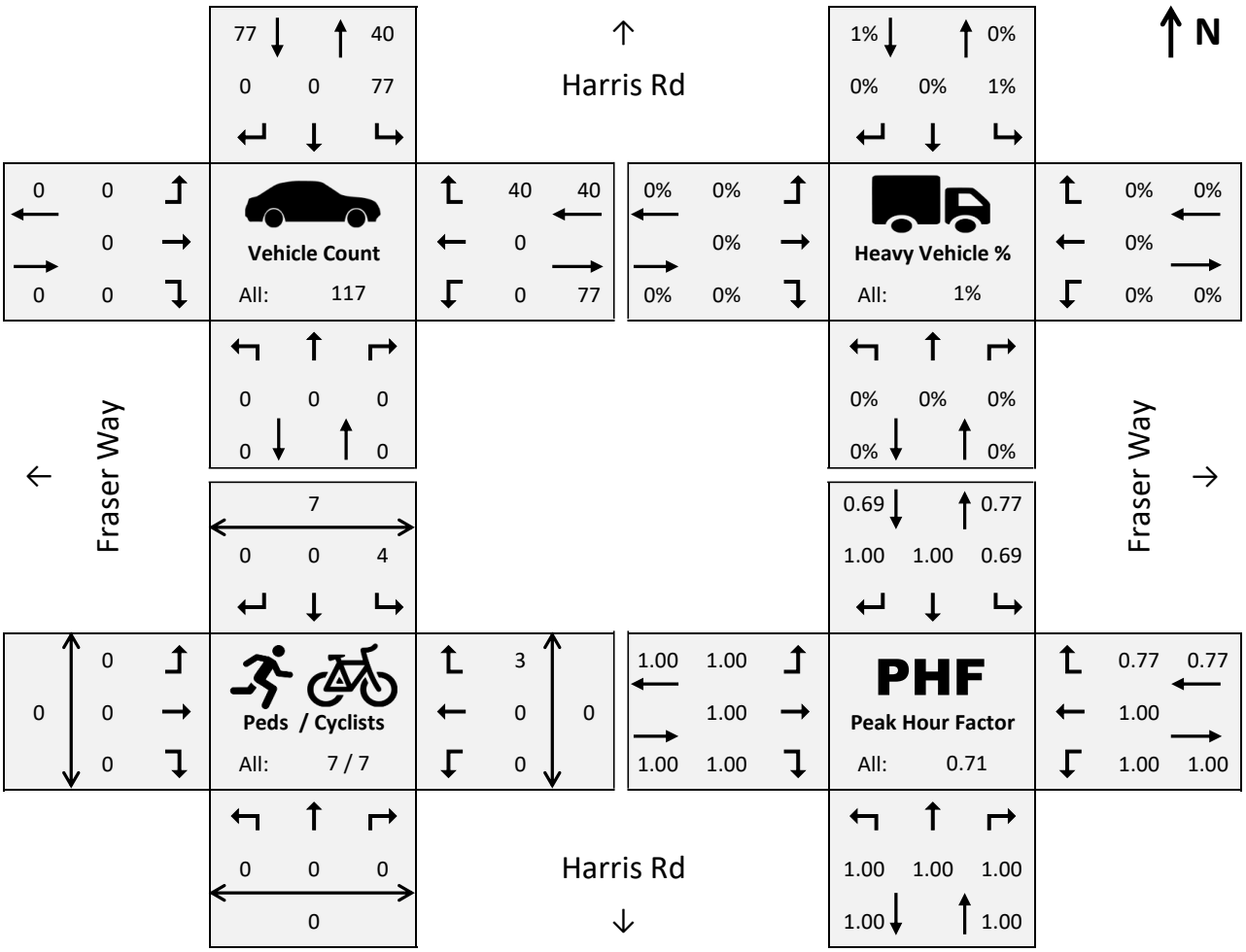
TIME	AUTOMOBILE COUNT												PEDESTRIANS			
INTERVAL	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W
15:00 - 15:15	0	6	6	44	13	6	6	32	2	5	30	42	0	0	1	0
15:15 - 15:30	6	7	4	30	16	8	5	36	3	0	31	45	0	0	4	0
15:30 - 15:45	4	11	11	37	15	5	6	64	1	1	22	42	0	0	2	1
15:45 - 16:00	3	7	4	40	18	9	6	46	3	4	23	39	0	0	1	2
16:00 - 16:15	2	26	8	45	11	3	10	55	3	1	25	59	1	0	4	1
16:15 - 16:30	3	11	6	55	21	4	12	51	4	2	21	52	1	0	2	4
16:30 - 16:45	0	10	9	39	12	2	18	78	4	2	20	58	1	0	3	0
16:45 - 17:00	2	9	4	40	16	3	10	53	3	2	21	44	0	1	0	2
17:00 - 17:15	0	12	7	48	7	1	9	38	3	1	13	38	2	0	4	1
17:15 - 17:30	0	8	2	26	16	2	5	33	2	2	19	48	0	0	2	2
17:30 - 17:45	2	10	4	40	11	1	13	38	0	3	15	37	2	0	3	1
17:45 - 18:00	0	10	2	34	15	4	5	29	1	3	22	41	0	0	1	0
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Harris Rd @ Fraser Way – Pitt Meadows, BC

Project#:	04-24-0264	**Weather:**	Sunny	**Analysis Period:**	16:15 - 17:15
Date:	Jan 08, 2025 (Wed)	**Road Cond:**	Dry	**Intersection Peak:**	16:00 - 17:00
Notes:					

TIME	AUTOMOBILE COUNT												PEDESTRIANS			
INTERVAL	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W
15:00 - 15:15	0	0	0	15	0	0	0	0	0	0	0	5	0	0	0	0
15:15 - 15:30	0	0	0	16	0	0	0	0	0	0	0	10	1	0	0	0
15:30 - 15:45	0	0	0	17	0	0	0	0	0	0	0	8	3	0	0	0
15:45 - 16:00	0	0	0	18	0	0	0	0	0	0	0	11	4	0	0	0
16:00 - 16:15	0	0	0	14	0	0	0	0	0	0	0	23	2	0	0	0
16:15 - 16:30	0	0	0	28	0	0	0	0	0	0	0	13	2	0	0	0
16:30 - 16:45	0	0	0	17	0	0	0	0	0	0	0	8	3	0	0	0
16:45 - 17:00	0	0	0	21	0	0	0	0	0	0	0	12	1	0	0	0
17:00 - 17:15	0	0	0	11	0	0	0	0	0	0	0	7	1	0	0	0
17:15 - 17:30	0	0	0	20	0	0	0	0	0	0	0	8	4	0	0	0
17:30 - 17:45	0	0	0	10	0	0	0	0	0	0	0	12	0	0	0	0
17:45 - 18:00	0	0	0	16	0	0	0	0	0	0	0	9	0	0	0	0
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The attached information is provided to support the agency's review process and shall not be distributed to other parties without written consent from Bunt & Associates Engineering Ltd.

APPENDIX C

Synchro 11 Reports

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1597	271	107	1965	100	517	84	186	37	72	8
Future Volume (vph)	5	1597	271	107	1965	100	517	84	186	37	72	8
Ideal Flow (vphpl)	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
Lane Width	3.5	3.8	3.1	3.7	3.7	3.7	3.0	3.3	3.0	3.2	3.2	3.2
Total Lost time (s)	6.0	6.4	6.4	5.9	6.4	6.4	7.8	7.8	7.8	6.8	6.8	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	0.95	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.96	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00	0.95	1.00	
Satd. Flow (prot)	1968	5847	1633	2013	4025	1727	1765	1857	1620	1902	3739	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00	0.95	1.00	
Satd. Flow (perm)	1968	5847	1633	2013	4025	1727	1765	1857	1620	1902	3739	
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)	5	1664	282	111	2047	104	539	88	194	39	75	8
RTOR Reduction (vph)	0	0	119	0	0	49	0	0	157	0	6	0
Lane Group Flow (vph)	5	1664	163	111	2047	55	313	314	37	39	77	0
Confl. Peds. (#/hr)	5		7	7		5			5	5		
Confl. Bikes (#/hr)						5			5			5
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases			2			6			3			
Actuated Green, G (s)	1.2	60.4	60.4	12.0	71.1	71.1	25.3	25.3	25.3	9.5	9.5	
Effective Green, g (s)	1.2	60.4	60.4	12.0	71.1	71.1	25.3	25.3	25.3	9.5	9.5	
Actuated g/C Ratio	0.01	0.45	0.45	0.09	0.53	0.53	0.19	0.19	0.19	0.07	0.07	
Clearance Time (s)	6.0	6.4	6.4	5.9	6.4	6.4	7.8	7.8	7.8	6.8	6.8	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	17	2633	735	180	2134	915	332	350	305	134	264	
v/s Ratio Prot	0.00	0.28		c0.06	c0.51		c0.18	0.17		0.02	c0.02	
v/s Ratio Perm			0.10			0.03			0.02			
v/c Ratio	0.29	0.63	0.22	0.62	0.96	0.06	0.94	0.90	0.12	0.29	0.29	
Uniform Delay, d1	66.0	28.3	22.5	58.8	30.1	15.3	53.7	53.1	45.2	59.1	59.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	9.4	0.5	0.2	6.2	11.3	0.0	34.5	24.3	0.2	1.2	0.6	
Delay (s)	75.5	28.8	22.7	65.0	41.4	15.3	88.2	77.4	45.3	60.3	59.7	
Level of Service	E	C	C	E	D	B	F	E	D	E	E	
Approach Delay (s)		28.0			41.4			73.9			59.9	
Approach LOS		C			D			E			E	

Intersection Summary				
HCM 2000 Control Delay	42.0	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.91			
Actuated Cycle Length (s)	134.1	Sum of lost time (s)	27.0	
Intersection Capacity Utilization	89.7%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

2: Harris Rd & McMyn Rd/Parking Access

AM Peak Hour
05/30/2025
Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	169	3	57	2	1	2	108	629	5	7	394	20
Future Volume (vph)	169	3	57	2	1	2	108	629	5	7	394	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.3	3.3	4.8	3.3	3.0	3.3	3.0	3.0	3.3	3.0
Total Lost time (s)		6.2	6.2		6.2		6.3	5.6		6.1	5.6	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.98		0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		0.99	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.95		1.00	1.00		1.00	0.99	
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1697	1457		1884		1603	3319		1603	3294	
Flt Permitted		0.73	1.00		0.89		0.37	1.00		0.39	1.00	
Satd. Flow (perm)		1294	1457		1704		631	3319		663	3294	
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)	182	3	61	2	1	2	116	676	5	8	424	22
RTOR Reduction (vph)	0	0	47	0	2	0	0	1	0	0	4	0
Lane Group Flow (vph)	0	185	14	0	3	0	116	680	0	8	442	0
Confl. Peds. (#/hr)	8		12	12		8	5		5	5		5
Confl. Bikes (#/hr)									5			5
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		14.1	14.1		14.1		33.5	26.6		21.3	20.4	
Effective Green, g (s)		14.1	14.1		14.1		33.5	26.6		21.3	20.4	
Actuated g/C Ratio		0.24	0.24		0.24		0.56	0.45		0.36	0.34	
Clearance Time (s)		6.2	6.2		6.2		6.3	5.6		6.1	5.6	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		306	345		403		467	1483		251	1129	
v/s Ratio Prot							c0.03	c0.21		0.00	0.13	
v/s Ratio Perm		c0.14	0.01		0.00		0.11			0.01		
v/c Ratio		0.60	0.04		0.01		0.25	0.46		0.03	0.39	
Uniform Delay, d1		20.2	17.5		17.4		6.5	11.4		12.3	14.8	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		3.4	0.1		0.0		0.3	0.2		0.1	0.2	
Delay (s)		23.6	17.5		17.4		6.8	11.7		12.4	15.1	
Level of Service		C	B		B		A	B		B	B	
Approach Delay (s)		22.1			17.4			11.0			15.0	
Approach LOS		C			B			B			B	

Intersection Summary				
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.57			
Actuated Cycle Length (s)	59.5	Sum of lost time (s)	21.1	
Intersection Capacity Utilization	55.7%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

3: Harris Rd & 124 Ave

AM Peak Hour
05/30/2025
Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	13	47	82	11	69	23	641	2	24	441	3
Future Volume (vph)	21	13	47	82	11	69	23	641	2	24	441	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.3	3.3	3.0	3.3	3.3
Total Lost time (s)		6.0			6.0		5.6	5.6		6.1	5.6	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		0.99	1.00		1.00	1.00	
Frt		0.92			0.94		1.00	1.00		1.00	1.00	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1567			1586		1590	3322		1604	3319	
Flt Permitted		0.88			0.80		0.48	1.00		0.27	1.00	
Satd. Flow (perm)		1400			1296		810	3322		453	3319	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	22	14	49	86	12	73	24	675	2	25	464	3
RTOR Reduction (vph)	0	37	0	0	32	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	48	0	0	139	0	24	677	0	25	467	0
Confl. Peds. (#/hr)	12		15	15		12	14		5	5		14
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		12.3			12.3		19.3	19.3		26.2	26.2	
Effective Green, g (s)		12.3			12.3		19.3	19.3		26.2	26.2	
Actuated g/C Ratio		0.25			0.25		0.39	0.39		0.52	0.52	
Clearance Time (s)		6.0			6.0		5.6	5.6		6.1	5.6	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		343			318		312	1279		255	1735	
v/s Ratio Prot								c0.20		0.00	c0.14	
v/s Ratio Perm		0.03			c0.11		0.03			0.05		
v/c Ratio		0.14			0.44		0.08	0.53		0.10	0.27	
Uniform Delay, d1		14.8			16.0		9.8	11.9		6.5	6.6	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2			1.0		0.1	0.4		0.2	0.1	
Delay (s)		15.0			16.9		9.9	12.3		6.6	6.7	
Level of Service		B			B		A	B		A	A	
Approach Delay (s)		15.0			16.9			12.2			6.7	
Approach LOS		B			B			B			A	

Intersection Summary				
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.57			
Actuated Cycle Length (s)	50.1	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	47.8%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

4: Harris Rd & 122 Ave/122a Ave — AM Peak Hour
05/30/2025 — Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	183	38	40	14	28	151	21	442	12	69	403	137
Future Volume (vph)	183	38	40	14	28	151	21	442	12	69	403	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.3	3.3	3.0	3.3	3.0
Total Lost time (s)	6.2	6.2			6.2		6.1	5.5		6.1	5.5	
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99			0.98		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.92			0.89		1.00	1.00		1.00	0.96	
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1651	1594			1528		1599	3306		1598	3160	
Flt Permitted	0.63	1.00			0.97		0.40	1.00		0.42	1.00	
Satd. Flow (perm)	1102	1594			1493		666	3306		698	3160	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	213	44	47	16	33	176	24	514	14	80	469	159
RTOR Reduction (vph)	0	35	0	0	131	0	0	2	0	0	36	0
Lane Group Flow (vph)	213	56	0	0	94	0	24	526	0	80	592	0
Confl. Peds. (#/hr)	16		13	13		16	16		18	18		16
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	13.7	13.7			13.7		21.3	19.6		23.5	20.7	
Effective Green, g (s)	13.7	13.7			13.7		21.3	19.6		23.5	20.7	
Actuated g/C Ratio	0.25	0.25			0.25		0.40	0.36		0.44	0.38	
Clearance Time (s)	6.2	6.2			6.2		6.1	5.5		6.1	5.5	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	280	405			379		292	1202		351	1213	
v/s Ratio Prot		0.04					0.00	0.16		c0.01	c0.19	
v/s Ratio Perm	c0.19				0.06		0.03			0.09		
v/c Ratio	0.76	0.14			0.25		0.08	0.44		0.23	0.49	
Uniform Delay, d1	18.6	15.5			16.0		10.0	13.0		9.1	12.6	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	11.5	0.2			0.3		0.1	0.3		0.3	0.3	
Delay (s)	30.1	15.7			16.3		10.1	13.2		9.4	12.9	
Level of Service	C	B			B		B	B		A	B	
Approach Delay (s)		25.8			16.3			13.1			12.5	
Approach LOS		C			B			B			B	

Intersection Summary				
HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.64			
Actuated Cycle Length (s)	53.9	Sum of lost time (s)	20.8	
Intersection Capacity Utilization	73.8%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

5: Harris Rd & Ford Rd — AM Peak Hour
05/30/2025 — Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	17	86	7	33	20	88	298	6	6	333	110
Future Volume (vph)	150	17	86	7	33	20	88	298	6	6	333	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.3	3.3	3.5	3.5	3.0	3.3	3.3	3.0	3.3	3.3
Total Lost time (s)	5.2	5.2			5.2		5.0	4.8		5.0	4.8	
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98			0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.98	1.00			1.00		1.00	1.00		0.99	1.00	
Frt	1.00	0.88			0.96		1.00	1.00		1.00	0.96	
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1495	1381			1508		1438	2980		1433	2839	
Flt Permitted	0.71	1.00			0.96		0.36	1.00		0.53	1.00	
Satd. Flow (perm)	1117	1381			1452		539	2980		802	2839	
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Adj. Flow (vph)	183	21	105	9	40	24	107	363	7	7	406	134
RTOR Reduction (vph)	0	82	0	0	19	0	0	2	0	0	43	0
Lane Group Flow (vph)	183	44	0	0	54	0	107	368	0	7	497	0
Confl. Peds. (#/hr)	34		10	10		34	23		17	17		23
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	12.0	12.0			12.0		31.6	26.4		23.0	22.1	
Effective Green, g (s)	12.0	12.0			12.0		31.6	26.4		23.0	22.1	
Actuated g/C Ratio	0.22	0.22			0.22		0.58	0.49		0.42	0.41	
Clearance Time (s)	5.2	5.2			5.2		5.0	4.8		5.0	4.8	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	246	305			320		399	1448		350	1155	
v/s Ratio Prot		0.03					c0.03	0.12		0.00	c0.17	
v/s Ratio Perm	c0.16				0.04		0.13			0.01		
v/c Ratio	0.74	0.14			0.17		0.27	0.25		0.02	0.43	
Uniform Delay, d1	19.7	17.0			17.1		5.5	8.2		9.1	11.6	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	11.5	0.2			0.3		0.4	0.1		0.0	0.3	
Delay (s)	31.2	17.2			17.4		5.8	8.3		9.1	11.8	
Level of Service	C	B			B		A	A		A	B	
Approach Delay (s)		25.5			17.4			7.7			11.8	
Approach LOS		C			B			A			B	

Intersection Summary				
HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.51			
Actuated Cycle Length (s)	54.3	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	49.8%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

6: Harris Rd & 119 Ave — AM Peak Hour
05/30/2025 — Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	13	69	20	54	19	74	433	15	5	369	29
Future Volume (vph)	14	13	69	20	54	19	74	433	15	5	369	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	4.8	3.3	3.3	4.8	3.3	3.0	3.3	3.3	3.0	3.3	3.3
Total Lost time (s)		6.0			6.0		5.5	5.5		5.5	5.5	5.5
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes		0.98			0.99		1.00	1.00		1.00	1.00	0.89
Flpb, ped/bikes		0.99			1.00		0.96	1.00		1.00	1.00	1.00
Frt		0.90			0.97		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1790			1941		1540	3303		1598	1749	1320
Flt Permitted		0.95			0.92		0.38	1.00		0.41	1.00	1.00
Satd. Flow (perm)		1709			1801		618	3303		696	1749	1320
Peak-hour factor, PHF	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Adj. Flow (vph)	19	18	93	27	73	26	100	585	20	7	499	39
RTOR Reduction (vph)	0	64	0	0	17	0	0	3	0	0	0	20
Lane Group Flow (vph)	0	66	0	0	109	0	100	602	0	7	499	19
Confl. Peds. (#/hr)	97		24	24		97	77		8	8		77
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		2
Actuated Green, G (s)		16.8			16.8		25.9	25.9		25.9	25.9	25.9
Effective Green, g (s)		16.8			16.8		25.9	25.9		25.9	25.9	25.9
Actuated g/C Ratio		0.31			0.31		0.48	0.48		0.48	0.48	0.48
Clearance Time (s)		6.0			6.0		5.5	5.5		5.5	5.5	5.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		529			558		295	1578		332	835	630
v/s Ratio Prot								0.18			c0.29	
v/s Ratio Perm		0.04			c0.06		0.16			0.01		0.01
v/c Ratio		0.12			0.20		0.34	0.38		0.02	0.60	0.03
Uniform Delay, d1		13.4			13.7		8.8	9.0		7.5	10.3	7.5
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.1			0.2		0.7	0.2		0.0	1.2	0.0
Delay (s)		13.5			13.9		9.5	9.2		7.5	11.5	7.5
Level of Service		B			B		A	A		A	B	A
Approach Delay (s)		13.5			13.9			9.2			11.2	
Approach LOS		B			B			A			B	

Intersection Summary				
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.47			
Actuated Cycle Length (s)	54.2	Sum of lost time (s)	14.5	
Intersection Capacity Utilization	66.3%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

7: Harris Rd & Mitchell Rd/Hammond Rd — AM Peak Hour
05/30/2025 — Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	70	41	50	28	305	13	184	34	236	219	8
Future Volume (vph)	32	70	41	50	28	305	13	184	34	236	219	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.6	3.3	3.0	3.3	3.3
Total Lost time (s)		6.0			6.0	6.0	5.5	5.5	5.5	6.2	5.5	5.5
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		0.98			1.00	0.98	1.00	1.00	0.95	1.00	1.00	0.94
Flpb, ped/bikes		1.00			0.98	1.00	0.97	1.00	1.00	0.99	1.00	1.00
Frt		0.96			1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1627			1659	1455	1616	1810	1410	1595	1749	1393
Flt Permitted		0.91			0.75	1.00	0.59	1.00	1.00	0.41	1.00	1.00
Satd. Flow (perm)		1493			1289	1455	999	1810	1410	692	1749	1393
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	41	90	53	64	36	391	17	236	44	303	281	10
RTOR Reduction (vph)	0	18	0	0	0	287	0	0	32	0	0	5
Lane Group Flow (vph)	0	166	0	0	100	104	17	236	12	303	281	5
Confl. Peds. (#/hr)	9		43	43		9	29		18	18		29
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)		14.9			14.9	14.9	14.9	14.9	14.9	29.5	29.5	29.5
Effective Green, g (s)		14.9			14.9	14.9	14.9	14.9	14.9	29.5	29.5	29.5
Actuated g/C Ratio		0.27			0.27	0.27	0.27	0.27	0.27	0.53	0.53	0.53
Clearance Time (s)		6.0			6.0	6.0	5.5	5.5	5.5	6.2	5.5	5.5
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)		397			343	387	266	482	375	500	922	735
v/s Ratio Prot								0.13		c0.09	0.16	
v/s Ratio Perm		c0.11			0.08	0.07	0.02		0.01	c0.23		0.00
v/c Ratio		0.42			0.29	0.27	0.06	0.49	0.03	0.61	0.30	0.01
Uniform Delay, d1		16.9			16.3	16.2	15.3	17.3	15.2	8.3	7.4	6.3
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.7			0.5	0.4	0.1	0.8	0.0	2.1	0.2	0.0
Delay (s)		17.6			16.8	16.6	15.4	18.1	15.2	10.4	7.6	6.3
Level of Service		B			B	B	B	B	B	B	A	A
Approach Delay (s)		17.6			16.6			17.5			9.0	
Approach LOS		B			B			B			A	

Intersection Summary				
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.65			
Actuated Cycle Length (s)	55.9	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	67.2%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	2	7	176	1	5	276
Future Volume (Veh/h)	2	7	176	1	5	276
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	2	7	181	1	5	285
Pedestrians	17		5			
Lane Width (m)	3.3		3.5			
Walking Speed (m/s)	1.1		1.1			
Percent Blockage	1		0			
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	498	198			199	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	498	198			199	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	514	823			1336	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	9	182	290
Volume Left	2	0	5
Volume Right	7	1	0
cSH	726	1700	1336
Volume to Capacity	0.01	0.11	0.00
Queue Length 95th (m)	0.3	0.0	0.1
Control Delay (s)	10.0	0.0	0.2
Lane LOS	B		A
Approach Delay (s)	10.0	0.0	0.2
Approach LOS	B		

Intersection Summary				
Average Delay		0.3		
Intersection Capacity Utilization		28.5%	ICU Level of Service	A
Analysis Period (min)		15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	83	4	29	215	134	11	58	9	180	61	37
Future Volume (vph)	10	83	4	29	215	134	11	58	9	180	61	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	5.8		7.0	5.8		6.8	6.1	6.1	6.8	6.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.94		1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1659	3297		1656	3093		1659	1749	1452	1660	1638	
Flt Permitted	0.53	1.00		0.66	1.00		0.69	1.00	1.00	0.41	1.00	
Satd. Flow (perm)	934	3297		1144	3093		1205	1749	1452	721	1638	
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)	10	86	4	30	224	140	11	60	9	188	64	39
RTOR Reduction (vph)	0	3	0	0	77	0	0	0	8	0	17	0
Lane Group Flow (vph)	10	87	0	30	287	0	11	60	1	188	86	0
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	20.9	19.9		23.1	21.1		9.9	9.2	9.2	26.1	18.6	
Effective Green, g (s)	20.9	19.9		23.1	21.1		9.9	9.2	9.2	26.1	18.6	
Actuated g/C Ratio	0.31	0.30		0.35	0.32		0.15	0.14	0.14	0.39	0.28	
Clearance Time (s)	6.8	5.8		7.0	5.8		6.8	6.1	6.1	6.8	6.1	
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)	302	980		410	975		183	240	199	423	455	
v/s Ratio Prot	0.00	0.03		c0.00	c0.09		0.00	0.03		c0.07	0.05	
v/s Ratio Perm	0.01			0.02			0.01		0.00	c0.11		
v/c Ratio	0.03	0.09		0.07	0.29		0.06	0.25	0.01	0.44	0.19	
Uniform Delay, d1	15.9	17.0		14.6	17.3		24.4	25.8	24.9	14.4	18.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.0	0.0		0.1	0.2		0.1	0.5	0.0	0.7	0.2	
Delay (s)	16.0	17.0		14.7	17.5		24.6	26.3	24.9	15.2	18.6	
Level of Service	B	B		B	B		C	C	C	B	B	
Approach Delay (s)		16.9			17.2			25.9			16.4	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	66.9	Sum of lost time (s)	25.7
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	2582	521	139	1733	81	461	98	257	63	86	10
Future Volume (vph)	60	2582	521	139	1733	81	461	98	257	63	86	10
Ideal Flow (vphpl)	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
Lane Width	3.5	3.8	3.1	3.7	3.7	3.7	3.0	3.3	3.0	3.2	3.2	3.2
Total Lost time (s)	6.0	6.4	6.4	5.9	6.4	6.4	7.8	7.8	7.8	6.8	6.8	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	0.95	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00	0.95	1.00	
Satd. Flow (prot)	1968	5847	1617	2013	4025	1731	1765	1863	1605	1902	3743	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00	0.95	1.00	
Satd. Flow (perm)	1968	5847	1617	2013	4025	1731	1765	1863	1605	1902	3743	
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)	65	2776	560	149	1863	87	496	105	276	68	92	11
RTOR Reduction (vph)	0	0	140	0	0	43	0	0	167	0	6	0
Lane Group Flow (vph)	65	2776	420	149	1863	44	298	303	109	68	97	0
Confl. Peds. (#/hr)	5		10	10		5			13	13		
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases			2			6			3			
Actuated Green, G (s)	7.6	70.7	70.7	11.5	74.5	74.5	25.2	25.2	25.2	12.0	12.0	
Effective Green, g (s)	7.6	70.7	70.7	11.5	74.5	74.5	25.2	25.2	25.2	12.0	12.0	
Actuated g/C Ratio	0.05	0.48	0.48	0.08	0.51	0.51	0.17	0.17	0.17	0.08	0.08	
Clearance Time (s)	6.0	6.4	6.4	5.9	6.4	6.4	7.8	7.8	7.8	6.8	6.8	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	102	2825	781	158	2049	881	304	320	276	156	307	
v/s Ratio Prot	0.03	c0.47		c0.07	c0.46		c0.17	0.16		c0.04	0.03	
v/s Ratio Perm			0.26			0.03			0.07			
v/c Ratio	0.64	0.98	0.54	0.94	0.91	0.05	0.98	0.95	0.39	0.44	0.31	
Uniform Delay, d1	68.0	37.2	26.4	67.1	32.8	18.1	60.3	59.9	53.8	63.9	63.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	12.3	13.1	0.7	54.5	6.4	0.0	46.0	36.1	0.9	1.9	0.6	
Delay (s)	80.3	50.3	27.1	121.6	39.2	18.1	106.3	96.0	54.7	65.9	63.9	
Level of Service	F	D	C	F	D	B	F	F	D	E	E	
Approach Delay (s)		47.0			44.2			86.5			64.7	
Approach LOS		D			D			F			E	

Intersection Summary			
HCM 2000 Control Delay	51.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	146.3	Sum of lost time (s)	27.0
Intersection Capacity Utilization	86.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

2: Harris Rd & McMyn Rd/Parking Access

PM Peak Hour
05/30/2025
Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	221	3	155	8	4	8	171	587	15	22	706	37
Future Volume (vph)	221	3	155	8	4	8	171	587	15	22	706	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.3	3.3	4.8	3.3	3.0	3.3	3.0	3.0	3.3	3.0
Total Lost time (s)		6.2	6.2		6.2		6.3	5.6		6.1	5.6	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.97		0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		0.98	1.00		0.99		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.94		1.00	1.00		1.00	0.99	
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1674	1437		1863		1603	3308		1599	3289	
Flt Permitted		0.71	1.00		0.86		0.18	1.00		0.40	1.00	
Satd. Flow (perm)		1252	1437		1636		306	3308		679	3289	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	240	3	168	9	4	9	186	638	16	24	767	40
RTOR Reduction (vph)	0	0	124	0	7	0	0	2	0	0	4	0
Lane Group Flow (vph)	0	243	44	0	15	0	186	652	0	24	803	0
Confl. Peds. (#/hr)	24		27	27		24	20		12	12		20
Confl. Bikes (#/hr)									5			5
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		19.1	19.1		19.1		41.7	33.5		27.7	25.6	
Effective Green, g (s)		19.1	19.1		19.1		41.7	33.5		27.7	25.6	
Actuated g/C Ratio		0.26	0.26		0.26		0.57	0.46		0.38	0.35	
Clearance Time (s)		6.2	6.2		6.2		6.3	5.6		6.1	5.6	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		329	378		430		350	1526		285	1159	
v/s Ratio Prot							c0.07	0.20		0.00	c0.24	
v/s Ratio Perm		c0.19	0.03		0.01		0.23			0.03		
v/c Ratio		0.74	0.12		0.04		0.53	0.43		0.08	0.69	
Uniform Delay, d1		24.5	20.3		19.9		9.8	13.1		14.1	20.1	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		8.4	0.1		0.0		1.6	0.2		0.1	1.8	
Delay (s)		32.9	20.5		19.9		11.3	13.3		14.2	21.9	
Level of Service		C	C		B		B	B		B	C	
Approach Delay (s)		27.8			19.9			12.9			21.7	
Approach LOS		C			B			B			C	

Intersection Summary				
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.73			
Actuated Cycle Length (s)	72.6	Sum of lost time (s)	21.1	
Intersection Capacity Utilization	70.2%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

3: Harris Rd & 124 Ave

PM Peak Hour
05/30/2025
Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	41	27	92	44	62	29	644	5	115	753	19
Future Volume (vph)	17	41	27	92	44	62	29	644	5	115	753	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.3	3.3	3.0	3.3	3.3
Total Lost time (s)		6.0			6.0		5.6	5.6		6.1	5.6	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		0.99	1.00		1.00	1.00	
Frt		0.96			0.96		1.00	1.00		1.00	1.00	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1639			1611		1581	3319		1602	3306	
Flt Permitted		0.91			0.81		0.34	1.00		0.23	1.00	
Satd. Flow (perm)		1510			1330		564	3319		386	3306	
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)	18	44	29	99	47	67	31	692	5	124	810	20
RTOR Reduction (vph)	0	20	0	0	20	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	71	0	0	193	0	31	696	0	124	828	0
Confl. Peds. (#/hr)	27		17	17		27	31		16	16		31
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		16.2			16.2		20.2	20.2		32.3	32.3	
Effective Green, g (s)		16.2			16.2		20.2	20.2		32.3	32.3	
Actuated g/C Ratio		0.27			0.27		0.34	0.34		0.54	0.54	
Clearance Time (s)		6.0			6.0		5.6	5.6		6.1	5.6	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		407			358		189	1115		328	1776	
v/s Ratio Prot								c0.21		0.04	c0.25	
v/s Ratio Perm		0.05			c0.15		0.05			0.16		
v/c Ratio		0.18			0.54		0.16	0.62		0.38	0.47	
Uniform Delay, d1		16.8			18.8		14.0	16.8		8.1	8.6	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2			1.6		0.4	1.1		0.7	0.2	
Delay (s)		17.0			20.3		14.4	17.9		8.9	8.8	
Level of Service		B			C		B	B		A	A	
Approach Delay (s)		17.0			20.3			17.7			8.8	
Approach LOS		B			C			B			A	

Intersection Summary				
HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	60.1	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	64.6%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

4: Harris Rd & 122 Ave/122a Ave

PM Peak Hour

05/30/2025

Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	30	29	28	21	102	23	501	12	151	569	190
Future Volume (vph)	150	30	29	28	21	102	23	501	12	151	569	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.3	3.3	3.0	3.3	3.0
Total Lost time (s)	6.2	6.2			6.2		6.1	5.5		6.1	5.5	
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99			0.98		1.00	1.00		1.00	0.98	
Flpb, ped/bikes	0.99	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93			0.91		1.00	1.00		1.00	0.96	
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1643	1602			1540		1597	3307		1597	3142	
Flt Permitted	0.70	1.00			0.93		0.33	1.00		0.35	1.00	
Satd. Flow (perm)	1207	1602			1444		559	3307		584	3142	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	163	33	32	30	23	111	25	545	13	164	618	207
RTOR Reduction (vph)	0	25	0	0	87	0	0	2	0	0	30	0
Lane Group Flow (vph)	163	40	0	0	77	0	25	556	0	164	795	0
Confl. Peds. (#/hr)	23		8	8		23	31		25	25		31
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	13.5	13.5			13.5		26.0	24.3		34.8	28.7	
Effective Green, g (s)	13.5	13.5			13.5		26.0	24.3		34.8	28.7	
Actuated g/C Ratio	0.22	0.22			0.22		0.42	0.39		0.56	0.47	
Clearance Time (s)	6.2	6.2			6.2		6.1	5.5		6.1	5.5	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	264	350			315		264	1302		429	1461	
v/s Ratio Prot		0.02					0.00	0.17		c0.04	c0.25	
v/s Ratio Perm	c0.14				0.05		0.04			0.18		
v/c Ratio	0.62	0.11			0.25		0.09	0.43		0.38	0.54	
Uniform Delay, d1	21.8	19.3			19.9		10.5	13.6		6.9	11.8	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.3	0.1			0.4		0.2	0.2		0.6	0.4	
Delay (s)	26.0	19.5			20.3		10.7	13.9		7.5	12.2	
Level of Service	C	B			C		B	B		A	B	
Approach Delay (s)		24.1			20.3			13.7			11.4	
Approach LOS		C			C			B			B	

Intersection Summary				
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.63			
Actuated Cycle Length (s)	61.7	Sum of lost time (s)	20.8	
Intersection Capacity Utilization	75.3%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

5: Harris Rd & Ford Rd

PM Peak Hour

05/30/2025

Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	178	22	108	5	20	9	110	351	4	28	467	138
Future Volume (vph)	178	22	108	5	20	9	110	351	4	28	467	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.3	3.3	3.5	3.5	3.0	3.3	3.3	3.0	3.3	3.3
Total Lost time (s)	5.2	5.2			5.2		5.0	4.8		5.0	4.8	
Lane Util. Factor	1.00	1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98			0.99		1.00	1.00		1.00	0.98	
Flpb, ped/bikes	0.99	1.00			1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.88			0.96		1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1521	1375			1528		1436	2985		1434	2831	
Flt Permitted	0.73	1.00			0.96		0.30	1.00		0.53	1.00	
Satd. Flow (perm)	1175	1375			1475		448	2985		797	2831	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	189	23	115	5	21	10	117	373	4	30	497	147
RTOR Reduction (vph)	0	86	0	0	8	0	0	1	0	0	39	0
Lane Group Flow (vph)	189	52	0	0	29	0	117	376	0	30	605	0
Confl. Peds. (#/hr)	8		18	18		8	45		17	17		45
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	13.6	13.6			13.6		29.2	23.8		22.4	20.4	
Effective Green, g (s)	13.6	13.6			13.6		29.2	23.8		22.4	20.4	
Actuated g/C Ratio	0.25	0.25			0.25		0.54	0.44		0.41	0.37	
Clearance Time (s)	5.2	5.2			5.2		5.0	4.8		5.0	4.8	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	293	343			368		338	1305		351	1061	
v/s Ratio Prot		0.04					c0.03	0.13		0.00	c0.21	
v/s Ratio Perm	c0.16				0.02		0.15			0.03		
v/c Ratio	0.65	0.15			0.08		0.35	0.29		0.09	0.57	
Uniform Delay, d1	18.2	15.9			15.6		6.8	9.8		9.6	13.5	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.8	0.2			0.1		0.6	0.1		0.1	0.7	
Delay (s)	23.1	16.1			15.7		7.5	10.0		9.7	14.2	
Level of Service	C	B			B		A	A		A	B	
Approach Delay (s)		20.1			15.7			9.4			14.0	
Approach LOS		C			B			A			B	

Intersection Summary				
HCM 2000 Control Delay	13.9	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.57			
Actuated Cycle Length (s)	54.4	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	57.3%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

6: Harris Rd & 119 Ave
05/30/2025

PM Peak Hour
Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	4	22	7	5	15	32	475	10	21	555	30
Future Volume (vph)	14	4	22	7	5	15	32	475	10	21	555	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	4.8	3.3	3.3	4.8	3.3	3.0	3.3	3.3	3.0	3.3	3.3
Total Lost time (s)		6.0			6.0		5.5	5.5		5.5	5.5	4.0
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes		1.00			1.00		0.99	1.00		0.99	1.00	1.00
Frt		0.92			0.93		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.98			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1837			1845		1585	3311		1596	1749	1487
Flt Permitted		0.87			0.89		0.39	1.00		0.46	1.00	1.00
Satd. Flow (perm)		1631			1668		645	3311		767	1749	1487
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	15	4	24	8	5	16	35	516	11	23	603	33
RTOR Reduction (vph)	0	21	0	0	14	0	0	1	0	0	0	33
Lane Group Flow (vph)	0	22	0	0	15	0	35	526	0	23	603	0
Confl. Peds. (#/hr)	10		5	5		10	27		10	10		27
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	NA
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)		7.2			7.2		34.4	34.4		34.4	34.4	0.0
Effective Green, g (s)		7.2			7.2		34.4	34.4		34.4	34.4	0.0
Actuated g/C Ratio		0.14			0.14		0.65	0.65		0.65	0.65	0.00
Clearance Time (s)		6.0			6.0		5.5	5.5		5.5	5.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		221			226		417	2144		496	1133	0
v/s Ratio Prot								0.16			c0.34	
v/s Ratio Perm		c0.01			0.01		0.05			0.03		
v/c Ratio		0.10			0.07		0.08	0.25		0.05	0.53	0.00
Uniform Delay, d1		20.1			20.0		3.5	3.9		3.4	5.0	26.6
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.2			0.1		0.1	0.1		0.0	0.5	0.0
Delay (s)		20.3			20.1		3.6	4.0		3.4	5.5	26.6
Level of Service		C			C		A	A		A	A	C
Approach Delay (s)		20.3			20.1			3.9			6.5	
Approach LOS		C			C			A			A	

Intersection Summary				
HCM 2000 Control Delay	6.2	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.49			
Actuated Cycle Length (s)	53.1	Sum of lost time (s)	14.5	
Intersection Capacity Utilization	50.1%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

7: Harris Rd & Mitchell Rd/Hammond Rd
05/30/2025

PM Peak Hour
Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	17	13	16	30	238	27	258	55	310	239	37
Future Volume (vph)	18	17	13	16	30	238	27	258	55	310	239	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.6	3.3	3.0	3.3	3.3
Total Lost time (s)		6.0			6.0	6.0	5.5	5.5	5.5	6.2	5.5	5.5
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		0.99			1.00	0.98	1.00	1.00	0.93	1.00	1.00	0.95
Flpb, ped/bikes		1.00			0.99	1.00	0.98	1.00	1.00	0.99	1.00	1.00
Frt		0.96			1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1633			1710	1454	1636	1810	1384	1592	1574	1420
Flt Permitted		0.87			0.88	1.00	0.60	1.00	1.00	0.37	1.00	1.00
Satd. Flow (perm)		1442			1524	1454	1028	1810	1384	619	1574	1420
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	20	19	14	18	33	262	30	284	60	341	263	41
RTOR Reduction (vph)	0	11	0	0	0	211	0	0	43	0	0	17
Lane Group Flow (vph)	0	42	0	0	51	51	30	284	17	341	263	24
Confl. Peds. (#/hr)	8		16	16		8	17		33	33		17
Confl. Bikes (#/hr)			5			5			5			5
Parking (#/hr)											0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)		10.2			10.2	10.2	14.9	14.9	14.9	31.0	31.0	31.0
Effective Green, g (s)		10.2			10.2	10.2	14.9	14.9	14.9	31.0	31.0	31.0
Actuated g/C Ratio		0.19			0.19	0.19	0.28	0.28	0.28	0.59	0.59	0.59
Clearance Time (s)		6.0			6.0	6.0	5.5	5.5	5.5	6.2	5.5	5.5
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)		279			294	281	290	511	391	546	925	835
v/s Ratio Prot								0.16		c0.12	0.17	
v/s Ratio Perm		0.03			0.03	c0.03	0.03		0.01	c0.25		0.02
v/c Ratio		0.15			0.17	0.18	0.10	0.56	0.04	0.62	0.28	0.03
Uniform Delay, d1		17.6			17.7	17.8	14.0	16.1	13.7	6.6	5.4	4.5
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.2			0.3	0.3	0.2	1.3	0.0	2.2	0.2	0.0
Delay (s)		17.9			18.0	18.1	14.1	17.4	13.8	8.8	5.5	4.6
Level of Service		B			B	B	B	B	B	A	A	A
Approach Delay (s)		17.9			18.1			16.6			7.2	
Approach LOS		B			B			B			A	

Intersection Summary				
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.62			
Actuated Cycle Length (s)	52.7	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	62.0%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	4	305	7	10	227
Future Volume (Veh/h)	0	4	305	7	10	227
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	5	381	9	12	284
Pedestrians	32		13			
Lane Width (m)	3.3		3.5			
Walking Speed (m/s)	1.1		1.1			
Percent Blockage	3		1			
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	738	418			422	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	738	418			422	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			99	
cM capacity (veh/h)	362	612			1091	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	5	390	296
Volume Left	0	0	12
Volume Right	5	9	0
cSH	612	1700	1091
Volume to Capacity	0.01	0.23	0.01
Queue Length 95th (m)	0.2	0.0	0.3
Control Delay (s)	10.9	0.0	0.4
Lane LOS	B		A
Approach Delay (s)	10.9	0.0	0.4
Approach LOS	B		

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	30.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	220	14	7	75	192	5	42	26	182	56	10
Future Volume (vph)	49	220	14	7	75	192	5	42	26	182	56	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	5.8		7.0	5.8		6.8	6.1	6.1	6.8	6.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.89		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1659	3287		1657	2887		1656	1749	1504	1657	1705	
Flt Permitted	0.40	1.00		0.59	1.00		0.71	1.00	1.00	0.48	1.00	
Satd. Flow (perm)	694	3287		1022	2887		1234	1749	1504	840	1705	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	56	253	16	8	86	221	6	48	30	209	64	11
RTOR Reduction (vph)	0	3	0	0	172	0	0	0	25	0	4	0
Lane Group Flow (vph)	56	266	0	8	135	0	6	48	5	209	71	0
Confl. Peds. (#/hr)	5		5	5		5	7		9	9		7
Confl. Bikes (#/hr)			5			5			5			5
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	1%	5%	5%	5%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	42.2	34.3		20.2	19.3		14.3	13.4	13.4	33.6	25.9	
Effective Green, g (s)	42.2	34.3		20.2	19.3		14.3	13.4	13.4	33.6	25.9	
Actuated g/C Ratio	0.48	0.39		0.23	0.22		0.16	0.15	0.15	0.38	0.30	
Clearance Time (s)	6.8	5.8		7.0	5.8		6.8	6.1	6.1	6.8	6.1	
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)	511	1285		241	635		205	267	229	446	503	
v/s Ratio Prot	c0.02	c0.08		0.00	0.05		0.00	0.03		c0.07	0.04	
v/s Ratio Perm	0.03			0.01			0.00		0.00	c0.11		
v/c Ratio	0.11	0.21		0.03	0.21		0.03	0.18	0.02	0.47	0.14	
Uniform Delay, d1	12.6	17.7		26.1	28.0		30.8	32.4	31.6	19.4	22.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	0.1		0.1	0.2		0.1	0.3	0.0	0.8	0.1	
Delay (s)	12.7	17.8		26.2	28.1		30.9	32.7	31.6	20.2	22.8	
Level of Service	B	B		C	C		C	C	C	C	C	
Approach Delay (s)		16.9			28.1			32.2			20.9	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	22.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	87.7	Sum of lost time (s)	25.7
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1597	271	107	1965	100	517	84	186	37	72	8
Future Volume (vph)	5	1597	271	107	1965	100	517	84	186	37	72	8
Ideal Flow (vphpl)	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
Lane Width	3.5	3.8	3.1	3.7	3.7	3.7	3.0	3.3	3.0	3.2	3.2	3.2
Total Lost time (s)	6.0	6.4	6.4	5.9	6.4	6.4	7.8	7.8	7.8	6.8	6.8	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	0.95	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.96	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00	0.95	1.00	
Satd. Flow (prot)	1968	5847	1633	2013	4025	1727	1765	1857	1620	1902	3739	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00	0.95	1.00	
Satd. Flow (perm)	1968	5847	1633	2013	4025	1727	1765	1857	1620	1902	3739	
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)	5	1664	282	111	2047	104	539	88	194	39	75	8
RTOR Reduction (vph)	0	0	119	0	0	49	0	0	157	0	6	0
Lane Group Flow (vph)	5	1664	163	111	2047	55	313	314	37	39	77	0
Confl. Peds. (#/hr)	5		7	7		5			5	5		
Confl. Bikes (#/hr)						5			5			5
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases			2			6			3			
Actuated Green, G (s)	1.2	60.4	60.4	12.0	71.1	71.1	25.3	25.3	25.3	9.5	9.5	
Effective Green, g (s)	1.2	60.4	60.4	12.0	71.1	71.1	25.3	25.3	25.3	9.5	9.5	
Actuated g/C Ratio	0.01	0.45	0.45	0.09	0.53	0.53	0.19	0.19	0.19	0.07	0.07	
Clearance Time (s)	6.0	6.4	6.4	5.9	6.4	6.4	7.8	7.8	7.8	6.8	6.8	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	17	2633	735	180	2134	915	332	350	305	134	264	
v/s Ratio Prot	0.00	0.28		c0.06	c0.51		c0.18	0.17		0.02	c0.02	
v/s Ratio Perm			0.10			0.03			0.02			
v/c Ratio	0.29	0.63	0.22	0.62	0.96	0.06	0.94	0.90	0.12	0.29	0.29	
Uniform Delay, d1	66.0	28.3	22.5	58.8	30.1	15.3	53.7	53.1	45.2	59.1	59.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	9.4	0.5	0.2	6.2	11.3	0.0	34.5	24.3	0.2	1.2	0.6	
Delay (s)	75.5	28.8	22.7	65.0	41.4	15.3	88.2	77.4	45.3	60.3	59.7	
Level of Service	E	C	C	E	D	B	F	E	D	E	E	
Approach Delay (s)		28.0			41.4			73.9			59.9	
Approach LOS		C			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	42.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	134.1	Sum of lost time (s)	27.0
Intersection Capacity Utilization	89.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

2: Harris Rd & McMyn Rd/Parking Access

AM Peak Hour
05/30/2025
Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	169	3	57	2	1	2	108	629	5	7	394	20
Future Volume (vph)	169	3	57	2	1	2	108	629	5	7	394	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.3	3.3	4.8	3.3	3.0	3.3	3.0	3.0	3.3	3.0
Total Lost time (s)		6.2	6.2		6.2		6.3	5.6		6.1	5.6	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.98		0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		0.99	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.95		1.00	1.00		1.00	0.99	
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1697	1457		1884		1603	3319		1603	3294	
Flt Permitted		0.73	1.00		0.89		0.37	1.00		0.39	1.00	
Satd. Flow (perm)		1294	1457		1704		631	3319		663	3294	
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)	182	3	61	2	1	2	116	676	5	8	424	22
RTOR Reduction (vph)	0	0	47	0	2	0	0	1	0	0	4	0
Lane Group Flow (vph)	0	185	14	0	3	0	116	680	0	8	442	0
Confl. Peds. (#/hr)	8		12	12		8	5		5	5		5
Confl. Bikes (#/hr)									5			5
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		14.1	14.1		14.1		33.5	26.6		21.3	20.4	
Effective Green, g (s)		14.1	14.1		14.1		33.5	26.6		21.3	20.4	
Actuated g/C Ratio		0.24	0.24		0.24		0.56	0.45		0.36	0.34	
Clearance Time (s)		6.2	6.2		6.2		6.3	5.6		6.1	5.6	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		306	345		403		467	1483		251	1129	
v/s Ratio Prot							c0.03	c0.21		0.00	0.13	
v/s Ratio Perm		c0.14	0.01		0.00		0.11			0.01		
v/c Ratio		0.60	0.04		0.01		0.25	0.46		0.03	0.39	
Uniform Delay, d1		20.2	17.5		17.4		6.5	11.4		12.3	14.8	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		3.4	0.1		0.0		0.3	0.2		0.1	0.2	
Delay (s)		23.6	17.5		17.4		6.8	11.7		12.4	15.1	
Level of Service		C	B		B		A	B		B	B	
Approach Delay (s)		22.1			17.4			11.0			15.0	
Approach LOS		C			B			B			B	

Intersection Summary				
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.57			
Actuated Cycle Length (s)	59.5	Sum of lost time (s)	21.1	
Intersection Capacity Utilization	55.7%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

3: Harris Rd & 124 Ave

AM Peak Hour
05/30/2025
Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	13	47	82	11	69	23	641	2	24	441	3
Future Volume (vph)	21	13	47	82	11	69	23	641	2	24	441	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.3	3.3	3.0	3.3	3.3
Total Lost time (s)		6.0			6.0		5.6	5.6		6.1	5.6	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		0.99	1.00		1.00	1.00	
Frt		0.92			0.94		1.00	1.00		1.00	1.00	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1567			1586		1590	3322		1604	3319	
Flt Permitted		0.88			0.80		0.48	1.00		0.27	1.00	
Satd. Flow (perm)		1400			1296		810	3322		453	3319	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	22	14	49	86	12	73	24	675	2	25	464	3
RTOR Reduction (vph)	0	37	0	0	32	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	48	0	0	139	0	24	677	0	25	467	0
Confl. Peds. (#/hr)	12		15	15		12	14		5	5		14
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		12.3			12.3		19.3	19.3		26.2	26.2	
Effective Green, g (s)		12.3			12.3		19.3	19.3		26.2	26.2	
Actuated g/C Ratio		0.25			0.25		0.39	0.39		0.52	0.52	
Clearance Time (s)		6.0			6.0		5.6	5.6		6.1	5.6	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		343			318		312	1279		255	1735	
v/s Ratio Prot								c0.20		0.00	c0.14	
v/s Ratio Perm		0.03			c0.11		0.03			0.05		
v/c Ratio		0.14			0.44		0.08	0.53		0.10	0.27	
Uniform Delay, d1		14.8			16.0		9.8	11.9		6.5	6.6	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2			1.0		0.1	0.4		0.2	0.1	
Delay (s)		15.0			16.9		9.9	12.3		6.6	6.7	
Level of Service		B			B		A	B		A	A	
Approach Delay (s)		15.0			16.9			12.2			6.7	
Approach LOS		B			B			B			A	

Intersection Summary				
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.57			
Actuated Cycle Length (s)	50.1	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	47.8%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

4: Harris Rd & 122 Ave/122a Ave — AM Peak Hour
05/30/2025 — Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	183	38	40	14	28	151	21	442	12	69	403	137
Future Volume (vph)	183	38	40	14	28	151	21	442	12	69	403	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.3	3.3	3.0	3.3	3.0
Total Lost time (s)		6.2			6.2		6.1	5.5		6.1	5.5	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.98		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.89		1.00	1.00		1.00	0.96	
Flt Protected		0.97			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1640			1528		1599	3306		1598	3157	
Flt Permitted		0.68			0.96		0.39	1.00		0.35	1.00	
Satd. Flow (perm)		1150			1477		651	3306		588	3157	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	213	44	47	16	33	176	24	514	14	80	469	159
RTOR Reduction (vph)	0	9	0	0	116	0	0	2	0	0	38	0
Lane Group Flow (vph)	0	295	0	0	109	0	24	526	0	80	590	0
Confl. Peds. (#/hr)	16		13	13		16	16		18	18		16
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		21.2			21.2		20.5	18.6		25.5	21.1	
Effective Green, g (s)		21.2			21.2		20.5	18.6		25.5	21.1	
Actuated g/C Ratio		0.34			0.34		0.33	0.30		0.41	0.34	
Clearance Time (s)		6.2			6.2		6.1	5.5		6.1	5.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		393			505		244	991		313	1074	
v/s Ratio Prot							0.00	0.16		c0.02	c0.19	
v/s Ratio Perm		c0.26			0.07		0.03			0.09		
v/c Ratio		0.75			0.22		0.10	0.53		0.26	0.55	
Uniform Delay, d1		18.1			14.5		14.1	18.1		11.5	16.6	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		7.9			0.2		0.2	0.5		0.4	0.6	
Delay (s)		26.0			14.7		14.3	18.6		12.0	17.2	
Level of Service		C			B		B	B		B	B	
Approach Delay (s)		26.0			14.7			18.4			16.6	
Approach LOS		C			B			B			B	

Intersection Summary				
HCM 2000 Control Delay	18.5	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.69			
Actuated Cycle Length (s)	62.0	Sum of lost time (s)	20.8	
Intersection Capacity Utilization	76.8%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

5: Harris Rd & Ford Rd — AM Peak Hour
05/30/2025 — Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	17	86	7	33	20	88	298	6	6	333	110
Future Volume (vph)	150	17	86	7	33	20	88	298	6	6	333	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.3	3.3	3.5	3.5	3.0	3.3	3.3	3.0	3.3	3.3
Total Lost time (s)	5.2	5.2			5.2	5.2	5.0	4.8		5.0	4.8	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98			1.00	0.96	1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.98	1.00			1.00	1.00	1.00	1.00		0.99	1.00	
Frt	1.00	0.88			1.00	0.85	1.00	1.00		1.00	0.96	
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1494	1381			1594	1312	1438	2980		1433	2839	
Flt Permitted	0.73	1.00			0.94	1.00	0.36	1.00		0.53	1.00	
Satd. Flow (perm)	1140	1381			1509	1312	540	2980		802	2839	
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Adj. Flow (vph)	183	21	105	9	40	24	107	363	7	7	406	134
RTOR Reduction (vph)	0	82	0	0	0	19	0	2	0	0	43	0
Lane Group Flow (vph)	183	44	0	0	49	5	107	368	0	7	497	0
Confl. Peds. (#/hr)	34		10	10		34	23		17	17		23
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	11.9	11.9			11.9	11.9	31.6	26.4		23.0	22.1	
Effective Green, g (s)	11.9	11.9			11.9	11.9	31.6	26.4		23.0	22.1	
Actuated g/C Ratio	0.22	0.22			0.22	0.22	0.58	0.49		0.42	0.41	
Clearance Time (s)	5.2	5.2			5.2	5.2	5.0	4.8		5.0	4.8	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	250	303			331	288	400	1451		350	1157	
v/s Ratio Prot		0.03					c0.03	0.12		0.00	c0.17	
v/s Ratio Perm	c0.16				0.03	0.00	0.13			0.01		
v/c Ratio	0.73	0.15			0.15	0.02	0.27	0.25		0.02	0.43	
Uniform Delay, d1	19.7	17.1			17.1	16.6	5.4	8.1		9.0	11.5	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.5	0.2			0.2	0.0	0.4	0.1		0.0	0.3	
Delay (s)	30.2	17.3			17.3	16.6	5.8	8.2		9.0	11.8	
Level of Service	C	B			B	B	A	A		A	B	
Approach Delay (s)		24.9			17.0			7.7			11.7	
Approach LOS		C			B			A			B	

Intersection Summary				
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.50			
Actuated Cycle Length (s)	54.2	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	51.0%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

6: Harris Rd & 119 Ave

AM Peak Hour

05/30/2025

Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	13	69	20	54	19	74	433	15	5	369	29
Future Volume (vph)	14	13	69	20	54	19	74	433	15	5	369	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	4.8	3.3	3.3	4.8	3.3	3.0	3.3	3.3	3.0	3.3	3.3
Total Lost time (s)		6.0			6.0		5.5	5.5		5.5	5.5	5.5
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes		0.98			0.99		1.00	1.00		1.00	1.00	0.89
Flpb, ped/bikes		0.99			1.00		0.96	1.00		1.00	1.00	1.00
Frt		0.90			0.97		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1790			1941		1540	3303		1598	1749	1320
Flt Permitted		0.95			0.92		0.38	1.00		0.41	1.00	1.00
Satd. Flow (perm)		1709			1801		618	3303		696	1749	1320
Peak-hour factor, PHF	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Adj. Flow (vph)	19	18	93	27	73	26	100	585	20	7	499	39
RTOR Reduction (vph)	0	64	0	0	17	0	0	3	0	0	0	20
Lane Group Flow (vph)	0	66	0	0	109	0	100	602	0	7	499	19
Confl. Peds. (#/hr)	97		24	24		97	77		8	8		77
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		2
Actuated Green, G (s)		16.8			16.8		25.9	25.9		25.9	25.9	25.9
Effective Green, g (s)		16.8			16.8		25.9	25.9		25.9	25.9	25.9
Actuated g/C Ratio		0.31			0.31		0.48	0.48		0.48	0.48	0.48
Clearance Time (s)		6.0			6.0		5.5	5.5		5.5	5.5	5.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		529			558		295	1578		332	835	630
v/s Ratio Prot								0.18			c0.29	
v/s Ratio Perm		0.04			c0.06		0.16			0.01		0.01
v/c Ratio		0.12			0.20		0.34	0.38		0.02	0.60	0.03
Uniform Delay, d1		13.4			13.7		8.8	9.0		7.5	10.3	7.5
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.1			0.2		0.7	0.2		0.0	1.2	0.0
Delay (s)		13.5			13.9		9.5	9.2		7.5	11.5	7.5
Level of Service		B			B		A	A		A	B	A
Approach Delay (s)		13.5			13.9			9.2			11.2	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	54.2	Sum of lost time (s)	14.5
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

7: Harris Rd & Mitchell Rd/Hammond Rd

AM Peak Hour

05/30/2025

Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	70	41	50	28	305	13	184	34	236	219	8
Future Volume (vph)	32	70	41	50	28	305	13	184	34	236	219	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.6	3.3	3.0	3.3	3.3
Total Lost time (s)		6.0			6.0	6.0	5.5	5.5	5.5	6.2	5.5	5.5
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		0.98			1.00	0.98	1.00	1.00	0.95	1.00	1.00	0.94
Flpb, ped/bikes		1.00			0.98	1.00	0.97	1.00	1.00	0.99	1.00	1.00
Frt		0.96			1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1627			1659	1455	1616	1810	1410	1595	1749	1393
Flt Permitted		0.91			0.75	1.00	0.59	1.00	1.00	0.41	1.00	1.00
Satd. Flow (perm)		1493			1289	1455	999	1810	1410	692	1749	1393
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	41	90	53	64	36	391	17	236	44	303	281	10
RTOR Reduction (vph)	0	18	0	0	0	287	0	0	32	0	0	5
Lane Group Flow (vph)	0	166	0	0	100	104	17	236	12	303	281	5
Confl. Peds. (#/hr)	9		43	43		9	29		18	18		29
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)		14.9			14.9	14.9	14.9	14.9	14.9	29.5	29.5	29.5
Effective Green, g (s)		14.9			14.9	14.9	14.9	14.9	14.9	29.5	29.5	29.5
Actuated g/C Ratio		0.27			0.27	0.27	0.27	0.27	0.27	0.53	0.53	0.53
Clearance Time (s)		6.0			6.0	6.0	5.5	5.5	5.5	6.2	5.5	5.5
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)		397			343	387	266	482	375	500	922	735
v/s Ratio Prot								0.13		c0.09	0.16	
v/s Ratio Perm		c0.11			0.08	0.07	0.02		0.01	c0.23		0.00
v/c Ratio		0.42			0.29	0.27	0.06	0.49	0.03	0.61	0.30	0.01
Uniform Delay, d1		16.9			16.3	16.2	15.3	17.3	15.2	8.3	7.4	6.3
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.7			0.5	0.4	0.1	0.8	0.0	2.1	0.2	0.0
Delay (s)		17.6			16.8	16.6	15.4	18.1	15.2	10.4	7.6	6.3
Level of Service		B			B	B	B	B	B	B	A	A
Approach Delay (s)		17.6			16.6			17.5			9.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	55.9	Sum of lost time (s)	20.7
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	2	7	176	1	5	276
Future Volume (Veh/h)	2	7	176	1	5	276
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	2	7	181	1	5	285
Pedestrians	17		5			
Lane Width (m)	3.3		3.5			
Walking Speed (m/s)	1.1		1.1			
Percent Blockage	1		0			
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	498	198			199	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	498	198			199	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	514	823			1336	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	9	182	290
Volume Left	2	0	5
Volume Right	7	1	0
cSH	726	1700	1336
Volume to Capacity	0.01	0.11	0.00
Queue Length 95th (m)	0.3	0.0	0.1
Control Delay (s)	10.0	0.0	0.2
Lane LOS	B		A
Approach Delay (s)	10.0	0.0	0.2
Approach LOS	B		

Intersection Summary				
Average Delay		0.3		
Intersection Capacity Utilization		28.5%	ICU Level of Service	A
Analysis Period (min)		15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	83	4	29	215	134	11	58	9	180	61	37
Future Volume (vph)	10	83	4	29	215	134	11	58	9	180	61	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	5.8		7.0	5.8		6.8	6.1	6.1	6.8	6.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.94		1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1659	3297		1656	3093		1659	1749	1452	1660	1638	
Flt Permitted	0.53	1.00		0.66	1.00		0.69	1.00	1.00	0.41	1.00	
Satd. Flow (perm)	934	3297		1144	3093		1205	1749	1452	721	1638	
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)	10	86	4	30	224	140	11	60	9	188	64	39
RTOR Reduction (vph)	0	3	0	0	77	0	0	0	8	0	17	0
Lane Group Flow (vph)	10	87	0	30	287	0	11	60	1	188	86	0
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	20.9	19.9		23.1	21.1		9.9	9.2	9.2	26.1	18.6	
Effective Green, g (s)	20.9	19.9		23.1	21.1		9.9	9.2	9.2	26.1	18.6	
Actuated g/C Ratio	0.31	0.30		0.35	0.32		0.15	0.14	0.14	0.39	0.28	
Clearance Time (s)	6.8	5.8		7.0	5.8		6.8	6.1	6.1	6.8	6.1	
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)	302	980		410	975		183	240	199	423	455	
v/s Ratio Prot	0.00	0.03		c0.00	c0.09		0.00	0.03		c0.07	0.05	
v/s Ratio Perm	0.01			0.02			0.01		0.00	c0.11		
v/c Ratio	0.03	0.09		0.07	0.29		0.06	0.25	0.01	0.44	0.19	
Uniform Delay, d1	15.9	17.0		14.6	17.3		24.4	25.8	24.9	14.4	18.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.0	0.0		0.1	0.2		0.1	0.5	0.0	0.7	0.2	
Delay (s)	16.0	17.0		14.7	17.5		24.6	26.3	24.9	15.2	18.6	
Level of Service	B	B		B	B		C	C	C	B	B	
Approach Delay (s)		16.9			17.2			25.9			16.4	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	66.9	Sum of lost time (s)	25.7
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	2582	521	139	1733	81	461	98	257	63	86	10
Future Volume (vph)	60	2582	521	139	1733	81	461	98	257	63	86	10
Ideal Flow (vphpl)	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
Lane Width	3.5	3.8	3.1	3.7	3.7	3.7	3.0	3.3	3.0	3.2	3.2	3.2
Total Lost time (s)	6.0	6.4	6.4	5.9	6.4	6.4	7.8	7.8	7.8	6.8	6.8	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	0.95	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00	0.95	1.00	
Satd. Flow (prot)	1968	5847	1617	2013	4025	1731	1765	1863	1605	1902	3743	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00	0.95	1.00	
Satd. Flow (perm)	1968	5847	1617	2013	4025	1731	1765	1863	1605	1902	3743	
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)	65	2776	560	149	1863	87	496	105	276	68	92	11
RTOR Reduction (vph)	0	0	140	0	0	43	0	0	167	0	6	0
Lane Group Flow (vph)	65	2776	420	149	1863	44	298	303	109	68	97	0
Confl. Peds. (#/hr)	5		10	10		5			13	13		
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases			2			6			3			
Actuated Green, G (s)	7.6	70.7	70.7	11.5	74.5	74.5	25.2	25.2	25.2	12.0	12.0	
Effective Green, g (s)	7.6	70.7	70.7	11.5	74.5	74.5	25.2	25.2	25.2	12.0	12.0	
Actuated g/C Ratio	0.05	0.48	0.48	0.08	0.51	0.51	0.17	0.17	0.17	0.08	0.08	
Clearance Time (s)	6.0	6.4	6.4	5.9	6.4	6.4	7.8	7.8	7.8	6.8	6.8	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	102	2825	781	158	2049	881	304	320	276	156	307	
v/s Ratio Prot	0.03	c0.47		c0.07	c0.46		c0.17	0.16		c0.04	0.03	
v/s Ratio Perm			0.26			0.03			0.07			
v/c Ratio	0.64	0.98	0.54	0.94	0.91	0.05	0.98	0.95	0.39	0.44	0.31	
Uniform Delay, d1	68.0	37.2	26.4	67.1	32.8	18.1	60.3	59.9	53.8	63.9	63.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	12.3	13.1	0.7	54.5	6.4	0.0	46.0	36.1	0.9	1.9	0.6	
Delay (s)	80.3	50.3	27.1	121.6	39.2	18.1	106.3	96.0	54.7	65.9	63.9	
Level of Service	F	D	C	F	D	B	F	F	D	E	E	
Approach Delay (s)		47.0			44.2			86.5			64.7	
Approach LOS		D			D			F			E	

Intersection Summary			
HCM 2000 Control Delay	51.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	146.3	Sum of lost time (s)	27.0
Intersection Capacity Utilization	86.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

2: Harris Rd & McMyn Rd/Parking Access

PM Peak Hour
05/30/2025
Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	221	3	155	8	4	8	171	587	15	22	706	37
Future Volume (vph)	221	3	155	8	4	8	171	587	15	22	706	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.3	3.3	4.8	3.3	3.0	3.3	3.0	3.0	3.3	3.0
Total Lost time (s)		6.2	6.2		6.2		6.3	5.6		6.1	5.6	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.97		0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		0.98	1.00		0.99		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.94		1.00	1.00		1.00	0.99	
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1674	1437		1863		1603	3308		1599	3289	
Flt Permitted		0.71	1.00		0.86		0.18	1.00		0.40	1.00	
Satd. Flow (perm)		1252	1437		1636		306	3308		679	3289	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	240	3	168	9	4	9	186	638	16	24	767	40
RTOR Reduction (vph)	0	0	124	0	7	0	0	2	0	0	4	0
Lane Group Flow (vph)	0	243	44	0	15	0	186	652	0	24	803	0
Confl. Peds. (#/hr)	24		27	27		24	20		12	12		20
Confl. Bikes (#/hr)									5			5
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		19.1	19.1		19.1		41.7	33.5		27.7	25.6	
Effective Green, g (s)		19.1	19.1		19.1		41.7	33.5		27.7	25.6	
Actuated g/C Ratio		0.26	0.26		0.26		0.57	0.46		0.38	0.35	
Clearance Time (s)		6.2	6.2		6.2		6.3	5.6		6.1	5.6	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		329	378		430		350	1526		285	1159	
v/s Ratio Prot							c0.07	0.20		0.00	c0.24	
v/s Ratio Perm		c0.19	0.03		0.01		0.23			0.03		
v/c Ratio		0.74	0.12		0.04		0.53	0.43		0.08	0.69	
Uniform Delay, d1		24.5	20.3		19.9		9.8	13.1		14.1	20.1	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		8.4	0.1		0.0		1.6	0.2		0.1	1.8	
Delay (s)		32.9	20.5		19.9		11.3	13.3		14.2	21.9	
Level of Service		C	C		B		B	B		B	C	
Approach Delay (s)		27.8			19.9			12.9			21.7	
Approach LOS		C			B			B			C	

Intersection Summary				
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.73			
Actuated Cycle Length (s)	72.6	Sum of lost time (s)	21.1	
Intersection Capacity Utilization	70.2%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

3: Harris Rd & 124 Ave

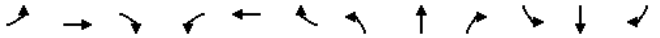
PM Peak Hour
05/30/2025
Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	41	27	92	44	62	29	644	5	115	753	19
Future Volume (vph)	17	41	27	92	44	62	29	644	5	115	753	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.3	3.3	3.0	3.3	3.3
Total Lost time (s)		6.0			6.0		5.6	5.6		6.1	5.6	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		0.99	1.00		1.00	1.00	
Frt		0.96			0.96		1.00	1.00		1.00	1.00	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1639			1611		1581	3319		1602	3306	
Flt Permitted		0.91			0.81		0.34	1.00		0.23	1.00	
Satd. Flow (perm)		1510			1330		564	3319		386	3306	
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)	18	44	29	99	47	67	31	692	5	124	810	20
RTOR Reduction (vph)	0	20	0	0	20	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	71	0	0	193	0	31	696	0	124	828	0
Confl. Peds. (#/hr)	27		17	17		27	31		16	16		31
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		16.2			16.2		20.2	20.2		32.3	32.3	
Effective Green, g (s)		16.2			16.2		20.2	20.2		32.3	32.3	
Actuated g/C Ratio		0.27			0.27		0.34	0.34		0.54	0.54	
Clearance Time (s)		6.0			6.0		5.6	5.6		6.1	5.6	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		407			358		189	1115		328	1776	
v/s Ratio Prot								c0.21		0.04	c0.25	
v/s Ratio Perm		0.05			c0.15		0.05			0.16		
v/c Ratio		0.18			0.54		0.16	0.62		0.38	0.47	
Uniform Delay, d1		16.8			18.8		14.0	16.8		8.1	8.6	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2			1.6		0.4	1.1		0.7	0.2	
Delay (s)		17.0			20.3		14.4	17.9		8.9	8.8	
Level of Service		B			C		B	B		A	A	
Approach Delay (s)		17.0			20.3			17.7			8.8	
Approach LOS		B			C			B			A	

Intersection Summary				
HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	60.1	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	64.6%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

4: Harris Rd & 122 Ave/122a Ave
05/30/2025

PM Peak Hour
Existing

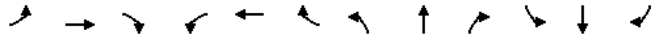


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	30	29	28	21	102	23	501	12	151	569	190
Future Volume (vph)	150	30	29	28	21	102	23	501	12	151	569	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.3	3.3	3.0	3.3	3.0
Total Lost time (s)		6.2			6.2		6.1	5.5		6.1	5.5	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.98		1.00	1.00		1.00	0.98	
Flpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.91		1.00	1.00		1.00	0.96	
Flt Protected		0.97			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1638			1541		1598	3307		1598	3140	
Flt Permitted		0.73			0.91		0.31	1.00		0.31	1.00	
Satd. Flow (perm)		1236			1411		516	3307		527	3140	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	163	33	32	30	23	111	25	545	13	164	618	207
RTOR Reduction (vph)	0	7	0	0	78	0	0	2	0	0	34	0
Lane Group Flow (vph)	0	221	0	0	86	0	25	556	0	164	791	0
Confl. Peds. (#/hr)	23		8	8		23	31		25	25		31
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		18.7			18.7		22.7	20.9		31.9	25.5	
Effective Green, g (s)		18.7			18.7		22.7	20.9		31.9	25.5	
Actuated g/C Ratio		0.29			0.29		0.36	0.33		0.50	0.40	
Clearance Time (s)		6.2			6.2		6.1	5.5		6.1	5.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		362			413		214	1083		370	1255	
v/s Ratio Prot							0.00	0.17		c0.04	c0.25	
v/s Ratio Perm		c0.18			0.06		0.04			0.18		
v/c Ratio		0.61			0.21		0.12	0.51		0.44	0.63	
Uniform Delay, d1		19.4			17.0		13.5	17.3		9.4	15.4	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		3.0			0.3		0.2	0.4		0.8	1.0	
Delay (s)		22.4			17.2		13.7	17.8		10.3	16.4	
Level of Service		C			B		B	B		B	B	
Approach Delay (s)		22.4			17.2			17.6			15.4	
Approach LOS		C			B			B			B	

Intersection Summary				
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.69			
Actuated Cycle Length (s)	63.8	Sum of lost time (s)	20.8	
Intersection Capacity Utilization	77.4%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

5: Harris Rd & Ford Rd
05/30/2025

PM Peak Hour
Existing



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	178	22	108	5	20	9	110	351	4	28	467	138
Future Volume (vph)	178	22	108	5	20	9	110	351	4	28	467	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.3	3.3	3.5	3.5	3.0	3.3	3.3	3.0	3.3	3.3
Total Lost time (s)	5.2	5.2			5.2	5.2	5.0	4.8		5.0	4.8	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98			1.00	0.98	1.00	1.00		1.00	0.98	
Flpb, ped/bikes	0.99	1.00			1.00	1.00	0.99	1.00		0.99	1.00	
Frt	1.00	0.88			1.00	0.85	1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1521	1375			1592	1338	1436	2985		1434	2831	
Flt Permitted	0.74	1.00			0.94	1.00	0.30	1.00		0.53	1.00	
Satd. Flow (perm)	1185	1375			1518	1338	448	2985		797	2831	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	189	23	115	5	21	10	117	373	4	30	497	147
RTOR Reduction (vph)	0	86	0	0	0	8	0	1	0	0	39	0
Lane Group Flow (vph)	189	52	0	0	26	2	117	376	0	30	605	0
Confl. Peds. (#/hr)	8		18	18		8	45		17	17		45
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	13.5	13.5			13.5	13.5	29.2	23.8		22.4	20.4	
Effective Green, g (s)	13.5	13.5			13.5	13.5	29.2	23.8		22.4	20.4	
Actuated g/C Ratio	0.25	0.25			0.25	0.25	0.54	0.44		0.41	0.38	
Clearance Time (s)	5.2	5.2			5.2	5.2	5.0	4.8		5.0	4.8	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	294	341			377	332	339	1308		352	1063	
v/s Ratio Prot		0.04					c0.03	0.13		0.00	c0.21	
v/s Ratio Perm	c0.16				0.02	0.00	0.15			0.03		
v/c Ratio	0.64	0.15			0.07	0.01	0.35	0.29		0.09	0.57	
Uniform Delay, d1	18.2	15.9			15.6	15.4	6.8	9.8		9.6	13.5	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.8	0.2			0.1	0.0	0.6	0.1		0.1	0.7	
Delay (s)	23.0	16.1			15.7	15.4	7.4	9.9		9.7	14.2	
Level of Service	C	B			B	B	A	A		A	B	
Approach Delay (s)		20.1			15.6			9.3			14.0	
Approach LOS		C			B			A			B	

Intersection Summary				
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.57			
Actuated Cycle Length (s)	54.3	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	57.3%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

6: Harris Rd & 119 Ave
05/30/2025

PM Peak Hour
Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	4	22	7	5	15	32	475	10	21	555	30
Future Volume (vph)	14	4	22	7	5	15	32	475	10	21	555	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	4.8	3.3	3.3	4.8	3.3	3.0	3.3	3.3	3.0	3.3	3.3
Total Lost time (s)		6.0			6.0		5.5	5.5		5.5	5.5	5.5
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	0.95
Flpb, ped/bikes		1.00			1.00		0.99	1.00		0.99	1.00	1.00
Frt		0.92			0.93		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.98			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1837			1845		1585	3311		1596	1749	1408
Flt Permitted		0.87			0.89		0.39	1.00		0.46	1.00	1.00
Satd. Flow (perm)		1631			1668		645	3311		767	1749	1408
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	15	4	24	8	5	16	35	516	11	23	603	33
RTOR Reduction (vph)	0	21	0	0	14	0	0	1	0	0	0	12
Lane Group Flow (vph)	0	22	0	0	15	0	35	526	0	23	603	21
Confl. Peds. (#/hr)	10		5	5		10	27		10	10		27
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		2
Actuated Green, G (s)		7.2			7.2		34.4	34.4		34.4	34.4	34.4
Effective Green, g (s)		7.2			7.2		34.4	34.4		34.4	34.4	34.4
Actuated g/C Ratio		0.14			0.14		0.65	0.65		0.65	0.65	0.65
Clearance Time (s)		6.0			6.0		5.5	5.5		5.5	5.5	5.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		221			226		417	2144		496	1133	912
v/s Ratio Prot								0.16			c0.34	
v/s Ratio Perm		c0.01			0.01		0.05			0.03		0.02
v/c Ratio		0.10			0.07		0.08	0.25		0.05	0.53	0.02
Uniform Delay, d1		20.1			20.0		3.5	3.9		3.4	5.0	3.3
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.2			0.1		0.1	0.1		0.0	0.5	0.0
Delay (s)		20.3			20.1		3.6	4.0		3.4	5.5	3.4
Level of Service		C			C		A	A		A	A	A
Approach Delay (s)		20.3			20.1			3.9			5.3	
Approach LOS		C			C			A			A	

Intersection Summary				
HCM 2000 Control Delay	5.6	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.49			
Actuated Cycle Length (s)	53.1	Sum of lost time (s)	14.5	
Intersection Capacity Utilization	50.1%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

7: Harris Rd & Mitchell Rd/Hammond Rd
05/30/2025

PM Peak Hour
Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	17	13	16	30	238	27	258	55	310	239	37
Future Volume (vph)	18	17	13	16	30	238	27	258	55	310	239	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.6	3.3	3.0	3.3	3.3
Total Lost time (s)		6.0			6.0	6.0	5.5	5.5	5.5	6.2	5.5	5.5
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		0.99			1.00	0.98	1.00	1.00	0.93	1.00	1.00	0.95
Flpb, ped/bikes		1.00			0.99	1.00	0.98	1.00	1.00	0.99	1.00	1.00
Frt		0.96			1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1633			1710	1454	1636	1810	1384	1592	1574	1420
Flt Permitted		0.87			0.88	1.00	0.60	1.00	1.00	0.37	1.00	1.00
Satd. Flow (perm)		1442			1524	1454	1028	1810	1384	619	1574	1420
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	20	19	14	18	33	262	30	284	60	341	263	41
RTOR Reduction (vph)	0	11	0	0	0	211	0	0	43	0	0	17
Lane Group Flow (vph)	0	42	0	0	51	51	30	284	17	341	263	24
Confl. Peds. (#/hr)	8		16	16		8	17		33	33		17
Confl. Bikes (#/hr)			5			5			5			5
Parking (#/hr)											0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)		10.2			10.2	10.2	14.9	14.9	14.9	31.0	31.0	31.0
Effective Green, g (s)		10.2			10.2	10.2	14.9	14.9	14.9	31.0	31.0	31.0
Actuated g/C Ratio		0.19			0.19	0.19	0.28	0.28	0.28	0.59	0.59	0.59
Clearance Time (s)		6.0			6.0	6.0	5.5	5.5	5.5	6.2	5.5	5.5
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)		279			294	281	290	511	391	546	925	835
v/s Ratio Prot								0.16		c0.12	0.17	
v/s Ratio Perm		0.03			0.03	c0.03	0.03		0.01	c0.25		0.02
v/c Ratio		0.15			0.17	0.18	0.10	0.56	0.04	0.62	0.28	0.03
Uniform Delay, d1		17.6			17.7	17.8	14.0	16.1	13.7	6.6	5.4	4.5
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.2			0.3	0.3	0.2	1.3	0.0	2.2	0.2	0.0
Delay (s)		17.9			18.0	18.1	14.1	17.4	13.8	8.8	5.5	4.6
Level of Service		B			B	B	B	B	B	A	A	A
Approach Delay (s)		17.9			18.1			16.6			7.2	
Approach LOS		B			B			B			A	

Intersection Summary				
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.62			
Actuated Cycle Length (s)	52.7	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	62.0%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	4	305	7	10	227
Future Volume (Veh/h)	0	4	305	7	10	227
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	5	381	9	12	284
Pedestrians	32		13			
Lane Width (m)	3.3		3.5			
Walking Speed (m/s)	1.1		1.1			
Percent Blockage	3		1			
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	738	418			422	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	738	418			422	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			99	
cM capacity (veh/h)	362	612			1091	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	5	390	296
Volume Left	0	0	12
Volume Right	5	9	0
cSH	612	1700	1091
Volume to Capacity	0.01	0.23	0.01
Queue Length 95th (m)	0.2	0.0	0.3
Control Delay (s)	10.9	0.0	0.4
Lane LOS	B		A
Approach Delay (s)	10.9	0.0	0.4
Approach LOS	B		

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	30.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	220	14	7	75	192	5	42	26	182	56	10
Future Volume (vph)	49	220	14	7	75	192	5	42	26	182	56	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	5.8		7.0	5.8		6.8	6.1	6.1	6.8	6.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.89		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1659	3287		1657	2887		1656	1749	1504	1657	1705	
Flt Permitted	0.40	1.00		0.59	1.00		0.71	1.00	1.00	0.48	1.00	
Satd. Flow (perm)	694	3287		1022	2887		1234	1749	1504	840	1705	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	56	253	16	8	86	221	6	48	30	209	64	11
RTOR Reduction (vph)	0	3	0	0	172	0	0	0	25	0	4	0
Lane Group Flow (vph)	56	266	0	8	135	0	6	48	5	209	71	0
Confl. Peds. (#/hr)	5		5	5		5	7		9	9		7
Confl. Bikes (#/hr)			5			5			5			5
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	1%	5%	5%	5%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	42.2	34.3		20.2	19.3		14.3	13.4	13.4	33.6	25.9	
Effective Green, g (s)	42.2	34.3		20.2	19.3		14.3	13.4	13.4	33.6	25.9	
Actuated g/C Ratio	0.48	0.39		0.23	0.22		0.16	0.15	0.15	0.38	0.30	
Clearance Time (s)	6.8	5.8		7.0	5.8		6.8	6.1	6.1	6.8	6.1	
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)	511	1285		241	635		205	267	229	446	503	
v/s Ratio Prot	c0.02	c0.08		0.00	0.05		0.00	0.03		c0.07	0.04	
v/s Ratio Perm	0.03			0.01			0.00		0.00	c0.11		
v/c Ratio	0.11	0.21		0.03	0.21		0.03	0.18	0.02	0.47	0.14	
Uniform Delay, d1	12.6	17.7		26.1	28.0		30.8	32.4	31.6	19.4	22.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	0.1		0.1	0.2		0.1	0.3	0.0	0.8	0.1	
Delay (s)	12.7	17.8		26.2	28.1		30.9	32.7	31.6	20.2	22.8	
Level of Service	B	B		C	C		C	C	C	C	C	
Approach Delay (s)		16.9			28.1			32.2			20.9	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	22.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	87.7	Sum of lost time (s)	25.7
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1597	271	107	1965	100	517	84	186	37	72	8
Future Volume (vph)	5	1597	271	107	1965	100	517	84	186	37	72	8
Ideal Flow (vphpl)	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
Lane Width	3.5	3.8	3.1	3.7	3.7	3.7	3.0	3.3	3.0	3.2	3.2	3.2
Total Lost time (s)	6.0	6.4	6.4	5.9	6.4	6.4	7.8	7.8	7.8	6.8	6.8	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	0.95	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.96	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00	0.95	1.00	
Satd. Flow (prot)	1968	5847	1633	2013	4025	1727	1765	1857	1620	1902	3739	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00	0.95	1.00	
Satd. Flow (perm)	1968	5847	1633	2013	4025	1727	1765	1857	1620	1902	3739	
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)	5	1664	282	111	2047	104	539	88	194	39	75	8
RTOR Reduction (vph)	0	0	119	0	0	49	0	0	157	0	6	0
Lane Group Flow (vph)	5	1664	163	111	2047	55	313	314	37	39	77	0
Confl. Peds. (#/hr)	5		7	7		5			5	5		
Confl. Bikes (#/hr)						5			5			5
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases			2			6			3			
Actuated Green, G (s)	1.2	60.4	60.4	12.0	71.1	71.1	25.3	25.3	25.3	9.5	9.5	
Effective Green, g (s)	1.2	60.4	60.4	12.0	71.1	71.1	25.3	25.3	25.3	9.5	9.5	
Actuated g/C Ratio	0.01	0.45	0.45	0.09	0.53	0.53	0.19	0.19	0.19	0.07	0.07	
Clearance Time (s)	6.0	6.4	6.4	5.9	6.4	6.4	7.8	7.8	7.8	6.8	6.8	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	17	2633	735	180	2134	915	332	350	305	134	264	
v/s Ratio Prot	0.00	0.28		c0.06	c0.51		c0.18	0.17		0.02	c0.02	
v/s Ratio Perm			0.10			0.03			0.02			
v/c Ratio	0.29	0.63	0.22	0.62	0.96	0.06	0.94	0.90	0.12	0.29	0.29	
Uniform Delay, d1	66.0	28.3	22.5	58.8	30.1	15.3	53.7	53.1	45.2	59.1	59.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	9.4	0.5	0.2	6.2	11.3	0.0	34.5	24.3	0.2	1.2	0.6	
Delay (s)	75.5	28.8	22.7	65.0	41.4	15.3	88.2	77.4	45.3	60.3	59.7	
Level of Service	E	C	C	E	D	B	F	E	D	E	E	
Approach Delay (s)		28.0			41.4			73.9			59.9	
Approach LOS		C			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	42.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	134.1	Sum of lost time (s)	27.0
Intersection Capacity Utilization	89.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

2: Harris Rd & McMyn Rd/Parking Access — AM Peak Hour

05/30/2025 — Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	169	3	57	2	1	2	108	629	5	7	394	20
Future Volume (vph)	169	3	57	2	1	2	108	629	5	7	394	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.3	3.3	4.8	3.3	3.0	3.3	3.0	3.0	3.3	3.0
Total Lost time (s)		6.2	6.2		6.2		6.3	5.6		6.1	5.6	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.98		0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		0.99	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.95		1.00	1.00		1.00	0.99	
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1697	1457		1884		1603	3319		1603	3294	
Flt Permitted		0.73	1.00		0.89		0.37	1.00		0.39	1.00	
Satd. Flow (perm)		1294	1457		1704		631	3319		663	3294	
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)	182	3	61	2	1	2	116	676	5	8	424	22
RTOR Reduction (vph)	0	0	47	0	2	0	0	1	0	0	4	0
Lane Group Flow (vph)	0	185	14	0	3	0	116	680	0	8	442	0
Confl. Peds. (#/hr)	8		12	12		8	5		5	5		5
Confl. Bikes (#/hr)									5			5
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		14.1	14.1		14.1		33.5	26.6		21.3	20.4	
Effective Green, g (s)		14.1	14.1		14.1		33.5	26.6		21.3	20.4	
Actuated g/C Ratio		0.24	0.24		0.24		0.56	0.45		0.36	0.34	
Clearance Time (s)		6.2	6.2		6.2		6.3	5.6		6.1	5.6	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		306	345		403		467	1483		251	1129	
v/s Ratio Prot							c0.03	c0.21		0.00	0.13	
v/s Ratio Perm		c0.14	0.01		0.00		0.11			0.01		
v/c Ratio		0.60	0.04		0.01		0.25	0.46		0.03	0.39	
Uniform Delay, d1		20.2	17.5		17.4		6.5	11.4		12.3	14.8	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		3.4	0.1		0.0		0.3	0.2		0.1	0.2	
Delay (s)		23.6	17.5		17.4		6.8	11.7		12.4	15.1	
Level of Service		C	B		B		A	B		B	B	
Approach Delay (s)		22.1			17.4			11.0			15.0	
Approach LOS		C			B			B			B	

Intersection Summary				
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.57			
Actuated Cycle Length (s)	59.5	Sum of lost time (s)	21.1	
Intersection Capacity Utilization	55.7%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

3: Harris Rd & 124 Ave — AM Peak Hour

05/30/2025 — Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	13	47	82	11	69	23	641	2	24	441	3
Future Volume (vph)	21	13	47	82	11	69	23	641	2	24	441	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.3	3.3	3.0	3.3	3.3
Total Lost time (s)		6.0			6.0		5.6	5.6		6.1	5.6	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		0.99	1.00		1.00	1.00	
Frt		0.92			0.94		1.00	1.00		1.00	1.00	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1567			1586		1590	3322		1604	3319	
Flt Permitted		0.88			0.80		0.48	1.00		0.27	1.00	
Satd. Flow (perm)		1400			1296		810	3322		453	3319	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	22	14	49	86	12	73	24	675	2	25	464	3
RTOR Reduction (vph)	0	37	0	0	32	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	48	0	0	139	0	24	677	0	25	467	0
Confl. Peds. (#/hr)	12		15	15		12	14		5	5		14
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		12.3			12.3		19.3	19.3		26.2	26.2	
Effective Green, g (s)		12.3			12.3		19.3	19.3		26.2	26.2	
Actuated g/C Ratio		0.25			0.25		0.39	0.39		0.52	0.52	
Clearance Time (s)		6.0			6.0		5.6	5.6		6.1	5.6	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		343			318		312	1279		255	1735	
v/s Ratio Prot								c0.20		0.00	c0.14	
v/s Ratio Perm		0.03			c0.11		0.03			0.05		
v/c Ratio		0.14			0.44		0.08	0.53		0.10	0.27	
Uniform Delay, d1		14.8			16.0		9.8	11.9		6.5	6.6	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2			1.0		0.1	0.4		0.2	0.1	
Delay (s)		15.0			16.9		9.9	12.3		6.6	6.7	
Level of Service		B			B		A	B		A	A	
Approach Delay (s)		15.0			16.9			12.2			6.7	
Approach LOS		B			B			B			A	

Intersection Summary				
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.57			
Actuated Cycle Length (s)	50.1	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	47.8%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

4: Harris Rd & 122 Ave/122a Ave — AM Peak Hour
05/30/2025 — Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	183	38	40	14	28	151	21	442	12	69	403	137
Future Volume (vph)	183	38	40	14	28	151	21	442	12	69	403	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.3	3.3	3.0	3.3	3.0
Total Lost time (s)		6.2			6.2		6.1	5.5		6.1	5.5	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.98		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.89		1.00	1.00		1.00	0.96	
Flt Protected		0.97			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1640			1528		1599	3306		1598	3157	
Flt Permitted		0.68			0.96		0.39	1.00		0.35	1.00	
Satd. Flow (perm)		1150			1477		651	3306		588	3157	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	213	44	47	16	33	176	24	514	14	80	469	159
RTOR Reduction (vph)	0	9	0	0	116	0	0	2	0	0	38	0
Lane Group Flow (vph)	0	295	0	0	109	0	24	526	0	80	590	0
Confl. Peds. (#/hr)	16		13	13		16	16		18	18		16
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		21.2			21.2		20.5	18.6		25.5	21.1	
Effective Green, g (s)		21.2			21.2		20.5	18.6		25.5	21.1	
Actuated g/C Ratio		0.34			0.34		0.33	0.30		0.41	0.34	
Clearance Time (s)		6.2			6.2		6.1	5.5		6.1	5.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		393			505		244	991		313	1074	
v/s Ratio Prot							0.00	0.16		c0.02	c0.19	
v/s Ratio Perm		c0.26			0.07		0.03			0.09		
v/c Ratio		0.75			0.22		0.10	0.53		0.26	0.55	
Uniform Delay, d1		18.1			14.5		14.1	18.1		11.5	16.6	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		7.9			0.2		0.2	0.5		0.4	0.6	
Delay (s)		26.0			14.7		14.3	18.6		12.0	17.2	
Level of Service		C			B		B	B		B	B	
Approach Delay (s)		26.0			14.7			18.4			16.6	
Approach LOS		C			B			B			B	

Intersection Summary				
HCM 2000 Control Delay	18.5	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.69			
Actuated Cycle Length (s)	62.0	Sum of lost time (s)	20.8	
Intersection Capacity Utilization	76.8%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

5: Harris Rd & Ford Rd — AM Peak Hour
05/30/2025 — Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	17	86	7	33	20	88	298	6	6	333	110
Future Volume (vph)	150	17	86	7	33	20	88	298	6	6	333	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.3	3.3	3.5	3.5	3.0	3.3	3.3	3.0	3.3	3.3
Total Lost time (s)	5.2	5.2			5.2	5.2	5.0	4.8		5.0	4.8	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98			1.00	0.96	1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.98	1.00			1.00	1.00	1.00	1.00		0.99	1.00	
Frt	1.00	0.88			1.00	0.85	1.00	1.00		1.00	0.96	
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1494	1381			1594	1312	1438	2980		1433	2839	
Flt Permitted	0.73	1.00			0.94	1.00	0.36	1.00		0.53	1.00	
Satd. Flow (perm)	1140	1381			1509	1312	540	2980		802	2839	
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Adj. Flow (vph)	183	21	105	9	40	24	107	363	7	7	406	134
RTOR Reduction (vph)	0	82	0	0	0	19	0	2	0	0	43	0
Lane Group Flow (vph)	183	44	0	0	49	5	107	368	0	7	497	0
Confl. Peds. (#/hr)	34		10	10		34	23		17	17		23
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	11.9	11.9			11.9	11.9	31.6	26.4		23.0	22.1	
Effective Green, g (s)	11.9	11.9			11.9	11.9	31.6	26.4		23.0	22.1	
Actuated g/C Ratio	0.22	0.22			0.22	0.22	0.58	0.49		0.42	0.41	
Clearance Time (s)	5.2	5.2			5.2	5.2	5.0	4.8		5.0	4.8	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	250	303			331	288	400	1451		350	1157	
v/s Ratio Prot		0.03					c0.03	0.12		0.00	c0.17	
v/s Ratio Perm	c0.16				0.03	0.00	0.13			0.01		
v/c Ratio	0.73	0.15			0.15	0.02	0.27	0.25		0.02	0.43	
Uniform Delay, d1	19.7	17.1			17.1	16.6	5.4	8.1		9.0	11.5	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.5	0.2			0.2	0.0	0.4	0.1		0.0	0.3	
Delay (s)	30.2	17.3			17.3	16.6	5.8	8.2		9.0	11.8	
Level of Service	C	B			B	B	A	A		A	B	
Approach Delay (s)		24.9			17.0			7.7			11.7	
Approach LOS		C			B			A			B	

Intersection Summary				
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.50			
Actuated Cycle Length (s)	54.2	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	51.0%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

6: Harris Rd & 119 Ave

AM Peak Hour

05/30/2025

Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	13	69	20	54	19	74	433	15	5	369	29
Future Volume (vph)	14	13	69	20	54	19	74	433	15	5	369	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	4.8	3.3	3.3	4.8	3.3	3.0	3.3	3.3	3.0	3.3	3.3
Total Lost time (s)		6.0			6.0		5.5	5.5		5.5	5.5	5.5
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes		0.98			0.99		1.00	1.00		1.00	1.00	0.89
Flpb, ped/bikes		0.99			1.00		0.96	1.00		1.00	1.00	1.00
Frt		0.90			0.97		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1790			1941		1540	3303		1598	1749	1320
Flt Permitted		0.95			0.92		0.38	1.00		0.41	1.00	1.00
Satd. Flow (perm)		1709			1801		618	3303		696	1749	1320
Peak-hour factor, PHF	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Adj. Flow (vph)	19	18	93	27	73	26	100	585	20	7	499	39
RTOR Reduction (vph)	0	64	0	0	17	0	0	3	0	0	0	20
Lane Group Flow (vph)	0	66	0	0	109	0	100	602	0	7	499	19
Confl. Peds. (#/hr)	97		24	24		97	77		8	8		77
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		2
Actuated Green, G (s)		16.8			16.8		25.9	25.9		25.9	25.9	25.9
Effective Green, g (s)		16.8			16.8		25.9	25.9		25.9	25.9	25.9
Actuated g/C Ratio		0.31			0.31		0.48	0.48		0.48	0.48	0.48
Clearance Time (s)		6.0			6.0		5.5	5.5		5.5	5.5	5.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		529			558		295	1578		332	835	630
v/s Ratio Prot								0.18			c0.29	
v/s Ratio Perm		0.04			c0.06		0.16			0.01		0.01
v/c Ratio		0.12			0.20		0.34	0.38		0.02	0.60	0.03
Uniform Delay, d1		13.4			13.7		8.8	9.0		7.5	10.3	7.5
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.1			0.2		0.7	0.2		0.0	1.2	0.0
Delay (s)		13.5			13.9		9.5	9.2		7.5	11.5	7.5
Level of Service		B			B		A	A		A	B	A
Approach Delay (s)		13.5			13.9			9.2			11.2	
Approach LOS		B			B			A			B	

Intersection Summary				
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.47			
Actuated Cycle Length (s)	54.2	Sum of lost time (s)	14.5	
Intersection Capacity Utilization	66.3%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

7: Harris Rd & Mitchell Rd/Hammond Rd

AM Peak Hour

05/30/2025

Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	70	41	50	28	305	13	184	34	236	219	8
Future Volume (vph)	32	70	41	50	28	305	13	184	34	236	219	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.6	3.3	3.0	3.3	3.3
Total Lost time (s)		6.0			6.0	6.0	5.5	5.5	5.5	6.2	5.5	5.5
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		0.98			1.00	0.98	1.00	1.00	0.95	1.00	1.00	0.94
Flpb, ped/bikes		1.00			0.98	1.00	0.97	1.00	1.00	0.99	1.00	1.00
Frt		0.96			1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99			0.97	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1627			1659	1455	1616	1810	1410	1595	1749	1393
Flt Permitted		0.91			0.75	1.00	0.59	1.00	1.00	0.41	1.00	1.00
Satd. Flow (perm)		1493			1289	1455	999	1810	1410	692	1749	1393
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	41	90	53	64	36	391	17	236	44	303	281	10
RTOR Reduction (vph)	0	18	0	0	0	287	0	0	32	0	0	5
Lane Group Flow (vph)	0	166	0	0	100	104	17	236	12	303	281	5
Confl. Peds. (#/hr)	9		43	43		9	29		18	18		29
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)		14.9			14.9	14.9	14.9	14.9	14.9	29.5	29.5	29.5
Effective Green, g (s)		14.9			14.9	14.9	14.9	14.9	14.9	29.5	29.5	29.5
Actuated g/C Ratio		0.27			0.27	0.27	0.27	0.27	0.27	0.53	0.53	0.53
Clearance Time (s)		6.0			6.0	6.0	5.5	5.5	5.5	6.2	5.5	5.5
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)		397			343	387	266	482	375	500	922	735
v/s Ratio Prot								0.13		c0.09	0.16	
v/s Ratio Perm		c0.11			0.08	0.07	0.02		0.01	c0.23		0.00
v/c Ratio		0.42			0.29	0.27	0.06	0.49	0.03	0.61	0.30	0.01
Uniform Delay, d1		16.9			16.3	16.2	15.3	17.3	15.2	8.3	7.4	6.3
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.7			0.5	0.4	0.1	0.8	0.0	2.1	0.2	0.0
Delay (s)		17.6			16.8	16.6	15.4	18.1	15.2	10.4	7.6	6.3
Level of Service		B			B	B	B	B	B	B	A	A
Approach Delay (s)		17.6			16.6			17.5			9.0	
Approach LOS		B			B			B			A	

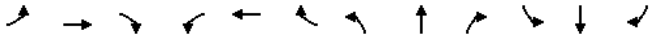
Intersection Summary				
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.65			
Actuated Cycle Length (s)	55.9	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	67.2%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	2	7	176	1	5	276
Future Volume (Veh/h)	2	7	176	1	5	276
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	2	7	181	1	5	285
Pedestrians	17		5			
Lane Width (m)	3.3		3.5			
Walking Speed (m/s)	1.1		1.1			
Percent Blockage	1		0			
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	498	198			199	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	498	198			199	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	514	823			1336	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	9	182	290
Volume Left	2	0	5
Volume Right	7	1	0
cSH	726	1700	1336
Volume to Capacity	0.01	0.11	0.00
Queue Length 95th (m)	0.3	0.0	0.1
Control Delay (s)	10.0	0.0	0.2
Lane LOS	B		A
Approach Delay (s)	10.0	0.0	0.2
Approach LOS	B		

Intersection Summary				
Average Delay		0.3		
Intersection Capacity Utilization		28.5%	ICU Level of Service	A
Analysis Period (min)		15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	83	4	29	215	134	11	58	9	180	61	37
Future Volume (vph)	10	83	4	29	215	134	11	58	9	180	61	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	5.8		7.0	5.8		6.8	6.1	6.1	6.8	6.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.94		1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1659	3297		1656	3093		1659	1749	1452	1660	1638	
Flt Permitted	0.53	1.00		0.66	1.00		0.69	1.00	1.00	0.41	1.00	
Satd. Flow (perm)	934	3297		1144	3093		1205	1749	1452	721	1638	
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)	10	86	4	30	224	140	11	60	9	188	64	39
RTOR Reduction (vph)	0	3	0	0	77	0	0	0	8	0	17	0
Lane Group Flow (vph)	10	87	0	30	287	0	11	60	1	188	86	0
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	20.9	19.9		23.1	21.1		9.9	9.2	9.2	26.1	18.6	
Effective Green, g (s)	20.9	19.9		23.1	21.1		9.9	9.2	9.2	26.1	18.6	
Actuated g/C Ratio	0.31	0.30		0.35	0.32		0.15	0.14	0.14	0.39	0.28	
Clearance Time (s)	6.8	5.8		7.0	5.8		6.8	6.1	6.1	6.8	6.1	
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)	302	980		410	975		183	240	199	423	455	
v/s Ratio Prot	0.00	0.03		c0.00	c0.09		0.00	0.03		c0.07	0.05	
v/s Ratio Perm	0.01			0.02			0.01		0.00	c0.11		
v/c Ratio	0.03	0.09		0.07	0.29		0.06	0.25	0.01	0.44	0.19	
Uniform Delay, d1	15.9	17.0		14.6	17.3		24.4	25.8	24.9	14.4	18.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.0	0.0		0.1	0.2		0.1	0.5	0.0	0.7	0.2	
Delay (s)	16.0	17.0		14.7	17.5		24.6	26.3	24.9	15.2	18.6	
Level of Service	B	B		B	B		C	C	C	B	B	
Approach Delay (s)		16.9			17.2			25.9			16.4	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	66.9	Sum of lost time (s)	25.7
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	2582	521	139	1733	81	461	98	257	63	86	10
Future Volume (vph)	60	2582	521	139	1733	81	461	98	257	63	86	10
Ideal Flow (vphpl)	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
Lane Width	3.5	3.8	3.1	3.7	3.7	3.7	3.0	3.3	3.0	3.2	3.2	3.2
Total Lost time (s)	6.0	6.4	6.4	5.9	6.4	6.4	7.8	7.8	7.8	6.8	6.8	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	0.95	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00	0.95	1.00	
Satd. Flow (prot)	1968	5847	1617	2013	4025	1731	1765	1863	1605	1902	3743	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00	0.95	1.00	
Satd. Flow (perm)	1968	5847	1617	2013	4025	1731	1765	1863	1605	1902	3743	
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)	65	2776	560	149	1863	87	496	105	276	68	92	11
RTOR Reduction (vph)	0	0	140	0	0	43	0	0	158	0	6	0
Lane Group Flow (vph)	65	2776	420	149	1863	44	298	303	118	68	97	0
Confl. Peds. (#/hr)	5		10	10		5			13	13		
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases			2			6			3			
Actuated Green, G (s)	7.6	73.3	73.3	9.1	74.7	74.7	25.0	25.0	25.0	12.0	12.0	
Effective Green, g (s)	7.6	73.3	73.3	9.1	74.7	74.7	25.0	25.0	25.0	12.0	12.0	
Actuated g/C Ratio	0.05	0.50	0.50	0.06	0.51	0.51	0.17	0.17	0.17	0.08	0.08	
Clearance Time (s)	6.0	6.4	6.4	5.9	6.4	6.4	7.8	7.8	7.8	6.8	6.8	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	102	2929	810	125	2055	883	301	318	274	156	307	
v/s Ratio Prot	0.03	c0.47		c0.07	0.46		c0.17	0.16		c0.04	0.03	
v/s Ratio Perm			0.26			0.03			0.07			
v/c Ratio	0.64	0.95	0.52	1.19	0.91	0.05	0.99	0.95	0.43	0.44	0.31	
Uniform Delay, d1	68.0	34.7	24.6	68.6	32.6	18.0	60.5	60.1	54.3	63.9	63.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	12.3	7.6	0.6	141.1	6.2	0.0	49.0	37.8	1.1	1.9	0.6	
Delay (s)	80.3	42.3	25.2	209.7	38.8	18.0	109.5	97.9	55.4	65.9	63.9	
Level of Service	F	D	C	F	D	B	F	F	E	E	E	
Approach Delay (s)		40.2			50.1			88.5			64.7	
Approach LOS		D			D			F			E	

Intersection Summary			
HCM 2000 Control Delay	50.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	146.3	Sum of lost time (s)	27.0
Intersection Capacity Utilization	86.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

2: Harris Rd & McMyn Rd/Parking Access

PM Peak Hour
05/30/2025
Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	221	3	155	8	4	8	171	587	15	22	706	37
Future Volume (vph)	221	3	155	8	4	8	171	587	15	22	706	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.3	3.3	4.8	3.3	3.0	3.3	3.0	3.0	3.3	3.0
Total Lost time (s)		6.2	6.2		6.2		6.3	5.6		6.1	5.6	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.97		0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		0.98	1.00		0.99		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.94		1.00	1.00		1.00	0.99	
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1674	1437		1863		1603	3308		1599	3289	
Flt Permitted		0.71	1.00		0.86		0.18	1.00		0.40	1.00	
Satd. Flow (perm)		1252	1437		1636		306	3308		679	3289	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	240	3	168	9	4	9	186	638	16	24	767	40
RTOR Reduction (vph)	0	0	124	0	7	0	0	2	0	0	4	0
Lane Group Flow (vph)	0	243	44	0	15	0	186	652	0	24	803	0
Confl. Peds. (#/hr)	24		27	27		24	20		12	12		20
Confl. Bikes (#/hr)									5			5
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		19.1	19.1		19.1		41.7	33.5		27.7	25.6	
Effective Green, g (s)		19.1	19.1		19.1		41.7	33.5		27.7	25.6	
Actuated g/C Ratio		0.26	0.26		0.26		0.57	0.46		0.38	0.35	
Clearance Time (s)		6.2	6.2		6.2		6.3	5.6		6.1	5.6	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		329	378		430		350	1526		285	1159	
v/s Ratio Prot							c0.07	0.20		0.00	c0.24	
v/s Ratio Perm		c0.19	0.03		0.01		0.23			0.03		
v/c Ratio		0.74	0.12		0.04		0.53	0.43		0.08	0.69	
Uniform Delay, d1		24.5	20.3		19.9		9.8	13.1		14.1	20.1	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		8.4	0.1		0.0		1.6	0.2		0.1	1.8	
Delay (s)		32.9	20.5		19.9		11.3	13.3		14.2	21.9	
Level of Service		C	C		B		B	B		B	C	
Approach Delay (s)		27.8			19.9			12.9			21.7	
Approach LOS		C			B			B			C	

Intersection Summary				
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.73			
Actuated Cycle Length (s)	72.6	Sum of lost time (s)	21.1	
Intersection Capacity Utilization	70.2%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

3: Harris Rd & 124 Ave

PM Peak Hour
05/30/2025
Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	41	27	92	44	62	29	644	5	115	753	19
Future Volume (vph)	17	41	27	92	44	62	29	644	5	115	753	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.3	3.3	3.0	3.3	3.3
Total Lost time (s)		6.0			6.0		5.6	5.6		6.1	5.6	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		0.99	1.00		1.00	1.00	
Frt		0.96			0.96		1.00	1.00		1.00	1.00	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1639			1611		1581	3319		1602	3306	
Flt Permitted		0.91			0.81		0.34	1.00		0.23	1.00	
Satd. Flow (perm)		1510			1330		564	3319		386	3306	
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)	18	44	29	99	47	67	31	692	5	124	810	20
RTOR Reduction (vph)	0	20	0	0	20	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	71	0	0	193	0	31	696	0	124	828	0
Confl. Peds. (#/hr)	27		17	17		27	31		16	16		31
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		16.2			16.2		20.2	20.2		32.3	32.3	
Effective Green, g (s)		16.2			16.2		20.2	20.2		32.3	32.3	
Actuated g/C Ratio		0.27			0.27		0.34	0.34		0.54	0.54	
Clearance Time (s)		6.0			6.0		5.6	5.6		6.1	5.6	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		407			358		189	1115		328	1776	
v/s Ratio Prot								c0.21		0.04	c0.25	
v/s Ratio Perm		0.05			c0.15		0.05			0.16		
v/c Ratio		0.18			0.54		0.16	0.62		0.38	0.47	
Uniform Delay, d1		16.8			18.8		14.0	16.8		8.1	8.6	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2			1.6		0.4	1.1		0.7	0.2	
Delay (s)		17.0			20.3		14.4	17.9		8.9	8.8	
Level of Service		B			C		B	B		A	A	
Approach Delay (s)		17.0			20.3			17.7			8.8	
Approach LOS		B			C			B			A	

Intersection Summary				
HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	60.1	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	64.6%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

4: Harris Rd & 122 Ave/122a Ave — PM Peak Hour
05/30/2025 — Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	30	29	28	21	102	23	501	12	151	569	190
Future Volume (vph)	150	30	29	28	21	102	23	501	12	151	569	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.3	3.3	3.0	3.3	3.0
Total Lost time (s)		6.2			6.2		6.1	5.5		6.1	5.5	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.98		1.00	1.00		1.00	0.98	
Flpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.91		1.00	1.00		1.00	0.96	
Flt Protected		0.97			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1638			1541		1598	3307		1598	3140	
Flt Permitted		0.73			0.91		0.31	1.00		0.31	1.00	
Satd. Flow (perm)		1236			1411		516	3307		527	3140	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	163	33	32	30	23	111	25	545	13	164	618	207
RTOR Reduction (vph)	0	7	0	0	78	0	0	2	0	0	34	0
Lane Group Flow (vph)	0	221	0	0	86	0	25	556	0	164	791	0
Confl. Peds. (#/hr)	23		8	8		23	31		25	25		31
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		18.7			18.7		22.7	20.9		31.9	25.5	
Effective Green, g (s)		18.7			18.7		22.7	20.9		31.9	25.5	
Actuated g/C Ratio		0.29			0.29		0.36	0.33		0.50	0.40	
Clearance Time (s)		6.2			6.2		6.1	5.5		6.1	5.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		362			413		214	1083		370	1255	
v/s Ratio Prot							0.00	0.17		c0.04	c0.25	
v/s Ratio Perm		c0.18			0.06		0.04			0.18		
v/c Ratio		0.61			0.21		0.12	0.51		0.44	0.63	
Uniform Delay, d1		19.4			17.0		13.5	17.3		9.4	15.4	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		3.0			0.3		0.2	0.4		0.8	1.0	
Delay (s)		22.4			17.2		13.7	17.8		10.3	16.4	
Level of Service		C			B		B	B		B	B	
Approach Delay (s)		22.4			17.2			17.6			15.4	
Approach LOS		C			B			B			B	

Intersection Summary				
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.69			
Actuated Cycle Length (s)	63.8	Sum of lost time (s)	20.8	
Intersection Capacity Utilization	77.4%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

5: Harris Rd & Ford Rd — PM Peak Hour
05/30/2025 — Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	178	22	108	5	20	9	110	351	4	28	467	138
Future Volume (vph)	178	22	108	5	20	9	110	351	4	28	467	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.3	3.3	3.5	3.5	3.0	3.3	3.3	3.0	3.3	3.3
Total Lost time (s)	5.2	5.2			5.2	5.2	5.0	4.8		5.0	4.8	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98			1.00	0.98	1.00	1.00		1.00	0.98	
Flpb, ped/bikes	0.99	1.00			1.00	1.00	0.99	1.00		0.99	1.00	
Frt	1.00	0.88			1.00	0.85	1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1521	1375			1592	1338	1436	2985		1434	2831	
Flt Permitted	0.74	1.00			0.94	1.00	0.30	1.00		0.53	1.00	
Satd. Flow (perm)	1185	1375			1518	1338	448	2985		797	2831	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	189	23	115	5	21	10	117	373	4	30	497	147
RTOR Reduction (vph)	0	86	0	0	0	8	0	1	0	0	39	0
Lane Group Flow (vph)	189	52	0	0	26	2	117	376	0	30	605	0
Confl. Peds. (#/hr)	8		18	18		8	45		17	17		45
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	13.5	13.5			13.5	13.5	29.2	23.8		22.4	20.4	
Effective Green, g (s)	13.5	13.5			13.5	13.5	29.2	23.8		22.4	20.4	
Actuated g/C Ratio	0.25	0.25			0.25	0.25	0.54	0.44		0.41	0.38	
Clearance Time (s)	5.2	5.2			5.2	5.2	5.0	4.8		5.0	4.8	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	294	341			377	332	339	1308		352	1063	
v/s Ratio Prot		0.04					c0.03	0.13		0.00	c0.21	
v/s Ratio Perm	c0.16				0.02	0.00	0.15			0.03		
v/c Ratio	0.64	0.15			0.07	0.01	0.35	0.29		0.09	0.57	
Uniform Delay, d1	18.2	15.9			15.6	15.4	6.8	9.8		9.6	13.5	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.8	0.2			0.1	0.0	0.6	0.1		0.1	0.7	
Delay (s)	23.0	16.1			15.7	15.4	7.4	9.9		9.7	14.2	
Level of Service	C	B			B	B	A	A		A	B	
Approach Delay (s)		20.1			15.6			9.3			14.0	
Approach LOS		C			B			A			B	

Intersection Summary				
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.57			
Actuated Cycle Length (s)	54.3	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	57.3%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

6: Harris Rd & 119 Ave
05/30/2025

PM Peak Hour
Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	4	22	7	5	15	32	475	10	21	555	30
Future Volume (vph)	14	4	22	7	5	15	32	475	10	21	555	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	4.8	3.3	3.3	4.8	3.3	3.0	3.3	3.3	3.0	3.3	3.3
Total Lost time (s)		6.0			6.0		5.5	5.5		5.5	5.5	5.5
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	1.00	1.00
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	0.95
Flpb, ped/bikes		1.00			1.00		0.99	1.00		0.99	1.00	1.00
Frt		0.92			0.93		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.98			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1837			1845		1585	3311		1596	1749	1408
Flt Permitted		0.87			0.89		0.39	1.00		0.46	1.00	1.00
Satd. Flow (perm)		1631			1668		645	3311		767	1749	1408
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	15	4	24	8	5	16	35	516	11	23	603	33
RTOR Reduction (vph)	0	21	0	0	14	0	0	1	0	0	0	12
Lane Group Flow (vph)	0	22	0	0	15	0	35	526	0	23	603	21
Confl. Peds. (#/hr)	10		5	5		10	27		10	10		27
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		2
Actuated Green, G (s)		7.2			7.2		34.4	34.4		34.4	34.4	34.4
Effective Green, g (s)		7.2			7.2		34.4	34.4		34.4	34.4	34.4
Actuated g/C Ratio		0.14			0.14		0.65	0.65		0.65	0.65	0.65
Clearance Time (s)		6.0			6.0		5.5	5.5		5.5	5.5	5.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		221			226		417	2144		496	1133	912
v/s Ratio Prot								0.16			c0.34	
v/s Ratio Perm		c0.01			0.01		0.05			0.03		0.02
v/c Ratio		0.10			0.07		0.08	0.25		0.05	0.53	0.02
Uniform Delay, d1		20.1			20.0		3.5	3.9		3.4	5.0	3.3
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		0.2			0.1		0.1	0.1		0.0	0.5	0.0
Delay (s)		20.3			20.1		3.6	4.0		3.4	5.5	3.4
Level of Service		C			C		A	A		A	A	A
Approach Delay (s)		20.3			20.1			3.9			5.3	
Approach LOS		C			C			A			A	

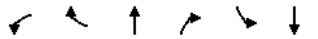
Intersection Summary				
HCM 2000 Control Delay	5.6	HCM 2000 Level of Service		A
HCM 2000 Volume to Capacity ratio	0.49			
Actuated Cycle Length (s)	53.1	Sum of lost time (s)		14.5
Intersection Capacity Utilization	50.1%	ICU Level of Service		A
Analysis Period (min)	15			
c Critical Lane Group				

7: Harris Rd & Mitchell Rd/Hammond Rd
05/30/2025

PM Peak Hour
Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	17	13	16	30	238	27	258	55	310	239	37
Future Volume (vph)	18	17	13	16	30	238	27	258	55	310	239	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.6	3.3	3.0	3.3	3.3
Total Lost time (s)		6.0			6.0	6.0	5.5	5.5	5.5	6.2	5.5	5.5
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		0.99			1.00	0.98	1.00	1.00	0.93	1.00	1.00	0.95
Flpb, ped/bikes		1.00			0.99	1.00	0.98	1.00	1.00	0.99	1.00	1.00
Frt		0.96			1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1633			1710	1454	1636	1810	1384	1592	1574	1420
Flt Permitted		0.87			0.88	1.00	0.60	1.00	1.00	0.37	1.00	1.00
Satd. Flow (perm)		1442			1524	1454	1028	1810	1384	619	1574	1420
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	20	19	14	18	33	262	30	284	60	341	263	41
RTOR Reduction (vph)	0	11	0	0	0	211	0	0	43	0	0	17
Lane Group Flow (vph)	0	42	0	0	51	51	30	284	17	341	263	24
Confl. Peds. (#/hr)	8		16	16		8	17		33	33		17
Confl. Bikes (#/hr)			5			5			5			5
Parking (#/hr)											0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)		10.2			10.2	10.2	14.9	14.9	14.9	31.0	31.0	31.0
Effective Green, g (s)		10.2			10.2	10.2	14.9	14.9	14.9	31.0	31.0	31.0
Actuated g/C Ratio		0.19			0.19	0.19	0.28	0.28	0.28	0.59	0.59	0.59
Clearance Time (s)		6.0			6.0	6.0	5.5	5.5	5.5	6.2	5.5	5.5
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)		279			294	281	290	511	391	546	925	835
v/s Ratio Prot								0.16		c0.12	0.17	
v/s Ratio Perm		0.03			0.03	c0.03	0.03		0.01	c0.25		0.02
v/c Ratio		0.15			0.17	0.18	0.10	0.56	0.04	0.62	0.28	0.03
Uniform Delay, d1		17.6			17.7	17.8	14.0	16.1	13.7	6.6	5.4	4.5
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.2			0.3	0.3	0.2	1.3	0.0	2.2	0.2	0.0
Delay (s)		17.9			18.0	18.1	14.1	17.4	13.8	8.8	5.5	4.6
Level of Service		B			B	B	B	B	B	A	A	A
Approach Delay (s)		17.9			18.1			16.6			7.2	
Approach LOS		B			B			B			A	

Intersection Summary				
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio	0.62			
Actuated Cycle Length (s)	52.7	Sum of lost time (s)		20.7
Intersection Capacity Utilization	62.0%	ICU Level of Service		B
Analysis Period (min)	15			
c Critical Lane Group				



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	4	305	7	10	227
Future Volume (Veh/h)	0	4	305	7	10	227
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	5	381	9	12	284
Pedestrians	32		13			
Lane Width (m)	3.3		3.5			
Walking Speed (m/s)	1.1		1.1			
Percent Blockage	3		1			
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	738	418			422	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	738	418			422	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			99	
cM capacity (veh/h)	362	612			1091	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	5	390	296
Volume Left	0	0	12
Volume Right	5	9	0
cSH	612	1700	1091
Volume to Capacity	0.01	0.23	0.01
Queue Length 95th (m)	0.2	0.0	0.3
Control Delay (s)	10.9	0.0	0.4
Lane LOS	B		A
Approach Delay (s)	10.9	0.0	0.4
Approach LOS	B		

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	30.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	220	14	7	75	192	5	42	26	182	56	10
Future Volume (vph)	49	220	14	7	75	192	5	42	26	182	56	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	5.8		7.0	5.8		6.8	6.1	6.1	6.8	6.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.89		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1659	3287		1657	2887		1656	1749	1504	1657	1705	
Flt Permitted	0.40	1.00		0.59	1.00		0.71	1.00	1.00	0.48	1.00	
Satd. Flow (perm)	694	3287		1022	2887		1234	1749	1504	840	1705	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	56	253	16	8	86	221	6	48	30	209	64	11
RTOR Reduction (vph)	0	3	0	0	172	0	0	0	25	0	4	0
Lane Group Flow (vph)	56	266	0	8	135	0	6	48	5	209	71	0
Confl. Peds. (#/hr)	5		5	5		5	7		9	9		7
Confl. Bikes (#/hr)			5			5			5			5
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	1%	5%	5%	5%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	42.2	34.3		20.2	19.3		14.3	13.4	13.4	33.6	25.9	
Effective Green, g (s)	42.2	34.3		20.2	19.3		14.3	13.4	13.4	33.6	25.9	
Actuated g/C Ratio	0.48	0.39		0.23	0.22		0.16	0.15	0.15	0.38	0.30	
Clearance Time (s)	6.8	5.8		7.0	5.8		6.8	6.1	6.1	6.8	6.1	
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)	511	1285		241	635		205	267	229	446	503	
v/s Ratio Prot	c0.02	c0.08		0.00	0.05		0.00	0.03		c0.07	0.04	
v/s Ratio Perm	0.03			0.01			0.00		0.00	c0.11		
v/c Ratio	0.11	0.21		0.03	0.21		0.03	0.18	0.02	0.47	0.14	
Uniform Delay, d1	12.6	17.7		26.1	28.0		30.8	32.4	31.6	19.4	22.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	0.1		0.1	0.2		0.1	0.3	0.0	0.8	0.1	
Delay (s)	12.7	17.8		26.2	28.1		30.9	32.7	31.6	20.2	22.8	
Level of Service	B	B		C	C		C	C	C	C	C	
Approach Delay (s)		16.9			28.1			32.2			20.9	
Approach LOS		B			C			C			C	

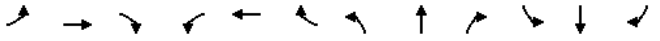
Intersection Summary			
HCM 2000 Control Delay	22.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	87.7	Sum of lost time (s)	25.7
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1597	271	107	1965	100	517	84	186	37	72	8
Future Volume (vph)	5	1597	271	107	1965	100	517	84	186	37	72	8
Ideal Flow (vphpl)	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
Lane Width	3.5	3.8	3.1	3.7	3.7	3.7	3.0	3.3	3.0	3.2	3.2	3.2
Total Lost time (s)	6.0	6.4	6.4	5.9	6.4	6.4	7.8	7.8	7.8	6.8	6.8	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	0.95	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.96	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00	0.95	1.00	
Satd. Flow (prot)	1968	5847	1633	2013	4025	1727	1765	1857	1620	1902	3739	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00	0.95	1.00	
Satd. Flow (perm)	1968	5847	1633	2013	4025	1727	1765	1857	1620	1902	3739	
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)	5	1664	282	111	2047	104	539	88	194	39	75	8
RTOR Reduction (vph)	0	0	119	0	0	49	0	0	157	0	6	0
Lane Group Flow (vph)	5	1664	163	111	2047	55	313	314	37	39	77	0
Confl. Peds. (#/hr)	5		7	7		5			5	5		
Confl. Bikes (#/hr)						5			5			5
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases			2			6			3			
Actuated Green, G (s)	1.2	60.4	60.4	12.0	71.1	71.1	25.3	25.3	25.3	9.5	9.5	
Effective Green, g (s)	1.2	60.4	60.4	12.0	71.1	71.1	25.3	25.3	25.3	9.5	9.5	
Actuated g/C Ratio	0.01	0.45	0.45	0.09	0.53	0.53	0.19	0.19	0.19	0.07	0.07	
Clearance Time (s)	6.0	6.4	6.4	5.9	6.4	6.4	7.8	7.8	7.8	6.8	6.8	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	17	2633	735	180	2134	915	332	350	305	134	264	
v/s Ratio Prot	0.00	0.28		c0.06	c0.51		c0.18	0.17		0.02	c0.02	
v/s Ratio Perm			0.10			0.03			0.02			
v/c Ratio	0.29	0.63	0.22	0.62	0.96	0.06	0.94	0.90	0.12	0.29	0.29	
Uniform Delay, d1	66.0	28.3	22.5	58.8	30.1	15.3	53.7	53.1	45.2	59.1	59.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	9.4	0.5	0.2	6.2	11.3	0.0	34.5	24.3	0.2	1.2	0.6	
Delay (s)	75.5	28.8	22.7	65.0	41.4	15.3	88.2	77.4	45.3	60.3	59.7	
Level of Service	E	C	C	E	D	B	F	E	D	E	E	
Approach Delay (s)		28.0			41.4			73.9			59.9	
Approach LOS		C			D			E			E	

Intersection Summary				
HCM 2000 Control Delay	42.0	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.91			
Actuated Cycle Length (s)	134.1	Sum of lost time (s)	27.0	
Intersection Capacity Utilization	89.7%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

2: Harris Rd & McMyn Rd/Parking Access — AM Peak Hour

06/17/2025 — Existing

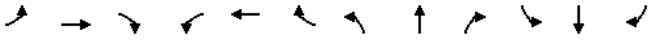


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	169	3	57	2	1	2	108	629	5	7	394	20
Future Volume (vph)	169	3	57	2	1	2	108	629	5	7	394	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.3	3.3	4.8	3.3	3.0	3.3	3.0	3.0	3.3	3.0
Total Lost time (s)		6.2	6.2		6.2		6.3	5.6		6.1	5.6	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.98		0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		0.99	1.00		1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.95		1.00	1.00		1.00	0.99	
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1697	1457		1884		1603	3319		1603	3294	
Flt Permitted		0.73	1.00		0.89		0.37	1.00		0.39	1.00	
Satd. Flow (perm)		1294	1457		1704		631	3319		663	3294	
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)	182	3	61	2	1	2	116	676	5	8	424	22
RTOR Reduction (vph)	0	0	47	0	2	0	0	1	0	0	4	0
Lane Group Flow (vph)	0	185	14	0	3	0	116	680	0	8	442	0
Confl. Peds. (#/hr)	8		12	12		8	5		5	5		5
Confl. Bikes (#/hr)									5			5
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		14.1	14.1		14.1		33.5	26.6		21.3	20.4	
Effective Green, g (s)		14.1	14.1		14.1		33.5	26.6		21.3	20.4	
Actuated g/C Ratio		0.24	0.24		0.24		0.56	0.45		0.36	0.34	
Clearance Time (s)		6.2	6.2		6.2		6.3	5.6		6.1	5.6	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		306	345		403		467	1483		251	1129	
v/s Ratio Prot							c0.03	c0.21		0.00	0.13	
v/s Ratio Perm		c0.14	0.01		0.00		0.11			0.01		
v/c Ratio		0.60	0.04		0.01		0.25	0.46		0.03	0.39	
Uniform Delay, d1		20.2	17.5		17.4		6.5	11.4		12.3	14.8	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		3.4	0.1		0.0		0.3	0.2		0.1	0.2	
Delay (s)		23.6	17.5		17.4		6.8	11.7		12.4	15.1	
Level of Service		C	B		B		A	B		B	B	
Approach Delay (s)		22.1			17.4			11.0			15.0	
Approach LOS		C			B			B			B	

Intersection Summary				
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.57			
Actuated Cycle Length (s)	59.5	Sum of lost time (s)	21.1	
Intersection Capacity Utilization	55.7%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

3: Harris Rd & 124 Ave — AM Peak Hour

06/17/2025 — Existing



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	13	47	82	11	69	23	641	2	24	441	3
Future Volume (vph)	21	13	47	82	11	69	23	641	2	24	441	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.3	3.3	3.3	3.3	3.3	3.1	3.3	3.3	3.1	3.3	3.3
Total Lost time (s)	6.0	6.0		6.0	6.0		5.6	5.6		6.1	5.6	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98		1.00	0.98		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.88		1.00	0.87		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1652	1514		1649	1492		1609	3322		1623	3319	
Flt Permitted	0.70	1.00		0.72	1.00		0.48	1.00		0.28	1.00	
Satd. Flow (perm)	1220	1514		1243	1492		820	3322		483	3319	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	22	14	49	86	12	73	24	675	2	25	464	3
RTOR Reduction (vph)	0	40	0	0	59	0	0	0	0	0	0	0
Lane Group Flow (vph)	22	23	0	86	26	0	24	677	0	25	467	0
Confl. Peds. (#/hr)	12		15	15		12	14		5	5		14
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	9.2	9.2		9.2	9.2		19.9	19.9		26.8	26.8	
Effective Green, g (s)	9.2	9.2		9.2	9.2		19.9	19.9		26.8	26.8	
Actuated g/C Ratio	0.19	0.19		0.19	0.19		0.42	0.42		0.56	0.56	
Clearance Time (s)	6.0	6.0		6.0	6.0		5.6	5.6		6.1	5.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	235	292		240	288		342	1388		291	1868	
v/s Ratio Prot		0.02			0.02			c0.20		0.00	c0.14	
v/s Ratio Perm	0.02			c0.07			0.03			0.05		
v/c Ratio	0.09	0.08		0.36	0.09		0.07	0.49		0.09	0.25	
Uniform Delay, d1	15.8	15.7		16.6	15.8		8.3	10.1		5.2	5.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.1		0.9	0.1		0.1	0.3		0.1	0.1	
Delay (s)	15.9	15.9		17.6	15.9		8.4	10.4		5.3	5.4	
Level of Service	B	B		B	B		A	B		A	A	
Approach Delay (s)		15.9			16.7			10.3			5.4	
Approach LOS		B			B			B			A	

Intersection Summary				
HCM 2000 Control Delay	9.7	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.52			
Actuated Cycle Length (s)	47.6	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	44.3%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

4: Harris Rd & 122 Ave/122a Ave — AM Peak Hour
06/17/2025 — Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	183	38	40	14	28	151	21	442	12	69	403	137
Future Volume (vph)	183	38	40	14	28	151	21	442	12	69	403	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.3	3.3	3.3	3.3	3.3	3.1	3.3	3.3	3.1	3.3	3.0
Total Lost time (s)	6.2	6.2		6.2	6.2		6.1	5.5		6.1	5.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.92		1.00	0.87		1.00	1.00		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1651	1594		1651	1496		1618	3306		1617	3160	
Flt Permitted	0.63	1.00		0.70	1.00		0.40	1.00		0.42	1.00	
Satd. Flow (perm)	1089	1594		1213	1496		675	3306		708	3160	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	213	44	47	16	33	176	24	514	14	80	469	159
RTOR Reduction (vph)	0	35	0	0	132	0	0	2	0	0	36	0
Lane Group Flow (vph)	213	56	0	16	77	0	24	526	0	80	592	0
Confl. Peds. (#/hr)	16		13	13		16	16		18	18		16
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	13.5	13.5		13.5	13.5		21.4	19.7		23.6	20.8	
Effective Green, g (s)	13.5	13.5		13.5	13.5		21.4	19.7		23.6	20.8	
Actuated g/C Ratio	0.25	0.25		0.25	0.25		0.40	0.37		0.44	0.39	
Clearance Time (s)	6.2	6.2		6.2	6.2		6.1	5.5		6.1	5.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	273	399		304	375		298	1210		357	1221	
v/s Ratio Prot		0.03			0.05		0.00	0.16		c0.01	c0.19	
v/s Ratio Perm	c0.20			0.01			0.03			0.09		
v/c Ratio	0.78	0.14		0.05	0.21		0.08	0.43		0.22	0.49	
Uniform Delay, d1	18.8	15.6		15.3	15.9		9.9	12.9		9.0	12.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	13.4	0.2		0.1	0.3		0.1	0.3		0.3	0.3	
Delay (s)	32.2	15.8		15.4	16.2		10.0	13.1		9.3	12.8	
Level of Service	C	B		B	B		B	B		A	B	
Approach Delay (s)		27.3			16.1			13.0			12.4	
Approach LOS		C			B			B			B	

Intersection Summary				
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.64			
Actuated Cycle Length (s)	53.8	Sum of lost time (s)	20.8	
Intersection Capacity Utilization	68.5%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

5: Harris Rd & Ford Rd — AM Peak Hour
06/17/2025 — Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	17	86	7	33	20	88	298	6	6	333	110
Future Volume (vph)	150	17	86	7	33	20	88	298	6	6	333	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.3	3.3	3.5	3.5	3.1	3.3	3.3	3.1	3.3	3.3
Total Lost time (s)	5.2	5.2			5.2	4.0	5.0	4.8		5.0	4.8	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98			1.00	1.00	1.00	1.00		1.00	0.99	
Flpb, ped/bikes	0.98	1.00			1.00	1.00	1.00	1.00		0.99	1.00	
Frt	1.00	0.88			1.00	0.85	1.00	1.00		1.00	0.96	
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1494	1381			1594	1369	1455	2980		1450	2839	
Flt Permitted	0.73	1.00			0.94	1.00	0.36	1.00		0.53	1.00	
Satd. Flow (perm)	1140	1381			1509	1369	546	2980		812	2839	
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Adj. Flow (vph)	183	21	105	9	40	24	107	363	7	7	406	134
RTOR Reduction (vph)	0	82	0	0	0	24	0	2	0	0	43	0
Lane Group Flow (vph)	183	44	0	0	49	0	107	368	0	7	497	0
Confl. Peds. (#/hr)	34		10	10		34	23		17	17		23
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA	NA	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	11.9	11.9			11.9	0.0	31.6	26.4		23.0	22.1	
Effective Green, g (s)	11.9	11.9			11.9	0.0	31.6	26.4		23.0	22.1	
Actuated g/C Ratio	0.22	0.22			0.22	0.00	0.58	0.49		0.42	0.41	
Clearance Time (s)	5.2	5.2			5.2		5.0	4.8		5.0	4.8	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	250	303			331	0	405	1451		355	1157	
v/s Ratio Prot		0.03					c0.03	0.12		0.00	c0.17	
v/s Ratio Perm	c0.16				0.03		0.13			0.01		
v/c Ratio	0.73	0.15			0.15	0.00	0.26	0.25		0.02	0.43	
Uniform Delay, d1	19.7	17.1			17.1	27.1	5.4	8.1		9.0	11.5	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.5	0.2			0.2	0.0	0.4	0.1		0.0	0.3	
Delay (s)	30.2	17.3			17.3	27.1	5.8	8.2		9.0	11.8	
Level of Service	C	B			B	C	A	A		A	B	
Approach Delay (s)		24.9			20.5			7.7			11.7	
Approach LOS		C			C			A			B	

Intersection Summary				
HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.50			
Actuated Cycle Length (s)	54.2	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	49.8%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

6: Harris Rd & 119 Ave

AM Peak Hour

06/17/2025

Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	13	69	20	54	19	74	433	15	5	369	29
Future Volume (vph)	14	13	69	20	54	19	74	433	15	5	369	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	4.8	3.3	3.3	4.8	3.3	3.0	3.3	3.3	3.1	3.1	3.3
Total Lost time (s)		6.0			6.0		5.5	5.5		5.5	5.5	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.98			0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		0.99			1.00		0.96	1.00		1.00	1.00	
Frt		0.90			0.97		1.00	1.00		1.00	0.99	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1793			1943		1541	3303		1617	3187	
Flt Permitted		0.95			0.92		0.45	1.00		0.41	1.00	
Satd. Flow (perm)		1712			1805		732	3303		703	3187	
Peak-hour factor, PHF	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Adj. Flow (vph)	19	18	93	27	73	26	100	585	20	7	499	39
RTOR Reduction (vph)	0	62	0	0	16	0	0	3	0	0	7	0
Lane Group Flow (vph)	0	68	0	0	110	0	100	602	0	7	531	0
Confl. Peds. (#/hr)	97		24	24		97	77		8	8		77
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)		16.6			16.6		22.1	22.1		22.1	22.1	
Effective Green, g (s)		16.6			16.6		22.1	22.1		22.1	22.1	
Actuated g/C Ratio		0.33			0.33		0.44	0.44		0.44	0.44	
Clearance Time (s)		6.0			6.0		5.5	5.5		5.5	5.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		566			596		322	1454		309	1403	
v/s Ratio Prot								c0.18			0.17	
v/s Ratio Perm		0.04			c0.06		0.14			0.01		
v/c Ratio		0.12			0.18		0.31	0.41		0.02	0.38	
Uniform Delay, d1		11.7			12.0		9.1	9.6		7.9	9.4	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			0.2		0.6	0.2		0.0	0.2	
Delay (s)		11.8			12.1		9.7	9.8		8.0	9.6	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		11.8			12.1			9.8			9.6	
Approach LOS		B			B			A			A	

Intersection Summary				
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.34			
Actuated Cycle Length (s)	50.2	Sum of lost time (s)	14.5	
Intersection Capacity Utilization	65.5%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

7: Harris Rd & Mitchell Rd/Hammond Rd

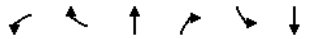
AM Peak Hour

06/17/2025

Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	70	41	50	28	305	13	184	34	236	219	8
Future Volume (vph)	32	70	41	50	28	305	13	184	34	236	219	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.3	3.3
Total Lost time (s)		6.0			6.0	6.0	5.5	5.5	5.5	6.2	5.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes		0.99			1.00	0.98	1.00	1.00	0.95	1.00	1.00	
Flpb, ped/bikes		1.00			0.99	1.00	0.97	1.00	1.00	0.99	1.00	
Frt		0.96			1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.99			0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1641			1673	1455	1617	1749	1410	1595	3299	
Flt Permitted		0.91			0.75	1.00	0.57	1.00	1.00	0.41	1.00	
Satd. Flow (perm)		1505			1299	1455	976	1749	1410	694	3299	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	41	90	53	64	36	391	17	236	44	303	281	10
RTOR Reduction (vph)	0	18	0	0	0	287	0	0	32	0	3	0
Lane Group Flow (vph)	0	166	0	0	100	104	17	236	12	303	288	0
Confl. Peds. (#/hr)	9		43	43		9	29		18	18		29
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6		6	8		8	4		
Actuated Green, G (s)		14.9			14.9	14.9	15.0	15.0	15.0	29.6	29.6	
Effective Green, g (s)		14.9			14.9	14.9	15.0	15.0	15.0	29.6	29.6	
Actuated g/C Ratio		0.27			0.27	0.27	0.27	0.27	0.27	0.53	0.53	
Clearance Time (s)		6.0			6.0	6.0	5.5	5.5	5.5	6.2	5.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		400			345	387	261	468	377	501	1743	
v/s Ratio Prot								0.13		c0.09	0.09	
v/s Ratio Perm		c0.11			0.08	0.07	0.02		0.01	c0.23		
v/c Ratio		0.41			0.29	0.27	0.07	0.50	0.03	0.60	0.17	
Uniform Delay, d1		16.9			16.3	16.2	15.3	17.4	15.1	8.3	6.8	
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.7			0.5	0.4	0.1	0.9	0.0	2.1	0.0	
Delay (s)		17.6			16.8	16.6	15.4	18.2	15.2	10.3	6.9	
Level of Service		B			B	B	B	B	B	B	A	
Approach Delay (s)		17.6			16.7			17.6			8.6	
Approach LOS		B			B			B			A	

Intersection Summary				
HCM 2000 Control Delay	13.9	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.65			
Actuated Cycle Length (s)	56.0	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	67.2%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	2	7	176	1	5	276
Future Volume (Veh/h)	2	7	176	1	5	276
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	2	7	181	1	5	285
Pedestrians	17		5			
Lane Width (m)	3.3		3.5			
Walking Speed (m/s)	1.1		1.1			
Percent Blockage	1		0			
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	498	198			199	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	498	198			199	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	514	823			1336	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	9	182	290
Volume Left	2	0	5
Volume Right	7	1	0
cSH	726	1700	1336
Volume to Capacity	0.01	0.11	0.00
Queue Length 95th (m)	0.3	0.0	0.1
Control Delay (s)	10.0	0.0	0.2
Lane LOS	B		A
Approach Delay (s)	10.0	0.0	0.2
Approach LOS	B		

Intersection Summary				
Average Delay		0.3		
Intersection Capacity Utilization		28.5%	ICU Level of Service	A
Analysis Period (min)		15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	83	4	29	215	134	11	58	9	180	61	37
Future Volume (vph)	10	83	4	29	215	134	11	58	9	180	61	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	5.8		7.0	5.8		6.8	6.1	6.1	6.8	6.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00	0.98	1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.94		1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1659	3297		1656	3093		1659	1749	1452	1660	1638	
Flt Permitted	0.53	1.00		0.66	1.00		0.69	1.00	1.00	0.41	1.00	
Satd. Flow (perm)	934	3297		1144	3093		1205	1749	1452	721	1638	
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)	10	86	4	30	224	140	11	60	9	188	64	39
RTOR Reduction (vph)	0	3	0	0	77	0	0	0	8	0	17	0
Lane Group Flow (vph)	10	87	0	30	287	0	11	60	1	188	86	0
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	20.9	19.9		23.1	21.1		9.9	9.2	9.2	26.1	18.6	
Effective Green, g (s)	20.9	19.9		23.1	21.1		9.9	9.2	9.2	26.1	18.6	
Actuated g/C Ratio	0.31	0.30		0.35	0.32		0.15	0.14	0.14	0.39	0.28	
Clearance Time (s)	6.8	5.8		7.0	5.8		6.8	6.1	6.1	6.8	6.1	
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)	302	980		410	975		183	240	199	423	455	
v/s Ratio Prot	0.00	0.03		c0.00	c0.09		0.00	0.03		c0.07	0.05	
v/s Ratio Perm	0.01			0.02			0.01		0.00	c0.11		
v/c Ratio	0.03	0.09		0.07	0.29		0.06	0.25	0.01	0.44	0.19	
Uniform Delay, d1	15.9	17.0		14.6	17.3		24.4	25.8	24.9	14.4	18.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.0	0.0		0.1	0.2		0.1	0.5	0.0	0.7	0.2	
Delay (s)	16.0	17.0		14.7	17.5		24.6	26.3	24.9	15.2	18.6	
Level of Service	B	B		B	B		C	C	C	B	B	
Approach Delay (s)		16.9			17.2			25.9			16.4	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	66.9	Sum of lost time (s)	25.7
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	2582	521	139	1733	81	461	98	257	63	86	10
Future Volume (vph)	60	2582	521	139	1733	81	461	98	257	63	86	10
Ideal Flow (vphpl)	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
Lane Width	3.5	3.8	3.1	3.7	3.7	3.7	3.0	3.3	3.0	3.2	3.2	3.2
Total Lost time (s)	6.0	6.4	6.4	5.9	6.4	6.4	7.8	7.8	7.8	6.8	6.8	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	0.95	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.96	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00	0.95	1.00	
Satd. Flow (prot)	1968	5847	1617	2013	4025	1731	1765	1863	1605	1902	3743	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00	0.95	1.00	
Satd. Flow (perm)	1968	5847	1617	2013	4025	1731	1765	1863	1605	1902	3743	
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)	65	2776	560	149	1863	87	496	105	276	68	92	11
RTOR Reduction (vph)	0	0	140	0	0	43	0	0	167	0	6	0
Lane Group Flow (vph)	65	2776	420	149	1863	44	298	303	109	68	97	0
Confl. Peds. (#/hr)	5		10	10		5			13	13		
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases			2			6			3			
Actuated Green, G (s)	7.6	70.7	70.7	11.5	74.5	74.5	25.2	25.2	25.2	12.0	12.0	
Effective Green, g (s)	7.6	70.7	70.7	11.5	74.5	74.5	25.2	25.2	25.2	12.0	12.0	
Actuated g/C Ratio	0.05	0.48	0.48	0.08	0.51	0.51	0.17	0.17	0.17	0.08	0.08	
Clearance Time (s)	6.0	6.4	6.4	5.9	6.4	6.4	7.8	7.8	7.8	6.8	6.8	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	102	2825	781	158	2049	881	304	320	276	156	307	
v/s Ratio Prot	0.03	c0.47		c0.07	c0.46		c0.17	0.16		c0.04	0.03	
v/s Ratio Perm			0.26			0.03			0.07			
v/c Ratio	0.64	0.98	0.54	0.94	0.91	0.05	0.98	0.95	0.39	0.44	0.31	
Uniform Delay, d1	68.0	37.2	26.4	67.1	32.8	18.1	60.3	59.9	53.8	63.9	63.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	12.3	13.1	0.7	54.5	6.4	0.0	46.0	36.1	0.9	1.9	0.6	
Delay (s)	80.3	50.3	27.1	121.6	39.2	18.1	106.3	96.0	54.7	65.9	63.9	
Level of Service	F	D	C	F	D	B	F	F	D	E	E	
Approach Delay (s)		47.0			44.2			86.5			64.7	
Approach LOS		D			D			F			E	

Intersection Summary			
HCM 2000 Control Delay	51.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	146.3	Sum of lost time (s)	27.0
Intersection Capacity Utilization	86.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

2: Harris Rd & McMyn Rd/Parking Access

PM Peak Hour
06/17/2025
Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	221	3	155	8	4	8	171	587	15	22	706	37
Future Volume (vph)	221	3	155	8	4	8	171	587	15	22	706	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.3	3.3	4.8	3.3	3.0	3.3	3.0	3.0	3.3	3.0
Total Lost time (s)		6.2	6.2		6.2		6.3	5.6		6.1	5.6	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00	0.97		0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		0.98	1.00		0.99		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.94		1.00	1.00		1.00	0.99	
Flt Protected		0.95	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1674	1437		1863		1603	3308		1599	3289	
Flt Permitted		0.71	1.00		0.86		0.18	1.00		0.40	1.00	
Satd. Flow (perm)		1252	1437		1636		306	3308		679	3289	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	240	3	168	9	4	9	186	638	16	24	767	40
RTOR Reduction (vph)	0	0	124	0	7	0	0	2	0	0	4	0
Lane Group Flow (vph)	0	243	44	0	15	0	186	652	0	24	803	0
Confl. Peds. (#/hr)	24		27	27		24	20		12	12		20
Confl. Bikes (#/hr)									5			5
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		19.1	19.1		19.1		41.7	33.5		27.7	25.6	
Effective Green, g (s)		19.1	19.1		19.1		41.7	33.5		27.7	25.6	
Actuated g/C Ratio		0.26	0.26		0.26		0.57	0.46		0.38	0.35	
Clearance Time (s)		6.2	6.2		6.2		6.3	5.6		6.1	5.6	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		329	378		430		350	1526		285	1159	
v/s Ratio Prot							c0.07	0.20		0.00	c0.24	
v/s Ratio Perm		c0.19	0.03		0.01		0.23			0.03		
v/c Ratio		0.74	0.12		0.04		0.53	0.43		0.08	0.69	
Uniform Delay, d1		24.5	20.3		19.9		9.8	13.1		14.1	20.1	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		8.4	0.1		0.0		1.6	0.2		0.1	1.8	
Delay (s)		32.9	20.5		19.9		11.3	13.3		14.2	21.9	
Level of Service		C	C		B		B	B		B	C	
Approach Delay (s)		27.8			19.9			12.9			21.7	
Approach LOS		C			B			B			C	

Intersection Summary				
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.73			
Actuated Cycle Length (s)	72.6	Sum of lost time (s)	21.1	
Intersection Capacity Utilization	70.2%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

3: Harris Rd & 124 Ave

PM Peak Hour
06/17/2025
Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	41	27	92	44	62	29	644	5	115	753	19
Future Volume (vph)	17	41	27	92	44	62	29	644	5	115	753	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.3	3.3	3.3	3.3	3.3	3.1	3.3	3.3	3.1	3.3	3.3
Total Lost time (s)	6.0	6.0		6.0	6.0		5.6	5.6		6.1	5.6	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.98	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.91		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1635	1626		1644	1562		1600	3319		1621	3306	
Flt Permitted	0.68	1.00		0.71	1.00		0.34	1.00		0.27	1.00	
Satd. Flow (perm)	1177	1626		1228	1562		571	3319		452	3306	
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)	18	44	29	99	47	67	31	692	5	124	810	20
RTOR Reduction (vph)	0	23	0	0	54	0	0	1	0	0	2	0
Lane Group Flow (vph)	18	50	0	99	60	0	31	696	0	124	828	0
Confl. Peds. (#/hr)	27		17	17		27	31		16	16		31
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	11.8	11.8		11.8	11.8		24.3	24.3		36.3	36.3	
Effective Green, g (s)	11.8	11.8		11.8	11.8		24.3	24.3		36.3	36.3	
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.41	0.41		0.61	0.61	
Clearance Time (s)	6.0	6.0		6.0	6.0		5.6	5.6		6.1	5.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	232	321		242	308		232	1350		390	2010	
v/s Ratio Prot		0.03			0.04			c0.21		0.03	c0.25	
v/s Ratio Perm	0.02			c0.08			0.05			0.16		
v/c Ratio	0.08	0.15		0.41	0.20		0.13	0.52		0.32	0.41	
Uniform Delay, d1	19.5	19.8		20.9	20.0		11.1	13.3		5.9	6.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.2		1.1	0.3		0.3	0.3		0.5	0.1	
Delay (s)	19.7	20.0		22.0	20.3		11.4	13.6		6.4	6.3	
Level of Service	B	C		C	C		B	B		A	A	
Approach Delay (s)		20.0			21.1			13.5			6.3	
Approach LOS		B			C			B			A	

Intersection Summary				
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.54			
Actuated Cycle Length (s)	59.7	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	61.8%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

4: Harris Rd & 122 Ave/122a Ave PM Peak Hour
06/17/2025 Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	30	29	28	21	102	23	501	12	151	569	190
Future Volume (vph)	150	30	29	28	21	102	23	501	12	151	569	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.3	3.3	3.3	3.3	3.3	3.1	3.3	3.3	3.1	3.3	3.0
Total Lost time (s)	6.2	6.2		6.2	6.2		6.1	5.5		6.1	5.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.97		1.00	1.00		1.00	0.98	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.88		1.00	1.00		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1641	1602		1654	1492		1616	3307		1616	3141	
Flt Permitted	0.67	1.00		0.71	1.00		0.33	1.00		0.35	1.00	
Satd. Flow (perm)	1160	1602		1244	1492		566	3307		593	3141	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	163	33	32	30	23	111	25	545	13	164	618	207
RTOR Reduction (vph)	0	25	0	0	87	0	0	2	0	0	30	0
Lane Group Flow (vph)	163	40	0	30	47	0	25	556	0	164	795	0
Confl. Peds. (#/hr)	23		8	8		23	31		25	25		31
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	13.5	13.5		13.5	13.5		26.4	24.7		35.2	29.1	
Effective Green, g (s)	13.5	13.5		13.5	13.5		26.4	24.7		35.2	29.1	
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.43	0.40		0.57	0.47	
Clearance Time (s)	6.2	6.2		6.2	6.2		6.1	5.5		6.1	5.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	252	348		270	324		269	1315		436	1471	
v/s Ratio Prot		0.02			0.03		0.00	0.17		c0.04	c0.25	
v/s Ratio Perm	c0.14			0.02			0.04			0.18		
v/c Ratio	0.65	0.11		0.11	0.15		0.09	0.42		0.38	0.54	
Uniform Delay, d1	22.1	19.5		19.5	19.6		10.4	13.5		6.9	11.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.6	0.1		0.2	0.2		0.2	0.2		0.5	0.4	
Delay (s)	27.7	19.7		19.7	19.8		10.6	13.8		7.4	12.1	
Level of Service	C	B		B	B		B	B		A	B	
Approach Delay (s)		25.4			19.8			13.6			11.4	
Approach LOS		C			B			B			B	

Intersection Summary				
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.64			
Actuated Cycle Length (s)	62.1	Sum of lost time (s)	20.8	
Intersection Capacity Utilization	73.0%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

5: Harris Rd & Ford Rd PM Peak Hour
06/17/2025 Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	178	22	108	5	20	9	110	351	4	28	467	138
Future Volume (vph)	178	22	108	5	20	9	110	351	4	28	467	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.3	3.3	3.5	3.5	3.1	3.3	3.3	3.1	3.3	3.3
Total Lost time (s)	5.2	5.2			5.2	5.2	5.0	4.8		5.0	4.8	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.98			1.00	0.98	1.00	1.00		1.00	0.98	
Flpb, ped/bikes	0.99	1.00			1.00	1.00	0.99	1.00		0.99	1.00	
Frt	1.00	0.88			1.00	0.85	1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1521	1375			1592	1338	1453	2985		1451	2831	
Flt Permitted	0.74	1.00			0.94	1.00	0.30	1.00		0.53	1.00	
Satd. Flow (perm)	1185	1375			1518	1338	454	2985		806	2831	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	189	23	115	5	21	10	117	373	4	30	497	147
RTOR Reduction (vph)	0	86	0	0	0	8	0	1	0	0	39	0
Lane Group Flow (vph)	189	52	0	0	26	2	117	376	0	30	605	0
Confl. Peds. (#/hr)	8		18	18		8	45		17	17		45
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	13.5	13.5			13.5	13.5	29.2	23.8		22.4	20.4	
Effective Green, g (s)	13.5	13.5			13.5	13.5	29.2	23.8		22.4	20.4	
Actuated g/C Ratio	0.25	0.25			0.25	0.25	0.54	0.44		0.41	0.38	
Clearance Time (s)	5.2	5.2			5.2	5.2	5.0	4.8		5.0	4.8	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	294	341			377	332	343	1308		356	1063	
v/s Ratio Prot		0.04					c0.03	0.13		0.00	c0.21	
v/s Ratio Perm	c0.16				0.02	0.00	0.15			0.03		
v/c Ratio	0.64	0.15			0.07	0.01	0.34	0.29		0.08	0.57	
Uniform Delay, d1	18.2	15.9			15.6	15.4	6.8	9.8		9.6	13.5	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.8	0.2			0.1	0.0	0.6	0.1		0.1	0.7	
Delay (s)	23.0	16.1			15.7	15.4	7.4	9.9		9.7	14.2	
Level of Service	C	B			B	B	A	A		A	B	
Approach Delay (s)		20.1			15.6			9.3			14.0	
Approach LOS		C			B			A			B	

Intersection Summary				
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.56			
Actuated Cycle Length (s)	54.3	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	57.3%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

6: Harris Rd & 119 Ave
06/17/2025

PM Peak Hour
Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	4	22	7	5	15	32	475	10	21	555	30
Future Volume (vph)	14	4	22	7	5	15	32	475	10	21	555	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	4.8	3.3	3.3	4.8	3.3	3.0	3.3	3.3	3.1	3.1	3.3
Total Lost time (s)		6.0			6.0		5.5	5.5		5.5	5.5	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		0.99	1.00		1.00	1.00	
Frt		0.92			0.93		1.00	1.00		1.00	0.99	
Flt Protected		0.98			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1838			1847		1587	3311		1616	3214	
Flt Permitted		0.87			0.89		0.41	1.00		0.46	1.00	
Satd. Flow (perm)		1632			1669		686	3311		776	3214	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	15	4	24	8	5	16	35	516	11	23	603	33
RTOR Reduction (vph)	0	20	0	0	14	0	0	1	0	0	3	0
Lane Group Flow (vph)	0	23	0	0	15	0	35	526	0	23	633	0
Confl. Peds. (#/hr)	10		5	5		10	27		10	10		27
Confl. Bikes (#/hr)			5			5			5			5
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)		6.7			6.7		26.9	26.9		26.9	26.9	
Effective Green, g (s)		6.7			6.7		26.9	26.9		26.9	26.9	
Actuated g/C Ratio		0.15			0.15		0.60	0.60		0.60	0.60	
Clearance Time (s)		6.0			6.0		5.5	5.5		5.5	5.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		242			247		409	1974		462	1916	
v/s Ratio Prot								0.16			c0.20	
v/s Ratio Perm		c0.01			0.01		0.05			0.03		
v/c Ratio		0.09			0.06		0.09	0.27		0.05	0.33	
Uniform Delay, d1		16.6			16.5		3.9	4.4		3.8	4.6	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2			0.1		0.1	0.1		0.0	0.1	
Delay (s)		16.7			16.6		4.0	4.4		3.8	4.7	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		16.7			16.6			4.4			4.6	
Approach LOS		B			B			A			A	

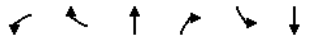
Intersection Summary				
HCM 2000 Control Delay	5.2	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.31			
Actuated Cycle Length (s)	45.1	Sum of lost time (s)	14.5	
Intersection Capacity Utilization	47.4%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

7: Harris Rd & Mitchell Rd/Hammond Rd
06/17/2025

PM Peak Hour
Existing

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	17	13	16	30	238	27	258	55	310	239	37
Future Volume (vph)	18	17	13	16	30	238	27	258	55	310	239	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.3	3.3
Total Lost time (s)		6.0			6.0	6.0	5.5	5.5	5.5	6.2	5.5	
Lane Util. Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	0.95	
Frpb, ped/bikes		0.99			1.00	0.98	1.00	1.00	0.93	1.00	0.99	
Flpb, ped/bikes		1.00			1.00	1.00	0.99	1.00	1.00	0.99	1.00	
Frt		0.96			1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected		0.98			0.98	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1641			1714	1454	1637	1749	1384	1591	3075	
Flt Permitted		0.87			0.88	1.00	0.57	1.00	1.00	0.37	1.00	
Satd. Flow (perm)		1450			1528	1454	976	1749	1384	625	3075	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	20	19	14	18	33	262	30	284	60	341	263	41
RTOR Reduction (vph)	0	11	0	0	0	211	0	0	43	0	12	0
Lane Group Flow (vph)	0	42	0	0	51	51	30	284	17	341	292	0
Confl. Peds. (#/hr)	8		16	16		8	17		33	33		17
Confl. Bikes (#/hr)			5			5			5			5
Parking (#/hr)											0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6		6	8		8	4		
Actuated Green, G (s)		10.3			10.3	10.3	15.3	15.3	15.3	31.4	31.4	
Effective Green, g (s)		10.3			10.3	10.3	15.3	15.3	15.3	31.4	31.4	
Actuated g/C Ratio		0.19			0.19	0.19	0.29	0.29	0.29	0.59	0.59	
Clearance Time (s)		6.0			6.0	6.0	5.5	5.5	5.5	6.2	5.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		280			295	281	280	503	398	548	1814	
v/s Ratio Prot								0.16		c0.12	0.10	
v/s Ratio Perm		0.03			0.03	c0.03	0.03		0.01	c0.25		
v/c Ratio		0.15			0.17	0.18	0.11	0.56	0.04	0.62	0.16	
Uniform Delay, d1		17.8			17.9	17.9	13.9	16.1	13.7	6.6	4.9	
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.2			0.3	0.3	0.2	1.5	0.0	2.2	0.0	
Delay (s)		18.1			18.2	18.2	14.1	17.6	13.7	8.8	5.0	
Level of Service		B			B	B	B	B	B	A	A	
Approach Delay (s)		18.1			18.2			16.7			7.0	
Approach LOS		B			B			B			A	

Intersection Summary				
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.61			
Actuated Cycle Length (s)	53.2	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	62.0%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	4	305	7	10	227
Future Volume (Veh/h)	0	4	305	7	10	227
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	5	381	9	12	284
Pedestrians	32		13			
Lane Width (m)	3.3		3.5			
Walking Speed (m/s)	1.1		1.1			
Percent Blockage	3		1			
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	738	418			422	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	738	418			422	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			99	
cM capacity (veh/h)	362	612			1091	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	5	390	296
Volume Left	0	0	12
Volume Right	5	9	0
cSH	612	1700	1091
Volume to Capacity	0.01	0.23	0.01
Queue Length 95th (m)	0.2	0.0	0.3
Control Delay (s)	10.9	0.0	0.4
Lane LOS	B		A
Approach Delay (s)	10.9	0.0	0.4
Approach LOS	B		

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	30.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	220	14	7	75	192	5	42	26	182	56	10
Future Volume (vph)	49	220	14	7	75	192	5	42	26	182	56	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	5.8		7.0	5.8		6.8	6.1	6.1	6.8	6.1	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.97		1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.89		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1659	3287		1657	2887		1656	1749	1504	1657	1705	
Flt Permitted	0.40	1.00		0.59	1.00		0.71	1.00	1.00	0.48	1.00	
Satd. Flow (perm)	694	3287		1022	2887		1234	1749	1504	840	1705	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	56	253	16	8	86	221	6	48	30	209	64	11
RTOR Reduction (vph)	0	3	0	0	172	0	0	0	25	0	4	0
Lane Group Flow (vph)	56	266	0	8	135	0	6	48	5	209	71	0
Confl. Peds. (#/hr)	5		5	5		5	7		9	9		7
Confl. Bikes (#/hr)			5			5			5			5
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	1%	5%	5%	5%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	42.2	34.3		20.2	19.3		14.3	13.4	13.4	33.6	25.9	
Effective Green, g (s)	42.2	34.3		20.2	19.3		14.3	13.4	13.4	33.6	25.9	
Actuated g/C Ratio	0.48	0.39		0.23	0.22		0.16	0.15	0.15	0.38	0.30	
Clearance Time (s)	6.8	5.8		7.0	5.8		6.8	6.1	6.1	6.8	6.1	
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)	511	1285		241	635		205	267	229	446	503	
v/s Ratio Prot	c0.02	c0.08		0.00	0.05		0.00	0.03		c0.07	0.04	
v/s Ratio Perm	0.03			0.01			0.00		0.00	c0.11		
v/c Ratio	0.11	0.21		0.03	0.21		0.03	0.18	0.02	0.47	0.14	
Uniform Delay, d1	12.6	17.7		26.1	28.0		30.8	32.4	31.6	19.4	22.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	0.1		0.1	0.2		0.1	0.3	0.0	0.8	0.1	
Delay (s)	12.7	17.8		26.2	28.1		30.9	32.7	31.6	20.2	22.8	
Level of Service	B	B		C	C		C	C	C	C	C	
Approach Delay (s)		16.9			28.1			32.2			20.9	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	22.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	87.7	Sum of lost time (s)	25.7
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			