

TRAFFIC IMPACT ASSESSMENT FOR BRAMOR DEVELOPMENT'S PROPOSED 686 52 ST AT PEBBLE HILL TOWNHOMES DEVELOPMENT

Prepared For: Bramor Developments

Prepared By:



TRAFFIC ANALYTICS & PLANNING INC.

June 2025 (Updated November 2025)



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1.0 INTRODUCTION

This Traffic Impact Assessment has been prepared for Bramor Developments proposed 50-unit townhomes development in the City of Delta. The development site is comprised of the assembly of Lot 141, Plan NWP21416, Section 3, TWP 5, NW Land District and Lot 8, Plan NWP21170, Section 3, TWP 5, NW Land District. The civic addresses of these two land parcels are 686 52 St. and 5236 7A Ave. Vehicular access for the entire development will be off 52 St. at the south property line of 686 52 St. Given the straight alignment of 52 St., there is adequate sight distance for a driver stopped at the driveway access when looking to the north and to the south.

686 52 St. is currently zoned RS1 and Bramor Developments is submitting an application to have it rezoned to RTS6, and the property at 5236 7A Ave. is also currently zoned RS1 and an application is being submitted to have this lot rezoned to RTS6. Bramor Developments is proposing 50 townhomes for the combined lots. This will increase the number of residential homes on the combined site from two to 50.

For off-street parking, the required number of parking spaces under RS1 zoning is one space for each of the two existing single-family houses, and Bramor will be providing a total of 76 off-street residential parking spaces plus five off-street visitor parking spaces.

A completed copy of the city's Form AB - Preliminary Traffic Impact Review form is provided in [Appendix A](#).

2.0 SURROUNDING ROAD NETWORK

The proposed development fronts onto 52 St. and 7A Ave.

52 St. is a two-lane local road that runs north-south, and 7A Ave. is a two-lane local road that runs east-west. Along the east side of 52 St. is a narrow pedestrian walkway from 6 Ave. to 7A Ave. The speed limit on 52 St. is 50 km/h, but it is reduced to 30 km/h where it fronts Dennison Park (approximately from 7A Ave. to 8A Ave.).

At the north end of 52 St., 52 St. forms a T-intersection with 8A Ave., and at the south end of 52 St., it forms a traditional four-legged intersection with 6 Ave.

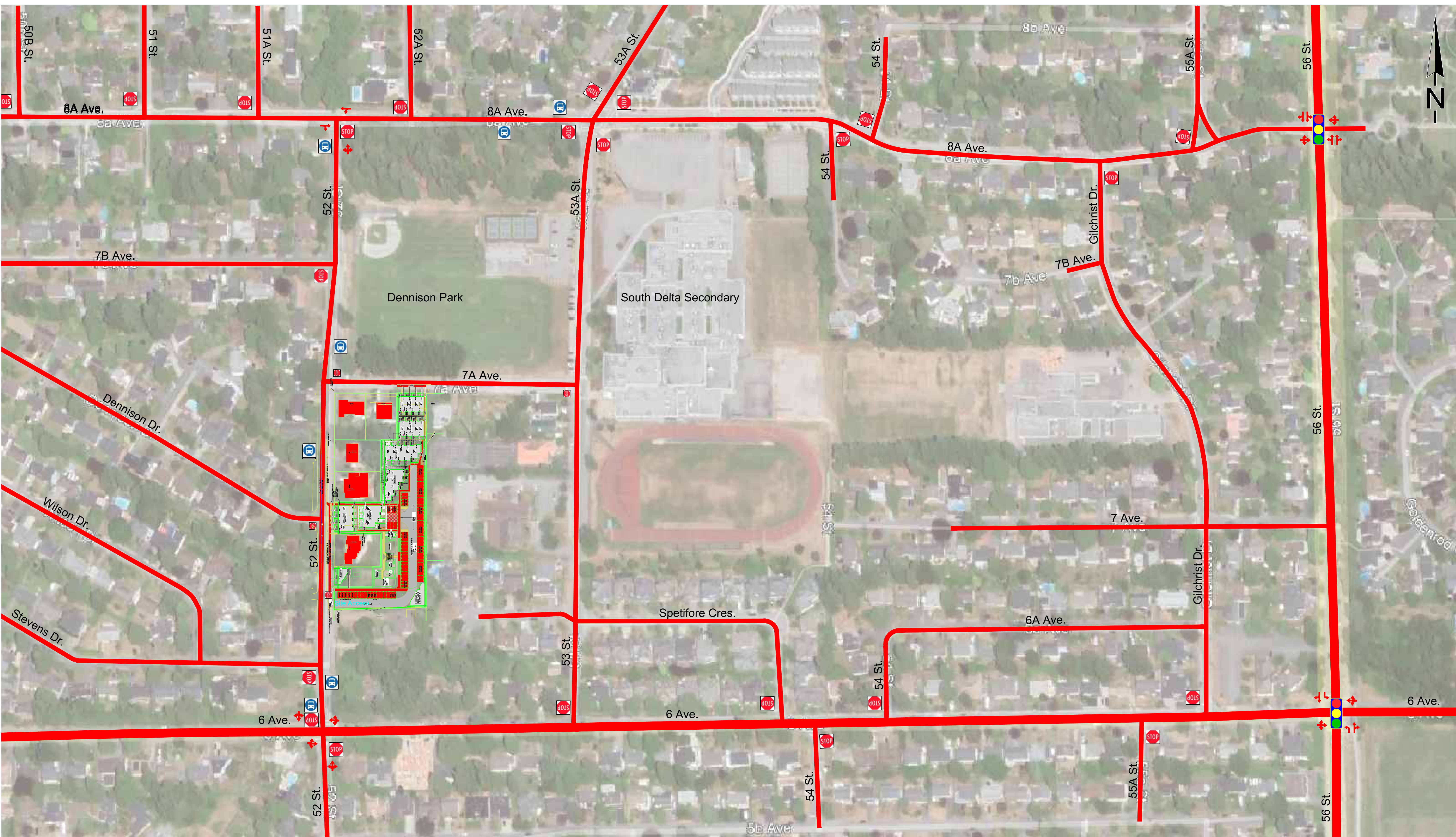
8A Ave. is an east-west two-lane roadway with sidewalk on its south side. The speed limit on 8A Ave. is 50 km/h, except where it fronts the park (between 52 St. and 53A St.) and South Delta Secondary school (between 53A St. and 54 St.), where the speed limit is reduced to 30 km/h. The speed limit fronting the school is time limited (on school days, 8 am – 5 pm). 8A Ave. is a bike route with eastbound and westbound bike lanes.

6 Ave. is an east-west two-lane local roadway with sidewalk on its south side. In the vicinity of the proposed development, the speed limit on 6 Ave. is 50 km/h.

The roadway used by the majority of residents originating from, and destined to, the development site is 56 St. 56 St. is a north-south arterial roadway varying from two-lanes to four-lanes. At its

intersection with 8A Ave., there are dedicated northbound and southbound left-turn lanes with the second lane being a combined thru-right lane, and at the 6 Ave. intersection, 56 St. has a left-turn lane and a thru-right lane in the northbound and southbound directions. The speed limit is 50 km/h. 56 St. has sidewalk on both its east and west sides. South of 6 Ave., 56 St. has painted bike lanes in the northbound and southbound directions.

Figure 1 shows the location of the development site relative to the above roadways, along with intersection laning & control, in addition to nearby bus stops.



CLIENT:

BRAMOR DEVELOPMENTS

KEY MAP

GAZETTED SPEED

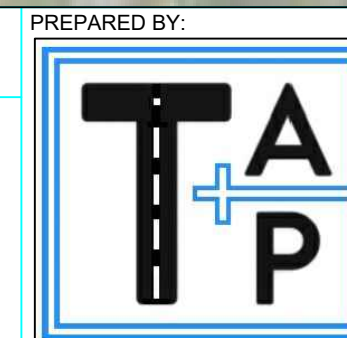
30/50

km/h

DESIGN SPEED

50

km/h



Traffic Analytics & Planning Inc.
info@trafficanalytics.ca
www.trafficanalytics.ca

SEAL:

PROJECT:

52 ST TOWNHOMES DEVELOPMENT

DWG. TITLE:

DWG. TITLE: AREA ROADWAYS, INTERSECTION LANING AND CONTROL & NEARBY BUS STOPS

PROJECT NO.:	DATE:	DWG. NO:
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PROJECT NO.:	DATE:	DWG. NO:
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25-002	NOVEMBER 5, 2025	1
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DRAWN BY:	CHECKED BY:	SCALE:	REV.:
P W	P W	N T S	0

3.0 ALTERNATIVE TRANSPORTATION MODES

Aside from travel by car, other modes of travel available to residents are:

Walking

There is a narrow pedestrian walkway on the east side of 52 St. from 6 Ave to 7A Ave., and 56 St. has sidewalk on both its east and west sides. On the east side of 52 St., there is sidewalk from 7A Ave. to 8A Ave.

In the east-west direction, 6 Ave. has sidewalks on both sides of the street, east of 53 St. 8A Ave. has a narrow pedestrian walkway on the south side of the street. For the most part, there currently are acceptable pedestrian walkways that provide future residents the ability to comfortably walk from their home to the various businesses and services on 56 St.

Transit

Located within a 2-to-3-minute walk on 52 St. are bus stops for the #601 and #602 buses. The bus stop locations are shown on [Figure 1](#), and [Figure 2](#) and [Figure 3](#) show the #601 bus route and #602 bus route respectively.

Bike

[Figure 4](#) shows the city's bike network. The major roadway east of the development site is 56 St. South of 6 Ave., 56 St has painted bike lanes in the northbound and southbound directions. For the segment of 56 St. between 1 Ave. to 6 Ave., the bike routes are informal in that there are no distinguishing features such as bike signage, or pavement markings that delineate a separate lane for cyclists so cyclists must share the travel lane with motorists (i.e., sharrows lane).

The major roadway west of the development site is English Bluff Road which does have dedicated bike lanes from 1 Ave. to 12 Ave.

North of the development site is 8A Ave. which has dedicated bike lanes from English Bluff Road to 55A St., and between 55A St. to 56 St. cyclists must share the road with motorists. For those who wish to continue further north by bike, they would use 53A St. to access 12 Ave. where they can continue their trip on 52 St.

The major bike route south of the development site is 1 Ave. where there are sharrows lanes from English Bluff Road to 56 St.

601 Bridgeport Station/South Delta/Boundary Bay



September 2018
For route and schedule information, visit www.translink.ca
CMBC Service Planning



LEGEND

- Regular Routing
- - Limited Service Routing
- Expo Line
- Canada Line
- TS Route Terminus/Scheduled Stop
- SkyTrain / Canada Line / West Coast Express Station

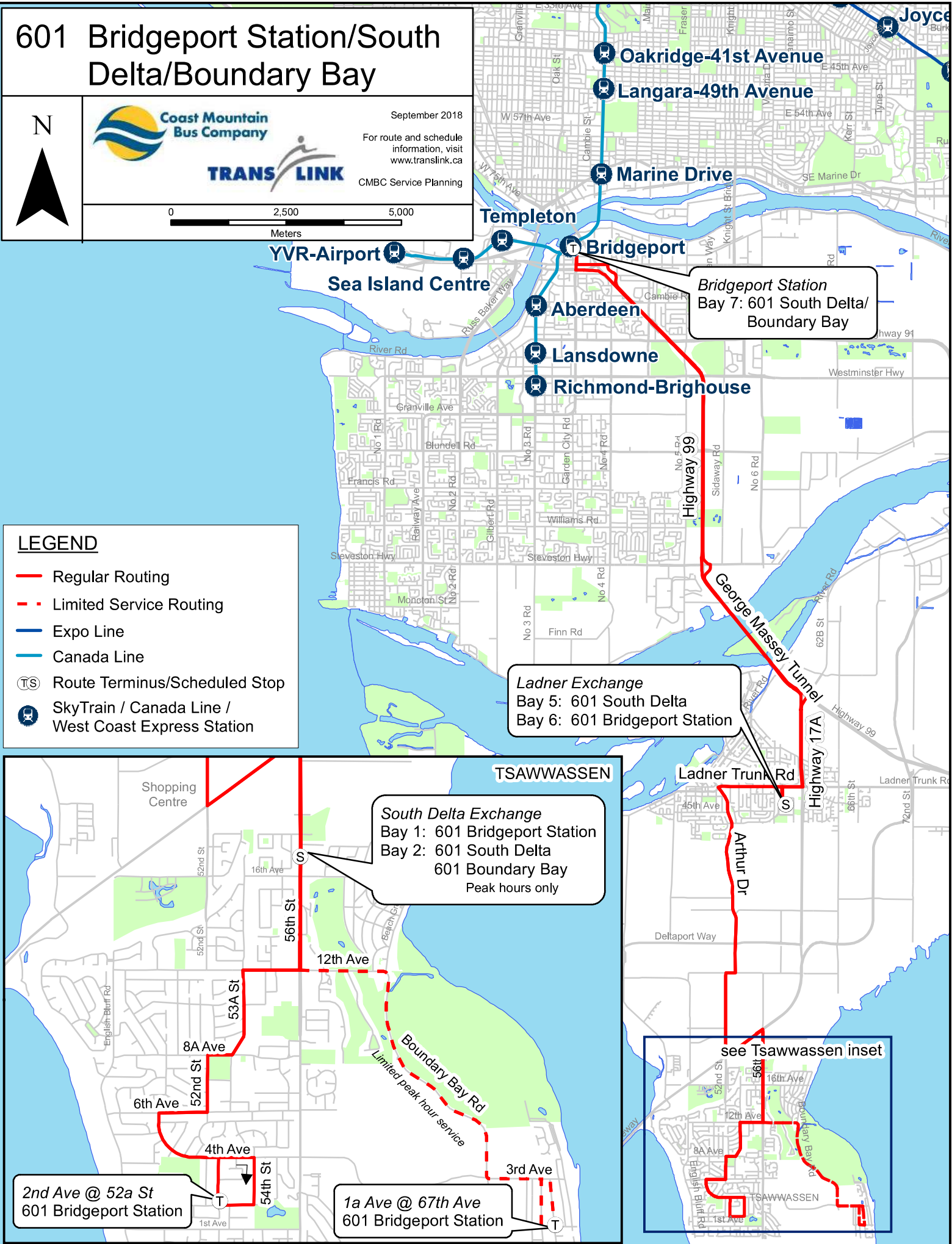


FIGURE 2

602 Bridgeport Station/ Tsawwassen Heights

N



September 2018

For route and schedule information, visit www.translink.ca

CMBC Service Planning

0 2,500 5,000
Meters

LEGEND

- Regular Routing
- Expo Line
- Canada Line
- TS Route Terminus/Scheduled Stop
- ST SkyTrain / Canada Line / West Coast Express Station

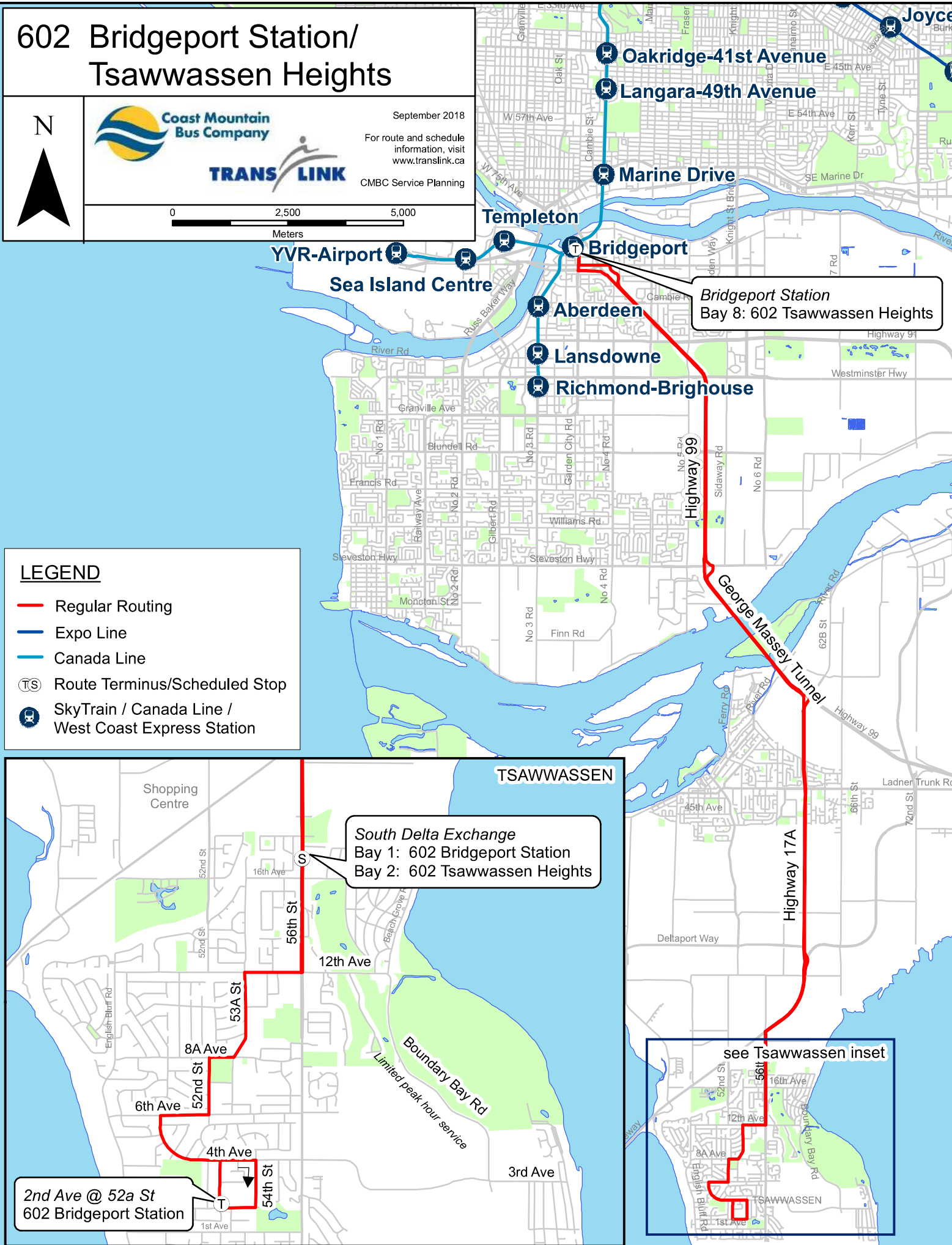


FIGURE 3

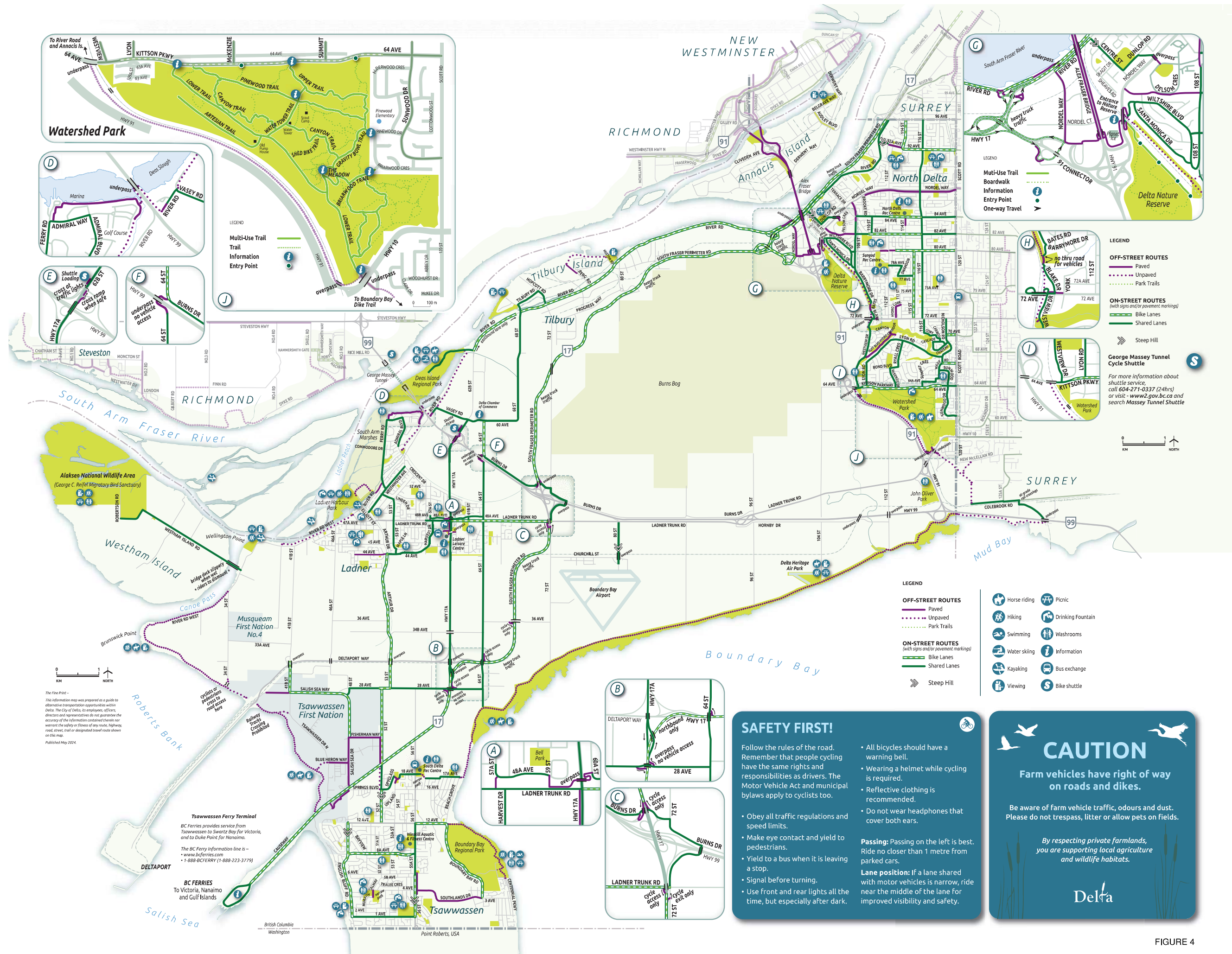


FIGURE 4

4.0 PROPOSED DEVELOPMENT

Proposed for the development site are seven buildings containing a total of 50 townhouses. There will also be a storage building located in the southeast corner of the site.

Townhouse Building 1	Units 1 – 8
Townhouse Building 2	Units 9 – 14
Townhouse Building 3	Units 15 – 22
Townhouse Building 4	Units 23 – 32
Townhouse Building 5	Units 33 – 40
Townhouse Building 6	Units 41 – 48
Townhouse Building 7	Units 49 & 50
Building 8	Storage & Bike Parking

Figure 5 – buro47 architecture's Sheet A100 shows the site layout.

REVISIONS

No. Date Notes

DRAWING ISSUES

1. 2025-07-10 Issued for Development Permit
2. 2025-10-31 Issued for Development Review

Project ID 2431 BRMR52

Drawn By SW, ND

Checked By JS

Date 2025-03-14

Per Date 2025-10-31 2:05:37 PM

Consultant Seal

Project Title

52 Street at
Pebble Hill
686 52 Street & 5236 7A AVE
Delta, BC V4M 1R4

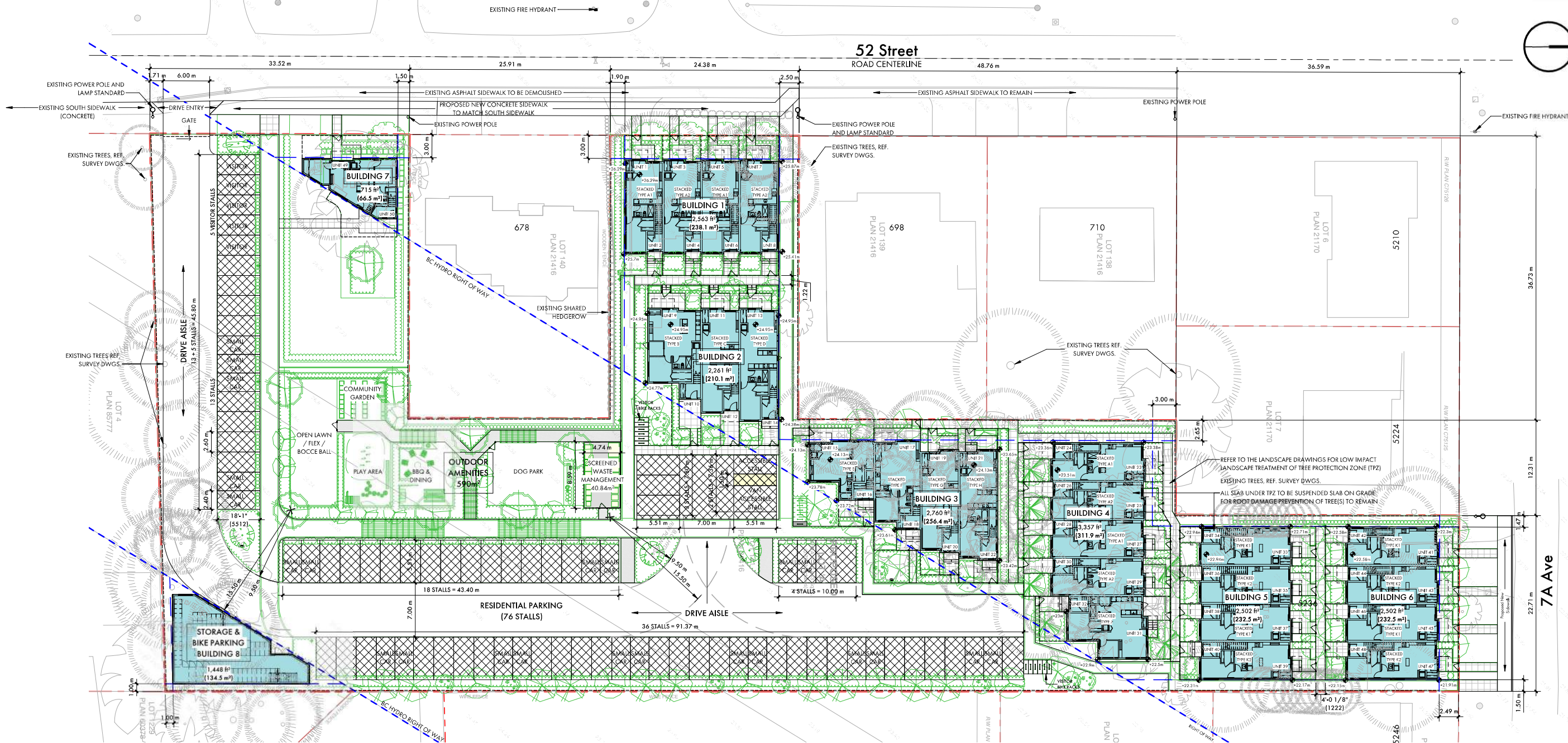
Sheet Title

Site Plan

Scale 1 : 250

Sheet No.

A100



Lot Area	7543.0 m ²
Impermeable Areas	
Driveway	1,200.7 m ²
Surface Parking	1,098.7 m ²
Concrete Patio	401.2 m ²
Walkways	858.0 m ²
Building Area	1,682.5 m ²
Total	5,241.1 m ²
Gross Floor Area	4,644.2 m ²
Floor Area Ratio	0.617

Site Legend

- Proposed Elevation (or existing unchanged)
- Property Line (See Survey DWGs)
- Proposed Setback Line
- Right of Way

Note:
• Existing Survey Drawing overlaid as halftone lines and text - Refer to Survey Drawings for additional details.
• Landscape Drawing overlaid as green lines and text - Refer to Landscape Drawings for additional details.

5.0 EXISTING CONDITIONS

5.1 Study Intersections

The following intersections were analyzed in this study:

- 52 St. / 6 Ave.
- 52 St. / 8A Ave.
- 56 St. / 6 Ave.
- 56 St. / 8A Ave.

At the two stop-sign controlled intersections (52 St. / 6 Ave. and 52 St. / 8A Ave.), all approaches have a single lane for all movements).

At the 56 St. / 6 Ave. intersection, the approaches have the following lane configuration:

- East leg is a combined left-thru-right lane.
- West leg is a combined left-thru-right lane.
- North leg has a left-turn lane, and a thru-right lane.
- South leg has a left-turn lane, and a thru-right lane.

At the 56 St. / 8A Ave. intersection, the approaches have the following lane configuration:

- East leg is a combined left-thru-right lane.
- West leg is a combined left-thru-right lane.
- North leg has a left-thru lane, and a thru-right lane.
- South leg has a left-thru lane, and a thru-right lane.

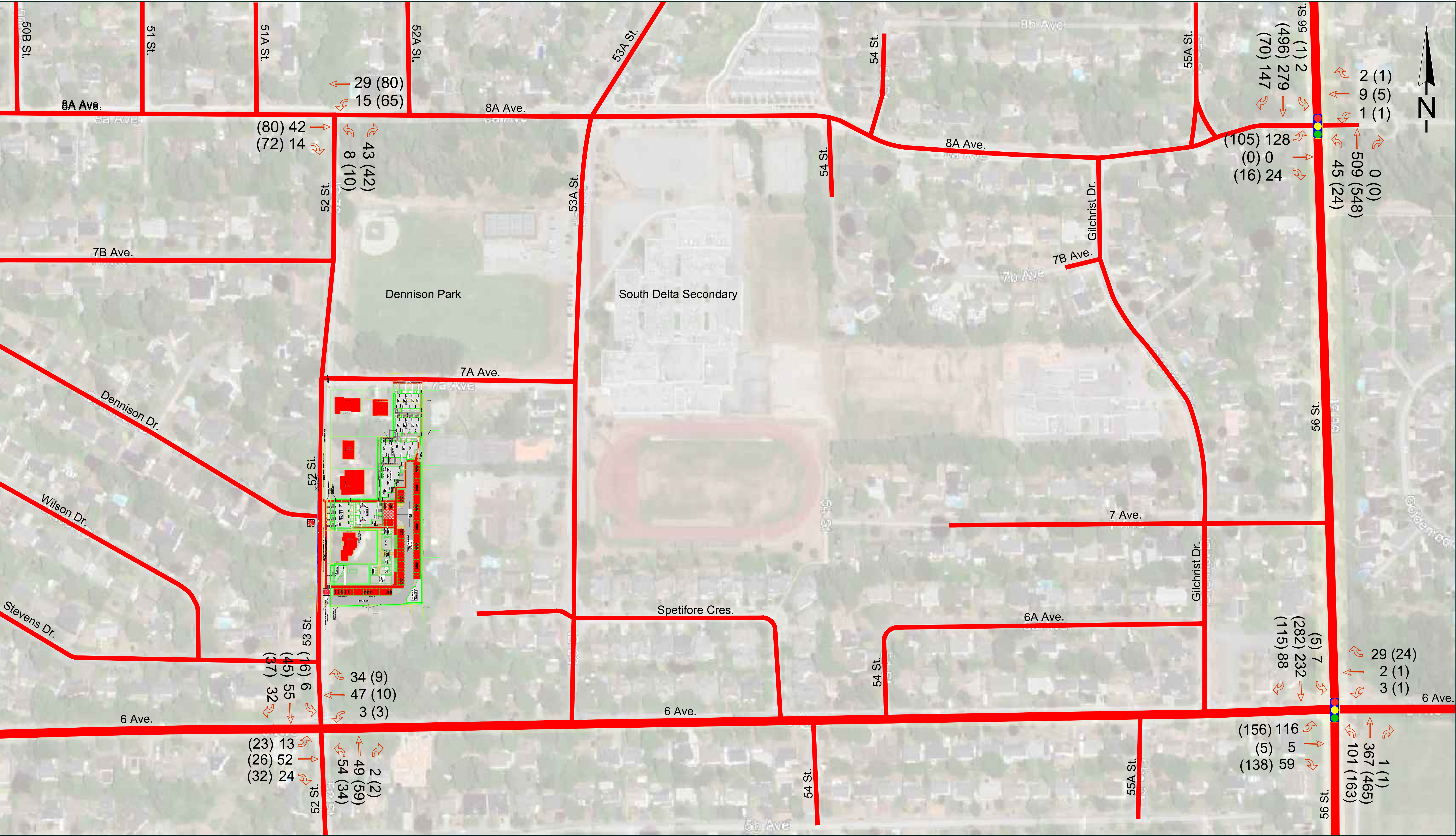
The lane configurations at the study intersections are shown in [Figure 1](#).

5.2 Traffic Volumes

Traffic counts were taken at the four study intersections between February 19th to 26th, 2025. A vehicle classification survey was also undertaken in conjunction with these traffic counts. At the two signalized intersections on 56 St., it was determined that the morning peak hour is from 8:15 AM to 9:15 AM, and the afternoon peak hour is from 3:00 PM to 4:00 PM for the 6 Ave. intersection, and at the 8A Ave. intersection, the morning peak hour was found to be from 8:15 AM to 9:15 AM, and the afternoon peak hour from 3:30 PM to 4:30 PM.

It was noted by city staff that the traffic count taken at the 52 St & 8A Ave. intersection coincided with the Delta School District's Pro D Day so traffic generated by South Delta Secondary School on a regular school day would not be captured in our Friday, February 21, 2025 count. Consequently, the eastbound through volume at the 52 St & 8A Ave. intersection was factored up by 20%, the westbound through volume was factored up by 10%, the westbound left-turn volume was factored up by 10%, and the northbound right-turn volumes are factored up by 10% to account for any school generated traffic that was missed.

The existing weekday AM and PM peak hour volumes at the four study intersections are shown in [Figure 6](#), and a copy of the intersection traffic count data can be found in [Appendix B](#).



GOVERNING AUTHORITY	CLIENT: BRAMOR DEVELOPMENTS	KEY MAP	GAZETTED SPEED 30/50 km/h	DESIGN SPEED 50 km/h	PREPARED BY: Traffic Analytics & Planning Inc. info@trafficanalytics.ca www.trafficanalytics.ca	SEAL:	PROJECT: 52 ST TOWNHOMES DEVELOPMENT			
							DWG. TITLE: EXISTING (2025) WEEKDAY AM & PM PEAK HOUR VOLUMES	PROJECT NO.: 25-002	DATE: APRIL 30, 2025	DWG. NO.: 6
							DRAWN BY: P.W.	CHECKED BY: P.W.	SCALE: N.T.S.	REV.: 0

5.3 Existing Intersection Operating Performances

The subject intersections were analyzed using the Synchro/SimTraffic software program. This software aids in calculating the average delay time to drivers in each lane of the intersection, with the average delay time corresponding to a letter grade from 'A' to 'F'. The letter grade refers to Level-of-Service (LOS), with 'A' representing 'excellent' intersection operating performance with minimal delay to drivers, and 'F' being 'failure' of the intersection with excessive delay to drivers. An overall delay for the intersection is also determined which represents the intersection's operating performance as a whole. **The Highway Capacity Manual considers a Level-of-Service 'D' or better to be acceptable intersection operating performance, a Level-of-Service 'E' indicates the intersection is near or at capacity, and a Level-of-Service 'F' indicates that the intersection's capacity is exceeded and the intersection is at failure.**

Table 1 shows the relationship between average delay and the associated LOS grade for STOP sign-controlled intersections, and Table 2 shows the relationship between average delay and the associated LOS grade for signalized intersections.

Table 1 – Levels-of-Service for Unsignalized Intersections

Average Delay (in seconds/vehicle)	Level-of-Service
≤ 10	A
> 10 and ≤ 15	B
> 15 and ≤ 25	C
> 25 and ≤ 35	D
> 35 and ≤ 50	E
> 50	F

Table 2 – Levels-of-Service for Signalized Intersections

Average Delay (in seconds/vehicle)	Level-of-Service
≤ 10	A
> 10 and ≤ 20	B
> 20 and ≤ 35	C
> 35 and ≤ 55	D
> 55 and ≤ 80	E
> 80	F

The Synchro results for the intersection operating performances for the two unsignalized intersections (52 St. / 6 Ave. and 52 St. / 8A Ave.), and the two signalized intersections (56 St. / 6 Ave. and 56 St. / 8A Ave.), are summarized in Table 3. To determine the heavy vehicle percentages to be used in our analyses, vehicle classification data collected during the traffic counts were used.

Table 3 – Existing Intersection Operating Performance

		Approach LOS and Delay (sec.)			
		NB	SB	EB	WB
52 St. / 6 Ave. (Unsignalized)					
AM Peak Hour	Overall Intersection LOS = A	LOS = B Delay = 11.39 sec	LOS = B Delay = 10.38 sec	LOS = A Delay = 1.08 sec	LOS = A Delay = 0.26 sec
PM Peak Hour	Overall Intersection LOS = A	LOS = B Delay = 10.58 sec	LOS = A Delay = 9.93 sec	LOS = A Delay = 2.07 sec	LOS = A Delay = 1 sec
52 St. / 8A Ave. (Unsignalized)					
AM Peak Hour	Overall Intersection LOS = A	LOS = A Delay = 8.89 sec	N/A	LOS = A Delay = 0 sec	LOS = A Delay = 2.51 sec
PM Peak Hour	Overall Intersection LOS = A	LOS = A Delay = 9.54 sec	N/A	LOS = A Delay = 0 sec	LOS = A Delay = 3.44 sec
56 St. / 6 Ave. (Signalized)					
AM Peak Hour	Overall Intersection LOS = A	LOS = A Delay = 6.4 sec	LOS = A Delay = 5.9 sec	LOS = B Delay = 15.3 sec	LOS = B Delay = 11 sec
PM Peak Hour	Overall Intersection LOS = B	LOS = A Delay = 9.8 sec	LOS = A Delay = 8.4 sec	LOS = B Delay = 15.3 sec	LOS = B Delay = 11.7 sec
56 St. / 8A Ave. (Signalized)					
AM Peak Hour	Overall Intersection LOS = A	LOS = A Delay = 8.6 sec	LOS = A Delay = 7.9 sec	LOS = B Delay = 10.5 sec	LOS = A Delay = 9.2 sec
AM Peak Hour	Overall Intersection LOS = A	LOS = A Delay = 4.1 sec	LOS = A Delay = 4.1 sec	LOS = B Delay = 13.3 sec	LOS = B Delay = 11.8 sec

Our analyses found that the 52 St. / 6 Ave. intersection currently operates at an overall LOS 'A' during the weekday AM and PM peak hours, with all approaches operating at a LOS 'B' or better. A LOS 'B' is considered 'very good' operating performance.

At the 52 St. / 8A Ave. intersection, our results found that this intersection currently operates at an overall LOS 'A' during the weekday AM and PM peak hours, with all approaches operating at a LOS 'A' during the AM and PM peak hours. LOS 'A' is considered to be 'excellent' intersection operating performance.

At the 56 St. / 6 Ave. intersection, our results found that this intersection currently operates at an overall LOS 'A' during the weekday AM peak hour, and an overall LOS 'B' during the weekday PM peak hour. Both the northbound and southbound approaches were found to operate at a LOS 'A' during both the weekday AM and PM peak hours, with the eastbound and westbound approaches operating at LOS 'B' during the weekday AM and PM peak hours. LOS 'B' is considered to be 'very good' intersection operating performance.

At the 56 St. / 8A Ave. intersection, our results found that this intersection currently operates at an overall LOS 'A' during the weekday AM and PM peak hours. Both the northbound and southbound approaches were found to operate at a LOS 'A' during the weekday AM and PM peak hours, with the eastbound approach operating at LOS 'B' during the weekday AM peak hour and the westbound approach operating at LOS 'A' during the weekday AM peak hour and at a LOS 'B' during the weekday PM peak hour. LOS 'B' is considered to be 'very good' intersection operating performance.

The detailed Synchro result sheets for existing conditions can be found in [Appendix C](#).

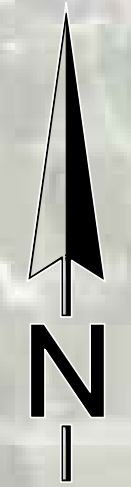
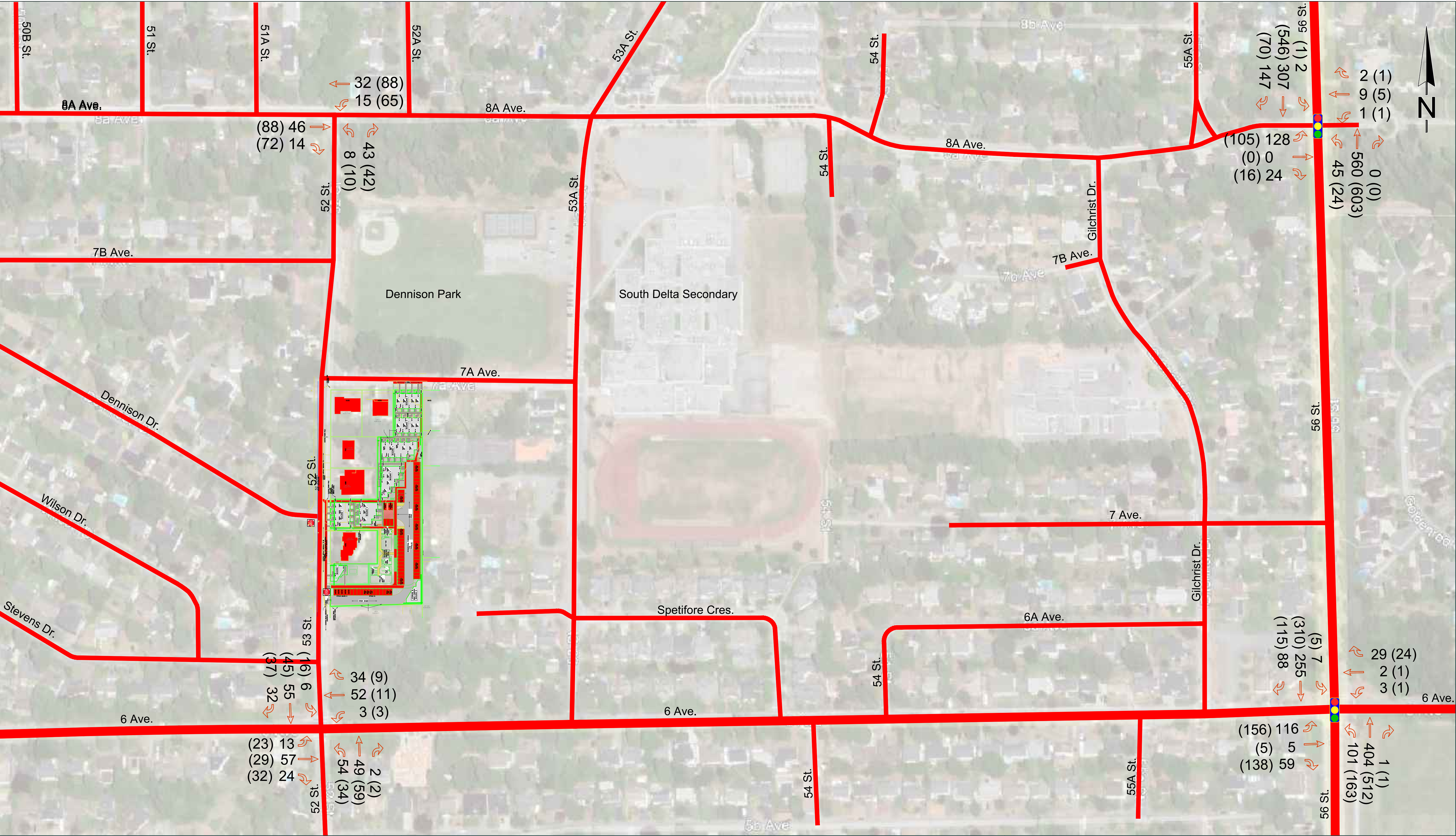
6.0 YEAR 2030 & 2035 BACKGROUND CONDITIONS

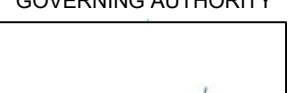
6.1 Annual Growth Rate

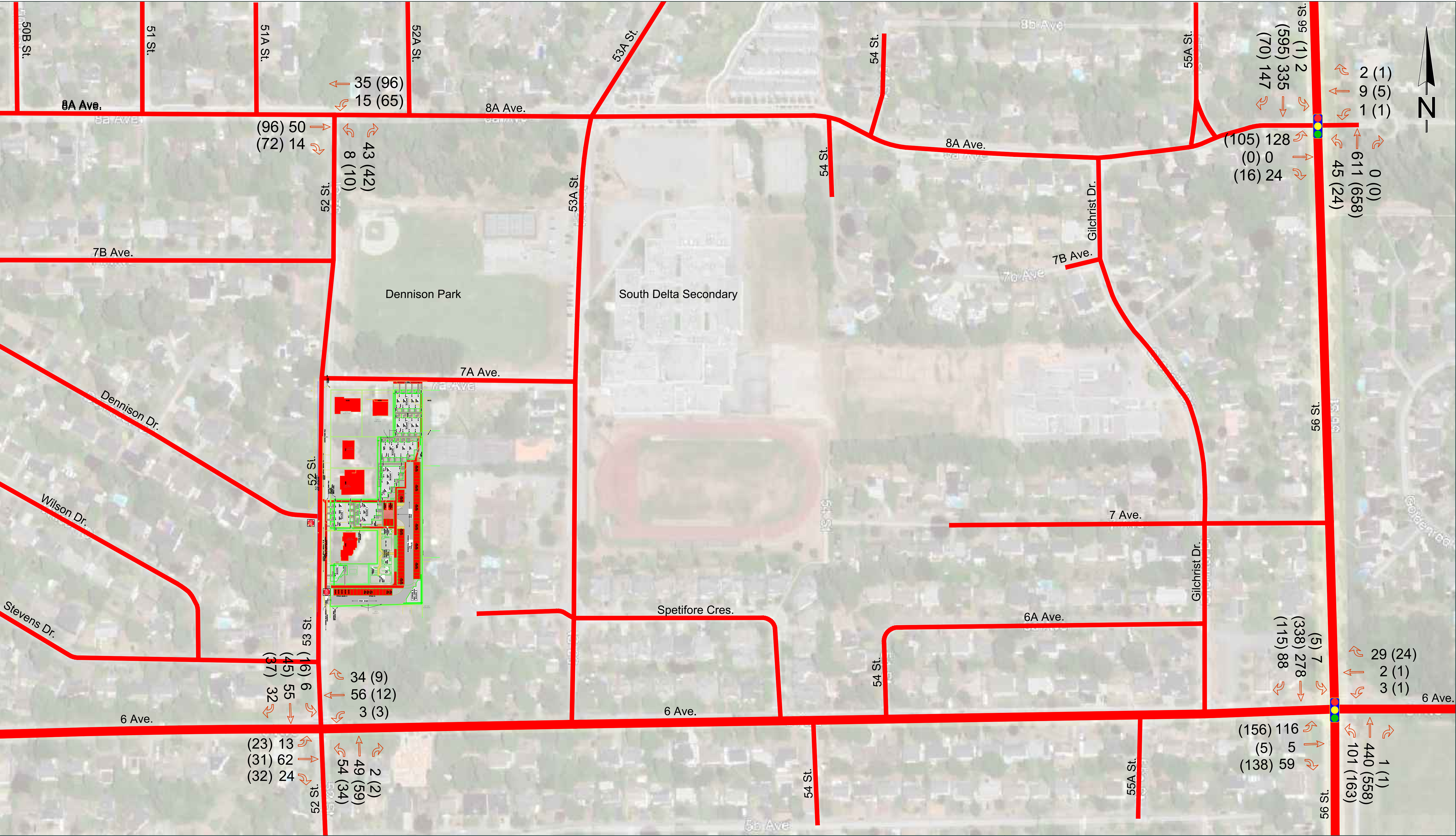
To account for regional traffic growth on 56 St., we applied a linear growth rate of 2%/year to the weekday AM & PM peak hour through traffic volumes, as well as the through traffic volumes on 6 Ave. and 8A Ave.

It is assumed that the proposed townhomes development will be fully built and occupied at Year 2030. Since we wish to compare how the operating performance of the subject intersections at Year 2030 without, and then with, the 50 townhomes completed and occupied, the before scenario is referred to as the background scenario. The Year 2030 background traffic volumes are shown in [Figure 7](#).

We further assessed traffic conditions at a future 5-year post-development time horizon (Year 2035 Background) to assess the four-study intersection's operating performance 5-years in the future, but without site occupancy. The resulting Year 2035 Background traffic volumes are shown in [Figure 8](#).



GOVERNING AUTHORITY 	CLIENT: BRAMOR DEVELOPMENTS	KEY MAP	GAZETTED SPEED	DESIGN SPEED	PREPARED BY:  Traffic Analytics & Planning Inc. info@trafficanalytics.ca www.trafficanalytics.ca	SEAL:	PROJECT: 52 ST TOWNHOMES DEVELOPMENT			
			30/50 km/h	50 km/h			DWG. TITLE: 2030 BACKGROUND WEEKDAY AM & PM PEAK HOUR TRAFFIC VOLUMES			
							PROJECT NO.: 25-002	DATE: NOVEMBER 5, 2025	DWG. NO: 7	
							DRAWN BY: P.W.	CHECKED BY: P.W.	SCALE: N.T.S.	REV.: 0



GOVERNING AUTHORITY 	CLIENT: BRAMOR DEVELOPMENTS	KEY MAP	GAZETTED SPEED	DESIGN SPEED	PREPARED BY:  Traffic Analytics & Planning Inc. info@trafficanalytics.ca www.trafficanalytics.ca	SEAL:	PROJECT: 52 ST TOWNHOMES DEVELOPMENT			
			30/50 km/h	50 km/h			DWG. TITLE: 2035 BACKGROUND WEEKDAY AM & PM PEAK HOUR TRAFFIC VOLUMES			
							PROJECT NO.: 25-002	DATE: NOVEMBER 5, 2025	DWG. NO.: 8	
DRAWN BY: P.W.		CHECKED BY: P.W.		SCALE: N.T.S.		REV.: 0				

6.2 Year 2030 and 2025 Background Intersection Performance

The Year 2030 Background traffic volumes were input into the Synchro model to assess what the future operating performance at the four study intersections are likely to operate at before full build-out and occupancy of the development. The Synchro results are summarized in [Table 4](#) below, and a copy of the Synchro reports can be found in [Appendix D](#).

**Table 4 – Year 2030 Background Intersection Operating Performance
(i.e., without traffic generated by the 50 townhomes)**

		Approach LOS and Delay (sec.)			
		NB	SB	EB	WB
52 St. / 6 Ave. (Unsignalized)					
AM Peak Hour	Overall Intersection LOS = A	LOS = B Delay = 11.5 sec	LOS = B Delay = 10.5 sec	LOS = A Delay = 1 sec	LOS = A Delay = 0.3 sec
PM Peak Hour	Overall Intersection LOS = A	LOS = B Delay = 10.62 sec	LOS = A Delay = 9.95 sec	LOS = A Delay = 2 sec	LOS = A Delay = 0.96 sec
52 St. / 8A Ave. (Unsignalized)					
AM Peak Hour	Overall Intersection LOS = A	LOS = A Delay = 8.92 sec	N/A	LOS = A Delay = 0 sec	LOS = A Delay = 2.35 sec
PM Peak Hour	Overall Intersection LOS = A	LOS = A Delay = 9.61 sec	N/A	LOS = A Delay = 0 sec	LOS = A Delay = 3.26 sec
56 St. / 6 Ave. (Signalized)					
AM Peak Hour	Overall Intersection LOS = A	LOS = A Delay = 6.2 sec	LOS = A Delay = 5.6 sec	LOS = B Delay = 18.1 sec	LOS = B Delay = 15.5 sec
PM Peak Hour	Overall Intersection LOS = B	LOS = B Delay = 10.4 sec	LOS = A Delay = 8.8 sec	LOS = B Delay = 15.3 sec	LOS = B Delay = 11.7 sec
56 St. / 8A Ave. (Signalized)					

AM Peak Hour	Overall Intersection LOS = A	LOS = A Delay = 5.1 sec	LOS = A Delay = 4.6 sec	LOS = B Delay = 13 sec	LOS = B Delay = 11.2 sec
AM Peak Hour	Overall Intersection LOS = A	LOS = A Delay = 4.3 sec	LOS = A Delay = 4.2 sec	LOS = B Delay = 13.3 sec	LOS = B Delay = 11.8 sec

Our analyses determined that the 52 St. / 6 Ave. intersection will operate at an overall LOS 'A' during the weekday AM and PM peak hours. Looking at the individual approaches, the northbound and southbound approaches are anticipated to operate at a LOS 'B' during the weekday AM peak hour while the eastbound and westbound approaches are anticipated to operate at a LOS 'A'. During the weekday PM peak hour, only the northbound approach is anticipated to operate at a LOS 'B'. The other three approaches will operate at a LOS 'A'. LOS 'B' is considered 'very good' intersection operating performance.

Our analyses determined that the 52 St. / 8A Ave. intersection will operate at an overall LOS 'A' during the weekday AM and PM peak hours, and all approaches also operating at a LOS 'A' during the morning and afternoon peak hours. LOS 'A' is considered 'excellent' intersection operating performance.

Our analyses determined that the 56 St. / 6 Ave. intersection will operate at an overall LOS 'A' during the weekday AM peak hour and at a LOS 'B' during the weekday PM peak hour. Looking at the individual approaches, the northbound and southbound approaches are anticipated to operate at a LOS 'A' during the weekday AM peak hour while the eastbound and westbound approaches are anticipated to operate at a LOS 'B'. During the weekday PM peak hour, the southbound approach is anticipated to operate at a LOS 'B' while the other three approaches will operate at a LOS 'A'. LOS 'B' is considered 'very good' intersection operating performance.

Our analyses determined that the 56 St. / 8A Ave. intersection will operate at an overall LOS 'A' during the weekday AM and PM peak hours. Looking at the individual approaches, the northbound and southbound approaches are anticipated to operate at a LOS 'A' during the weekday AM and PM peak hours while the eastbound and westbound approaches operate at a LOS 'B' during both the weekday AM and PM peak hours. LOS 'B' is considered 'very good' intersection operating performance.

We also considered the operation of the four study intersections at a 5-year post site build-out. The 2035 Background traffic volumes shown in Figure 8 were input into the Synchro model to assess what the future operating performance the intersections are likely to operate at without site traffic. The Synchro results for the Year 2035 Background scenario are summarized in [Table 5](#), and a copy of the detailed Synchro reports can be found in [Appendix E](#).

**Table 5 – Year 2035 Background Intersection Operating Performance
(i.e., without traffic generated by the 50 townhomes)**

		Approach LOS and Delay (sec.)			
		NB	SB	EB	WB
52 St. / 6 Ave. (Unsignalized)					
AM Peak Hour	Overall Intersection LOS = A	LOS = B Delay = 11.64 sec	LOS = B Delay = 10.54 sec	LOS = A Delay = 0.98 sec	LOS = A Delay = 0.24 sec
PM Peak Hour	Overall Intersection LOS = A	LOS = B Delay = 10.65 sec	LOS = A Delay = 9.97 sec	LOS = A Delay = 1.95 sec	LOS = A Delay = 0.92 sec
52 St. / 8A Ave. (Unsignalized)					
AM Peak Hour	Overall Intersection LOS = A	LOS = A Delay = 8.95 sec	N/A	LOS = A Delay = 0 sec	LOS = A Delay = 2.22 sec
PM Peak Hour	Overall Intersection LOS = A	LOS = A Delay = 9.68 sec	N/A	LOS = A Delay = 0 sec	LOS = A Delay = 3.11 sec
56 St. / 6 Ave. (Signalized)					
AM Peak Hour	Overall Intersection LOS = A	LOS = A Delay = 7.1 sec	LOS = A Delay = 6.4 sec	LOS = B Delay = 12.7 sec	LOS = B Delay = 11 sec
PM Peak Hour	Overall Intersection LOS = B	LOS = B Delay = 10.5 sec	LOS = A Delay = 8.7 sec	LOS = B Delay = 17.8 sec	LOS = B Delay = 13.6 sec
56 St. / 8A Ave. (Signalized)					
AM Peak Hour	Overall Intersection LOS = A	LOS = A Delay = 5.3 sec	LOS = A Delay = 4.7sec	LOS = B Delay = 13 sec	LOS = B Delay = 11.2 sec
PM Peak Hour	Overall Intersection LOS = A	LOS = A Delay = 4.5 sec	LOS = A Delay = 4.4 sec	LOS = B Delay = 13.3 sec	LOS = B Delay = 11.8 sec

Our analyses determined that the 52 St. / 6 Ave. intersection will operate at an overall LOS 'A' during the weekday AM and PM peak hours. Looking at the individual approaches, the northbound and southbound approaches are anticipated to operate at a LOS 'B' during the weekday AM peak hour while the eastbound and westbound approaches are anticipated to operate at a LOS 'A'. During the weekday PM peak hour, only the northbound approach is anticipated to operate at a LOS 'B'. The other three approaches will operate at a LOS 'A'. LOS 'B' is considered 'very good' intersection operating performance.

The 52 St. / 8A Ave. intersection is anticipated to operate at an overall LOS 'A' during the weekday AM and PM peak hours, with all approaches operating at a LOS 'A' during both the AM and PM peak hours. LOS 'A' is considered 'excellent'.

Our analyses determined that the 56 St. / 6 Ave. intersection will operate at an overall LOS 'A' during the weekday AM peak hour and at a LOS 'B' during the weekday PM peak hour. Looking at the individual approaches, the northbound and southbound approaches are anticipated to operate at a LOS 'A' during the weekday AM peak hour while the eastbound and westbound approaches are anticipated to operate at a LOS 'B'. During the weekday PM peak hour, the southbound approach is anticipated to operate at a LOS 'B' while the other three approaches will operate at a LOS 'A'. LOS 'B' is considered 'very good' intersection operating performance.

The 56 St. / 8A Ave. intersection is anticipated to operate at an overall LOS 'A' during the weekday AM and PM peak hours, with the northbound and southbound approaches operating at a LOS 'A' during the weekday AM and PM peak hours, and the eastbound and westbound approaches operating at a LOS 'B' during the weekday AM and PM peak hours. LOS 'B' is considered to be 'very good' intersection operating performance.

7.0 SITE TRIP GENERATION AND ASSIGNMENT

To estimate the number of trips generated by the 50 townhomes during the weekday AM and PM peak hours, ITE Trip Generation rates for low-rise multi-family residential housing were used. [Table 6](#) shows the average number of trips generated based on 0.39 trips per townhouse during the weekday AM peak hour, and 0.52 trips per townhouse during the weekday PM peak hour.

The total number of trips generated was further broken down by the % entering and % exiting to derive the number vehicles entering and exiting the site.

There are bus stops for the #601 and #602 buses on 52nd St within a few minutes' walk to the north and south of the site. To account for those future residents of the development who choose to commute by bus, we have assumed 10% of site trips will be via transit. The resulting number of trips in and out by car is shown in the table above.

The ITE trip generation rate sheets can be found in [Appendix E](#).

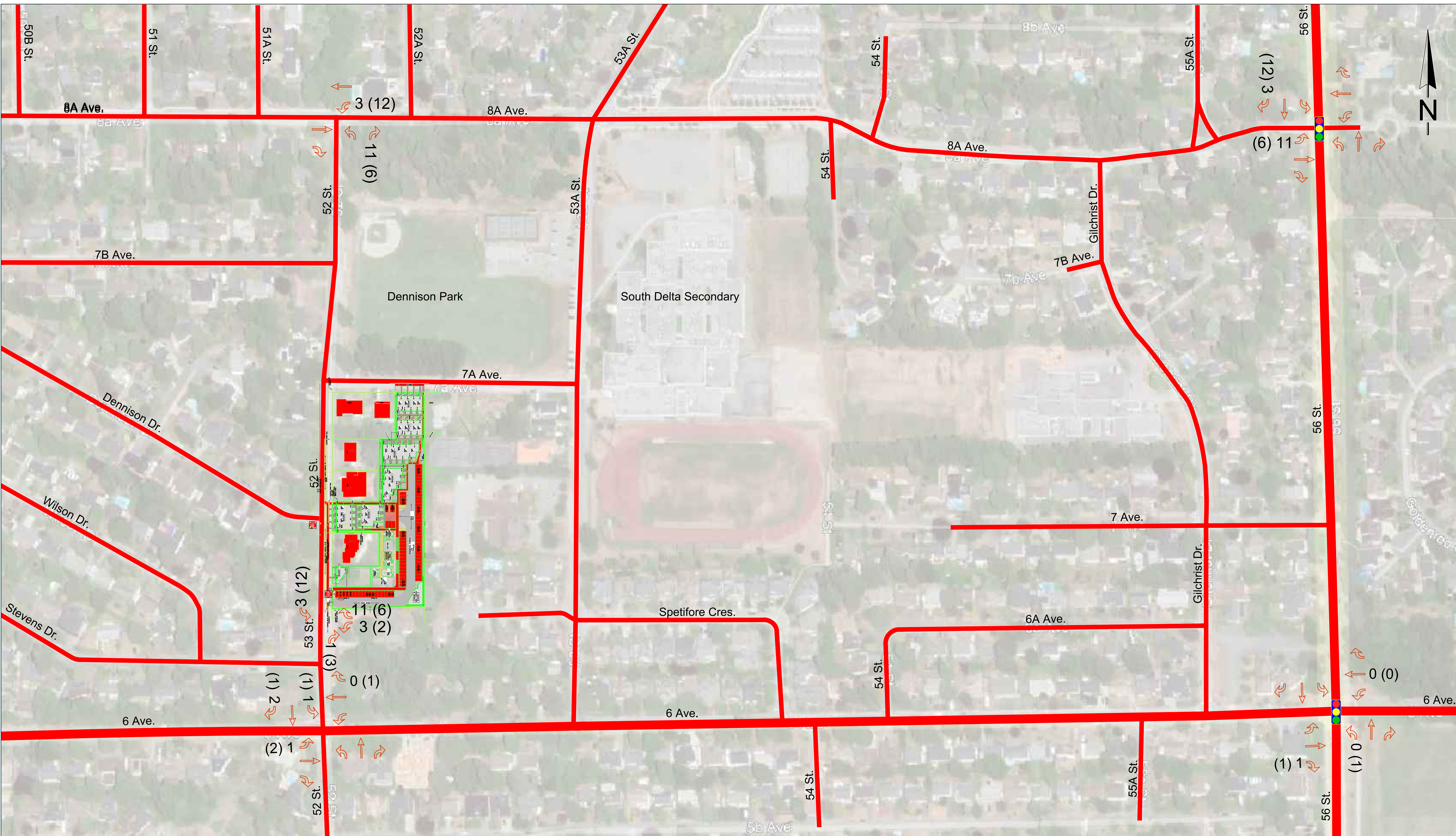
Table 6 – Weekday AM and PM Peak Hour Trip Generation

CATEGORY: LAND USE CODE 220		50 Townhouses	
TIME PERIOD:		Weekday AM Peak	Weekday PM Peak
TRIP GENERATION	Average Trip Rate	0.39 trips / DU	0.52 trips / DU
	Total Trips Generated	20	26
	Enter / Exit Split	20% / 80%	65% / 35%
	In / Out Trips	4 / 16	17 / 9
	Reduction for 10% Transit Riders	0 / 2	2 / 1
	Total New Vehicle Trips	4 Trips In / 14 Trips Out	15 Trips In / 8 Trips Out

To determine the directional distribution for trips generated by the development, it was assumed that during the weekday am and pm peak hours, 80% of site trips are from/to the north, 10% of site trips are from/to the south, and 10% of site trips are from/to the west. The resultant trip assignment based on the directional distribution is shown in [Table 7](#), and the resulting site-generated trips as assigned to area roads are shown in [Figure 9](#). Figure 9 also shows the number of vehicle trips entering and exiting at the site's sole driveway.

Table 7 – Directional Distribution for Site Traffic

Inbound / Outbound Direction at Site Driveway	DIRECTIONAL DISTRIBUTION FOR SITE- GENERATED TRAFFIC	AM	PM
Entering Site from the North	80%	3	12
Exiting Site to the North	80%	11	6
Entering Site from the South	10%	0	1
Exiting Site to the South	10%	1	1
Entering Site from the West	10%	1	2
Exiting Site to the West	10%	2	1



CLIENT:

BRAMOR DEVELOPMENTS

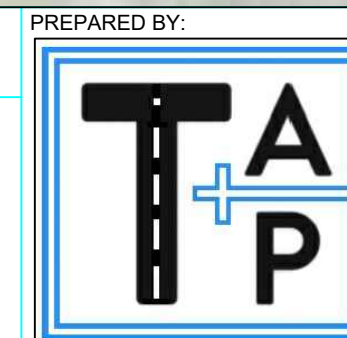
KEY MAP

GAZETTED SPEED

30/50
km/h

DESIGN SPEED

50
km/h



Traffic Analytics & Planning Inc.
info@trafficanalytics.ca
www.trafficanalytics.ca

SEAL:

PROJECT: 52 ST TOWNHOMES DEVELOPMENT

DWG. TITLE: SITE-GENERATED WEEKDAY AM & PM
PEAK HOUR TRAFFIC ASSIGNMENT

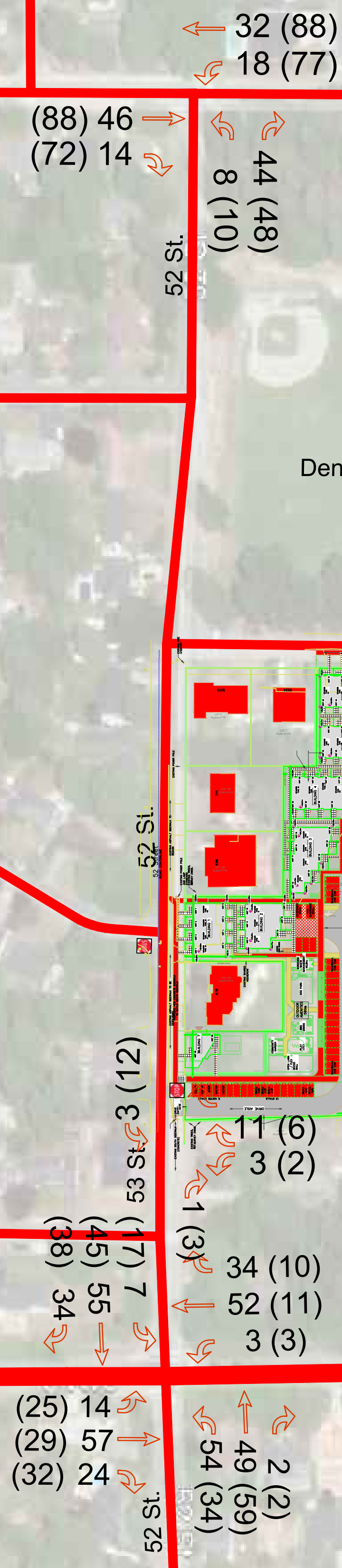
PROJECT NO.: 25-002	DATE: NOVEMBER 5, 2025	DWG. NO.: 9	
DRAWN BY: P.W.	CHECKED BY: P.W.	SCALE: N.T.S.	REV.: 0

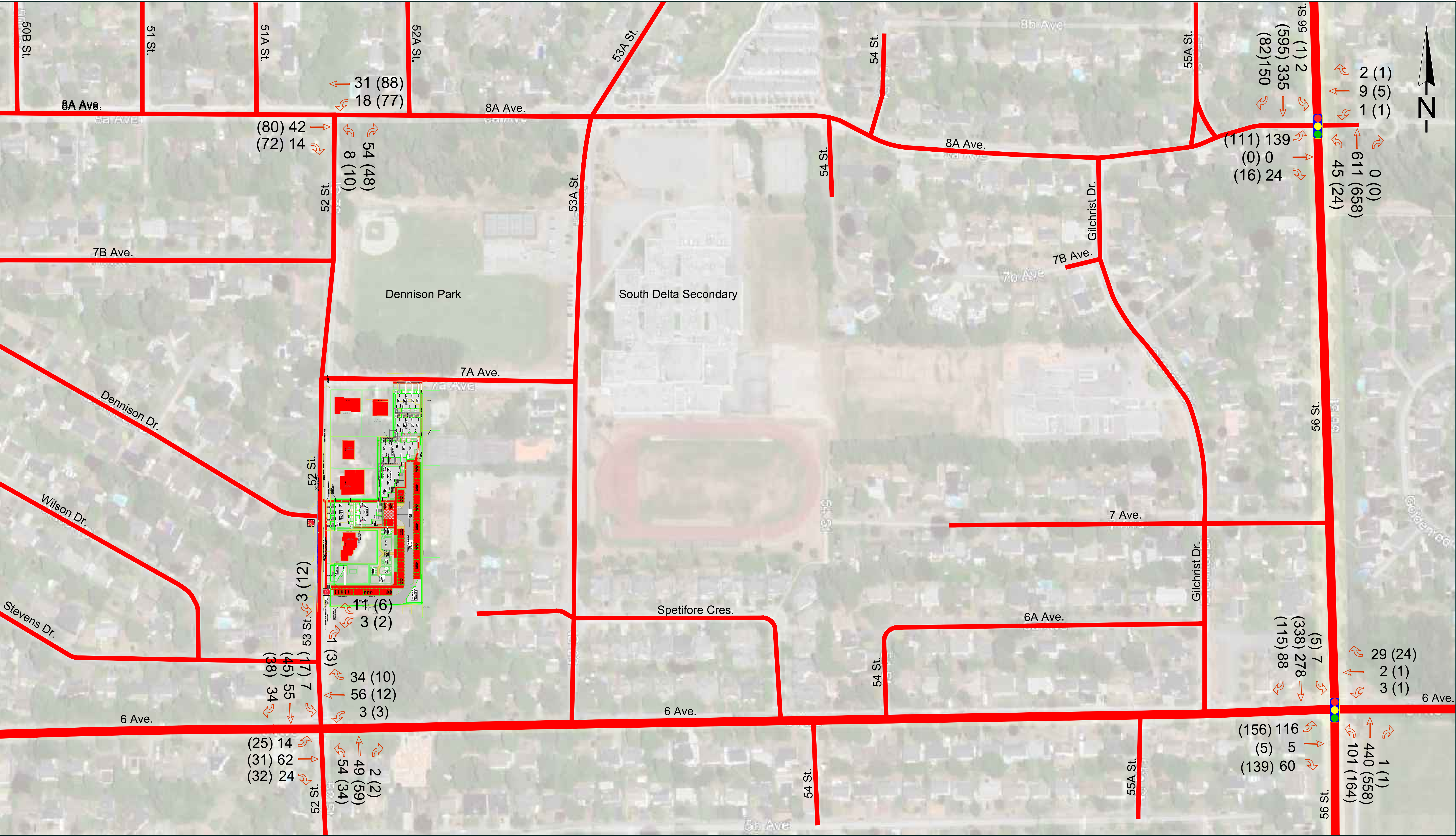
8.0 POST-DEVELOPMENT CONDITIONS

8.1 Traffic Volumes

To derive the Year 2030 post-site build-out weekday AM and PM peak hour traffic volumes, the number of new vehicle trips generated by the proposed 50 townhomes shown in Figure 8, were added to the Year 2030 Background traffic volumes (Figure 6). The resulting Year 2030 weekday AM and PM peak hour traffic volumes at full site occupancy are shown in [Figure 10](#).

To derive the Year 2035 (5-years' post-site build-out) weekday AM and PM peak hour traffic volumes, the number of new vehicle trips generated by the proposed 50 townhomes shown in Figure 8 were added to the Year 2035 Background traffic volumes (Figure 7). The resulting Year 2035 weekday AM and PM peak hour traffic volumes are shown in [Figure 11](#).





GOVERNING AUTHORITY 	CLIENT: BRAMOR DEVELOPMENTS	KEY MAP	GAZETTED SPEED	DESIGN SPEED	PREPARED BY:  Traffic Analytics & Planning Inc. info@trafficanalytics.ca www.trafficanalytics.ca	SEAL:	PROJECT: 52 ST TOWNHOUSES AND SINGLE FAMILY HOUSE DEVELOPMENT			
			30/50 km/h	50 km/h			DWG. TITLE: 2035 (5-YRS. POST SITE BUILD-OUT & OCCUPANCY) WEEKDAY AM & PM PEAK HOUR TRAFFIC VOLUMES			
							PROJECT NO.: 25-002	DATE: NOVEMBER 5, 2025	DWG. NO.: 11	
			DRAWN BY: P.W.	CHECKED BY: P.W.	SCALE: N.T.S.	REV.: 0				

8.2 Intersection Operating Conditions

The Synchro results for the study intersections at full site build-out and occupancy in 2030 are summarized in [Table 8](#). The results indicate that the intersections continue to operate at very good to excellent levels-of-service.

Table 8 – Year 2030 Full Build-out Intersection Operating Performance

		Approach LOS and Delay (sec.)			
		NB	SB	EB	WB
52 St. / 6 Ave.					
AM Peak Hour	Overall Intersection LOS = A	LOS = B Delay = 11.56 sec	LOS = B Delay = 10.49 sec	LOS = A Delay = 1.1 sec	LOS = A Delay = 0.25 sec
PM Peak Hour	Intersection LOS = A	LOS = B Delay = 10.68	LOS = A Delay = 10 sec	LOS = A Delay = 2.12 sec	LOS = A Delay = 0.92 sec
52 St. / 8A Ave.					
AM Peak Hour	Overall Intersection LOS = A	LOS = A Delay = 8.93 sec	N/A	LOS = A Delay = 0 sec	LOS = A Delay = 2.66 sec
PM Peak Hour	Intersection LOS = A	LOS = A Delay = 9.65 sec	N/A	LOS = A Delay = 0 sec	LOS = A Delay = 3.6 sec
56 St. / 6 Ave.					
AM Peak Hour	Overall Intersection LOS = A	LOS = A Delay = 6.8 sec	LOS = A Delay = 6.2 sec	LOS = B Delay = 12.7 sec	LOS = B Delay = 11 sec
PM Peak Hour	Intersection LOS = B	LOS = B Delay = 10.3 sec	LOS = A Delay = 8.6 sec	LOS = B Delay = 17.1 sec	LOS = B Delay = 13.1 sec

56 St. / 8A Ave.					
AM Peak Hour	Overall Intersection LOS = A	LOS = A Delay = 5.3 sec	LOS = A Delay = 4.8 sec	LOS = B Delay = 13 sec	LOS = B Delay = 11 sec
AM Peak Hour	Overall Intersection LOS = A	LOS = A Delay = 4.4 sec	LOS = A Delay = 4.4 sec	LOS = B Delay = 13.3 sec	LOS = B Delay = 11.6 sec

Our analyses determined that the 52 St. / 6 Ave. intersection will continue to operate at an overall LOS 'A' during the weekday AM and PM peak hours. Looking at the individual approaches, the northbound and southbound approaches are anticipated to operate at a LOS 'B' during the weekday AM peak hour while the eastbound and westbound approaches are anticipated to operate at a LOS 'A'. During the weekday PM peak hour, only the northbound approach is anticipated to operate at a LOS 'B'. The other three approaches will operate at a LOS 'A'. LOS 'B' is considered 'very good' intersection operating performance.

Our analyses determined that the 52 St. / 8A Ave. intersection will continue to operate at an overall LOS 'A' during the weekday AM and PM peak hours, and all approaches also operating at a LOS 'A' during the morning and afternoon peak hours. LOS 'A' is considered 'excellent' intersection operating performance.

The 56 St. / 6 Ave. intersection is anticipated to operate at an overall LOS 'A' during the weekday AM peak hour, and an overall LOS 'B' during the weekday PM peak hour. During the weekday AM peak hour, both the northbound and southbound approaches are anticipated to operate at a LOS 'A', while the eastbound and westbound are anticipated to operate at a LOS 'B'. During the weekday PM peak hour, it is anticipated that the southbound approach will operate at a LOS 'A', with all others at a LOS 'B'. LOS 'B' is considered 'very good' intersection operating performance.

The 56 St. / 8A Ave. intersection is anticipated to operate at an overall LOS 'A' during the weekday AM and PM peak hours, with the northbound and southbound approaches operating at a LOS 'A' during the weekday AM and PM peak hours, and the eastbound and westbound approaches operating at a LOS 'B' during the weekday AM and PM peak hours. LOS 'B' is considered 'very good' intersection operating performance.

The Synchro results for this scenario can be found in [Appendix F](#).

Summarized in [Table 9](#) are our results for the operation of the four study intersections at our Year 2035 (5-years' post site build-out) scenario.

Table 9 – Year 2035 (5-Years Post Site Build-out) Intersection Operating Performance

		Approach LOS and Delay (sec.)			
		NB	SB	EB	WB
52 St. / 6 Ave.					
AM Peak Hour	Overall Intersection LOS = A	LOS = B Delay = 11.69 sec	LOS = B Delay = 10.56 sec	LOS = A Delay = 1.04 sec	LOS = A Delay = 0.24 sec
PM Peak Hour	Intersection LOS = A	LOS = B Delay = 10.71 sec	LOS = B Delay = 10.02 sec	LOS = A Delay = 2.07 sec	LOS = A Delay = 0.88 sec
52 St. / 8A Ave.					
AM Peak Hour	Overall Intersection LOS = A	LOS = A Delay = 8.94 sec	N/A	LOS = A Delay = 0 sec	LOS = A Delay = 2.71 sec
PM Peak Hour	Intersection LOS = A	LOS = A Delay = 9.6 sec	N/A	LOS = A Delay = 0 sec	LOS = A Delay = 3.6 sec
56 St. / 6 Ave.					
AM Peak Hour	Overall Intersection LOS = A	LOS = A Delay = 7.2 sec	LOS = A Delay = 6.4 sec	LOS = B Delay = 12.7 sec	LOS = B Delay = 11 sec
PM Peak Hour	Intersection LOS = B	LOS = B Delay = 10.6 sec	LOS = A Delay = 8.7 sec	LOS = B Delay = 17.8 sec	LOS = B Delay = 13.5 sec
56 St. / 8A Ave.					
AM Peak Hour	Overall Intersection LOS = A	LOS = A Delay = 5.6 sec	LOS = A Delay = 4.9 sec	LOS = B Delay = 13 sec	LOS = B Delay = 11 sec
AM Peak Hour	Overall Intersection LOS = A	LOS = A Delay = 4.6 sec	LOS = A Delay = 4.6 sec	LOS = B Delay = 13.3 sec	LOS = B Delay = 11.6 sec

Our analyses determined that the 52 St. / 6 Ave. intersection will continue to operate at an overall LOS 'A' during the weekday AM and PM peak hours. Looking at the individual approaches, the northbound and southbound approaches are anticipated to operate at a LOS 'B' during the weekday AM and PM

peak hours while the eastbound and westbound approaches are anticipated to operate at a LOS 'A' during the weekday AM and PM peak hours. LOS 'B' is considered 'very good' intersection operating performance.

The 52 St. / 8A Ave. intersection is anticipated to operate at an overall LOS 'A' during the weekday AM and PM peak hours, with all approaches operating at a LOS 'A' during the weekday AM and PM peak hours. LOS 'A' is considered 'excellent' intersection operating performance.

The 56 St. / 6 Ave. intersection is anticipated to operate at an overall LOS 'A' during the weekday AM peak hour, and an overall LOS 'B' during the weekday PM peak hour. During the weekday AM peak hour, both the northbound and southbound approaches are anticipated to operate at a LOS 'A', while the eastbound and westbound are anticipated to operate at a LOS 'B'. During the weekday PM peak hour, it is anticipated that the southbound approach will operate at a LOS 'A', with all others at a LOS 'B'. LOS 'B' is considered 'very good' intersection operating performance.

The 56 St. / 8A Ave. intersection is anticipated to operate at an overall LOS 'A' during the weekday AM and PM peak hours, with the northbound and southbound approaches operating at a LOS 'A' during the weekday AM and PM peak hours, and the eastbound and westbound approaches operating at a LOS 'B' during the weekday AM and PM peak hours. LOS 'B' is considered to be 'very good' intersection operating performance.

A copy of the detailed Synchro reports for this scenario can be found in [Appendix G](#).

11.0 FINDINGS

It is estimated that the proposed 50 townhomes will add 18 vehicle trips to the road network during the weekday AM peak hour, and 23 vehicles during the weekday PM peak hour.

There are several bus stops along 52 St. within a 2-to-3-minute walk to/from the development site.

There is a developed bike lane network in the area which offers residents an alternative to driving.

Our analyses determined that on “Opening Day”, the 52 St. / 6 Ave. intersection will continue to operate at an overall LOS ‘A’ during the weekday AM and PM peak hours. Looking at the individual approaches, the northbound and southbound approaches are anticipated to operate at a LOS ‘B’ during the weekday AM peak hour while the eastbound and westbound approaches are anticipated to operate at a LOS ‘A’. During the weekday PM peak hour, only the northbound approach is anticipated to operate at a LOS ‘B’. The other three approaches will operate at a LOS ‘A’. LOS ‘B’ is considered ‘very good’ intersection operating performance.

Our analyses determined that the 52 St. / 8A Ave. intersection will continue to operate at an overall LOS ‘A’ during the weekday AM and PM peak hours, and all approaches also operating at a LOS ‘A’ during the morning and afternoon peak hours. LOS ‘A’ is considered ‘excellent’ intersection operating performance.

The 56 St. / 6 Ave. intersection is anticipated that on “Opening Day”, this intersection will continue to operate at an overall LOS ‘A’ during the weekday AM peak hour, and an overall LOS ‘B’ during the weekday PM peak hour. During the weekday AM peak hour, both the northbound and southbound approaches are anticipated to operate at a LOS ‘A’, while the eastbound and westbound are anticipated to operate at a LOS ‘B’. During the weekday PM peak hour, it is anticipated that the southbound approach will operate at a LOS ‘A’, with all others at a LOS ‘B’. LOS ‘B’ is considered ‘very good’ intersection operating performance.

The 56 St. / 8A Ave. intersection is anticipated that on “Opening Day”, this intersection will continue to operate at an overall LOS ‘A’ during the weekday AM and PM peak hours. The northbound and southbound approaches will operate at a LOS ‘A’ during the weekday AM and PM peak hours, and the eastbound and westbound approaches operate at a LOS ‘B’ during the weekday AM and PM peak hours. LOS ‘B’ is considered ‘very good’ intersection operating performance.

Our Year 2035 scenario with site traffic determined that the 52 St. / 6 Ave. intersection will continue to operate at an overall LOS ‘A’ during the weekday AM and PM peak hours. Looking at the individual approaches, the northbound and southbound approaches are anticipated to operate at a LOS ‘B’ during the weekday AM and PM peak hours while the eastbound and westbound approaches are anticipated to operate at a LOS ‘A’ during the weekday AM and PM peak hours. LOS ‘B’ is considered ‘very good’ intersection operating performance.

Our Year 2035 scenario with site traffic determined that the 52 St. / 8A Ave. intersection will continue to operate at an overall LOS ‘A’ during the weekday AM and PM peak hours, with all approaches operating at a LOS ‘A’ during the weekday AM and PM peak hours. LOS ‘A’ is considered ‘excellent’ intersection operating performance.

Our Year 2035 scenario with site traffic determined that the 56 St. / 6 Ave. intersection is anticipated to operate at an overall LOS 'A' during the weekday AM peak hour, and an overall LOS 'B' during the weekday PM peak hour. During the weekday AM peak hour, both the northbound and southbound approaches are anticipated to operate at a LOS 'A', while the eastbound and westbound are anticipated to operate at a LOS 'B'. During the weekday PM peak hour, it is anticipated that the southbound approach will operate at a LOS 'A', with all others at a LOS 'B'. LOS 'B' is considered 'very good' intersection operating performance.

Our Year 2035 scenario with site traffic determined that the 56 St. / 8A Ave. intersection is anticipated to operate at an overall LOS 'A' during the weekday AM and PM peak hours, with the northbound and southbound approaches operating at a LOS 'A' during the weekday AM and PM peak hours, and the eastbound and westbound approaches operating at a LOS 'B' during the weekday AM and PM peak hours. LOS 'B' is considered to be 'very good' intersection operating performance.

APPENDIX A – FORM AB PRELIMINARY TRAFFIC IMPACT REVIEW

Form AB – Preliminary Traffic Impact Review Acknowledgement and Consent Form



This submission form should be completed by a professional engineer in good standing with Engineers and Geoscientists BC and accompany the Preliminary Traffic Impact Review. Applicants are encouraged to discuss the requirements relating to their proposal with the Development Department prior to submitting an application and ensuring their consulting engineer is aware of or familiar with the minimum standards.

Note: The Preliminary Traffic Impact Review will determine whether a Traffic Impact Study is required to analyze the effects of new development on the local transportation network considering the scale of land use change and the capacity of existing infrastructure to handle future traffic volumes.

☒ Please check off which of the following has been included in the Preliminary Traffic Impact Review:

- ☐ Brief description of the proposal including reference to matters which will influence traffic volumes (e.g., increase in density, additional vehicle parking, container storage / warehousing capacity increase, etc.);
- ☐ Anticipated number of vehicle trips determined through the use of the most current edition of the Institute of Transportation Engineers (ITE) *Trip Generation Manual*. If no ITE rates exist for the type of development proposed, the City will consider traffic counts from similar uses, within similar contexts in the Lower Mainland;
- ☐ Reference to the adequacy of sightlines as they relate to ingress and egress to the subject property(ies), considering the design speed of the road(s) providing access to the site and the potential for obstructions;
- ☐ Internal site operation diagram which demonstrates vehicle flow / movement throughout the development. Note this may include a swept path analysis which clearly illustrates vehicle maneuverability within constrained portions of the site (e.g., at the terminus of laneways, driveway accesses, etc.); and
- ☐ Confirmation that the development will not result in any vehicle queuing within the municipal boulevard.

☒ If a Traffic Impact Study has been requested, please check off which of the following has been included in the Study:

Overview of Development and Transportation Network	
▪ Describe the development proposal including reference to any land use change and factors which may affect vehicle and pedestrian volumes observed within the transportation network	☒
▪ Provide a context map of the subject property(ies) and the abutting road network (approx. scale 1:1500)	☒
▪ Provide a broader area map illustrating roads, by classification, signalized intersections, pedestrian connections, bus stops and other related transportation network features within 1.5 km of the site, or as directed by the Engineering Department	☒

Site Layout and Access	
▪ Provide a detailed site plan illustrating vehicle drive aisles and access to the public road network.	☒
▪ Ensure the site plan is compliant with applicable zoning provisions, development standards, and building code requirements. Where standards are not met, identify the relief that may be required in support of the project.	☒
▪ Include a summary of required and proposed parking, as outlined in the City's Zoning Bylaw	☒
▪ Illustrate sight distances entering / exiting the site considering existing obstructions and the geometric design of the abutting road network	☒
▪ Demonstrate on-site circulation of vehicles and pedestrians, including a swath analysis where vehicle maneuverability may be constrained; reference to ICBC on-site parking guidelines may be advantageous	☒
▪ Review parking requirements, i.e. patrons/visitors, employees, loading, etc.	☒



Application Centre, Development Department

Contact Us: 604-946-3380 or Development@delta.ca

June 2023

Page 1 of 3

Form AB – Preliminary Traffic Impact Review Acknowledgement and Consent Form



Description of Existing Transportation Network Conditions	
▪ Describe the transportation network which serves the development including reference to intersection geometrics, road rights-of-way, traffic control measures at intersections, transit routes / bus stops, and related	☒
▪ Provide a quantified summary of average daily traffic (ADT), AM and PM peak hour turning movements, and levels of service within the transportation network serving the development site	☒
▪ Determine existing queue lengths at controlled intersections which may be impacted by the development	☒

Description of Future Transportation Network Conditions	
▪ Identify other projects / proposals within the transportation network servicing the site subject and determine the volume of traffic that may be generated by each over a 5 and 10 year planning horizon; identify all assumptions made in determining base and future traffic volumes	☒
▪ Provide a quantified summary of average daily traffic (ADT), AM and PM peak hour turning movements, and levels of service resulting from the development and other projects / proposals within the transportation network serving the development site; if relevant, show impact of traffic levels generated through development phases in addition to the cumulative impact of traffic within the overall network	☒
▪ Determine future queue lengths at controlled intersections which may be impacted by the development	☒

Recommendations	
▪ Identify the need for infrastructure improvements necessary to maintain an acceptable level of service at controlled intersections as well as any other improvements required to address existing deficiencies and / or to support the effective operation of the development (e.g., road widening, pedestrian connections, etc.)	☒
▪ Distinguish between short-term improvements and long-term improvements required to support the project	☒
▪ The report must be sealed and signed by a Professional Engineer registered in the Province of BC	☒

If any of the above has not been included, please explain below:



Acknowledgement and Consent Form

When drawings, documents or reports are submitted to the City of Delta as part of the application process, the owner/author of these submissions (e.g., surveyors, consultants, etc.) must acknowledge they have met the minimum submission requirements and consent in writing to allow their work to be reproduced (e.g., photocopied, scanned, etc.) by the City of Delta and the Land Title Office.

1. The undersigned warrants that they are the owner(s) (the “Owner”) of the copyright for the Preliminary Traffic Impact Review or the Traffic Impact Study (the “Work”) prepared for:

686 52 St. and 5236 7A Ave.

SITE ADDRESS

Bramor Development

CLIENT NAME

2. The Owner acknowledges and consents to the reproduction of the Work by the City of Delta for the purpose of inclusion of the Work in Council reports and/or information packages prepared for any Public Hearing held pursuant to requirements of the *Local Government Act*, as amended, or any bylaw or policy of the City of Delta, and to the provision of copies to interested members of the public prior to or at the Public Hearing.
3. The Owner also acknowledges and consents to the reproduction of the Work and attachment of the reproduction to any document where such document may be required for filing in the Land Title Office.
4. The Owner understands it may, in writing, request the City of Delta that any reproductions made of the Work be stamped that it not be further reproduced or used without permission of the author.
5. The Owner also acknowledges and understands that the Work may also be made subject of a request under the *Freedom of Information and Protection of Privacy Act*, as amended, and that the reproduction by the City of Delta of the Work pursuant to such a request is not a breach of copyright.

Philip Wong

ENGINEER SIGNATURE

June 20, 2025

DATE

Philip Wong

ENGINEER NAME (Please Print)



APPENDIX B – TRAFFIC COUNT DATA

- February 2025 52 Street / 6 Avenue Turning Movement Counts
- February 2025 52 Street / 8A Avenue Turning Movement Counts
- February 2025 56 Street / 6 Avenue Turning Movement Counts
- February 2025 56 Street / 8A Avenue Turning Movement Counts

TRAFFIC COUNT & VEHICLE CLASSIFICATION SUMMARY

MAIN ROAD: 6 Avenue

CROSS STREET: 52 Street

DAY & DATE OF COUNT: Wednesday, Feb. 19, 2025

COUNT DURATION: 6.5 Hours (7:30 AM TO 10:30 AM & 2:30 PM - 6:00 PM)

WEATHER CONDITION: Overcast

INTERVAL	INTERSECTION APPROACH															INTERSECTION APPROACH															15 MIN. TOTALS	1 HOUR TOTALS	PHF	% HV	PEDESTRIANS USING CROSSWALK: NORTH																																									
	NORTHBOUND ON 52 STREET					SOUTHBOUND ON 52 STREET					EASTBOUND ON 6 AVENUE					WESTBOUND ON 6 AVENUE																																																												
	LEFT		THROUGH		RIGHT	LEFT		THROUGH		RIGHT	LEFT		THROUGH		RIGHT	LEFT		THROUGH		RIGHT																																																								
7:00 - 7:15																							0																																																					
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8:00 - 8:15	10					15				3						3					9					7																																																		
8:15 - 8:30	11	1				18				3						3					9					8																																																		
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AM PEAK: 8:45 AM - 9:45 AM	49	0	5	0	0	48	0	1	0	0	2	0	0	0	0	6	0	0	0	0	34	0	0	0	0	3	0	0	0	0																																														
AM PEAK HOUR TOTALS	54					49					2					6					55					32					13					52					17					0					3					47					34					0										
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3:15 - 3:30	8	2				15				1						7					8					5	2																																																	
3:30 - 3:45	9	1				15				7						9					7					9	1																																																	
3:45 - 4:00	6	1				17				6						5					7					9	1																																																	
4:00 - 4:15	3					12	1			5						2					3					3	3																																																	
4:15 - 4:30	1	1				9				1						2					4					1	2																																																	
4:30 - 4:45		1				7				5						6					7					1	1																																																	
4:45 - 5:00	3	1				14				3						1					10					2	2																																																	
5:00 - 5:15	2	1								2						1					10					3	1																																																	
5:15 - 5:30	2	1				10	1			1						7					3					3	1																																																	
5:30 - 5:45	2	1				7				3						3					8					3																																																		
5:45 - 6:00 PM	1					6				3						1					4					5	2																																																	
PM PEAK: 3:00 PM - 4:00 PM	28	0	6	0	0	59	0	0	0	0	2	0	0	0	0	16	0	0	0	0	37	0	0	0	0	23	0	5	0	0																																														
PM PEAK HOUR TOTALS	34					59					2					16					45					37					23					26					27					3					10					9																				
VEH CLASS	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E																																									
	NB LEFT		NB THRU		NB RIGHT		SB LEFT		SB THRU		SB RIGHT		EB LEFT		EB THRU		EB RIGHT		WB LEFT		WB THRU		WB RIGHT																																																					

LOCATION DIAGRAM ENCLOSED (Y/N): N

COMMENTS:

VEHICLE CLASSES

A: PASSENGER VEHICLES
D: SINGLE-UNIT TRUCKS

B: RECREATION VEHICLES
E: TRACTOR-TRAILERS (SEMIS)

C: BUSES

APPENDIX C – SYNCHRO RESULTS SHEETS FOR EXISTING INTERSECTION OPERATING CONDITIONS

52 St & 6 Ave Intersection
Existing (2025) Weekday AM Peak Hour

11/09/2025

Intersection												
Int Delay, s/veh	6.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	52	24	3	47	34	54	49	2	6	55	32
Future Vol, veh/h	13	52	24	3	47	34	54	49	2	6	55	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	58	27	3	53	38	61	55	2	7	62	36

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	91	0	0	85	0	0	192	199	72	194	193	72
Stage 1	-	-	-	-	-	-	101	101	-	79	79	-
Stage 2	-	-	-	-	-	-	90	98	-	115	115	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1504	-	-	1511	-	-	768	697	990	766	702	990
Stage 1	-	-	-	-	-	-	905	811	-	930	830	-
Stage 2	-	-	-	-	-	-	917	814	-	890	801	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1504	-	-	1511	-	-	667	688	990	695	693	990
Mov Cap-2 Maneuver	-	-	-	-	-	-	667	688	-	695	693	-
Stage 1	-	-	-	-	-	-	896	803	-	928	828	-
Stage 2	-	-	-	-	-	-	816	812	-	818	792	-

Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	1.08			0.26			11.39			10.38		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	681	247	-	-	59	-	-	773
HCM Lane V/C Ratio	0.173	0.01	-	-	0.002	-	-	0.135
HCM Ctrl Dly (s/v)	11.4	7.4	0	-	7.4	0	-	10.4
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.6	0	-	-	0	-	-	0.5

52 St & 6 Ave Intersection
2025 Weekday PM Peak Hour

11/09/2025

Intersection												
Int Delay, s/veh	7.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	26	32	3	10	9	34	59	2	16	45	37
Future Vol, veh/h	23	26	32	3	10	9	34	59	2	16	45	37
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	29	35	3	11	10	37	65	2	18	49	41

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	21	0	0	64	0	0	139	124	46	134	137	16
Stage 1	-	-	-	-	-	-	97	97	-	23	23	-
Stage 2	-	-	-	-	-	-	42	27	-	112	114	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1595	-	-	1539	-	-	831	766	1023	838	754	1063
Stage 1	-	-	-	-	-	-	910	815	-	996	876	-
Stage 2	-	-	-	-	-	-	972	872	-	894	801	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1595	-	-	1539	-	-	733	752	1023	751	740	1063
Mov Cap-2 Maneuver	-	-	-	-	-	-	733	752	-	751	740	-
Stage 1	-	-	-	-	-	-	895	801	-	994	875	-
Stage 2	-	-	-	-	-	-	880	870	-	806	788	-

Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	2.07			1			10.58			9.93		
HCM LOS							B			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	749	460	-	-	224	-	-	838
HCM Lane V/C Ratio	0.139	0.016	-	-	0.002	-	-	0.128
HCM Ctrl Dly (s/v)	10.6	7.3	0	-	7.3	0	-	9.9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	0.4

52 St & 8A Ave Intersection
Existing (2025) Weekday AM Peak Hour

11/09/2025

Intersection						
Int Delay, s/veh	3.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	42	14	15	29	8	43
Future Vol, veh/h	42	14	15	29	8	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	48	16	17	33	9	49

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	64	0	124
Stage 1	-	-	-	-	56
Stage 2	-	-	-	-	68
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1538	-	871
Stage 1	-	-	-	-	966
Stage 2	-	-	-	-	955
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1538	-	861
Mov Cap-2 Maneuver	-	-	-	-	861
Stage 1	-	-	-	-	966
Stage 2	-	-	-	-	944

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	2.51	8.89
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	983	-	-	614	-
HCM Lane V/C Ratio	0.06	-	-	0.011	-
HCM Ctrl Dly (s/v)	8.9	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

52 St & 8A Ave Intersection
2025 Weekday PM Peak Hour

11/09/2025

Intersection						
Int Delay, s/veh	2.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	80	72	65	80	10	42
Future Vol, veh/h	80	72	65	80	10	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	84	76	68	84	11	44

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	160	0	343	122
Stage 1	-	-	-	-	122	-
Stage 2	-	-	-	-	221	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1419	-	653	929
Stage 1	-	-	-	-	903	-
Stage 2	-	-	-	-	816	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1419	-	620	929
Mov Cap-2 Maneuver	-	-	-	-	620	-
Stage 1	-	-	-	-	903	-
Stage 2	-	-	-	-	774	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	3.44	9.54
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	848	-	-	807	-
HCM Lane V/C Ratio	0.065	-	-	0.048	-
HCM Ctrl Dly (s/v)	9.5	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-

56 St & 6 Ave Intersection

Existing (2025) Weekday AM Peak Hour

06/23/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	5	59	3	2	29	101	367	1	7	232	88
Future Volume (veh/h)	116	5	59	3	2	29	101	367	1	7	232	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	127	5	65	3	2	32	111	403	1	8	255	97
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	350	33	103	124	36	292	632	981	2	598	679	258
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.53	0.53	0.53	0.53	0.53	0.53
Sat Flow, veh/h	838	154	488	47	170	1386	1029	1865	5	981	1291	491
Grp Volume(v), veh/h	197	0	0	37	0	0	111	0	404	8	0	352
Grp Sat Flow(s),veh/h/ln	1480	0	0	1602	0	0	1029	0	1870	981	0	1782
Q Serve(g_s), s	3.3	0.0	0.0	0.0	0.0	0.0	2.4	0.0	4.5	0.2	0.0	4.0
Cycle Q Clear(g_c), s	4.1	0.0	0.0	0.6	0.0	0.0	6.4	0.0	4.5	4.6	0.0	4.0
Prop In Lane	0.64		0.33	0.08		0.86	1.00		0.00	1.00		0.28
Lane Grp Cap(c), veh/h	485	0	0	451	0	0	632	0	984	598	0	938
V/C Ratio(X)	0.41	0.00	0.00	0.08	0.00	0.00	0.18	0.00	0.41	0.01	0.00	0.38
Avail Cap(c_a), veh/h	942	0	0	948	0	0	632	0	984	598	0	938
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.2	0.0	0.0	10.9	0.0	0.0	6.7	0.0	4.9	6.3	0.0	4.8
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.1	0.0	0.0	0.6	0.0	1.3	0.0	0.0	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	12.7	0.0	0.0	11.0	0.0	0.0	7.3	0.0	6.2	6.3	0.0	5.9
LnGrp LOS	B			B			A			A		
Approach Vol, veh/h	197			37			515			360		
Approach Delay, s/veh	12.7			11.0			6.4			5.9		
Approach LOS	B			B			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	22.5			11.7			22.5			11.7		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	18.0			18.0			18.0			18.0		
Max Q Clear Time (g_c+I1), s	8.4			6.1			6.6			2.6		
Green Ext Time (p_c), s	4.3			2.0			3.8			0.3		
Intersection Summary												
HCM 7th Control Delay, s/veh				7.5								
HCM 7th LOS				A								

56 St & 6 Ave Intersection
2025 Weekday PM Peak Hour

06/23/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	5	138	1	1	24	163	465	1	5	282	115
Future Volume (veh/h)	156	5	138	1	1	24	163	465	1	5	282	115
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	162	5	144	1	1	25	170	484	1	5	294	120
Peak Hour Factor	0.96	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	317	33	196	87	30	417	521	963	2	477	652	266
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.52	0.52	0.52	0.52	0.52	0.52
Sat Flow, veh/h	689	118	696	12	106	1479	972	1866	4	911	1262	515
Grp Volume(v), veh/h	311	0	0	27	0	0	170	0	485	5	0	414
Grp Sat Flow(s),veh/h/ln	1503	0	0	1598	0	0	972	0	1870	911	0	1778
Q Serve(g_s), s	6.9	0.0	0.0	0.0	0.0	0.0	6.0	0.0	7.6	0.2	0.0	6.5
Cycle Q Clear(g_c), s	8.3	0.0	0.0	0.5	0.0	0.0	12.5	0.0	7.6	7.7	0.0	6.5
Prop In Lane	0.52		0.46	0.04		0.93	1.00		0.00	1.00		0.29
Lane Grp Cap(c), veh/h	547	0	0	534	0	0	521	0	965	477	0	918
V/C Ratio(X)	0.57	0.00	0.00	0.05	0.00	0.00	0.33	0.00	0.50	0.01	0.00	0.45
Avail Cap(c_a), veh/h	727	0	0	727	0	0	521	0	965	477	0	918
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.4	0.0	0.0	11.7	0.0	0.0	10.7	0.0	7.0	9.6	0.0	6.8
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.0	0.0	0.0	1.7	0.0	1.9	0.0	0.0	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.5	0.0	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	15.3	0.0	0.0	11.7	0.0	0.0	12.4	0.0	8.9	9.6	0.0	8.4
LnGrp LOS	B			B			B		A	A		A
Approach Vol, veh/h	311			27			655			419		
Approach Delay, s/veh	15.3			11.7			9.8			8.4		
Approach LOS	B			B			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	27.5			17.1			27.5			17.1		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	23.0			18.0			23.0			18.0		
Max Q Clear Time (g_c+I1), s	14.5			10.3			9.7			2.5		
Green Ext Time (p_c), s	4.9			2.5			5.1			0.2		
Intersection Summary												
HCM 7th Control Delay, s/veh				10.6								
HCM 7th LOS				B								

56 St & 8A Ave Intersection
Existing (2025) Weekday AM Peak Hour

11/09/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	0	24	1	9	2	45	509	0	2	279	147
Future Volume (veh/h)	128	0	24	1	9	2	45	509	0	2	279	147
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.86	0.89		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	141	0	26	1	10	2	49	559	0	2	307	162
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	537	14	71	108	482	90	165	1450	0	92	1004	513
Arrive On Green	0.32	0.00	0.32	0.32	0.32	0.32	0.45	0.45	0.00	0.45	0.45	0.45
Sat Flow, veh/h	1146	43	219	34	1492	277	135	3298	0	2	2225	1138
Grp Volume(v), veh/h	167	0	0	13	0	0	319	289	0	258	0	213
Grp Sat Flow(s),veh/h/ln	1408	0	0	1803	0	0	1732	1617	0	1867	0	1497
Q Serve(g_s), s	3.2	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	0.0	3.6
Cycle Q Clear(g_c), s	3.6	0.0	0.0	0.2	0.0	0.0	4.5	4.8	0.0	3.5	0.0	3.6
Prop In Lane	0.84		0.16	0.08		0.15	0.15		0.00	0.01		0.76
Lane Grp Cap(c), veh/h	621	0	0	680	0	0	886	730	0	934	0	676
V/C Ratio(X)	0.27	0.00	0.00	0.02	0.00	0.00	0.36	0.40	0.00	0.28	0.00	0.32
Avail Cap(c_a), veh/h	800	0	0	904	0	0	886	730	0	934	0	676
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.3	0.0	0.0	9.2	0.0	0.0	7.2	7.3	0.0	7.0	0.0	7.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	0.0	1.1	1.6	0.0	0.7	0.0	1.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.2	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	10.5	0.0	0.0	9.2	0.0	0.0	8.4	8.9	0.0	7.7	0.0	8.2
LnGrp LOS	B			A			A	A		A		A
Approach Vol, veh/h		167			13			608			471	
Approach Delay, s/veh		10.5			9.2			8.6			7.9	
Approach LOS		B			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		17.4		22.5		17.4				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		6.8		5.6		5.6		2.2				
Green Ext Time (p_c), s		6.1		1.7		5.2		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh			8.6									
HCM 7th LOS			A									

56 St & 8A Ave Intersection
2025 Weekday PM Peak Hour

06/23/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	0	16	1	5	1	24	548	0	1	496	70
Future Volume (veh/h)	105	0	16	1	5	1	24	548	0	1	496	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	114	0	17	1	5	1	26	596	0	1	539	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	383	0	25	150	188	34	153	1948	0	116	1769	248
Arrive On Green	0.13	0.00	0.13	0.13	0.13	0.13	0.58	0.58	0.00	0.58	0.58	0.58
Sat Flow, veh/h	1253	0	187	133	1410	257	50	3457	0	1	3063	430
Grp Volume(v), veh/h	131	0	0	7	0	0	330	292	0	329	0	287
Grp Sat Flow(s),veh/h/ln	1439	0	0	1800	0	0	1805	1617	0	1869	0	1625
Q Serve(g_s), s	2.6	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	2.8
Cycle Q Clear(g_c), s	2.7	0.0	0.0	0.1	0.0	0.0	2.8	2.9	0.0	2.8	0.0	2.8
Prop In Lane	0.87		0.13	0.14		0.14	0.08		0.00	0.00		0.26
Lane Grp Cap(c), veh/h	408	0	0	373	0	0	1167	934	0	1196	0	938
V/C Ratio(X)	0.32	0.00	0.00	0.02	0.00	0.00	0.28	0.31	0.00	0.27	0.00	0.31
Avail Cap(c_a), veh/h	1043	0	0	1146	0	0	1167	934	0	1196	0	938
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.9	0.0	0.0	11.7	0.0	0.0	3.4	3.4	0.0	3.4	0.0	3.4
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.0	0.0	0.0	0.6	0.9	0.0	0.6	0.0	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.2	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.3	0.0	0.0	11.8	0.0	0.0	4.0	4.3	0.0	3.9	0.0	4.2
LnGrp LOS	B			B			A			A		
Approach Vol, veh/h	131			7			622			616		
Approach Delay, s/veh	13.3			11.8			4.1			4.1		
Approach LOS	B			B			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	22.5			8.7			22.5			8.7		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	18.0			18.0			18.0			18.0		
Max Q Clear Time (g_c+I1), s	4.9			4.7			4.8			2.1		
Green Ext Time (p_c), s	7.0			1.3			7.0			0.0		
Intersection Summary												
HCM 7th Control Delay, s/veh			5.0									
HCM 7th LOS			A									

APPENDIX D – SYNCHRO RESULTS SHEETS FOR YEAR 2030 BACKGROUND INTERSECTION OPERATING CONDITIONS

56 St & 6 Ave Intersection

2030 Background Weekday AM Peak Hour

11/12/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	5	59	3	2	29	101	404	1	7	255	88
Future Volume (veh/h)	116	5	59	3	2	29	101	404	1	7	255	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	127	5	65	3	2	32	111	444	1	8	280	97
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	295	27	95	93	34	270	664	1137	3	617	809	280
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	853	138	488	42	175	1387	1006	1865	4	945	1328	460
Grp Volume(v), veh/h	197	0	0	37	0	0	111	0	445	8	0	377
Grp Sat Flow(s),veh/h/ln	1479	0	0	1604	0	0	1006	0	1870	945	0	1788
Q Serve(g_s), s	4.7	0.0	0.0	0.0	0.0	0.0	2.8	0.0	5.6	0.2	0.0	4.8
Cycle Q Clear(g_c), s	5.6	0.0	0.0	0.9	0.0	0.0	7.6	0.0	5.6	5.8	0.0	4.8
Prop In Lane	0.64		0.33	0.08		0.86	1.00		0.00	1.00		0.26
Lane Grp Cap(c), veh/h	417	0	0	397	0	0	664	0	1139	617	0	1089
V/C Ratio(X)	0.47	0.00	0.00	0.09	0.00	0.00	0.17	0.00	0.39	0.01	0.00	0.35
Avail Cap(c_a), veh/h	702	0	0	707	0	0	664	0	1139	617	0	1089
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.1	0.0	0.0	15.2	0.0	0.0	6.3	0.0	4.6	6.1	0.0	4.4
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.1	0.0	0.0	0.5	0.0	1.0	0.0	0.0	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	17.9	0.0	0.0	15.3	0.0	0.0	6.9	0.0	5.6	6.1	0.0	5.3
LnGrp LOS	B			B			A			A		
Approach Vol, veh/h	197			37			556			385		
Approach Delay, s/veh	17.9			15.3			5.9			5.3		
Approach LOS	B			B			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	32.5			13.5			32.5			13.5		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	28.0			18.0			28.0			18.0		
Max Q Clear Time (g_c+I1), s	9.6			7.6			7.8			2.9		
Green Ext Time (p_c), s	7.5			1.8			6.0			0.2		
Intersection Summary												
HCM 7th Control Delay, s/veh				8.0								
HCM 7th LOS				A								

52 St & 6 Ave Intersection
2030 Background Weekday PM Peak Hour

06/23/2025

Intersection												
Int Delay, s/veh	7.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	23	29	32	3	11	9	34	59	2	16	45	37
Future Vol, veh/h	23	29	32	3	11	9	34	59	2	16	45	37
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	32	35	3	12	10	37	65	2	18	49	41

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	22	0	0	67	0	0	143	129	49	138	141	17
Stage 1	-	-	-	-	-	-	100	100	-	24	24	-
Stage 2	-	-	-	-	-	-	43	29	-	115	118	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1594	-	-	1534	-	-	826	762	1019	832	750	1062
Stage 1	-	-	-	-	-	-	906	812	-	994	876	-
Stage 2	-	-	-	-	-	-	971	871	-	890	798	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1594	-	-	1534	-	-	728	748	1019	745	736	1062
Mov Cap-2 Maneuver	-	-	-	-	-	-	728	748	-	745	736	-
Stage 1	-	-	-	-	-	-	891	799	-	992	874	-
Stage 2	-	-	-	-	-	-	879	869	-	802	785	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	2	0.96	10.62	9.95
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	745	446	-	-	215	-	-	834
HCM Lane V/C Ratio	0.14	0.016	-	-	0.002	-	-	0.129
HCM Ctrl Dly (s/v)	10.6	7.3	0	-	7.4	0	-	10
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	0.4

52 St & 8A Ave Intersection
2030 Background Weekday AM Peak Hour

11/12/2025

Intersection						
Int Delay, s/veh	3.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	46	14	15	32	8	43
Future Vol, veh/h	46	14	15	32	8	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	16	17	37	9	49

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	69	0	132	61
Stage 1	-	-	-	-	61	-
Stage 2	-	-	-	-	71	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1532	-	862	1004
Stage 1	-	-	-	-	962	-
Stage 2	-	-	-	-	952	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1532	-	852	1004
Mov Cap-2 Maneuver	-	-	-	-	852	-
Stage 1	-	-	-	-	962	-
Stage 2	-	-	-	-	941	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	2.35	8.92
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	977	-	-	574	-
HCM Lane V/C Ratio	0.06	-	-	0.011	-
HCM Ctrl Dly (s/v)	8.9	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

52 St & 8A Ave Intersection
2030 Background Weekday PM Peak Hour

11/12/2025

Intersection						
Int Delay, s/veh	2.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	88	72	65	88	10	42
Future Vol, veh/h	88	72	65	88	10	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	93	76	68	93	11	44

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	168
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1409
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1409
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	3.26	9.61
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	836	-	-	765	-
HCM Lane V/C Ratio	0.065	-	-	0.049	-
HCM Ctrl Dly (s/v)	9.6	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-

56 St & 6 Ave Intersection

2030 Background Weekday AM Peak Hour

06/23/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	0	24	1	9	2	45	560	0	2	307	147
Future Volume (veh/h)	128	0	24	1	9	2	45	560	0	2	307	147
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	141	0	26	1	10	2	49	615	0	2	337	162
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	346	7	38	95	249	47	597	1178	0	524	752	361
Arrive On Green	0.17	0.00	0.17	0.17	0.17	0.17	0.63	0.63	0.00	0.63	0.63	0.63
Sat Flow, veh/h	1175	42	224	44	1484	278	899	1870	0	807	1193	574
Grp Volume(v), veh/h	167	0	0	13	0	0	49	615	0	2	0	499
Grp Sat Flow(s),veh/h/ln	1442	0	0	1805	0	0	899	1870	0	807	0	1767
Q Serve(g_s), s	4.6	0.0	0.0	0.0	0.0	0.0	1.3	8.1	0.0	0.1	0.0	6.5
Cycle Q Clear(g_c), s	4.8	0.0	0.0	0.3	0.0	0.0	7.8	8.1	0.0	8.1	0.0	6.5
Prop In Lane	0.84		0.16	0.08		0.15	1.00		0.00	1.00		0.32
Lane Grp Cap(c), veh/h	391	0	0	390	0	0	597	1178	0	524	0	1113
V/C Ratio(X)	0.43	0.00	0.00	0.03	0.00	0.00	0.08	0.52	0.00	0.00	0.00	0.45
Avail Cap(c_a), veh/h	730	0	0	811	0	0	597	1178	0	524	0	1113
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.4	0.0	0.0	15.5	0.0	0.0	6.3	4.5	0.0	6.8	0.0	4.2
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.0	0.0	0.0	0.3	1.7	0.0	0.0	0.0	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.1	0.0	0.0	15.5	0.0	0.0	6.5	6.2	0.0	6.8	0.0	5.6
LnGrp LOS	B			B			A	A		A		A
Approach Vol, veh/h		167			13			664			501	
Approach Delay, s/veh		18.1			15.5			6.2			5.6	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		32.5		12.0		32.5		12.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		28.0		18.0		28.0		18.0				
Max Q Clear Time (g_c+I1), s		10.1		6.8		10.1		2.3				
Green Ext Time (p_c), s		9.7		1.5		7.6		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh				7.5								
HCM 7th LOS				A								

56 St & 6 Ave Intersection

2030 Background Weekday PM Peak Hour

06/23/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	5	138	1	1	24	163	512	1	5	310	115
Future Volume (veh/h)	156	5	138	1	1	24	163	512	1	5	310	115
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	162	5	144	1	1	25	170	533	1	5	323	120
Peak Hour Factor	0.96	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	317	33	196	87	30	417	499	963	2	443	671	249
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.52	0.52	0.52	0.52	0.52	0.52
Sat Flow, veh/h	689	118	696	12	106	1479	947	1866	4	870	1300	483
Grp Volume(v), veh/h	311	0	0	27	0	0	170	0	534	5	0	443
Grp Sat Flow(s),veh/h/ln	1503	0	0	1598	0	0	947	0	1870	870	0	1783
Q Serve(g_s), s	6.9	0.0	0.0	0.0	0.0	0.0	6.3	0.0	8.6	0.2	0.0	7.1
Cycle Q Clear(g_c), s	8.3	0.0	0.0	0.5	0.0	0.0	13.4	0.0	8.6	8.8	0.0	7.1
Prop In Lane	0.52		0.46	0.04		0.93	1.00		0.00	1.00		0.27
Lane Grp Cap(c), veh/h	547	0	0	534	0	0	499	0	965	443	0	921
V/C Ratio(X)	0.57	0.00	0.00	0.05	0.00	0.00	0.34	0.00	0.55	0.01	0.00	0.48
Avail Cap(c_a), veh/h	727	0	0	727	0	0	499	0	965	443	0	921
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.4	0.0	0.0	11.7	0.0	0.0	11.3	0.0	7.3	10.3	0.0	6.9
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.0	0.0	0.0	1.9	0.0	2.3	0.0	0.0	1.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.6	0.0	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	15.3	0.0	0.0	11.7	0.0	0.0	13.1	0.0	9.6	10.3	0.0	8.7
LnGrp LOS	B			B			B		A	B		A
Approach Vol, veh/h		311			27			704			448	
Approach Delay, s/veh		15.3			11.7			10.4			8.8	
Approach LOS		B			B			B			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.5		17.1		27.5		17.1				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		23.0		18.0		23.0		18.0				
Max Q Clear Time (g_c+I1), s		15.4		10.3		10.8		2.5				
Green Ext Time (p_c), s		4.8		2.5		5.2		0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh				11.0								
HCM 7th LOS				B								

56 St & 8A Ave Intersection

2030 Background Weekday AM Peak Hour

11/12/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (veh/h)	128	0	24	1	9	2	45	560	0	2	307	147
Future Volume (veh/h)	128	0	24	1	9	2	45	560	0	2	307	147
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	141	0	26	1	10	2	49	615	0	2	337	162
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	412	6	40	128	260	49	188	1783	0	112	1261	591
Arrive On Green	0.18	0.00	0.18	0.18	0.18	0.18	0.55	0.55	0.00	0.55	0.55	0.55
Sat Flow, veh/h	1185	31	224	53	1472	277	114	3334	0	2	2298	1076
Grp Volume(v), veh/h	167	0	0	13	0	0	349	315	0	274	0	227
Grp Sat Flow(s), veh/h/ln	1441	0	0	1802	0	0	1747	1617	0	1868	0	1508
Q Serve(g_s), s	3.3	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	0.0	2.6
Cycle Q Clear(g_c), s	3.5	0.0	0.0	0.2	0.0	0.0	3.4	3.6	0.0	2.5	0.0	2.6
Prop In Lane	0.84		0.16	0.08		0.15	0.14		0.00	0.01		0.71
Lane Grp Cap(c), veh/h	457	0	0	437	0	0	1084	887	0	1136	0	828
V/C Ratio(X)	0.37	0.00	0.00	0.03	0.00	0.00	0.32	0.36	0.00	0.24	0.00	0.27
Avail Cap(c_a), veh/h	988	0	0	1097	0	0	1084	887	0	1136	0	828
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.5	0.0	0.0	11.2	0.0	0.0	4.1	4.1	0.0	3.9	0.0	3.9
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.0	0.0	0.0	0.8	1.1	0.0	0.5	0.0	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.0	0.2	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.0	0.0	0.0	11.2	0.0	0.0	4.9	5.3	0.0	4.4	0.0	4.7
LnGrp LOS	B			B			A	A		A		A
Approach Vol, veh/h		167			13			664			501	
Approach Delay, s/veh		13.0			11.2			5.1			4.6	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		10.3		22.5		10.3				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		5.6		5.5		4.6		2.2				
Green Ext Time (p_c), s		7.2		1.7		5.9		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh			5.9									
HCM 7th LOS			A									

56 St & 8A Ave Intersection

2030 Background Weekday PM Peak Hour

06/23/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (veh/h)	105	0	16	1	5	1	24	603	0	1	546	70
Future Volume (veh/h)	105	0	16	1	5	1	24	603	0	1	546	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	114	0	17	1	5	1	26	655	0	1	593	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	383	0	25	150	188	34	150	1950	0	116	1792	229
Arrive On Green	0.13	0.00	0.13	0.13	0.13	0.13	0.58	0.58	0.00	0.58	0.58	0.58
Sat Flow, veh/h	1253	0	187	133	1410	257	45	3462	0	1	3103	396
Grp Volume(v), veh/h	131	0	0	7	0	0	361	320	0	357	0	313
Grp Sat Flow(s), veh/h/ln	1439	0	0	1800	0	0	1805	1617	0	1869	0	1631
Q Serve(g_s), s	2.6	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.0	3.1
Cycle Q Clear(g_c), s	2.7	0.0	0.0	0.1	0.0	0.0	3.2	3.2	0.0	3.1	0.0	3.1
Prop In Lane	0.87		0.13	0.14		0.14	0.07		0.00	0.00		0.24
Lane Grp Cap(c), veh/h	408	0	0	373	0	0	1166	934	0	1196	0	942
V/C Ratio(X)	0.32	0.00	0.00	0.02	0.00	0.00	0.31	0.34	0.00	0.30	0.00	0.33
Avail Cap(c_a), veh/h	1043	0	0	1146	0	0	1166	934	0	1196	0	942
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.9	0.0	0.0	11.7	0.0	0.0	3.4	3.5	0.0	3.4	0.0	3.4
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.0	0.0	0.0	0.7	1.0	0.0	0.6	0.0	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.0	0.2	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.3	0.0	0.0	11.8	0.0	0.0	4.1	4.5	0.0	4.1	0.0	4.4
LnGrp LOS	B			B			A	A		A		A
Approach Vol, veh/h		131			7			681			670	
Approach Delay, s/veh		13.3			11.8			4.3			4.2	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		8.7		22.5		8.7				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		5.2		4.7		5.1		2.1				
Green Ext Time (p_c), s		7.5		1.3		7.4		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh			5.1									
HCM 7th LOS			A									

APPENDIX E – SYNCHRO RESULTS SHEETS FOR YEAR 2035 BACKGROUND INTERSECTION OPERATING CONDITIONS

52 St & 6 Ave Intersection
2035 Background Weekday AM Peak Hour

06/23/2025

Intersection												
Int Delay, s/veh	6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	62	24	3	56	34	54	49	2	6	55	32
Future Vol, veh/h	13	62	24	3	56	34	54	49	2	6	55	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	70	27	3	63	38	61	55	2	7	62	36

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	101	0	0	97	0	0	213	220	83	215	215	82
Stage 1	-	-	-	-	-	-	112	112	-	89	89	-
Stage 2	-	-	-	-	-	-	101	108	-	126	126	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1491	-	-	1497	-	-	744	678	976	741	683	978
Stage 1	-	-	-	-	-	-	893	802	-	919	821	-
Stage 2	-	-	-	-	-	-	906	806	-	877	792	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1491	-	-	1497	-	-	643	670	976	671	674	978
Mov Cap-2 Maneuver	-	-	-	-	-	-	643	670	-	671	674	-
Stage 1	-	-	-	-	-	-	883	794	-	916	819	-
Stage 2	-	-	-	-	-	-	805	804	-	806	784	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.98	0.24	11.64	10.54
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	660	224	-	-	54	-	-	755
HCM Lane V/C Ratio	0.179	0.01	-	-	0.002	-	-	0.138
HCM Ctrl Dly (s/v)	11.6	7.4	0	-	7.4	0	-	10.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.6	0	-	-	0	-	-	0.5

52 St & 6 Ave Intersection
2035 Background Weekday PM Peak Hour

06/23/2025

Intersection												
Int Delay, s/veh	7.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	23	31	32	3	12	9	34	59	2	16	45	37
Future Vol, veh/h	23	31	32	3	12	9	34	59	2	16	45	37
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	34	35	3	13	10	37	65	2	18	49	41

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	23	0	0	69	0	0	147	132	52	142	145	18
Stage 1	-	-	-	-	-	-	102	102	-	25	25	-
Stage 2	-	-	-	-	-	-	45	30	-	117	120	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1592	-	-	1532	-	-	822	759	1016	828	747	1060
Stage 1	-	-	-	-	-	-	904	811	-	993	875	-
Stage 2	-	-	-	-	-	-	970	870	-	888	797	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1592	-	-	1532	-	-	724	745	1016	741	733	1060
Mov Cap-2 Maneuver	-	-	-	-	-	-	724	745	-	741	733	-
Stage 1	-	-	-	-	-	-	889	797	-	991	873	-
Stage 2	-	-	-	-	-	-	878	868	-	800	783	-

Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	1.95			0.92			10.65			9.97		
HCM LOS							B			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	741	437	-	-	207	-	-	831
HCM Lane V/C Ratio	0.141	0.016	-	-	0.002	-	-	0.13
HCM Ctrl Dly (s/v)	10.7	7.3	0	-	7.4	0	-	10
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	0.4

52 St & 8A Ave Intersection
2035 Background Weekday AM Peak Hour

11/12/2025

Intersection						
Int Delay, s/veh	3.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	50	14	15	35	8	43
Future Vol, veh/h	50	14	15	35	8	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	16	17	40	9	49

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	74	0	140	66
Stage 1	-	-	-	-	66	-
Stage 2	-	-	-	-	75	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1526	-	853	998
Stage 1	-	-	-	-	957	-
Stage 2	-	-	-	-	948	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1526	-	843	998
Mov Cap-2 Maneuver	-	-	-	-	843	-
Stage 1	-	-	-	-	957	-
Stage 2	-	-	-	-	937	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	2.22	8.95
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	970	-	-	540	-
HCM Lane V/C Ratio	0.06	-	-	0.011	-
HCM Ctrl Dly (s/v)	8.9	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

52 St & 8A Ave Intersection
2035 Background Weekday PM Peak Hour

11/12/2025

Intersection						
Int Delay, s/veh	2.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	96	72	65	96	10	42
Future Vol, veh/h	96	72	65	96	10	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	101	76	68	101	11	44

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	177
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1399
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1399
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	3.11	9.68
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	824	-	-	727	-
HCM Lane V/C Ratio	0.066	-	-	0.049	-
HCM Ctrl Dly (s/v)	9.7	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-

56 St & 6 Ave Intersection

2035 Background Weekday AM Peak Hour

06/23/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	5	59	3	2	29	101	440	1	7	278	88
Future Volume (veh/h)	116	5	59	3	2	29	101	440	1	7	278	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	127	5	65	3	2	32	111	484	1	8	305	97
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	350	33	103	124	36	292	593	982	2	538	716	228
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.53	0.53	0.53	0.53	0.53	0.53
Sat Flow, veh/h	838	154	488	47	170	1386	983	1866	4	911	1360	433
Grp Volume(v), veh/h	197	0	0	37	0	0	111	0	485	8	0	402
Grp Sat Flow(s),veh/h/ln	1480	0	0	1602	0	0	983	0	1870	911	0	1793
Q Serve(g_s), s	3.3	0.0	0.0	0.0	0.0	0.0	2.7	0.0	5.7	0.2	0.0	4.7
Cycle Q Clear(g_c), s	4.1	0.0	0.0	0.6	0.0	0.0	7.3	0.0	5.7	5.9	0.0	4.7
Prop In Lane	0.64		0.33	0.08		0.86	1.00		0.00	1.00		0.24
Lane Grp Cap(c), veh/h	485	0	0	451	0	0	593	0	984	538	0	943
V/C Ratio(X)	0.41	0.00	0.00	0.08	0.00	0.00	0.19	0.00	0.49	0.01	0.00	0.43
Avail Cap(c_a), veh/h	942	0	0	948	0	0	593	0	984	538	0	943
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.2	0.0	0.0	10.9	0.0	0.0	7.2	0.0	5.2	7.1	0.0	5.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.1	0.0	0.0	0.7	0.0	1.8	0.1	0.0	1.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.5	0.0	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	12.7	0.0	0.0	11.0	0.0	0.0	7.9	0.0	7.0	7.1	0.0	6.4
LnGrp LOS	B			B			A		A	A		A
Approach Vol, veh/h		197			37			596			410	
Approach Delay, s/veh		12.7			11.0			7.1			6.4	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		11.7		22.5		11.7				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		9.3		6.1		7.9		2.6				
Green Ext Time (p_c), s		4.7		2.0		4.1		0.3				
Intersection Summary												
HCM 7th Control Delay, s/veh				7.9								
HCM 7th LOS				A								

56 St & 6 Ave Intersection

2035 Background Weekday PM Peak Hour

06/23/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	5	138	1	1	24	163	558	1	5	338	115
Future Volume (veh/h)	156	5	138	1	1	24	163	558	1	5	338	115
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	162	5	144	1	1	25	170	581	1	5	352	120
Peak Hour Factor	0.96	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	299	29	189	78	29	403	500	1024	2	430	731	249
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.55	0.55	0.55	0.55	0.55	0.55
Sat Flow, veh/h	699	107	695	12	106	1480	922	1867	3	833	1334	455
Grp Volume(v), veh/h	311	0	0	27	0	0	170	0	582	5	0	472
Grp Sat Flow(s),veh/h/ln	1500	0	0	1598	0	0	922	0	1870	833	0	1789
Q Serve(g_s), s	8.2	0.0	0.0	0.0	0.0	0.0	7.0	0.0	10.2	0.2	0.0	8.1
Cycle Q Clear(g_c), s	9.5	0.0	0.0	0.6	0.0	0.0	15.1	0.0	10.2	10.4	0.0	8.1
Prop In Lane	0.52		0.46	0.04		0.93	1.00		0.00	1.00		0.25
Lane Grp Cap(c), veh/h	518	0	0	509	0	0	500	0	1025	430	0	981
V/C Ratio(X)	0.60	0.00	0.00	0.05	0.00	0.00	0.34	0.00	0.57	0.01	0.00	0.48
Avail Cap(c_a), veh/h	660	0	0	662	0	0	500	0	1025	430	0	981
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.6	0.0	0.0	13.5	0.0	0.0	11.6	0.0	7.4	10.8	0.0	6.9
Incr Delay (d2), s/veh	1.1	0.0	0.0	0.0	0.0	0.0	1.8	0.0	2.3	0.0	0.0	1.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.6	0.0	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	17.8	0.0	0.0	13.6	0.0	0.0	13.4	0.0	9.7	10.9	0.0	8.6
LnGrp LOS	B			B			B		A	B		A
Approach Vol, veh/h		311			27			752				477
Approach Delay, s/veh		17.8			13.6			10.5				8.7
Approach LOS		B			B			B				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		32.0		18.2		32.0		18.2				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		27.5		18.5		27.5		18.5				
Max Q Clear Time (g_c+I1), s		17.1		11.5		12.4		2.6				
Green Ext Time (p_c), s		6.6		2.3		6.4		0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh				11.5								
HCM 7th LOS				B								

56 St & 8A Ave Intersection

2035 Background Weekday AM Peak Hour

06/23/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	0	24	1	9	2	45	611	0	2	335	147
Future Volume (veh/h)	128	0	24	1	9	2	45	611	0	2	335	147
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	141	0	26	1	10	2	49	671	0	2	368	162
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	412	6	40	128	260	49	182	1790	0	112	1298	559
Arrive On Green	0.18	0.00	0.18	0.18	0.18	0.18	0.55	0.55	0.00	0.55	0.55	0.55
Sat Flow, veh/h	1185	31	224	53	1472	277	106	3346	0	2	2365	1019
Grp Volume(v), veh/h	167	0	0	13	0	0	378	342	0	291	0	241
Grp Sat Flow(s),veh/h/ln	1441	0	0	1802	0	0	1749	1617	0	1867	0	1519
Q Serve(g_s), s	3.3	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	2.8
Cycle Q Clear(g_c), s	3.5	0.0	0.0	0.2	0.0	0.0	3.7	4.0	0.0	2.7	0.0	2.8
Prop In Lane	0.84		0.16	0.08		0.15	0.13		0.00	0.01		0.67
Lane Grp Cap(c), veh/h	457	0	0	437	0	0	1084	887	0	1135	0	833
V/C Ratio(X)	0.37	0.00	0.00	0.03	0.00	0.00	0.35	0.39	0.00	0.26	0.00	0.29
Avail Cap(c_a), veh/h	988	0	0	1097	0	0	1084	887	0	1135	0	833
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.5	0.0	0.0	11.2	0.0	0.0	4.2	4.2	0.0	4.0	0.0	4.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.0	0.0	0.0	0.9	1.3	0.0	0.5	0.0	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.2	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.0	0.0	0.0	11.2	0.0	0.0	5.1	5.5	0.0	4.5	0.0	4.8
LnGrp LOS	B			B			A			A		
Approach Vol, veh/h	167			13			720			532		
Approach Delay, s/veh	13.0			11.2			5.3			4.7		
Approach LOS	B			B			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	22.5			10.3			22.5			10.3		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	18.0			18.0			18.0			18.0		
Max Q Clear Time (g_c+I1), s	6.0			5.5			4.8			2.2		
Green Ext Time (p_c), s	7.5			1.7			6.1			0.0		
Intersection Summary												
HCM 7th Control Delay, s/veh				6.0								
HCM 7th LOS				A								

56 St & 8A Ave Intersection

2035 Background Weekday PM Peak Hour

06/23/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (veh/h)	105	0	16	1	5	1	24	658	0	1	595	70
Future Volume (veh/h)	105	0	16	1	5	1	24	658	0	1	595	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	114	0	17	1	5	1	26	715	0	1	647	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	383	0	25	150	188	34	147	1952	0	116	1812	212
Arrive On Green	0.13	0.00	0.13	0.13	0.13	0.13	0.58	0.58	0.00	0.58	0.58	0.58
Sat Flow, veh/h	1253	0	187	133	1410	257	42	3465	0	1	3137	368
Grp Volume(v), veh/h	131	0	0	7	0	0	393	348	0	386	0	338
Grp Sat Flow(s), veh/h/ln	1439	0	0	1800	0	0	1805	1617	0	1869	0	1636
Q Serve(g_s), s	2.6	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	0.0	3.4
Cycle Q Clear(g_c), s	2.7	0.0	0.0	0.1	0.0	0.0	3.5	3.6	0.0	3.4	0.0	3.4
Prop In Lane	0.87		0.13	0.14		0.14	0.07		0.00	0.00		0.22
Lane Grp Cap(c), veh/h	408	0	0	373	0	0	1166	934	0	1196	0	945
V/C Ratio(X)	0.32	0.00	0.00	0.02	0.00	0.00	0.34	0.37	0.00	0.32	0.00	0.36
Avail Cap(c_a), veh/h	1043	0	0	1146	0	0	1166	934	0	1196	0	945
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.9	0.0	0.0	11.7	0.0	0.0	3.5	3.5	0.0	3.5	0.0	3.5
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.0	0.0	0.0	0.8	1.1	0.0	0.7	0.0	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.2	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.3	0.0	0.0	11.8	0.0	0.0	4.3	4.7	0.0	4.2	0.0	4.6
LnGrp LOS	B			B			A	A		A		A
Approach Vol, veh/h		131			7			741			724	
Approach Delay, s/veh		13.3			11.8			4.5			4.4	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		8.7		22.5		8.7				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		5.6		4.7		5.4		2.1				
Green Ext Time (p_c), s		7.8		1.3		7.7		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh				5.2								
HCM 7th LOS				A								

APPENDIX F – DETAILED ITE TRIP GENERATION ANALYSES SHEET FOR LOW-RISE MULTI-FAMILY HOUSING

Trip Generation Summary

Alternative: Alternative 1

Phase:

Open Date: 2025-11-20

Project: BRAMOR Development

Analysis Date: 2025-11-20

ITE	Land Use	Weekday Average Daily Trips				Weekday AM Peak Hour of Adjacent Street Traffic				Weekday PM Peak Hour of Adjacent Street Traffic			
		*	Enter	Exit	Total	*	Enter	Exit	Total	*	Enter	Exit	Total
220	LOW-RISE 1		158	158	316		4	16	20		17	9	26
	50 Occupied Dwelling Units												
Unadjusted Volume			158	158	316		4	16	20		17	9	26
Internal Capture Trips			0	0	0		0	0	0		0	0	0
Pass-By Trips			0	0	0		0	0	0		0	0	0
Volume Added to Adjacent Streets			158	158	316		4	16	20		17	9	26

Total Weekday Average Daily Trips Internal Capture = 0 Percent

Total Weekday AM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent

Total Weekday PM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent

* - Custom rate used for selected time period.

Source: Institute of Transportation Engineers, Trip Generation Manual 10th Edition

TRIP GENERATION 10, TRAFFICWARE, LLC

P. 1

APPENDIX G – SYNCHRO RESULTS SHEETS FOR
YEAR 2030 POST-FULL BUILD-OUT
INTERSECTION OPERATING CONDITIONS

52 St & 6 Ave Intersection
2030 Full Build-out Weekday AM Peak Hour

12/01/2025

Intersection												
Int Delay, s/veh	6.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	57	24	3	52	34	54	49	2	7	55	34
Future Vol, veh/h	14	57	24	3	52	34	54	49	2	7	55	34
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	64	27	3	58	38	61	55	2	8	62	38

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	97	0	0	91	0	0	205	212	78	207	207	78
Stage 1	-	-	-	-	-	-	109	109	-	84	84	-
Stage 2	-	-	-	-	-	-	96	103	-	123	122	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1497	-	-	1504	-	-	753	685	983	750	690	983
Stage 1	-	-	-	-	-	-	896	805	-	924	825	-
Stage 2	-	-	-	-	-	-	911	810	-	881	794	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1497	-	-	1504	-	-	650	676	983	679	681	983
Mov Cap-2 Maneuver	-	-	-	-	-	-	650	676	-	679	681	-
Stage 1	-	-	-	-	-	-	886	796	-	922	823	-
Stage 2	-	-	-	-	-	-	808	808	-	809	786	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.1	0.25	11.56	10.49
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	666	250	-	-	56	-	-	764
HCM Lane V/C Ratio	0.177	0.011	-	-	0.002	-	-	0.141
HCM Ctrl Dly (s/v)	11.6	7.4	0	-	7.4	0	-	10.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.6	0	-	-	0	-	-	0.5

52 St & 6 Ave Intersection
2030 Full Build-out Weekday PM Peak Hour

11/12/2025

Intersection												
Int Delay, s/veh	7.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	25	29	32	3	11	10	34	59	2	17	45	38
Future Vol, veh/h	25	29	32	3	11	10	34	59	2	17	45	38
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	32	35	3	12	11	37	65	2	19	49	42

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	23	0	0	67	0	0	148	134	49	143	146	18
Stage 1	-	-	-	-	-	-	104	104	-	24	24	-
Stage 2	-	-	-	-	-	-	43	30	-	119	122	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1592	-	-	1534	-	-	820	757	1019	826	745	1061
Stage 1	-	-	-	-	-	-	901	809	-	994	875	-
Stage 2	-	-	-	-	-	-	971	870	-	885	795	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1592	-	-	1534	-	-	721	741	1019	738	730	1061
Mov Cap-2 Maneuver	-	-	-	-	-	-	721	741	-	738	730	-
Stage 1	-	-	-	-	-	-	885	794	-	992	873	-
Stage 2	-	-	-	-	-	-	878	868	-	797	781	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	2.12	0.92	10.68	10
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	738	474	-	-	205	-	-	830
HCM Lane V/C Ratio	0.141	0.017	-	-	0.002	-	-	0.132
HCM Ctrl Dly (s/v)	10.7	7.3	0	-	7.4	0	-	10
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0	-	-	0.5

52 St & 8A Ave Intersection
2030 Full Build-out Weekday AM Peak Hour

11/12/2025

Intersection						
Int Delay, s/veh	3.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	46	14	18	32	8	44
Future Vol, veh/h	46	14	18	32	8	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	16	21	37	9	51

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	69	0	139	61
Stage 1	-	-	-	-	61	-
Stage 2	-	-	-	-	78	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1532	-	854	1004
Stage 1	-	-	-	-	962	-
Stage 2	-	-	-	-	945	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1532	-	842	1004
Mov Cap-2 Maneuver	-	-	-	-	842	-
Stage 1	-	-	-	-	962	-
Stage 2	-	-	-	-	932	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	2.66	8.93
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	975	-	-	648	-
HCM Lane V/C Ratio	0.061	-	-	0.014	-
HCM Ctrl Dly (s/v)	8.9	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

52 St & 8A Ave Intersection
2030 Full Build-out Weekday PM Peak Hour

11/12/2025

Intersection

Int Delay, s/veh 3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	88	72	77	88	10	48
Future Vol, veh/h	88	72	77	88	10	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	93	76	81	93	11	51

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	168
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1409
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1409
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	3.6	9.65
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	835	-	-	840	-
HCM Lane V/C Ratio	0.073	-	-	0.058	-
HCM Ctrl Dly (s/v)	9.7	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-

56 St & 6 Ave Intersection
2030 Full Build-out Weekday AM Peak Hour

06/23/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	5	60	3	2	29	102	404	1	7	255	88
Future Volume (veh/h)	116	5	60	3	2	29	102	404	1	7	255	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	127	5	66	3	2	32	112	444	1	8	280	97
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	349	33	105	123	36	293	611	980	2	567	698	242
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.53	0.53	0.53	0.53	0.53	0.53
Sat Flow, veh/h	833	155	494	46	170	1386	1006	1865	4	945	1328	460
Grp Volume(v), veh/h	198	0	0	37	0	0	112	0	445	8	0	377
Grp Sat Flow(s),veh/h/ln	1481	0	0	1602	0	0	1006	0	1870	945	0	1788
Q Serve(g_s), s	3.3	0.0	0.0	0.0	0.0	0.0	2.6	0.0	5.1	0.2	0.0	4.3
Cycle Q Clear(g_c), s	4.1	0.0	0.0	0.6	0.0	0.0	6.9	0.0	5.1	5.3	0.0	4.3
Prop In Lane	0.64		0.33	0.08		0.86	1.00		0.00	1.00		0.26
Lane Grp Cap(c), veh/h	486	0	0	453	0	0	611	0	983	567	0	939
V/C Ratio(X)	0.41	0.00	0.00	0.08	0.00	0.00	0.18	0.00	0.45	0.01	0.00	0.40
Avail Cap(c_a), veh/h	941	0	0	947	0	0	611	0	983	567	0	939
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.2	0.0	0.0	10.9	0.0	0.0	7.0	0.0	5.1	6.7	0.0	4.9
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.1	0.0	0.0	0.7	0.0	1.5	0.0	0.0	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.4	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	12.7	0.0	0.0	11.0	0.0	0.0	7.6	0.0	6.6	6.7	0.0	6.2
LnGrp LOS	B			B			A			A		
Approach Vol, veh/h	198			37			557			385		
Approach Delay, s/veh	12.7			11.0			6.8			6.2		
Approach LOS	B			B			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	22.5			11.7			22.5			11.7		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	18.0			18.0			18.0			18.0		
Max Q Clear Time (g_c+I1), s	8.9			6.1			7.3			2.6		
Green Ext Time (p_c), s	4.5			2.0			4.0			0.3		
Intersection Summary												
HCM 7th Control Delay, s/veh				7.7								
HCM 7th LOS				A								

56 St & 6 Ave Intersection

2030 Full Build-out Weekday PM Peak Hour

11/12/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↗	↘		↗	↘	
Traffic Volume (veh/h)	156	5	139	1	1	24	164	512	1	5	310	115
Future Volume (veh/h)	156	5	139	1	1	24	164	512	1	5	310	115
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	162	5	145	1	1	25	171	533	1	5	323	120
Peak Hour Factor	0.96	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	304	31	195	79	30	413	511	1005	2	454	700	260
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.54	0.54	0.54	0.54	0.54	0.54
Sat Flow, veh/h	693	111	698	12	107	1480	947	1866	4	870	1300	483
Grp Volume(v), veh/h	312	0	0	27	0	0	171	0	534	5	0	443
Grp Sat Flow(s),veh/h/ln	1502	0	0	1598	0	0	947	0	1870	870	0	1783
Q Serve(g_s), s	7.9	0.0	0.0	0.0	0.0	0.0	6.7	0.0	9.1	0.2	0.0	7.5
Cycle Q Clear(g_c), s	9.2	0.0	0.0	0.6	0.0	0.0	14.2	0.0	9.1	9.3	0.0	7.5
Prop In Lane	0.52		0.46	0.04		0.93	1.00		0.00	1.00		0.27
Lane Grp Cap(c), veh/h	530	0	0	522	0	0	511	0	1006	454	0	960
V/C Ratio(X)	0.59	0.00	0.00	0.05	0.00	0.00	0.33	0.00	0.53	0.01	0.00	0.46
Avail Cap(c_a), veh/h	703	0	0	706	0	0	511	0	1006	454	0	960
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.0	0.0	0.0	13.0	0.0	0.0	11.3	0.0	7.3	10.3	0.0	7.0
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	2.0	0.0	0.0	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.6	0.0	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	17.1	0.0	0.0	13.1	0.0	0.0	13.1	0.0	9.3	10.4	0.0	8.6
LnGrp LOS	B			B			B		A	B		A
Approach Vol, veh/h		312			27			705			448	
Approach Delay, s/veh		17.1			13.1			10.3			8.6	
Approach LOS		B			B			B			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.0		18.2		31.0		18.2				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		26.5		19.5		26.5		19.5				
Max Q Clear Time (g_c+I1), s		16.2		11.2		11.3		2.6				
Green Ext Time (p_c), s		6.1		2.6		6.0		0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh				11.2								
HCM 7th LOS				B								

56 St & 8A Ave Intersection
2030 Full Build-out Weekday AM Peak Hour

11/12/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	139	0	24	1	9	2	45	560	0	2	307	150
Future Volume (veh/h)	139	0	24	1	9	2	45	560	0	2	307	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	153	0	26	1	10	2	49	615	0	2	337	165
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	426	8	40	126	280	53	185	1754	0	110	1233	588
Arrive On Green	0.19	0.00	0.19	0.19	0.19	0.19	0.54	0.54	0.00	0.54	0.54	0.54
Sat Flow, veh/h	1188	41	209	49	1477	277	115	3332	0	2	2283	1089
Grp Volume(v), veh/h	179	0	0	13	0	0	349	315	0	276	0	228
Grp Sat Flow(s),veh/h/ln	1438	0	0	1803	0	0	1745	1617	0	1868	0	1506
Q Serve(g_s), s	3.6	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0	0.0	2.7
Cycle Q Clear(g_c), s	3.8	0.0	0.0	0.2	0.0	0.0	3.5	3.7	0.0	2.6	0.0	2.7
Prop In Lane	0.85		0.15	0.08		0.15	0.14		0.00	0.01		0.72
Lane Grp Cap(c), veh/h	473	0	0	458	0	0	1066	873	0	1118	0	814
V/C Ratio(X)	0.38	0.00	0.00	0.03	0.00	0.00	0.33	0.36	0.00	0.25	0.00	0.28
Avail Cap(c_a), veh/h	973	0	0	1080	0	0	1066	873	0	1118	0	814
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.5	0.0	0.0	11.0	0.0	0.0	4.3	4.4	0.0	4.1	0.0	4.2
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.0	0.0	0.0	0.8	1.2	0.0	0.5	0.0	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.0	0.2	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.0	0.0	0.0	11.0	0.0	0.0	5.1	5.5	0.0	4.7	0.0	5.0
LnGrp LOS	B			B			A			A		
Approach Vol, veh/h	179			13			664			504		
Approach Delay, s/veh	13.0			11.0			5.3			4.8		
Approach LOS	B			B			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	22.5			10.8			22.5			10.8		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	18.0			18.0			18.0			18.0		
Max Q Clear Time (g_c+I1), s	5.7			5.8			4.7			2.2		
Green Ext Time (p_c), s	7.1			1.8			5.9			0.0		
Intersection Summary												
HCM 7th Control Delay, s/veh				6.2								
HCM 7th LOS				A								

56 St & 8A Ave Intersection

2030 Full Build-out Weekday PM Peak Hour

06/23/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (veh/h)	111	0	16	1	5	1	24	603	0	1	546	82
Future Volume (veh/h)	111	0	16	1	5	1	24	603	0	1	546	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	121	0	17	1	5	1	26	655	0	1	593	89
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	394	0	25	148	201	36	149	1931	0	115	1736	260
Arrive On Green	0.14	0.00	0.14	0.14	0.14	0.14	0.57	0.57	0.00	0.57	0.57	0.57
Sat Flow, veh/h	1261	0	177	124	1417	257	46	3460	0	1	3035	454
Grp Volume(v), veh/h	138	0	0	7	0	0	361	320	0	365	0	318
Grp Sat Flow(s), veh/h/ln	1438	0	0	1798	0	0	1804	1617	0	1869	0	1620
Q Serve(g_s), s	2.8	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0	3.3
Cycle Q Clear(g_c), s	2.9	0.0	0.0	0.1	0.0	0.0	3.2	3.3	0.0	3.3	0.0	3.3
Prop In Lane	0.88		0.12	0.14		0.14	0.07		0.00	0.00		0.28
Lane Grp Cap(c), veh/h	419	0	0	386	0	0	1155	925	0	1184	0	927
V/C Ratio(X)	0.33	0.00	0.00	0.02	0.00	0.00	0.31	0.35	0.00	0.31	0.00	0.34
Avail Cap(c_a), veh/h	1034	0	0	1135	0	0	1155	925	0	1184	0	927
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.8	0.0	0.0	11.6	0.0	0.0	3.6	3.6	0.0	3.6	0.0	3.6
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.0	0.0	0.0	0.7	1.0	0.0	0.7	0.0	1.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.0	0.2	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.3	0.0	0.0	11.6	0.0	0.0	4.3	4.6	0.0	4.3	0.0	4.6
LnGrp LOS	B			B			A	A		A		A
Approach Vol, veh/h		138			7			681			683	
Approach Delay, s/veh		13.3			11.6			4.4			4.4	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		9.0		22.5		9.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		5.3		4.9		5.3		2.1				
Green Ext Time (p_c), s		7.4		1.4		7.4		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh			5.3									
HCM 7th LOS			A									

APPENDIX H – SYNCHRO RESULTS SHEETS FOR YEAR 2035 (5-YEARS POST FULL SITE BUILD- OUT) INTERSECTION OPERATING CONDITIONS

52 St & 6 Ave Intersection

2035 (5-Yrs Post Full Build-out) Weekday AM Peak Hour

11/12/2025

Intersection												
Int Delay, s/veh	6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	62	24	3	56	34	54	49	2	7	55	34
Future Vol, veh/h	14	62	24	3	56	34	54	49	2	7	55	34
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	70	27	3	63	38	61	55	2	8	62	38

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	101	0	0	97	0	0	215	222	83	217	217	82
Stage 1	-	-	-	-	-	-	115	115	-	89	89	-
Stage 2	-	-	-	-	-	-	101	108	-	129	128	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1491	-	-	1497	-	-	741	676	976	739	681	978
Stage 1	-	-	-	-	-	-	890	801	-	919	821	-
Stage 2	-	-	-	-	-	-	906	806	-	875	790	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1491	-	-	1497	-	-	639	667	976	668	672	978
Mov Cap-2 Maneuver	-	-	-	-	-	-	639	667	-	668	672	-
Stage 1	-	-	-	-	-	-	880	792	-	916	819	-
Stage 2	-	-	-	-	-	-	803	804	-	803	781	-

Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	1.04			0.24			11.69			10.56		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	656	239	-	-	54	-	-	755
HCM Lane V/C Ratio	0.18	0.011	-	-	0.002	-	-	0.143
HCM Ctrl Dly (s/v)	11.7	7.4	0	-	7.4	0	-	10.6
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.7	0	-	-	0	-	-	0.5

52 St & 6 Ave Intersection

2035 (5-Yrs Post Full Build-out) Weekday PM Peak Hour

11/12/2025

Intersection												
Int Delay, s/veh	7.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	25	31	32	3	12	10	34	59	2	17	45	38
Future Vol, veh/h	25	31	32	3	12	10	34	59	2	17	45	38
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	34	35	3	13	11	37	65	2	19	49	42

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	24	0	0	69	0	0	151	137	52	147	149	19
Stage 1	-	-	-	-	-	-	107	107	-	25	25	-
Stage 2	-	-	-	-	-	-	45	31	-	121	124	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1591	-	-	1532	-	-	816	754	1016	822	742	1060
Stage 1	-	-	-	-	-	-	899	807	-	992	874	-
Stage 2	-	-	-	-	-	-	970	869	-	883	793	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1591	-	-	1532	-	-	717	738	1016	734	727	1060
Mov Cap-2 Maneuver	-	-	-	-	-	-	717	738	-	734	727	-
Stage 1	-	-	-	-	-	-	883	792	-	990	872	-
Stage 2	-	-	-	-	-	-	877	868	-	794	779	-

Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	2.07			0.88			10.71			10.02		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	735	464	-	-	198	-	-	827
HCM Lane V/C Ratio	0.142	0.017	-	-	0.002	-	-	0.133
HCM Ctrl Dly (s/v)	10.7	7.3	0	-	7.4	0	-	10
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0	-	-	0.5

52 St & 8A Ave Intersection

2035 (5-Yrs Post Full Build-out) Weekday AM Peak Hour

11/12/2025

Intersection

Int Delay, s/veh 4.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
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Lane Configurations						
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Traffic Vol, veh/h	42	14	18	31	8	54
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Future Vol, veh/h	42	14	18	31	8	54
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Conflicting Peds, #/hr	0	0	0	0	0	0
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Sign Control	Free	Free	Free	Free	Stop	Stop
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RT Channelized	-	None	-	None	-	None
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Storage Length	-	-	-	-	0	-
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Veh in Median Storage, #	0	-	-	0	0	-
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Grade, %	0	-	-	0	0	-
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Peak Hour Factor	87	87	87	87	87	87
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Heavy Vehicles, %	2	2	2	2	2	2
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Mvmt Flow	48	16	21	36	9	62
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Major/Minor	Major1	Major2	Minor1
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Conflicting Flow All	0	0	64
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Stage 1	-	-	56
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Stage 2	-	-	77
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Critical Hdwy	-	4.12	6.22
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Critical Hdwy Stg 1	-	-	5.42
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Critical Hdwy Stg 2	-	-	5.42
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Follow-up Hdwy	-	2.218	3.318
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Pot Cap-1 Maneuver	-	1538	860
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Stage 1	-	-	966
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Stage 2	-	-	946
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Platoon blocked, %	-	-	-
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Mov Cap-1 Maneuver	-	1538	849
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Mov Cap-2 Maneuver	-	-	849
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Stage 1	-	-	966
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Stage 2	-	-	933
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Approach	EB	WB	NB
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HCM Ctrl Dly, s/v	0	2.71	8.94
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HCM LOS			A
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Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
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Capacity (veh/h)	986	-	-	661	-
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HCM Lane V/C Ratio	0.072	-	-	0.013	-
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HCM Ctrl Dly (s/v)	8.9	-	-	7.4	0
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HCM Lane LOS	A	-	-	A	A
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HCM 95th %tile Q(veh)	0.2	-	-	0	-
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52 St & 8A Ave Intersection

2035 (5-Yrs Post Full Build-out) Weekday PM Peak Hour

11/12/2025

Intersection						
Int Delay, s/veh	3.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	80	72	77	88	10	48
Future Vol, veh/h	80	72	77	88	10	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	84	76	81	93	11	51

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	160
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1419
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1419
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	3.59	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	844	-	-	840	-
HCM Lane V/C Ratio	0.072	-	-	0.057	-
HCM Ctrl Dly (s/v)	9.6	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-

56 St & 6 Ave Intersection

2035 (5-Yrs Post Full Build-out) Weekday AM Peak Hour

11/12/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	5	60	3	2	29	101	440	1	7	278	88
Future Volume (veh/h)	116	5	60	3	2	29	101	440	1	7	278	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	127	5	66	3	2	32	111	484	1	8	305	97
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	349	33	105	123	36	293	592	981	2	537	715	227
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.53	0.53	0.53	0.53	0.53	0.53
Sat Flow, veh/h	833	155	494	46	170	1386	983	1866	4	911	1360	433
Grp Volume(v), veh/h	198	0	0	37	0	0	111	0	485	8	0	402
Grp Sat Flow(s),veh/h/ln	1481	0	0	1602	0	0	983	0	1870	911	0	1793
Q Serve(g_s), s	3.3	0.0	0.0	0.0	0.0	0.0	2.7	0.0	5.7	0.2	0.0	4.7
Cycle Q Clear(g_c), s	4.1	0.0	0.0	0.6	0.0	0.0	7.4	0.0	5.7	5.9	0.0	4.7
Prop In Lane	0.64		0.33	0.08		0.86	1.00		0.00	1.00		0.24
Lane Grp Cap(c), veh/h	486	0	0	453	0	0	592	0	983	537	0	942
V/C Ratio(X)	0.41	0.00	0.00	0.08	0.00	0.00	0.19	0.00	0.49	0.01	0.00	0.43
Avail Cap(c_a), veh/h	941	0	0	947	0	0	592	0	983	537	0	942
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.2	0.0	0.0	10.9	0.0	0.0	7.2	0.0	5.2	7.1	0.0	5.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.1	0.0	0.0	0.7	0.0	1.8	0.1	0.0	1.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.5	0.0	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	12.7	0.0	0.0	11.0	0.0	0.0	7.9	0.0	7.0	7.1	0.0	6.4
LnGrp LOS	B			B			A			A		
Approach Vol, veh/h	198			37			596			410		
Approach Delay, s/veh	12.7			11.0			7.2			6.4		
Approach LOS	B			B			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	22.5			11.7			22.5			11.7		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	18.0			18.0			18.0			18.0		
Max Q Clear Time (g_c+I1), s	9.4			6.1			7.9			2.6		
Green Ext Time (p_c), s	4.7			2.0			4.1			0.3		
Intersection Summary												
HCM 7th Control Delay, s/veh				7.9								
HCM 7th LOS				A								

56 St & 6 Ave Intersection

2035 (5-Yrs Post Full Build-out) Weekday PM Peak Hour

11/12/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	5	139	1	1	24	164	558	1	5	338	115
Future Volume (veh/h)	156	5	139	1	1	24	164	558	1	5	338	115
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	162	5	145	1	1	25	171	581	1	5	352	120
Peak Hour Factor	0.96	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	299	29	190	78	29	404	499	1023	2	430	731	249
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.55	0.55	0.55	0.55	0.55	0.55
Sat Flow, veh/h	697	106	697	12	107	1480	922	1867	3	833	1334	455
Grp Volume(v), veh/h	312	0	0	27	0	0	171	0	582	5	0	472
Grp Sat Flow(s),veh/h/ln	1500	0	0	1598	0	0	922	0	1870	833	0	1789
Q Serve(g_s), s	8.2	0.0	0.0	0.0	0.0	0.0	7.0	0.0	10.3	0.2	0.0	8.1
Cycle Q Clear(g_c), s	9.5	0.0	0.0	0.6	0.0	0.0	15.2	0.0	10.3	10.5	0.0	8.1
Prop In Lane	0.52		0.46	0.04		0.93	1.00		0.00	1.00		0.25
Lane Grp Cap(c), veh/h	518	0	0	510	0	0	499	0	1025	430	0	980
V/C Ratio(X)	0.60	0.00	0.00	0.05	0.00	0.00	0.34	0.00	0.57	0.01	0.00	0.48
Avail Cap(c_a), veh/h	660	0	0	661	0	0	499	0	1025	430	0	980
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.6	0.0	0.0	13.5	0.0	0.0	11.6	0.0	7.4	10.9	0.0	7.0
Incr Delay (d2), s/veh	1.1	0.0	0.0	0.0	0.0	0.0	1.9	0.0	2.3	0.0	0.0	1.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.6	0.0	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	17.8	0.0	0.0	13.5	0.0	0.0	13.5	0.0	9.7	10.9	0.0	8.7
LnGrp LOS	B			B			B			A		A
Approach Vol, veh/h	312			27			753			477		
Approach Delay, s/veh	17.8			13.5			10.6			8.7		
Approach LOS	B			B			B			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	32.0			18.2			32.0			18.2		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	27.5			18.5			27.5			18.5		
Max Q Clear Time (g_c+I1), s	17.2			11.5			12.5			2.6		
Green Ext Time (p_c), s	6.6			2.3			6.4			0.2		
Intersection Summary												
HCM 7th Control Delay, s/veh	11.5											
HCM 7th LOS	B											

56 St & 8A Ave Intersection

2035 (5-Yrs Post Full Build-out) Weekday AM Peak Hour

06/23/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	139	0	24	1	9	2	45	611	0	2	335	150
Future Volume (veh/h)	139	0	24	1	9	2	45	611	0	2	335	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	153	0	26	1	10	2	49	671	0	2	368	165
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	426	8	40	126	280	53	180	1760	0	110	1270	557
Arrive On Green	0.19	0.00	0.19	0.19	0.19	0.19	0.54	0.54	0.00	0.54	0.54	0.54
Sat Flow, veh/h	1188	41	209	49	1477	277	107	3343	0	2	2350	1031
Grp Volume(v), veh/h	179	0	0	13	0	0	378	342	0	292	0	243
Grp Sat Flow(s),veh/h/ln	1438	0	0	1803	0	0	1748	1617	0	1867	0	1516
Q Serve(g_s), s	3.6	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0	0.0	2.9
Cycle Q Clear(g_c), s	3.8	0.0	0.0	0.2	0.0	0.0	3.9	4.1	0.0	2.8	0.0	2.9
Prop In Lane	0.85		0.15	0.08		0.15	0.13		0.00	0.01		0.68
Lane Grp Cap(c), veh/h	473	0	0	458	0	0	1066	873	0	1118	0	819
V/C Ratio(X)	0.38	0.00	0.00	0.03	0.00	0.00	0.35	0.39	0.00	0.26	0.00	0.30
Avail Cap(c_a), veh/h	973	0	0	1080	0	0	1066	873	0	1118	0	819
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.5	0.0	0.0	11.0	0.0	0.0	4.4	4.5	0.0	4.2	0.0	4.2
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.0	0.0	0.0	0.9	1.3	0.0	0.6	0.0	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.2	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.0	0.0	0.0	11.0	0.0	0.0	5.3	5.8	0.0	4.7	0.0	5.1
LnGrp LOS	B			B			A			A		
Approach Vol, veh/h	179			13			720			535		
Approach Delay, s/veh	13.0			11.0			5.6			4.9		
Approach LOS	B			B			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	22.5			10.8			22.5			10.8		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	18.0			18.0			18.0			18.0		
Max Q Clear Time (g_c+I1), s	6.1			5.8			4.9			2.2		
Green Ext Time (p_c), s	7.4			1.8			6.1			0.0		
Intersection Summary												
HCM 7th Control Delay, s/veh	6.3											
HCM 7th LOS	A											

56 St & 8A Ave Intersection

2035 (5-Yrs Post Full Build-out) Weekday PM Peak Hour

06/23/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	0	16	1	5	1	24	658	0	1	595	82
Future Volume (veh/h)	111	0	16	1	5	1	24	658	0	1	595	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	121	0	17	1	5	1	26	715	0	1	647	89
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	394	0	25	148	201	36	146	1933	0	115	1758	241
Arrive On Green	0.14	0.00	0.14	0.14	0.14	0.14	0.57	0.57	0.00	0.57	0.57	0.57
Sat Flow, veh/h	1261	0	177	124	1417	257	42	3464	0	1	3073	422
Grp Volume(v), veh/h	138	0	0	7	0	0	393	348	0	394	0	343
Grp Sat Flow(s),veh/h/ln	1438	0	0	1798	0	0	1804	1617	0	1869	0	1626
Q Serve(g_s), s	2.8	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0	0.0	3.6
Cycle Q Clear(g_c), s	2.9	0.0	0.0	0.1	0.0	0.0	3.6	3.7	0.0	3.6	0.0	3.6
Prop In Lane	0.88		0.12	0.14		0.14	0.07		0.00	0.00		0.26
Lane Grp Cap(c), veh/h	419	0	0	386	0	0	1154	925	0	1184	0	930
V/C Ratio(X)	0.33	0.00	0.00	0.02	0.00	0.00	0.34	0.38	0.00	0.33	0.00	0.37
Avail Cap(c_a), veh/h	1034	0	0	1135	0	0	1154	925	0	1184	0	930
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.8	0.0	0.0	11.6	0.0	0.0	3.6	3.7	0.0	3.6	0.0	3.7
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.0	0.0	0.0	0.8	1.2	0.0	0.8	0.0	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.2	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.3	0.0	0.0	11.6	0.0	0.0	4.4	4.8	0.0	4.4	0.0	4.8
LnGrp LOS	B			B			A			A		
Approach Vol, veh/h	138			7			741			737		
Approach Delay, s/veh	13.3			11.6			4.6			4.6		
Approach LOS	B			B			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	22.5			9.0			22.5			9.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	18.0			18.0			18.0			18.0		
Max Q Clear Time (g_c+I1), s	5.7			4.9			5.6			2.1		
Green Ext Time (p_c), s	7.8			1.4			7.7			0.0		
Intersection Summary												
HCM 7th Control Delay, s/veh	5.4											
HCM 7th LOS	A											