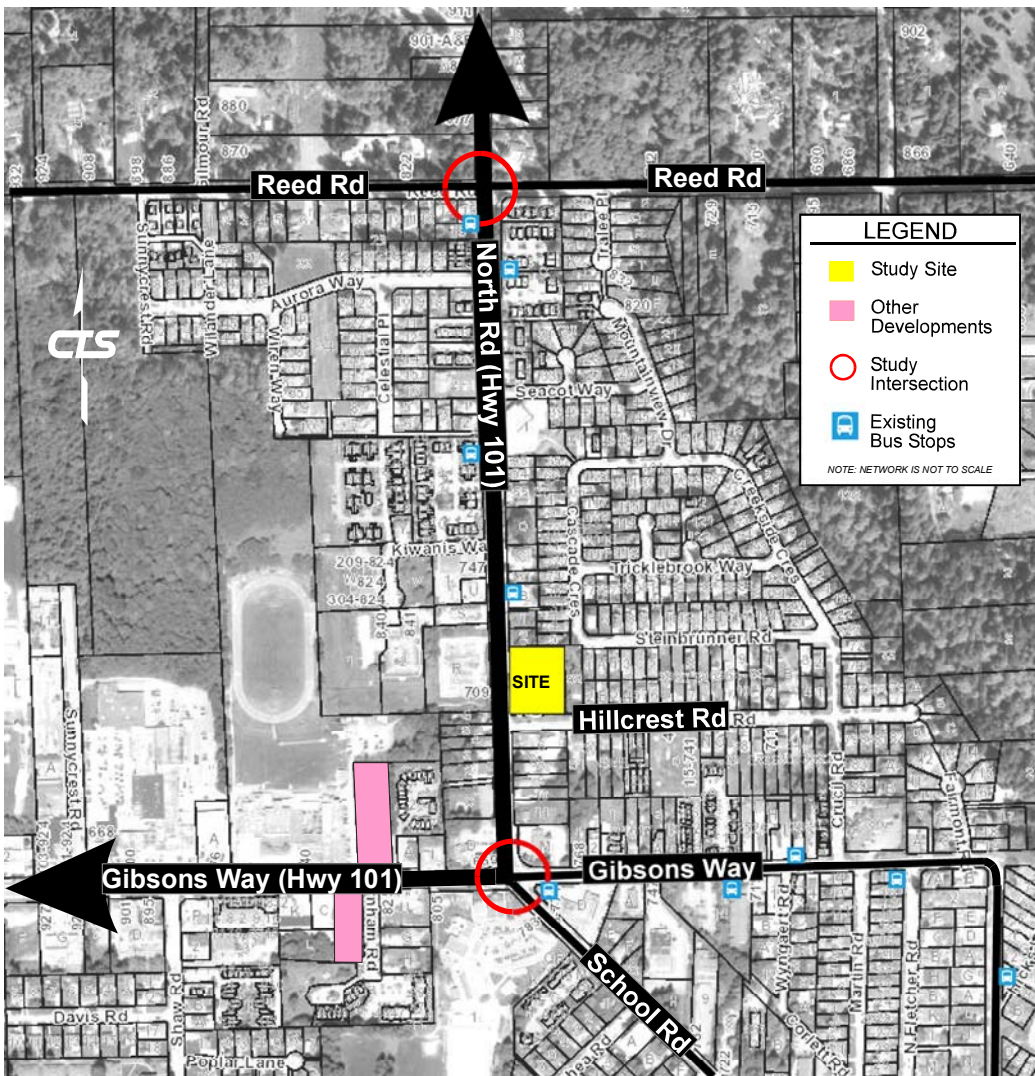


# 718 North Road Traffic Impact Study



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MAY 2024

Date: May 10, 2024  
File No: 9090-01

BY EMAIL



Dear [REDACTED]

**Re: 718 North Road, Town of Gibsons – Final Traffic Impact Study**

Creative Transportation Solutions Ltd. (CTS) is pleased to submit this *Final Traffic Impact Study* for the proposed mixed-use development located at 718 North Road in the Town of Gibsons, BC. The primary objectives of this assignment were:

1. To conduct a Traffic Impact Study for the proposed mixed-use development, and
2. To document the site conditions, data, analyses, key findings, and recommendations (if any) in a report that meets the requirements set out by the client, Town of Gibsons, and Ministry of Transportation & Infrastructure (Ministry).

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## 1.0 BACKGROUND

### 1.1 Study Site

The client is proposing to develop the site at 718 North Road, Town of Gibsons, BC, as a six-storey building. The proposed mixed-use development is to consist of 124 residential units and a 3,637 ft<sup>2</sup> (337.9 m<sup>2</sup>) daycare. The existing zoning is C-1 (Upper Gibsons Commercial District 1), and the legal description is:

- Lot K, Block 7, Plan VAP23077, District Lot 688, New Westminster Land District Lot 1.

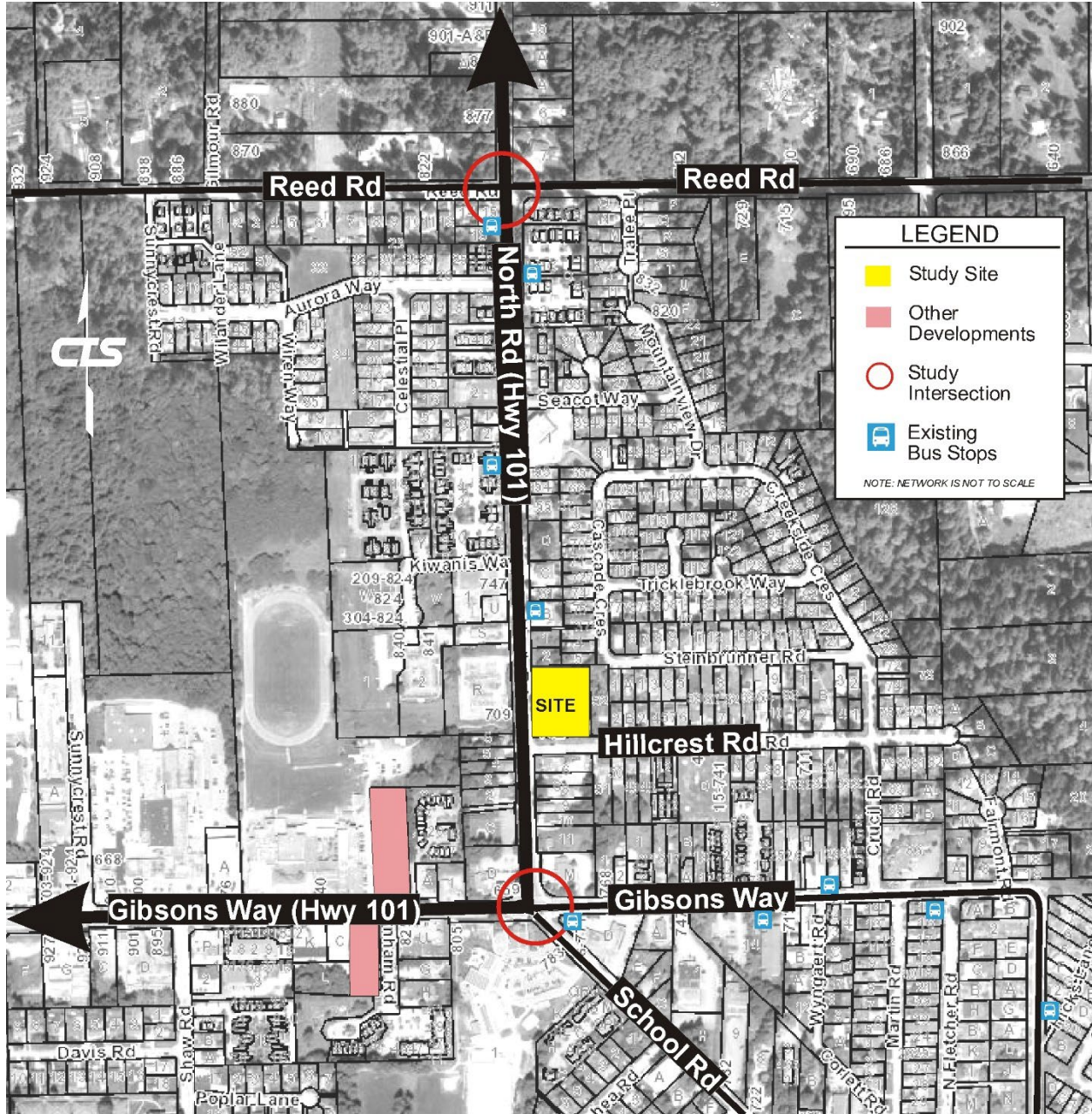
For the purpose of this study, the mixed-use development was assumed to be completed and fully occupied by 2028. A copy of the site plan referenced by this study is included as **APPENDIX A**.

### 1.2 Study Area

The study area is bounded by Reed Road to the north, the site property line to the east, Gibsons Way to the south, and North Road (Highway 101) to the west. **FIGURE 1** illustrates the study area and the road network adjacent to the site.



**FIGURE 1  
STUDY AREA AND ADJACENT ROAD NETWORK**



For the purpose of this study, the following key intersections were included in the analysis:

- 1) Reed Road & North Road/Highway 101 (signalized); and
- 2) North Road/School Road & Gibsons Way/Highway 101 (signalized).

### 1.3 Study Periods

Friday AM and PM peak hours were selected as the design hours for this study as that is when both the adjacent road network typically carries the highest traffic volumes, and the proposed mixed-use development generates the maximum traffic volumes. For the purpose of this study, the mixed-use development was assumed to be completed and fully occupied by 2028.

The following horizon years were selected for this study:

- 2023 Existing Base i.e. existing base traffic scenario.
- 2028 Future Base i.e. future base traffic scenario without the mixed-use development.
- 2028 Future Base + Site i.e., fully built-out & occupied.
- 2033 Future Base i.e. future base traffic scenario without the mixed-use development.
- 2033 Future Base + Site i.e. 5 years post build-out.

### 1.4 Existing Road Network and Intersections

North Road (Highway 101) is an arterial highway within the authority of the Ministry of Transportation & Infrastructure (MOTI). The highway services two BC Ferries terminals and provides access to various communities along the coast. Within the study area, Highway 101 has a two-lane cross-section and designated bicycle lanes. The posted speed limit is 50km/h.

Reed Road is a two-lane local road. The road connects residential areas to the east and west of Highway 101. The posted speed is 50 km/h.

Gibsons Way (Highway 101) is a two-lane arterial highway with a designated bicycle lane on the south side. The posted speed is 50 km/h.

Gibsons Way is a two-lane collector roadway with designated bicycle lanes, which connects Upper Gibsons and Lower Gibsons. The posted speed is 50 km/h.

School Road is a two-lane collector roadway that connects Upper Gibsons and Lower Gibsons. The posted speed is 30 km/h.



North Road (Highway 101) and Reed Road

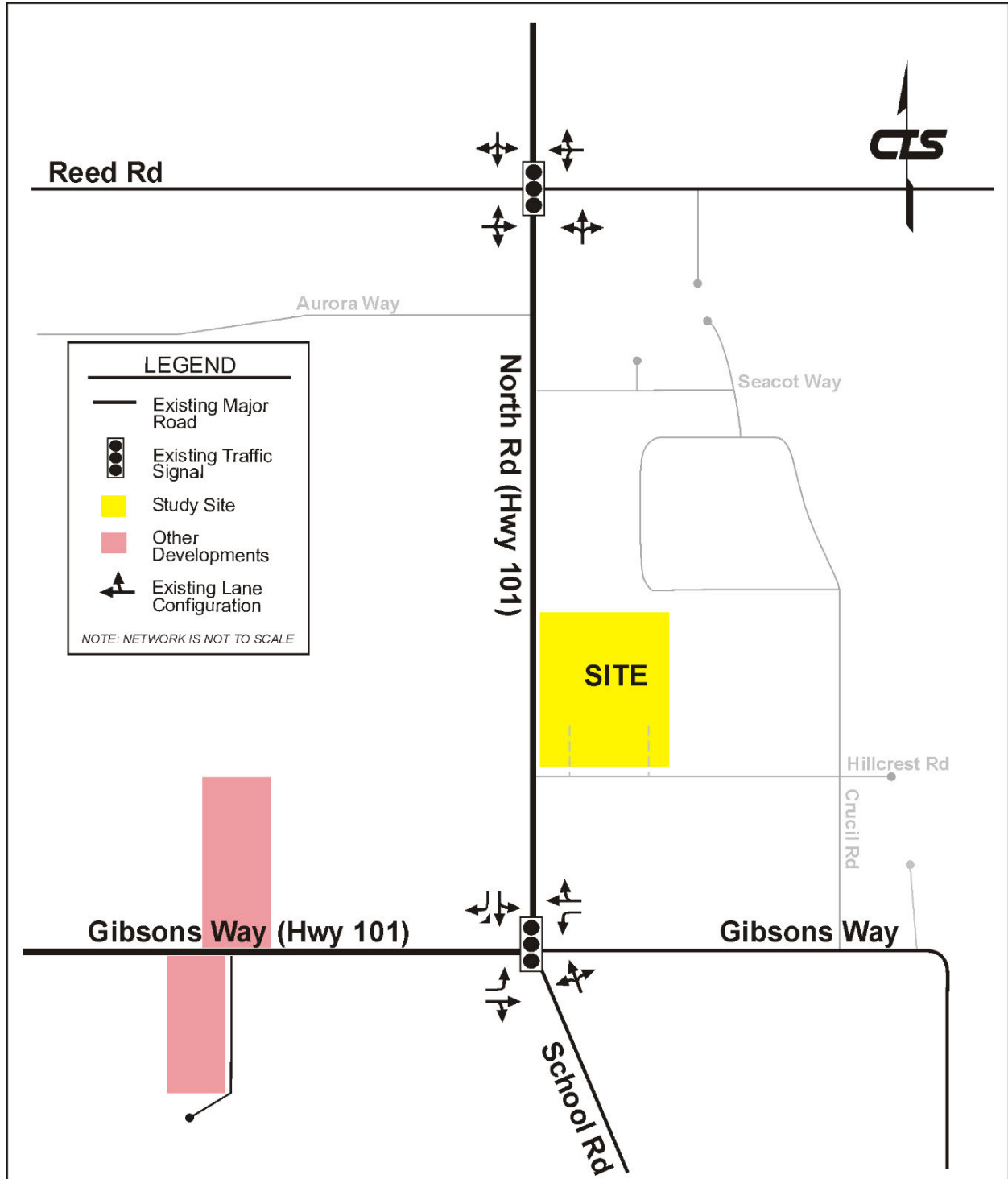
- North Road (Highway 101) intersects Reed Road at a signalized “+” intersection. On the north approach there is a shared left-turn/through/right-turn lane. On the east approach there is a shared left-turn/through/right-turn lane. On the south approach there is a shared left-turn/through/right-turn lane. On the west approach there is a shared left-turn/through/right-turn lane.
- There are marked pedestrian crosswalks on the east, south and west approaches, to the intersection.
- There are designated bicycle lanes on both sides of North Road, south of the intersection.
- All quadrants are illuminated.

Gibsons Way (Highway 101) / North Road (Highway 101) / School Road

- North Road (Highway 101) intersects Gibsons Way at a signalized “+” intersection. On the north approach there is a shared left-turn/through lane, and a channelized right-turn lane. On the east approach, there is a left-turn lane, and a shared through/right-turn lane. On the south approach there is a shared left-turn /through/right-turn lane. On the west approach there is a left-turn lane, and a shared through/right-turn lane.
- There are marked pedestrian crosswalks on all approaches to the intersection.
- There are designated bicycle lanes on both sides of Gibsons Way east of intersection, on the south side of Gibsons Way (Highway 101) west of intersection, on the west side of School Road south of the intersection, and on the east side of North Road (Highway 101) north of intersection.
- The northwest and southeast quadrants are illuminated.

The existing lane configuration for each study intersection is illustrated by **FIGURE 2**.

**FIGURE 2  
EXISTING LANING CONFIGURATION**



## 2.0 BASE TRAFFIC VOLUMES

### 2023 Base Traffic Volumes

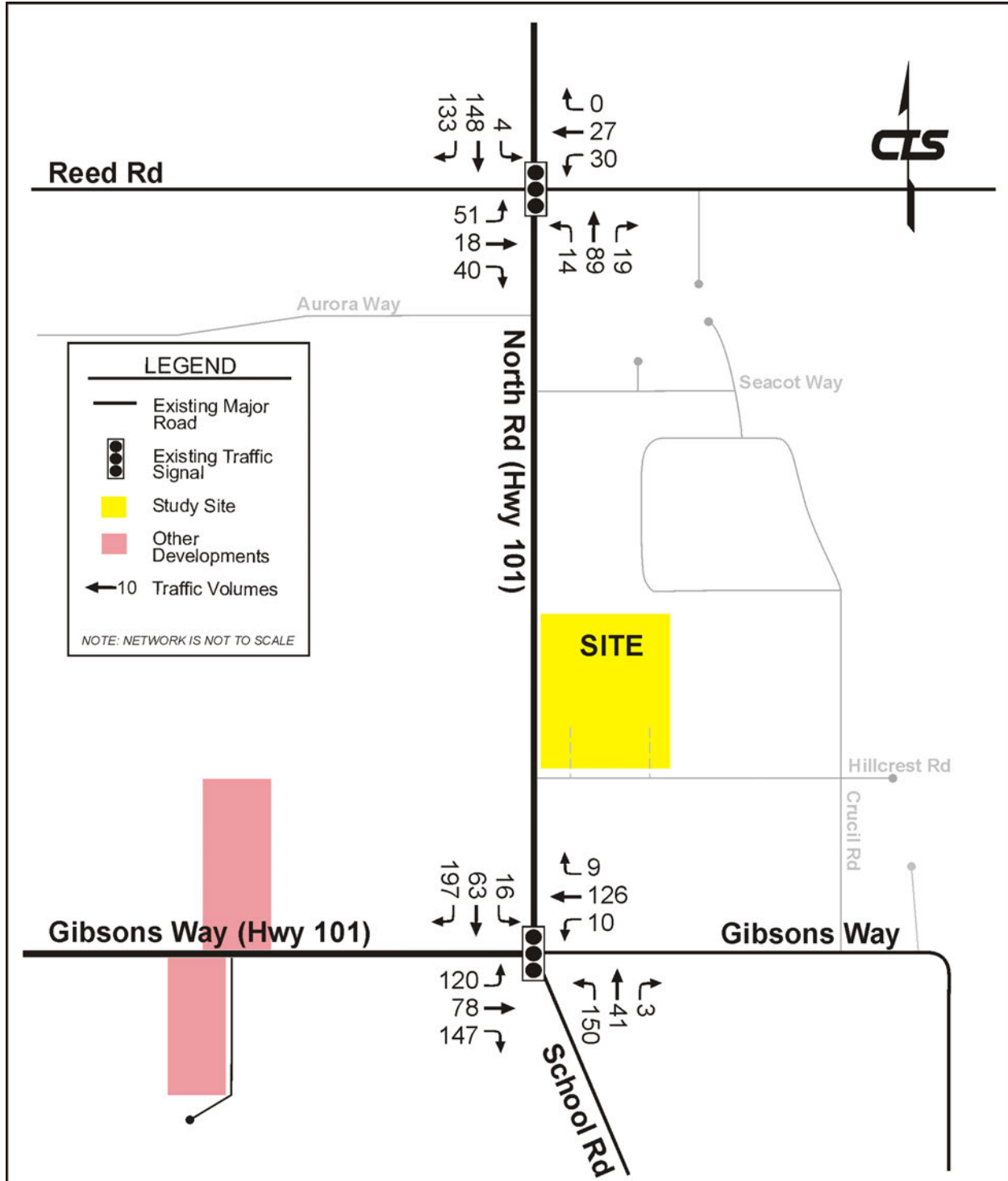
CTS conducted intersection traffic turning movement counts on Friday, 24 November 2023 from 07:00 to 09:30 and from 14:30 to 17:30, to document existing base traffic volumes within the study area. On the day of the traffic counts, the pavement on the roads was dry, all public schools in Gibsons were open and there was no weather event that could have adversely affected traffic patterns. The traffic turning movement count data was tabulated and reviewed to ensure data integrity and validity. The tabulated traffic turning movement count data sheets are included as **APPENDIX B**.

The following design hours were selected based on the peak hours observed at the study intersections:

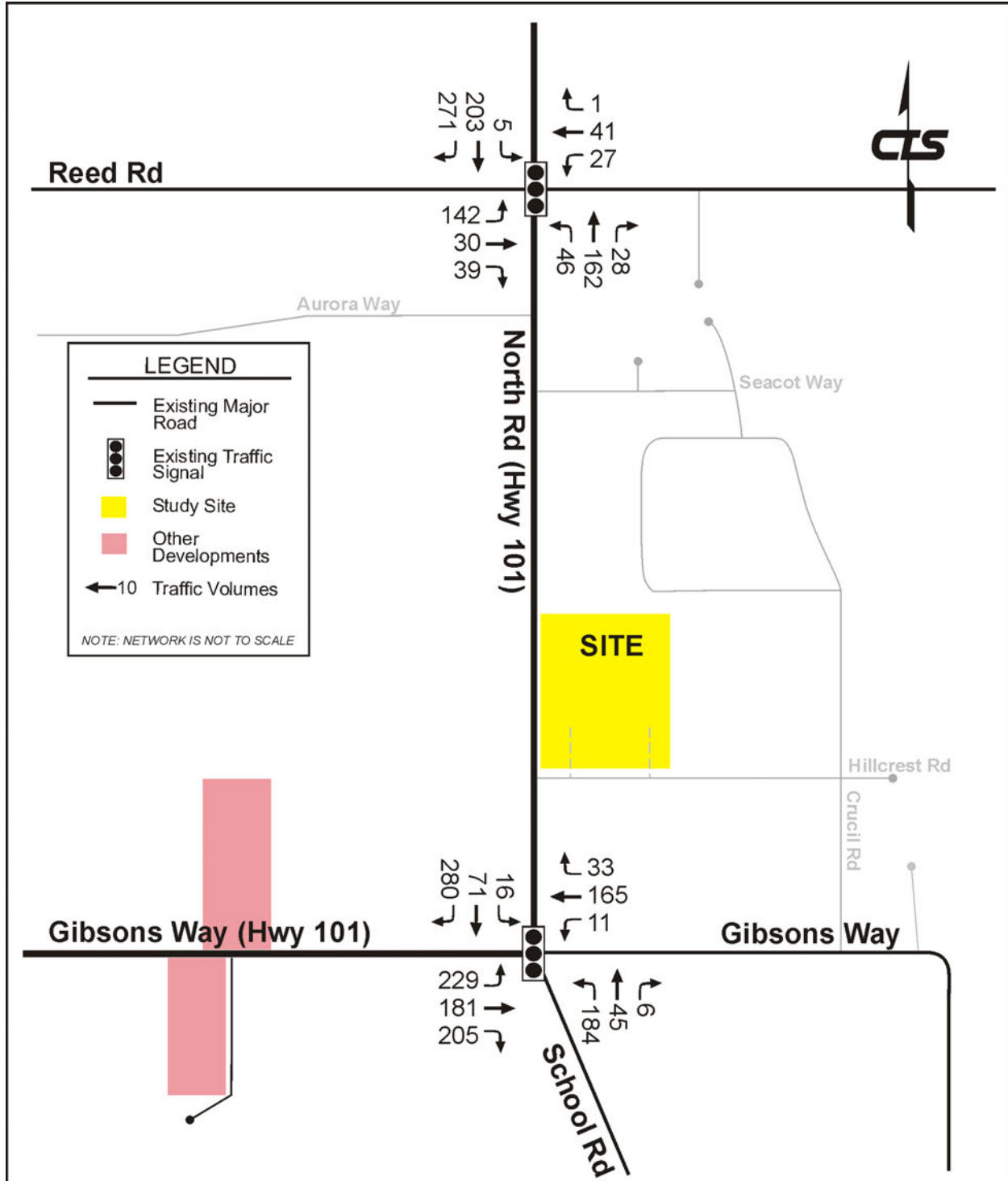
- Friday AM Peak Hour – 08:15 to 09:15
- Friday PM Peak Hour – 14:30 to 15:30

**FIGURE 3** and **FIGURE 4** illustrate the 2023 Friday AM and PM peak hour base traffic volumes, respectively.

**FIGURE 3**  
**2023 FRIDAY AM PEAK HOUR BASE TRAFFIC VOLUMES**



**FIGURE 4**  
**2023 FRIDAY PM BASE TRAFFIC VOLUMNES**





### 2028 Future Base Traffic Volumes

Year 2028 was identified as the year of build-out for the proposed mixed-use development. The 2023 base traffic volumes were factored up by a traffic volume growth rate of 2.0% per annum (simple straight line) to represent the initial future year 2028 base traffic volumes. The 2.0% annual growth rate is an acceptable rate that CTS has used in past traffic studies in the Town of Gibsons.

Traffic volumes were also estimated for the following nearby proposed developments:

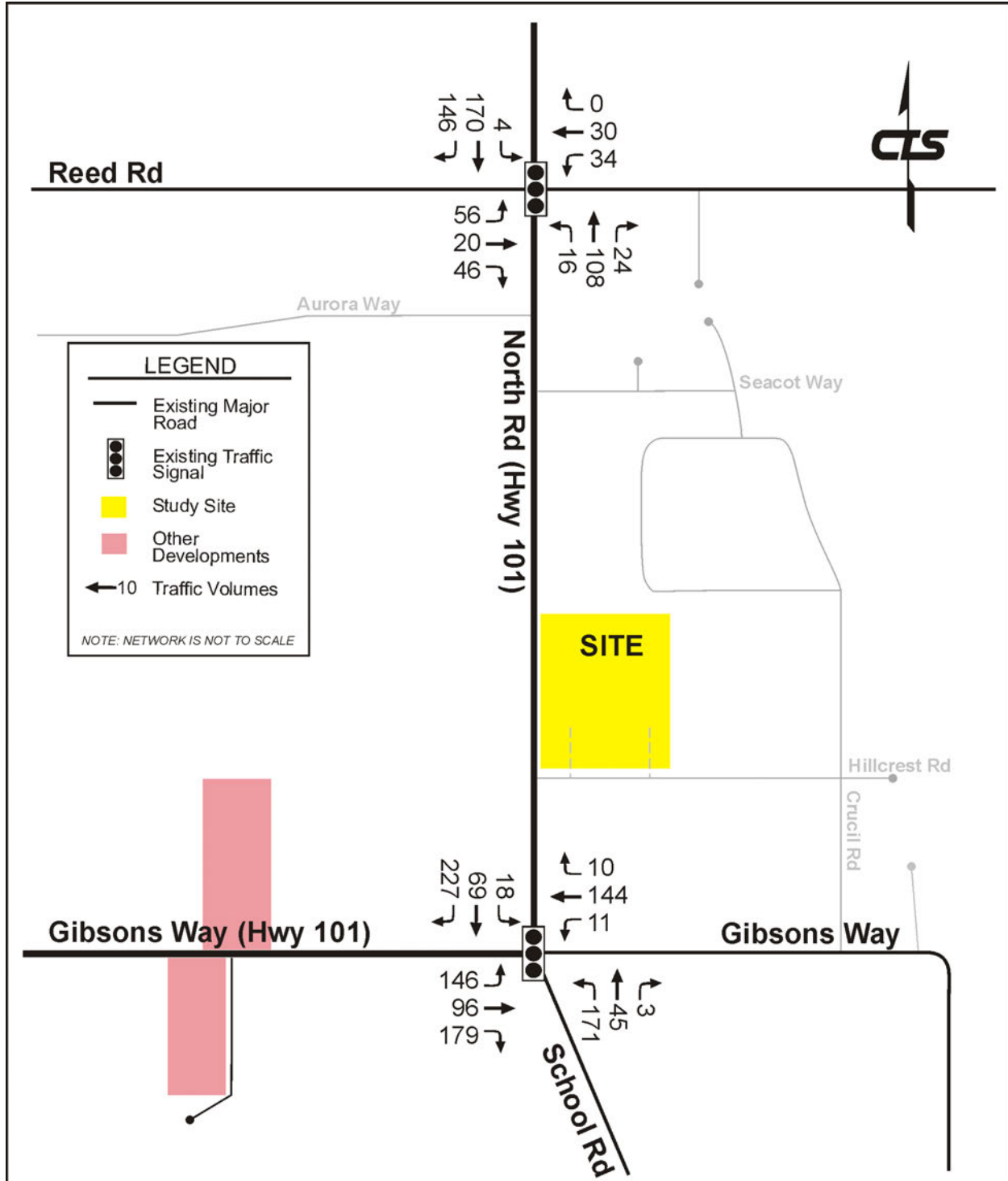
- 826 Gibsons Way; and
- 835 Gibsons Way.

The traffic volumes from the above developments were superimposed on the initial future year 2028 base traffic volumes to give the total future year 2028 base traffic volumes. **FIGURE 5** and **FIGURE 6** illustrate the 2028 Friday AM and PM peak hour traffic volumes for the future base scenarios with no development traffic, respectively.

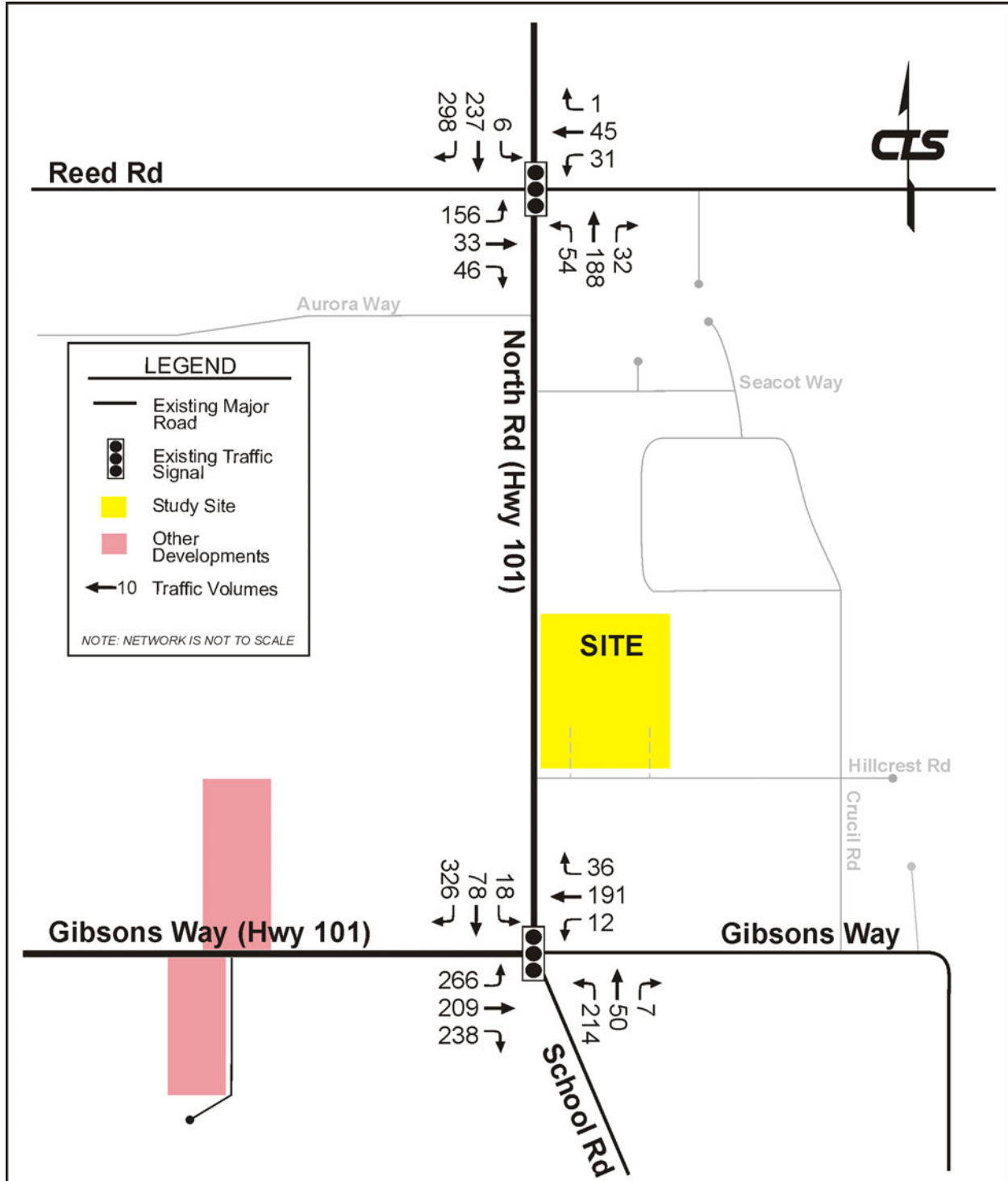
### 2033 Future Base Traffic Volumes

The 2023 base traffic volumes were factored up by a traffic volume growth rate of 2.0% per annum (simple straight line) to represent initial base year of 2033 volumes. The traffic volumes from the above developments were superimposed on the initial future year 2033 base traffic volumes to give the total future year 2033 base traffic volumes. **FIGURE 7** and **FIGURE 8** illustrate the 2033 Friday AM and PM peak hour traffic volumes for the future base scenarios with no development traffic, respectively.

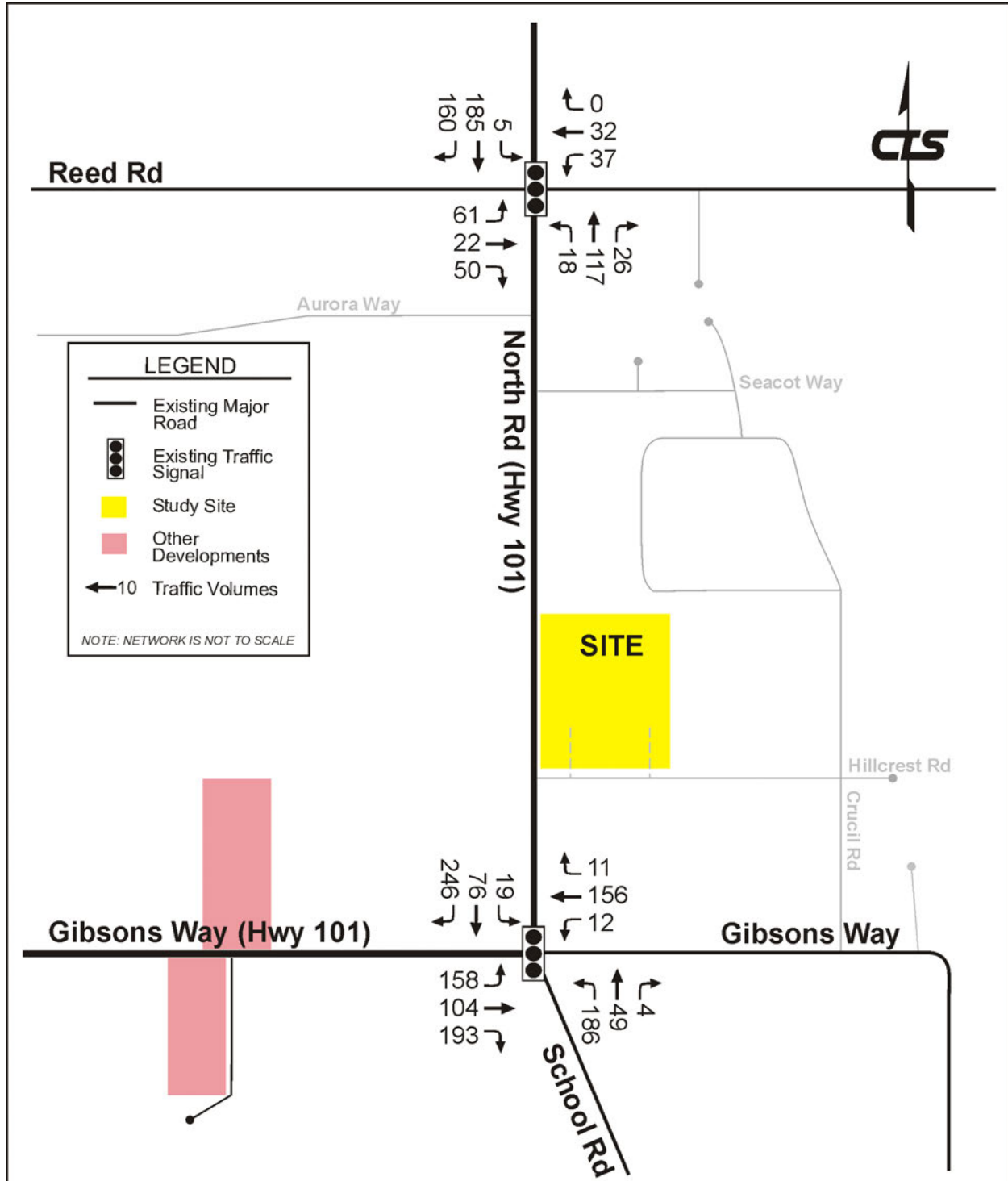
**FIGURE 5**  
**2028 FRIDAY AM PEAK HOUR BASE TRAFFIC VOLUMES**



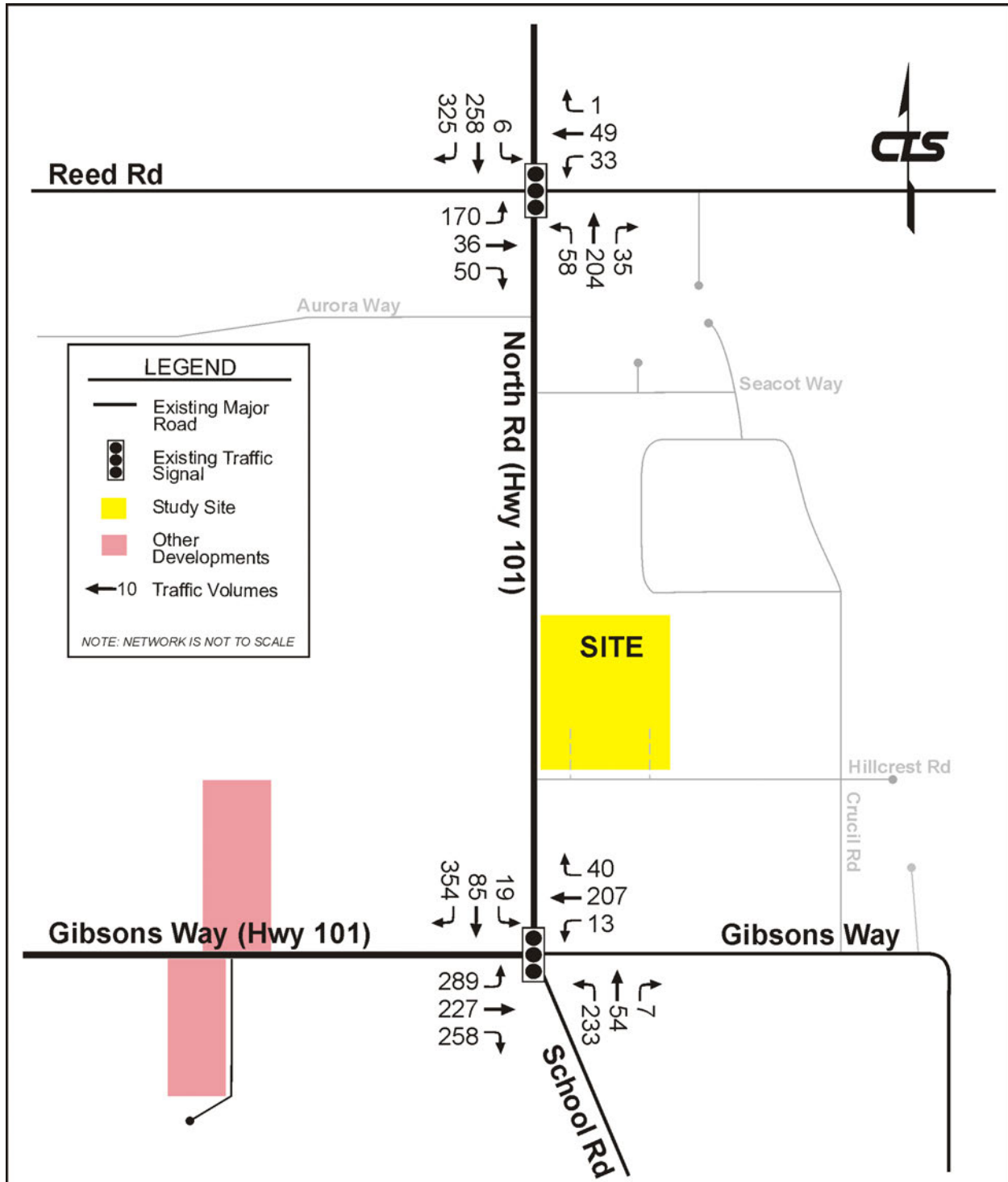
**FIGURE 6**  
**2028 FRIDAY PM PEAK HOUR BASE TRAFFIC VOLUMES**



**FIGURE 7**  
**2023 FRIDAY AM PEAK HOUR BASE TRAFFIC VOLUMES**



**FIGURE 8**  
**2033 FRIDAY PM PEAK HOUR BASE TRAFFIC VOLUMES**





## 3.0 SITE TRAFFIC VOLUMES

### 3.1 Trip Generation

The proposed mixed-use development will comprise 124 multi-family residential units, and 3,637 ft<sup>2</sup> of daycare. To predict the future traffic volumes for the site, the published vehicle trip generation rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual 11th Edition Code 221 - Multifamily Housing (Mid-Rise)*, and *Code 565 – Daycare Center*, were referenced. For the purpose of this study, the pass-by traffic was assumed to be zero so that the projected traffic volumes would represent the worst-case scenario and result in a more conservative assessment. **TABLE 1** summarizes the forecast site generated traffic for the proposed development.

**TABLE 1  
SUMMARY OF SITE GENERATED TRAFFIC**

Land Use	Peak Hour	Trip Generation Variable	Scope of Development	Vehicle Trip Generation Rate	Trip Rate Source	Directional Split		Peak Hour Volumes (vph)		
						% in	% out	in	out	total
Residential - Multifamily Housing (Mid-Rise Condominiums)	Weekday Morning	Dwelling Units	124	0.37	ITE 11th Edition - Code 221	23%	77%	11	35	46
	Weekday Afternoon			0.39		61%	39%	30	19	49
Daycare	Weekday Morning	1,000 Sqft GLA	3.64	11.00	ITE 11th Edition - Code 565	53%	47%	22	19	41
	Weekday Afternoon			11.12		47%	53%	19	22	41
<b>NET WEEKDAY MORNING PEAK HOUR SITE GENERATED VEHICLE TRIPS</b>								<b>33</b>	<b>54</b>	<b>87</b>
<b>NET WEEKDAY AFTERNOON PEAK HOUR SITE GENERATED VEHICLE TRIPS</b>								<b>49</b>	<b>41</b>	<b>90</b>

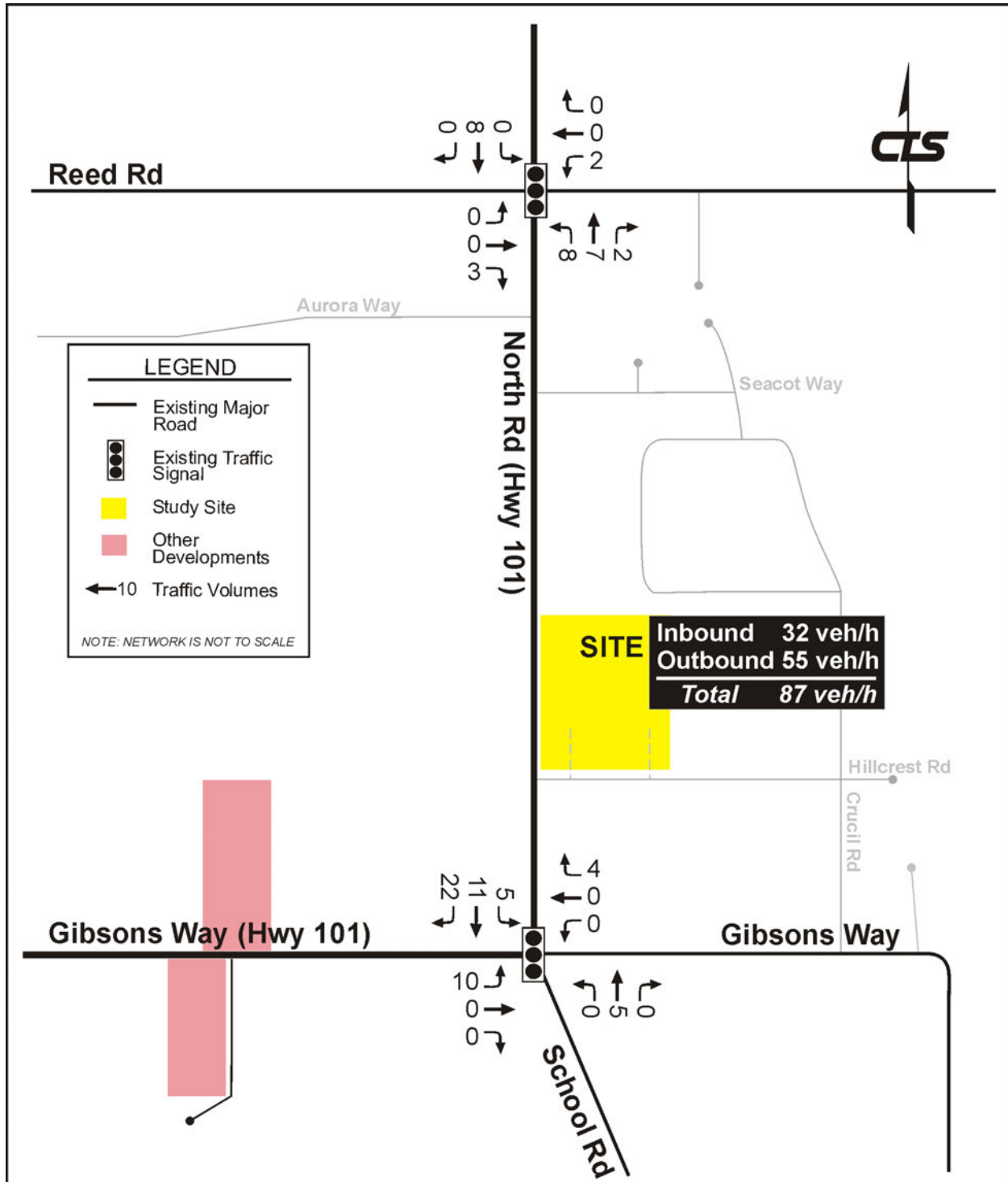
From **TABLE 1**, the proposed mix-use development is forecast to generate a total of 87 vehicle trips (33 inbound, 54 outbound) during the weekday AM peak hour and 90 vehicle trips (49 inbound, 41 outbound) during the weekday PM peak hour. The AM peak hour traffic volume is equivalent to 1 vehicle movement every 0.7 minutes, while the PM peak hour traffic volume is equivalent to 1 vehicle movement every 0.7 minutes.

For reference, the Ministry of Transportation & Infrastructure threshold for undertaking traffic impact studies, is when the site generated vehicle volumes are 100 vehicle trips or more in any peak hour. Therefore, the proposed development does not meet the Provincial threshold for warranting a traffic impact study as the peak site generated volumes are only 90% of the threshold.

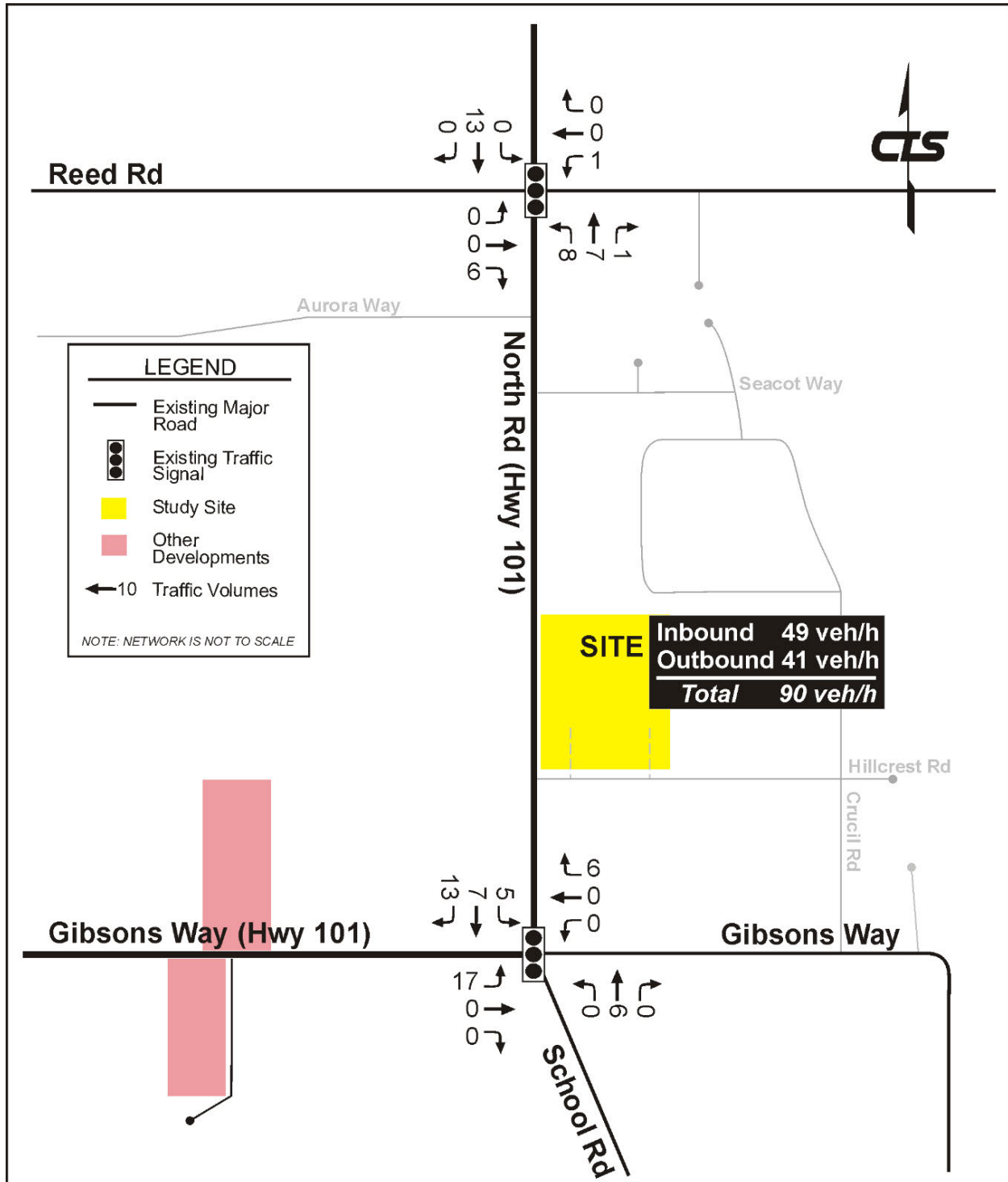
### 3.2 Site Trip Distribution

Trip distribution parameters to distribute the site generated vehicle trips to/from the site were developed from existing traffic patterns entering and exiting the study area for the PM peak hour. The weekday AM and PM peak hour site generated traffic volumes for the proposed development for the build-out year of 2028 are illustrated by **FIGURE 9** and **FIGURE 10**.

**FIGURE 9**  
**2028 FRIDAY AM PEAK HOUR SITE GENERATED TRAFFIC VOLUMES**



**FIGURE 10**  
**2028 FRIDAY PM PEAK HOUR SITE GENERATED TRAFFIC VOLUMES**



## 4.0 BASE + SITE TRAFFIC VOLUMES

### 2028 Future Base + Site Traffic Volumes (Build-out Year)

**FIGURE 11** illustrates the total projected traffic for the 2028 Friday AM peak hour consisting of both base, and site generated traffic from the proposed mixed-use development. It is the result of superimposing **FIGURE 9** onto **FIGURE 5**.

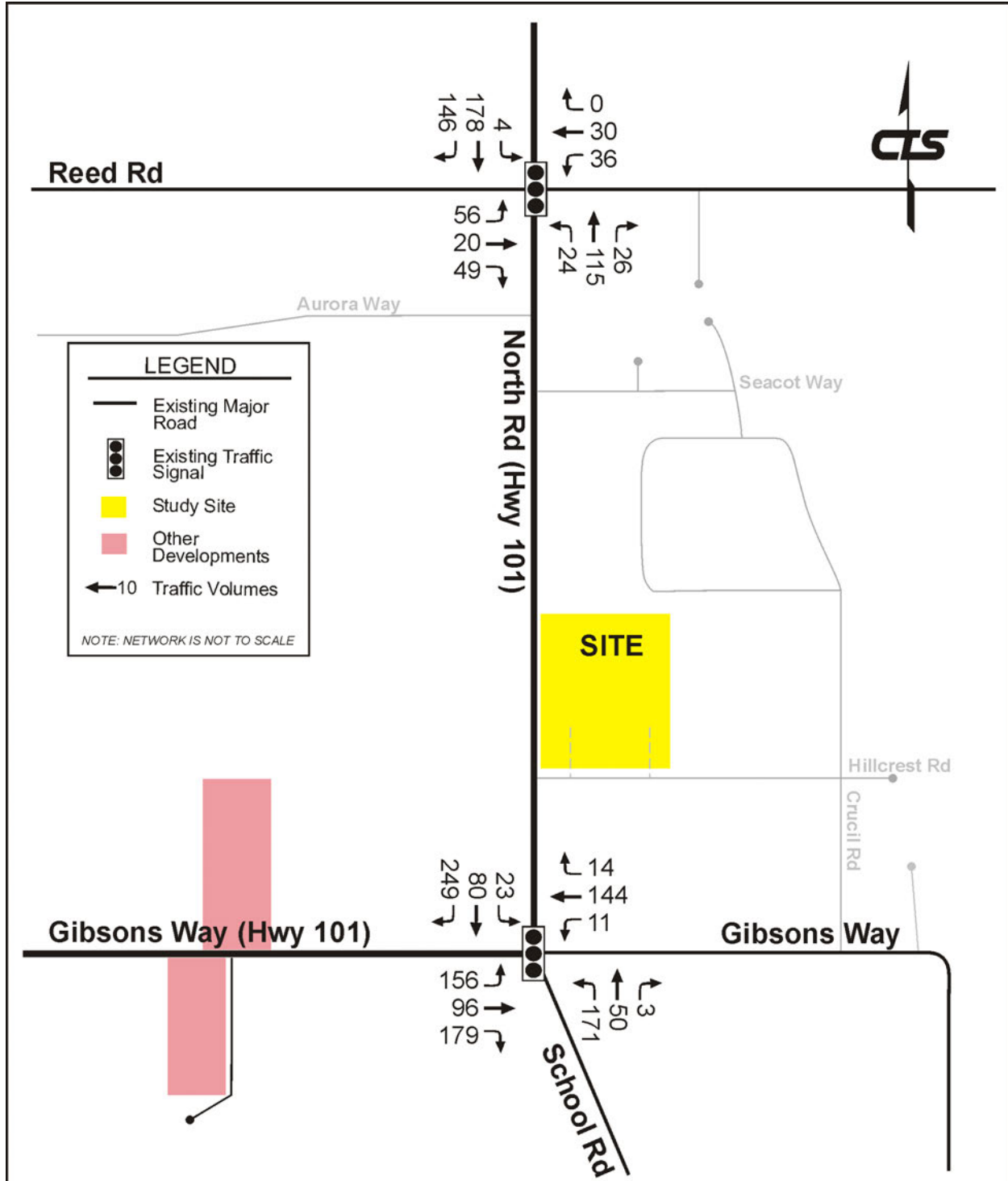
**FIGURE 12** illustrates the total projected traffic for the 2028 Friday PM peak hour consisting of both base, and site generated traffic from the proposed mixed-use development. It is the result of superimposing **FIGURE 10** onto **FIGURE 6**.

### 2033 Future Base + Site Traffic Volumes (5 Years Post Build-out)

**FIGURE 13** illustrates the total projected traffic for the 2033 Friday AM peak hour consisting of both base and site generated traffic from the proposed mixed-use development. It is the result of superimposing **FIGURE 9** onto **FIGURE 7**.

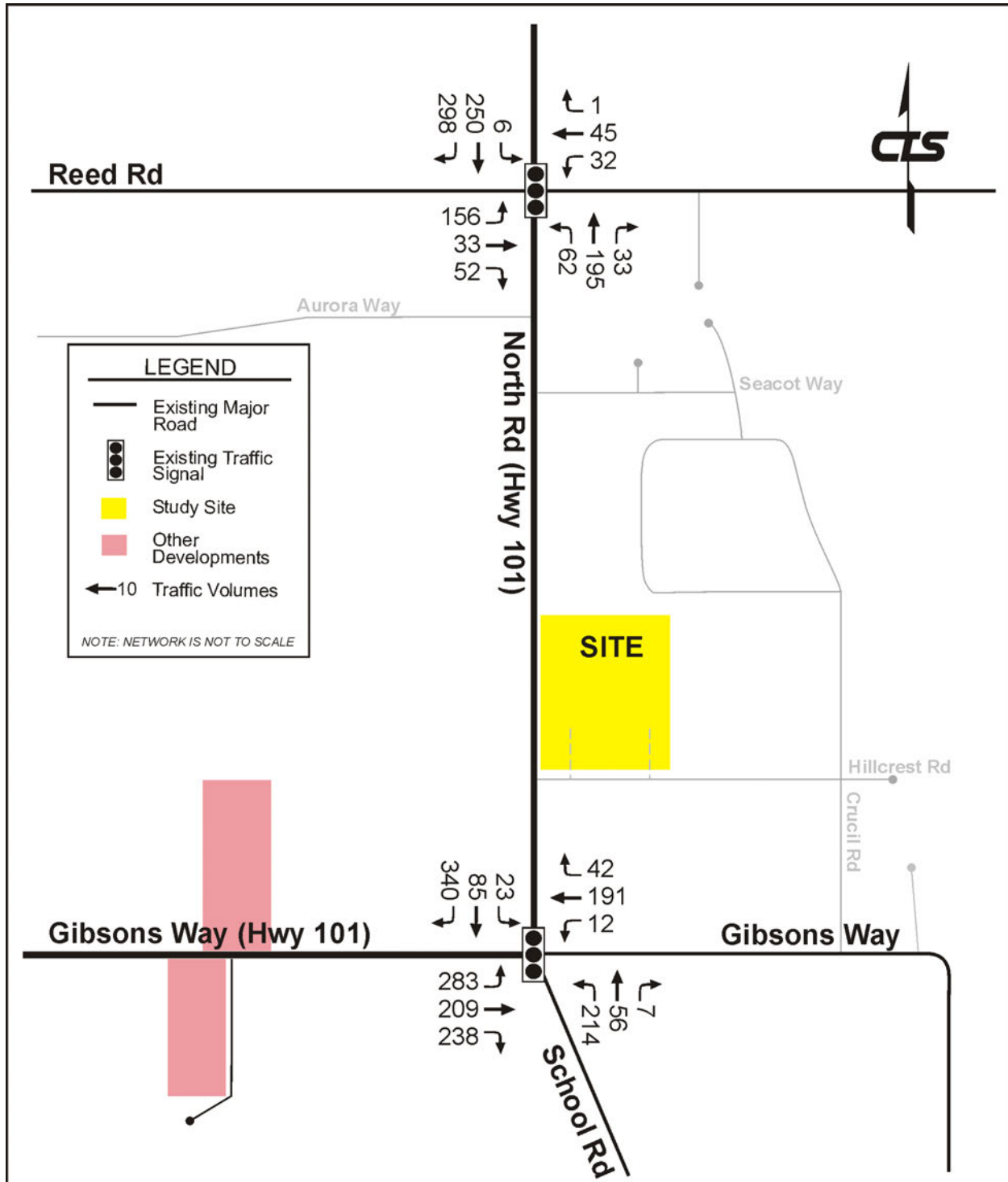
**FIGURE 14** illustrates the total projected traffic for the 2033 Friday PM peak hour consisting of both base and site generated traffic from the proposed mixed-use development. It is the result of superimposing **FIGURE 10** onto **FIGURE 8**.

**FIGURE 11**  
**2028 FRIDAY AM PEAK HOUR BASE + SITE TRAFFIC VOLUMES**

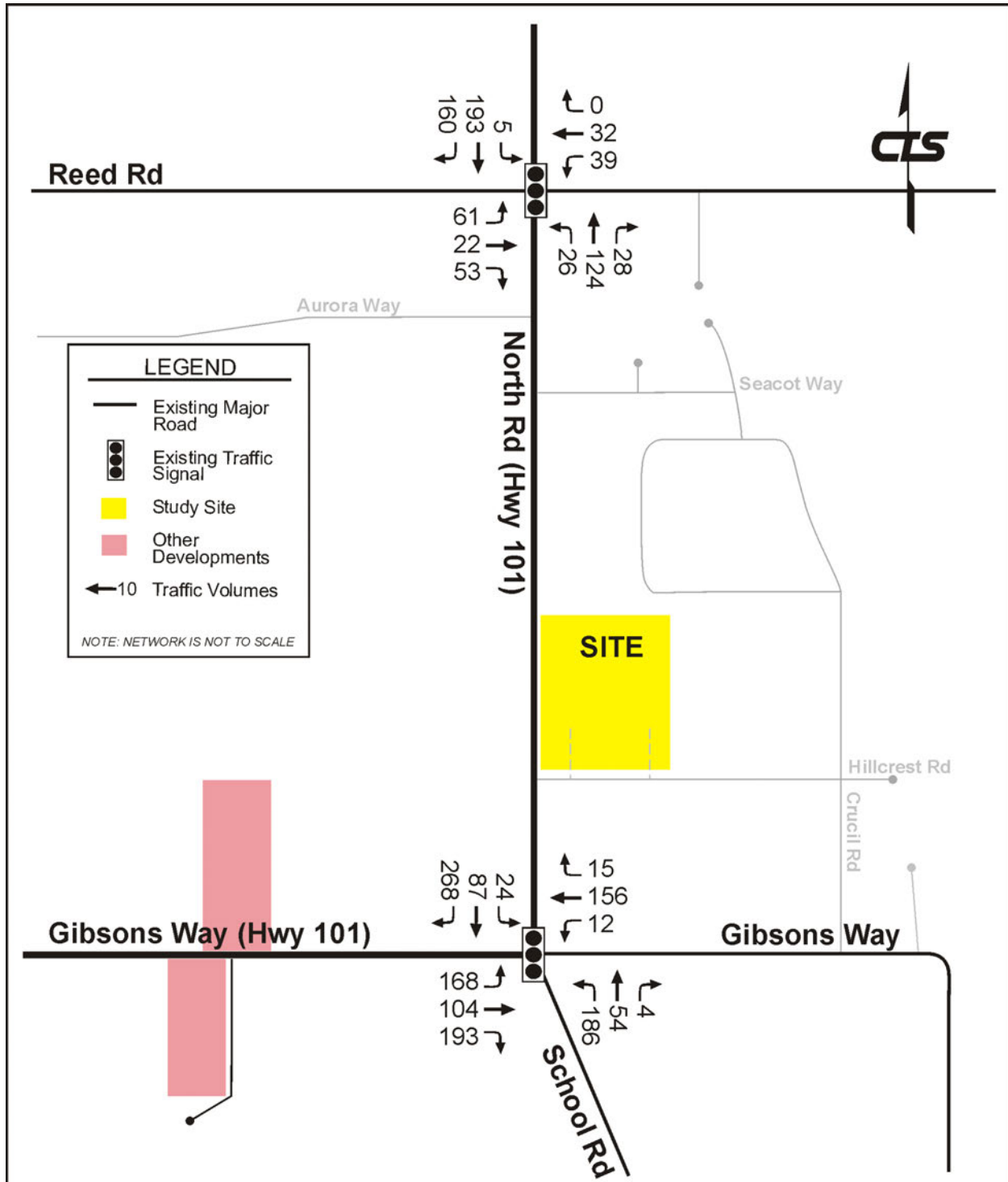




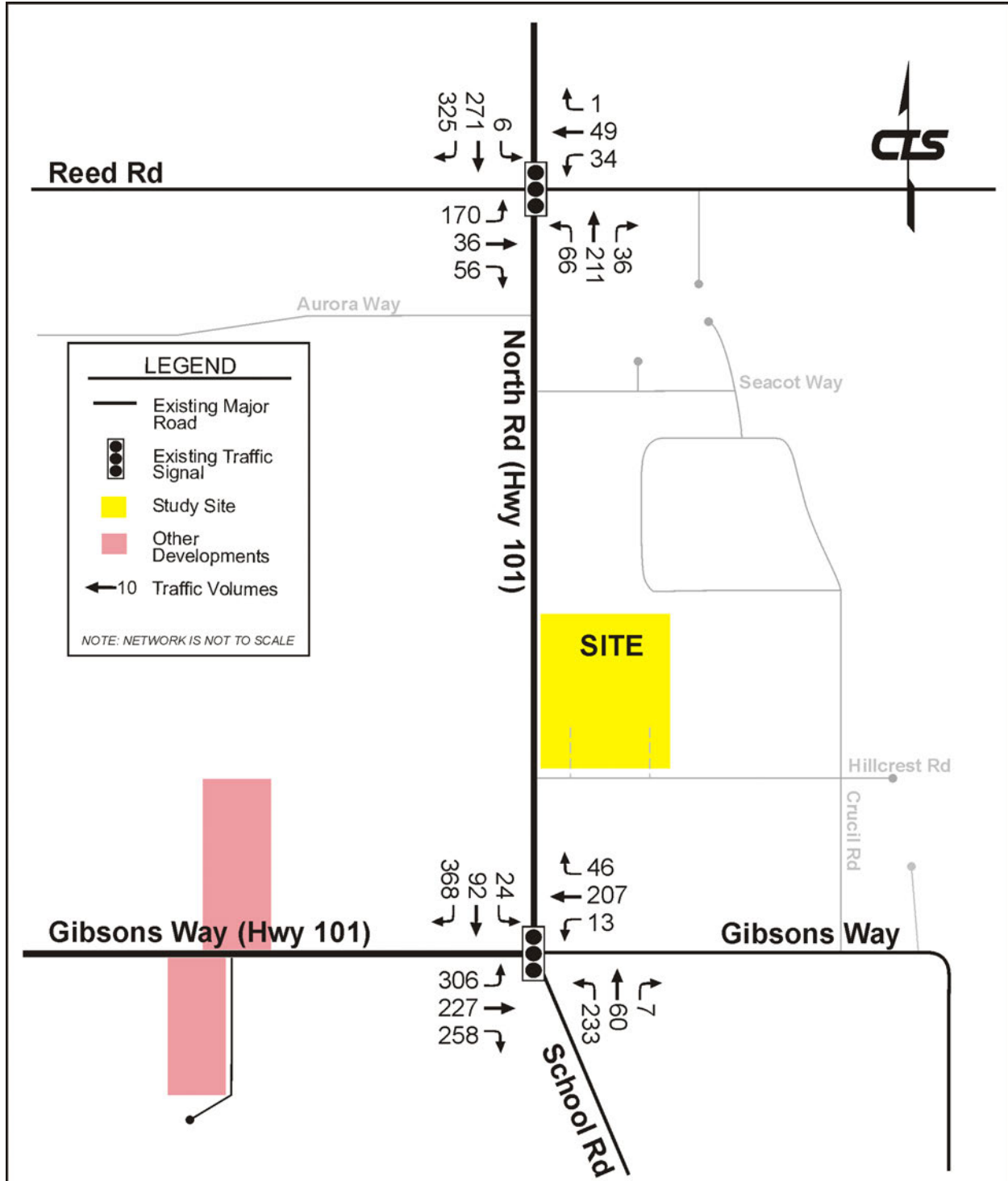
**FIGURE 12**  
**2028 FRIDAY PM PEAK HOUR BASE + SITE TRAFFIC VOLUMES**



**FIGURE 13**  
**2033 FRIDAY AM PEAK HOUR BASE + SITE TRAFFIC VOLUMES**



**FIGURE 14**  
**2033 FRIDAY PM PEAK HOUR BASE + SITE TRAFFIC VOLUMES**



## 5.0 TRAFFIC ANALYSIS

### 5.1 Capacity Analysis

Capacity analysis was performed at each study intersection to determine the overall intersection and individual movement Level of Service (LOS) that is provided to motorists. The LOS for intersections and individual movements are defined in terms of delay (seconds per vehicle), which is a measure of driver discomfort and frustration, fuel consumption and lost travel time.

An intersection or movement LOS can range from "A" (Excellent) to "E" (Poor). A LOS of "F" (Fail) indicates that an intersection or individual movement is failing because the intersection or movement is over capacity and delays are excessive. A LOS of "D" (Fair) or better is considered acceptable by many larger public agencies for overall intersection, through and right-turn movements, and a LOS of "E" (Poor) or better is considered acceptable for left-turn movements, at signalized intersections. However, for smaller communities like Sechelt where motorist tolerance for vehicle delay is expected to be less, a LOS of "C" (Good) was used as the threshold for when operational and/or geometrical improvements may be considered.

With respect to the intersection and individual movement analysis, the following tables evaluate the performance of the study road network with and without the future traffic volumes generated by the proposed mixed-use development. The study area intersections were analysed based on capacity analysis methods from the *Highway Capacity Manual* published by the Transportation Research Board of the National Academies of Science in the United States. Synchro Version 10.0 was used to analyze the intersection and individual movement level of service for signalized intersections. Highway Capacity Software HCS 7.9 was used to analyze the intersection and individual movement level of service for unsignalized intersections. These tools conduct a rigorous analysis of peak hour intersection operation based on intersection lane configurations, traffic signal timing and phasing and turning movement volumes. The purpose of the analysis is to identify movements that are or will become problematic under future scenarios.

Measures of effectiveness generated by the calculations include the following:

- Volume to capacity ratio (V/C) for each movement or lane group where there are shared lanes. This is the proportion of available capacity used by the expected demand.
- Average delay per vehicle (Delay) in the lane group over the hour analysed. This indicates a weighted average delay in seconds per vehicle for drivers approaching during the hour analysed.
- 95th percentile queue length (m). This indicates the length of the vehicle queues which 95% of the time are not exceeded.

- Intersection Level of Service. This indicates the weighted average delay for the intersection during the hour analysed, converted to a letter representing a range of delays. The ranges of delays corresponding to each Level of Service are summarized in **TABLE 2**.

**TABLE 2  
LEVEL OF SERVICE AND CORRESPONDING AVERAGE DELAY**

Level of Service	Average Delay (Seconds per Vehicle)	
	Signalized Intersection	Unsignalized Intersection
A	0 - 10	0 - 10
B	>10 - 20	>10 - 15
C	>20 - 35	>15 - 25
D	>35 - 55	>25 - 35
E	>55 - 80	>35 - 50
F	>80	>50

## 5.2 Evaluation Approach

The signalized intersection capacity analysis was conducted using the existing and optimized signal timing plans and the existing intersection geometry unless intersection upgrades were specified with the build-out of the study site.

The following assumptions were made with respect to the intersection capacity analysis:

- Saturation flow rate → 1,800 passenger cars/hour of green/lane (pcphgpl).
- Truck percentage → 2% for roads.
- Peak Hour Factor (PHF) → 0.73 for the weekday AM peak hour and 0.78 for the weekday PM peak hour which are an average of the PHF's from the traffic turning movement counts.

*Saturation flow rate* is the equivalent hourly rate at which previously queued vehicles can traverse an intersection approach under prevailing conditions, assuming that the green signal is always available, and no lost times are experienced. It is a base rate to which adjustment factors are applied.

*Peak Hour Factor* is a measure of traffic demand fluctuation within the analysis hour. The closer the number is to 1.00, the less fluctuation during the hour.

**TABLE 3** through **TABLE 4** summarizes and compares the main performance measures of the intersection capacity analysis for signalized intersections.

Note, the volume to capacity ratio (v/c) and the 95th percentile queue in meters, were summarized for the signalized intersections whereas, delay time in seconds for each lane group and the 95th percentile queue in vehicle numbers, were summarized for the unsignalized intersections. Wherever feasible, attempts at improvements have been made to maintain intersection and approach movement level of service standards for each of the post-development scenarios.

The capacity analysis summary sheets are included as **APPENDIX C**.

**TABLE 3  
SIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY  
NORTH ROAD (HIGHWAY 101) AT REED ROAD**

Intersection	Time of Day	Scenario	Performance Measure	Eastbound			Westbound			Northbound			Southbound			LOS	Notes
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
North Rd/Hwy 101 (N/S) and Reed Rd (E/W)	Weekday Morning Peak Hour	2023 Base	Volumes	51	18	40	30	27	0	14	89	19	4	148	133	A	Optimized signal timing.
			V/C	0.43			0.23			0.16			0.37				
			95% Queue (m)	10.6			8.3			9.3			16.8				
		2028 Base	Volumes	56	20	46	34	30	0	16	108	24	4	170	146	A	Optimized signal timing
			V/C	0.46			0.26			0.20			0.42				
			95% Queue (m)	11.4			9.1			11.7			20.9				
		2028 Base + Site	Volumes	56	20	49	36	30	0	24	115	26	4	178	146	A	Optimized signal timing
			V/C	0.47			0.27			0.23			0.43				
			95% Queue (m)	11.5			9.3			13.4			22.0				
		2033 Base	Volumes	61	22	50	37	32	0	18	117	26	5	185	160	A	Optimized signal timing
			V/C	0.49			0.28			0.23			0.47				
			95% Queue (m)	12.2			9.6			13.4			25.1				
	2033 Base + Site	Volumes	61	22	53	39	32	0	26	124	28	5	193	160	A	Optimized signal timing	
		V/C	0.53			0.32			0.24			0.45					
		95% Queue (m)	14.4			11.5			15.3			26.9					
	Weekday Afternoon Peak Hour	2023 Base	Volumes	142	30	39	27	41	1	46	162	28	5	203	271	B	Optimized signal timing
			V/C	0.74			0.22			0.36			0.61				
			95% Queue (m)	37.6			14.0			27.1			47.1				
		2028 Base	Volumes	156	33	46	31	45	1	54	188	32	6	237	298	B	Optimized signal timing
			V/C	0.80			0.25			0.43			0.70				
			95% Queue (m)	43.5			15.7			31.1			57.2				
		2028 Base + Site	Volumes	156	33	52	32	45	1	62	195	33	6	250	298	B	Optimized signal timing
			V/C	0.80			0.25			0.47			0.72				
			95% Queue (m)	44.5			15.8			33.7			61.1				
2033 Base		Volumes	170	36	50	33	49	1	58	204	35	6	258	325	B	Optimized signal timing	
		V/C	0.83			0.25			0.48			0.78					
		95% Queue (m)	48.8			16.4			35.2			69.5					
2033 Base + Site	Volumes	170	36	56	34	49	1	66	211	36	6	271	325	C	Optimized signal timing		
	V/C	0.83			0.25			0.53			0.81						
	95% Queue (m)	48.2			16.4			39.5			76.2						

  Intersection approaching capacity (LOS 'D' or 'E'); or approach demand near capacity (v/c 0.85 to 0.99)  
  Intersection equals or exceeds capacity (LOS 'F'); or high approach demand over capacity (v/c >= 1.0)  
  95% Queue length exceeds the capacity of existing storage bay.

**TABLE 4  
SIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY  
NORTH ROAD/SCHOOL ROAD AT GIBSONS WAY (HIGHWAY 101)**

Intersection	Time of Day	Scenario	Performance Measure	Eastbound			Westbound			Northbound			Southbound			LOS	Notes
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
North Rd/School Rd (N/S) and Gibsons Way/Hwy 101 (E/W)	Weekday Morning Peak Hour	2023 Base	Volumes	120	78	147	10	126	9	150	41	3	16	63	197	B	Optimized signal timing.
			V/C	0.42	0.45		0.07	0.50		0.64		0.18	0.44				
			95% Queue (m)	15.4	11.8		3.8	24.6		37.1		14.0	6.2				
		2028 Base	Volumes	146	96	179	11	144	10	171	45	3	18	69	227	B	Optimized signal timing
			V/C	0.50	0.50		0.08	0.57		0.79		0.21	0.50				
			95% Queue (m)	18.5	15.4		4.0	27.7		51.3		15.9	6.3				
		2028 Base + Site	Volumes	156	96	179	11	144	14	171	50	3	23	80	249	B	Optimized signal timing
			V/C	0.59	0.51		0.08	0.62		0.73		0.23	0.52				
			95% Queue (m)	22.9	20.9		4.3	31.4		45.8		18.1	5.7				
		2033 Base	Volumes	158	104	193	12	156	11	186	49	4	19	76	246	B	Optimized signal timing
			V/C	0.60	0.58		0.09	0.64		0.79		0.21	0.51				
			95% Queue (m)	23.2	24.2		4.5	33.4		56.1		16.7	5.7				
	2033 Base + Site	Volumes	168	104	193	12	156	15	186	54	4	24	87	268	B	Optimized signal timing	
		V/C	0.65	0.58		0.08	0.65		0.81		0.25	0.54					
		95% Queue (m)	24.8	24.4		4.6	34.1		58.2		19.1	5.6					
	Weekday Afternoon Peak Hour	2023 Base	Volumes	9	181	205	11	165	33	184	45	6	16	71	280	C	Optimized signal timing
			V/C	0.78	0.69		0.08	0.65		0.83		0.20	0.58				
			95% Queue (m)	30.7	41.7		4.1	35.2		59.9		16.1	8.8				
		2028 Base	Volumes	266	209	238	12	191	36	214	50	7	18	78	326	C	Optimized signal timing. EB/LT, NBLT/TH/RT are near capacity
			V/C	0.93	0.80		0.09	0.76		0.95		0.22	0.64				
			95% Queue (m)	50.3	61.8		4.7	45.8		75.2		17.9	8.8				
		2028 Base + Site	Volumes	283	209	238	12	191	42	214	56	7	23	85	340	C	Optimized signal timing. EB/LT, NBLT/TH/RT are near capacity
			V/C	0.96	0.79		0.09	0.81		0.97		0.24	0.67				
			95% Queue (m)	57.8	67.7		5.3	51.8		80.6		20.8	8.7				
2033 Base		Volumes	289	227	258	13	207	40	233	54	7	19	85	354	D	Optimized signal timing. EB/LT, EBTH/RT, WBTH/RT are near capacity. NB is over capacity.	
		V/C	0.99	0.88		0.12	0.92		1.02		0.22	0.69					
		95% Queue (m)	74.1	95.6		6.4	74.7		93.9		21.1	8.2					
2033 Base + Site	Volumes	306	227	258	13	207	46	233	60	7	24	92	368	D	Optimized signal timing. EB/LT, EBTH/RT, WBTH/RT are near capacity. NB is over capacity.		
	V/C	0.99	0.85		0.11	0.93		1.08		0.26	0.72						
	95% Queue (m)	78.1	91.6		6.4	77.6		99.5		24.4	8.4						
2033 Base (NBLT)	Volumes	289	227	258	13	207	40	233	54	7	19	85	354	C	Optimized signal timing. EB/LT, WBTH/RT, NBLT are near capacity.		
	V/C	0.92	0.84		0.11	0.87		0.93	0.13	0.23	0.70						
	95% Queue (m)	62.4	81.3		6.0	66.2		71.2	12.6	21.1	8.7						
2033 Base + Site (NBLT)	Volumes	306	227	258	13	207	46	233	60	7	24	92	368	C	Optimized signal timing. EB/LT, WBTH/RT, NBLT are near capacity.		
	V/C	0.99	0.82		0.10	0.85		0.95	0.15	0.27	0.71						
	95% Queue (m)	65.8	74.4		5.7	62.4		69.7	113.3	22.9	9.0						

Intersection approaching capacity (LOS 'D' or 'E'); or approach demand near capacity (v/c 0.85 to 0.99)  
 Intersection equals or exceeds capacity (LOS 'F'); or high approach demand over capacity (v/c >= 1.0)  
 95% Queue length exceeds the capacity of existing storage bay.



Based on the capacity analyses summarized by **TABLE 3** and **TABLE 4**, the following observations can be made:

North Road/Highway 101(N/S) & Reed Road (E/W)

- This signalized intersection currently operates at an overall level of service LOS A (Excellent) and LOS B (Very Good) with optimized signal timing during the Friday AM and PM peak hours, respectively. All movements are under capacity during both peak hours.
- For the year 2028 and 2033 future base scenario with optimized signal timing, the overall level of service is LOS A (Excellent) and LOS B (Very Good) during the Friday AM and PM peak hours, respectively. All movements are under capacity during both peak hours.
- Addition of site traffic to the 2028 future base traffic scenario results in no change to the overall intersection level of service. The overall intersection level of service is LOS A (Excellent) and LOS B (Very Good) during the Friday AM and PM peak hours, respectively. All movements are under capacity during both peak hours.
- Of note, the addition of site traffic in 2028 represents a 4.6% (30 vehicles) increase in the Friday AM peak hour intersection volumes and a 3.2% (36 vehicles) increase in the Friday PM peak hour intersection volumes. From a traffic engineering perspective, this increase in traffic volume is not considered to be significant.
- For the year 2033 base + site traffic scenario i.e. 5 years post build-out, the overall intersection level of service is LOS A (Excellent) for the Friday AM peak hour and LOS C (Good) for the Friday PM peak hour. All movements are under capacity during both peak hours.

North Road/School Road (N/S) & Gibsons Way/Highway 101(E/W)

- This signalized intersection currently operates at an overall level of service LOS B (Very Good) and LOS C (Good) with optimized signal timing during the Friday AM and PM peak hours, respectively. All movements are under capacity during both peak hours.
- For the year 2028 future base scenario with optimized signal timing, the overall level of service is LOS B (Very Good) and LOS C (Good) during the Friday AM and PM peak hours, respectively. All movements are under capacity during the weekday AM peak hour. However, the eastbound left-turn and the northbound movements are approaching capacity during the Friday PM peak hour.
- For the year 2033 future base scenario with optimized signal timing, the overall level service is LOS B (Very Good) during the Friday AM peak hour and LOS D (Fair) during the Friday PM peak hour. All movements are under capacity during the weekday AM peak hour. However, the eastbound and the westbound through/right-turn movements are approaching capacity, and the northbound movements are over capacity during the Friday PM peak hour.

- Addition of site traffic to the 2028 future base traffic scenario results in no change to the overall intersection level of service. The overall intersection level of service is LOS B (Very Good) and LOS C (Good) during Friday AM and PM peak hours, respectively. All movements are under capacity during the weekday AM peak hour. However, the eastbound left-turn and the northbound movements are approaching capacity during the Friday PM peak hour.
- Of note, the addition of site traffic in 2028 represents a 5.1% (57 vehicles) increase in the Friday AM peak hour intersection volumes and 3.3% (55 vehicles) increase in Friday PM peak hour intersection volumes.
- For the year 2033 future base + site traffic scenario i.e. 5 years post build-out, the overall intersection level of service is LOS B (Very Good) during the Friday AM peak hour and LOS D (Fair) during the Friday PM peak hour. All movements are under capacity during the weekday AM peak hour. However, the eastbound and the westbound through/right-turn movements are approaching capacity, and the northbound movements are over capacity during the Friday PM peak hour.
- By adding a northbound left-turn lane, the overall level of service is improved from LOS D (Fair) to LOS C (Good) in the 2033 future base and 2033 future base+site scenarios during the Friday PM peak hour. The eastbound left-turn, the westbound through/right-turn, and northbound left-turn movements are approaching capacity.

## 6.0 PARKING ANALYSIS

### 6.1 Off-Street Vehicle Parking

With reference to the Town of Gibsons *Zoning Bylaw No. 1065, Part 6 – Off-Street Vehicle and Bicycle Parking and Loading*, the off-street vehicle parking space requirement is 178 spaces, as summarized by **TABLE 5**.

**TABLE 5**  
**OFF-STREET VEHICLE PARKING SPACE EQUIREMENT (BYLAW RATE)**

USE	RATE	SCOPE	BY-LAW REQUIRED	PROVIDED
Daycare	1 per 45 m <sup>2</sup> (484.0 ft <sup>2</sup> )	3,637 ft <sup>2</sup>	8	8
Residential	1.50 per dwelling unit	124	186*	145
<b>TOTAL</b>			<b>194</b>	<b>153</b>

\* Includes 28 Visitor Spaces i.e. 15%

The development is proposing 153 parking spaces. The parking space supply is therefore deficient by forty-one spaces.

### 6.2 Alternate Parking Rate Rationale

Metro Vancouver's *Regional Parking Study 2018* was an update to the *Apartment Parking Study 2012*, which was the first regional study of apartment parking supply and demand in Metro Vancouver. The *Regional Parking Study 2018* collected data for 73 apartment sites across the region during fall/winter 2017 and comprises three components: Parking Facility Survey, Street Parking Survey and Household Survey. The key findings of the *Regional Parking Study 2018* were consistent with those in the 2012 Study, with some new insights about street parking. The key regional findings were as follows:

- a. The Regional Parking Study found that apartment parking supply exceeds use across the region for both rental and strata buildings, with parking supply exceeding use by 42% for strata apartment buildings and 35% for market rental apartment buildings.
- b. The overcapacity rate is similar for mixed tenure and mixed rental apartment buildings, with supply over demand by 41%.
- c. Smaller strata or market rental units with less than 800 ft<sup>2</sup> of living area, tend to have at most one parked vehicle per unit.
- d. Market rental units that are even smaller i.e. less than 600 ft<sup>2</sup>, generally have the largest oversupply of parking.

- e. For market rental sites, parking utilization near transit (bus or SkyTrain) ranges 0.35 – 0.72, compared to 0.99 for sites further away from the FTN.

Municipalities have reacted to the Metro Vancouver study by reviewing and updating their off-street parking rates. In the City of North Vancouver for example, the previous off-street parking rate for apartments was 0.75 spaces per unit and this was reduced to 0.60 spaces per unit in the most recent update to their zoning bylaw.

Some municipalities have taken a completely different approach to their zoning bylaw off-street parking requirements by removing the minimum requirements all together and permitting applicants to create custom parking strategies for each development with supporting technical rationale and transportation demand management.

CTS is proposing application of a 0.75 parking space per unit rate for the rental units given the findings of the Metro Vancouver *Regional Parking Study 2018*, the location of the site in Upper Gibsons and the proximity to nearby transit including bus Route 90 linking Sechelt with Gibsons and the Langdale Ferry Terminal. **TABLE 6** summarizes the off-street vehicle parking space requirement with the proposed parking rate.

**TABLE 6  
OFF-STREET VEHICLE PARKING SPACES REQUIREMENT (METRO RATE)**

USE		RATE	SCOPE	METRO REQUIRED	PROVIDED
Daycare		1 per 45 m <sup>2</sup> (484.0 ft <sup>2</sup> )	3,637 ft <sup>2</sup>	8	8
Below Market Rental	1 & 2 bedroom	0.75 per dwelling unit	19	14	130
	3 bedroom + lockoff suite	1.5 per dwelling unit	4	6	
Market Rental	1, 2 & 3 bedroom	0.75 per dwelling unit	77	58	
Market Ownership	1, 2 & 3 bedroom	1.5 per dwelling unit	24	36	
Visitor		0.1 per dwelling unit	124	12	12
Car Share					3
<b>TOTAL</b>				<b>134</b>	<b>153</b>

The development is proposing 153 parking spaces including twelve visitor spaces, eight daycare spaces and three car share spaces. The parking space supply exceeds the parking space requirement (Metro) by nineteen spaces.

### 6.3 Other Parking Measures

The Town of Gibsons *Zoning Bylaw No. 1065, Part 6 – Off-Street Vehicle and Bicycle Parking and Loading, Section 6.5*, allows for a parking space reduction of three spaces for each shared vehicle space and shared vehicle. Given three shared vehicle spaces

and shared vehicles are proposed, a reduction of nine parking spaces is possible reducing the Bylaw parking space requirement from 185 spaces.

Additionally, the Town of Gibsons *Zoning Bylaw No. 1065, Part 6 – Off-Street Vehicle and Bicycle Parking and Loading, Section 6.5*, allows for the sharing of parking space between off-setting uses. Given the peak parking period for the daycare use i.e. weekday daytime, is offset by the peak parking period for the visitor use i.e. weekday evenings and weekends, a further reduction of eight parking spaces is possible reducing the Bylaw parking space requirement from to 177 spaces.

#### 6.4 Tandem Parking

Eighteen parking spaces are proposed to be tandem spaces. Given an expectation of an excess of nineteen parking spaces based on the parking space requirement (Metro), each tandem parking space could potentially function as a single parking space.

That said, for those residential units having a parking rate of 1.5 i.e. rental units having 3+ bedrooms and market units, it is reasonable to assume that some of the units might require just one parking space and some might require two parking spaces. Hence, those requiring two parking spaces would be assigned one of the tandem parking spaces.

#### 6.5 Off-Street Bicycle Parking

With reference to the *Town of Gibsons Zoning Bylaws No. 1065, Part 6 – Off-Street Vehicle and Bicycle Parking and Loading*, the off-street bicycle parking space requirement for the proposed mixed-use development is summarized by **TABLE 7**.

**TABLE 7  
OFF-STREET BICYCLE PARKING REQUIREMENT**

USE		RATE	SCOPE	BY-LAW REQUIRED	PROVIDED
Class 1 (Long-Term)	Daycare	0.27 spaces per 100m <sup>2</sup> (1076.4ft <sup>2</sup> ) of GFA	3,637 ft <sup>2</sup>	1	1
	Mid-Rise Condominiums	1.25 spaces per dwelling unit	124	155	192
Class 2 (Short-Term)	Daycare	0.40 spaces per 100m <sup>2</sup> (1076.4ft <sup>2</sup> ) of GFA	3,637 ft <sup>2</sup>	1	
	Mid-Rise Condominiums)	0.20 spaces per dwelling unit	124	25	24
<b>TOTAL CLASS 1 (LONG-TERM) BICYCLE PARKING SPACE</b>				156	193
<b>TOTAL CLASS 2 (SHORT-TERM) BICYCLE PARKING SPACE</b>				26	24

From **TABLE 7**, the mixed-use development proposes 193 long-term bicycle parking spaces and twenty-four short-term spaces. The proposed long-term bicycle parking space provision exceeds the Bylaw requirement, whereas the short-term bicycle parking space provision is deficient by two spaces.

## 6.6 Loading

With reference to the *Town of Gibsons Zoning Bylaws No. 1065, Part 6 – Off-Street Vehicle and Bicycle Parking and Loading*, one loading space is required for the commercial use.

The mixed-use development is currently proposing loading on-street, from a designated loading bay on Hillcrest Road. See **SECTION 7, FIGURE 16**.

## 6.7 Garbage and Recycling

Garbage/recycling collection is also proposed to be on-street, from a designated loading bay on Hillcrest Road adjacent to a staging area. See **SECTION 7, FIGURE 17**.

On garbage/recycling days the totes will be wheeled from the storage area on Parking Level 1 to the staging area adjacent to Hillcrest Road. Upon arrival of the service provider, the totes will be lined up curbside, and tipped.

## 7.0 SWEPT PATH

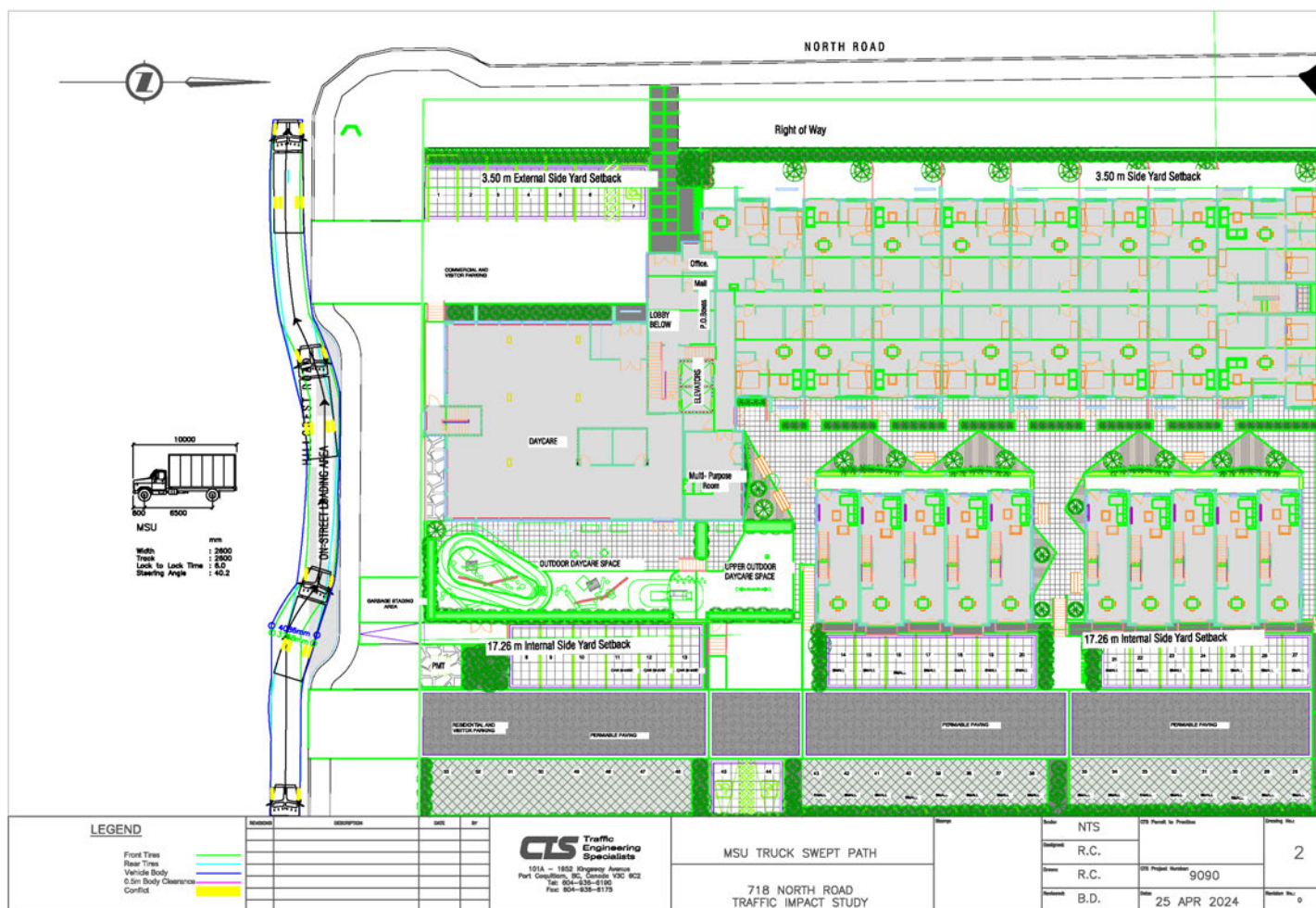
CTS undertook swept path analysis for the proposed mixed-use development with reference to the site plan included as **APPENDIX A**.

AutoTURN 10.2 was used for the analysis, with a front load garbage truck and a Medium Single Unit (MSU) truck representing a moving or delivery truck, and a side load garbage truck, as the design vehicles.

**FIGURE 16** and **FIGURE 17** illustrate the swept path analyses for the and MSU truck and front load garbage truck.

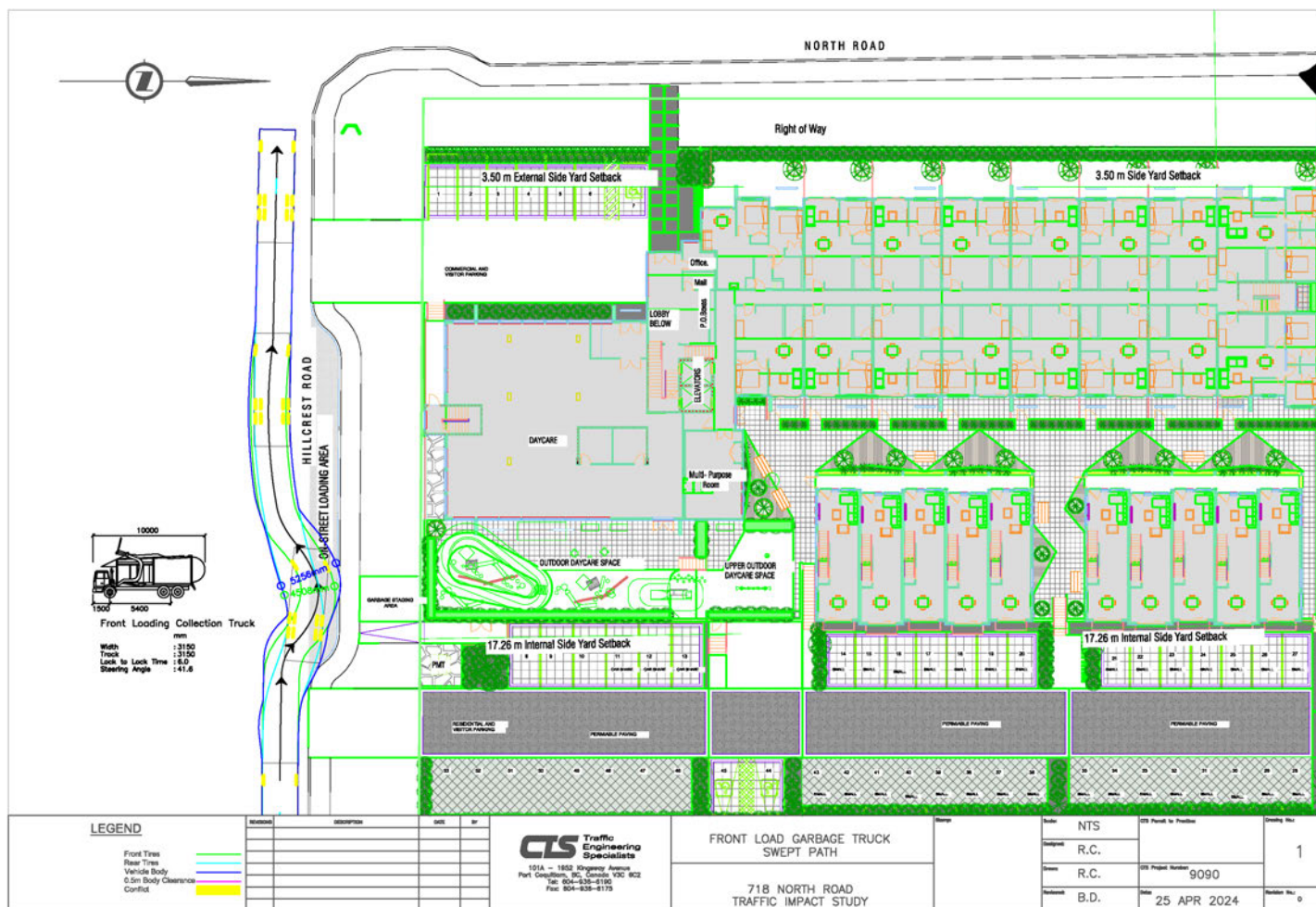


**FIGURE 15  
MSU TRUCK SWEEP PATH**





**FIGURE 16  
FRONT LOAD GARBAGE TRUCK SWEEP PATH**



## 8.0 CONCLUSIONS

- 1) The proposed development would consist of 124 residential units and 3,637 ft<sup>2</sup> (337.9 m<sup>2</sup>) of daycare located at 718 North Road, in the Town of Gibsons. The estimated year of completion is 2028.
- 2) CTS conducted intersection traffic turning movement counts on Friday, November 2, 2023, to document existing base traffic volume counts within the study area. On the day of the traffic volume counts, the pavement on the roads was dry, all public schools in Gibsons were open and there was no weather event that could have adversely affected traffic patterns.
- 3) The proposed mixed-use development is estimated to conservatively generate up to eighty-seven vehicle trips during the weekday AM peak hour i.e. thirty-two inbound and fifty-five outbound, and up to ninety vehicle trips during the weekday PM peak hour i.e. forty-nine inbound and forty-one inbound. The projected volumes of new site traffic represent on average one vehicle movement every 0.7 minutes during the Friday AM and PM peak hours.
- 4) It is noted the Ministry of Transportation & Infrastructure's warrant for requiring a traffic impact study for a proposed development is 100 or more new vehicle trips during the design hour. Therefore, the proposed development does not technically meet the Provincial requirement for a formal traffic impact study at only 91% of the threshold.
- 5) For the year 2028, traffic generated by the following nearby new developments will be included as the base traffic volumes:
  - 826 Gibsons Way, and
  - 835 Gibsons Way.
- 6) For the optimized signal timing and operation, the signalized intersection of Reed Road and North Road (Highway 101) is projected to operate at LOS A (Excellent) during Friday AM peak hour and LOS C (Good) or better during Friday PM peak hour for the year 2023 base, 2028 base, 2033 base, 2028 base+site i.e. buildout, and 2033 base+site i.e. 5 yrs. post buildout, scenarios. Addition site traffic does not change the level of service and all movements are under capacity.
- 7) For the optimized signal timing and operation, the signalized intersection of Gibsons Way (Highway 101) and School Road is projected to operate at LOS B (Very Good) with all movements under capacity during Friday AM peak hour for all scenarios. During the Friday PM peak hour, the intersection is projected to operate at LOS C (Good) for the 2023 base, 2028 base, and 2028 base+site scenarios. However, the eastbound left-turn and the northbound movements are near capacity in the 2028 base scenario. The overall level of service is LOS D (Fair) during Friday PM peak hour in the 2033 base and 2033 base+site scenarios. The eastbound movements and the westbound through/right-turn are near capacity while the northbound movements are

over capacity in the 2033 and 2033 base+site base scenarios.

- By adding the left-turn lane on the north, the overall LOS is improved from LOS D to LOS C for the Friday PM peak hour in the 2033 and 2033 base+site base scenarios.
- 8) With reference to the Town of Gibsons *Zoning Bylaws No. 1065*, 194 parking spaces are required. The proposed mixed-use development proposes 153 parking spaces, giving a deficit of forty-one spaces.
  - 9) There has been an increasing and well documented trend towards reducing and/or eliminating minimum parking space requirements in urban centres in Western Canada, in direct response to changes in travel behaviour and transport mode of choice. This trend is particularly evident in the rental housing market.
  - 10) Metro Vancouver's 2018 Regional Parking Study was an update to the 2012 Apartment Parking Study, which was the first regional study of apartment parking supply and demand in Metro Vancouver. The Regional Parking Study found that apartment parking supply exceeds use across the region for both rental and strata buildings, with parking supply exceeding use by 42% for strata apartment buildings and 35% for market rental apartment buildings. Furthermore, smaller strata or market rental units with less than 800 sq. ft. of living area tend to have at most one parked vehicle per unit. Market rental units that are even smaller with less than 600 sq. ft. have the largest oversupply of parking.
  - 11) The proposed parking rate for the rental housing of 0.75 spaces per unit is technically justified given the location of the site in Upper Gibsons and the proximity to nearby transit including the express bus Route 90 linking Sechelt with Gibsons and the Langdale Ferry Terminal.  
  
Application of the Metro parking rate to the rental units gives an excess of on-site parking spaces.
  - 12) Further, application of the provisions of the Bylaw which allow for a shared vehicle space/shared vehicle and shared parking between offset uses i.e. daycare and visitor, allows for an additional reduction in the parking space requirement, of nineteen spaces.
  - 13) Following on discussions with the Town of Gibsons, loading and garbage/recycling is proposed to be within a layby on Hillcrest Road. The swept path for a delivery truck and a garbage/recycling truck, were acceptable.
  - 14) Per the Town of Gibsons *Zoning Bylaws No. 1065*, one hundred fifty-six (156) long-term bicycle parking spaces and twenty-six (26) short-term bicycle parking spaces are required. The proposed long-term bicycle parking space provision is met, however the short-term bicycle parking space provision is deficient by two spaces.

## 9.0 RECOMMENDATIONS

Based on the preceding, the following is recommended:

1. That the Town of Gibsons and the Ministry of Transportation & Infrastructure accept the data, analyses and conclusions as documented by this study.
2. That the Town of Gibsons supports an off-street parking space rate of 0.75 spaces per unit, for rental.
3. That the Town of Gibsons supports loading and garbage/recycling, from Hillcrest Road.

Please call the undersigned should there be questions and/or comments related to this Final Traffic Impact Study.

Yours truly,

**CREATIVE TRANSPORTATION SOLUTIONS LTD.  
PERMIT TO PRACTICE NO. 1000697**



Brent A. Dozzi, P. Eng.  
Senior Traffic Engineer & Project Manager



**APPENDICES**

# Appendix A Site Plan



# 718 North Road, Gibsons, BC

Issued for Development permit: 2024-MM-DD

**Client**

[Redacted Client Information]

**Architect**

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**Planning**

[Redacted Planning Information]

**Civil**

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**Arborist**

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 Parksville, BC V8P 1G7  
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 Tel: 604.614.3517

**Landscaping**

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 Burnaby, BC V5C 6G9  
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 Tel: 604.294.0011 ext.116

**Geotechnical**

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**Traffic**

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 Tel: 250.404.9094

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 Email: robert.malczyk@timberengineering.ca  
 Cell: 604.839.0214



1645 West 5th Avenue  
 Vancouver, BC V6J 1N5

Tel: (604) 872-2595 Fax: (604) 872-2505  
 Email: office@AMArchitects.com

Project: 2306

Owner:

718 North Road, Gibsons, BC

Drawing: **COVER PAGE & DRAWING LIST**

Project Status: **Development Permit**

SUBMISSION	
Date (YYYY-MM-DD)	Description

REVISION

No.	Date	Description

All Drawings in this set to be read in conjunction with each other. Any errors or discrepancies to be reported to the Architect before commencing work. Contractors are responsible to ensure that all work is executed to the requirements of the appropriate Building Code Authority. © Copyright Ankenman Marchand Architects. All rights reserved.

Scale: \_\_\_\_\_ DWG. NO: **A001**

SHEET NUMBER	SHEET NAME
A001	COVER PAGE & DRAWING LIST
A002	STATISTICS AND CONTEXT
A100	SITE PLAN
A101	PARKING P1
A102	LEVEL 1
A103	LEVEL 2
A104	LEVEL 3
A105	LEVEL 4
A106	LEVEL 5
A107	LEVEL 6
A108	ROOF PLAN
A200	ELEVATIONS
A201	ELEVATIONS
A202	ELEVATIONS

SHEET NUMBER	SHEET NAME
A300	SECTIONS
A301	SECTIONS
A302	SECTIONS
A400	AREA PLAN LEVEL 1
A401	AREA PLAN LEVEL 2
A402	AREA PLAN LEVEL 3
A403	AREA PLAN LEVEL 4
A404	AREA PLAN LEVEL 5
A405	AREA PLAN LEVEL 6
A700	RENDERED VIEWS
A701	RENDERED VIEWS
A702	RENDERED VIEWS
A900	MATERIAL SAMPLE BOARD

Grand total: 27



# 718 North Road, Gibsons, BC

## STATISTICS:

### LEGAL DESCRIPTION

Lot 'K' of Lot 1 Bk 7 DL688 NWD Plan 23077.  
Town of Gibsons

### CIVIC ADDRESS

718 North Road, Gibsons, BC

### EXISTING ZONING

Zone: Upper Gibsons Commercial District 1 (C-1)  
Land Use Designation: Medium Density Residential

### PROPOSED USE

Mixed-Use - Residential & Daycare

### SURVEY INFORMATION

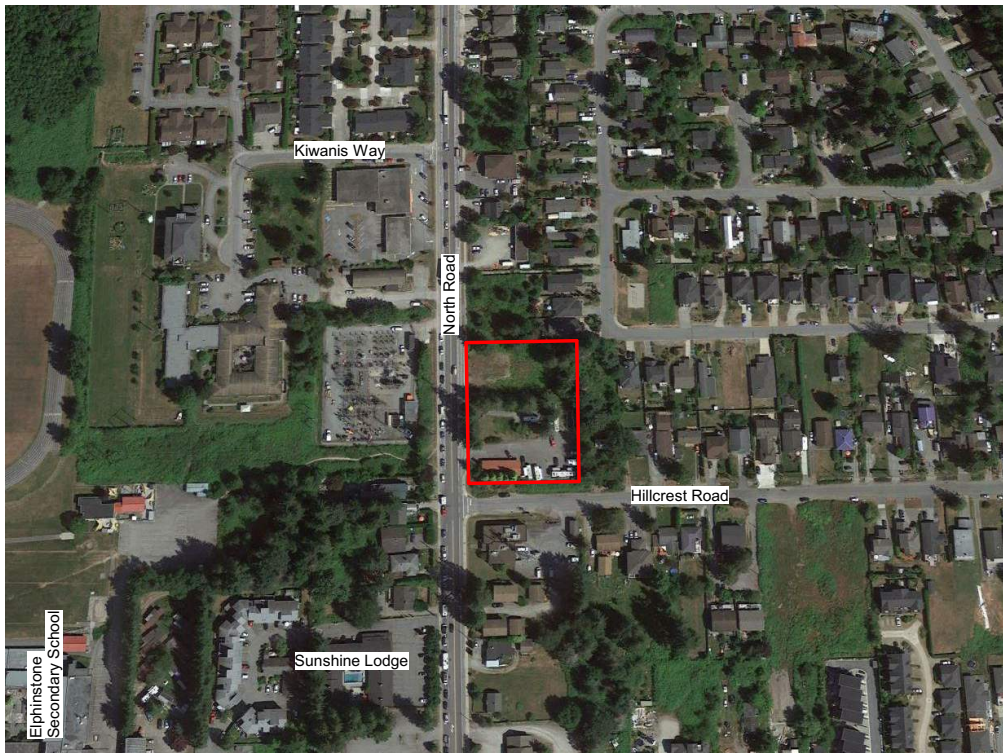
Original survey by Bennett Surveys on May 14, 2019.  
Updated re-inspected survey by Bennett Surveys on October 20, 2023.

### DEFINITIONS (PER ZONING BYLAW NO. 1065, 2007)

**Gross Floor Area:** means the sum of the horizontal areas of each storey of a building measured from the interior faces of the exterior walls providing that in the case of a wall containing windows, the glazing line of the windows may be used. The measurement is exclusive of basement areas used only for storage or service to the building, unfinished attic space, attached garages, carports, breezeways, porches, balconies, exit stairways, corridors, and terraces. In the case of apartments, public corridors, common amenity spaces, and building mechanical systems are also excluded. In the case of congregate housing, communal dining and kitchen facilities are excluded.

**Floor Space Ratio:** means a ratio calculated by gross floor area of buildings divided by the lot area upon which the buildings are located.

**Lot Coverage:** means the percentage of lot area covered by the vertical projection onto the horizontal plane of impermeable surfaces on the lot such as principal and accessory buildings and structures, including roof overhangs and covered entries, porches and decks, and other features such as swimming pools, open decks, walkways, driveways, parking, loading and storage spaces, where such features are constructed or paved with impermeable surfaces or substrates.



SITE CONTEXT

	REQUIREMENT	PROPOSED
LOT AREA	≥235 m <sup>2</sup>	5,240 m <sup>2</sup>
LOT WIDTH	≥7.5 m	81.5 m
LOT DEPTH	≥30.0 m	64.3m
LOT COVERAGE	≤80%	3,377 m <sup>2</sup> (64%)
GROSS FLOOR AREA (GFA)	N/A	8,297 m <sup>2</sup>
FLOOR SPACE RATIO (FSR)	N/A	1.58
UNIT COUNT*	N/A	124
LEVEL 1	N/A	26
LEVEL 2	N/A	21
LEVEL 3	N/A	21
LEVEL 4	N/A	21
LEVEL 5	N/A	21
LEVEL 6	N/A	14
BUILDING HEIGHT	≤12.0 m	20.0 m
SETBACK – FRONT LOT LINE	≥0.00 m	0.2 m
SETBACK – SIDE (INTERIOR) EAST LOT	≥0.00 m	17.26 m
SETBACK – SIDE (EXTERIOR) WEST LOT	≥0.00 m	3.50 m
SETBACK – REAR LOT LINE	≥0.00 m	2.00 m
SETBACK – NORTH ROAD CENTRELINE	16.5 m	17.79 m

\*For area plans and area schedules, see A400-A404.

GROSS FLOOR AREA	
Name	Area
1 BEDROOM UNIT	4203 m <sup>2</sup>
86	4203 m <sup>2</sup>
2 BEDROOM UNIT	586.3 m <sup>2</sup>
8	586.3 m <sup>2</sup>
2 BEDROOM UNIT + DEN	548.3 m <sup>2</sup>
8	548.3 m <sup>2</sup>
3 BEDROOM LOCK-OFF UNIT	118.1 m <sup>2</sup>
1	118.1 m <sup>2</sup>
3 BEDROOM UNIT	2434.8 m <sup>2</sup>
42	2434.8 m <sup>2</sup>
ACCESSIBLE 2 BEDROOM UNIT	62 m <sup>2</sup>
1	62 m <sup>2</sup>
AMIN	6.6 m <sup>2</sup>
1	6.6 m <sup>2</sup>
DAYCARE	337.9 m <sup>2</sup>
1	337.9 m <sup>2</sup>
Grand total: 148	8297 m <sup>2</sup>

## DESIGN RATIONALE

The proposed development consists of 126 apartment units in three buildings, including two (2) five-unit buildings with three-storey units. The project is located at 718 North Road, Gibsons, BC, and is aimed at bringing much-needed affordable rental housing to Upper Gibsons. Its location is ideal for families and local workers, due to its proximity to several amenities.

Elphinstone Secondary School and Gibsons Elementary School are each just a few minutes' walk away, facilitating housing options for young families. The site is surrounded by single-family houses to the north and east, a Telus building to the south, and a BC Hydro sub-station to the west, opposite North Road. Also within walking distance are several shops and amenities, and Langdale Ferry Terminal is just a 5-minute drive away.

The area is geared for outdoor enthusiasts, close to Gibsons Ravine and Shirley Macey Park. Lower Gibsons' famous village area is a 15-minute walk away, close to Gibsons Harbour and Armours Beach.

The proposed development offers affordability and accessibility in an optimal location, delivering livability for future tenants and addressing Gibsons' urgent housing needs.

## VEHICLE PARKING SUMMARY

	CALCULATION	REQUIREMENT	PROPOSED
APARTMENT USE – RESIDENT*	≥1.275 per unit	≥161	117
APARTMENT USE – VISITOR*	≥0.225 per unit	≥28	28
COMMERCIAL USE (DAYCARE)	≥1.0 per 45 m <sup>2</sup>	≥8	8
MINUS: CAR SHARE REDUCTION	3 spaces per 1 shared car	-9	
MINUS: SHARED PARKING SPACES REDUCTION	25% of shared uses	-9	
TOTAL SPACES		179	153
SMALL CAR SPACES	≤30% of required spaces	≤54	50
ACCESSIBLE SPACES	0, if required Commercial spaces is ≤19	≥0	8

\*Ratios reflect 1.5 spaces per unit with 15% allocation for Visitor use.

### REGULATIONS (PER ZONING BYLAW NO. 1065, 2007)

#### 6.12 Number of Required Accessory Off-Street Parking Spaces:

Apartment dwelling units: 1.5 per dwelling unit  
Retail, Office or Service commercial use: 1.0 per 45.0 m<sup>2</sup>

**6.08 Visitor Parking:** Of the parking spaces **required** for a townhouse or apartment use, 15% must be available for visitor use; conveniently located for visitor use; and clearly marked "VISITOR PARKING".

**6.10 Parking Spaces for Physically Disabled Persons:** For all **commercial**, industrial, entertainment, recreation and public assembly uses, parking spaces sized and marked for the exclusive use of physically disabled persons must be provided in at least the following ratio to the total number of accessory parking spaces required on the lot:

#### Required Spaces for Disabled Persons

0-19	none
20-49	1
49-99	2
100 or more	2 plus one space for every fifty or portion thereof exceeding one hundred

#### 6.07 Small Car Parking

Of the total required number of accessory parking **spaces required on a lot**, up to **30%** may take the form of "small car" parking space as described in Section 6.9.

#### 6.05(2)(b) Car Share Vehicle & Parking (Parking Reduction)

The minimum vehicle parking requirement in accordance with subsection 6.12, not including visitor parking requirements in accordance with Section 6.8, shall be **reduced by three parking spaces**, for provision of both of the following:

- one shared vehicle in accordance with subsection 6.5(2)(a)
- one shared vehicle parking space in accordance with subsection 6.5(2)(d)

#### 6.05(4)(a) Shared Parking Spaces

Where the peak use of parking spaces for two or more uses on the same lot or adjacent lots occurs at different periods of time, and required parking for such use is or may be shared, the total number of parking spaces required by Section 6.12 for such uses may be reduced by no more than 25%, provided that the requirements of subsection 6.5(4)(b) are met.

#### 6.13 Provision of Electric Vehicle Charging Infrastructure

(1) A parking area containing 10 or more parking spaces required by this Bylaw also requires one energized electrical outlet for every 10 required parking spaces, labeled for the use of electric vehicle charging and capable of providing Level 2 or higher charging for an electric vehicle, for every 10 required parking spaces.

## BICYCLE PARKING SUMMARY

	CALCULATION	REQUIREMENT	PROPOSED
APARTMENT USE – CLASS 1	≥1.25 per unit	≥155	193
APARTMENT USE – CLASS 2	≥0.20 per unit	≥25	24
COMMERCIAL USE (DAYCARE) – CLASS 1	≥0.27 per 100 m <sup>2</sup> over 100 m <sup>2</sup>	≥1	
COMMERCIAL USE (DAYCARE) – CLASS 2	≥0.40 per 100 m <sup>2</sup> over 100 m <sup>2</sup>	≥1	
TOTAL SPACES		182	193* (217 Inc. Class 2)

\* of which 148 Horizontal stalls and 45 Vertical (23%)

Project:

2306

Owner:

718 North Road, Gibsons, BC

Drawing:

STATISTICS AND CONTEXT

Project Status:

Development Permit

SUBMISSION

Date	Description
(YYYY-MM-DD)	

Scale:

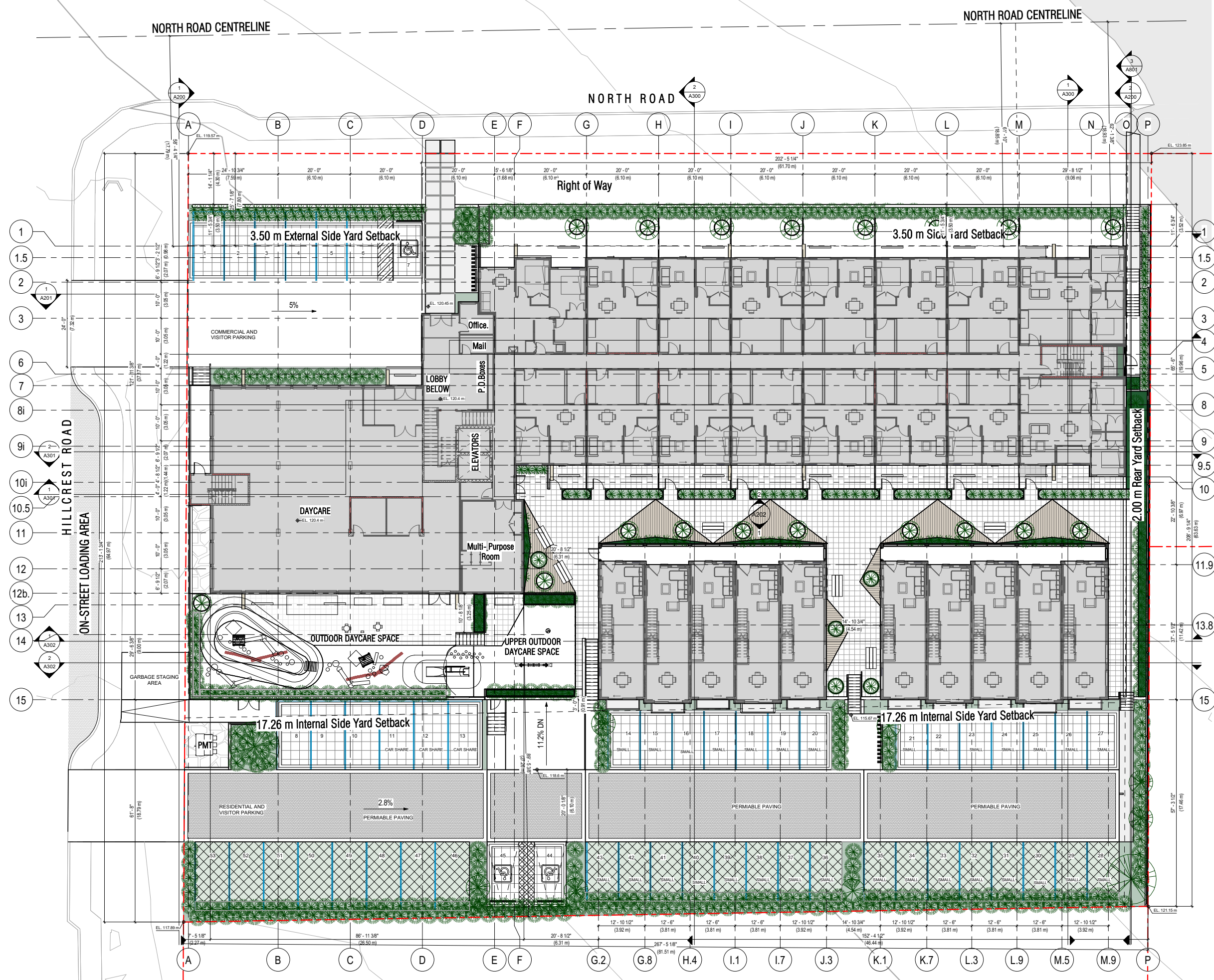
DWG. NO:

A002

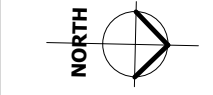


Plot Date: 2024-04-24 2:19:14 PM

D:\001 REVIT LOCAL FILES\2306\_06\_MAIN\_RZ\_718 North Road, Gibsons BC\1\_danield TGBM4.rvt



**SITE PLAN**  
SCALE: 1 : 150



Project:  
**2306**

Owner:

718 North Road, Gibsons, BC

Drawing:  
**SITE PLAN**

Project Status:  
**Development Permit**  
SUBMISSION

Date	Description

REVISION		
No.	Date	Description

All Drawings in this set to be read in conjunction with each other. Any errors or discrepancies to be reported to the Architect before commencing work. Contractors are responsible to ensure that all work is executed to the requirements of the appropriate Building Code Authority.  
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Scale:  
1 : 150

DWG. NO:  
**A100**



# Appendix B

## Turning Movement Count Summary Sheets



# Hwy 101 & Reed Rd

Friday, November 24, 2023

## Vehicle Classification Summary

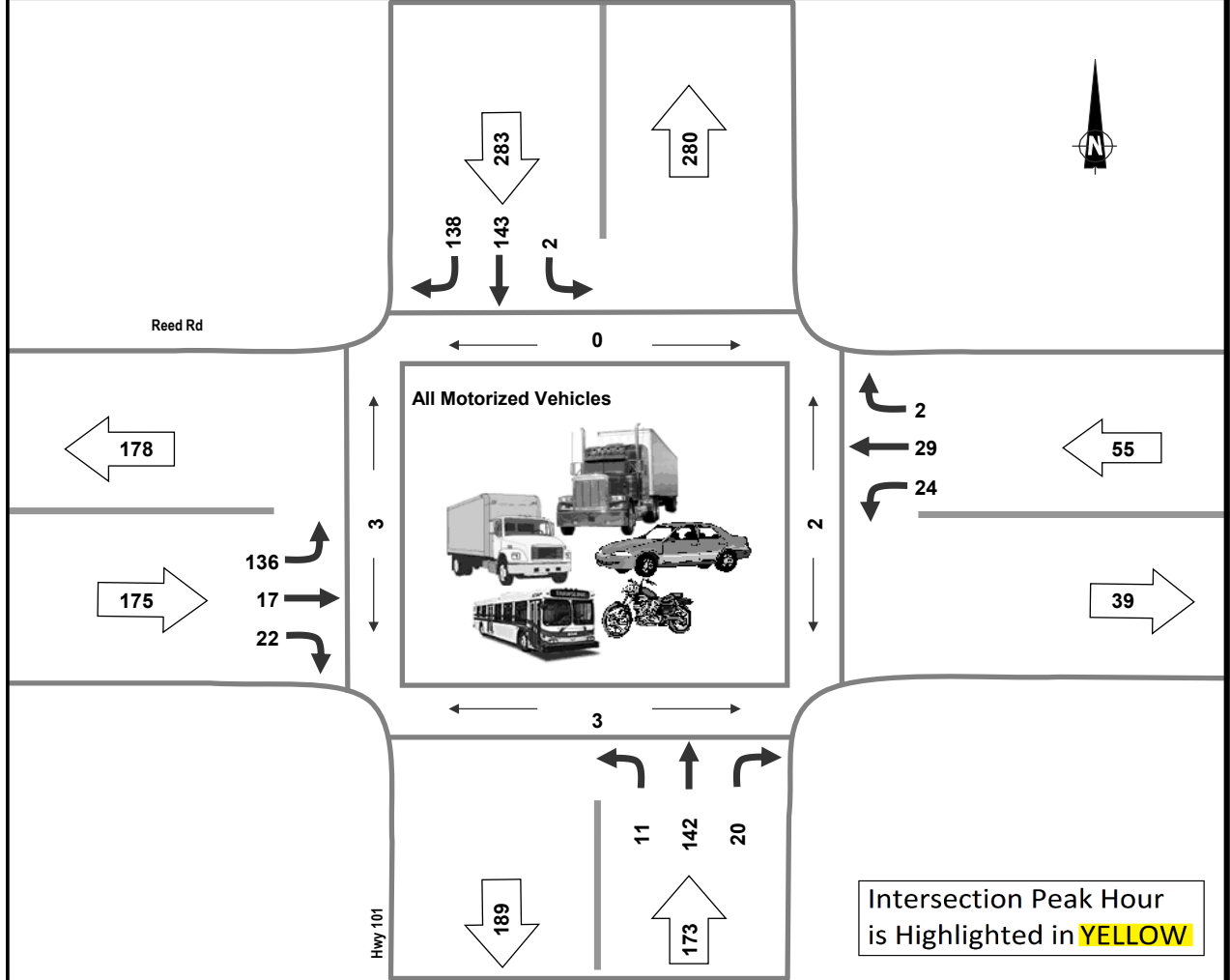
**Project:** #9090: 718 North Road TIS  
**Municipality:** Town of Gibsons  
**Weather:** Sunny

Time Period	Entering Intersection	Vehicle Classification				Total
		Passenger Cars	Heavy Vehicles (3 or more axles)			
Morning (07:00 - 09:30)	Volume	1,213	46			<b>1,259</b>
	%	96.3%	3.7%			<b>100.0%</b>
	Volume					
	%					
Afternoon (14:30 - 18:00)	Volume	2,740	49			<b>2,789</b>
	%	98.2%	1.8%			<b>100.0%</b>
<b>Total (6 Hours)</b>	<b>Volume</b>	<b>3,953</b>	<b>95</b>			<b>4,048</b>
	<b>%</b>	<b>97.7%</b>	<b>2.3%</b>			<b>100.0%</b>

Project: #9090: 718 North Road TIS  
Municipality: Town of Gibsons  
Weather: Sunny  
Vehicle Class: All Motorized Vehicles

**Morning Peak Period**

**Peak Hour Traffic by Movement** 7:45 AM to 8:45 AM

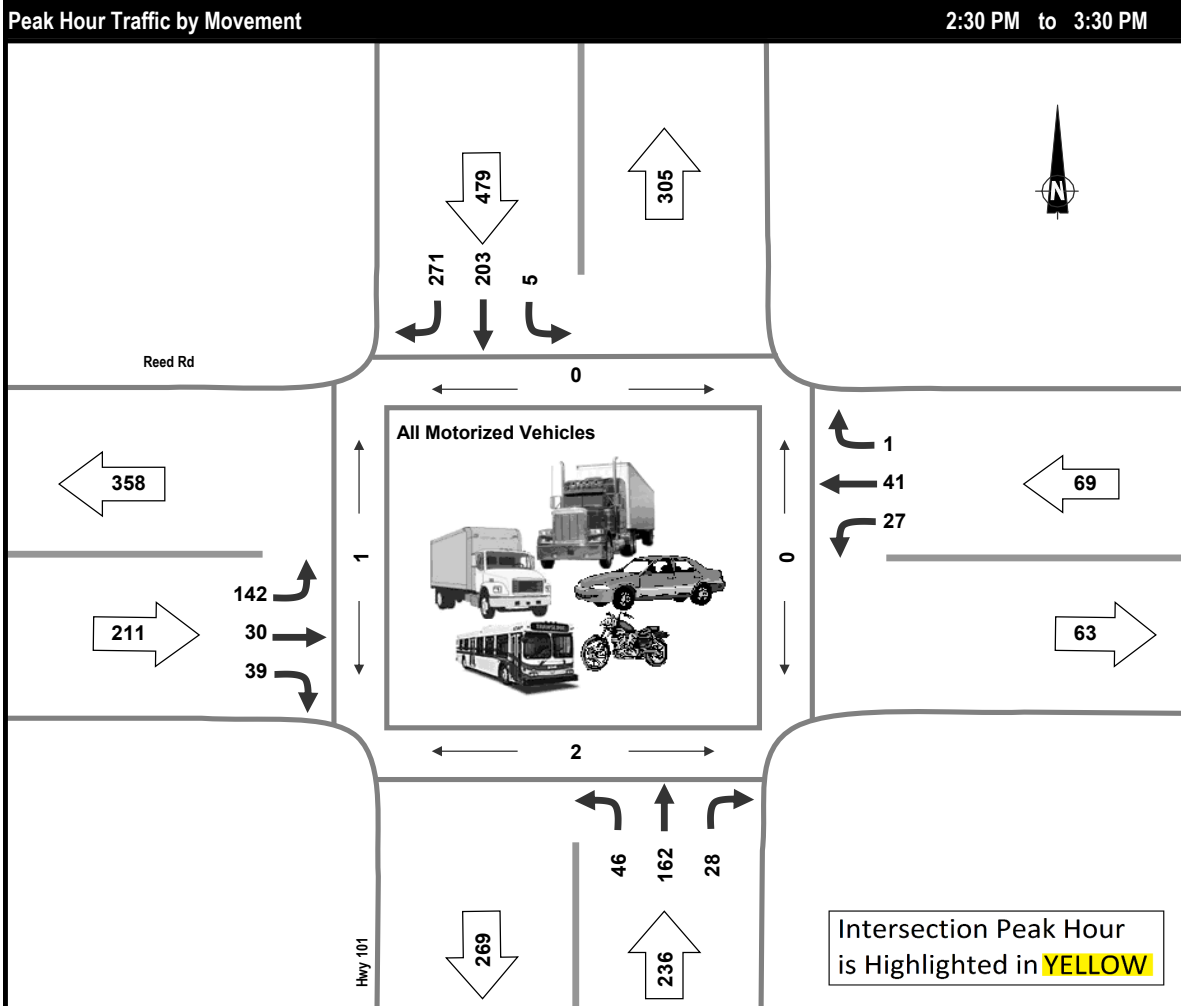


Time	NORTH Approach			SOUTH Approach			WEST Approach			EAST Approach			PEDESTRIANS				Total Volumes
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	N	S	W	E	
<b>Peak Hour</b>	<b>2</b>	<b>143</b>	<b>138</b>	<b>11</b>	<b>142</b>	<b>20</b>	<b>136</b>	<b>17</b>	<b>22</b>	<b>24</b>	<b>29</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>686</b>
<b>PHF</b>	<b>0.50</b>	<b>0.46</b>	<b>0.40</b>	<b>0.46</b>	<b>0.70</b>	<b>0.56</b>	<b>0.49</b>	<b>0.71</b>	<b>0.79</b>	<b>0.60</b>	<b>0.60</b>	<b>0.50</b>	<b>0.00</b>	<b>0.25</b>	<b>0.38</b>	<b>0.50</b>	<b>0.71</b>
<b>Peak 15 X 4</b>	4	308	348	24	204	36	276	24	28	40	48	4	0	12	8	4	960
<b>Average Hour</b>	2	94	81	11	115	15	105	13	24	20	22	2	0	2	1	1	504
<b>Survey Total</b>	4	235	203	27	288	37	263	33	60	51	54	4	0	5	3	3	1,259
7:00	0	11	10	0	24	2	15	1	2	2	4	2	0	0	0	0	73
7:15	0	5	12	1	28	1	33	3	2	2	3	0	0	0	0	0	90
7:30	0	14	8	1	36	3	35	0	0	0	5	0	0	0	0	0	102
7:45	0	17	18	3	51	7	69	1	3	6	6	1	0	0	1	1	182
8:00	0	22	15	6	44	2	39	5	6	3	4	1	0	0	0	0	147
8:15	1	77	87	0	28	2	22	5	6	5	7	0	0	3	0	1	240
8:30	1	27	18	2	19	9	6	6	7	10	12	0	0	0	2	0	117
8:45	0	24	12	9	24	5	14	5	21	11	5	0	0	1	0	0	130
9:00	2	20	16	3	18	3	9	2	6	4	3	0	0	1	0	1	86
9:15	0	18	7	2	16	3	21	5	7	8	5	0	0	0	0	0	92



Project: #9090: 718 North Road TIS  
Municipality: Town of Gibsons  
Weather: Sunny  
Vehicle Class: All Motorized Vehicles

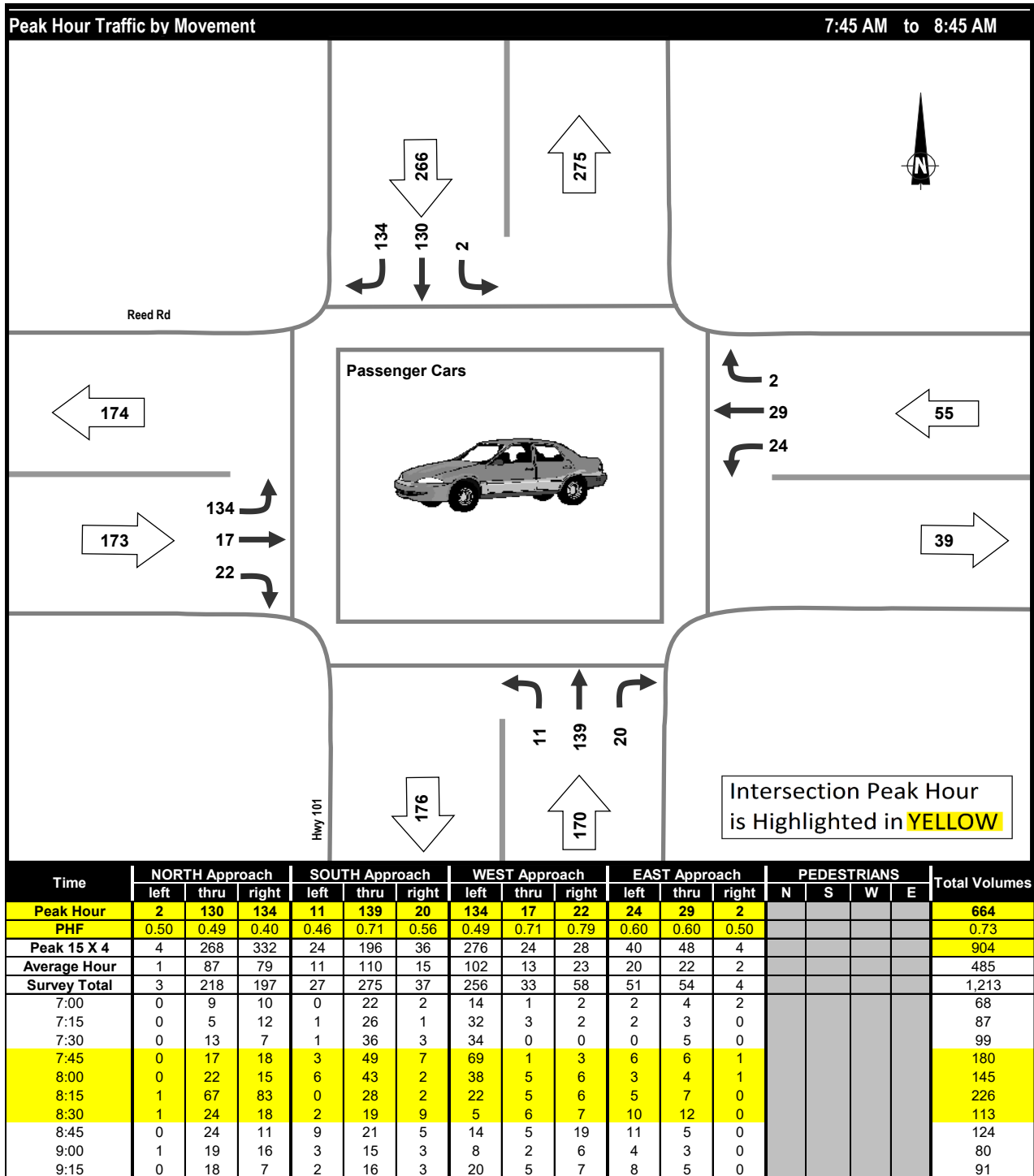
**Afternoon Peak Period**



Time	NORTH Approach			SOUTH Approach			WEST Approach			EAST Approach			PEDESTRIANS				Total Volumes
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	N	S	W	E	
<b>Peak Hour</b>	5	203	271	46	162	28	142	30	39	27	41	1	0	2	1	0	<b>995</b>
PHF	0.63	0.45	0.41	0.58	0.66	0.64	0.57	0.94	0.75	0.75	0.51	0.25	0.00	0.50	0.25	0.00	0.65
<b>Peak 15 X 4</b>	8	448	656	80	244	44	248	32	52	36	80	4	0	4	4	0	<b>1,528</b>
<b>Average Hour</b>	5	156	189	26	139	31	122	34	35	21	36	3	1	1	0	1	797
<b>Survey Total</b>	19	546	660	91	487	109	427	120	121	73	126	10	2	3	1	5	2,789
14:30	1	21	35	4	61	7	62	8	13	9	6	0	0	0	1	0	227
14:45	1	35	25	7	45	0	43	7	9	9	7	1	0	0	0	0	189
15:00	2	112	164	15	27	10	14	7	9	2	20	0	0	1	0	0	382
15:15	1	35	47	20	29	11	23	8	8	7	8	0	0	1	0	0	197
15:30	1	27	25	11	21	10	17	9	14	8	8	0	0	0	0	0	151
15:45	3	25	24	8	34	8	19	11	12	3	9	4	0	1	0	1	160
16:00	3	27	29	4	20	15	30	13	9	4	4	1	1	0	0	1	159
16:15	0	19	33	2	32	5	30	11	5	7	6	1	0	0	0	0	151
16:30	1	30	23	3	39	9	42	7	9	3	18	0	0	0	0	0	184
16:45	1	46	35	3	45	3	43	11	8	4	14	1	0	0	0	1	214
17:00	1	21	15	2	52	8	47	5	4	8	5	0	1	0	0	1	168
17:15	1	105	170	4	23	7	21	8	4	3	10	0	0	0	0	1	356
17:30	2	27	22	3	28	6	18	6	8	4	4	2	0	0	0	0	130
17:45	1	16	13	5	31	10	18	9	9	2	7	0	0	0	0	0	121

Project: #9090: 718 North Road TIS  
Municipality: Town of Gibsons  
Weather: Sunny  
Vehicle Class: Passenger Cars

**Morning Peak Period**

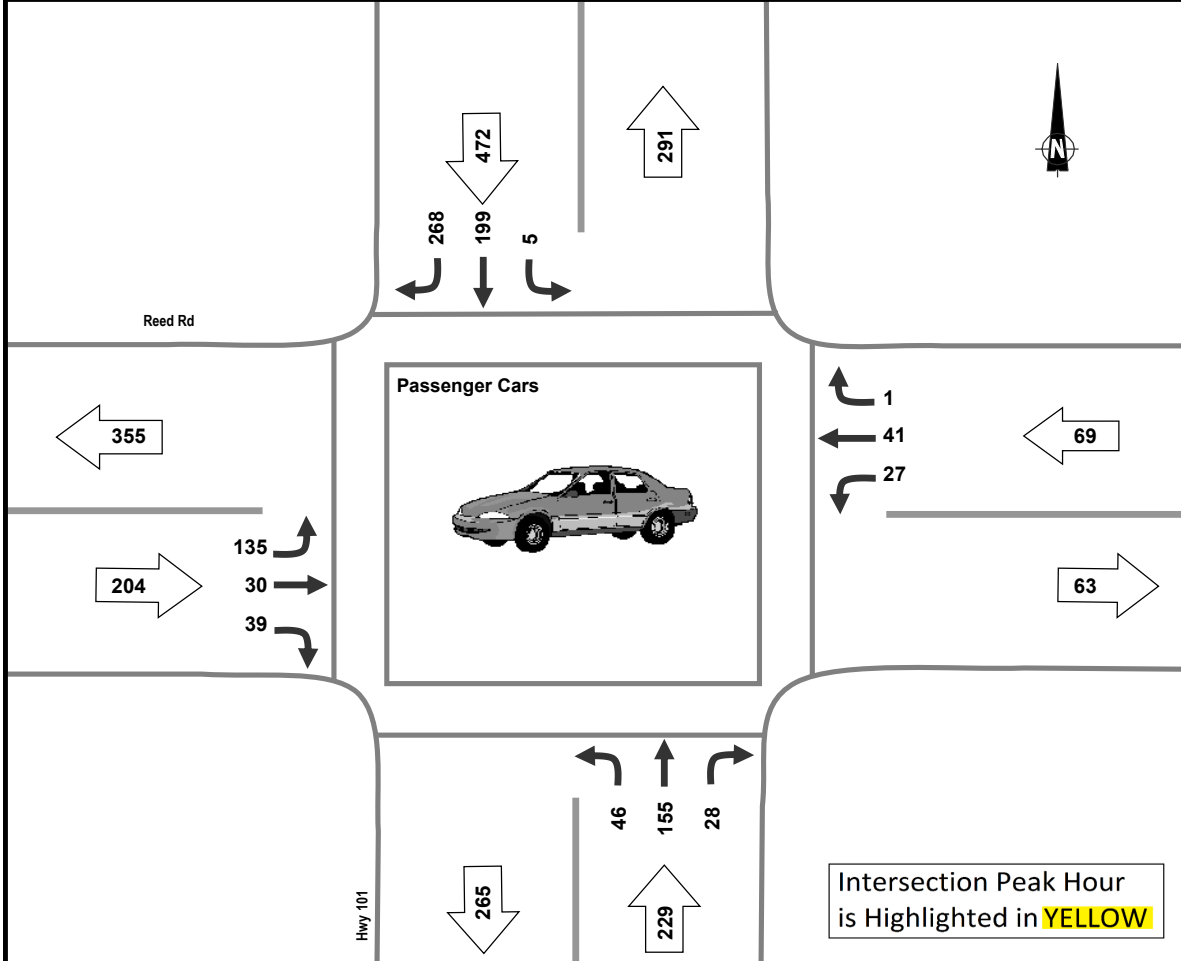




Project: #9090: 718 North Road TIS  
Municipality: Town of Gibsons  
Weather: Sunny  
Vehicle Class: Passenger Cars

**Afternoon Peak Period**

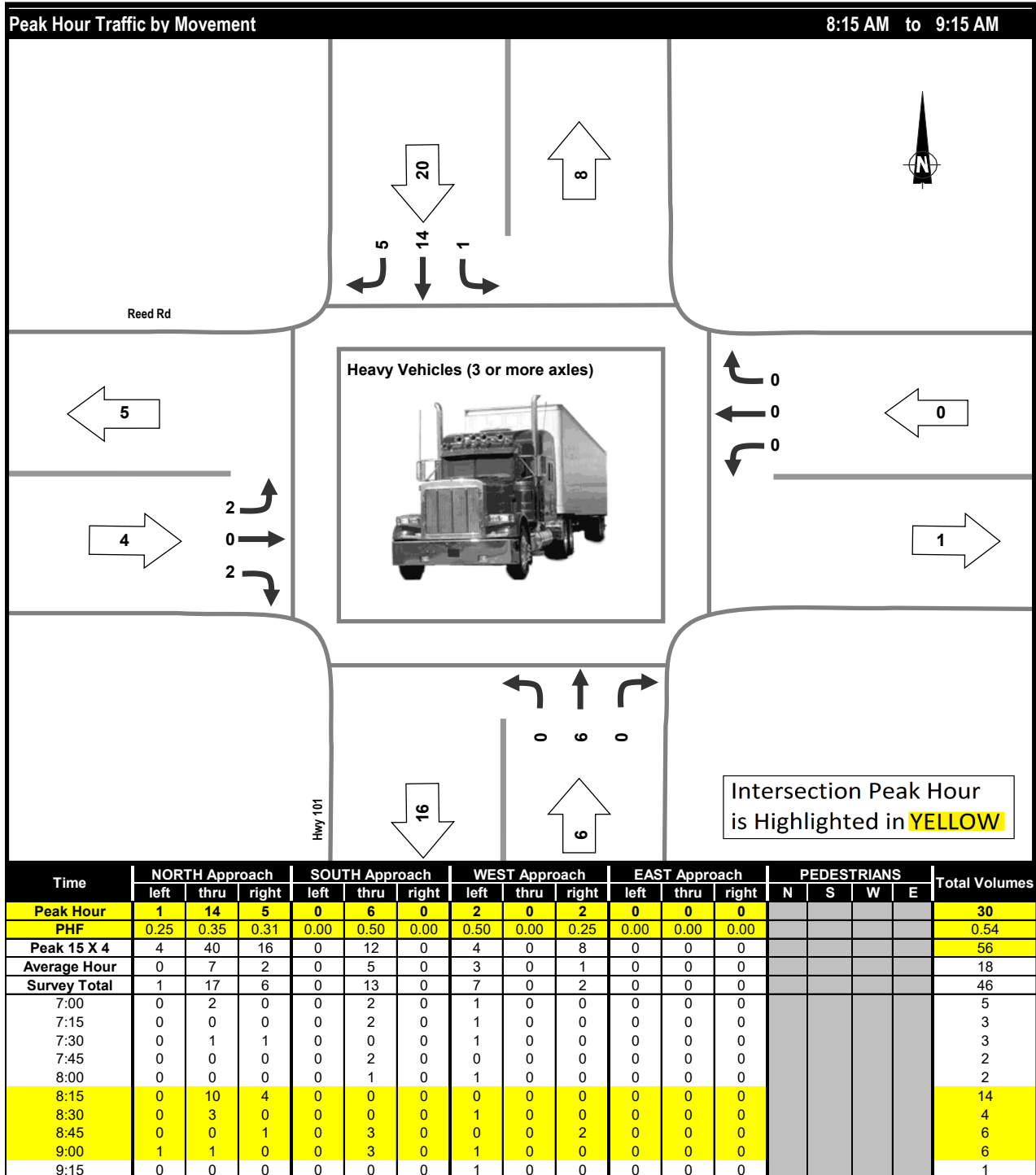
**Peak Hour Traffic by Movement** 2:30 PM to 3:30 PM



Time	NORTH Approach			SOUTH Approach			WEST Approach			EAST Approach			PEDESTRIANS				Total Volumes
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	N	S	W	E	
<b>Peak Hour</b>	5	199	268	46	155	28	135	30	39	27	41	1					<b>974</b>
<b>PHF</b>	0.63	0.46	0.41	0.58	0.66	0.64	0.58	0.94	0.75	0.75	0.51	0.25					0.65
<b>Peak 15 X 4</b>	8	436	648	80	236	44	232	32	52	36	80	4					1,496
<b>Average Hour</b>	5	153	186	26	133	31	120	34	35	21	36	3					783
<b>Survey Total</b>	19	537	650	91	467	108	419	120	121	72	126	10					2,740
14:30	1	21	34	4	59	7	58	8	13	9	6	0					220
14:45	1	35	25	7	43	0	43	7	9	9	7	1					187
15:00	2	109	162	15	26	10	12	7	9	2	20	0					374
15:15	1	34	47	20	27	11	22	8	8	7	8	0					193
15:30	1	27	24	11	20	10	17	9	14	8	8	0					149
15:45	3	23	23	8	33	8	19	11	12	3	9	4					156
16:00	3	27	29	4	20	15	30	13	9	4	4	1					159
16:15	0	19	32	2	31	5	30	11	5	6	6	1					148
16:30	1	30	23	3	37	9	42	7	9	3	18	0					182
16:45	1	45	34	3	43	3	43	11	8	4	14	1					210
17:00	1	21	15	2	49	8	46	5	4	8	5	0					164
17:15	1	103	167	4	22	6	21	8	4	3	10	0					349
17:30	2	27	22	3	28	6	18	6	8	4	4	2					130
17:45	1	16	13	5	29	10	18	9	9	2	7	0					119

Project: #9090: 718 North Road TIS  
Municipality: Town of Gibsons  
Weather: Sunny  
Vehicle Class: Heavy Vehicles (3 or more axles)

**Morning Peak Period**

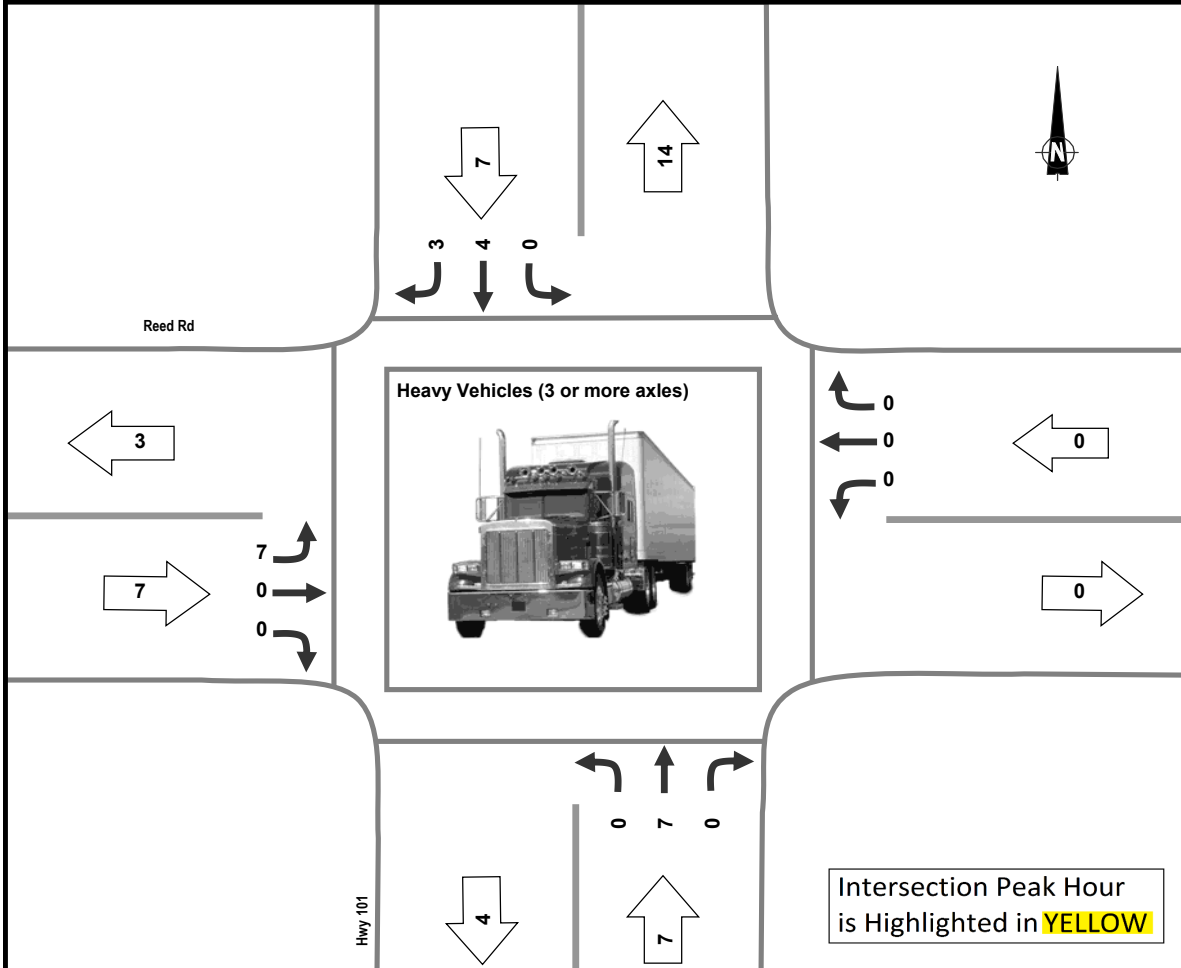


Project: #9090: 718 North Road TIS  
 Municipality: Town of Gibsons  
 Weather: Sunny  
 Vehicle Class: Heavy Vehicles (3 or more axles)

### Afternoon Peak Period

#### Peak Hour Traffic by Movement

2:30 PM to 3:30 PM

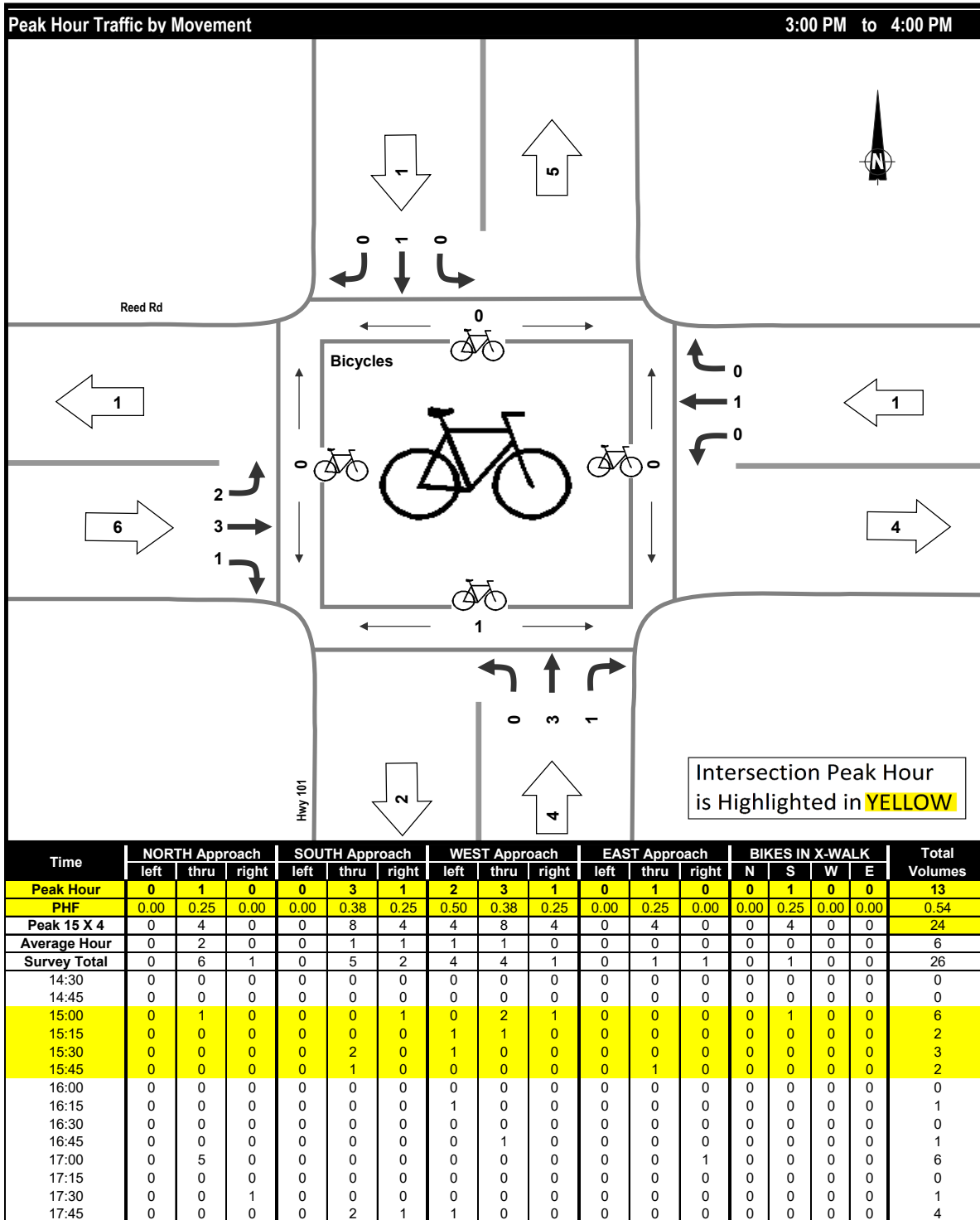


Time	NORTH Approach			SOUTH Approach			WEST Approach			EAST Approach			PEDESTRIANS				Total Volumes
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	N	S	W	E	
<b>Peak Hour</b>	0	4	3	0	7	0	7	0	0	0	0	0					21
<b>PHF</b>	0.00	0.33	0.38	0.00	0.88	0.00	0.44	0.00	0.00	0.00	0.00	0.00					0.66
<b>Peak 15 X 4</b>	0	12	8	0	8	0	16	0	0	0	0	0					32
<b>Average Hour</b>	0	3	3	0	6	0	2	0	0	0	0	0					14
<b>Survey Total</b>	0	9	10	0	20	1	8	0	0	1	0	0					49
14:30	0	0	1	0	2	0	4	0	0	0	0	0					7
14:45	0	0	0	0	2	0	0	0	0	0	0	0					2
15:00	0	3	2	0	1	0	2	0	0	0	0	0					8
15:15	0	1	0	0	2	0	1	0	0	0	0	0					4
15:30	0	0	1	0	1	0	0	0	0	0	0	0					2
15:45	0	2	1	0	1	0	0	0	0	0	0	0					4
16:00	0	0	0	0	0	0	0	0	0	0	0	0					0
16:15	0	0	1	0	1	0	0	0	0	1	0	0					3
16:30	0	0	0	0	2	0	0	0	0	0	0	0					2
16:45	0	1	1	0	2	0	0	0	0	0	0	0					4
17:00	0	0	0	0	3	0	1	0	0	0	0	0					4
17:15	0	2	3	0	1	1	0	0	0	0	0	0					7
17:30	0	0	0	0	0	0	0	0	0	0	0	0					0
17:45	0	0	0	0	2	0	0	0	0	0	0	0					2



Project: #9090: 718 North Road TIS  
Municipality: Town of Gibsons  
Weather: Sunny  
Vehicle Class: Bicycles

**Afternoon Peak Period**





# School Rd & Gibsons Way

Friday, November 24, 2023

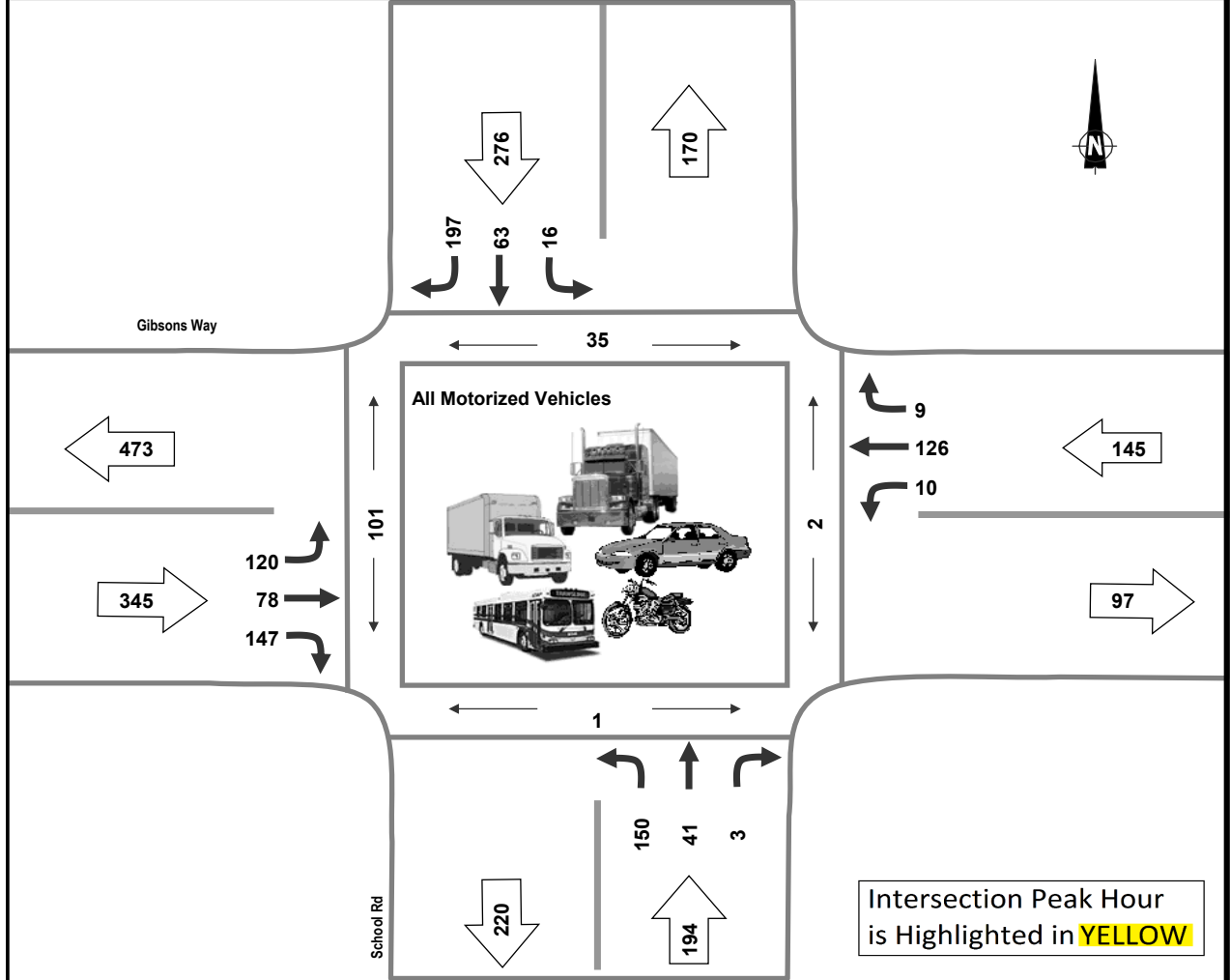
## Vehicle Classification Summary

**Project:** #9090: 718 North Road TIS  
**Municipality:** Town of Gibsons  
**Weather:** Sunny

Time Period	Entering Intersection	Vehicle Classification				Total
		Passenger Cars	Heavy Vehicles (3 or more axles)			
Morning (07:00 - 09:30)	Volume	1,761	34			1,795
	%	98.1%	1.9%			100.0%
	Volume					
	%					
Afternoon (14:30 - 18:00)	Volume	4,253	26			4,279
	%	99.4%	0.6%			100.0%
<b>Total (6 Hours)</b>	<b>Volume</b>	<b>6,014</b>	<b>60</b>			<b>6,074</b>
	<b>%</b>	<b>99.0%</b>	<b>1.0%</b>			<b>100.0%</b>

Project: #9090: 718 North Road TIS  
 Municipality: Town of Gibsons  
 Weather: Sunny  
 Vehicle Class: All Motorized Vehicles

**Peak Hour Traffic by Movement** 8:15 AM to 9:15 AM

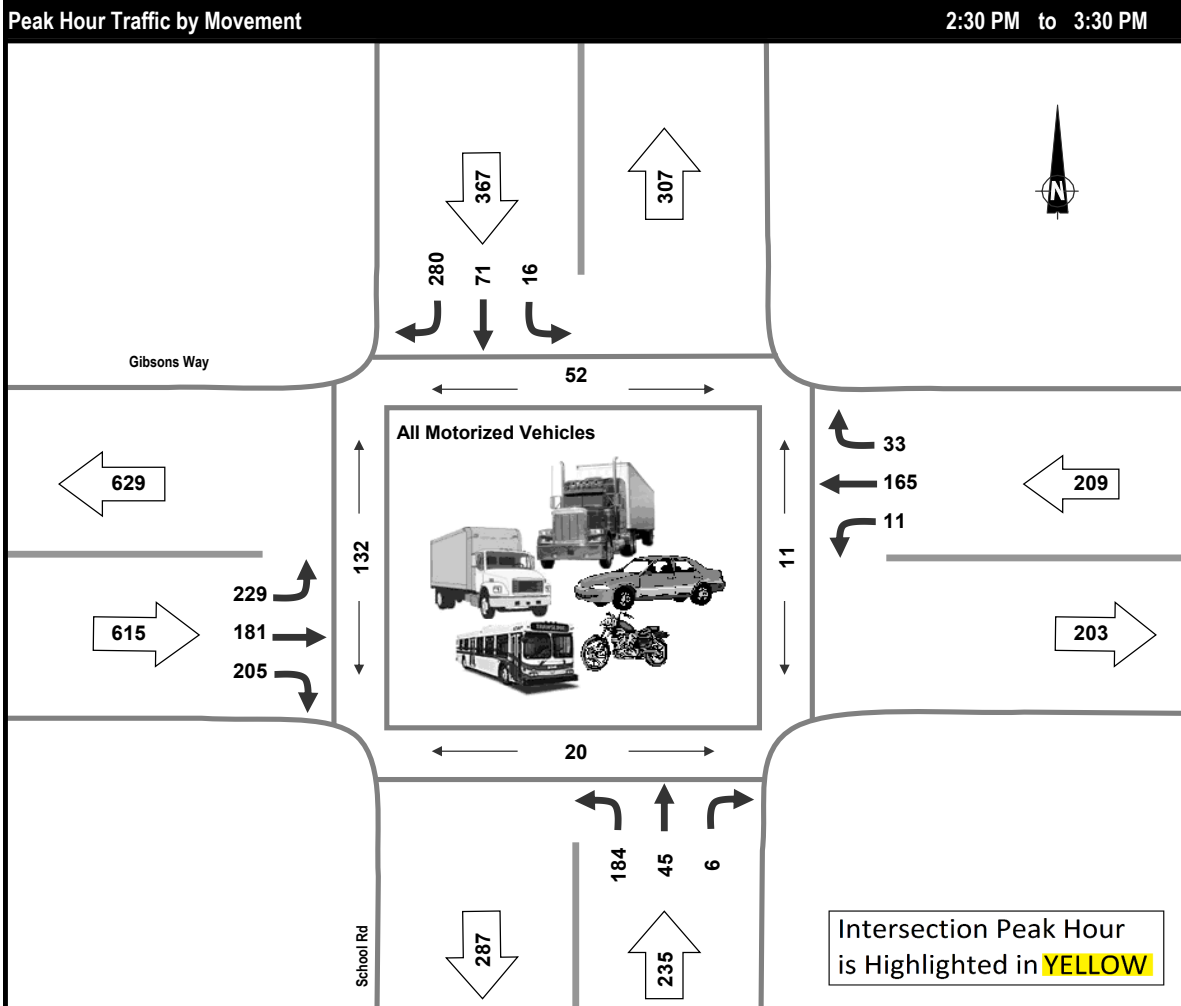


Time	NORTH Approach			SOUTH Approach			WEST Approach			EAST Approach			PEDESTRIANS				Total Volumes
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	N	S	W	E	
<b>Peak Hour</b>	<b>16</b>	<b>63</b>	<b>197</b>	<b>150</b>	<b>41</b>	<b>3</b>	<b>120</b>	<b>78</b>	<b>147</b>	<b>10</b>	<b>126</b>	<b>9</b>	<b>35</b>	<b>1</b>	<b>101</b>	<b>2</b>	<b>960</b>
<b>PHF</b>	<b>0.44</b>	<b>0.68</b>	<b>0.60</b>	<b>0.80</b>	<b>0.60</b>	<b>0.38</b>	<b>0.94</b>	<b>0.70</b>	<b>0.78</b>	<b>0.63</b>	<b>0.95</b>	<b>0.56</b>	<b>0.73</b>	<b>0.25</b>	<b>0.60</b>	<b>0.50</b>	<b>0.86</b>
<b>Peak 15 X 4</b>	36	92	328	188	68	8	128	112	188	16	132	16	48	4	168	4	1,120
<b>Average Hour</b>	8	39	140	107	28	2	134	60	98	6	88	6	16	1	48	2	716
<b>Survey Total</b>	20	98	351	268	69	4	336	151	246	15	221	16	39	2	119	6	1,795
7:00	1	0	18	9	3	0	20	8	10	0	8	1	0	0	1	0	78
7:15	0	0	15	12	4	0	33	7	5	0	16	1	1	0	2	0	93
7:30	1	3	18	14	4	0	45	11	13	0	10	1	0	0	0	3	120
7:45	0	9	32	19	10	0	54	12	16	1	13	1	0	0	2	0	167
8:00	1	10	32	27	6	1	41	12	24	3	21	2	3	0	7	1	180
<b>8:15</b>	<b>1</b>	<b>15</b>	<b>82</b>	<b>33</b>	<b>7</b>	<b>1</b>	<b>27</b>	<b>14</b>	<b>28</b>	<b>2</b>	<b>33</b>	<b>3</b>	<b>7</b>	<b>0</b>	<b>9</b>	<b>1</b>	<b>246</b>
8:30	3	12	41	33	7	0	32	11	41	1	30	2	12	0	25	0	213
8:45	9	23	41	47	17	0	31	25	47	4	32	4	12	0	42	1	280
9:00	3	13	33	37	10	2	30	28	31	3	31	0	4	1	25	0	221
9:15	1	13	39	37	1	0	23	23	31	1	27	1	0	1	6	0	197



Project: #9090: 718 North Road TIS  
 Municipality: Town of Gibsons  
 Weather: Sunny  
 Vehicle Class: All Motorized Vehicles

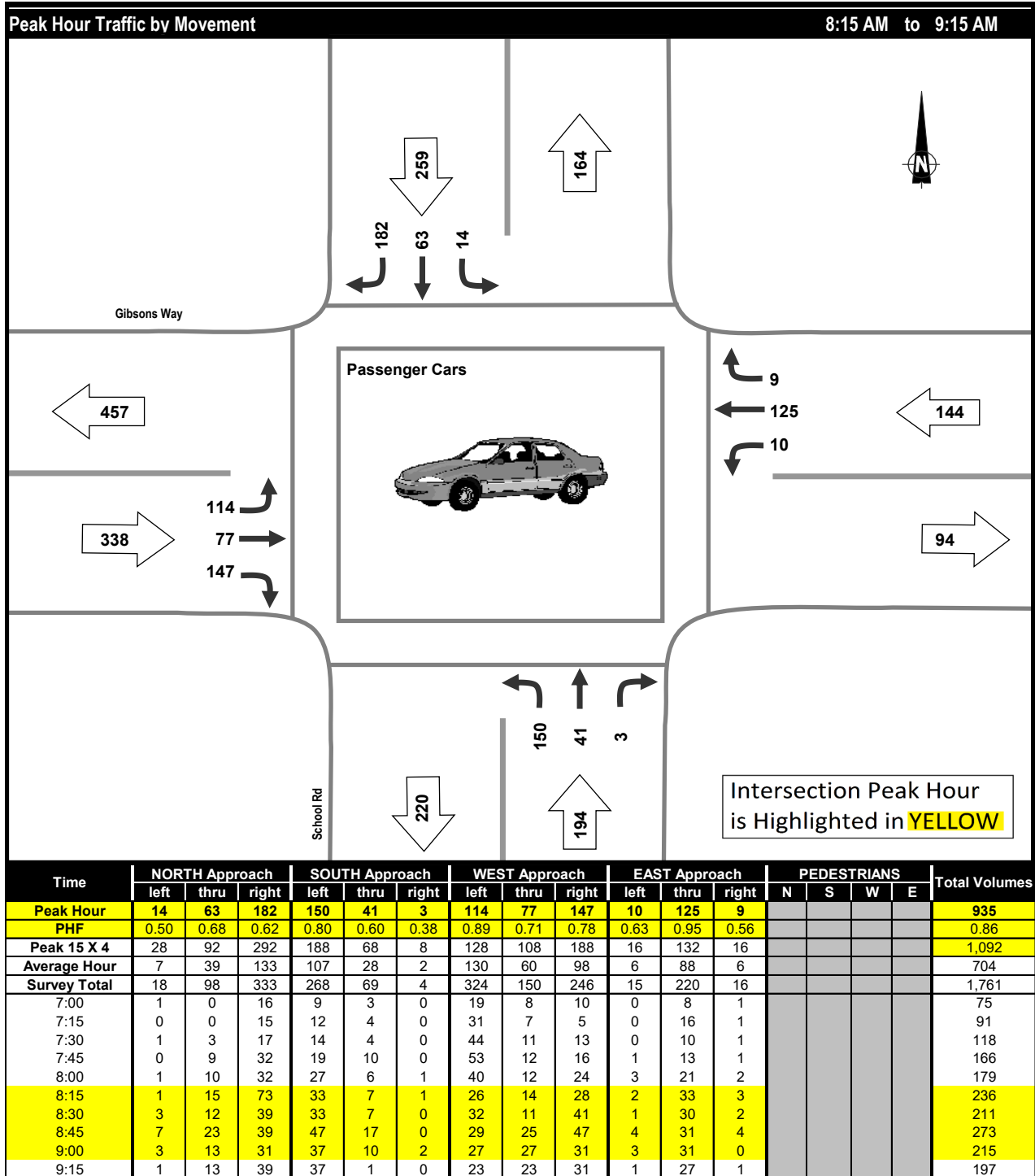
## Afternoon Peak Period



Time	NORTH Approach			SOUTH Approach			WEST Approach			EAST Approach			PEDESTRIANS				Total Volumes
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	N	S	W	E	
<b>Peak Hour</b>	16	71	280	184	45	6	229	181	205	11	165	33	52	20	132	11	1,426
<b>PHF</b>	0.67	0.85	0.65	0.84	0.66	0.50	0.72	0.94	0.93	0.55	0.81	0.83	0.41	0.63	0.52	0.55	0.90
<b>Peak 15 X 4</b>	24	84	428	220	68	12	316	192	220	20	204	40	128	32	256	20	1,592
<b>Average Hour</b>	19	43	204	170	33	3	209	163	197	5	151	27	25	9	47	8	1,224
<b>Survey Total</b>	67	150	715	596	114	9	730	571	688	19	527	93	89	30	166	28	4,279
14:30	4	14	36	35	10	2	79	38	47	5	39	5	0	3	4	2	314
14:45	1	21	66	55	9	1	53	48	55	1	51	10	32	8	64	5	371
15:00	5	18	107	55	9	3	59	48	48	2	36	8	20	6	49	2	398
15:15	6	18	71	39	17	0	38	47	55	3	39	10	0	3	15	2	343
15:30	5	10	36	49	4	0	46	37	58	0	27	8	5	2	8	0	280
15:45	4	8	47	45	13	0	50	43	52	1	50	8	9	3	9	2	321
16:00	5	6	37	59	8	0	43	54	47	3	45	6	5	3	7	8	313
16:15	4	5	29	56	8	1	50	45	54	0	41	7	3	1	1	1	300
16:30	6	8	40	35	7	0	45	47	40	1	37	5	1	0	2	2	271
16:45	7	6	35	33	9	1	55	38	48	0	28	11	0	0	0	1	271
17:00	3	3	44	50	9	0	55	34	50	0	35	4	3	0	4	1	287
17:15	7	12	91	28	0	1	64	33	60	1	38	5	3	1	0	1	340
17:30	5	11	47	41	9	0	53	31	41	0	39	1	8	0	3	1	278
17:45	5	10	29	16	2	0	40	28	33	2	22	5	0	0	0	0	192

Project: #9090: 718 North Road TIS  
 Municipality: Town of Gibsons  
 Weather: Sunny  
 Vehicle Class: Passenger Cars

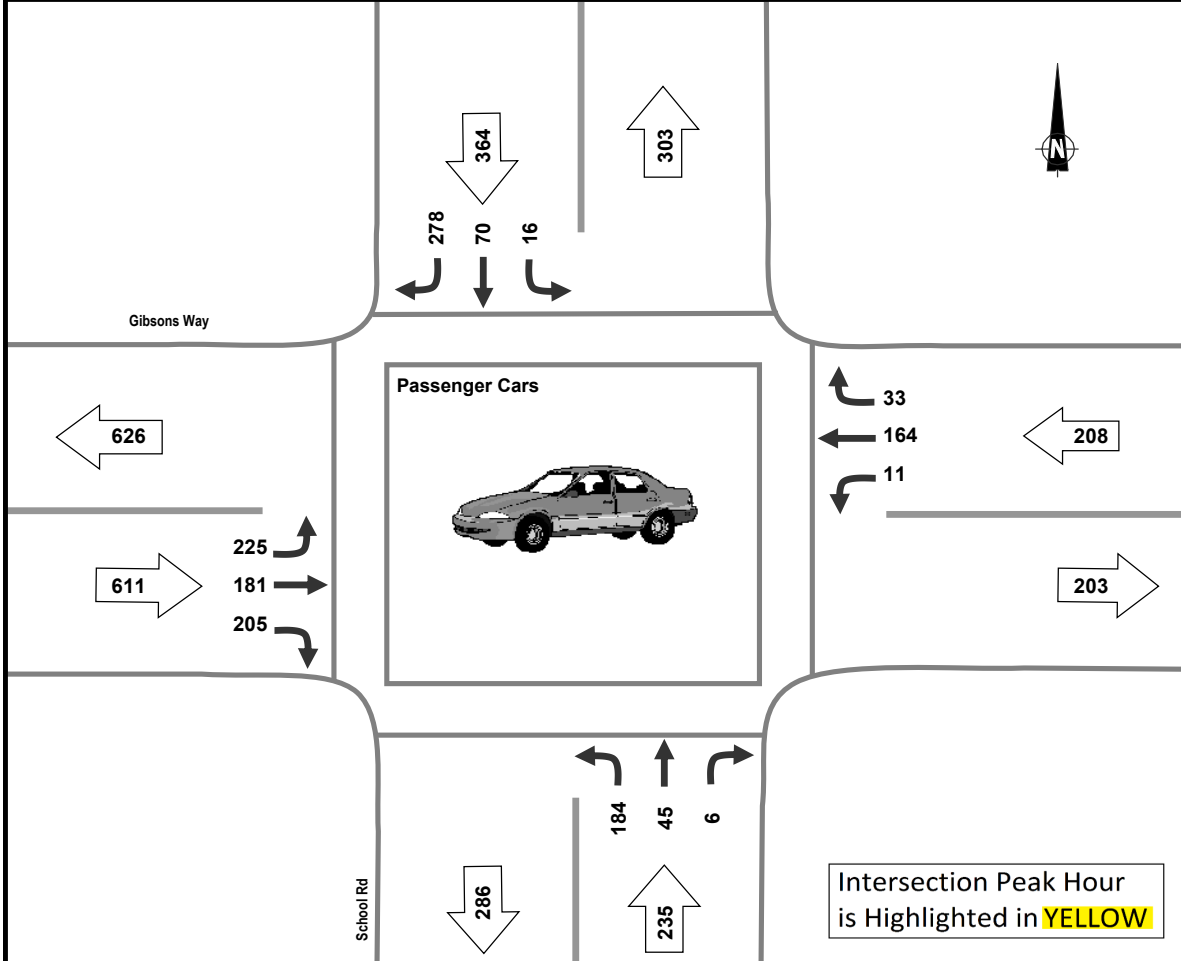
## Morning Peak Period



Project: #9090: 718 North Road TIS  
 Municipality: Town of Gibsons  
 Weather: Sunny  
 Vehicle Class: Passenger Cars

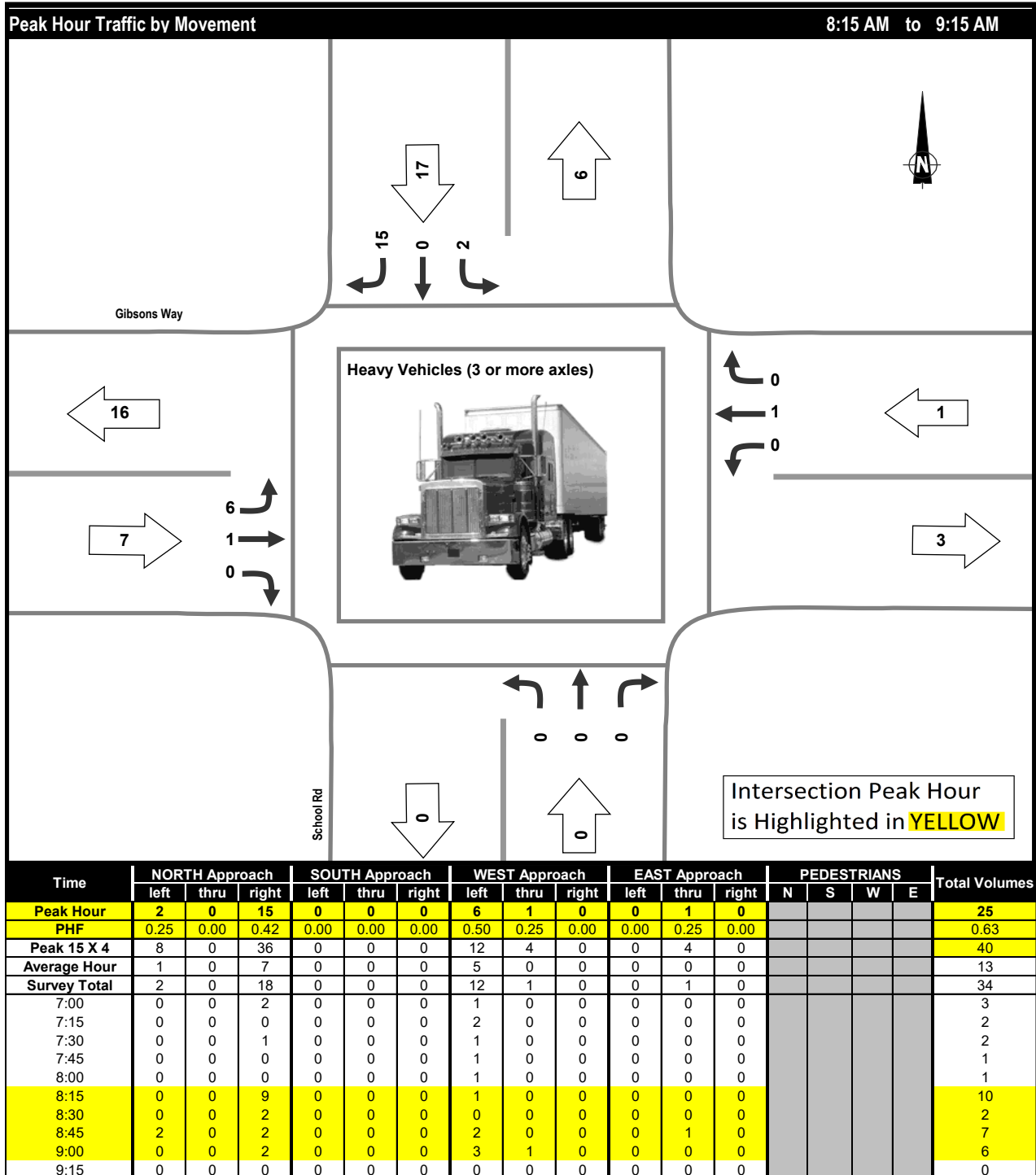
## Afternoon Peak Period

**Peak Hour Traffic by Movement** 2:30 PM to 3:30 PM



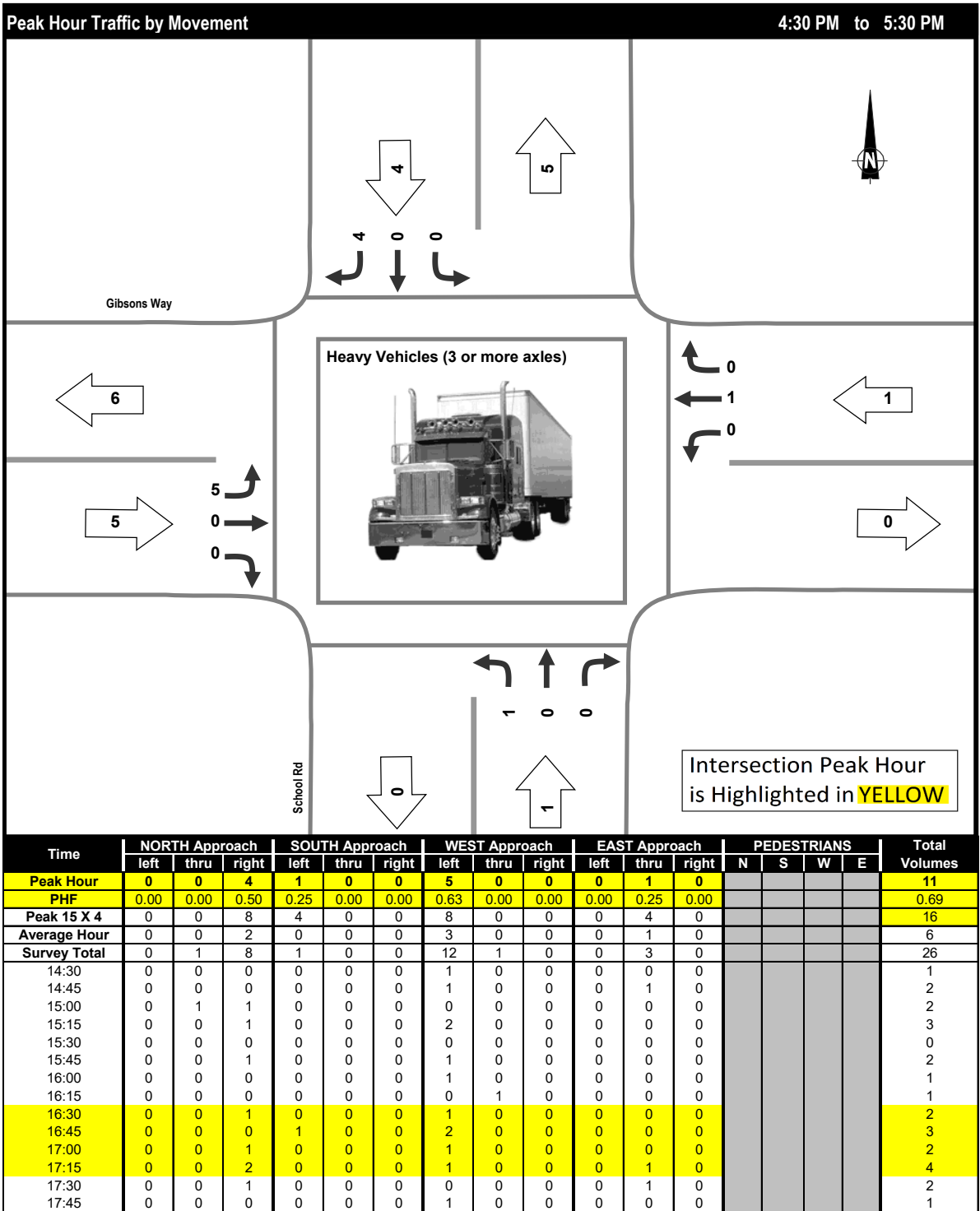
Time	NORTH Approach			SOUTH Approach			WEST Approach			EAST Approach			PEDESTRIANS				Total Volumes
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	N	S	W	E	
<b>Peak Hour</b>	16	70	278	184	45	6	225	181	205	11	164	33					1,418
<b>PHF</b>	0.67	0.83	0.66	0.84	0.66	0.50	0.72	0.94	0.93	0.55	0.82	0.83					0.90
<b>Peak 15 X 4</b>	24	84	424	220	68	12	312	192	220	20	200	40					1,584
<b>Average Hour</b>	19	43	202	170	33	3	205	163	197	5	150	27					1,217
<b>Survey Total</b>	67	149	707	595	114	9	718	570	688	19	524	93					4,253
14:30	4	14	36	35	10	2	78	38	47	5	39	5					313
14:45	1	21	66	55	9	1	52	48	55	1	50	10					369
15:00	5	17	106	55	9	3	59	48	48	2	36	8					396
15:15	6	18	70	39	17	0	36	47	55	3	39	10					340
15:30	5	10	36	49	4	0	46	37	58	0	27	8					280
15:45	4	8	46	45	13	0	49	43	52	1	50	8					319
16:00	5	6	37	59	8	0	42	54	47	3	45	6					312
16:15	4	5	29	56	8	1	50	44	54	0	41	7					299
16:30	6	8	39	35	7	0	44	47	40	1	37	5					269
16:45	7	6	35	32	9	1	53	38	48	0	28	11					268
17:00	3	3	43	50	9	0	54	34	50	0	35	4					285
17:15	7	12	89	28	0	1	63	33	60	1	37	5					336
17:30	5	11	46	41	9	0	53	31	41	0	38	1					276
17:45	5	10	29	16	2	0	39	28	33	2	22	5					191

Project: #9090: 718 North Road TIS  
 Municipality: Town of Gibsons  
 Weather: Sunny  
 Vehicle Class: Heavy Vehicles (3 or more axles)



Project: #9090: 718 North Road TIS  
 Municipality: Town of Gibsons  
 Weather: Sunny  
 Vehicle Class: Heavy Vehicles (3 or more axles)

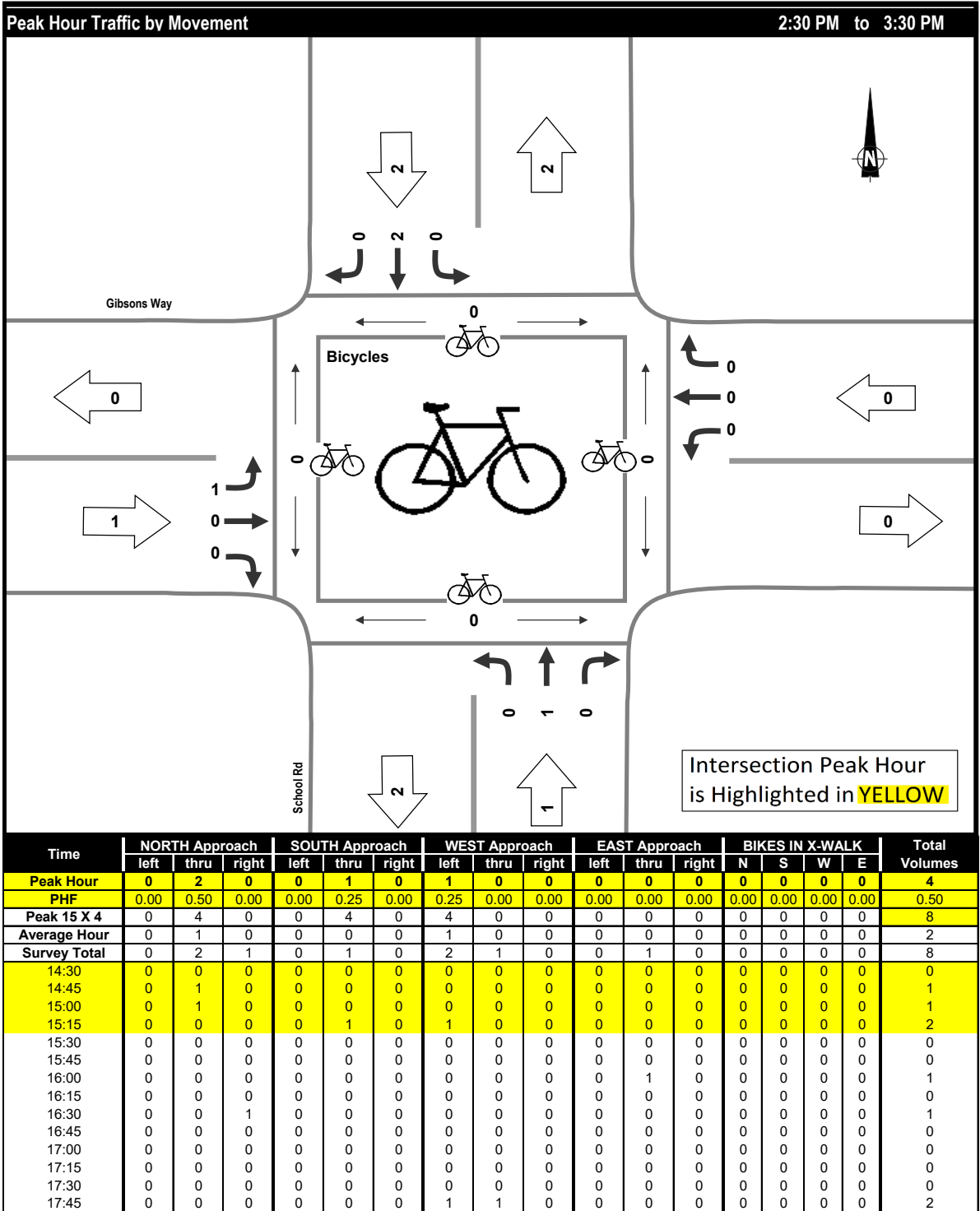
**Afternoon Peak Period**





Project: #9090: 718 North Road TIS  
 Municipality: Town of Gibsons  
 Weather: Sunny  
 Vehicle Class: Bicycles

**Afternoon Peak Period**





# Appendix C

## Capacity Analysis Summary Sheets

Lanes, Volumes, Timings  
1: North Rd (Hwy 101) & Reed Rd

2023 Base  
Timing Plan: Friday AM Peak Hr

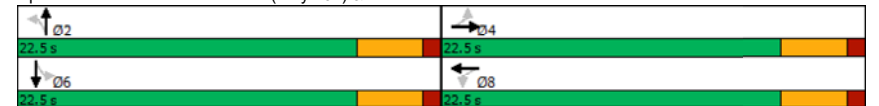
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	51	18	40	30	27	0	14	89	19	4	148	133
Future Volume (vph)	51	18	40	30	27	0	14	89	19	4	148	133
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00			1.00			0.99	
Frt		0.950						0.979			0.937	
Flt Protected		0.977			0.974			0.994			0.999	
Satd. Flow (prot)	0	1622	0	0	1719	0	0	1711	0	0	1635	0
Flt Permitted		0.812			0.833			0.949			0.997	
Satd. Flow (perm)	0	1348	0	0	1466	0	0	1634	0	0	1631	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		55						25			117	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		425.8			377.5			821.0			385.3	
Travel Time (s)		30.7			27.2			59.1			27.7	
Confl. Peds. (#/hr)			5	5			2		2	2		2
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	0	0	78	0	0	167	0	0	390	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0					7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0					11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0					0	0		0	0	
Act Effct Green (s)		8.5			8.5			23.3			23.3	
Actuated g/C Ratio		0.23			0.23			0.62			0.62	
v/c Ratio		0.43			0.23			0.16			0.37	
Control Delay		12.1			12.8			5.1			5.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		12.1			12.8			5.1			5.3	
LOS		B			B			A			A	
Approach Delay		12.1			12.8			5.1			5.3	

Lanes, Volumes, Timings  
1: North Rd (Hwy 101) & Reed Rd

2023 Base  
Timing Plan: Friday AM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		B			B			A			A	
Queue Length 50th (m)		4.8			3.9			3.7			7.8	
Queue Length 95th (m)		10.6			8.3			9.3			16.8	
Internal Link Dist (m)		401.8			353.5			797.0			361.3	
Turn Bay Length (m)												
Base Capacity (vph)		675			703			1020			1053	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.22			0.11			0.16			0.37	
Intersection Summary												
Area Type:	Other											
Cycle Length:	45											
Actuated Cycle Length:	37.6											
Natural Cycle:	45											
Control Type:	Semi Act-Uncoord											
Maximum v/c Ratio:	0.43											
Intersection Signal Delay:	7.3						Intersection LOS: A					
Intersection Capacity Utilization:	34.3%						ICU Level of Service A					
Analysis Period (min):	15											

Splits and Phases: 1: North Rd (Hwy 101) & Reed Rd



Lanes, Volumes, Timings  
1: North Rd (Hwy 101) & Reed Rd

2028 Base  
Timing Plan: Friday AM Peak Hr

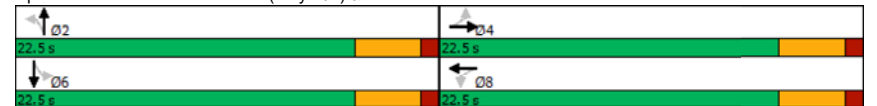
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	56	20	46	34	30	0	16	108	24	4	170	146
Future Volume (vph)	56	20	46	34	30	0	16	108	24	4	170	146
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00			1.00			0.99	
Frt		0.949						0.978			0.938	
Flt Protected		0.977			0.974			0.995			0.999	
Satd. Flow (prot)	0	1620	0	0	1719	0	0	1711	0	0	1637	0
Flt Permitted		0.809			0.820			0.944			0.997	
Satd. Flow (perm)	0	1341	0	0	1443	0	0	1623	0	0	1633	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		63						26			112	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		425.8			377.5			821.0			385.3	
Travel Time (s)		30.7			27.2			59.1			27.7	
Confl. Peds. (#/hr)			5	5			2		2	2		2
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	167	0	0	88	0	0	203	0	0	438	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0					7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0					11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0					0	0		0	0	
Act Effct Green (s)		8.7			8.7			22.7			22.7	
Actuated g/C Ratio		0.23			0.23			0.61			0.61	
v/c Ratio		0.46			0.26			0.20			0.42	
Control Delay		12.2			13.0			5.5			6.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		12.2			13.0			5.5			6.2	
LOS		B			B			A			A	
Approach Delay		12.2			13.0			5.5			6.2	

Lanes, Volumes, Timings  
1: North Rd (Hwy 101) & Reed Rd

2028 Base  
Timing Plan: Friday AM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		B			B			A			A	
Queue Length 50th (m)		5.3			4.4			4.8			9.9	
Queue Length 95th (m)		11.4			9.1			11.7			20.9	
Internal Link Dist (m)		401.8			353.5			797.0			361.3	
Turn Bay Length (m)												
Base Capacity (vph)		680			697			999			1039	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.25			0.13			0.20			0.42	
<b>Intersection Summary</b>												
Area Type:	Other											
Cycle Length:	45											
Actuated Cycle Length:	37.3											
Natural Cycle:	45											
Control Type:	Semi Act-Uncoord											
Maximum v/c Ratio:	0.46											
Intersection Signal Delay:	7.8						Intersection LOS: A					
Intersection Capacity Utilization:	37.1%						ICU Level of Service A					
Analysis Period (min):	15											

Splits and Phases: 1: North Rd (Hwy 101) & Reed Rd



Lanes, Volumes, Timings  
1: North Rd (Hwy 101) & Reed Rd

2028 Base+Site  
Timing Plan: Friday AM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	56	20	49	36	30	0	24	115	26	4	178	146
Future Volume (vph)	56	20	49	36	30	0	24	115	26	4	178	146
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00			1.00			0.99	
Frt		0.947						0.979			0.940	
Flt Protected		0.978			0.973			0.993			0.999	
Satd. Flow (prot)	0	1618	0	0	1717	0	0	1709	0	0	1641	0
Flt Permitted		0.812			0.815			0.917			0.997	
Satd. Flow (perm)	0	1343	0	0	1434	0	0	1578	0	0	1637	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		67						25			107	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		425.8			377.5			821.0			385.3	
Travel Time (s)		30.7			27.2			59.1			27.7	
Confl. Peds. (#/hr)			5	5			2		2	2		2
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	171	0	0	90	0	0	227	0	0	449	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0					7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0					11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0					0	0		0	0	
Act Effct Green (s)		8.7			8.7			22.6			22.6	
Actuated g/C Ratio		0.23			0.23			0.61			0.61	
v/c Ratio		0.47			0.27			0.23			0.43	
Control Delay		12.0			13.0			5.8			6.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		12.0			13.0			5.8			6.4	
LOS		B			B			A			A	
Approach Delay		12.0			13.0			5.8			6.4	

Lanes, Volumes, Timings  
1: North Rd (Hwy 101) & Reed Rd

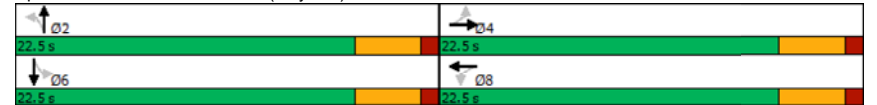
2028 Base+Site  
Timing Plan: Friday AM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		B			B			A			A	
Queue Length 50th (m)		5.3			4.5			5.6			10.5	
Queue Length 95th (m)		11.5			9.3			13.4			22.0	
Internal Link Dist (m)		401.8			353.5			797.0			361.3	
Turn Bay Length (m)												
Base Capacity (vph)		684			694			969			1037	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.25			0.13			0.23			0.43	

Intersection Summary

Area Type:	Other
Cycle Length:	45
Actuated Cycle Length:	37.2
Natural Cycle:	45
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.47
Intersection Signal Delay:	7.9
Intersection LOS:	A
Intersection Capacity Utilization:	42.1%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 1: North Rd (Hwy 101) & Reed Rd



Lanes, Volumes, Timings  
1: North Rd (Hwy 101) & Reed Rd

2033 Base  
Timing Plan: Friday AM Peak Hr

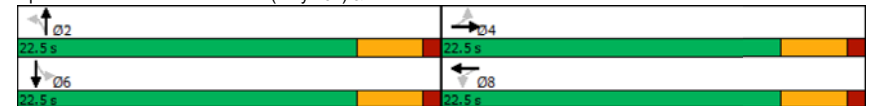
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	61	22	50	37	32	0	18	117	26	5	185	160
Future Volume (vph)	61	22	50	37	32	0	18	117	26	5	185	160
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00			1.00			0.99	
Frt		0.950						0.978			0.938	
Flt Protected		0.977			0.974			0.994			0.999	
Satd. Flow (prot)	0	1622	0	0	1719	0	0	1709	0	0	1637	0
Flt Permitted		0.806			0.807			0.935			0.996	
Satd. Flow (perm)	0	1338	0	0	1420	0	0	1608	0	0	1632	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		68						26			112	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		425.8			377.5			821.0			385.3	
Travel Time (s)		30.7			27.2			59.1			27.7	
Confl. Peds. (#/hr)			5	5			2		2	2		2
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	182	0	0	95	0	0	221	0	0	479	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0					7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0					11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0					0	0		0	0	
Act Effct Green (s)		9.0			9.0			22.4			22.4	
Actuated g/C Ratio		0.24			0.24			0.60			0.60	
v/c Ratio		0.49			0.28			0.23			0.47	
Control Delay		12.4			13.0			5.9			7.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		12.4			13.0			5.9			7.0	
LOS		B			B			A			A	
Approach Delay		12.4			13.0			5.9			7.0	

Lanes, Volumes, Timings  
1: North Rd (Hwy 101) & Reed Rd

2033 Base  
Timing Plan: Friday AM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		B			B			A			A	
Queue Length 50th (m)		5.8			4.8			5.5			11.8	
Queue Length 95th (m)		12.2			9.6			13.4			25.1	
Internal Link Dist (m)		401.8			353.5			797.0			361.3	
Turn Bay Length (m)												
Base Capacity (vph)		682			687			978			1027	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.27			0.14			0.23			0.47	
<b>Intersection Summary</b>												
Area Type:	Other											
Cycle Length:	45											
Actuated Cycle Length:	37.2											
Natural Cycle:	45											
Control Type:	Semi Act-Uncoord											
Maximum v/c Ratio:	0.49											
Intersection Signal Delay:	8.3						Intersection LOS: A					
Intersection Capacity Utilization:	39.7%						ICU Level of Service A					
Analysis Period (min):	15											

Splits and Phases: 1: North Rd (Hwy 101) & Reed Rd



Lanes, Volumes, Timings  
1: North Rd (Hwy 101) & Reed Rd

2033 Base+Site  
Timing Plan: Friday AM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	61	22	53	39	32	0	26	124	28	5	193	160
Future Volume (vph)	61	22	53	39	32	0	26	124	28	5	193	160
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00			1.00			0.99	
Frt		0.947						0.979			0.940	
Flt Protected		0.978			0.973			0.993			0.999	
Satd. Flow (prot)	0	1617	0	0	1717	0	0	1709	0	0	1640	0
Flt Permitted		0.809			0.779			0.910			0.996	
Satd. Flow (perm)	0	1338	0	0	1371	0	0	1566	0	0	1635	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		72						25			107	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		425.8			377.5			821.0			385.3	
Travel Time (s)		30.7			27.2			59.1			27.7	
Confl. Peds. (#/hr)			5	5			2		2	2		2
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	187	0	0	97	0	0	244	0	0	490	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.6	22.6		22.6	22.6		27.4	27.4		27.4	27.4	
Total Split (%)	45.2%	45.2%		45.2%	45.2%		54.8%	54.8%		54.8%	54.8%	
Maximum Green (s)	18.1	18.1		18.1	18.1		22.9	22.9		22.9	22.9	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0					7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0					11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0					0	0		0	0	
Act Effct Green (s)		9.5			9.5			27.2			27.2	
Actuated g/C Ratio		0.22			0.22			0.64			0.64	
v/c Ratio		0.53			0.32			0.24			0.45	
Control Delay		14.8			16.1			5.7			6.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		14.8			16.1			5.7			6.5	
LOS		B			B			A			A	
Approach Delay		14.8			16.1			5.7			6.5	

Lanes, Volumes, Timings  
1: North Rd (Hwy 101) & Reed Rd

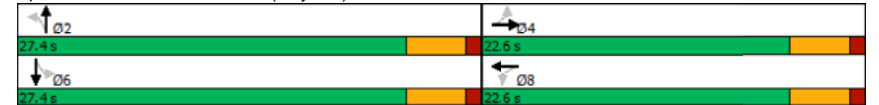
2033 Base+Site  
Timing Plan: Friday AM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		B			B			A			A	
Queue Length 50th (m)		7.3			6.0			6.7			13.2	
Queue Length 95th (m)		14.4			11.5			15.3			26.9	
Internal Link Dist (m)		401.8			353.5			797.0			361.3	
Turn Bay Length (m)												
Base Capacity (vph)		612			585			1012			1085	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.31			0.17			0.24			0.45	

Intersection Summary

Area Type:	Other
Cycle Length:	50
Actuated Cycle Length:	42.5
Natural Cycle:	50
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.53
Intersection Signal Delay:	8.8
Intersection LOS:	A
Intersection Capacity Utilization:	44.2%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 1: North Rd (Hwy 101) & Reed Rd



Lanes, Volumes, Timings  
1: North Rd (Hwy 101) & Reed Rd

2023 Base  
Timing Plan: Friday PM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	142	30	39	27	41	1	46	162	28	5	203	271
Future Volume (vph)	142	30	39	27	41	1	46	162	28	5	203	271
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00			1.00			1.00			0.99	0.99
Frt	0.975				0.998			0.984			0.924	
Flt Protected	0.967				0.981			0.990			0.997	
Satd. Flow (prot)	0	1657	0	0	1728	0	0	1719	0	0	1611	0
Flt Permitted	0.765				0.851			0.836			0.997	
Satd. Flow (perm)	0	1311	0	0	1498	0	0	1452	0	0	1606	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			1			17			165	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		425.8			377.5			821.0			385.3	
Travel Time (s)		30.7			27.2			59.1			27.7	
Confl. Peds. (#/hr)			2	2			1					1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	270	0	0	89	0	0	303	0	0	613	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	24.0	24.0		24.0	24.0		36.0	36.0		36.0	36.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%		60.0%	60.0%		60.0%	60.0%	
Maximum Green (s)	19.5	19.5		19.5	19.5		31.5	31.5		31.5	31.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0					7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0					11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0					0	0		0	0	
Act Effct Green (s)		15.6			15.6			33.7			33.7	
Actuated g/C Ratio		0.27			0.27			0.58			0.58	
v/c Ratio		0.74			0.22			0.36			0.61	
Control Delay		30.4			16.5			8.6			9.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		30.4			16.5			8.6			9.8	
LOS		C			B			A			A	
Approach Delay		30.4			16.5			8.6			9.8	

Lanes, Volumes, Timings  
1: North Rd (Hwy 101) & Reed Rd

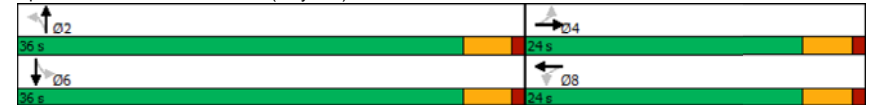
2023 Base  
Timing Plan: Friday PM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		C			B			A			A	
Queue Length 50th (m)		23.9			7.2			15.3			27.6	
Queue Length 95th (m)		37.6			14.0			27.1			47.1	
Internal Link Dist (m)		401.8			353.5			797.0			361.3	
Turn Bay Length (m)												
Base Capacity (vph)		453			503			846			998	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.60			0.18			0.36			0.61	

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	58.3
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.74
Intersection Signal Delay:	14.4
Intersection LOS:	B
Intersection Capacity Utilization:	71.2%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 1: North Rd (Hwy 101) & Reed Rd





Lanes, Volumes, Timings  
1: North Rd (Hwy 101) & Reed Rd

2028 Base  
Timing Plan: Friday PM Peak Hr

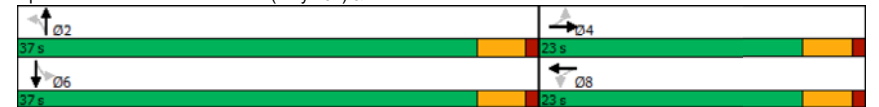
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	156	33	46	31	45	1	54	188	32	6	237	298
Future Volume (vph)	156	33	46	31	45	1	54	188	32	6	237	298
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00			1.00			1.00			0.99	
Frt	0.974				0.999			0.984			0.926	
Flt Protected	0.968				0.980			0.990			0.999	
Satd. Flow (prot)	0	1656	0	0	1728	0	0	1719	0	0	1613	0
Flt Permitted	0.777				0.835			0.809			0.996	
Satd. Flow (perm)	0	1329	0	0	1471	0	0	1405	0	0	1608	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			1			17			160	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		425.8			377.5			821.0			385.3	
Travel Time (s)		30.7			27.2			59.1			27.7	
Confl. Peds. (#/hr)			2	2			1					1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	301	0	0	99	0	0	351	0	0	694	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	23.0	23.0		23.0	23.0		37.0	37.0		37.0	37.0	
Total Split (%)	38.3%	38.3%		38.3%	38.3%		61.7%	61.7%		61.7%	61.7%	
Maximum Green (s)	18.5	18.5		18.5	18.5		32.5	32.5		32.5	32.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0					7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0					11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0					0	0		0	0	
Act Effct Green (s)		16.2			16.2			33.9			33.9	
Actuated g/C Ratio		0.27			0.27			0.57			0.57	
v/c Ratio		0.80			0.25			0.43			0.70	
Control Delay		35.3			17.4			9.5			12.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		35.3			17.4			9.5			12.2	
LOS		D			B			A			B	
Approach Delay		35.3			17.4			9.5			12.2	

Lanes, Volumes, Timings  
1: North Rd (Hwy 101) & Reed Rd

2028 Base  
Timing Plan: Friday PM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		D			B			A			B	
Queue Length 50th (m)		28.3			8.3			20.9			41.1	
Queue Length 95th (m)		43.5			15.7			31.1			57.2	
Internal Link Dist (m)		401.8			353.5			797.0			361.3	
Turn Bay Length (m)												
Base Capacity (vph)		430			461			813			991	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.70			0.21			0.43			0.70	
<b>Intersection Summary</b>												
Area Type:	Other											
Cycle Length:	60											
Actuated Cycle Length:	59.1											
Natural Cycle:	60											
Control Type:	Semi Act-Uncoord											
Maximum v/c Ratio:	0.80											
Intersection Signal Delay:	16.7						Intersection LOS: B					
Intersection Capacity Utilization:	79.8%						ICU Level of Service D					
Analysis Period (min):	15											

Splits and Phases: 1: North Rd (Hwy 101) & Reed Rd



Lanes, Volumes, Timings  
1: North Rd (Hwy 101) & Reed Rd

2028 Base+Site  
Timing Plan: Friday PM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	156	33	52	32	45	1	62	195	33	6	250	298
Future Volume (vph)	156	33	52	32	45	1	62	195	33	6	250	298
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00			1.00			0.99	
Frt		0.971			0.999			0.985			0.927	
Flt Protected		0.969			0.980			0.989			0.999	
Satd. Flow (prot)	0	1652	0	0	1728	0	0	1719	0	0	1615	0
Flt Permitted		0.781			0.829			0.794			0.996	
Satd. Flow (perm)	0	1332	0	0	1460	0	0	1380	0	0	1610	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			1			17			152	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		425.8			377.5			821.0			385.3	
Travel Time (s)		30.7			27.2			59.1			27.7	
Confl. Peds. (#/hr)			2	2			1					1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	309	0	0	100	0	0	371	0	0	711	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	23.0	23.0		23.0	23.0		37.0	37.0		37.0	37.0	
Total Split (%)	38.3%	38.3%		38.3%	38.3%		61.7%	61.7%		61.7%	61.7%	
Maximum Green (s)	18.5	18.5		18.5	18.5		32.5	32.5		32.5	32.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0					7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0					11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0					0	0		0	0	
Act Effct Green (s)		16.2			16.2			33.8			33.8	
Actuated g/C Ratio		0.27			0.27			0.57			0.57	
v/c Ratio		0.80			0.25			0.47			0.72	
Control Delay		35.9			17.4			10.1			13.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		35.9			17.4			10.1			13.3	
LOS		D			B			B			B	
Approach Delay		35.9			17.4			10.1			13.3	

Lanes, Volumes, Timings  
1: North Rd (Hwy 101) & Reed Rd

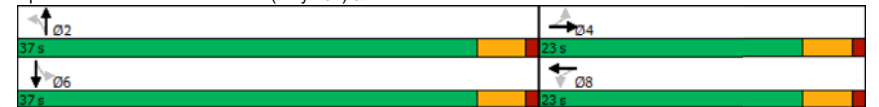
2028 Base+Site  
Timing Plan: Friday PM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		D			B			B			B	
Queue Length 50th (m)		28.9			8.4			22.8			44.2	
Queue Length 95th (m)		44.5			15.8			33.7			61.1	
Internal Link Dist (m)		401.8			353.5			797.0			361.3	
Turn Bay Length (m)												
Base Capacity (vph)		434			458			797			985	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.71			0.22			0.47			0.72	

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	59
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.80
Intersection Signal Delay:	17.4
Intersection LOS:	B
Intersection Capacity Utilization:	82.4%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 1: North Rd (Hwy 101) & Reed Rd



Lanes, Volumes, Timings  
1: North Rd (Hwy 101) & Reed Rd

2033 Base  
Timing Plan: Friday PM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	170	36	50	33	49	1	58	204	35	6	258	325
Future Volume (vph)	170	36	50	33	49	1	58	204	35	6	258	325
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00			1.00			1.00			0.99	
Frt	0.974				0.999			0.984			0.926	
Flt Protected	0.968				0.981			0.990			0.999	
Satd. Flow (prot)	0	1656	0	0	1729	0	0	1719	0	0	1613	0
Flt Permitted	0.774				0.831			0.807			0.996	
Satd. Flow (perm)	0	1324	0	0	1464	0	0	1401	0	0	1608	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			1			17			159	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		425.8			377.5			821.0			385.3	
Travel Time (s)		30.7			27.2			59.1			27.7	
Confl. Peds. (#/hr)			2	2			1					1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	328	0	0	106	0	0	381	0	0	756	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	23.4	23.4		23.4	23.4		36.6	36.6		36.6	36.6	
Total Split (%)	39.0%	39.0%		39.0%	39.0%		61.0%	61.0%		61.0%	61.0%	
Maximum Green (s)	18.9	18.9		18.9	18.9		32.1	32.1		32.1	32.1	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0					7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0					11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0					0	0		0	0	
Act Effct Green (s)		16.9			16.9			32.9			32.9	
Actuated g/C Ratio		0.29			0.29			0.56			0.56	
v/c Ratio		0.83			0.25			0.48			0.78	
Control Delay		38.4			17.1			10.6			16.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		38.4			17.1			10.6			16.1	
LOS		D			B			B			B	
Approach Delay		38.4			17.1			10.6			16.1	

Lanes, Volumes, Timings  
1: North Rd (Hwy 101) & Reed Rd

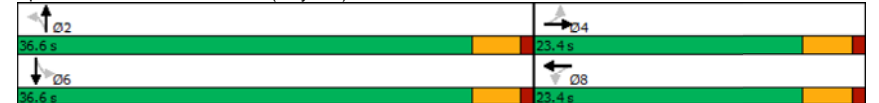
2033 Base  
Timing Plan: Friday PM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		D			B			B			B	
Queue Length 50th (m)		31.4			8.9			24.1			51.1	
Queue Length 95th (m)		#48.8			16.4			35.2			69.5	
Internal Link Dist (m)		401.8			353.5			797.0			361.3	
Turn Bay Length (m)												
Base Capacity (vph)		439			470			792			970	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.75			0.23			0.48			0.78	

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	58.8
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.83
Intersection Signal Delay:	19.5
Intersection LOS:	B
Intersection Capacity Utilization:	85.7%
ICU Level of Service:	E
Analysis Period (min):	15
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 1: North Rd (Hwy 101) & Reed Rd



Lanes, Volumes, Timings  
1: North Rd (Hwy 101) & Reed Rd

2033 Base+Site  
Timing Plan: Friday PM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	170	36	56	34	49	1	66	211	36	6	271	325
Future Volume (vph)	170	36	56	34	49	1	66	211	36	6	271	325
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00			1.00			1.00			0.99	
Frt	0.971				0.999			0.985			0.927	
Flt Protected	0.969				0.980			0.990			0.999	
Satd. Flow (prot)	0	1652	0	0	1728	0	0	1721	0	0	1615	0
Flt Permitted	0.776				0.822			0.783			0.996	
Satd. Flow (perm)	0	1323	0	0	1448	0	0	1361	0	0	1610	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			1			16			148	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		425.8			377.5			821.0			385.3	
Travel Time (s)		30.7			27.2			59.1			27.7	
Confl. Peds. (#/hr)			2	2			1					1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	336	0	0	108	0	0	402	0	0	772	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	24.0	24.0		24.0	24.0		36.0	36.0		36.0	36.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%		60.0%	60.0%		60.0%	60.0%	
Maximum Green (s)	19.5	19.5		19.5	19.5		31.5	31.5		31.5	31.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0					7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0					11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0					0	0		0	0	
Act Effct Green (s)		17.2			17.2			32.2			32.2	
Actuated g/C Ratio		0.29			0.29			0.55			0.55	
v/c Ratio		0.83			0.25			0.53			0.81	
Control Delay		36.9			16.7			11.9			18.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		36.9			16.7			11.9			18.4	
LOS		D			B			B			B	
Approach Delay		36.9			16.7			11.9			18.4	

Lanes, Volumes, Timings  
1: North Rd (Hwy 101) & Reed Rd

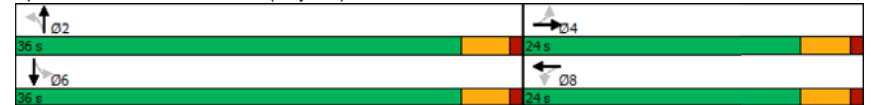
2033 Base+Site  
Timing Plan: Friday PM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		D			B			B			B	
Queue Length 50th (m)		31.7			8.9			27.1			56.3	
Queue Length 95th (m)		48.2			16.4			39.5			76.2	
Internal Link Dist (m)		401.8			353.5			797.0			361.3	
Turn Bay Length (m)												
Base Capacity (vph)		458			484			758			954	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.73			0.22			0.53			0.81	

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	58.4
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.83
Intersection Signal Delay:	20.5
Intersection LOS:	C
Intersection Capacity Utilization:	87.9%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 1: North Rd (Hwy 101) & Reed Rd



Lanes, Volumes, Timings  
 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101)      2023 Base  
 Timing Plan: Friday AM Peak Hr

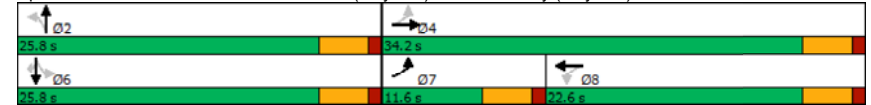
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	120	78	147	10	126	9	150	41	3	16	63	197
Future Volume (vph)	120	78	147	10	126	9	150	41	3	16	63	197
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	55.0		0.0	0.0		0.0	0.0		180.0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (m)	7.5			7.5		7.5			7.5			7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.96	0.99		1.00	0.99		0.89				1.00	0.82
Frnt		0.902			0.990			0.998				0.850
Fit Protected	0.950			0.950				0.963			0.990	
Satd. Flow (prot)	1509	1412	0	1509	1564	0	0	1526	0	0	1572	1350
Fit Permitted	0.416			0.573				0.704			0.921	
Satd. Flow (perm)	635	1412	0	908	1564	0	0	990	0	0	1462	1100
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		201			6			1				270
Link Speed (k/h)		50			50			30				50
Link Distance (m)		375.6			381.6			659.4				821.0
Travel Time (s)		27.0			27.5			79.1				59.1
Confl. Peds. (#/hr)	35		1	2		35	101		2	2		101
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	164	308	0	14	185	0	0	265	0	0	108	270
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4			8			2			6	6
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	11.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	11.6	34.2		22.6	22.6		25.8	25.8		25.8	25.8	25.8
Total Split (%)	19.3%	57.0%		37.7%	37.7%		43.0%	43.0%		43.0%	43.0%	43.0%
Maximum Green (s)	7.1	29.7		18.1	18.1		21.3	21.3		21.3	21.3	21.3
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	Max	None		None	None		Max	Max		None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	0
Act Effct Green (s)	21.0	21.0		12.2	12.2		21.6	21.6		21.6	21.6	21.6
Actuated g/C Ratio	0.41	0.41		0.24	0.24		0.42	0.42		0.42	0.42	0.42
v/c Ratio	0.42	0.45		0.07	0.50		0.64	0.64		0.18	0.44	0.44
Control Delay	13.0	6.0		16.8	22.6		24.4	24.4		12.6	4.7	4.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0

Lanes, Volumes, Timings  
 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101)      2023 Base  
 Timing Plan: Friday AM Peak Hr

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	13.0	6.0		16.8	22.6		24.4	24.4		12.6	4.7	4.7
LOS	B	A		B	C		C	C		B	A	A
Approach Delay		8.4			22.2		24.4	24.4		7.0		
Approach LOS		A			C		C	C		A		
Queue Length 50th (m)	9.9	6.3		1.1	16.1		20.6	20.6		6.7	0.0	0.0
Queue Length 95th (m)	15.4	11.8		3.8	24.6		37.1	37.1		14.0	6.2	6.2
Internal Link Dist (m)		351.6			357.6		635.4	635.4		797.0		
Turn Bay Length (m)	70.0			55.0								180.0
Base Capacity (vph)	391	906		322	559		414	414		611	616	616
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.42	0.34		0.04	0.33		0.64	0.64		0.18	0.44	0.44

Intersection Summary	
Area Type:	CBD
Cycle Length:	60
Actuated Cycle Length:	51.8
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.64
Intersection Signal Delay:	13.3
Intersection LOS:	B
Intersection Capacity Utilization:	59.6%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101)



Lanes, Volumes, Timings  
 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101)      2028 Base  
 Timing Plan: Friday AM Peak Hr

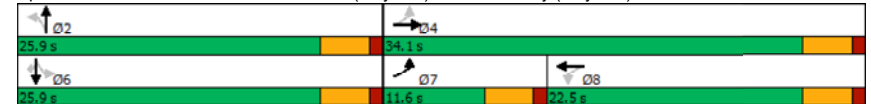
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	146	96	179	11	144	10	171	45	3	18	69	227
Future Volume (vph)	146	96	179	11	144	10	171	45	3	18	69	227
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	55.0		0.0	0.0		0.0	0.0		180.0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (m)	7.5			7.5		7.5			7.5			7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.96	0.99		1.00	0.99		0.89				1.00	0.82
Frt		0.903			0.990			0.998				0.850
Fit Protected	0.950			0.950			0.962				0.990	
Satd. Flow (prot)	1509	1414	0	1509	1564	0	0	1524	0	0	1572	1350
Fit Permitted	0.425			0.538			0.695				0.909	
Satd. Flow (perm)	650	1414	0	853	1564	0	0	979	0	0	1443	1100
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		220			6			1				311
Link Speed (k/h)		50			50			30				50
Link Distance (m)		375.6			381.6			659.4				821.0
Travel Time (s)		27.0			27.5			79.1				59.1
Confl. Peds. (#/hr)	35		1	2		35	101		2	2		101
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	200	377	0	15	211	0	0	300	0	0	120	311
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4			8			2			6	6
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	11.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	11.6	34.1		22.5	22.5		25.9	25.9		25.9	25.9	25.9
Total Split (%)	19.3%	56.8%		37.5%	37.5%		43.2%	43.2%		43.2%	43.2%	43.2%
Maximum Green (s)	7.1	29.6		18.0	18.0		21.4	21.4		21.4	21.4	21.4
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	Max	None		None	None		Max	Max		None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	0
Act Effct Green (s)	24.5	24.5		12.8	12.8		21.5	21.5		21.5	21.5	21.5
Actuated g/C Ratio	0.45	0.45		0.23	0.23		0.39	0.39		0.39	0.39	0.39
v/c Ratio	0.50	0.50		0.08	0.57		0.79	0.79		0.21	0.50	0.50
Control Delay	14.3	6.9		16.6	24.5		34.2	34.2		13.4	5.3	5.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0

Lanes, Volumes, Timings  
 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101)      2028 Base  
 Timing Plan: Friday AM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	14.3	6.9		16.6	24.5		34.2	34.2		13.4	5.3	5.3
LOS	B	A		B	C		C	C		B	A	A
Approach Delay		9.5			24.0			34.2			7.6	
Approach LOS		A			C			C			A	
Queue Length 50th (m)	12.5	9.6		1.2	18.9			25.7			7.8	0.0
Queue Length 95th (m)	18.5	15.4		4.0	27.7			#51.3			15.9	6.3
Internal Link Dist (m)		351.6			357.6			635.4			797.0	
Turn Bay Length (m)	70.0			55.0								180.0
Base Capacity (vph)	400	865		280	517			382			563	619
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.50	0.44		0.05	0.41			0.79			0.21	0.50

Intersection Summary	
Area Type:	CBD
Cycle Length:	60
Actuated Cycle Length:	55
Natural Cycle:	60
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.79
Intersection Signal Delay:	15.9
Intersection LOS:	B
Intersection Capacity Utilization:	62.1%
ICU Level of Service:	B
Analysis Period (min):	15
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101)



Lanes, Volumes, Timings

2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101)

2028 Base+Site

Timing Plan: Friday AM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (vph)	156	96	179	11	144	14	171	50	3	23	80	249
Future Volume (vph)	156	96	179	11	144	14	171	50	3	23	80	249
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	55.0		0.0	0.0		0.0	0.0		180.0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.96	0.99		1.00	0.99		0.89				1.00	0.80
Fr <sub>t</sub>		0.903			0.987			0.998				0.850
Fit Protected	0.950			0.950				0.963			0.989	
Satd. Flow (prot)	1509	1414	0	1509	1556	0	0	1526	0	0	1571	1350
Fit Permitted	0.401			0.538				0.686			0.897	
Satd. Flow (perm)	612	1414	0	853	1556	0	0	963	0	0	1424	1082
Right Turn on Red			Yes			Yes		Yes			Yes	
Satd. Flow (RTOR)		190			7			1				341
Link Speed (k/h)		50			50			30			50	
Link Distance (m)		375.6			381.6			659.4			821.0	
Travel Time (s)		27.0			27.5			79.1			59.1	
Confl. Peds. (#/hr)	35		1	2		35	101		2	2		101
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	214	377	0	15	216	0	0	306	0	0	142	341
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	11.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	11.8	34.4		22.6	22.6		30.6	30.6		30.6	30.6	30.6
Total Split (%)	18.2%	52.9%		34.8%	34.8%		47.1%	47.1%		47.1%	47.1%	47.1%
Maximum Green (s)	7.3	29.9		18.1	18.1		26.1	26.1		26.1	26.1	26.1
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	Max	None		None	None		Max	Max		None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	0
Act Effct Green (s)	25.3	25.3		13.5	13.5		26.2	26.2		26.2	26.2	26.2
Actuated g/C Ratio	0.42	0.42		0.22	0.22		0.43	0.43		0.43	0.43	0.43
v/c Ratio	0.59	0.54		0.08	0.62		0.73	0.73		0.23	0.52	0.52
Control Delay	19.2	9.3		19.0	28.5		28.9	28.9		13.0	5.0	5.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0

Lanes, Volumes, Timings

2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101)

2028 Base+Site

Timing Plan: Friday AM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	19.2	9.3		19.0	28.5			28.9			13.0	5.0
LOS	B	A		B	C			C			B	A
Approach Delay		12.9			27.9			28.9			7.3	
Approach LOS		B			C			C			A	
Queue Length 50th (m)	16.2	14.0		1.4	22.0			27.9			9.8	0.0
Queue Length 95th (m)	22.9	20.9		4.3	31.4			45.8			18.1	5.7
Internal Link Dist (m)		351.6			357.6			635.4			797.0	
Turn Bay Length (m)	70.0			55.0								180.0
Base Capacity (vph)	364	796		255	471			417			616	661
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.59	0.47		0.06	0.46			0.73			0.23	0.52
<b>Intersection Summary</b>												
Area Type:	CBD											
Cycle Length:	65											
Actuated Cycle Length:	60.5											
Natural Cycle:	65											
Control Type:	Semi Act-Uncoord											
Maximum v/c Ratio:	0.73											
Intersection Signal Delay:	16.4											
Intersection LOS:	B											
Intersection Capacity Utilization:	63.8%											
ICU Level of Service:	B											
Analysis Period (min):	15											
<b>Splits and Phases: 2: School Rd/North Rd (Hwy 101) &amp; Gibsons Way (Hwy 101)</b>												
Phase 02	30.5 s	Phase 04	34.4 s									
Phase 06	30.6 s	Phase 07	11.8 s									
		Phase 08	22.6 s									

Lanes, Volumes, Timings  
 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101) 2033 Base  
 Timing Plan: Friday AM Peak Hr

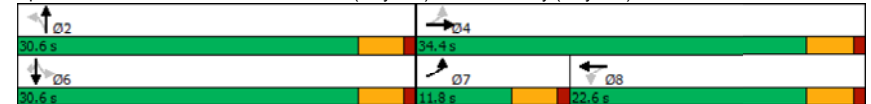
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	158	104	193	12	156	11	186	49	4	19	76	246
Future Volume (vph)	158	104	193	12	156	11	186	49	4	19	76	246
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	55.0		0.0	0.0		0.0	0.0		180.0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (m)	7.5			7.5		7.5			7.5			7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.96	0.99		1.00	0.99		0.88				1.00	0.80
Frnt		0.902			0.990			0.998				0.850
Fit Protected	0.950			0.950			0.962				0.990	
Satd. Flow (prot)	1509	1412	0	1509	1564	0	0	1524	0	0	1572	1350
Fit Permitted	0.385			0.524			0.689				0.910	
Satd. Flow (perm)	589	1412	0	831	1564	0	0	962	0	0	1445	1082
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		191			5			1				337
Link Speed (k/h)		50			50			30			50	
Link Distance (m)		375.6			381.6			659.4			821.0	
Travel Time (s)		27.0			27.5			79.1			59.1	
Confl. Peds. (#/hr)	35		1	2		35	101		2	2		101
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	216	406	0	16	229	0	0	327	0	0	130	337
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4			8			2			6	6
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	11.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	11.8	34.4		22.6	22.6		30.6	30.6		30.6	30.6	30.6
Total Split (%)	18.2%	52.9%		34.8%	34.8%		47.1%	47.1%		47.1%	47.1%	47.1%
Maximum Green (s)	7.3	29.9		18.1	18.1		26.1	26.1		26.1	26.1	26.1
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	Max	None		None	None		Max	Max		None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	0
Act Effct Green (s)	25.6	25.6		13.8	13.8		26.2	26.2		26.2	26.2	26.2
Actuated g/C Ratio	0.42	0.42		0.23	0.23		0.43	0.43		0.43	0.43	0.43
v/c Ratio	0.60	0.58		0.09	0.64		0.79	0.79		0.21	0.51	0.51
Control Delay	19.7	10.3		19.0	29.4		33.4	33.4		12.9	5.0	5.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0

Lanes, Volumes, Timings  
 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101) 2033 Base  
 Timing Plan: Friday AM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Total Delay	19.7	10.3		19.0	29.4					33.4		12.9	5.0
LOS	B	B		B	C					C		B	A
Approach Delay		13.6			28.8					33.4		7.2	
Approach LOS		B			C					C		A	
Queue Length 50th (m)	16.3	16.4		1.5	23.8					31.3		9.1	0.0
Queue Length 95th (m)	23.2	24.2		4.5	33.4					#56.1		16.7	5.7
Internal Link Dist (m)		351.6			357.6					635.4		797.0	
Turn Bay Length (m)	70.0			55.0								180.0	
Base Capacity (vph)	358	792		248	470					414		621	657
Starvation Cap Reductn	0	0		0	0					0		0	0
Spillback Cap Reductn	0	0		0	0					0		0	0
Storage Cap Reductn	0	0		0	0					0		0	0
Reduced v/c Ratio	0.60	0.51		0.06	0.49					0.79		0.21	0.51

Intersection Summary	
Area Type:	CBD
Cycle Length:	65
Actuated Cycle Length:	60.8
Natural Cycle:	65
Control Type:	Semi Act-UnCOORD
Maximum v/c Ratio:	0.79
Intersection Signal Delay:	17.9
Intersection LOS:	B
Intersection Capacity Utilization:	64.2%
ICU Level of Service:	C
Analysis Period (min):	15
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101)





Lanes, Volumes, Timings  
 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101)      2033 Base+Site  
 Timing Plan: Friday AM Peak Hr

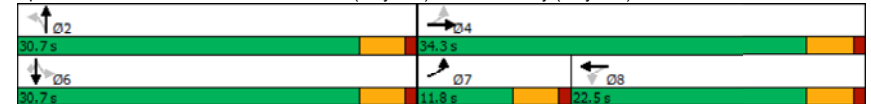
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	168	104	193	12	156	15	186	54	4	24	87	268
Future Volume (vph)	168	104	193	12	156	15	186	54	4	24	87	268
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	55.0		0.0	0.0		0.0	0.0		180.0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (m)	7.5			7.5		7.5			7.5			7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.96	0.99		1.00	0.99		0.89				1.00	0.80
Frnt		0.902			0.987			0.998				0.850
Fit Protected	0.950			0.950			0.963				0.989	
Satd. Flow (prot)	1509	1412	0	1509	1556	0	0	1526	0	0	1571	1350
Fit Permitted	0.377			0.524			0.680				0.894	
Satd. Flow (perm)	577	1412	0	831	1556	0	0	956	0	0	1419	1082
Right Turn on Red			Yes			Yes		Yes			Yes	
Satd. Flow (RTOR)		190			8			1				367
Link Speed (k/h)		50			50			30			50	
Link Distance (m)		375.6			381.6			659.4			821.0	
Travel Time (s)		27.0			27.5			79.1			59.1	
Confl. Peds. (#/hr)	35		1	2		35	101		2	2		101
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	230	406	0	16	235	0	0	334	0	0	152	367
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	11.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	11.8	34.3		22.5	22.5		30.7	30.7		30.7	30.7	30.7
Total Split (%)	18.2%	52.8%		34.6%	34.6%		47.2%	47.2%		47.2%	47.2%	47.2%
Maximum Green (s)	7.3	29.8		18.0	18.0		26.2	26.2		26.2	26.2	26.2
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	Max	None		None	None		Max	Max		None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	0
Act Effct Green (s)	25.7	25.7		13.9	13.9		26.3	26.3		26.3	26.3	26.3
Actuated g/C Ratio	0.42	0.42		0.23	0.23		0.43	0.43		0.43	0.43	0.43
v/c Ratio	0.65	0.58		0.08	0.65		0.81	0.81		0.25	0.54	0.54
Control Delay	21.9	10.4		19.0	29.7		35.6	35.6		13.4	5.2	5.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0

Lanes, Volumes, Timings  
 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101)      2033 Base+Site  
 Timing Plan: Friday AM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	21.9	10.4		19.0	29.7					35.6		13.4
LOS	C	B		B	C					D		B
Approach Delay		14.5			29.0					35.6		7.6
Approach LOS		B			C					D		A
Queue Length 50th (m)	17.6	16.6		1.5	24.2					32.8		10.9
Queue Length 95th (m)	24.8	24.4		4.6	34.1					#58.2		19.1
Internal Link Dist (m)		351.6			357.6					635.4		797.0
Turn Bay Length (m)	70.0			55.0								180.0
Base Capacity (vph)	355	788		245	465					411		610
Starvation Cap Reductn	0	0		0	0					0		0
Spillback Cap Reductn	0	0		0	0					0		0
Storage Cap Reductn	0	0		0	0					0		0
Reduced v/c Ratio	0.65	0.52		0.07	0.51					0.81		0.25

Intersection Summary	
Area Type:	CBD
Cycle Length:	65
Actuated Cycle Length:	61
Natural Cycle:	65
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.81
Intersection Signal Delay:	18.6
Intersection LOS:	B
Intersection Capacity Utilization:	66.2%
ICU Level of Service:	C
Analysis Period (min):	15
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101)



Lanes, Volumes, Timings  
 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101) 2023 Base  
 Timing Plan: Friday PM Peak Hr

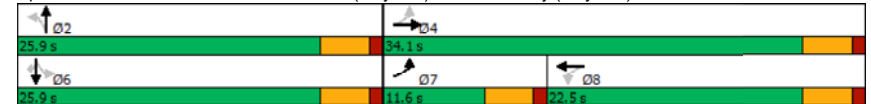
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	229	181	205	11	165	33	184	45	6	16	71	280
Future Volume (vph)	229	181	205	11	165	33	184	45	6	16	71	280
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	55.0		0.0	0.0		0.0	0.0		180.0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.95	0.97		0.98		0.98		0.85			1.00	0.76
Frt		0.920			0.975			0.996				0.850
Fit Protected	0.950			0.950				0.962			0.991	
Satd. Flow (prot)	1509	1420	0	1509	1522	0	0	1520	0	0	1574	1350
Fit Permitted	0.374			0.482				0.700			0.921	
Satd. Flow (perm)	565	1420	0	753	1522	0	0	943	0	0	1460	1032
Right Turn on Red			Yes			Yes		Yes			Yes	
Satd. Flow (RTOR)		134			17			3				359
Link Speed (k/h)		50			50			30			50	
Link Distance (m)		375.6			381.6			659.4			821.0	
Travel Time (s)		27.0			27.5			79.1			59.1	
Confl. Peds. (#/hr)	52		20	20		52	132		11	11		132
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	294	495	0	14	254	0	0	302	0	0	112	359
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	11.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	11.6	34.1		22.5	22.5		25.9	25.9		25.9	25.9	25.9
Total Split (%)	19.3%	56.8%		37.5%	37.5%		43.2%	43.2%		43.2%	43.2%	43.2%
Maximum Green (s)	7.1	29.6		18.0	18.0		21.4	21.4		21.4	21.4	21.4
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	Max	None		None	None		Max	Max		None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	0
Act Effct Green (s)	25.4	25.4		13.8	13.8		21.5	21.5		21.5	21.5	21.5
Actuated g/C Ratio	0.45	0.45		0.25	0.25		0.38	0.38		0.38	0.38	0.38
v/c Ratio	0.78	0.69		0.08	0.65		0.83	0.83		0.20	0.58	0.58
Control Delay	28.2	14.3		16.5	26.2		40.4	40.4		13.8	6.4	6.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0

Lanes, Volumes, Timings  
 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101) 2023 Base  
 Timing Plan: Friday PM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	28.2	14.3		16.5	26.2		40.4	40.4		13.8	6.4	6.4
LOS	C	B		B	C		D	D		B	A	A
Approach Delay		19.5			25.6		40.4	40.4			8.1	
Approach LOS		B			C		D	D			A	
Queue Length 50th (m)	19.8	27.3		1.1	22.5		27.7	27.7		7.7	0.0	0.0
Queue Length 95th (m) #30.7	41.7			4.1	35.2		#59.9	#59.9		16.1	8.8	8.8
Internal Link Dist (m)		351.6			357.6		635.4	635.4		797.0		
Turn Bay Length (m)	70.0			55.0							180.0	
Base Capacity (vph)	377	816		242	502		363	363		560	617	617
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.78	0.61		0.06	0.51		0.83	0.83		0.20	0.58	0.58

Intersection Summary	
Area Type:	CBD
Cycle Length:	60
Actuated Cycle Length:	55.9
Natural Cycle:	60
Control Type:	Semi Act-Uncooord
Maximum v/c Ratio:	0.83
Intersection Signal Delay:	20.9
Intersection LOS:	C
Intersection Capacity Utilization:	68.3%
ICU Level of Service:	C
Analysis Period (min):	15
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101)



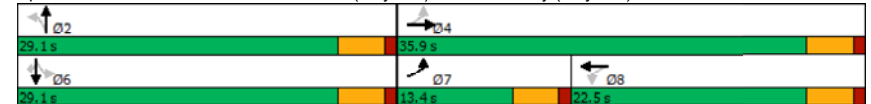
Lanes, Volumes, Timings  
 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101)      2028 Base  
 Timing Plan: Friday PM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	266	209	238	12	191	36	214	50	7	18	78	326
Future Volume (vph)	266	209	238	12	191	36	214	50	7	18	78	326
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	55.0		0.0	0.0		0.0	0.0		180.0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (m)	7.5			7.5		7.5			7.5			7.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.95	0.97		0.98		0.98		0.84			1.00	0.75
Frnt		0.920			0.976			0.996				0.850
Fit Protected	0.950			0.950				0.962			0.991	
Satd. Flow (prot)	1509	1418	0	1509	1523	0	0	1520	0	0	1574	1350
Fit Permitted	0.314			0.449				0.691			0.913	
Satd. Flow (perm)	475	1418	0	701	1523	0	0	919	0	0	1447	1008
Right Turn on Red			Yes			Yes		Yes				Yes
Satd. Flow (RTOR)		122			14			2				418
Link Speed (k/h)		50			50			30				50
Link Distance (m)		375.6			381.6			659.4				821.0
Travel Time (s)		27.0			27.5			79.1				59.1
Confl. Peds. (#/hr)	52		20	20		52	132		11	11		132
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	341	573	0	15	291	0	0	347	0	0	123	418
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4			8			2			6	6
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	11.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	13.4	35.9		22.5	22.5		29.1	29.1		29.1	29.1	29.1
Total Split (%)	20.6%	55.2%		34.6%	34.6%		44.8%	44.8%		44.8%	44.8%	44.8%
Maximum Green (s)	8.9	31.4		18.0	18.0		24.6	24.6		24.6	24.6	24.6
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	Max	None		None	None		Max	Max		None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	0
Act Effct Green (s)	28.6	28.6		15.2	15.2		24.7	24.7		24.7	24.7	24.7
Actuated g/C Ratio	0.46	0.46		0.24	0.24		0.40	0.40		0.40	0.40	0.40
v/c Ratio	0.93	0.80		0.09	0.76		0.95	0.95		0.22	0.64	0.64
Control Delay	49.8	21.3		19.1	35.1		60.4	60.4		14.7	7.1	7.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0

Lanes, Volumes, Timings  
 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101)      2028 Base  
 Timing Plan: Friday PM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	49.8	21.3		19.1	35.1		60.4	60.4		14.7	7.1	7.1
LOS	D	C		B	D		E	E		B	A	A
Approach Delay		32.0			34.3			60.4			8.8	
Approach LOS		C			C			E			A	
Queue Length 50th (m)	27.1	43.7		1.4	31.0			41.0		10.0	0.0	0.0
Queue Length 95th (m)	#50.3	61.8		4.7	45.8			#75.2		17.9	8.8	8.8
Internal Link Dist (m)		351.6			357.6			635.4		797.0		
Turn Bay Length (m)	70.0			55.0							180.0	
Base Capacity (vph)	366	776		203	450			365		572	651	651
Starvation Cap Reductn	0	0		0	0			0		0	0	0
Spillback Cap Reductn	0	0		0	0			0		0	0	0
Storage Cap Reductn	0	0		0	0			0		0	0	0
Reduced v/c Ratio	0.93	0.74		0.07	0.65			0.95		0.22	0.64	0.64
<b>Intersection Summary</b>												
Area Type:	CBD											
Cycle Length:	65											
Actuated Cycle Length:	62.3											
Natural Cycle:	65											
Control Type:	Semi Act-Uncoord											
Maximum v/c Ratio:	0.95											
Intersection Signal Delay:	31.0											
Intersection LOS:	C											
Intersection Capacity Utilization:	74.8%											
ICU Level of Service:	D											
Analysis Period (min):	15											
# 95th percentile volume exceeds capacity, queue may be longer.												
Queue shown is maximum after two cycles.												

Splits and Phases: 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101)



Lanes, Volumes, Timings

2028 Base+Site

2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101)

Timing Plan: Friday PM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	283	209	238	12	191	42	214	56	7	23	85	340
Future Volume (vph)	283	209	238	12	191	42	214	56	7	23	85	340
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	55.0		0.0	0.0		0.0	0.0		180.0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.95	0.97		0.98		0.98		0.84			1.00	0.73
Frnt		0.920			0.973			0.997				0.850
Fit Protected	0.950			0.950				0.963			0.990	
Satd. Flow (prot)	1509	1416	0	1509	1512	0	0	1523	0	0	1572	1350
Fit Permitted	0.287			0.449				0.686			0.895	
Satd. Flow (perm)	434	1416	0	701	1512	0	0	908	0	0	1418	983
Right Turn on Red			Yes			Yes		Yes			Yes	
Satd. Flow (RTOR)		113			15			2				436
Link Speed (k/h)		50			50			30			50	
Link Distance (m)		375.6			381.6			659.4			821.0	
Travel Time (s)		27.0			27.5			79.1			59.1	
Confl. Peds. (#/hr)	52		20	20		52	132		11	11		132
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	363	573	0	15	299	0	0	355	0	0	138	436
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	11.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	15.7	38.2		22.5	22.5		31.8	31.8		31.8	31.8	31.8
Total Split (%)	22.4%	54.6%		32.1%	32.1%		45.4%	45.4%		45.4%	45.4%	45.4%
Maximum Green (s)	11.2	33.7		18.0	18.0		27.3	27.3		27.3	27.3	27.3
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	Max	None		None	None		Max	Max		None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	0
Act Effct Green (s)	31.8	31.8		16.1	16.1		27.4	27.4		27.4	27.4	27.4
Actuated g/C Ratio	0.47	0.47		0.24	0.24		0.40	0.40		0.40	0.40	0.40
v/c Ratio	0.96	0.79		0.09	0.81		0.97	0.97		0.24	0.67	0.67
Control Delay	55.0	22.2		21.5	42.5		65.8	65.8		15.7	7.6	7.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0

Lanes, Volumes, Timings

2028 Base+Site

2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101)

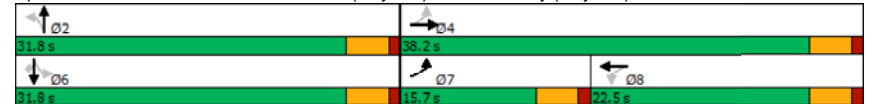
Timing Plan: Friday PM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	55.0	22.2		21.5	42.5		65.8	65.8		15.7	7.6	7.6
LOS	E	C		C	D		E	E		B	A	A
Approach Delay		34.9			41.5			65.8			9.6	
Approach LOS		C			D			E			A	
Queue Length 50th (m)	32.2	49.5		1.6	36.0			47.3			12.5	0.0
Queue Length 95th (m)	#57.8	67.7		5.3	51.8			#80.6			20.8	8.7
Internal Link Dist (m)		351.6			357.6			635.4			797.0	
Turn Bay Length (m)	70.0			55.0							180.0	
Base Capacity (vph)	379	758		185	410		365	365		569	655	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.96	0.76		0.08	0.73		0.97	0.97		0.24	0.67	0.67

Intersection Summary

Area Type:	CBD
Cycle Length:	70
Actuated Cycle Length:	68.2
Natural Cycle:	70
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.97
Intersection Signal Delay:	34.2
Intersection LOS:	C
Intersection Capacity Utilization:	76.1%
ICU Level of Service:	D
Analysis Period (min):	15
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101)



Lanes, Volumes, Timings  
 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101) 2033 Base  
 Timing Plan: Friday PM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	289	227	258	13	207	40	233	54	7	19	85	354
Future Volume (vph)	289	227	258	13	207	40	233	54	7	19	85	354
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	55.0		0.0	0.0		0.0	0.0		180.0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.95	0.97		0.98		0.98		0.81			1.00	0.69
Frnt		0.920			0.976			0.997				0.850
Fit Protected	0.950			0.950				0.962			0.991	
Satd. Flow (prot)	1509	1412	0	1509	1517	0	0	1522	0	0	1574	1350
Fit Permitted	0.229			0.429				0.684			0.910	
Satd. Flow (perm)	347	1412	0	669	1517	0	0	873	0	0	1443	935
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		96			11			2				454
Link Speed (k/h)		50			50			30			50	
Link Distance (m)		375.6			381.6			659.4			821.0	
Travel Time (s)		27.0			27.5			79.1			59.1	
Confl. Peds. (#/hr)	52		20	20		52	132		11	11		132
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	371	622	0	17	316	0	0	377	0	0	133	454
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	11.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	19.2	41.7		22.5	22.5		38.3	38.3		38.3	38.3	38.3
Total Split (%)	24.0%	52.1%		28.1%	28.1%		47.9%	47.9%		47.9%	47.9%	47.9%
Maximum Green (s)	14.7	37.2		18.0	18.0		33.8	33.8		33.8	33.8	33.8
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	Max	None		None	None		Max	Max		None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	0
Act Effct Green (s)	36.8	36.8		17.6	17.6		33.8	33.8		33.8	33.8	33.8
Actuated g/C Ratio	0.46	0.46		0.22	0.22		0.42	0.42		0.42	0.42	0.42
v/c Ratio	0.99	0.88		0.12	0.92		1.02	1.02		0.22	0.69	0.69
Control Delay	65.6	33.2		27.1	63.7		77.5	77.5		15.9	8.1	8.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0

Lanes, Volumes, Timings  
 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101) 2033 Base  
 Timing Plan: Friday PM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	65.6	33.2		27.1	63.7		77.5	77.5		15.9	8.1	8.1
LOS	E	C		C	E		E	E		B	A	A
Approach Delay		45.3			61.9			77.5			9.9	
Approach LOS		D			E			E			A	
Queue Length 50th (m)	41.9	74.6		2.2	47.8			~61.1			13.1	0.0
Queue Length 95th (m)	#74.1	95.6		6.4	#74.7			#93.9			21.1	8.2
Internal Link Dist (m)		351.6			357.6			635.4			797.0	
Turn Bay Length (m)	70.0			55.0								180.0
Base Capacity (vph)	374	710		151	351			371			612	658
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.99	0.88		0.11	0.90			1.02			0.22	0.69
<b>Intersection Summary</b>												
Area Type:	CBD											
Cycle Length:	80											
Actuated Cycle Length:	79.6											
Natural Cycle:	70											
Control Type:	Semi Act-Uncoord											
Maximum v/c Ratio:	1.02											
Intersection Signal Delay:	43.9											
Intersection LOS:	D											
Intersection Capacity Utilization:	79.0%											
ICU Level of Service:	D											
Analysis Period (min):	15											
~ Volume exceeds capacity, queue is theoretically infinite.												
Queue shown is maximum after two cycles.												
# 95th percentile volume exceeds capacity, queue may be longer.												
Queue shown is maximum after two cycles.												
<b>Splits and Phases: 2: School Rd/North Rd (Hwy 101) &amp; Gibsons Way (Hwy 101)</b>												
<p>The diagram shows a cycle of 80 seconds. Movement 02 (EBL) has a green time of 38.3s. Movement 04 (EBT) has a green time of 41.7s. Movement 06 (EBR) has a green time of 38.3s. Movement 07 (WBL) has a green time of 19.2s. Movement 08 (WBT) has a green time of 22.5s. Yellow and all-red times are also indicated for each movement.</p>												

Lanes, Volumes, Timings  
 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101)      2033 Base+Site  
 Timing Plan: Friday PM Peak Hr

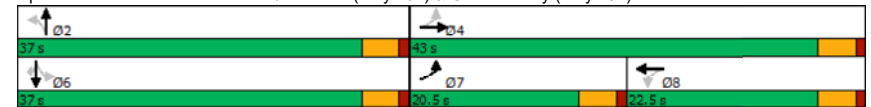
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	306	227	258	13	207	46	233	60	7	24	92	368
Future Volume (vph)	306	227	258	13	207	46	233	60	7	24	92	368
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	55.0		0.0	0.0		0.0	0.0		180.0
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.95	0.97		0.98		0.98		0.81			1.00	0.69
Frnt		0.920			0.973			0.997				0.850
Fit Protected	0.950			0.950				0.963			0.990	
Satd. Flow (prot)	1509	1412	0	1509	1508	0	0	1523	0	0	1572	1350
Fit Permitted	0.220			0.429				0.678			0.887	
Satd. Flow (perm)	333	1412	0	669	1508	0	0	874	0	0	1406	935
Right Turn on Red			Yes			Yes		Yes			Yes	
Satd. Flow (RTOR)		99			13			2				472
Link Speed (k/h)		50			50			30			50	
Link Distance (m)		375.6			381.6			659.4			821.0	
Travel Time (s)		27.0			27.5			79.1			59.1	
Confl. Peds. (#/hr)	52		20	20		52	132		11	11		132
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	392	622	0	17	324	0	0	385	0	0	149	472
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	11.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	20.5	43.0		22.5	22.5		37.0	37.0		37.0	37.0	37.0
Total Split (%)	25.6%	53.8%		28.1%	28.1%		46.3%	46.3%		46.3%	46.3%	46.3%
Maximum Green (s)	16.0	38.5		18.0	18.0		32.5	32.5		32.5	32.5	32.5
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	Max	None		None	None		Max	Max		None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	0
Act Effct Green (s)	38.3	38.3		17.8	17.8		32.5	32.5		32.5	32.5	32.5
Actuated g/C Ratio	0.48	0.48		0.22	0.22		0.41	0.41		0.41	0.41	0.41
v/c Ratio	0.99	0.85		0.11	0.93		1.08	1.08		0.26	0.72	0.72
Control Delay	64.7	29.0		27.1	66.2		97.3	97.3		17.3	8.9	8.9
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0

Lanes, Volumes, Timings  
 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101)      2033 Base+Site  
 Timing Plan: Friday PM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	64.7	29.0		27.1	66.2			97.3			17.3	8.9
LOS	E	C		C	E			F			B	A
Approach Delay		42.8			64.3			97.3			10.9	
Approach LOS		D			E			F			B	
Queue Length 50th (m)	45.8	71.4		2.2	49.1			~70.0			15.4	0.0
Queue Length 95th (m)	#78.1	91.6		6.4	#77.6			#99.5			24.4	8.4
Internal Link Dist (m)		351.6			357.6			635.4			797.0	
Turn Bay Length (m)	70.0			55.0								180.0
Base Capacity (vph)	395	731		150	350			357			572	660
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.99	0.85		0.11	0.93			1.08			0.26	0.72

Intersection Summary	
Area Type:	CBD
Cycle Length:	80
Actuated Cycle Length:	79.8
Natural Cycle:	75
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	1.08
Intersection Signal Delay:	46.4
Intersection LOS:	D
Intersection Capacity Utilization:	80.9%
ICU Level of Service:	D
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101)



Lanes, Volumes, Timings  
 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101) 2033 Base (NBLT lane)  
 Timing Plan: Friday PM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	[Diagrammatic arrows]											
Traffic Volume (vph)	289	227	258	13	207	40	233	54	7	19	85	354
Future Volume (vph)	289	227	258	13	207	40	233	54	7	19	85	354
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	55.0		0.0	0.0		50.0	0.0		180.0
Storage Lanes	1		0	1		0	1		1	0		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.95	0.97		0.98		0.98	0.77	1.00			1.00	0.71
Frt	0.920			0.976			0.983				0.850	
Fit Protected	0.950			0.950			0.950				0.991	
Satd. Flow (prot)	1509	1414	0	1509	1519	0	1509	1554	0	0	1574	1350
Fit Permitted	0.255			0.429			0.672				0.953	
Satd. Flow (perm)	386	1414	0	670	1519	0	827	1554	0	0	1508	964
Right Turn on Red	Yes			Yes			Yes			Yes		
Satd. Flow (RTOR)	109			12			9			454		
Link Speed (k/h)	50			50			30			50		
Link Distance (m)	375.6			381.6			659.4			821.0		
Travel Time (s)	27.0			27.5			79.1			59.1		
Confl. Peds. (#/hr)	52		20	20		52	132		11	11		132
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	371	622	0	17	316	0	299	78	0	0	133	454
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4		8	8		2	2		6	6	6
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	11.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	18.5	41.0		22.5	22.5		33.0	33.0		33.0	33.0	33.0
Total Split (%)	25.0%	55.4%		30.4%	30.4%		44.6%	44.6%		44.6%	44.6%	44.6%
Maximum Green (s)	14.0	36.5		18.0	18.0		28.5	28.5		28.5	28.5	28.5
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	Max	None		None	None		Max	Max		None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0			0	0		0	0		0	0	0
Act Effct Green (s)	35.6	35.6		17.1	17.1		28.5	28.5		28.5	28.5	28.5
Actuated g/C Ratio	0.49	0.49		0.23	0.23		0.39	0.39		0.39	0.39	0.39
v/c Ratio	0.92	0.84		0.11	0.87		0.93	0.13		0.23	0.70	0.70
Control Delay	46.5	25.6		23.9	51.6		60.5	14.1		16.6	8.5	8.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0

Lanes, Volumes, Timings  
 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101) 2033 Base (NBLT lane)  
 Timing Plan: Friday PM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	46.5	25.6		23.9	51.6		60.5	14.1		16.6	8.5	8.5
LOS	D	C		C	D		E	B		B	A	A
Approach Delay	33.4			50.2			50.9			10.3		
Approach LOS	C			D			D			B		
Queue Length 50th (m)	34.5	61.5		1.9	42.5		41.2	6.4		12.8	0.0	0.0
Queue Length 95th (m)	#62.4	81.3		6.0	#66.2		#71.2	12.6		21.1	8.7	8.7
Internal Link Dist (m)	351.6			357.6			635.4			797.0		
Turn Bay Length (m)	70.0			55.0						180.0		
Base Capacity (vph)	402	760		164	383		322	612		588	653	653
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.92	0.82		0.10	0.83		0.93	0.13		0.23	0.70	0.70

**Intersection Summary**

Area Type: CBD

Cycle Length: 74

Actuated Cycle Length: 73.1

Natural Cycle: 65

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 32.8

Intersection LOS: C

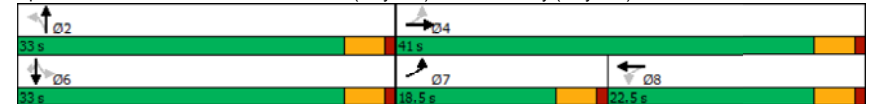
Intersection Capacity Utilization 75.1%

ICU Level of Service D

Analysis Period (min) 15

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

Splits and Phases: 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101)





Lanes, Volumes, Timings  
 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101) 2033 Base+Site (NBLT)  
 Timing Plan: Friday PM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	306	227	258	13	207	46	233	60	7	24	92	368
Future Volume (vph)	306	227	258	13	207	46	233	60	7	24	92	368
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	55.0		0.0	0.0		50.0	0.0		180.0
Storage Lanes	1		0	1		0	1		1	0		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.96	0.97		0.98		0.98	0.79		1.00		1.00	0.73
Frt		0.920			0.973			0.984				0.850
Fit Protected	0.950			0.950			0.950				0.990	
Satd. Flow (prot)	1509	1416	0	1509	1512	0	1509	1556	0	0	1572	1350
Fit Permitted	0.262			0.429			0.662				0.939	
Satd. Flow (perm)	398	1416	0	670	1512	0	832	1556	0	0	1485	983
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		117			15			9				472
Link Speed (k/h)		50			50			30			50	
Link Distance (m)		375.6			381.6			659.4			821.0	
Travel Time (s)		27.0			27.5			79.1			59.1	
Confl. Peds. (#/hr)	52		20	20		52	132		11	11		132
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	392	622	0	17	324	0	299	86	0	0	149	472
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	11.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	17.0	39.5		22.5	22.5		30.5	30.5		30.5	30.5	30.5
Total Split (%)	24.3%	56.4%		32.1%	32.1%		43.6%	43.6%		43.6%	43.6%	43.6%
Maximum Green (s)	12.5	35.0		18.0	18.0		26.0	26.0		26.0	26.0	26.0
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	Max	None		None	None		Max	Max		None	None	None
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	0
Act Effct Green (s)	33.8	33.8		16.8	16.8		26.0	26.0		26.0	26.0	26.0
Actuated g/C Ratio	0.49	0.49		0.24	0.24		0.38	0.38		0.38	0.38	0.38
v/c Ratio	0.99	0.82		0.10	0.85		0.95	0.15		0.27	0.71	
Control Delay	59.9	23.5		21.8	46.8		65.6	14.2		16.9	8.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	

Lanes, Volumes, Timings  
 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101) 2033 Base+Site (NBLT)  
 Timing Plan: Friday PM Peak Hr

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	59.9	23.5			21.8	46.8		65.6	14.2		16.9	8.9
LOS	E	C			C	D		E	B		B	A
Approach Delay		37.5				45.5			54.1			10.9
Approach LOS		D				D			D			B
Queue Length 50th (m)	34.1	55.3			1.8	40.0		39.4	6.9			14.0
Queue Length 95th (m)	#65.8	74.4			5.7	#62.4		#69.7	13.3			22.9
Internal Link Dist (m)		351.6				357.6			635.4			797.0
Turn Bay Length (m)	70.0				55.0							180.0
Base Capacity (vph)	397	778			175	406		314	593		561	665
Starvation Cap Reductn	0	0			0	0		0	0		0	0
Spillback Cap Reductn	0	0			0	0		0	0		0	0
Storage Cap Reductn	0	0			0	0		0	0		0	0
Reduced v/c Ratio	0.99	0.80			0.10	0.80		0.95	0.15		0.27	0.71

Intersection Summary

Area Type:	CBD
Cycle Length:	70
Actuated Cycle Length:	68.8
Natural Cycle:	65
Control Type:	Semi Act-Uncooord
Maximum v/c Ratio:	0.99
Intersection Signal Delay:	34.4
Intersection LOS:	C
Intersection Capacity Utilization:	76.7%
ICU Level of Service:	D
Analysis Period (min):	15
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 2: School Rd/North Rd (Hwy 101) & Gibsons Way (Hwy 101)

