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Re: 3131 Victoria Road, Ameliasburgh, Prince Edward County

Subject: Development Entrance Brief – 3131 Victoria Road

Project Number: 23-3-6610

The Greer Galloway Group has been retained to complete a Traffic Impact Study Brief (TISB) for the development located at 3131 Victoria Road, Ameliasburgh in Prince Edward County.

The Ministry of Transportation General Guidelines for the Preparation of Traffic Impact Studies acknowledges that where little to no impact on the surrounding road network is anticipated and the need for mitigation is not expected, a TIS Brief or Letter may be appropriate.

The subject property has an existing entrance to an existing residential property on a low volume rural road. It is likely that the proposed development will not have a significant impact on the surrounding road network and mitigation is not expected. Therefore, a Traffic Impact Study Brief is provided.

New development or redevelopment of existing lands will typically increase traffic on the connected public road system. Associated impacts can be evaluated by quantitative means through a traffic impact assessment such as this and are based on road / intersection volume capacities, vehicle delay, lines of sight, and other measurable means.

Other qualitative impacts are not as easily assessed, are highly subject to opinion, personal experiences and priorities and beyond the scope of this report.

The existing municipal road network does not have pedestrian infrastructure in the vicinity of the development lands. Accordingly, pedestrian traffic infrastructure to or from the municipal road system will not be provided or commented on.

The existing municipal road network does not have cycling infrastructure in the vicinity of the development lands. It is recognised that cycling in the County is common and will continue through existing shared use vehicle lanes only. Accordingly, cycling infrastructure to or from the municipal road system will not be provided, or commented on.

Having reviewed the available documents and visited the site to observe existing conditions, the following is provided in as part of the development application process and is intended to provide comment on the impact of the proposed site redevelopment at 3131 Victoria Road.

1.0 EXISTING CONDITIONS

1.1 Victoria Road and Subject Property

Victoria Road is a rural two-lane road running east to west between County Road 33 and County Road 23. Victoria Road spans a total distance of 12 kilometres with the development property being located on the western end, adjacent to County Road 33.

Traffic includes a mixture of local, tourist and agricultural vehicles, typical to the Prince Edward County region. The signed speed limit is 60 km/h and there is a seasonal vehicle weight restriction.

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Adjacent to the property Victoria Road has a narrow gravel shoulder 0.66m wide and a 6.5m wide paved driving surface. There are no visible line markings on the road.

Property and adjacent road runoff is collected and conveyed via shallow grassed ditch and corrugated steel culvert under the property entrance.

Victoria Road is stop controlled at County Road 33 intersection.

The subject property has a municipal address of 3131 Victoria Road with a house, barn and three accessory buildings on it. The following images highlight the boundary of the property and Victoria Road.



Figure 1: 3131 Victoria Road, Ameliasburg, Prince Edward County.

1.2 County Road 33

County Road 33 is also known as Loyalist Parkway (and old Highway 33). Extending from Stirling to Kingston, locally, County Road 33 connects Trenton to the north and to Wellington / Bloomfield and Picton to the south and east.

The subject section of County Road 33 has two lanes, gravel shoulders, full pavement markings and the road is in good condition.

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Figure 2: Looking from County Road 33, East Towards Victoria Road.
(Google 2023)



Figure 3: Looking East on Victoria Road to the Entrance of Development.
(Google 2023)

2.0 PROPOSED DEVELOPMENT

The proposed development includes the following traffic related land uses:

- Proposed
- Wedding Event Facility – Barn and Outbuildings
- 1 Dwelling
- Parking lot (73 spaces + 4 accessible)

Note: The existing barn will be converted into the wedding venue reception area, the existing outbuildings will be converted into complimentary buildings.



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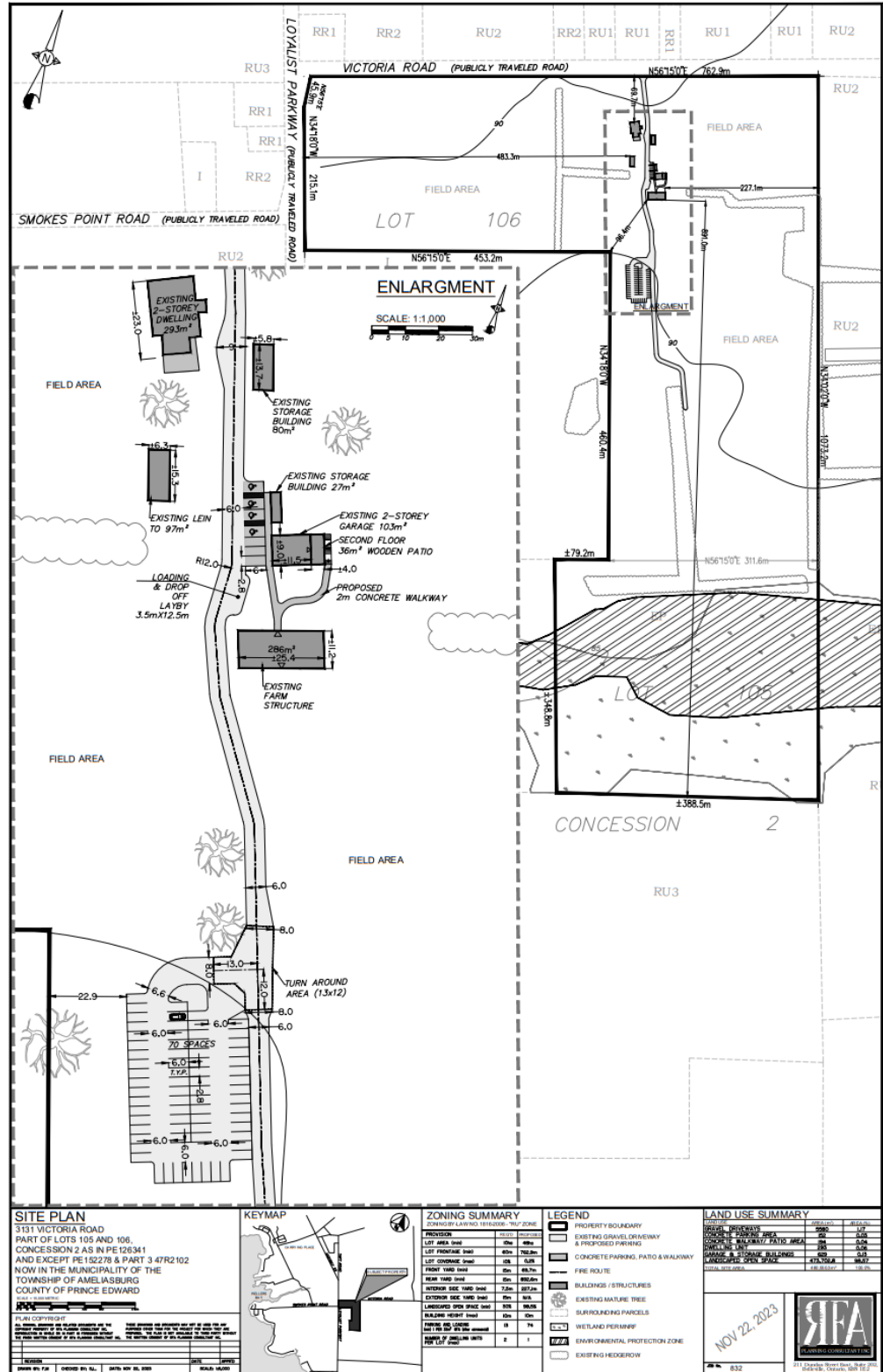


Figure 4: Conceptual Site Plan, RFA Planning Consultant (November 2023)



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3.0 BACKGROUND TRAFFIC VOLUMES

Background traffic on the intersection of Victoria Road and County Road 33 was assessed using a manual count conducted by Greer Galloway.

3.1 Greer Galloway Traffic Count – Thursday, May 2, 2024

Greer Galloway conducted a two and a half hour traffic count at the intersection of Victoria Road County Road 33 on May 2, 2024, from 2:30pm to 5:00pm.

Background at Victoria Road / County Road 33				
	SB-RT	SB-TH	SB-LT	
	-	570	55	
EB-LT				WB-RT
-				57
EB-TH		Total		WB-TH
-		1280		-
EB-RT				WB-LT
-				13
	NB-LT	NB-TH	NB-RT	
	-	577	8	

Figure 5.0: Total Background Traffic Count

The count was conducted during a common high traffic period and established a peak hour from 3:00pm – 4:00pm.

Background Peak Hour at Victoria Road / County Road 33				
	SB-RT	SB-TH	SB-LT	
	-	232	24	
EB-LT				WB-RT
-				30
EB-TH		Total		WB-TH
-		545		-
EB-RT				WB-LT
-				7
	NB-LT	NB-TH	NB-RT	
	-	247	5	

Figure 5.1: Peak Hour Background Traffic Count

The peak hour traffic volume on Victoria Road / at the property entrance included 37 vehicles travelling westbound and 29 travelling eastbound with a total of 66 vehicles.

Background Peak Hour at 3131 Victoria Road Property Entrance				
	SB-RT	SB-TH	SB-LT	
	-	-	-	
EB-LT				WB-RT
-				-
EB-TH		Total		WB-TH
29		66		37
EB-RT				WB-LT
0				0
	NB-LT	NB-TH	NB-RT	
	0	-	0	

Figure 5.2: Peak Hour Background Traffic



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4.0 NEW TRIP GENERATION

ITE Trip Generation Manual does not have a land use consistent with the proposed development. An alternative trip generation process will be followed.

An assumption was made using the number of proposed parking spots in the site plan. The property can accommodate only as many vehicles as there are available parking spaces. Thus, the number of parking spaces is equal to the maximum number of vehicles moving in or out of the property.

To account for all scenarios, two extreme situations were used when considering the number of additional trips associated with the developments 77 parking spots.

Scenario 1 - All 77 vehicles enter the property at once, to reflect arrival prior to a wedding, for instance.

Scenario 2 - All 77 vehicles leave the property at once, to reflect the guests departing after a wedding, for instance.

These are the most conservative scenarios possible. The vehicles will then be distributed similar to observed conditions from the background traffic count.

4.1 New Trip Generation at Property Entrance / Victoria Road Intersection

The intersection of focus for the following figures is 3131 Victoria Road property entrance / Victoria Road. To determine the new trip values generated by the completion of this project the conservative scenario of all 77 vehicles leaving or entering the property at once is used.

The new trips generated leave or enter the property consistent with existing observed background traffic.

Proposed 100% Leaving 3131 Victoria Road Property				
	SB-RT	SB-TH	SB-LT	
	-	-	-	
EB-LT				WB-RT
-				-
EB-TH		Total		WB-TH
0		77		0
EB-RT				WB-LT
0				0
	NB-LT	NB-TH	NB-RT	
	43	-	34	

Figure 6.1: Proposed Traffic is 100% Leaving 3131 Victoria Road Property

Proposed 100% Entering 3131 Victoria Road Property				
	SB-RT	SB-TH	SB-LT	
	-	-	-	
EB-LT				WB-RT
-				-
EB-TH		Total		WB-TH
0		77		0
EB-RT				WB-LT
43				34
	NB-LT	NB-TH	NB-RT	
	0	-	0	

Figure 6.2: Proposed Traffic is 100% Entering 3131 Victoria Road Property

The figures below illustrate total of existing background traffic combined with proposed trip generation scenarios.



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Total 100% Leaving 3131 Victoria Road Property				
	SB-RT	SB-TH	SB-LT	
EB-LT	-	-	-	WB-RT
-				-
EB-TH		Total		WB-TH
29		143		37
EB-RT				WB-LT
0				0
	NB-LT	NB-TH	NB-RT	
	43	-	34	

Figure 6.3: Total Proposed and Peak Hour Background Traffic Leaving Property

Total 100% Entering 3131 Victoria Road Property				
	SB-RT	SB-TH	SB-LT	
EB-LT	-	-	-	WB-RT
-				-
EB-TH		Total		WB-TH
29		143		37
EB-RT				WB-LT
43				34
	NB-LT	NB-TH	NB-RT	
	0	-	0	

Figure 6.4: Total Proposed and Peak Hour Background Traffic Entering Property

4.2 New Trip Generation at County Road 33 / Victoria Road Intersection

The intersection of focus for the following figures is the County Road 33 / Victoria Road intersection. The proposed 43 additional trips from the new development travelling to / from County Road 33 are considered.

The new trips generated pass through the intersection following the directional ratios seen in the peak hour of the background traffic count.

Proposed Leaving Victoria Road				
	SB-RT	SB-TH	SB-LT	
EB-LT	-	0	0	WB-RT
-				35
EB-TH		Total		WB-TH
-		43		-
EB-RT				WB-LT
-				8
	NB-LT	NB-TH	NB-RT	
	-	0	0	

Figure 7.1: Proposed Traffic Leaving Victoria Road at County Road 33 / Victoria Road Intersection

Proposed Entering Victoria Road				
	SB-RT	SB-TH	SB-LT	
EB-LT	-	0	35	WB-RT
-				0
EB-TH		Total		WB-TH
-		43		-
EB-RT				WB-LT
-				0
	NB-LT	NB-TH	NB-RT	
	-	0	8	

Figure 7.2: Proposed Traffic Entering Victoria Road at County Road 33 and Victoria Road Intersection

Total Leaving Victoria Road				
	SB-RT	SB-TH	SB-LT	
EB-LT	-	232	24	WB-RT
-				65
EB-TH		Total		WB-TH
-		588		-
EB-RT				WB-LT
-				15
	NB-LT	NB-TH	NB-RT	
	-	247	5	

Figure 7.3: Total Proposed and Peak Hour Background Traffic Leaving Victoria Road

Total Entering Victoria Road				
	SB-RT	SB-TH	SB-LT	
EB-LT	-	232	59	WB-RT
-				30
EB-TH		Total		WB-TH
-		588		-
EB-RT				WB-LT
-				7
	NB-LT	NB-TH	NB-RT	
	-	247	13	

Figure 7.4: Total Proposed and Background Traffic Entering Victoria Road

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5.0 INTERSECTION LEVEL OF SERVICE

Un-signalized intersection capacity analysis techniques based on the Highway Capacity Manual (using HCS7 Un-signalized Intersections software) are utilized to determine the level of service (LOS) at the subject intersection.

The LOS of an intersection is determined by the average total delay for specific turning movements - in particular, the left turn movements to and from the minor road.

Level of Service	Average Total Delay (seconds)
A	0-10
B	>10-15
C	>15-25
D	>25-35
E	>35-50
F	> 50

(* Highway Capacity Manual / Special Report No. 209, 1985)

Two Way Stop Controlled Intersection LOS, Average Total Delay

Levels of service of A to C are acceptable:

LOS A – Little or no traffic delay occurs. Approaches appear open, turning movements are easily made and drivers have freedom of operation.

LOS B – Short traffic delays occur. Many drivers begin to feel somewhat restricted in terms of freedom of operation.

LOS C – Average traffic delays occur. Operations are generally stable, but drivers emerging from the minor street may experience difficulty in completing their movement.

Levels of service of D/E are typically acceptable where opportunities to improve are limited:

LOS D – Long traffic delays occur. Motorists emerging from the minor street experience significant restriction and frustration. Drivers on the major street will experience congestion and delay as drivers emerging from the minor street interfere with the major through movements.

LOS E – Very long traffic delays occur. Operations approach capacity.

Level of service of F is not acceptable:

LOS F – Saturation occurs, with vehicle demand exceeding the available capacity. Very long traffic delays occur.

5.1 Modelling: Victoria Road and Development Entrance Intersection

No appreciable impacts to traffic resulting from the development are expected. However, a model was created using TWSC1 traffic modelling software to illustrate how the intersection of Victoria Road at Development Entrance operates.

- The 77 parking spaces were used as the number of proposed trip values entering or exiting the property at once in the peak hour.

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- The 77 trips were divided into eastbound and westbound approaches using the eastbound and westbound ratio from the background traffic count peak hour.

The results indicate an acceptable intersection level of service of “A” is expected for the development and Victoria Road intersection when all 77 vehicles enter or exit the new development at once. The summary model reports are appended as figures 11.1 and 11.2.

No volume / capacity-based concerns are anticipated at this intersection.

5.2 Modelling: County Road 33 and Victoria Road Intersection

No appreciable impacts to traffic resulting from the development are expected. However, a model was created using TWSC1 traffic modelling software to illustrate how the intersection of County Road 33 at Victoria Road operates.

- 43 vehicles were projected to move west on Victoria Road towards County Road 33 from the development during peak hour.
- Traffic was distributed in the north and southbound direction on County Road 33 using the ratios from the background traffic count peak hour.

The results indicate an acceptable intersection level of service of “B” is expected for the intersection of Victoria Road and County Road 33 when all 43 vehicles enter or exit Victoria Road through the intersection at once. The summary model reports are appended as figures 12.1 and 12.2.

No volume / capacity-based concerns are anticipated at this intersection.

6.0 LINE OF SIGHT

We are not aware of any existing concerns or history of accidents associated with this subject intersection. With increased traffic accessing the development, sightlines should be confirmed. As Victoria Road and the property entrance intersection already exists, the following is provided for reference.

6.1 Ministry of Transportation Highway Access Management Guideline (MTO)

The MTO Highway Access Management Guideline has been used as a line-of-sight standard in other instances in the County.

The most recent edition of the MTO (April 2022) refers to the line-of-sight standard within the Transportation Association of Canada Geometric Design Guide (TAC). Thus, the TAC will be referenced within this report.

6.2 Transportation Association of Canada Geometric Design Guide (TAC)

Stopping sight distance in the total of the distance travelled within the perception and reaction time along with the braking distance. This minimum distance must be met.

Sight Distance: Stopping (Table 2.5.2)

- Posted speed of 60 km/h (design speed of 80 km/h).
- Level roadway.
- Distance Required = 130m

Sight Distance: Left Turn from Stop (Table 9.9.4)

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- Posted speed of 60 km/h (design speed of 80 km/h).
- Level roadway.
- Distance Required = 170m

Sight Distance: Right Turn from Stop (Table 9.9.6)

- Posted speed of 60 km/h (design speed of 80 km/h).
- Level roadway.
- Distance Required = 145m

6.3 Existing Sightline Verification

Victoria Road surrounding the development property is a straight and level road in an east/west direction.

StreetView images were taken from two locations to check stopping sightlines surrounding the property. One taken from the Victoria Road/County Road 33 intersection (515m west from property entrance), and one taken 320m east from property entrance (see figures 8.5 and 8.6).

Sight lines are satisfied in both directions.

7.0 SITE EMERGENCY VEHICLE ACCESS

Based on Ontario Building Code (OBC) requirements, an access must be provided for fire department (and emergency vehicle access) that shall:

- Have a clear width not less than 6m.
- Have a centreline radius not less than 12m.
- Have an overhead clearance not less than 5m.
- Have a change of gradient not more than 1 in 12.5 (8%).
- Be designed to support the expected loads imposed by firefighting equipment and be surfaced with concrete, asphalt or other material designed to permit accessibility under all climatic conditions.
- Have turnaround facilities for any dead-end portion of the access route more than 90m long.
- Be connected to a public thoroughfare.

Also noted is Prince Edward County By-Law 3121-2012 Municipal Emergency Services to Private Roadways which is generally consistent with the OBC but does provide additional direction on the turnaround with a 27m diameter turnaround.

These requirements should be considered as part of the site plan design drawings and are noted here for reference.

8.0 CONCLUSIONS

Based on the above observations, applicable standards, a lack of previous safety concerns and our understanding of the proposed development, we believe that Victoria Road and the existing property entrance will be acceptable for the proposed development.

Emergency vehicle access should be provided as part of the site development plan.

(Note: It is reasonable to anticipate some minor changes in the site plan as the

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September 21st, 2024



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approval process runs its course. Only changes felt to be significant and directly relevant to entrance traffic may warrant a revision to this document.)

If there are any questions or comments, please contact the undersigned.

Sincerely,

**THE GREER GALLOWAY GROUP INC.
CONSULTING ENGINEERS**



Matthew McIntosh, P. Eng.
Senior Engineer / Project Manager

Attachments:

1. Google Maps Photos (x7)
2. Average Annual Daily Traffic Calculation
3. Modelling Traffic Output (x5)

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Figure 8.1: Looking South on County Road 33 from Victoria Road



Figure 8.2: Looking North on County Road 33 from Victoria Road



Figure 8.3: Looking Southwest in Entrance of 3131 Victoria Road Property



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Figure 8.4: Looking North in Entrance of 3131 Victoria Road Property



Figure 8.5: Looking South on Victoria Road ~320m from 3131 Victoria Road



Figure 8.6: Looking North at Victoria Road County Road 33 Intersection ~515m from 3131 Victoria Road



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Figure 8.7: Exact distance between figure 8.6 and 3131 Victoria Road Property



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Minimum Maintenance Standards Regulation 239/02
Highway Classification
Average Annual Daily Traffic (AADT) Calculation

This document provides municipalities with a procedure using *"accepted traffic engineering methods"* for establishing AADT for their municipal highway system.

Using manual traffic counts this procedure provides accurate results that have been validated in other jurisdictions using automated traffic counting systems.

Manual traffic counts must be undertaken once per year. Optional times for performing manual traffic counts are in the spring or fall, in the months of May, June, October or November, thus avoiding summer vacation traffic and winter operations.

The manual traffic count must be performed mid week on Tuesday, Wednesday or Thursday to avoid weekend peaks.

The time of day for the traffic count is the afternoon, 2:00 p.m. to 6:00 p.m.

The result provides a traffic count that equals 30% of the AADT for the highway.

Simple mathematics will then give you the AADT that has been established using *"accepted traffic engineering methods."*

For "dead end" roads or cul-de-sacs, in lieu of a 4 hour traffic count, you can simply count the number of houses on the road and multiply by 6/rural, or 10/urban, for the trips each house generates.

Tips

- 1) In a residential neighborhood, it is possible to estimate the AADT for lower volume roads after the AADT is known for the collector roads.
- 2) The Consultants advise that their approach is to take traffic counts at intersections; therefore establishing counts on all four roads. They use inexperienced labour, usually seniors or students. These people are hired for the task, given training on the day of and before the traffic counting begins, transported to the site(s), picked-up and returned to the marshalling point.

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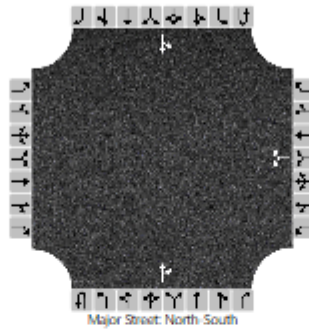
OGRA – Advocacy & Policy – Minimum Maintenance Standards for Municipal Highway
AADT for Highway Classification
AADT Calculation using accepted Traffic Engineering Methods
October 24, 2002

Figure 9: Average Annual Daily Traffic Calculation

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	Amelia McIntosh			Intersection	Victoria Road / CR33		
Agency/Co.	-			Jurisdiction	Prince Edward County		
Date Performed	5/6/2024			East/West Street	Victoria Road		
Analysis Year	2024			North/South Street	CR33		
Time Analyzed	PM			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	3131 Victoria Road Development						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0		0	1	0		0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						7		30			247	5		24	232	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1	6.2							4.1		
Critical Headway (sec)						6.43	6.23							4.13		
Base Follow-Up Headway (sec)						3.5	3.3							2.2		
Follow-Up Headway (sec)						3.53	3.33							2.23		

Delay, Queue Length, and Level of Service

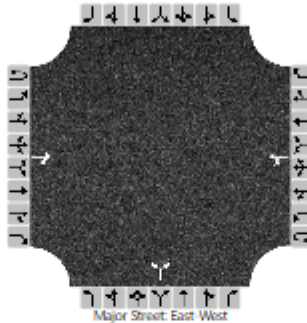
Flow Rate, v (veh/h)						40								26		
Capacity, c (veh/h)						682								1283		
v/c Ratio						0.06								0.02		
95% Queue Length, Q ₉₅ (veh)						0.2								0.1		
Control Delay (s/veh)						10.6								7.9		
Level of Service (LOS)						B								A		
Approach Delay (s/veh)						10.6								0.9		
Approach LOS						B								A		

Figure 10: County Road 33 Victoria Road Intersection Existing Peak Hour

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Amelia McIntosh	Intersection	Development/Victoria Road
Agency/Co.	-	Jurisdiction	Prince Edward County
Date Performed	5/6/2024	East/West Street	Victoria Road
Analysis Year	2024	North/South Street	New Development Entrance
Time Analyzed	PM	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	3131 Victoria Road Development		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			29	43		34	37			0		0				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

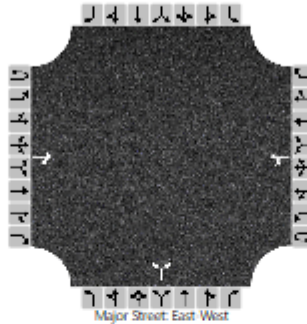
Flow Rate, v (veh/h)						37					0					
Capacity, c (veh/h)						1514										
v/c Ratio						0.02										
95% Queue Length, Q ₉₅ (veh)						0.1										
Control Delay (s/veh)						7.4										
Level of Service (LOS)						A										
Approach Delay (s/veh)						3.7										
Approach LOS						A										

Figure 11.1: Development Entrance / Victoria Road Intersection Peak Hour Entering

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	Amelia McIntosh			Intersection	Development/Victoria Road		
Agency/Co.	-			Jurisdiction	Prince Edward County		
Date Performed	5/6/2024			East/West Street	Victoria Road		
Analysis Year	2024			North/South Street	New Development Entrance		
Time Analyzed	PM			Peak Hour Factor	0.92		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	3131 Victoria Road Development						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			29	0		0	37			43		34				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1					7.1		6.2			
Critical Headway (sec)						4.13					6.43		6.23			
Base Follow-Up Headway (sec)						2.2					3.5		3.3			
Follow-Up Headway (sec)						2.23					3.53		3.33			

Delay, Queue Length, and Level of Service

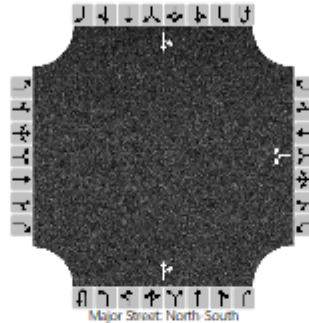
Flow Rate, v (veh/h)						0					84					
Capacity, c (veh/h)						1574					975					
v/c Ratio						0.00					0.09					
95% Queue Length, Q ₉₅ (veh)						0.0					0.3					
Control Delay (s/veh)						7.3					9.0					
Level of Service (LOS)						A					A					
Approach Delay (s/veh)						0.0					9.0					
Approach LOS											A					

Figure 11.2: Development Entrance / Victoria Road Intersection Peak Hour Leaving

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	Amelia McIntosh			Intersection	Victoria Road / CR33		
Agency/Co.	-			Jurisdiction	Prince Edward County		
Date Performed	5/6/2024			East/West Street	Victoria Road		
Analysis Year	2024			North/South Street	CR33		
Time Analyzed	PM			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	3131 Victoria Road Development						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR			LT	
Volume (veh/h)						7		30			247	13		59	232	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized																
Median Type Storage							Undivided									

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

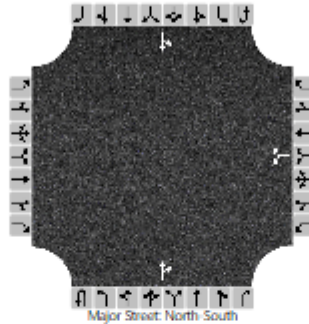
Flow Rate, v (veh/h)						40								64		
Capacity, c (veh/h)						652								1274		
v/c Ratio						0.06								0.05		
95% Queue Length, Q ₉₅ (veh)						0.2								0.2		
Control Delay (s/veh)						10.9								8.0		
Level of Service (LOS)						B								A		
Approach Delay (s/veh)						10.9								2.0		
Approach LOS						B										

Figure 12.1: County Road 33 / Victoria Road Intersection Peak Hour Entering

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	Amelia McIntosh	Intersection	Victoria Road / CR33
Agency/Co.	-	Jurisdiction	Prince Edward County
Date Performed	5/6/2024	East/West Street	Victoria Road
Analysis Year	2024	North/South Street	CR33
Time Analyzed	PM	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	3131 Victoria Road Development		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						15		65			247	5		24	232	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2							4.1	
Critical Headway (sec)						6.43		6.23							4.13	
Base Follow-Up Headway (sec)						3.5		3.3							2.2	
Follow-Up Headway (sec)						3.53		3.33							2.23	

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						87									26	
Capacity, c (veh/h)						683									1283	
v/c Ratio						0.13									0.02	
95% Queue Length, Q ₉₅ (veh)						0.4									0.1	
Control Delay (s/veh)						11.0									7.9	
Level of Service (LOS)						B									A	
Approach Delay (s/veh)						11.0								0.9		
Approach LOS						B								A		

Figure 12.2: County Road 33 / Victoria Road Intersection Peak Hour Leaving