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**Re: 161 and 163 Shanly Road, Cardinal, Residential Development**

**Subject: Traffic Brief**

**Project Number: 23-3-6598**

## 1. Introduction

The following is provided as a development application requirement for the proposed development as described in the Township of Edwardsburgh Cardinal Pre-consultation Meeting Notes, dated August 30, 2023.

Fotenn Planning and Design provided a concept plan titled 161 and 163 Shanly Road, Cardinal Concept Plan, dated August 8, 2023 to illustrate the proposed development.

Both documents are appended for reference.

## 2. Development Land Use Type, Site Plan & Development Size

The development will be part of a lot severance, separating the subject lands on eastern part of the lot with frontage on Marjorie Street East and Adelaide Street from the western portion of the lot with Shanly Road frontage.

The development is located on the south side of Majorie Street East, close to the dead end of that street, west of Walker Street in the community of Cardinal.

The development includes a 12 unit apartment building with 16 parking spaces. No commercial or other traffic generating land uses are proposed.

The main (vehicle) entrance is off Marjorie Street East.

Images illustrating existing conditions are appended.

- Site, Aerial – Google Maps
- Site, Lot – County GIS
- Site, Entrance – Google Streetview

## 3. Existing Conditions / Study Area

### Marjorie Street East

The development entrance will be onto Marjorie Street East, a stop controlled, 2 lane, dead end urban road in a residential area.

(It is noted that there is currently no turnaround facility at the dead end, however as this is a long existing condition it is presumed this is, and will remain acceptable.)

Existing traffic activity is negligible west of the Walker Street intersection.

### Walker Street

Walker Street is uncontrolled and connects the surrounding residential lands to County Road 2 to the south and stops at Gill Street to the north.

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Walker Street is 2 lane, urban road.

Traffic activity is low and reflect the low density residential surrounding lands.

#### Surrounding Intersections

Surrounding intersections are low volume and stop controlled.

We are not aware of any safety concerns or operational concerns associated with the surrounding intersections.

#### **4. Development Stages**

The development will be completed in a single phase.

While the timing of construction and occupancy is not clear, the subject area is fully developed and traffic is not likely to vary significantly over time so current traffic assumptions will not be adjusted for background traffic changes that can occur over time in other locations.

#### **5. Other Development & Planned Road Improvements**

It is understood there are other developments in the Cardinal Community, however, those developments are not located sufficiently close, and the proposed development is not sufficiently large, to warrant a coordinated traffic study or consideration herein.

No planned road improvements in the subject area are anticipated.

#### **6. Study Horizons**

As noted previously, the subject area is fully developed, traffic is not likely to vary significantly over time and construction will occur in a single phase.

Current conditions will be considered and are expected to remain more or less unchanged over time so no other study horizons are considered.

#### **7. Traffic Analysis**

##### Background Traffic

The author is generally familiar with the subject area and understands traffic to be primarily local traffic and very low volume.

To confirm site specific conditions a site visit was made Friday October 27<sup>th</sup> between 4:00 – 5:00 pm.

The intent was not to collect lengthy and comprehensive traffic data, but to confirm the general nature of traffic conditions sufficient to reach a reasonable conclusion for this document.

The time of the site visit generally aligns with a common PM Peak Hour period for

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residential land uses, such as this is located. This is consistent with the trip generation findings.

Traffic recorded is as shown below:

Weekday PM: 4-5pm				
2023				
	SB-RT	SB-TH	SB-LT	
	0	6	2	
EB-LT	Marjorie Street (Stop)	Walker Street	Marjorie Street (Stop)	WB-RT
1				1
EB-TH		Total		WB-TH
0		26		0
EB-RT	Walker Street			WB-LT
0				3
	NB-LT	NB-TH	NB-RT	
	1	12	0	

Observed conditions confirmed the very low volume of the local streets surrounding the subject development.

No concerns were observed relating to the operation of the intersection or it's geometry.

#### Trip Generation

The Institute of Transportation Engineers (ITE) Trip Generation Manual (11<sup>th</sup> Edition) is used estimate development vehicle trip generation.

The following land-use is felt to be a close representation of the proposed development:

#### *Land Use 220: Multifamily Housing (Low Rise)*

*Low-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have two or three floors (levels). Various configurations fit this description, including walkup apartment, mansion apartment, and stacked townhouse.*

*A walkup apartment typically is two or three floors in height with dwelling units that are accessed by a single or multiple entrances with stairways and hallways.*

A trip generation summary is appended and includes the following:

- PM Peak Hour is greater than the AM Peak Hour, so PM Peak Hour values will be used.
- Average trip generation rate is 0.57 trips for each dwelling unit, which for 12 units is 7 trips.

(Note: The fitted curve equation is not used. The average number of dwelling units used in study was 216 and the resulting formula provides falsely high values when the number of dwelling units is as small as it is for this development, i.e. 1 dwelling unit would still generate 35 trips by the formula.)

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- Directional distribution: 62% (4) entering; 38% (3) exiting

Trip generations is distributed as shown below:

Trip Generation				
Development				
	SB-RT	SB-TH	SB-LT	
	2	0	0	
EB-LT	Marjorie Street (Stop)	Walker Street	Marjorie Street (Stop)	WB-RT
2				0
EB-TH		Total		WB-TH
0		7		0
EB-RT				WB-LT
1		Walker Street		0
	NB-LT	NB-TH	NB-RT	
	2	0	0	

As a point of comparison, the estimated pm peak hour trip generation of 7 trips (4 entering / 3 exiting) appears reasonable relative to the 16 parking spaces provided in the site plan.

#### Trip Distribution / Assignment

Being a dead end road all traffic will enter and leave from the same direction.

Common trip destinations / sources are likely to include Highway 401 (north); Highway 2 (south); and local community destinations (south). For the purpose of this document traffic will be assumed to be split 50/50 in the north / south direction at Walker Street.

#### Trip Pass-By Rates

Being a residential development, there will be no allowance for trip pass-by trips.

## 8. Evaluation of Impacts

Adding background traffic and trip generation values, a traffic distribution at the intersection of Walker Street and Marjorie Street East is as shown:

Weekday PM Peak Hour				
2023 - Background & Development				
	SB-RT	SB-TH	SB-LT	
	2	6	2	
EB-LT	Marjorie Street (Stop)	Walker Street	Marjorie Street (Stop)	WB-RT
3				1
EB-TH		Total		WB-TH
0		33		0
EB-RT				WB-LT
1		Walker Street		3
	NB-LT	NB-TH	NB-RT	
	3	12	0	

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Traffic conditions are sufficiently low that there are no concerns relating to Level of Service; capacity; or delay.

## 9. Entrance Safety

We are not aware of any existing concerns or history of accidents associated with this subject entrance, road section or municipal intersection.

Being located on a dead end, straight, urban municipal road, lines of sight are good and vehicle speeds will be slow.

No safety related concerns are noted.

## 10. Emergency Access

Based on Ontario Building Code requirements:

- A building that is more than 3 storeys in building height or more than 600 m<sup>2</sup> in building area shall be provided with access routes for fire department vehicles.
- It is understood that the proposed building exceeds 600m<sup>2</sup> so the following will be relevant to the site plan design and noted for reference.

Where required, 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.

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

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## 11. Conclusion

Based on the above observations; applicable standards; a lack of previous safety concerns; and our understanding of the proposed development, we believe that Marjorie Street East and the existing Walker Street intersection will be able to serve both anticipated background traffic and the proposed development without any modification to geometry, new auxiliary lanes or traffic control modifications.

(Note: It is reasonable to anticipate some minor changes in the site plan as the approval process runs its course. Only changes that are felt to be significant and directly relevant to entrance traffic may warrant a revision to this document.)

Sincerely,

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



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

### Attachments:

1. Township of Edwardsburgh Cardinal Pre-consultation Meeting Notes, dated August 30, 2023.
2. 161 and 163 Shanly Road, Cardinal Concept Plan, dated August 8, 2023
3. Site, Aerial – Google Maps
4. Site, Lot – County GIS
5. Site, Entrance – Google Streetview
6. Walker Road / Marjorie Street East Intersection Site Photo
7. Traffic Model Summary Sheet

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## PRECONSULTATION MEETING NOTES

**Date:** August 30, 2023

**Location:** Virtual, by Teams

**Subject:** Proposed Application for Zoning Bylaw Amendment  
161-163 Shanly Rd, severed parcel for active consent application B-82-23  
Township of Edwardsburgh Cardinal

**Attending:** Dave Nanton, Fotenn; Agent for Owner/Buyer  
Wendy Van Keulen, Community Development Coordinator, TWPEC  
Jordan Jackson, Novatech on behalf of TWPEC  
Tara Michauville, Novatech on behalf of TWPEC  
Dave Grant, CAO, TWPEC  
Dwane Crawford, Chief Building Official, TWPEC  
Gord Shaw, Director of Operations, TWPEC

## PROPOSAL

This proposal relates to the severed portion of a consent application that has not yet received conditional approval. Council has made a recommendation on the severance application and has requested a condition for a zoning bylaw amendment for both the retained and severed parcel.

The entire parcel is zoned General Commercial (CG). The severance application notes that a Residential Third Density (R3) zoning is proposed.

The intended development for the severed parcel includes a 12-unit, 3-storey apartment building with a total of 16 parking spaces, landscaped amenity area, and an entranceway from Marjorie St E.

## ZONING APPLICATION SUBMISSION REQUIREMENTS

### Detailed site plan

Landscaping and the importance of screening for neighbouring residential uses were discussed on the call, as well as the location of balconies and pedestrian pathways. A

possible entranceway off Adelaide St. was discussed, however, there did not appear to be space to accommodate both entranceways with the site design.

Please include common site design elements that will be incorporated for the project, such as:

- parking area and barrier free parking
  - note ZBL section 3.14.4 (barrier free parking)
  - 3.14.8.2 (3m setback for parking area)
  - 3.14.5 (min driveway width)
- snow storage/removal
- garbage/recycling bin locations
  - screening would depend on the location of these facilities
- screening to neighbouring properties
- dimensions of amenity area
  - it was noted on the call that the amenity area is 326m<sup>2</sup>. Requirements are shown in ZBL section 6.3.3.2.

### **Environmental site assessment**

Because the zoning will change from commercial to residential, an Environmental Site Assessment is required.

### **Planning rationale**

Please provide a Planning report to demonstrate conformity to the Provincial Policy Statement, County Official Plan and Township Official Plan, with regard for the Development Criteria of section 6.8 of the Township's Official Plan (specifically, density requirements and land use compatibility).

The rationale should also discuss the proposed changes needed to the Zoning Bylaw and make a recommendation for the appropriate zoning. A zoning chart should be included (or could be provided as part of the detailed site plan).

The maximum density for the R3 zone was discussed as relief may be required through the amendment (6.3.2(d)).

If known, please include the size of the units proposed (# of bedrooms) and whether affordable housing is considered. The Township considers affordable housing for rental units to be 20% below average rental rate.

Please show building elevations (as a conceptual drawing), either within the planning report or as a separate document.



## **Traffic brief/memo**

Please include comments on the anticipated increase in traffic levels throughout the neighbourhood to a dead-end street.

## **Survey**

Although not discussed on our call, please include a survey plan of the property with your application (note that this will also be required as a condition of severance approval).

## **ADDITIONAL INFORMATION**

### **Future site plan control application**

The Township notes that site plan control will be required for the proposed 12-unit building and welcomes a future preconsultation meeting prior to the site plan control application. We anticipate that the following items will be requested with your site plan control application:

- grading and drainage plan
- detailed servicing drawings
  - with consultation with Environmental Services department. Manager of Environmental Services is Eric Wemerman, [ewemerman@twpec.ca](mailto:ewemerman@twpec.ca)
  - It was noted that there are water and sanitary mains on Adelaide St south of the proposed building.
- landscaping plan
- building elevations and entrance design

### **Application submission**

Application forms are available on our website at <https://www.twpec.ca/en/business-and-development/planning-applications.aspx>. The studies/plans identified here should be completed prior to submitting your application for a zoning bylaw amendment and will form part of your application. The application should be made to the Township office, through the Community Development Coordinator ([wvankeulen@twpec.ca](mailto:wvankeulen@twpec.ca)).

The Township will circulate the completed application and notice of a public meeting to agencies, public bodies and persons as required by the Planning Act. A public meeting will be held to hear any comments from the public on the application. The approval authority for a zoning amendment is the Council of the Township of Edwardsburgh Cardinal.

## **Fees**

A \$2,500 application deposit fee is due to the Township at the time of making the application for zoning bylaw amendment. Fees can be paid by cash, debit or cheque payable to the Corporation of the Township of Edwardsburgh Cardinal. The application fee is used to pay for the cost of processing the application, including peer and technical reviews of the studies. The owner will be billed for any costs incurred by the Township that exceed this amount, in accordance with the Township's Planning Fees Bylaw 2022-40.

## **CONTACT**

Please reach out with any questions about the information provided here.

Wendy Van Keulen

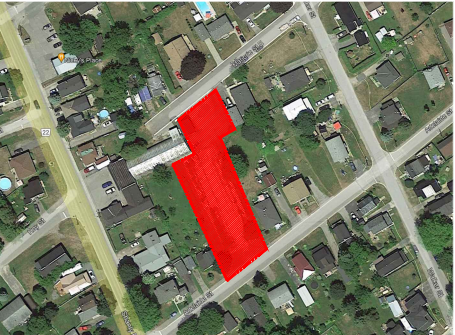
Community Development Coordinator, Township of Edwardsburgh Cardinal

[wvankeulen@twpec.ca](mailto:wvankeulen@twpec.ca)

613.658.3055 x101



161 and 163 Shanly Road, Cardinal  
Concept Plan



LEGEND

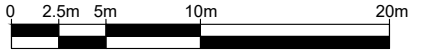
- PROPOSED BUILDING
- SUBJECT PROPERTY BOUNDARY
- LANDSCAPE AREA
- AMENITY AREA

DEVELOPMENT STATISTICS

SITE AREA:	1831.5 m <sup>2</sup>
BUILDING FOOTPRINT:	328 m <sup>2</sup>
LANDSCAPE AREA:	832 m <sup>2</sup>
AMENITY AREA:	326 m <sup>2</sup>
3-STOREY TOTAL GFA:	836.4 m <sup>2</sup>
RESIDENTIAL UNITS:	12 units
PARKING:	16 parking spaces

NOTES

- Assumes typical floor height of 3.0m.
- For the purpose of this concept, GFA is calculated with 85% efficiency.
- The base plan (lot lines, existing roads and surrounding areas) is based on open data and aerial images. The site area is approximate and all dimensions need to be confirmed by a legal survey.



1	BASE PLAN	2023.07.26	ET
No.	REVISION	DATE	BY

CLIENT  
**Madison Mulder Enterprises**

**FOTENN**  
Planning + Design

OTTAWA: 396 Cooper Street, Suite 300, Ottawa ON K2P 2H7 613.730.5709	KINGSTON: 4 Cataraqui St, Suite 315, Kingston ON K7K 1Z7 613.542.5454	TORONTO: 174 Spadina Ave, Suite 304, Toronto ON M5T 2C2 416.789.4530
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DESIGNED	ET/ACJ
REVIEWED	ET
DATE	2023.07.26

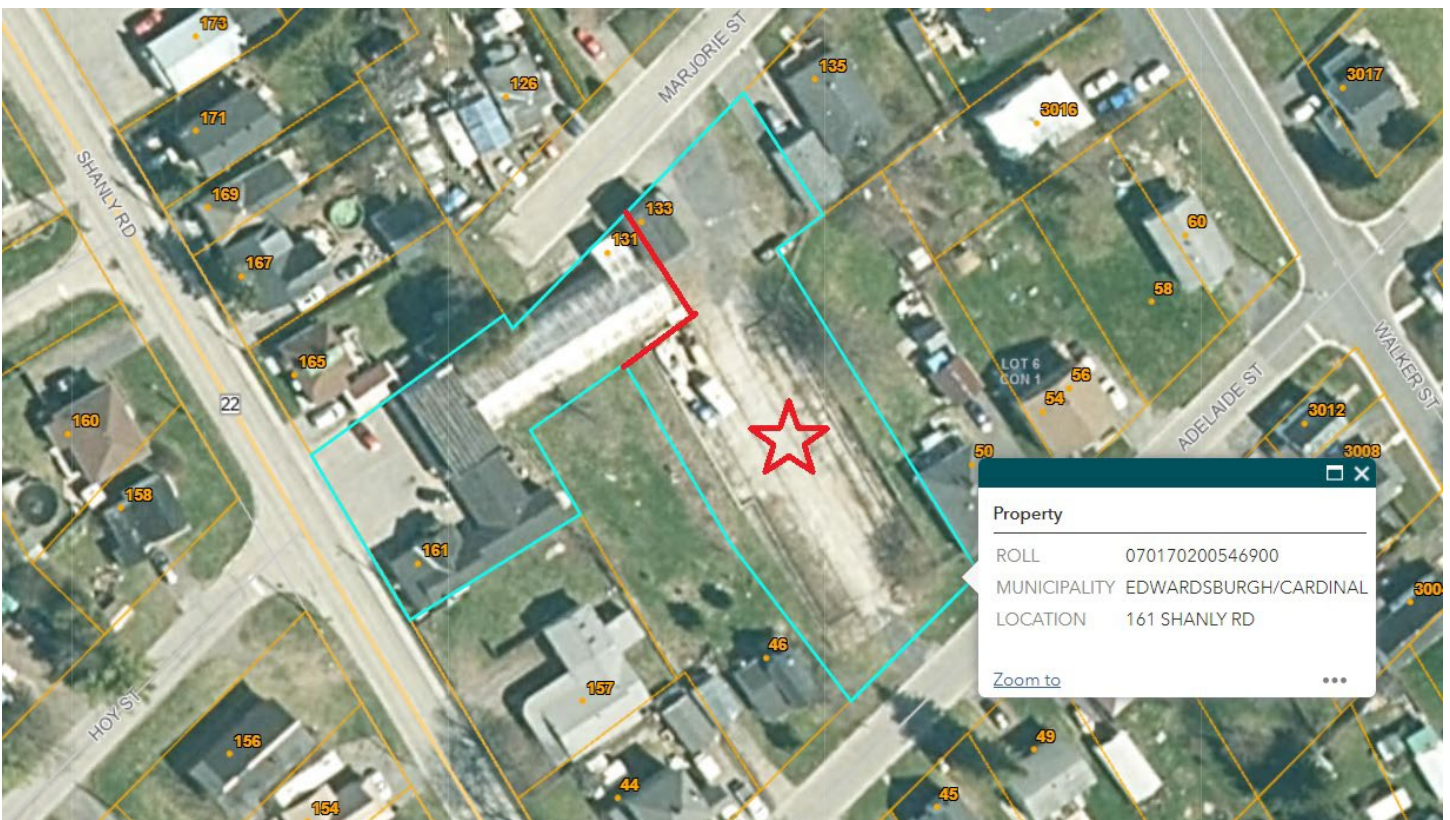
P1



Subject Site Location – Google Maps



Subject Lot Boundary – County GIS





## Existing Site Entrance – Goole Maps / Streetview



## Walker Road / Marjorie Street East Intersection



# HCS7 Two-Way Stop-Control Report

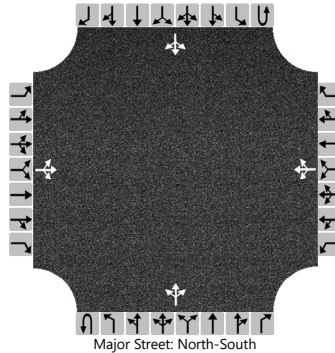
## General Information

Analyst	Matthew McIntosh
Agency/Co.	The Greer Galloway Group
Date Performed	11/6/2023
Analysis Year	2023
Time Analyzed	PM Peak
Intersection Orientation	North-South
Project Description	161 / 163 Shanly Road Development

## Site Information

Intersection	Walker / Marjorie
Jurisdiction	Cardinal
East/West Street	Marjorie Street East
North/South Street	Walker Street
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	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	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		3	0	1		3	0	1		3	12	0		2	6	2
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type   Storage	Undivided															

## Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

## Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			4				4			3				2		
Capacity, c (veh/h)			993				992			1605				1599		
v/c Ratio			0.00				0.00			0.00				0.00		
95% Queue Length, Q <sub>95</sub> (veh)			0.0				0.0			0.0				0.0		
Control Delay (s/veh)			8.6				8.6			7.2				7.3		
Level of Service (LOS)			A				A			A				A		
Approach Delay (s/veh)	8.6				8.6				1.5				1.5			
Approach LOS	A				A											