

Transportation Impact Assessment for

Proposed Gas Station at 1043 Division St. Cobourg, ON

Ref. No: MT21-03-36A

May 3, 2021

2804830 Ontario Inc.

By Frontop Engineering Limited





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EXECUTIVE SUMMARY

This Transportation Impact Assessment (TIA) report has been prepared for the project at 1043 Division Street. The subject site is surrounded by the following facilities:

- A South-North bound street;
- None residential developments in the vicinity

As per the corresponding policies of Communications Department in County Cobourg, the traffic components and volume as well as the trend in horizontal year are evaluated. The conclusions and recommendations of this assessment can be summarized as follows:

The weekday peak hour total traffic volumes along Division Street are anticipated to be within the City's ATM thresholds, and overall capacity thresholds for a local roadway.

The additional traffic generated by the proposed development during the weekday peak hours is not anticipated to have a significant impact on Division Street, nor on intersection operations within the study area. All study area intersections are anticipated to continue to operate with a supposed LOS F or D during weekday peak hours.

1.0 Introduction

This report presents the achievements of a traffic impacts study that has been conducted for the Proposed Gas Station at 1043 Division St. Cobourg, ON (referred to as the "Site" from herein). Frontop Engineering Limited was retained by 2804830 Ontario Inc. to complete this traffic impact assessment (TIA).

This report shall evaluate the traffic in horizontal year, and recommend the way to reduce the impacts on transportation in accordance with the policies and demands of the communications department of County Cobourg.



The proposed build lot, located at west side of 1043 Division Street, which is currently a vacant area with roughly rectangular in shape and 3,300 square meters in area. Refer to Figure 1 for location of the development site.



Figure 1 - Location of the Site

2804830 Ontario Inc. intends to develop the spare land, and a separate Transportation Assessment Study is needed to support of the implementation.

The site Plan is shown in Figure 2.



Figure 2 - Site Plan

The following table1 shows the resultant unit count in the plan.

Lot Area (m ²)	Frontage (m)	Proposed building GFA (m ²)	Proposed Canopy GFA (m ²)
3295	34.4	210	200

Table 1 - Unit Count of the Plan

2.0 Current Situation

The key roadways in the vicinity are shown in Figure 1. The only road involved in the area is Division Street. They have been identified as the roads most directly affected by trips generated in the site. All the roads within the study area fall under the jurisdiction of the Town of Cobourg.

Division Street is a local roadway that runs on a North-South alignment from the north end of Baltimore Street. It has a 4- lane with one sidewalk/curb on the west side. Division Street has a supposed speed limit of 60km/hr and is designated as a local artery road.

The primary entrance to the site is found on the west side of Division Street.



2.1 Traffic Conditions

2.1.1 Intersections



Figure 3 - Division/ Densmore road

The intersections along Division Street have stop controls for the road.

Division/Densmore Road (Veronica Street)

- Signalized intersection
- One left-turn lane in all directions

Division/Patterson Street (Veronica Street)



Figure 4 - Division/Patterson Street

- Signalized intersection
- One left-turn lane in all directions

2.1.2 Signage and Pavement Markings

Regulatory signage and pavement markings are in accordance with Town of Cobourg and MTO requirements. MTO will be updating the signage and pavement markings in the vicinity of the interchange.

2.1.3 Pedestrians, Cyclists and Transit

Sidewalk is currently only provided on west side of Division Street. There are no other sidewalks along Densmore Road, Veronica Street and Patterson Street in this area.

Within the study area, bike lanes and cycling tracks are not provided.

There are also no Transit stops in the vicinity of the subject site that is discussed in the subject site.

2.1.4 Existing Traffic Volumes

Weekday traffic counts were obtained from the Town of Cobourg at the study area intersections to determine the existing pedestrian and vehicular traffic volumes.

	All Motorized vehicle AADT			
Intersection	Volume	Truck/day	Pedestrians/day	Bicycles/day
401/Baltimore St.	43550	4185	0	0
Division/Patterson	9856	320	56	21

Table2 - Intersection Total Traffic Volume (2019)

2.1.5 Collision Records

Historical collision data from January 1st, 2015 to December 31st, 2018 was obtained from the City's Public Works and Service Department for the study area intersection.



Accident Location		Total numb	er of collisions	
	Incidents	Parties	Injuries	% Injuries
Division/Densmore	0	0	0	0
Division/Elgin	3	6	0	0

Table 3 - Reported Collisions from 2020(January 1st to June 30th)

• Division Street/Densmore

No collisions were reported at this intersection over the period from January to June in 2020.

• Division Street/Elgin Street

Three collisions were reported from January to June in 2020, but no injuries caused.

2.2 Planned Conditions

The Town of Cobourg's County Official Plan 2016, Land Use Plan & Transportation Network Plan will have little impacts on the implementation of the project along Division Street.



Figure 5 - Transportation Network



Figure 6 - Land Use in Cobourg

2.3 Study Area and Time Periods

The study area intersections include the proposed accesses and following intersections:

Division Street/Densmore Street,

The selected time periods for the analysis are the weekday AM and PM peak hours, as they represent the 'worst case' combination of site generated traffic and adjacent street traffic. Analysis will be completed for the 2022 build-out year (supposed) and 2030 horizon year.

Weekday AM peak: 1232 vehicles per hour

Weekday PM peak: 1466 vehicles per hour

3.0 Travel Demand Forecasting

3.1 Development-Generated Traffic

The trip generation for this development was computed based on the 10th edition of the ITE Trip Generation Manual. The expected trips generated by the site were computed based on assuming the entire gross floor area can only be canopy area, and regarding to the existing three neighbor 8 •



gas station along the Division Street. The trip generation calculations are provided in Table 4 below.

Table 4 - Trip Generation	Calculations
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Land Use	Code	1000sq-ft GFA	Period	Trips
Gas Station	945	2.15	AM	46
	/	2.10	PM	48

The total expected trips generated as a result of the site at 1043 Division Street are summarized in Table 5.

Period	Total	Inbound	Outbound
AM	46	25	21
PM	48	26	22

3.2 Trip Distribution

Based on the trips generated results, no traffic assessment is required when the estimated trip generation is at or below the 75 vph site generated traffic threshold. As such, since the site generated traffic was calculated to be 46(48) vph during the peak hour, which means no further traffic assessments are required by the Town of Cobourg.

3.3 Background Traffic

A review of historic traffic counts, as well as Master Plan of the Town of Cobourg was reviewed to determine an appropriate background growth rate along the study area roadways.

Based on the historic traffic counts (2016, 2017, 2019, and 2020 at Division Street/Densmore Street), traffic volumes generally maintain stable along the study area roadways. This is consistent with the 2031 Transportation Master Plan, which suggests no growth along the study area roadways.

4.0 Conclusions and Recommendations

The weekday peak hour total traffic volumes along Division Street are anticipated to be within the ATM (Active Traffic Management) thresholds, and overall capacity thresholds for a local roadway.

The additional traffic generated by the proposed development during the weekday peak hours is not anticipated to have a significant impact on both Division Street and other streets related to, nor on intersection operations within the study area. All study area intersections are anticipated to continue to operate with a supposed LOS F or D during weekday peak hours.

Yours truly,

Frontop Engineering Limited

Andy Zhong

Traffic Analyst

Chengyu Liu P. Eng

Frank Feng P. Eng

Senior Engineer

President



APPENDIX A

DRAWING LEGEND



SURFACE COVER (EXISTING) SURFACE COVER (PROPOSED) HYDRO POLE / LIGHT POLE FIRE HYDRANT WOOD FENCE (PROPOSED) CONTOUR LINES (EXISTING) TOPO ELEVATION (EXISTING) TOPO ELEVATION (PROPOSED) DRAINAGE ARROW SWALE (EXISTING) SWALE (PROPOSED) ----- SF ----- SILT FENCE (PROPOSED) $\longrightarrow - \longrightarrow -$ SANITARY LINE (EXISTING) → STORMWATER LINE (EXISTING) STORMWATER LINE (PROPOSED)

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SCALE - 1:200



1043 DIVISION S	TREET	- DC ZON	IING CHAF	RT
ITEM	ZONIN	IG BY-LAW	PROVIDED	COMPLIANCE
LOT AREA	7	'40m²	3295m ²	Y
LOT COVERAGE	20	% MAX.	6.4%	Y
LOT FRONTAGE (DIVISION STREET) 38	m MIN.	34.4m	Ν
LANDSCAPED OPEN SPACE	15	5% MIN.	43%	Y
BUILD	DING S	TATISTIC	<u>S</u>	
MINIMUM FRONT YARD		3m	3m	Y
MINIMUM REAR YARD		7.5m	47.8m	Y
MINIMUM INTERIOR SIDE YARD		0m	0.5m	Y
MINIMUM EXTERIOR SIDE YARD		3m	N/A	N/A
MAXIMUM BUILDING HEIGHT	4 5	STOREYS	1 STOREY	Y
GAS CA	ANOPY	STATIST	ICS	
MINIMUM FRONT YARD		3m	8.3m	Y
MAXIMUM FRONT YARD		15m	8.3m	Y
MINIMUM REAR YARD		7.5m	35.2m	Y
MINIMUM INTERIOR SIDE YARD		7.5m	10.3m	Y
MAXIMUM BUILDING HEIGHT	2 5	STOREYS	5.3m	Y
PUMP ISLAND SETBACK		6m	11.6m	Y
PARKIN	IG REC	UIREMEN	NTS	
ITEM R	ATIO	ZBL	PROVIDED	COMPLIANCE
VEHICLE FUELING STATION 2/	/PUMP	8	8	Х
TAKE-OUT FOOD (0 SEAT)	:9m²	11	11	Х
BARRIER FREE SPACES 1	:<20	1	1	Х

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