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11 March 2020
Project: 200038

Shawn Allen
PO Box 86
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Dear Mr. Allen:

**RE: TRAFFIC IMPACT BRIEF – OPA, ZBA, AND DRAFT PLAN OF SUBDIVISION,
PROPOSED 16-UNIT RESIDENTIAL SUBDIVISION, 45 BISHOP STREET,
LAKEFIELD, ON**

The purpose of this letter is to provide an opinion as to whether the vehicular traffic that would be generated by the proposed residential development can be accommodated by the local road network.

Background

The subject site is a vacant property situated at the municipal address 45 Bishop Street, Lakefield, Township of Selwyn, Peterborough County. The proposed development would include a road connection between Bishop Street and the southern portion of this vacant property where eight residential townhouses and eight semi-detached residential dwellings would be developed around a cul-de-sac. It is understood that Township staff have requested this Traffic Impact Brief to confirm that the traffic generated by the proposed development could be accommodated on Bishop Street.

Existing Conditions

Bishop Street is an east-west, two-lane road located at the south end of the urban area of Lakefield. To the west, it terminates as a T-intersection with Concession Street, and approximately 360 metres to the east, it terminates at a dead end. The T-intersection at Concession Street is controlled by a stop sign on the Bishop Street westbound approach.

Bishop Street functions as a Local road providing access to the local residences. Based on a desktop review of available aerial photography, there are 30 single-family homes fronting on Bishop Street with 19 along the north side and 11 along the south side.

Traffic

The weekday AM peak hour, PM peak hour, and daily traffic that would be generated by the existing single-family homes and the proposed development has been estimated based on trip generation information contained in the current Institute of Transportation Engineers (ITE) Trip Generation Manual (10th edition). **Table 1** provides a summary of this information.

Residential Development ¹	Weekday					
	AM		PM		Daily	
	In	Out	In	Out	In	Out
Existing 30 single-family	6	16	19	11	140	140
<i>Proposed 8 semi-detached</i>	2	4	5	3	40	40
<i>Proposed 8 townhouses</i>	1	3	3	2	30	30
Sub-Total Proposed	3	7	8	5	70	70
Grand Total	9	23	27	16	210	210

¹Trip generation based on average trip rates for ITE Land Use Codes 210 "Single-Family Detached Housing" for single family and semi-detached homes and 220 "Multifamily Housing (Low-Rise)" for townhouses. Daily trip estimates are rounded to the nearest 5.

As shown above, the estimate of existing traffic represents a total of approximately 20 and 30 vehicle trips in the weekday AM or PM peak hours, respectively. This represents the traffic on Bishop Street just east of Concession Street where all trips are concentrated. This is a very low traffic volume with an average of approximately one vehicle every two or three minutes.

The proposed development would add a total of approximately 10 and 15 vehicle trips in the weekday AM and PM peak hours, respectively. The combination of existing and proposed development trips would be totals of approximately 30 vehicle trips in the AM peak hour (approximately one vehicle every two minutes on average) and 45 vehicle trips in the PM peak hour (approximately one vehicle every minute and 20 seconds on average). This also represents a very low volume at the busiest location on Bishop Street just east of Concession Street.

At the Bishop Street intersection, the proposed development would result in very small increases in the AM or PM peak hour turning movements (maximums of 3 to 8 per hour for any specific left or right turn movement to/from Concession Street). This nominal increase in turning movements would have a negligible impact on intersection traffic operations and would not be expected to require auxiliary turn lanes or a higher form of intersection traffic control than the existing stop sign.

With regard to the daily traffic volume, the estimate for existing conditions is 280 vehicle trips (two-way total) and for future conditions with the proposed development would be 420 vehicle trips (two-way total). Again, this would be at the west end of Bishop Street at Concession



Street, with the volume decreasing between this location and the dead end to the east. This can be compared to daily traffic volume guidelines in the Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads (2017) where the upper threshold for roads providing a Local function is 1,000 vehicles per day (two-way trips). Therefore, the estimated daily traffic volume on Bishop Street with the proposed development would be well within the guidelines for a Local road.

Conclusions

The conclusions of the Traffic Impact Brief are as follows:

- ▶ The estimated AM and PM peak hour traffic volumes for Bishop Street under existing conditions are very low and the daily traffic volume is well within the TAC guidelines for Local roads;
- ▶ The estimated AM and PM peak hour traffic volumes for Bishop Street with the combination of existing and proposed residential development would also be very low and the daily traffic volume would remain well within the TAC guidelines for Local roads;
- ▶ The proposed development would have a negligible impact on traffic operations at the Concession Street/Bishop Street intersection, and therefore, would not be expected to require improvements such as auxiliary turn lanes or a higher form of traffic control than the existing stop sign on the Bishop Street approach; and
- ▶ From a traffic perspective, the planning applications for the proposed development should be approved.

If you have any questions or comments regarding the Traffic Impact Brief, please contact the undersigned.

Yours truly,

PARADIGM TRANSPORTATION SOLUTIONS LIMITED



Garry Pappin
LEL
Senior Project Manager

