



November 23rd, 2022

JDE Project 22061

Salter Pilon Architecture

151 Ferris Lane, Suite 400
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**RE: Traffic Letter
Victoria Village Manor, City of Barrie**

On behalf of **Salter Pilon Architecture** [the Client], **JD Northcote Engineering Inc.** [JD Engineering] is pleased to submit the following Traffic Letter in support of the proposed redevelopment of Victoria Village Manor, located in the northwest corner of the Toronto Street / Ross Street intersection in the City of Barrie [City].

1.0 Project Background

The subject site is bound by Ross Street to the south, existing residential lands and Toronto Street to the east, Wellington Street West to the north, and existing residential lands, Ross Street and Wellington Street West to the west.

Figure 1 illustrates the location of the subject site in relation to the surrounding area.

The existing Victoria Village development includes an eight storey building with a gross floor area of 203,000 sq.ft., including the following:

- 128 bed long-term care facility;
- 73 life lease units;
- Supporting functional spaces and administrative offices for the above noted uses; and
- 19,000 sq.ft. ground floor commercial space.

The existing building includes two full-movement access driveways onto Toronto Street [collectively, East Access], one full-movement access driveway onto Wellington Street West [North Access], one full-movement access driveway onto Ross Street opposite Parkside Drive [Southwest Access] and two additional full-movement accesses driveways onto Ross Street [collectively, Southeast Access].

The proposed redevelopment concept includes an additional building with the breakdown of uses currently unknown. The proposed redevelopment is anticipated to maintain the existing development Site Access driveways.



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The scope of this Traffic Letter is limited to a review of the existing capacity of the Site Access driveways and surrounding road network. A subsequent study will be provided to analyse the additional traffic generated by the proposed redevelopment.

Figure 1 – Site Location and Study Area



2.0 Street and Intersection Characteristics

Wellington Street West is an arterial road with an urban cross section and a sidewalk on both sides of the road. Wellington Street West is a four-lane road west of Sunnidale Road, and a two-lane road east of Sunnidale Road. Wellington Street West has a posted speed limit of 50km/h and is under the jurisdiction of the City.

Ross Street is a major collector road with an urban cross section and a sidewalk on both sides of the road. Ross Street is a three-lane road west of Parkside Drive, and a two-lane road east of Parkside Drive. Ross Street has a posted speed limit of 50km/h and is under the jurisdiction of the City. Ross Street has on-street parking on both sides of the road from Parkside Drive to Toronto Street.

Toronto Street is a minor collector road with an urban cross section and a sidewalk on both sides of the road within the study area. Toronto Street is a two-lane road north of Ross Street, and a three-lane road with on-street parking on the west side of the road, south of Ross Street within the study area. Toronto Street has a posted speed limit of 50km/h and is under the jurisdiction of the City.

Parkside Drive is a two-lane local road with an urban cross-section. Parkside Drive has a sidewalk on the west side of the road, and angled on-street parking on the east side of the road, adjacent to Queen's Park. Parkside Drive has a posted speed limit of 50km/h and is under the jurisdiction of the City.

The existing lane configuration within the study area is illustrated in **Figure 2**.

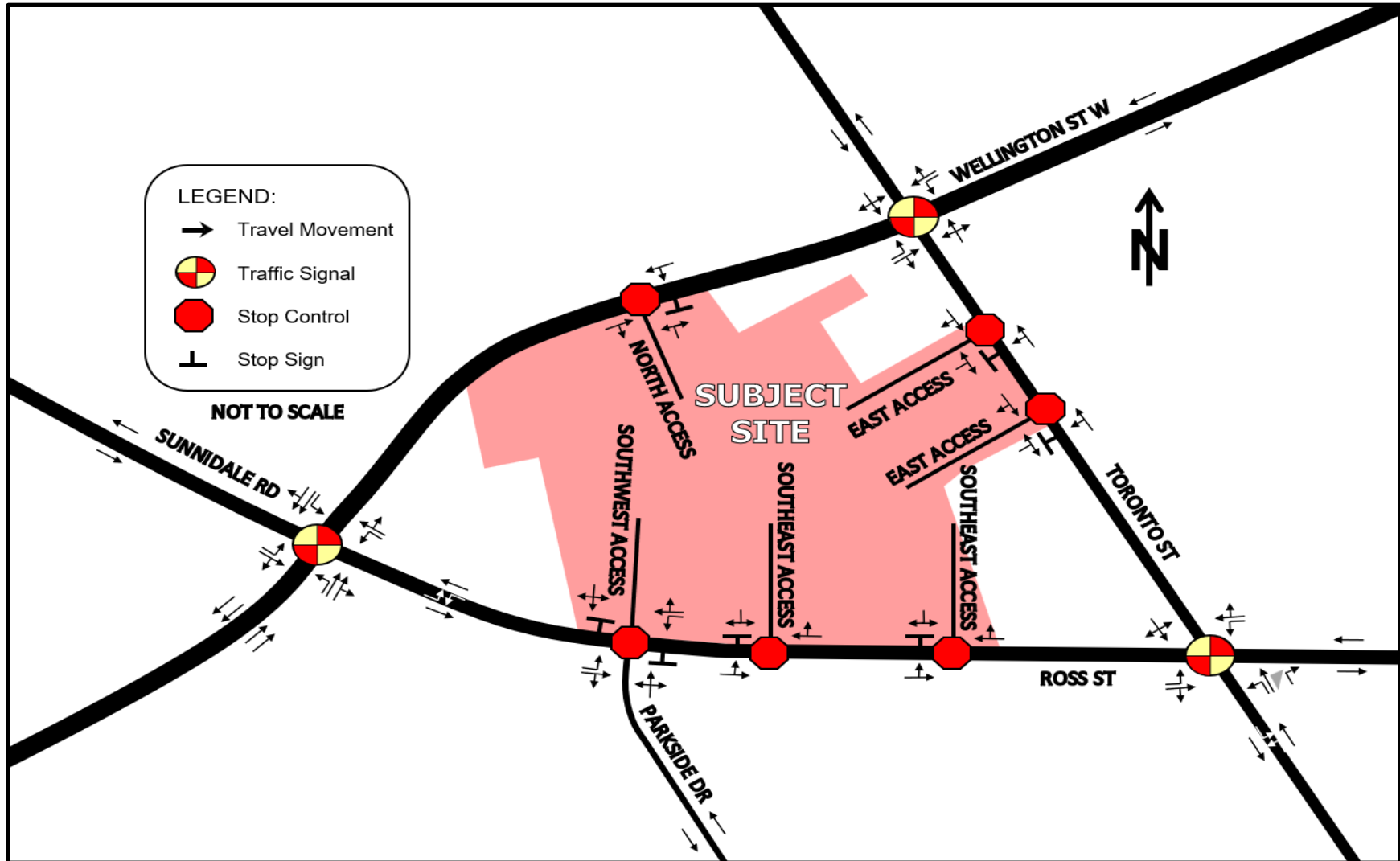
3.0 Local Transportation Infrastructure Improvements

Based on the City's Transportation Master Plan (April 2019) [TMP] and the City's 2022-2031 Capital Plan, the following improvements are anticipated to be completed within the study area:

- Wellington Street West (from Sunnidale Road to Bayfield Street) – after 2031
 - Widening to include a two way left turn lane [TWLTL], one through lane in each direction and bike lanes on both sides of the road.
- Wellington Street West (from Sunnidale Road to Anne Street North) – after 2031
 - Road diet to include a TWLTL, one through lane in each direction and bike lanes on both sides of the road.

There are no additional transportation infrastructure improvements anticipated within the study area.

Figure 2 – Existing Lane Configuration within Study Area



4.0 Subject Site Traffic Generation

The traffic generation for the subject site has been based on the Institute of Transportation Engineers [ITE] *Trip Generation Manual* (11th Edition) [ITE Trip Generation Manual]. The following ITE land uses have been applied to estimate the traffic from the proposed development:

- ITE land use 252 (Senior Adult Housing - Multifamily) – General Urban / Suburban Setting;
- ITE land use 254 (Assisted Living) – General Urban / Suburban Setting; and
- ITE land use 720 (Medical-Dental Office Building) – General Urban / Suburban Setting.

The weekday morning [AM] and weekday afternoon [PM] peak hour traffic generation for the subject site is not expected to exactly align with the AM and PM peak hour for the surrounding road network; consequently, we have applied the peak hour of adjacent street traffic values provided in the ITE Trip Generation Manual.

The estimated trip generation of the existing development is illustrated below in **Table 1**.

Table 1 – Estimated Traffic Generation – Existing Development

Land Use	Size	AM Peak Hour			PM Peak Hour		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Senior Adult Housing - Multifamily ITE Land Use: 252	73 units	5	10	15	11	8	19
Assisted Living ITE Land Use: 254	128 beds	14	10	24	12	19	31
TOTAL RESIDENTIAL		19	20	39	23	27	50
Medical-Dental Office Building* ITE land use 720	19,000 sq.ft.	47	12	59	23	52	75
TOTAL TRIP GENERATION		66	32	98	46	79	125
INTERNAL CAPTURE		-	-	-	-2	-2	-4
NET SITE GENERATION		66	32	98	44	77	121

*ITE Land use 720 was utilized for the 19,000 sq.ft. commercial space as it is most representative of the existing tenants of Victoria Village Manor

5.0 Subject Site Traffic Assignment

The ITE data provides the anticipated percentage of new traffic entering and exiting during the peak hour.

The distribution of traffic for the proposed development is based on the distribution of the City's 2031 EMME traffic projections within the study area. **Table 2** illustrates the calculation of the distribution of ingress and egress traffic for the existing development.

Table 2 – Existing Development Traffic Distribution Summary

Travel Direction (to / from)	AM Peak Hour		PM Peak Hour	
	Ingress	Egress	Ingress	Egress
West via Wellington Street West	26%	31%	29%	22%
East via Wellington Street West	32%	25%	24%	27%
North via Toronto Street	8%	7%	8%	9%
South via Toronto Street	8%	7%	10%	7%
East via Ross Street	6%	18%	12%	15%
West via Ross Street	19%	7%	9%	13%
South via Parkside Drive	1%	5%	8%	4%
TOTAL	100%	100%	100%	100%

Figure 3 illustrates the traffic assignment for the existing development. The distribution of traffic entering at each access location is based on our review of the internal parking and building layout, in conjunction with the external traffic distribution.

6.0 Traffic Impact Analysis

Table 3 illustrates the City’s two-way 2031 EMME traffic volume projections within the study area.

Table 3 – Study Area Roads – 2031 Traffic Projections

Road	AM Peak Hour	PM Peak Hour	Road Capacity
Wellington Street West	1,036	1,317	1,600
Toronto Street	271	453	1,300
Ross Road	454	718	1,300
Parkside Drive*	106	307	800

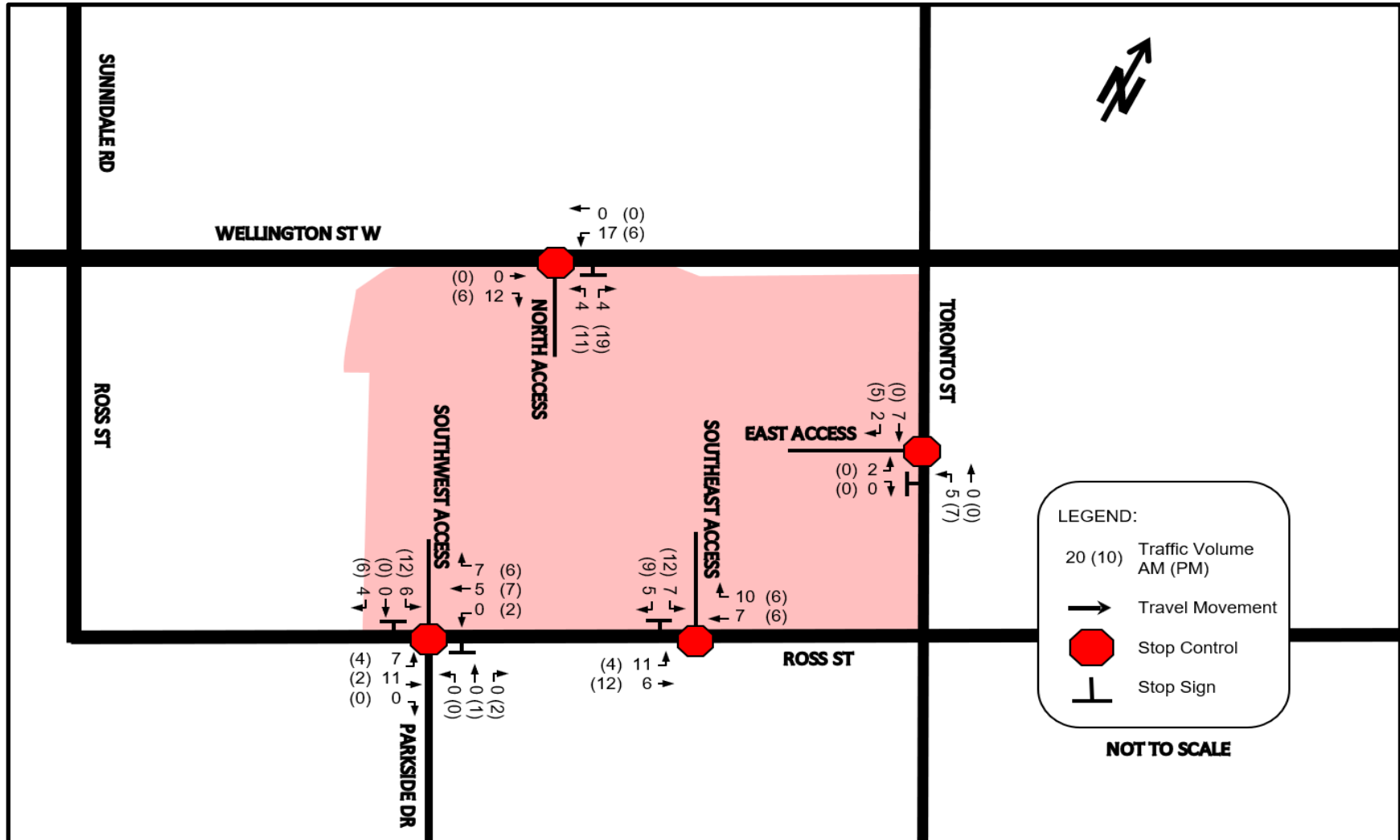
*No traffic projections were available for Parkside Drive in the City’s 2031 EMME traffic volume projections; consequently, we assumed the traffic volumes on Parkside Drive to be equivalent to Eccles Street North

A road generally has a single lane capacity of approximately 800 vehicles per lane per hour [vplph] for arterial roads, 650 vplph for collector roads and 400 vplph for local roads. Based on our review of the City’s 2031 EMME traffic volume projections, all roads within the study area have excess capacity.

The existing development is estimated to generate a total of 98 AM peak hour trips and 121 PM peak hour primary trips. Based on the number of trips utilizing each access as demonstrated in Figure 3 and the excess capacity in the surrounding road network, the existing Site Access driveways are anticipated to operate efficiently and are not anticipated to result in any traffic safety issues.

The existing road network can safely and efficiently accommodate the traffic generated by the existing development.

Figure 3 – Traffic Assignment for the Existing Development



7.0 Site Access Review

The North Access at Wellington Street West is anticipated to operate efficiently as a full-movement access, with one-way stop control for northbound movements. No lane improvements are recommended on Wellington Street West at the North Access. A single northbound and southbound lane at the North Access will provide the necessary capacity to service the existing development.

The East Access at Toronto Street is anticipated to operate efficiently as a full-movement access, with one-way stop control for eastbound movements. No lane improvements are recommended on Toronto Street at the East Access. A single eastbound and westbound lane at the East Access will provide the necessary capacity to service the existing development.

The Southeast and Southwest Accesses at Ross Street are anticipated to operate efficiently as full-movement accesses, with one-way stop control for southbound movements. No lane improvements are recommended on Ross Street at the Southeast and Southwest Accesses. A single southbound and northbound lane at the Southeast and Southwest Access will provide the necessary capacity to service the existing development.

8.0 Capacity within Study Area to Accommodate Redevelopment of the Subject Site

Based on a review of the City's 2031 EMME traffic volume projections and the number of trips utilizing each access as demonstrated in Figure 3, all Site Accesses and study area roads are anticipated to have excess capacity to accommodate additional traffic from the redevelopment of the subject site.

9.0 Conclusion

This chapter summarizes the conclusions and recommendations from the study.

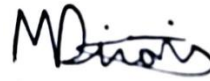
- 1) The existing road network is anticipated to safely and efficiently accommodate the traffic generated by the existing development
- 2) The configuration of the Site Accesses driveways provides the necessary capacity to service the existing development.
- 3) No infrastructure improvements are required within the study area as a result of the operation of the existing development.
- 4) The Site Access driveways and the surrounding road network are anticipated to have excess capacity to accommodate additional traffic from the redevelopment of the subject site.

We trust you will find this submission acceptable. Should you have any questions or concerns or require any additional information in this regard, please contact our office.

Yours truly,
JD Northcote Engineering Inc.



John Northcote, P.Eng.
President



Maitham Dinani



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