



May 10th, 2017

JDE Project 1704

Ada Homes Ltd.

1 Channen Court
Barrie, ON L4M 6T4

**RE: Traffic Brief
760 Mosley Street, Town of Wasaga Beach**

On behalf of **Ada Homes Ltd.** [the Developer], **JD Northcote Engineering Inc.** [JD Engineering] is pleased to submit the following Traffic Impact Assessment in support of the proposed residential development located south of 18th Street North between Mosley Street and Dunkerron Avenue in the Town of Wasaga Beach [Town], County of Simcoe [County].

1.0 Project Background

The subject site is municipally known as 760 Mosley Street and 3 Dunkerron Avenue.

The subject site is bound by 18th Street North to the north, Mosley Street to the east, Dunkerron Avenue to the west and existing commercial development (motel) to the south.

Figure 1 illustrates the location of the subject site and local road network in relation to the surrounding area. The proposed development consists of 14 residential townhouse units. The subject site will maintain a full movement driveway access onto Mosley Street [East Access] and another onto Dunkerron Avenue [West Access].

The Site Plan for the proposed development is provided in the **Appendix**.

The Developer has retained JD Engineering to prepare this Traffic Impact Assessment in support of the proposed development.

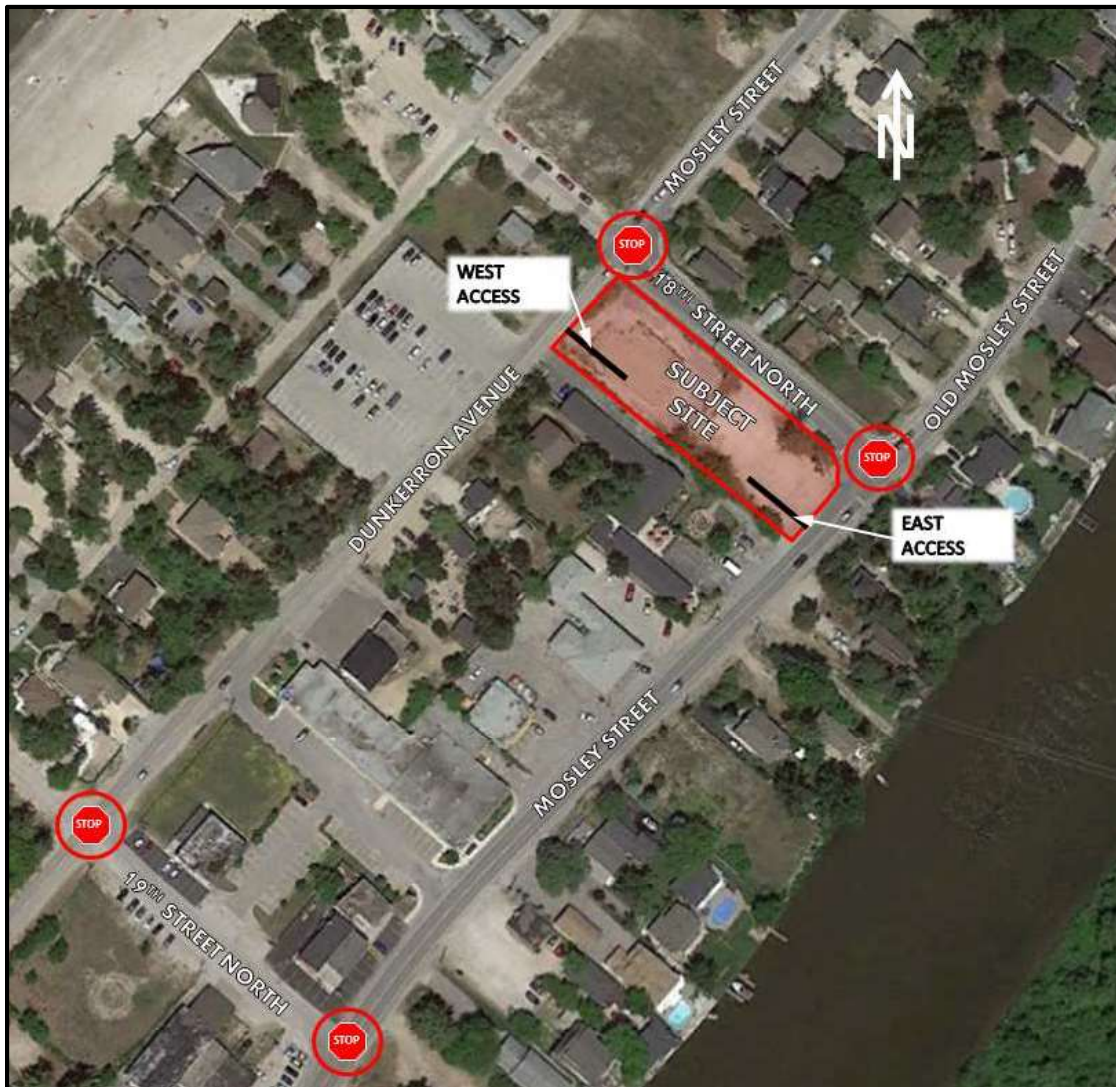
The scope of the Traffic Impact Assessment is limited to a preliminary review of the additional traffic at the East and West Access driveways.

It has been assumed that, should all approvals be granted, build-out of the proposed development will occur in 2018.



JD Engineering Inc.
Phone: 705.725.4035
Email: Info@JDEngineering.ca

Figure 1 – Site Location and Study Area



2.0 Street and intersection characteristics

18th Street North is a two-lane local road with a rural cross-section and paved shoulders and rumble strips in the study area. 18th Street North has an assumed (unposted) speed limit of 50km/h in the study area and is under the jurisdiction of the Town. There are no defined sidewalks on 18th Street North; however, the paved shoulders are used by pedestrians and cyclists, in lieu of sidewalks.

Mosley Street is a two-lane collector road with a rural cross-section and paved shoulders and rumble strips in the study area. Mosley Street has an assumed (unposted) speed limit of 50km/h in

the study area and is under the jurisdiction of the Town. There are no sidewalks on either side of Mosley Street; however, the paved shoulders are used by pedestrians and cyclists, in lieu of sidewalks.

Old Mosley Street is a two-lane collector road with a rural cross-section and paved shoulders and rumble strips in the study area. Old Mosley Street has a posted speed limit of 50km/h in the study area and is under the jurisdiction of the Town. There are no sidewalks on either side of Old Mosley Street; however, the paved shoulders are used by pedestrians and cyclists, in lieu of sidewalks.

Dunkerron Avenue is a two-lane collector road with a rural cross-section in the study area. Dunkerron Avenue has an assumed (unposted) speed limit of 50km/h in the study area and is under the jurisdiction of the Town. There are no sidewalks on either side of Dunkerron Avenue.

3.0 Local road improvements and development in the study area

Based on a review of the Town of Wasaga Beach 2012 Transportation Study Update [TMP], there are no planned transportation infrastructure improvements within the study area.

4.0 Other developments in the study area

A review of the Active Development Map from the Town shows that there are many developments in the Town; however, only a few of the proposed developments are in close proximity to the subject site.

The Perciball development is located on 18th Street North, between Shore Lane and Dunkerron Avenue. The proposed development includes seven residential condominium townhouse units.

The Tru Star development is located across the street from the Perciball development. The proposed development includes 11 residential condominium units.

The Bremont Homes development is located in the northwest corner of the Mosley Street / 20th Street North intersection. The proposed development includes 15 residential condominium units.

The above-noted adjacent developments are small infill residential developments, without significant traffic generation. Consequently, they will not have a notable impact on the local traffic volume. For the purpose of our analysis, the additional traffic generated by these developments is assumed to be captured in the local background growth rate (discussed in Section 5.0).

5.0 Existing and Projected traffic volumes

Peak Hour traffic volumes from the 2012 year at the Mosley Street / River Road West intersection are provided in the TMP¹. We have assumed that the traffic volumes at the north leg of this intersection would be similar to the traffic volume on Mosley Street adjacent to the subject site.

Based on our observations, the volume of traffic on Dunkerron Avenue is lower, and consequently less critical, than the volume of traffic on Mosley Street, in the study area.

The TMP also identifies the anticipated background growth rate as 2.14% in the Town, between 2012 and 2017. Based on the above noted data, **Table 1** illustrates the estimated the 2017 traffic volumes on Mosley Street, adjacent to the subject site.

Table 1– Peak Hour Traffic Volumes along Mosley Street

Scenario	AM Peak Hour		PM Peak Hour	
	Northbound	Southbound	Northbound	Southbound
2012	168	142	372	344
2017	187	158	414	382

6.0 Proposed development

The Institute of Transportation Engineers [ITE] produces a document entitled *Trip Generation Manual* (9th Edition), which is used to predict the number of trips associated with new developments. The ITE is a well-recognized agency throughout North America, and has completed numerous studies to identify trip rates associated with various types of developments including retail, residential, recreational, institutional, industrial, and office.

The traffic generation for the subject site has been based on the ITE Trip Generation data. The following ITE land uses have been applied to estimate the traffic from the proposed development:

- ITE land use #230 (Residential Condominium / Townhouse)

The estimated trip generation for the proposed development during the weekday morning [AM] and afternoon [PM] periods are illustrated below in **Table 2**. Although the AM and PM peak traffic generation for the subject site does not exactly align with the AM and PM peak hour in the traffic counts, for the purpose of this analysis, we have assumed the peak periods are concurrent.

¹ Traffic counts at this intersection were carried out on Thursday June 21st, 2012.

Table 2– Estimated Traffic Generation of Proposed Development

Land Use	Size	AM Peak Hour			PM Peak Hour		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Residential Condominium / Townhouse ITE Land Use: 230	14 units	1	6	7	5	3	8

The traffic distribution for the proposed development was estimated based on our experience with similar studies in the area and our site-specific review of existing and proposed local development in and around the study area. The distribution of egress trips are shown below and ingress trips are anticipated to follow the inverse of the egress distribution.

East Access (Mosley Street)

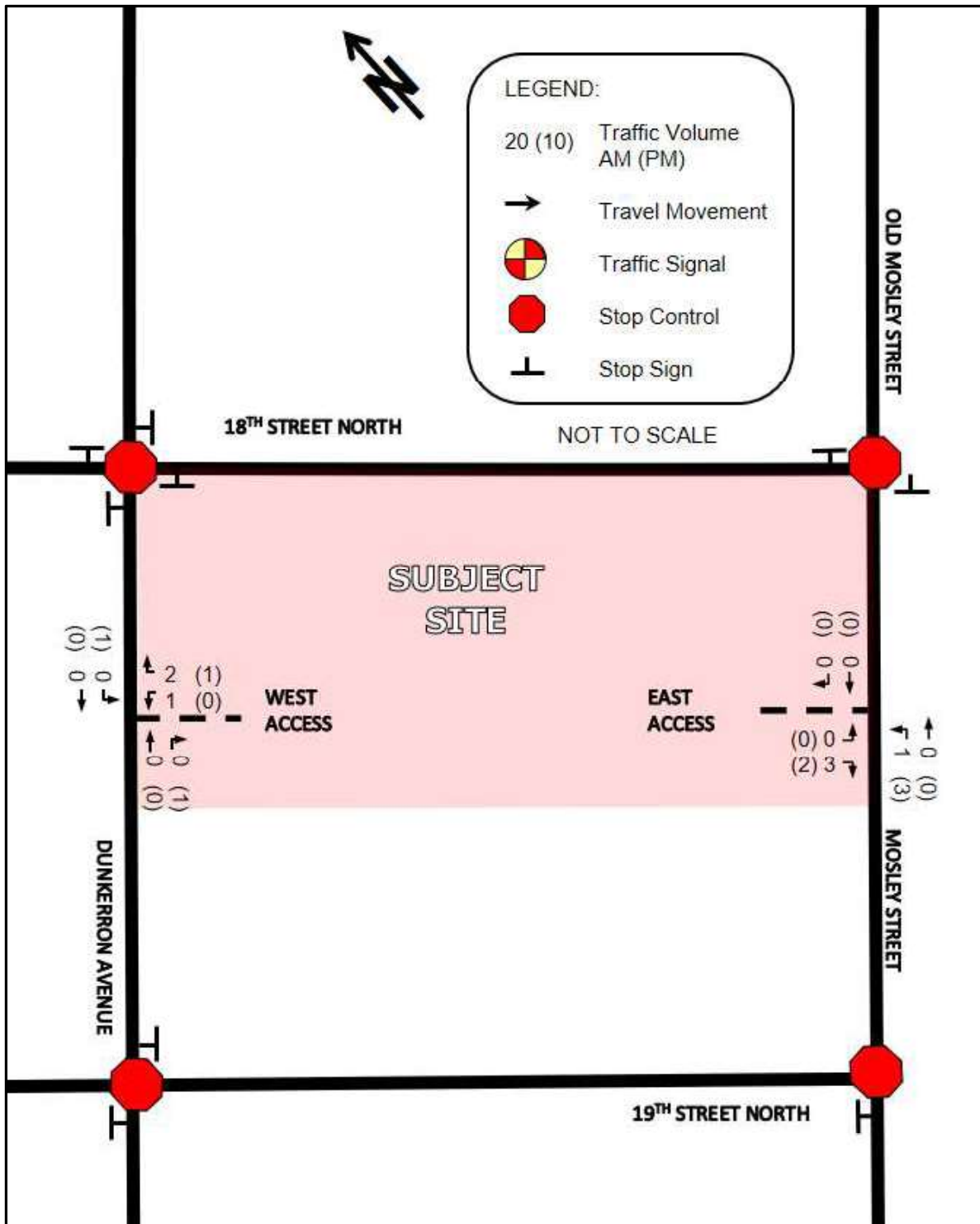
- 5% Northbound; and
- 60% Southbound

West Access (Dunkerron Avenue)

- 25% Northbound; and
- 10% Southbound

Figure 2 illustrates the assignment of traffic generated by the proposed development during the AM and PM peak hour.

Figure 2 – Traffic Assignment for Proposed Development



7.0 Sight Distance Review

A review of the available sight distance was completed for the Mosley Street / East Access and Dunkerron Avenue / West Access intersections, as part of this analysis.

The available stopping sight distance north and south on Mosley Street at the East Access driveway exceeds the minimum sight stopping distance requirements identified in TAC guidelines (Figure 2.3.3.6) for design speed of 60 km/h (85 meters).

The available stopping sight distance north and south on Dunkerron Avenue at the West Access driveway also exceeds the minimum sight stopping distance requirements identified in TAC guidelines (Figure 2.3.3.6) for design speed of 60 km/h (85 meters).

8.0 Driveway Spacing Review

The corner clearance from the East Access driveway to the 18th Street North / Mosley Street intersection (22 meters) exceeds the minimum driveway spacing requirement identified in the TAC Guidelines (Figure 3.2.8.2) for a collector road (20 meters).

The corner clearance from the West Access driveway to the 18th Street North / Dunkerron Avenue intersection (23 meters) exceeds the minimum driveway spacing requirement identified in the TAC Guidelines (Figure 3.2.8.2) for a collector road (20 meters).

9.0 Traffic impact analysis

An analysis was completed for the left turn movements on Mosley Street at the East Access driveway and on Dunkerron Avenue at the West Access driveway, based on the criteria outlined in Section E.9.1 of the Ministry of Transportation Ontario's Geometric Design Standards for Ontario Highways [MTO GDSOH]. Our analysis indicates that no additional left turn lanes are warranted as the left turn percentages are significantly less than 2.5% of the advancing traffic volumes.

For right turn movements, the criteria outlined in Section E.7 of the MTO GDSOH were applied. Based on the above-noted criteria, a right turn lane is not warranted at the East Access driveway or West Access driveway.

Based on the above-noted review of the 2017 peak hour traffic volume on Mosley Street, there is considerable excess traffic capacity available on the surrounding streets. The minor additional traffic generated by the proposed development will not adversely affect the capacity or result in any traffic safety issues on Mosley Street, Dunkerron Avenue or 18th Street North.

The proposed driveway configuration will provide sufficient capacity to service the proposed development. No traffic-related issues are anticipated as a result of the proposed spacing between

the East Access driveway and the Mosley Street / 18th Street North intersection or between the West Access driveway and the Dunkerron Avenue / 18th Street North Intersection.

10.0 Conclusion

This chapter summarizes the conclusions and recommendations from the study.

- 1) No additional infrastructure improvements are recommended within the study area as a result of the proposed development.
- 2) The configuration of the proposed East Access driveway and West Access driveways will provide the necessary capacity to service the proposed development.
- 3) The additional traffic generated by the proposed development is expected to have a negligible impact on the existing traffic operations along Mosley Street, Dunkerron Avenue and 18th Street North.

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.

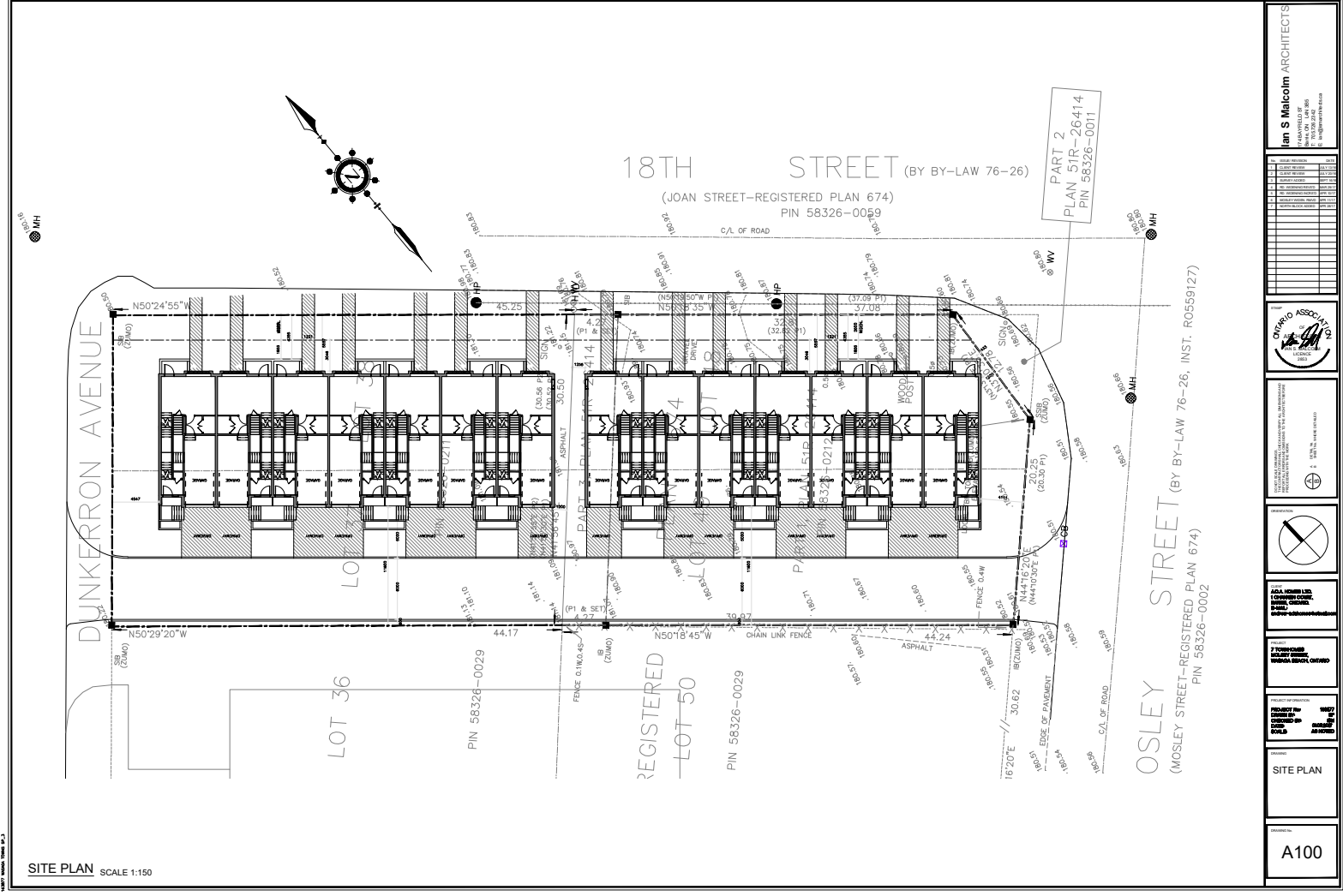
Yours truly,
JD Northcote Engineering Inc.



John Northcote, P.Eng.
President



Appendix



SITE PLAN SCALE 1:150

PART 2
 PLAN 51R-26414
 PIN 58326-0011

OSLEY STREET (BY BY-LAW 76-26, INST. R0559127)
 (MOSLEY STREET-REGISTERED PLAN 674)
 PIN 58326-0002

Ian S Malcom ARCHITECTS
 ARCHITECTS
 1404 BROADVIEW AVE
 SCARBOROUGH, ONTARIO
 M1B 5H6

NO.	DATE	DESCRIPTION



REGISTERED PROFESSIONAL ENGINEER
 CIVIL ENGINEERING
 1404 BROADVIEW AVE
 SCARBOROUGH, ONTARIO
 M1B 5H6
 IAN S. MALCOLM
 P. ENG. REG. NO. 39078



PROJECT INFORMATION
 PROJECT NO. 19007
 PREPARED BY IAN S. MALCOLM
 CHECKED BY IAN S. MALCOLM
 DATE 05/20/2019

DATE
 05/20/2019

SITE PLAN

A100