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April 29th, 2025

Reference Number: 23400

Creditmills Development Group
Oakville, ON

Dear Creditmills Development Group:

RE: Transportation Impact Study Brief

Proposed Residential Development
1295 Sixth Line, Town of Oakville

LEA Consulting Ltd. (LEA) was retained by Creditmills Development Group to conduct a Transportation Impact Study Brief (TIS Brief) for the proposed residential development located at 1295 Sixth Line (herein referred to as the "subject site") in the Town of Oakville. The subject site is located at the southeast corner of Sixth Line and Culham Street. Figure 1-1 illustrates the location of the subject site.

Figure 1-1: Subject Site Location

Source: Google Earth, accessed January 2024

By way of background, LEA has previously prepared the following reports for the subject site:

- Transportation Impact Study Brief dated February 12th, 2024.

- Transportation Impact Study Update dated November 2024 to respond to comments by the Town.

This letter has been prepared to assess the updated development proposal for the subject site and will review the existing transportation infrastructure in the surrounding area, including the road, transit, and active transportation networks. As only 30 units are proposed on-site, it is anticipated that less than 100 peak hour direction trips will be generated by the proposed development. Thus, the previous TIS Update which conducted capacity analysis for up to 70 units is considered conservative and an updated traffic analysis will not be required.

1 PROPOSED DEVELOPMENT

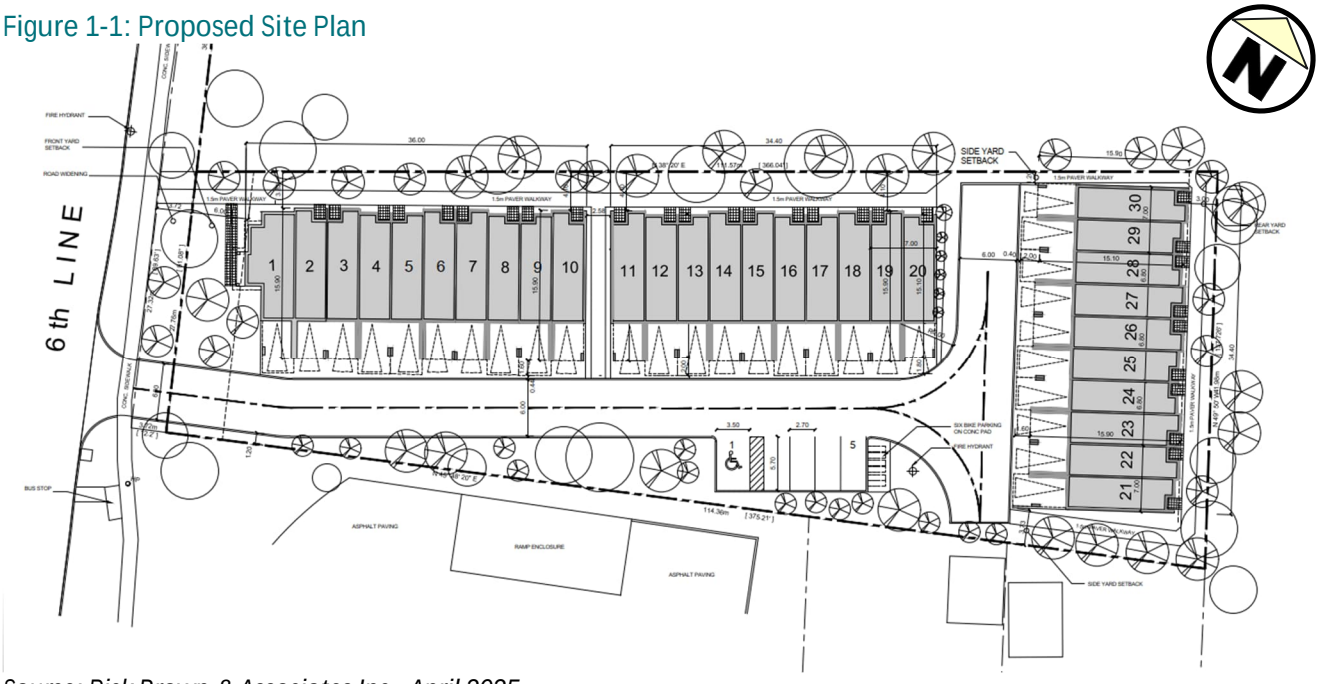
The proposed development consists of 30 townhouse units. Access to the proposed development is via Sixth Line. In total, 65 parking spaces are proposed. A comparison of the November 2024 submission and the latest site statistics is provided in Table 1-1.

Table 1-1: Site Statistics

Category	November 2024 (Previous Submission)	April 2025 Submission (Current Submission)	Change in Site Statistics
Number of Units	70 apartment units	30 townhouse units	-40 units
Vehicle Parking Supply	80 spaces	65 spaces	-15 spaces

Figure 1-1 illustrates the proposed site plan.

Figure 1-1: Proposed Site Plan



Source: Rick Brown & Associates Inc., April 2025

2 TRIP GENERATION

The vehicular trip generation for the proposed development was determined using the trip generation rates for Single-Family Attached Housing (ITE LUC 215) from the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition. Table 2-1 summarizes the trip generation rate for the subject site. To be conservative, no modal split reductions were applied. Detailed trip generation excerpts are provided in Exhibit A.

Table 2-1: Auto Trip Generation of the Subject Site

Land Use	Description	Weekday AM Peak Hour			Weekday PM Peak Hour		
		In	Out	Total	In	Out	Total
ITE LUC 215 Single-Family Attached Housing 30 units	Fitted Curve Formula – Vehicle Trips	Ln(T) = 0.92 Ln(X) – 0.26			Ln(T) = 0.88 Ln(X) + 0.06		
	Distribution – Vehicle Trips (%)	25%	75%	100%	62%	38%	100%
	Total ITE Vehicle Trips	4	14	18	13	8	21
Total Proposed Site Auto Trips		**4**	**14**	**18**	**13**	**8**	**21**

The proposed site's peak hour direction trips are forecasted to be less than 50 trips. The subject site is not anticipated to have a significant impact on the surrounding road network, and the previous analysis conducted where no constraints were identified is considered conservative and still applicable.

3 PARKING REVIEW

This section will review the bicycle parking and vehicle parking provisions for the proposed development compared to on By-law requirements.

3.1 BICYCLE PARKING REVIEW

The Town of Oakville Zoning By-Law 2014-014 was reviewed for bicycle parking requirements. No bicycle parking spaces are required for townhouses. Six (6) bicycle parking spaces are proposed adjacent to the visitor parking spaces at-grade.

3.2 VEHICLE PARKING REVIEW

The subject site governed by the Town of Oakville Zoning By-law 2014-014 and are outlined in Table 3-1 alongside the proposed parking supply. It is noted that as per the rounding provision within the By-law, if the application of any ratio in the By-law results in a fraction of a parking space, then the minimum number of spaces required was increased to the next highest whole number if the fraction was greater than 0.25.

Table 3-1: Zoning By-law 2014-014 Vehicle Parking Standards

Town of Oakville Zoning By-law 2014-014				
Land Use	Number of Units	Minimum Requirements		Proposed Parking Supply
		Parking Rate	Parking Spaces	
Townhouse Dwelling	30	2.0 spaces per unit	60	60
Visitor		0.25 spaces per unit	8	5
		Total	**68 spaces**	**65 spaces**

In total, 68 parking spaces are required. Within those 68 required parking spaces, 8 visitor parking spaces are required. The proposed development proposes to provide 65 parking spaces, with 60 residential parking spaces and 5 visitor parking spaces, meeting the minimum requirements for residential parking, with a slight deficiency of visitor parking spaces. While no barrier-free parking spaces are required for the townhouse use, one (1) barrier-free parking space has been provided.

The visitor parking proposed is deficient by three (3) spaces. This reduction is considered minor. Visitors would be able to use one of the six (6) at-grade bicycle parking spaces provided, park along neighbouring streets where on-street parking is permitted for up to three (3) hours, or use the bus with the closest bus stop immediately adjacent to the site, providing convenient access.

Additionally, it is anticipated that some dwelling units will have two (2) spaces dedicated to them and may not have two (2) vehicles in their households. For those households, visitors could park in the additional space allocated to the unit. To substantiate this assumption, LEA reviewed the Transportation Tomorrow Survey (TTS) 2016 and 2022 data to determine the average number of vehicles per household for townhouse units (see Exhibit B). The number of vehicles per household was reviewed for 2006 GTA zone of households 4029, 4030, 4031, 4036, and 4038, with results summarized in Table 3-2.

Table 3-2: Vehicle Ownership for Townhouses

Number of Vehicles	2016 TTS Data	2022 TTS Data
0	76	43
1	717	972
2	685	498
3	47	21
Total Number of Townhouses	1,525	1,534
Total Vehicle Ownership	2,228	2,031
Average Vehicle Ownership Rate (Vehicles/Unit)	**1.46**	**1.32**

Based on the TTS data, there is a downwards trend in vehicle ownership between 2016 and 2022, with the average vehicle ownership rates dropping from 1.46 vehicles per unit to 1.32 vehicles per unit. This means that on average, less than two (2) vehicles are owned per household, and visitors would be able to park within the excess spaces on occasion.

4 LOADING REVIEW

Based on the Town of Oakville Zoning By-law 2014-014, there are no minimum loading space requirements. The site will be serviced by private garbage pick-up.

5 TRANSPORTATION DEMAND MANAGEMENT (TDM)

Transportation Demand Management (TDM) refers to a set of strategies which strive towards a more efficient transportation network by influencing travel behaviour. Effective TDM measures can reduce vehicle usage and encourage people to engage in more sustainable methods of travel. There are several opportunities to incorporate TDM measures to promote alternate modes of transportation and support existing and future planned infrastructure. The recommendations should enhance non-single occupant vehicle trips for future residents of the subject site.

The following multimodal infrastructure strategies and TDM measures are recommended for consideration.

5.1 CYCLING-BASED STRATEGIES

Provision of Bicycle Parking Supply

Bicycle parking is proposed for the subject site. This will supplement the proposed vehicle parking supply. Short-term bicycle parking is provided at-grade adjacent to the visitor parking spaces.

Provision of Bicycle Repair Facilities

Providing basic equipment for keeping bicycles in good working condition can encourage residents to use the cycling networks in the vicinity of the subject site. Bicycle repair facilities include hand tools, tire gauges, and tire pumps. A bicycle repair station is proposed within the long-term bicycle parking, providing basic repair tools for residents to use for bicycle maintenance.

Promote and Increase Cycling Awareness and Multi-modal Transport

It is recommended that information packages be provided to residents of the proposed development to help encourage active transportation and increase awareness of different travel alternatives. The package should include information regarding the environmental and health benefits of cycling, rules of the road, as well as maps of active transportation infrastructure available in the surrounding area.

5.2 PEDESTRIAN-BASED STRATEGIES

Paved Walkway Along Northern End of Site

A paved walkway is proposed along the northern end of the site, providing safe and easy access to Sixth Line. This will provide convenient access for pedestrians, transit users, and cyclists via continuous sidewalks and feature landscaping to provide an overall comfortable and convenient pedestrian environment.

5.3 TRANSIT-BASED STRATEGIES

Transit Incentive Program

As PRESTO becomes a dominant form of payment for transit throughout the Greater Toronto and Hamilton Area (GTHA), it is recommended that pre-loaded PRESTO cards be offered to units in their welcome package. This incentive, coupled with the site's proximity to transit, provides an opportunity for residents to experience the benefits of using adjacent transit facilities.

5.4 IMPACT OF TDM MEASURES

The proposed TDM measures are expected to further support the site's proposed parking strategy by increasing the convenience and attractiveness of taking transit, walking, or cycling to/from the subject site. The proposed TDM measures will help further reduce vehicle activity associated with the subject site and encourage a lifestyle that largely relies upon transit and active transportation. Table 5-1 summarizes the proposed strategies and the expected auto trip reductions.

Table 5-1: Summary of TDM Strategies

Recommended TDM Measures	Benefits
Cycling-Based Strategies	
Provision of Bicycle Parking Supply	+ Support cycling as an alternative to SOV trips
Provision of Bicycle Repair Facilities	+ Reduces barriers to cycling
Promote and Increase Cycling Awareness and Multi-modal Transport	+ Encourages active transportation and increase awareness of active travel alternatives. +Spreads awareness of the benefits of cycling
Pedestrian-Based Strategies	
Paved Walkway Along Northern End of Site	+ Encourages walking and improves the pedestrian realm
Transit-Based Strategies	
Transit Incentive Program	+ Provides financial incentive to utilize transit

The combination of these TDM strategies listed above is expected to reduce the auto-dependency of residents and visitors in the subject development and encourage more sustainable travel habits.

Furthermore, it is recommended that ongoing monitoring and evaluation be undertaken to collect data and information regarding TDM performance measures. The key goal of performance measuring is to provide useful information on identifying successful program activities, improvements to existing programming, as well as the potential development of future programs. The owners should perform periodic evaluations to assess how well the TDM Programs are achieving the goal of reducing the number of single-occupant vehicle trips generated by the subject site. A baseline survey and annual monitoring for five (5) years onward is recommended to ensure effective monitoring.

6 CONCLUSIONS AND RECOMMENDATIONS

The proposed development consists of 30 townhouse units. The following conclusions are made based on the findings of this Transportation Impact Study Brief:

- The subject site is expected to generate up to 21 two-way vehicle trips during the weekday AM and PM peak hours. Given the minimal trips generated by the development, detailed capacity analysis is not necessary, and the proposed development is not anticipated to have a significant impact on the surrounding network.
- Based on the Zoning By-law, no bicycle parking spaces are required. Six (6) bicycle parking spaces are proposed to encourage active transportation.
- The proposed parking supply includes 65 vehicles spaces for residents and visitors, meeting minimum by-law requirements for residential parking. Visitor parking can be supplemented by active transportation and transit usage, as well as occasional use of residential parking spaces.
- No loading spaces are required for the subject site.
- Several transportation demand management measures are proposed to reduce single-occupancy vehicle trips generated by the proposed development. This includes cycling, transit, and pedestrian-based strategies.

Should you have any questions regarding this Transportation Impact Brief, please do not hesitate to contact the undersigned.

Yours truly,

LEA CONSULTING LTD.

Jocelyn Wallen, P.Eng.
Project Manager, Transportation Engineer

Encl. Exhibit A: Trip Generation Excerpts
Exhibit B: Transportation Tomorrow Survey Data

EXHIBIT A

Trip Generation Excerpts

Single-Family Attached Housing
(215)

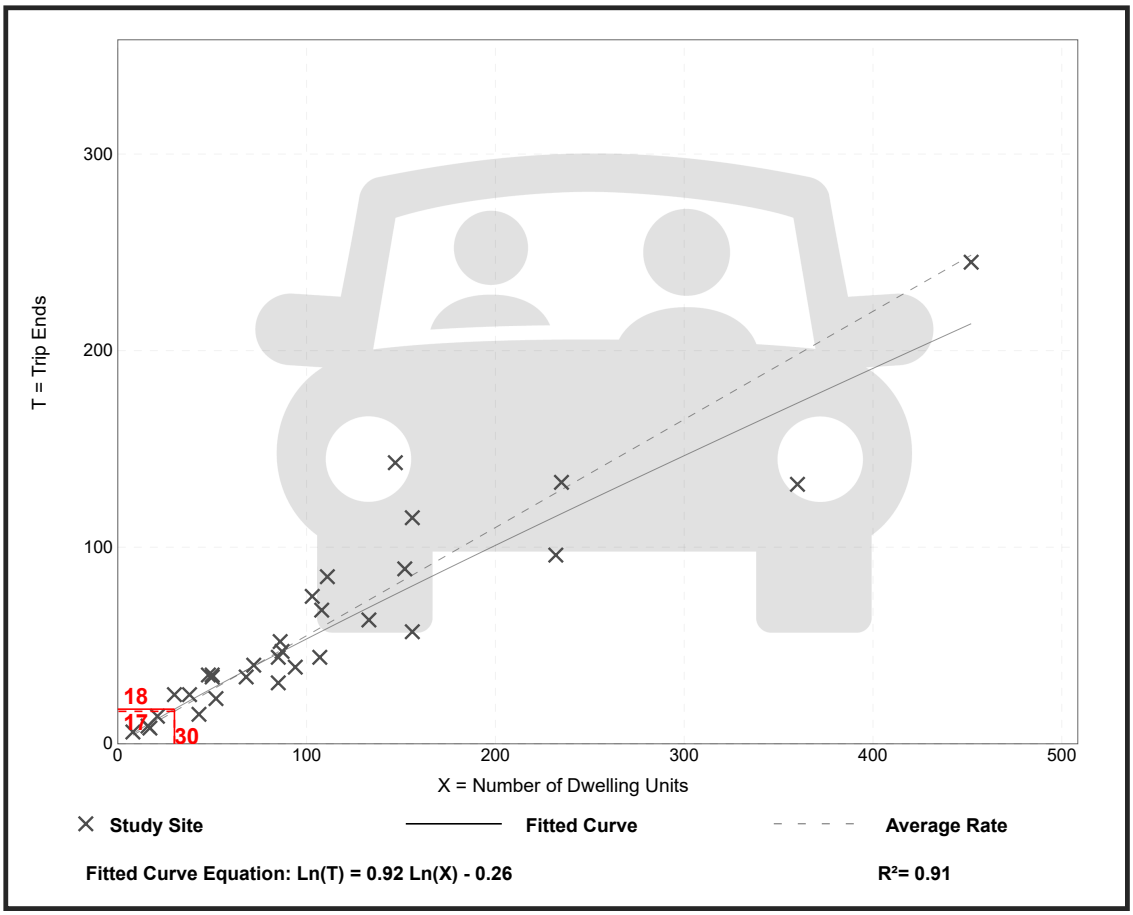
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 31
Avg. Num. of Dwelling Units: 110
Directional Distribution: 25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.55	0.35 - 0.97	0.16

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Single-Family Attached Housing
(215)

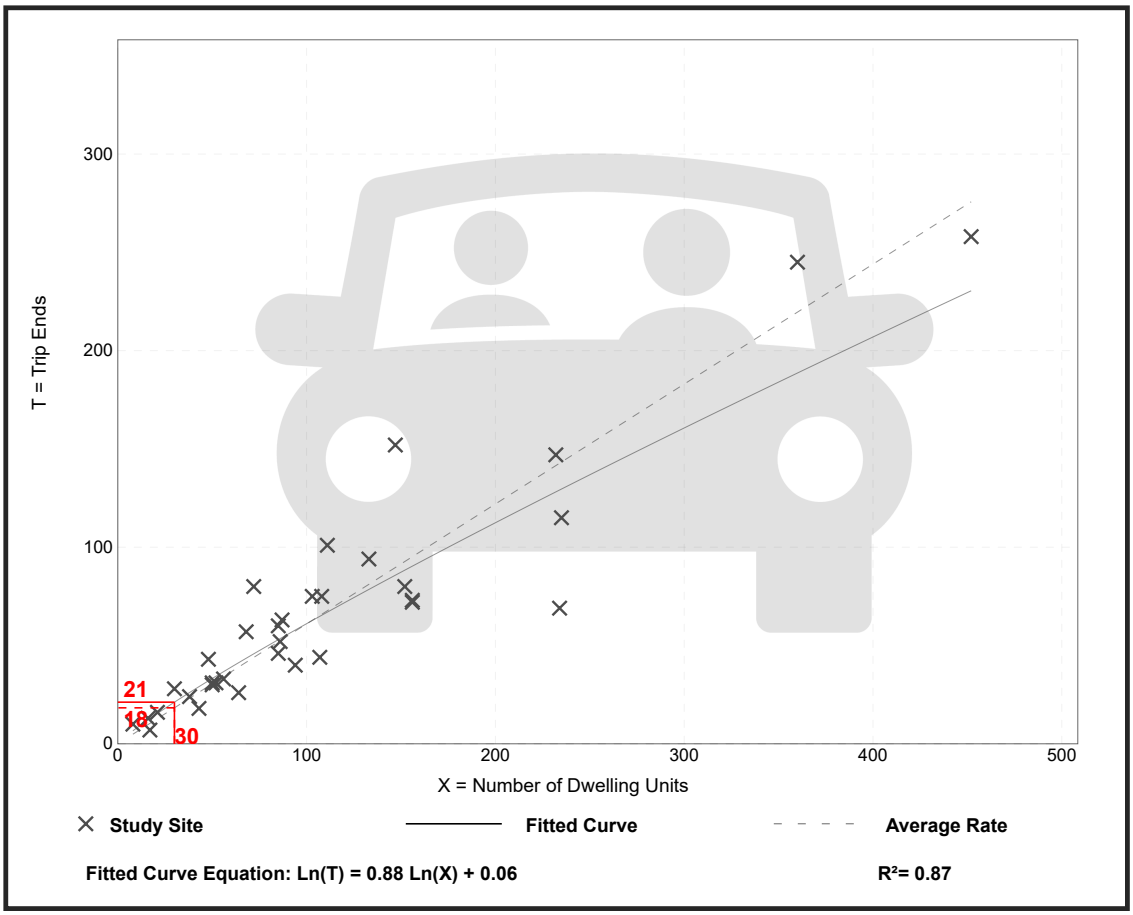
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 34
Avg. Num. of Dwelling Units: 110
Directional Distribution: 62% entering, 38% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.61	0.29 - 1.25	0.18

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

EXHIBIT B

Transportation Tomorrow Survey Data

Tue Apr 29 2025 10:44:13 GMT-0400 (Eastern Daylight Time) - Run Time: 495ms

Cross Tabulation Query Form - Household - 2016 2022

Row: Type of dwelling unit - dwell_type
Column: No. of vehicles in household - n_vehicle

Filters:
2006 GTA zone of household - gta06_hhld In 4030 4031 4038 4029 4036
and
Type of dwelling unit - dwell_type In 3

Household 2016
Table:

	0	1	2	3
Townhouse	76	717	685	47

Household 2022
Table:

	0	1	2	3
Townhouse	43	972	498	21