

Date: June 15, 2023
To: Carmine Zayoun, Wildpine Trails Inc.
From: Bomo Dambo, EIT JLR
Rani Nahas, P.Eng., JLR
CC: Raad Akrawi, Wildpine Trails Inc.
Karla Ferrey, P.Eng., JLR
Subject: 37 Wildpine Court – Trip Generation Memo
JLR No.: 29803-002

Introduction

From the information provided, it is our understanding that the proponent (Latitude Homes) has decided to move forward with a revised Site Plan for the development of their existing lands at 37 Wildpine Court in Stittsville, Ontario. The proposed site development (per the May 2, 2023, Concept Plan provided by PMA Architects) now consists of a four-storey apartment building with 94 rental units and 2 semi-detached units. Access to the apartment building is provided via a one-way looped driveway connection and access to the underground parking is provided via a full-movement driveway connection, both on Wildpine Court. The semi-detached units are also accessed via Wildpine Court. The proposed development concept plan is provided in **Appendix A**.

During the pre-consultation meeting held on May 16th, 2023, City staff indicated that a technical memorandum outlining the projected site trip generation will be required to satisfy the transportation analysis component of the application.

As such, the following technical memorandum has been prepared to determine the projected site-generated traffic from the proposed development and provide recommendations, as required.

Trip Generation Analysis

The latest Site Plan illustrates the proposed development will consist of a single mid-rise residential apartment building with 94 dwelling units and 2 semi-detached units.

Consistent with the City's Transportation Impact Assessment (TIA) Guidelines, projected site-generated traffic was estimated using appropriate trip generation rates from the latest TRANS Trip Generation Manual Summary Report, dated October 21, 2020. Based on the location and type of development envisioned, the following **Table 1** summarizes the appropriate trip generation rates for estimating projected site-generated traffic. Note that the TRANS Report does not include a trip generation rate for semi-detached units and the rate for single-detached unit was used in result.

Table 1: ITE and TRANS Peak Hour Trip Generation Rates

Land Use	ITE Land Use Code	AM Peak Hour	PM Peak Hour
Multifamily Housing (Mid-Rise)	ITE 221 TRANS Study Table 3 & 4 Person Trips	$T_P = 0.80(U) \times 0.50$	$T_P = 0.90(U) \times 0.44$
Single-Detached Housing	ITE 210 TRANS Study Table 3 & 4 Person Trips	$T_P = 0.2.05(U) \times 0.50$	$T_P = 2.48(U) \times 0.44$
Notes: T_P = Average Person Trips U = Dwelling unit The single-detached land-use was used to represent semi-detached housing			

Based on the foregoing, the projected weekday morning and afternoon peak hour person trip generation for the proposed development is summarized in **Table 2**.

Table 2: Modified Peak Hour Person Trips

Land Use	Supply	AM Peak Hour (Person Trips/h)			PM Peak Hour (Person Trips/h)		
		In	Out	Total	In	Out	Total
Multifamily Housing (Mid-Rise)	94 units	11	27	38	21	16	37
Semi-Detached Housing	2 units	0	2	2	1	1	2
Total 'New' Person Trips		11	29	40	22	17	39

As summarized in **Table 2**, the proposed development is projected to generate an approximate two-way total of 40 and 39 person trips/h during the weekday morning and afternoon peak hours, respectively. Directional splits (i.e., inbound vs. outbound trips) were obtained from the TRANS Trip Generation Manual Summary Report.

Travel Mode Shares

To determine the number of person trips arriving/departing by travel mode, total projected person trips were subdivided by percent mode shares. With respect to the TRANS Trip Generation Manual Summary Report, mode shares have been developed for select land uses, specific to City of Ottawa districts (e.g., Kanata-Stittsville, Orleans, Hunt Club, Ottawa Centre, etc.). Using mode share values for the Kanata-Stittsville district from the TRANS Trip Generation Manual Summary Report as a baseline, other key factors were also taken into consideration, including proximity and quality of transit, pedestrian and cycling facilities, purpose of trips, existing traffic studies etc., which results in mode shares slightly different than the mode shares summarized in the TRANS Trip Generation Manual Summary Report. It should also be noted that the mode shares below are an average between the morning and afternoon peak hour mode shares (e.g., people who drive to work in the morning will likely drive home in the afternoon). Therefore, the mode share for individual sites should be equivalent for the morning and afternoon peaks.

Based on TRANS mode share values for specific land uses and other key factors that can affect mode choice, the projected site-generated person trips were then subdivided into separate travel modes and summarized in **Table 3** below. Note that as the semi-detached units only generate 2 new person trips/h, it was assumed 100% of these trips would be auto-drivers.

Table 3: Projected Modal Site Generated Trips

Travel Mode	Mode Share	AM Peak Hour (Person Trips/h)			PM Peak Hour (Person Trips/h)		
		In	Out	Total	In	Out	Total
Multifamily Housing (Mid-Rise)							
Auto Driver	45%	5	13	18	10	8	18
Auto Passenger	25%	3	7	10	5	4	9
Transit	25%	3	6	9	5	4	9
Non-motorized	5%	0	1	1	1	0	1
Total Person Trips	100%	11	27	38	21	16	37
Semi-Detached Housing							
Auto Driver	100%	0	2	2	1	1	2
Total 'New' Vehicle Trips		5	15	20	11	9	20

As shown in **Table 3**, the site is projected to generate approximate two-way vehicle volumes of 20 veh/h during both weekday morning and afternoon peak hours. With regard to active modes, the proposed development is projected to generate approximately two-way person trips of 1 person/h, during both weekday morning and afternoon peak hours. With regard to transit trips during weekday morning and afternoon peak hours, the proposed development is projected to generate approximate two-way person trips of 9 persons/h during both weekday morning and afternoon peak hours.

Findings and Conclusions

Based on the foregoing, the proposed development is projected to generate 'new' two-way vehicle volumes of 20 veh/h during both weekday morning and afternoon peak hours. This equates to approximately one new car every 3 minutes and as such, the addition of this traffic is understood to be negligible.

The proposed development fits well into the context of the surrounding area and it is projected to have an acceptable impact on the surrounding transportation network. The design and location of the proposed development also serves the City of Ottawa's policies, goals and objectives. From a transportation perspective, approval of the proposed development at 37 Wildpine Court is recommended.

Sincerely,

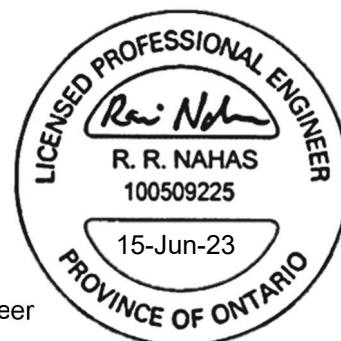
J.L. RICHARDS & ASSOCIATES LIMITED

Prepared by:



Bomo Dambo, EIT
Transportation Engineer-In-Training

Reviewed by:



Rani Nahas, P.Eng.
Transportation Engineer

Attachments