

March 21, 2024

OSO Planning and Design
206-1521 Grafton Street
Halifax, NS
B3J 2B9
Attention: Iyad Al Halis

RE: Bedford West Phase 12+1 – Traffic Impact Statement

Introduction

DesignPoint Engineering & Surveying Ltd. is pleased to submit this traffic impact study for a mixed-use development project on Larry Uteck Boulevard, Bedford. This project adds a total of 112 residential units and 10,000 ft² of commercial space.

Site Location

The site is located at PID #00645846, which is bound by Hammonds Plains Road and Larry Uteck Boulevard. There are no existing residences on the site. The site will be accessed from Larry Uteck Boulevard.

Larry Uteck Boulevard

Larry Uteck Boulevard is a two-lane arterial with a posted speed limit of 70 km/h. There is no sidewalk along this section of Larry Uteck Boulevard. There are no transit stops located near the proposed site.



Figure 1: Location of the proposed development

Site Description

The proposed development consists of 112 residential units and 10,000 ft² of commercial space. The residential units are spread over multiple buildings.

Access to the site is via driveway off Larry Uteck Boulevard. The site plan below includes a secondary access off Hammonds Plains Road that is understood to be considered for the future but will not be part of the initial site construction.



Figure 2: Proposed site plan (access to Hammonds Plains Road shown for possible future connection)

Site Trip Generation

Site generated trips have been calculated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11th Edition. The proposed development consists of a mix of multi-family units and ground floor retail space. The units have been understood to be mid-rise multi-family units (code 221) and the ground floor commercial represented with ITE Code 822 (Strip Retail Plaza under 40k GFA). The proposed development is expected to generate 59 two-way vehicle trips (22 in, 37 out) during the AM peak hour and 68 two-way vehicle trips (38 in, 30 out) during the PM peak hour.

Table 1: Site generated trip calculations

Land Use	Code	Units	Variable	Trip Generation Rates ¹						Trips Generated			
				AM Peak			PM Peak			AM Peak		PM Peak	
				Rate	In	Out	Rate	In	Out	In	Out	In	Out
Multi-Family (Mid-Rise)	221	112	Dwellings	0.37	0.23	0.77	0.39	0.61	0.39	10	32	27	17
Strip Retail Plaza (>40k GFA)	822	10	kGFA	2.36	0.6	0.4	6.59	0.5	0.5	14	9	33	33
Estimated Site Generated Vehicle Trips										24	41	60	50
Mode Share Reduction (0% Active Transportation, 5% Transit) ²										1	2	3	2
Internal Trip Capture (5% AM, 10% PM) ³										1	2	6	5
Reduction Pass-By Trips (0% - AM, 40% - PM) ⁴										0	0	13	13
Total Estimated Site Generated Vehicle Trips										22	37	38	30
Notes:		<ol style="list-style-type: none"> 1. Trip generation rates from ITE <i>Trip Generation Manual</i>, 11th Edition. 2. Non-auto mode share estimated. Transit mode share for census tract for 2016 at 2%. Transit service has increased in the area since 2016. 3. Internal trip capture has been estimated to account for residents traveling to the on-site retail locations. 4. Pass-by rate for code 821 Shopping Plaza (40-150k) has been used for Strip Retail Plaza (>40k) as no data available for code 822. 											

Site Generated Traffic Distribution

Site traffic distribution has been estimated based on connections to Highway 102, routes to major employment areas (Burnside, Downtown Halifax, Bayers Lake), and various destinations (Larry Uteck Blvd commercial area, etc.). The estimated distribution of site generated trips is shown in Figure 3. Site generated traffic has been distributed based on the estimated splits and is shown in Figure 4. Pass-by trips are included at the site access, but not at the adjacent intersection.

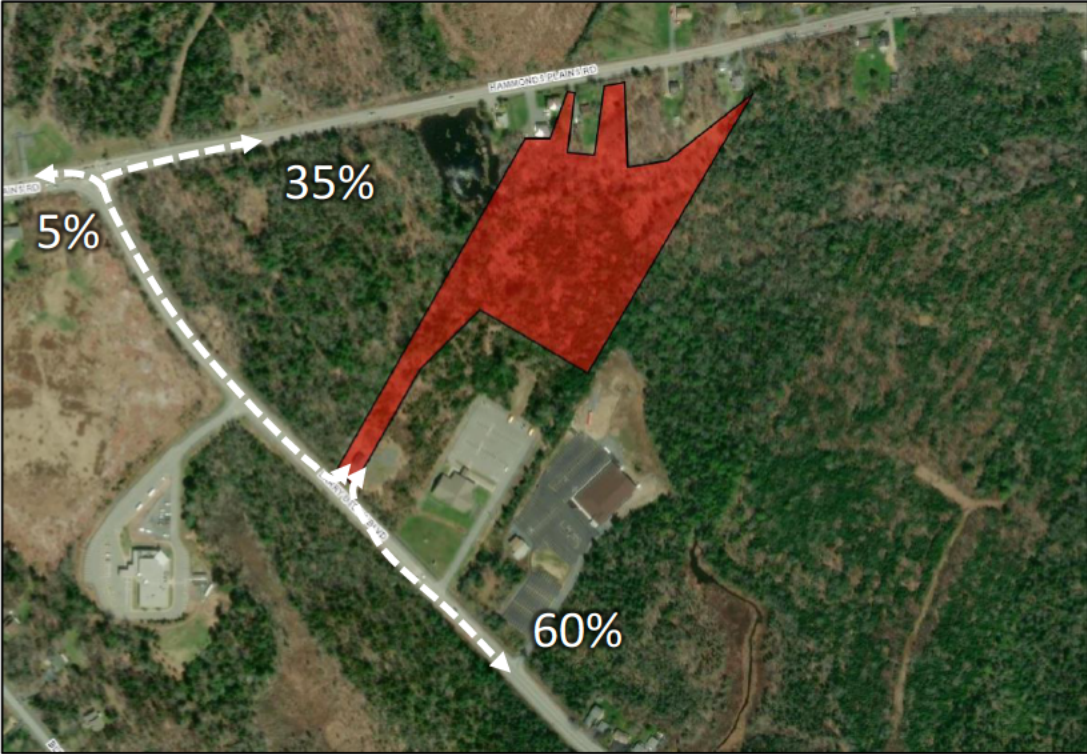


Figure 3: Estimated distribution of site generated traffic



Figure 4: Distributed site generated traffic

Access

The site will be accessed by a driveway connecting to Larry Uteck Boulevard. The driveway will be located approximately 130 m from the driveway to the St John’s Anglican Church and 115 m from the driveway to the Full Gospel Church. A site visit was completed to confirm stopping sight distances.

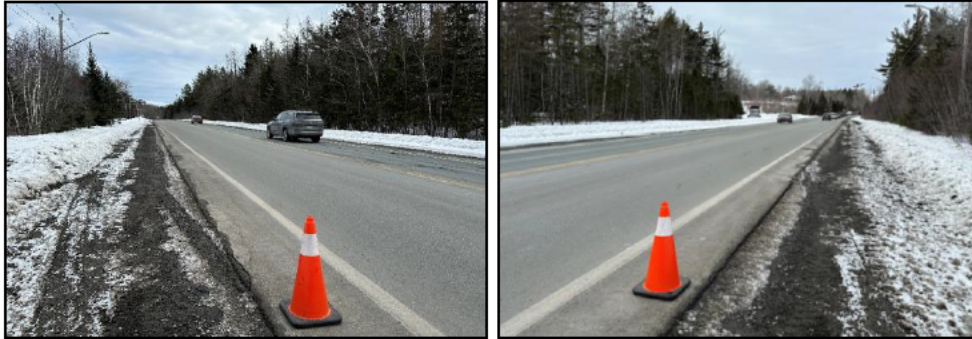


Figure 5: View from access location to the south (left) and to the north (right)

The critical sight distance for low volume driveways is stopping sight distance. Stopping sight distance is the distance travelled during the perception and reaction time and the braking distance. Minimum stopping sight distances are defined by the Transportation Association of Canada (TAC) *Geometric Design Guide for Canadian Roads*. A summary of the minimum stopping sight distances and measured stopping sight distances for the access location is provided in Table 2. The access location exceeds the minimum stopping sight distance for a 70 km/h design speed in each direction.

Direction of Travel	Minimum Stopping Sight Distance (m)	Measures Stopping Sight Distance (m)	Result
Eastbound	105	+ 150	Pass
Westbound	105	+ 150	Pass

We understand that there is an access shown on the proposed site plan representing the possibility of a future second access to Hammonds Plains Road. Should this driveway be constructed it will be subject to sight distance review and approval.

Conclusion

The proposed mixed-use development on Larry Uteck Boulevard includes 112 residential units and 10,000 ft² of retail space. A single access is proposed for Larry Uteck Boulevard. The development is expected to generate 59 two-way vehicle trips (22 in, 37 out) during the AM peak hour and 68 two-way vehicle trips (38 in, 30 out) during the PM peak hour. The traffic added by the proposed development is minimal and is not expected to have a noticeable impact on traffic operations in the area. If a second driveway is constructed in the future off Hammonds Plains Road, it will require sight distance review and approval.

Thank you,
DesignPoint Engineering & Surveying Ltd.



Ellen Dalton, P.Eng.
 Transportation Engineer & Principal