

March 1, 2022

John Keizer  
[REDACTED]

[via email: [REDACTED]]

**RE: Trip Generation Addendum  
Lot RL1 Sackville Drive, Middle Sackville, Nova Scotia**

Dear Mr. Keizer:

Plans were prepared and approved as part of a development agreement application (Document #112346128, Case 20332) for a 4,970 ft<sup>2</sup> building on Lot RL1 (PID 41158858) located on the north side of Sackville Drive between Rosemary Drive and Hamilton Drive in Middle Sackville, NS (See Figure 1).



**Figure 1 - Study Area**

A traffic impact statement was prepared by DesignPoint Engineering and Surveying in December 2015, which was submitted to the Halifax Regional Municipality (HRM) as part of a development agreement application. The purpose of this trip generation addendum is to update the trip generation estimates utilizing Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 11<sup>th</sup> Edition* and to compare various land uses being considered for the proposed development.

## TRIP GENERATION

When using the published trip generation rates in the *Trip Generation Manual, 11<sup>th</sup> Edition* (Institute of Transportation Engineers, Washington, 2021), the transportation engineer's objective should be to provide a realistic estimate of the number of trips that will be generated by the proposed development.

The land uses that are being considered for the proposed development are retail, office, and a commercial school for children in pre-primary and primary. The *Trip Generation Manual* does not provide trip generation rate data for pre-primary and primary schools; therefore, data for the land uses Private School (K-8) (Land Use 530), and Day Care Center (Land Use 565) were utilized, as they are the most similar. Trip generation rate data for Strip Retail Plaza (Land Use 822) and Small Office Building (Land Use 712) were utilized to represent the retail and office land uses.

Trip generation estimates were prepared to compare the different land uses. Trips generated for commercial/retail uses and institutional uses are estimated for the AM and PM peak hours of weekday traffic by the gross floor area and number of students, respectively. The proposed development is planned to include 4,970 ft<sup>2</sup> of gross floor area and a maximum of 50 students for the two institutional uses being considered.

The trip estimates for each of the prospective land uses are displayed in Table 1, while the final trip generation estimates for the various land use scenarios are displayed in Table 2.

**Table 1 - Base Trip Generation for Each Land Use**

Land Use <sup>1</sup>	Units <sup>2</sup>	Trip Generation Rates <sup>3</sup>				Base Trip Generation Estimates <sup>4</sup>			
		AM Peak		PM Peak		AM Peak		PM Peak	
		In	Out	In	Out	In	Out	In	Out
Base Trip Generation Estimate for Different Land Uses									
Strip Retail Plaza (Land Use 822)	2,485 ft <sup>2</sup>	1.42	0.94	3.30	3.30	4	2	8	8
Small Office Building (Land Use 712)	2,485 ft <sup>2</sup>	1.37	0.30	0.73	1.43	3	1	2	4
Private School (K-8) <sup>5</sup> (Land Use 530)	50 students	0.57	0.44	0.12	0.14	28	22	6	7
Day Care Center <sup>5</sup> (Land Use 565)	50 students	0.41	0.37	0.37	0.42	21	18	19	21
NOTES: 1. Land Use Codes are from <i>Trip Generation, 11th Edition</i> (Institute of Transportation Engineers, Washington, 2021). 2. '1000 ft <sup>2</sup> Gross Floor Area' for Land Use 822 and 712. 'Number of Students' for Land Use 530 and 565. 3. 'Trip generation rate for Land Use 822 and 712 are 'vehicles per hour per 1000 square feet.' 'Trip generation rate for Land Use 530 and 565 are 'vehicles per hour per student.' 4. Trips generated are 'vehicles per hour' for AM and PM peak hours. 5. 'Private School (K-8)' and 'Day Care Center' land uses were chosen as they are the most similar to a pre-primary/primary commercial school.									

**Table 2 - Trip Generation Estimates for Land Use Scenarios**

	AM Peak			PM Peak		
	In	Out	Total	In	Out	Total
<b>Trip Generation Estimates</b>						
2485 ft <sup>2</sup> of retail + 2485 ft <sup>2</sup> of office space	7	3	10	10	12	22
4970 ft <sup>2</sup> of retail	8	4	12	16	16	32
4970 ft <sup>2</sup> for a private school <sup>5</sup>	28	22	50	6	7	13
4970 ft <sup>2</sup> for a day care center <sup>5</sup>	21	18	39	19	21	40
NOTES: 5. 'Private School (K-8)' and 'Day Care Center' land uses were chosen as they are the most similar to a pre-primary/primary commercial school.						



As noted in Table 1 and Table 2, the two land uses that would generate the highest number of trips are the private school (50 trips during the AM peak) and the day care center (40 trips during the PM peak), which represent the potential trip generation for the pre-primary/primary commercial school.

## **SUMMARY**

1. Plans were prepared and approved as part of a development agreement application (Document #112346128, Case 20332) for a 4,970 ft<sup>2</sup> building on Lot RL1 (PID 41158858) located on the north side of Sackville Drive between Rosemary Drive and Hamilton Drive in Middle Sackville, Nova Scotia.
2. A trip generation comparison was completed to review different land uses for the proposed development, which included retail, office space, and a pre-primary/primary commercial school.
3. Of the land uses that were compared, the land uses that are expected to generate the highest number of trips are the private school (K-8) and the day care center, which represent the potential trip generation for the pre-primary/primary commercial school.

If you have any questions or comments, please contact me by email at [courtney.pyne@wsp.com](mailto:courtney.pyne@wsp.com) or by telephone at 902-536-0982.

Sincerely,

-Original Signed-

Courtney Pyne, P.Eng., PMP  
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WSP Canada Inc.