

Middle Sackville Apartments Traffic Impact Statement

May 2025

Prepared for

Servant Dunbrack McKenzie & MacDonald (SDMM) Ltd.



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Prepared by

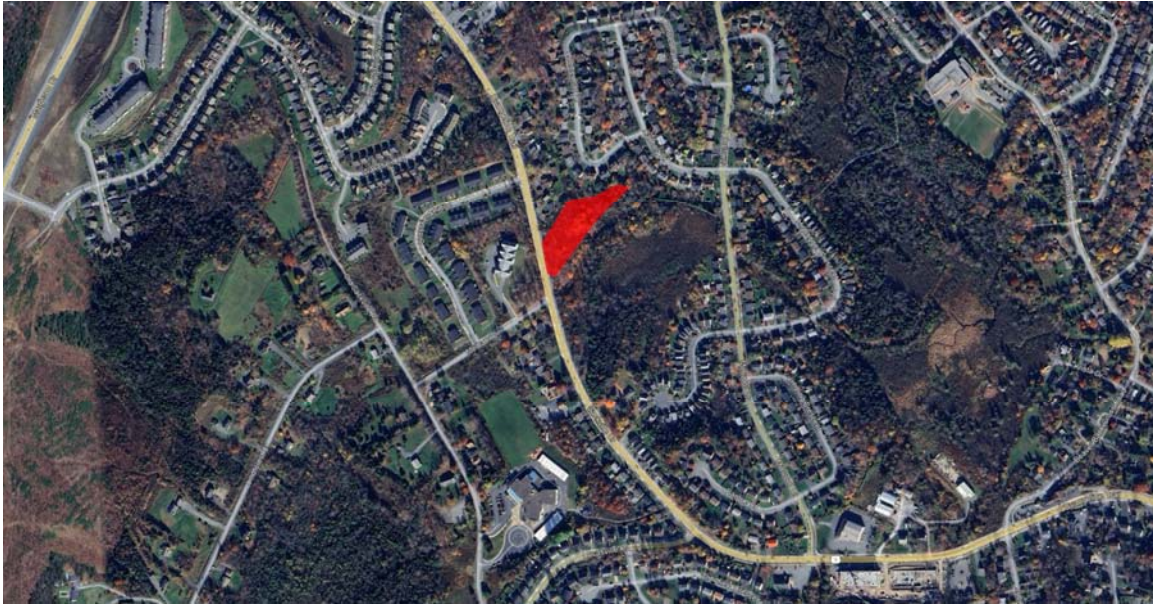
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1 Introduction

1.1 Background

Servant Dunbrack McKenzie & MacDonald (SDMM) Ltd, on behalf of the owner, Nova Scotia Housing and Municipal Affairs (NSHMA) is working on a proposal to develop a new residential apartment building in Middle Sackville, Nova Scotia. Exhibit 1.1 shows the site in red in the context of the surrounding area.

Exhibit 1.1 – Proposed Residential Apartment Building in Middle Sackville, Nova Scotia



Source: Google Earth

NSHMA has proposed to create a new 6-storey apartment building that will contain 81 apartments with a mixture of Studio, 1-Bedroom, 2-Bedroom and 3-Bedford units as well as a small commercial unit on the ground floor (683 sf).

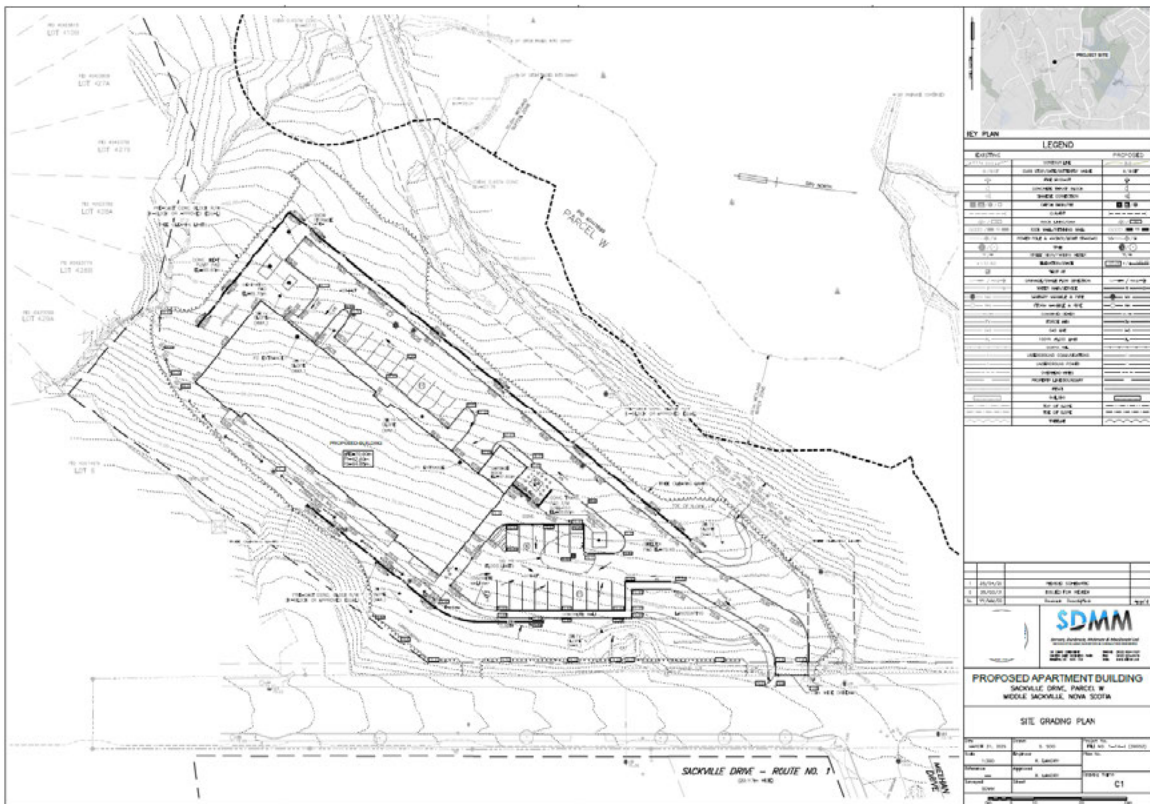
Access to the property will be from a new driveway on Sackville Drive just north of Melham Drive. Exterior surface parking will be provided with 28 spaces and a total of 68 interior parking spaces will be included on two underground parking levels (96 total parking spaces).

Refer to Exhibit 1.2 for a photo of the site and Exhibit 1.3 for a proposed Site Plan as provided by SDMM.

Exhibit 1.2 – Middle Sackville Apartments Property on Sackville Drive



Exhibit 1.3 – Middle Sackville Apartments Proposed Site Plan



JRL consulting was retained to prepare a Traffic Impact Statement (TIS) to assess the potential traffic impacts of the proposed residential development in Middle Sackville, Nova Scotia.

The purpose of a Traffic Impact Statement is to provide a high level overview of a proposed development including estimates of site-generated traffic along with an initial review of existing traffic counts in the general area of the proposed development.

2 Existing Traffic Conditions

2.1 Description

The principal route affected by this development is Sackville Drive. Exhibit 2.1 summarizes HRM's Characteristics of Street Classes from HRM's Municipal Service Systems Design Guidelines.

Exhibit 2.1 - HRM Characteristics of Street Classes

Characteristic	Arterial Street	Major Collector	Minor Collector	Local Industrial	Local Street
1. Traffic Service Function	First Consideration	Traffic movement	Traffic movement of equal importance with land access, parking permitted	Traffic movement secondary consideration with land access primary consideration, parking permitted	Traffic movement secondary consideration with land access primary consideration, parking permitted
2. Land Access Function	Limited Access with no parking	primary consideration, land access secondary consideration, some parking			
3. Range of design traffic average daily volume	More than 20,000	12,000 to 20,000 or more	Up to 12,000	Less than 3,000	Less than 3,000
4. Characteristics of traffic flow	Uninterrupted flow except at signals; w/ pedestrian overpass	Uninterrupted flow except at signals and crosswalks	Interrupted flow	Interrupted flow	Interrupted flow
5. Average running speed in off-peak conditions	50-70 km/hr	40-60 km/hr	30-50 km/hr	15-30 km/hr	15-30 km/hr
6. Vehicle types	All types	All types but trucks may be limited	All types with truck limitation	All types	Passenger and service vehicles, transit buses; large vehicles restricted
7. Connects to	Expressways, arterials, major collectors, minor collectors	Expressways, arterials, major collectors, minor collectors, some locals	Arterials, major collectors, minor collectors, locals	Some major collectors, minor collectors, locals	Some major collectors, minor collectors, locals

Sackville Drive is an arterial road also known as Evangeline Trail (Route 1) that runs through Lower Sackville, Nova Scotia generally parallel to Highway 101 to connect to points north and west from Halifax including the Annapolis Valley. It has one lane in each direction between Lucasville Road and Margeson Drive with northbound and southbound auxiliary left turn lanes at its intersection with Beaconsfield Way and Executive Drive. A concrete sidewalk is located on the western side near the proposed development. The posted speed limit is 60 km/hr in front of the proposed development and that speed is reduced to 50 km/hr just south of Melham Drive. Bike lanes are in place each side of Sackville Drive in the area. It is owned and maintained by HRM.

Refer to Exhibit 2.2 for photos of the Study Area around the proposed development.

Exhibit 2.2 – Study Area Photos



Sackville Drive looking south with proposed site access on left close to Melham Drive



Sackville Drive looking north with proposed development on right



Sackville Drive at Melham Drive looking north with proposed development on right



Sackville Drive at Melham Drive looking south



Melham Drive at Sackville Drive looking east



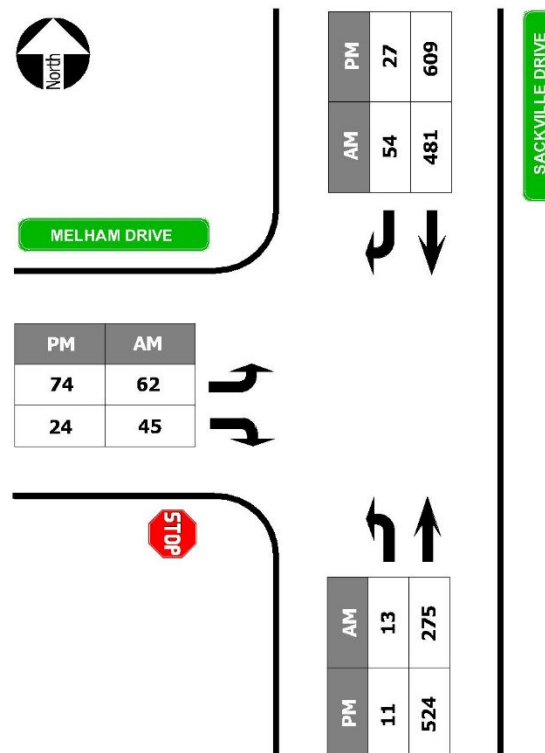
Melham Drive at Sackville Drive looking west

2.2 Existing Traffic Volumes

We completed a site review on January 4, 2025. The proposed development will be accessed from a new driveway on Sackville Drive just north of the existing Sackville Drive/Melham Drive intersection.

HRM completed peak hour turning movement counts on Thursday June 24 2021 at the Sackville Drive/Melham Drive intersection. The AM peak hour is from 7:45 AM to 8:45 AM and the PM peak hour is from 4:45 PM to 5:45 PM. We applied a 2% annual growth factor to estimate traffic volumes at this intersection in 2025 as summarized in Exhibit 2.3.

Exhibit 2.3 – Sackville Drive at Melham Drive Estimated Existing Traffic 2025



Based on these counts we estimate that traffic on Sackville Drive in front of the proposed development in the AM peak hour is 535 vehicles southbound towards Lower Sackville/Bedford/Halifax/Dartmouth and 337 vehicles northbound. In the PM peak hour we estimate 636 vehicles southbound towards Lower Sackville/Bedford/Halifax/Dartmouth and 598 vehicles northbound.

2.3 Trip Distribution

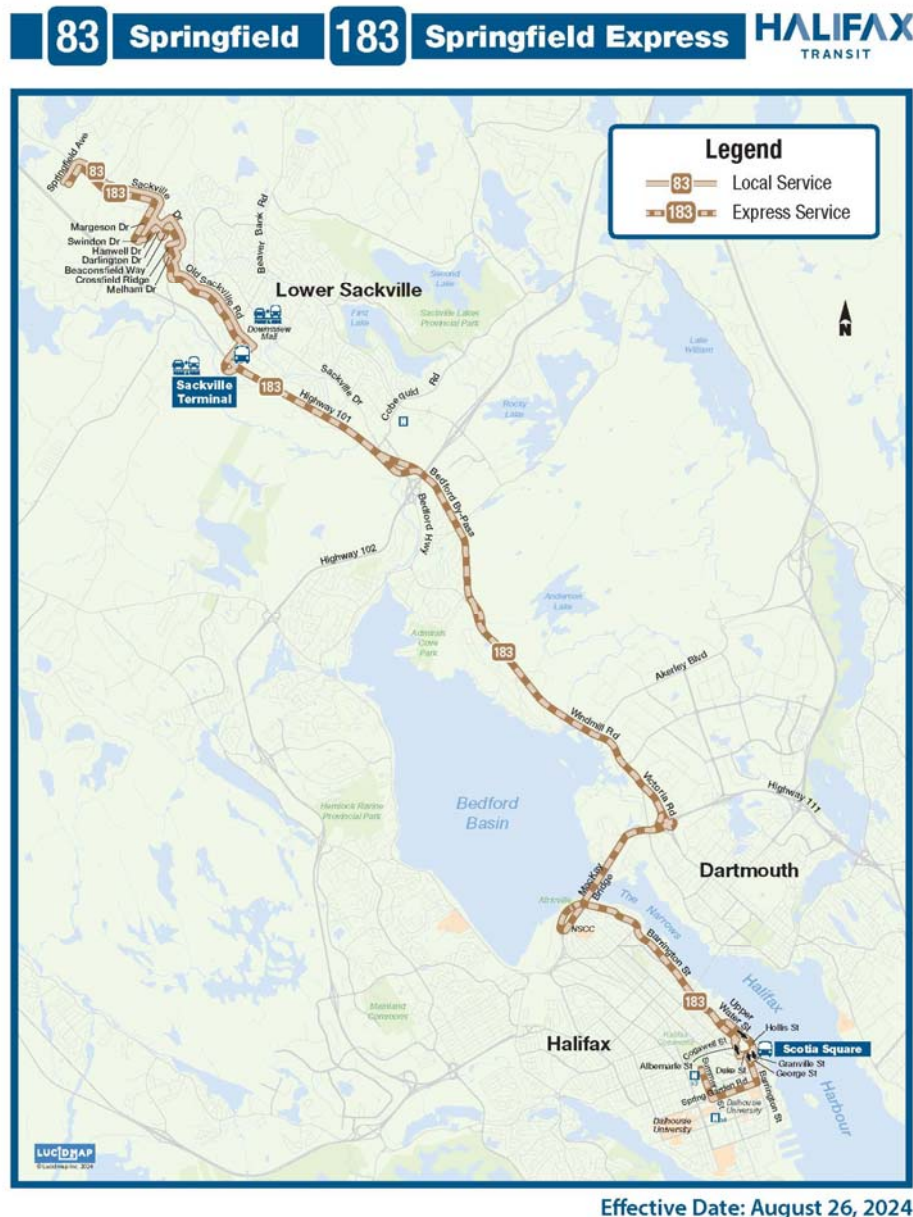
HRM's counts on Sackville Drive at Melham Drive provide an indication of trip distribution in the area and we expect that traffic generated by the proposed residential development will follow the same patterns. The majority of vehicles in the AM peak hour are heading south towards Lower Sackville/Bedford/Halifax/Dartmouth (61%) and the majority of vehicles in the PM peak hour are also traveling south towards Lower Sackville/Bedford/Halifax/Dartmouth (52%).

2.4 Transit and Pedestrians

The area around the proposed development is well serviced by Halifax Transit on Route 83 Springfield and Route 183 Springfield Express that provide regular service 7 days a week with connections to the rest of the transit network HRM. Refer to Exhibit 2.4.

A concrete sidewalk is located on the western side of Sackville Drive near the proposed development. A barrier free walking path will be installed around the property and a transit stop is proposed in front of the new building on the eastern side of Sackville Drive. Future plans may include a connection to Sackville Drive across from Melham Drive for trail parking for a future hiking trail.

Exhibit 2.4 – Halifax Transit Route 83 Springfield and Route 183 Springfield Express



2.5 Stopping Sight Distance

As per the Transportation of Canada Geometric Design Guide for Canadian Roads, adequate stopping sight distance *"is essential for safe operation that the vehicle operator be able to see far enough ahead to stop if necessary. Conditions that would force a vehicle operator to stop are for example, an object on the roadway, a culvert washout or other fault in the roadway. Adequate stopping site distance is required throughout the length of the roadway. Minimum stopping site distance is the sum of two distances namely:*

- *Brake reaction distance*

The distance travelled during the brake reaction time, that is the time that elapses from the instant an object, for which the driver decides to stop, comes into view to the instant the driver takes remedial action (contacts brake pedal).

- *Braking distance*

The distance travelled from the time that braking begins to the time the vehicle comes to a stop."

The proposed driveway will be located on Sackville Drive just north of Melham Drive. The posted speed limit is 60 km/hr which requires a stopping sight distance of 85 m. A design speed of 70 km/hr requires a minimum stopping sight distance of 110 m.

Visibility on Sackville Drive to the north and south is good at the proposed driveway located across from Melham Drive and we didn't see any concerns stopping sight distance on Sackville Drive.

3 Site Generated Traffic

3.1 Trip Generation

The proposed residential development will be a new 6-storey apartment building that will contain 81 apartments with a mixture of Studio, 1-Bedroom, 2-Bedroom and 3-Bedroom units along with a small commercial unit on the ground floor (683 sf).

The type of retail development in the commercial unit has not been confirmed at this stage of the development so we will assess trips generated by that portion as a general retail plaza space.

We completed trip generation estimates using equations provided in Institute for Transportation Engineer's Trip Generation Manual 11th Edition with the following Land Use Code.

- ITE Land Use 221 Multifamily Housing (Mid-Rise)

"Mid-rise multifamily housing includes apartments and condominiums located within the same building that has between four and 10 floors of living space. Access to individual dwelling units is through an outside building entrance, a lobby, elevator, and a set of hallways." The unit of measurement for average vehicle trip ends is dwelling units.

- ITE Land Use 822 Retail Plaza (<40K)

"A strip retail plaza is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Each study site in this land use has less than 40,000 square feet of gross leasable area (GLA). No shopping plaza with a supermarket as its anchor is smaller than 40,000 square feet GLA." The unit of measurement for average vehicle trip ends is 1,000 Square Feet Gross Floor Area.

Exhibit 3.1 – Estimated Site Generated Traffic Volumes

LAND USE	QUANTITY	AM PEAK			PM PEAK		
		TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT
Apartments ITE Land Use 221	81	30	23%	77%	32	61%	39%
			7	23		19	13
Retail ITE Land Use 822	683 sqft	5	60%	40%	12	50%	50%
			3	2		6	6
TOTAL		35	10	30	43	25	19

We estimate that the proposed development will generate additional net new traffic volumes of **35** vehicles in the AM peak hour and **43** vehicles in the PM peak hour.

4 Conclusions and Recommendations

- This Traffic Impact Statement has provided a high level overview of the proposed development of an 6-storey apartment building that will contain 81 apartments with a mixture of Studio, 1-Bedroom, 2-Bedroom and 3-Bedford units along with a small commercial unit on the ground floor (683 sf).
- It includes an estimate of new site generated trips and an analysis of existing traffic volumes in the surrounding area.
- Access to the property will be from a new driveway on Sackville Drive just north of Melham Drive. Exterior surface parking will be provided with 28 spaces and a total of 68 parking spaces will be included on two underground parking levels (96 total parking spaces).
- Based on ITE Trip Generation Rates, we estimate that the proposed development will generate **35** new vehicle trips in the AM peak hour and **43** new vehicles in the PM Peak Hour.
- Site generated traffic will most likely follow existing trip distribution patterns on Sackville Drive in the AM and PM peak hours with the majority of traffic traveling south towards Lower Sackville/Bedford/Halifax/Dartmouth (61%) in the AM peak hour and PM peak hour (52%).
- Stopping Sight Distance is adequate on Sackville Drive at the proposed driveway to the new 81-unit apartment building.
- The area around the proposed development is well serviced by Halifax Transit on Route 83 Springfield and Route 183 Springfield Express that provide regular service 7 days a week with connections to the rest of the transit network in HRM.
- The site is also located in a pedestrian and bicycle friendly area so it fits well with HRM's Active Transportation Program that aims to help residents bike, walk and use other human power ways to move around the city. HRM's Integrated Mobility Plan (IMP) has set a target that at least 30% of trips will be made by walking, bicycling or transit while no more than 70% will be made by private vehicles.
- We recommend that the driveway be designed and constructed in accordance with HRM Design Guidelines and Transportation Association of Canada standards.
- We recommend that a marked crosswalk be considered on Sackville Drive at Melham Drive to allow pedestrians safe access to the existing sidewalk on the western side of Sackville Drive.