

498 Sackville Drive Traffic Impact Statement

December 2023

Prepared for

Panco Construction





TABLE OF CONTENTS

1	INTRODUCTION	2
1.1	BACKGROUND	2
2	EXISTING TRAFFIC CONDITIONS	7
2.1	DESCRIPTION	7
2.2	EXISTING TRAFFIC VOLUMES.....	11
2.3	TRIP DISTRIBUTION	12
2.4	TRANSIT AND PEDESTRIANS.....	12
2.5	STOPPING SITE DISTANCE.....	14
3	SITE GENERATED TRAFFIC.....	15
3.1	TRIP GENERATION	15
3.2	PARKING	16
4	CONCLUSIONS AND RECOMMENDATIONS.....	17



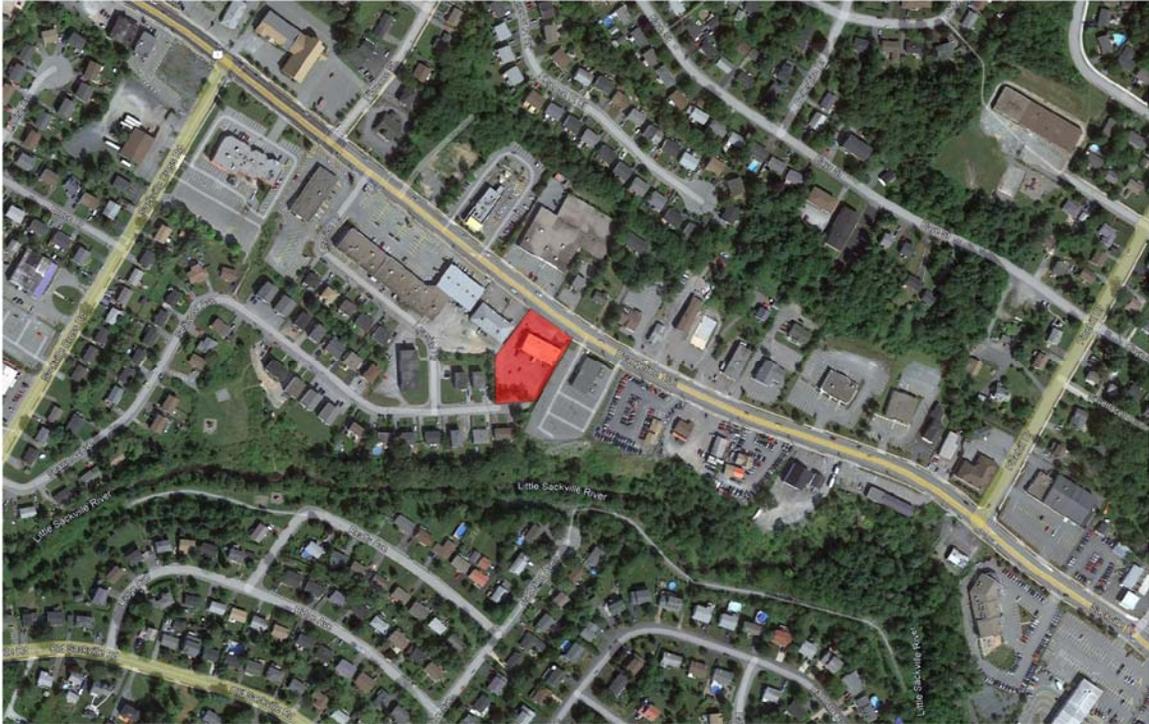
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1 Introduction

1.1 Background

Paul Skerry Architects Limited, on behalf of the owner, Panco Construction., is exploring options to redevelop their properties at 498 Sackville Drive in Lower Sackville, Nova Scotia. Exhibit 1.1 shows the site in red in the context of the surrounding area.

Exhibit 1.1 – 498 Sackville Drive in Lower Sackville, Nova Scotia



Source: Google Earth

The existing 28,629 sqft properties (PID 40003541 and 40002057) contain a 10,000 sqft two story commercial building that has direct access to Sackville Drive. Refer to Exhibit 1.2.

Exhibit 1.2 – Existing Commercial Building at 498 Sackville Drive



The existing building has surface level parking in the front which is accessed from two existing driveways on Sackville Drive along with surface parking in the rear on the lower level which is accessed from the western portion of the property.

The developer is proposing to build a new 7-storey residential building that will contain a small commercial space on the ground floor on Sackville Drive. A total of 63 apartments will be provided with a mixture of bachelor (6 units), 1-bedroom (1 unit), 2-bedroom (42 units) and 3-bedroom (14 units). Two-levels of underground parking will be included with 75 spaces as well as 5 surface parking spaces at the rear of the building. There will be a direct connection between the public sidewalk on Sackville Drive and the main door/access to the development.

Access to the underground parking levels and the surface parking spaces will be from two new driveways connecting to the eastern end of Seawood Avenue at the rear of the site. Each driveway will provide access to a single level of underground parking and there will be no internal vehicle connections between parking levels. There will be no vehicle access from Sackville Drive.

JRL consulting was retained to prepare a Traffic Impact Statement (TIS) to assess the potential traffic impacts of the proposed redevelopment of 498 Sackville Drive in Lower 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. This information will form part of the initial application to HRM which will be reviewed by staff and council. We are pleased to submit this report which summarizes our findings and provides the information required by HRM for review.

Refer to the following exhibits as provided by Paul Skerry Associates Limited Architects

Exhibit 1.3 – Rendering of the Proposed Development at 498 Sackville Drive



Exhibit 1.4 – Proposed Site Plan at 498 Sackville Drive

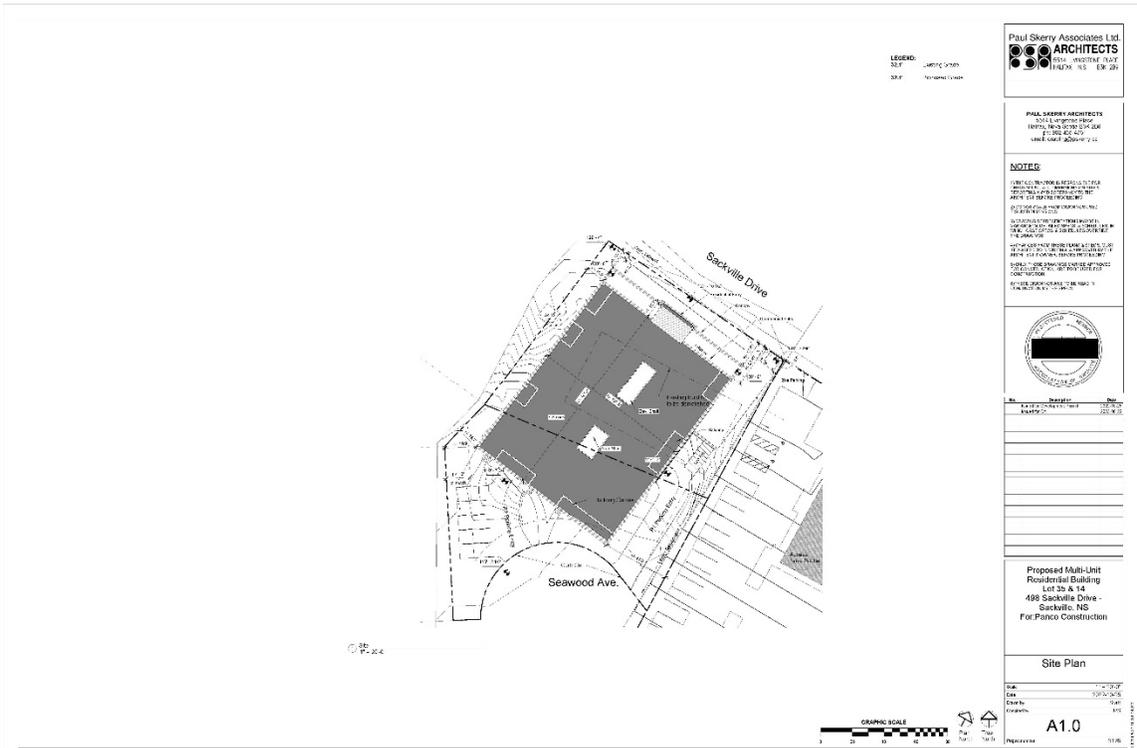


Exhibit 1.5 – Proposed P2 Parking Garage Floor Plan at 498 Sackville Drive

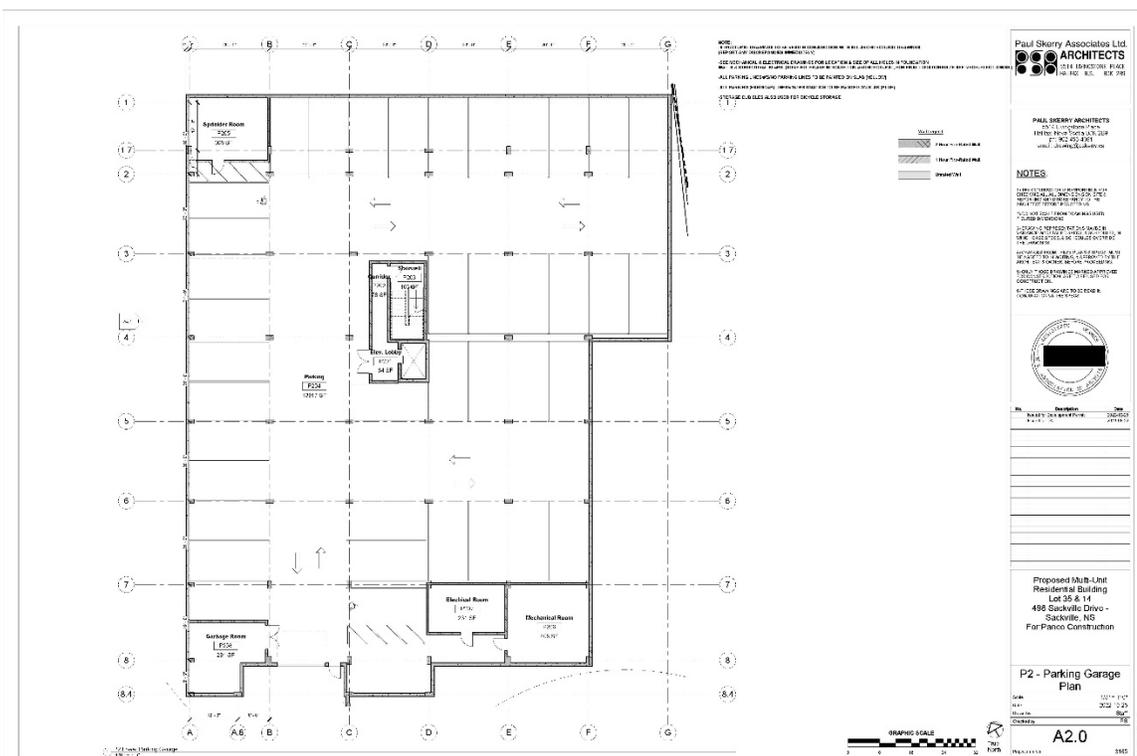


Exhibit 1.6 – Proposed P1 Parking Garage Floor Plan at 498 Sackville Drive

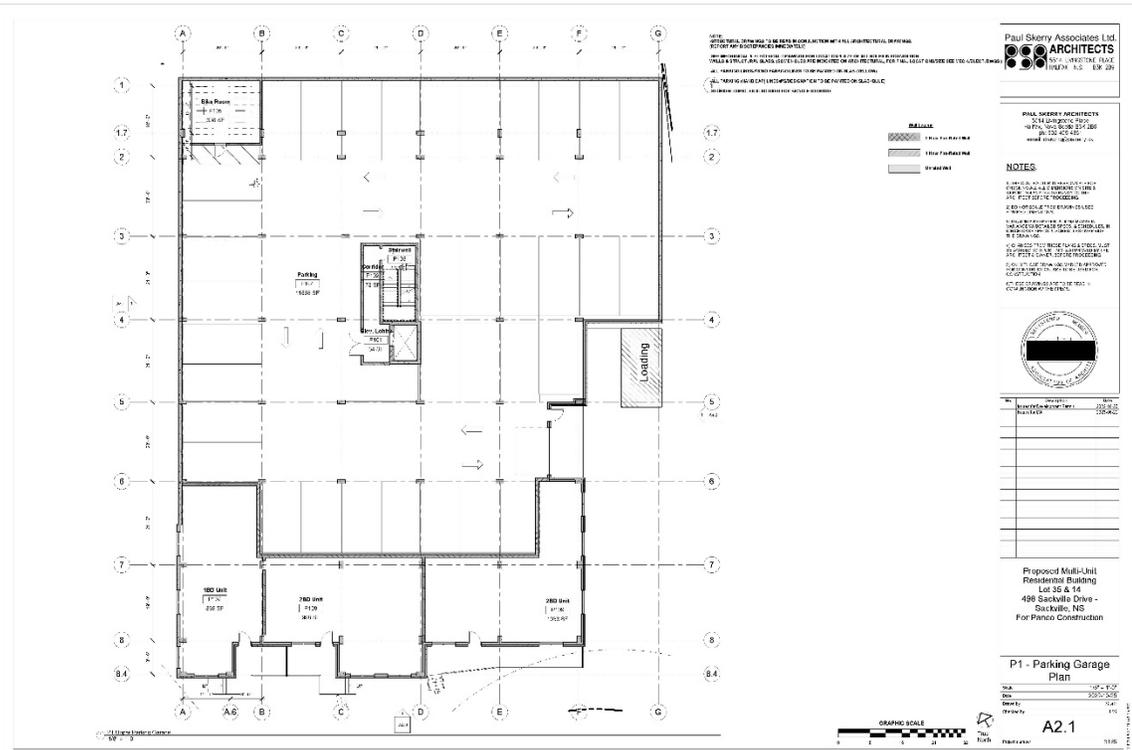


Exhibit 1.7 – Proposed 1st Floor Plan at 498 Sackville Drive

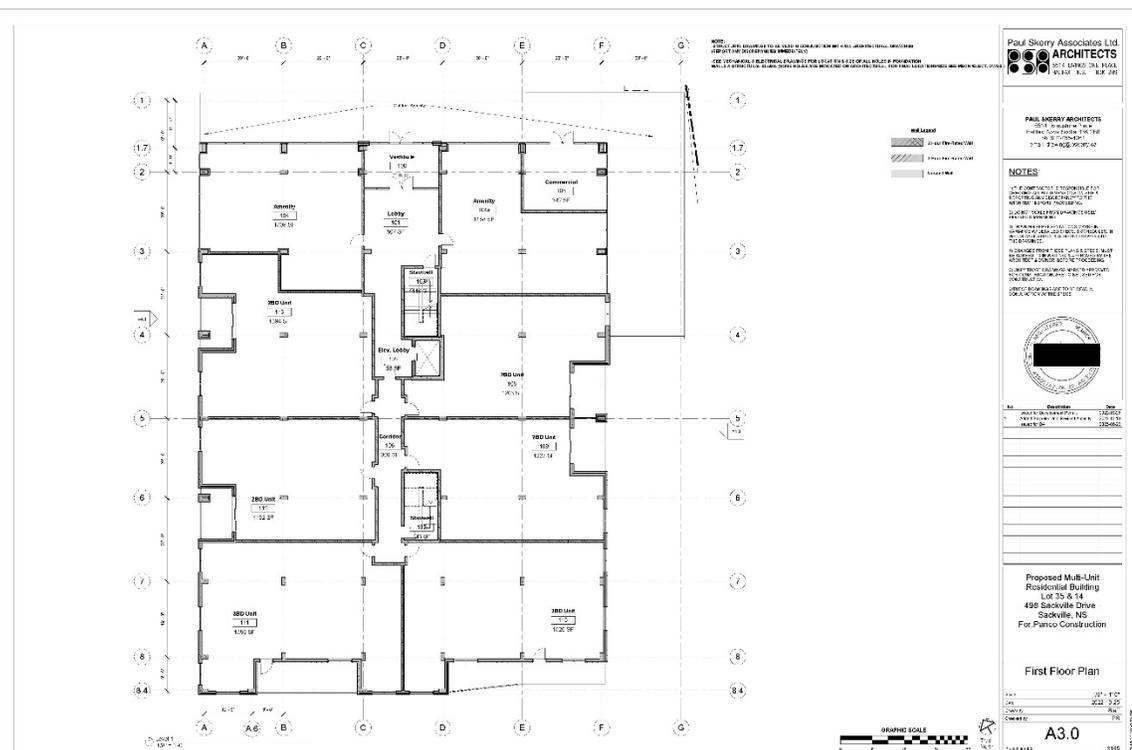


Exhibit 1.8 – Proposed 2nd Floor Plan at 498 Sackville Drive

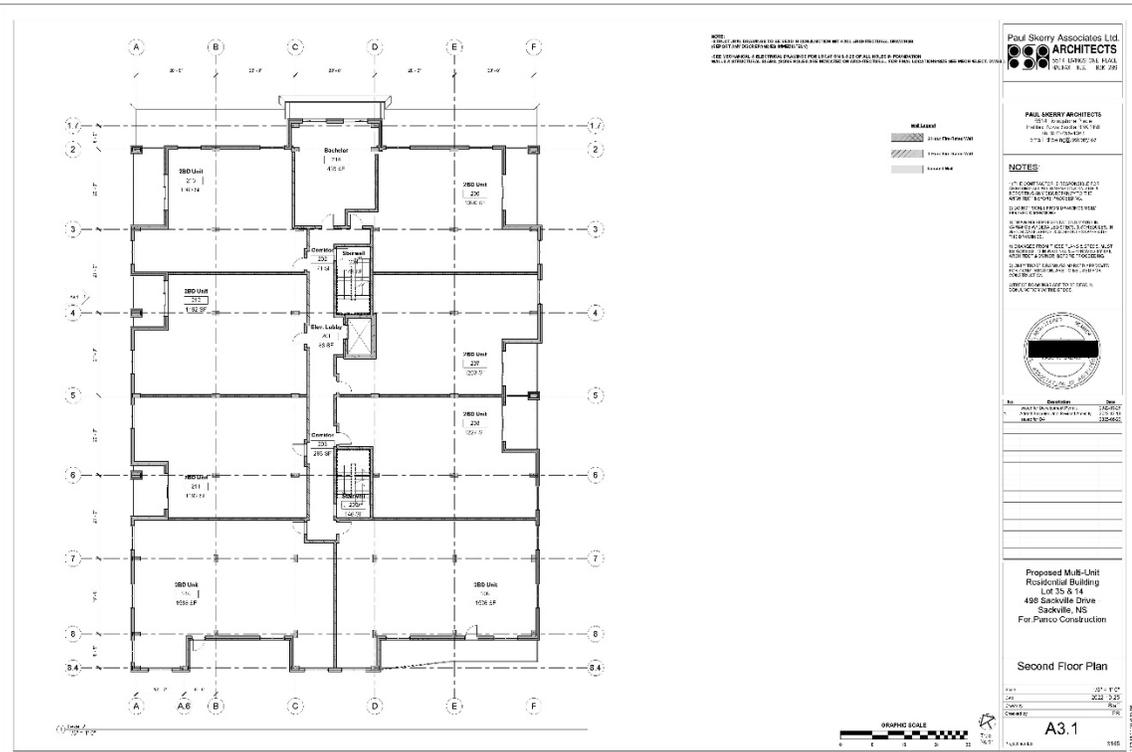
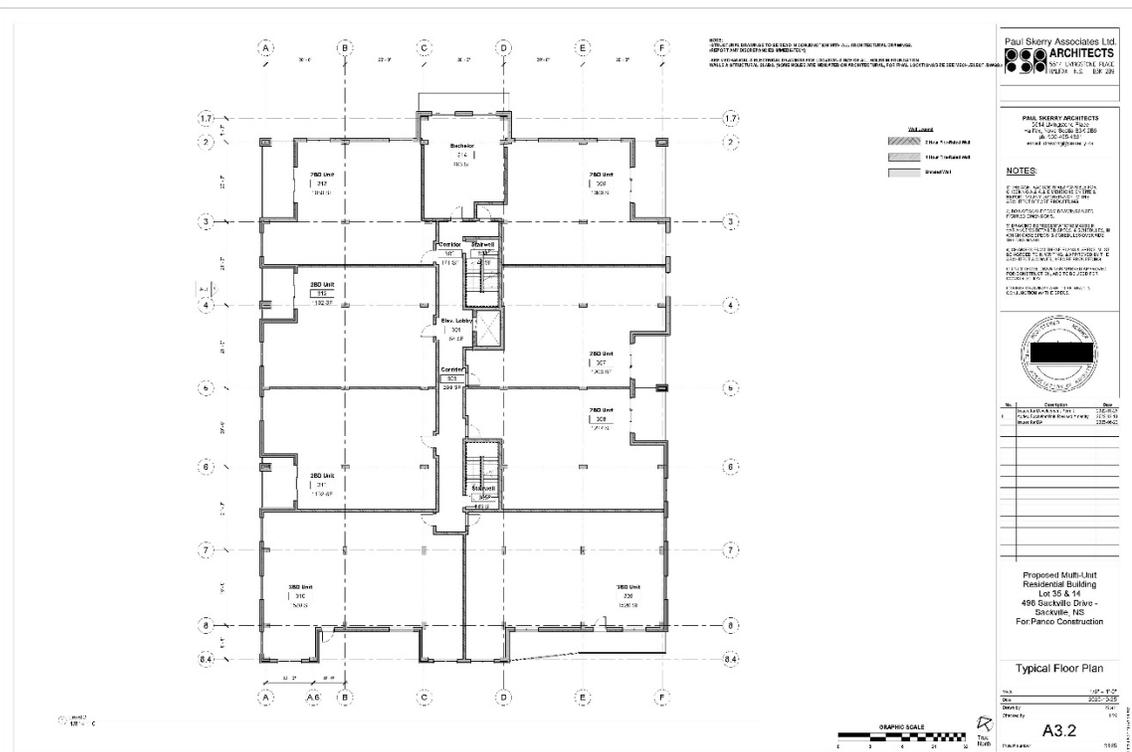


Exhibit 1.9 – Typical Floor Plan at 498 Sackville Drive



2 Existing Traffic Conditions

2.1 Description

The principal routes affected by this development are Sackville Drive, Seawood Avenue and Leaside Drive. Exhibit 2.1 summarizes HRM’s Characteristics of Street Classes.

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 primary consideration, land access secondary consideration, some parking	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				
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. It contains a mixture of commercial land uses in the immediate study area. It has two lanes in each direction for most of its length in Lower Sackville and there are many signalized intersections including the offset Sackville Drive/Leaside Drive/Florence Street located approximately 200 meters west of 498 Sackville Drive. On-street parking is not permitted. There are concrete sidewalks on both sides and the posted speed limit is 50 km/hr.

Seawood Avenue is a local road that begins at Sackville Cross Road and ends in a cul de sac at its western end which is at the rear of 498 Sackville Road. It provides access to residential properties and the posted speed limit is 50 km/hr. There are no sidewalks.

Leaside Drive is a short, local road that begins at Sackville Drive and ends at Seawood Avenue. It provides access to residential properties and commercial properties and the posted speed limit is 50 km/hr. There are no sidewalks.

Refer to Exhibit 2.2 for photos of the Study Area surrounding 498 Sackville Drive.

Exhibit 2.2 – Study Area Photos



498 Sackville Drive looking west



498 Sackville Drive with access to rear of property on right



Rear view of 498 Sackville Drive with access to front and Sackville Drive on left



Sackville Drive at 498 Sackville Drive looking west



End of Seawood Avenue looking east with proposed new access on far left



Seawood Avenue at Leaside Drive looking west



Sackville Drive at Leaside Drive looking west



Leaside Drive at Sackville Drive looking south



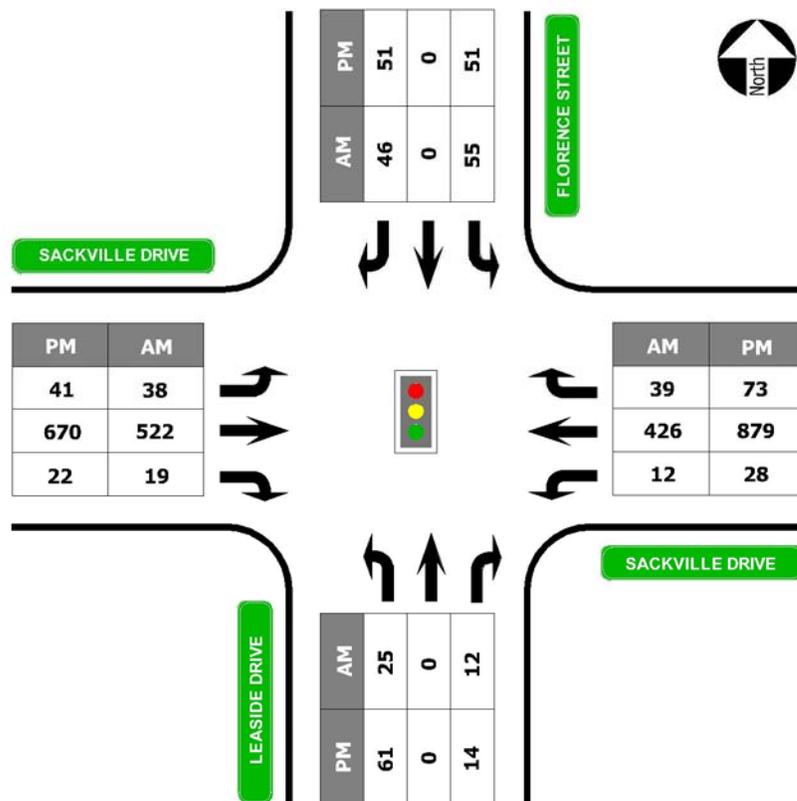
Sackville Drive at Leaside Drive looking east

2.2 Existing Traffic Volumes

We completed a site review on October 4, 2023. The proposed development is located just east of the existing offset signalized Sackville Drive/Leaside Drive/Florence Street intersection. HRM completed turning movement counts this intersection in August 2017. In our original Traffic Impact Statement dated October 10, 2023 we applied an annual background growth rate of 2% to estimate traffic in 2023.

HRM reviewed our report and they advised that using these counts “as a baseline for the analysis is likely not appropriate for this site” so we completed new peak hour turning movements counts on Wednesday December 20, 2023 while school was still in session to provide a current view of traffic at this intersection as summarized in Exhibit 2.3.

Exhibit 2.3 – Sackville Drive at Leaside Drive and Florence Street Existing Traffic 2023



Based on these counts we estimate that the AM peak hour traffic in front of 498 Sackville Drive is 589 vehicles eastbound towards Halifax/Dartmouth and 477 vehicles westbound. In the PM peak hour we estimate 735 vehicles eastbound towards downtown Halifax/Dartmouth and 980 vehicles westbound in front of 498 Sackville Drive. Traffic in the PM peak hour on Sackville Drive is significantly higher than observed in the AM Peak Hour.

2.3 Trip Distribution

HRM’s counts at the Sackville Drive/Leaside Drive/Florence Street intersection 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 east towards Halifax/Dartmouth (55%) and this reverses in the PM peak as people return home westbound (57%).

2.4 Transit and Pedestrians

The area around 498 Sackville Drive is well serviced by Halifax Transit on Routes 8 and 87 with regular service 7 days a week including connections to the rest of the transit network in Halifax and Dartmouth. Refer to Exhibits 2.4 and 2.5.

There are concrete sidewalks on both sides on Sackville Drive in the area. The Sackville Drive/Leaside Drive/Florence Street intersection to the west and the Sackville Drive/Pinehill Drive to the east offer opportunities for pedestrians to safely cross Sackville Drive.

Exhibit 2.4 – Halifax Transit Route 8 Sackville

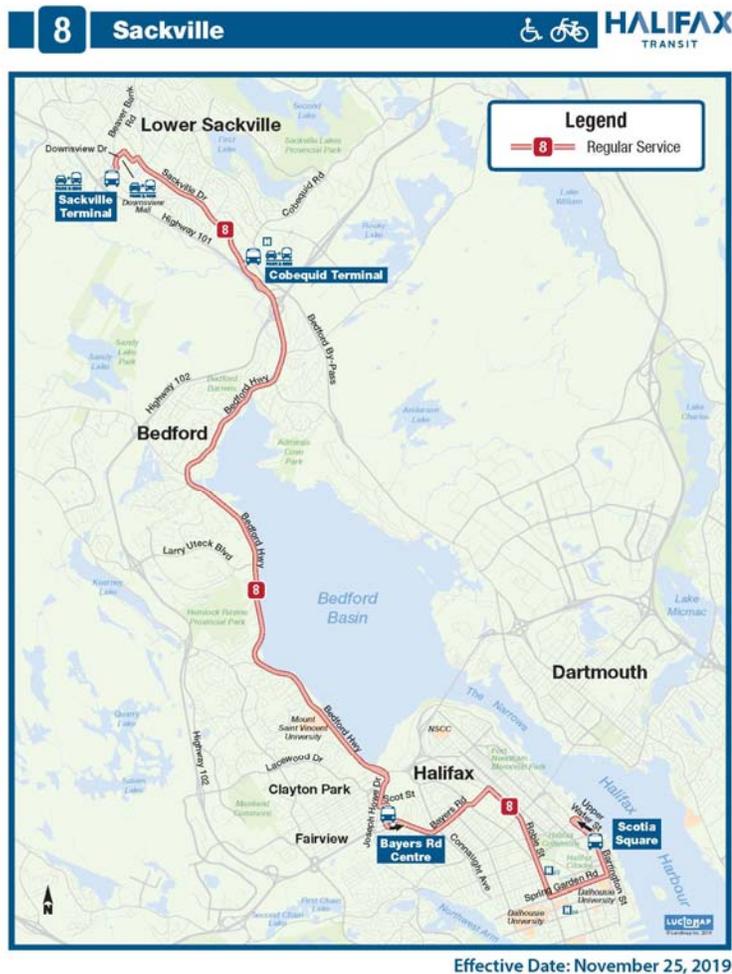
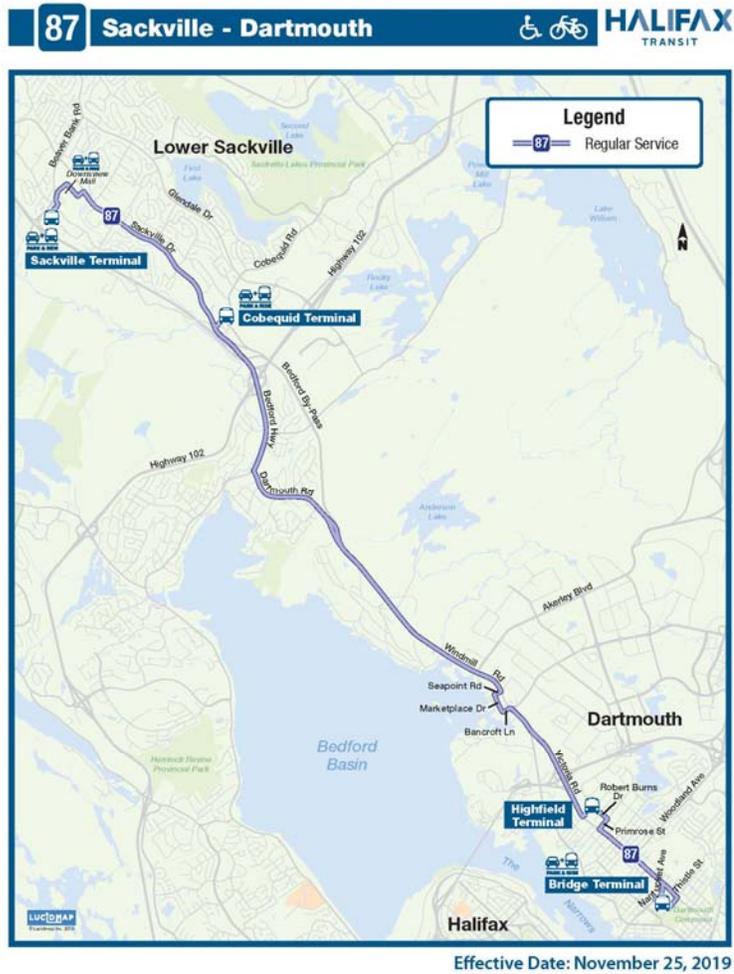


Exhibit 2.5 – Halifax Transit Route 87 Sackville - Dartmouth



2.5 Stopping Site Distance

As per the Transportation of Canada Geometric Design Guide for Canadian Roads, adequate stopping site 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."

A design speed of 50 km/hr requires a stopping site distance of 65 m. The proposed new access to the site is at the end of Seawood Avenue in a cul de sac so Stopping Site Distance will not be an issue.

3 Site Generated Traffic

3.1 Trip Generation

The existing building (total of 10,000 sqft) has an upper and lower level and we understand that a bar/restaurant is currently operational on the lower floor only (5,000 sqft).

It be replaced by a new a new 7-storey residential building that will contain a small commercial space (342 sqft) on the ground floor on Sackville Drive as well as 63 apartment units. The new commercial space is intended to be a small coffee stand and we expect it to serve building residents and other nearby customers who would walk to the location so it wouldn't generate new vehicle trips but we have captured it in our report as a worst-case scenario.

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

- ITE Land Use 975 Drinking Place

"A drinking place contains a bar, where alcoholic beverages and food are sold, and possibly some type of entertainment, such as music, television screens, video games, or pool tables. Establishments that specialize in serving food but also have bars are not included in this land use." The unit of measurement for average vehicle trip ends is 1,000 sqft of Gross Floor Area.

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

"Mid-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have between three and 10 levels (floors)." The unit of measurement for average vehicle trip ends is dwelling units.

- ITE Land Use 936 Coffee/Donut Shop without Drive-Through Window

"This land use includes any coffee and donut restaurant that does not have a drive-through window. The restaurant sells freshly brewed coffee (along with coffee-related accessories) and a variety of food/drink products such as donuts, bagels, breads, muffins, cakes, sandwiches, wraps, salads, and other hot and cold beverages. The restaurant marketing and sales may emphasize coffee beverages over food (or vice versa). A coffee/donut shop typically holds long store hours (more than 15 hours) with an early morning opening. Limited indoor seating is generally provided for patrons, but table service is not provided." The unit of measurement for average vehicle trip ends is 1,000 sqft of Gross Floor Area.

Exhibit 3.1 – Estimated Existing Site Generated Traffic Volumes

LAND USE	QUANTITY	AM PEAK			PM PEAK		
		TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT
Drinking Place ITE Land Use 975	5,000	-	50%	50%	57	66%	34%
		-	-	-		37	20
TOTAL		-	-	-	57	37	20

Exhibit 3.2 – Estimated Future Site Generated Traffic Volumes

LAND USE	QUANTITY	AM PEAK			PM PEAK		
		TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT
Apartments (Mid-Rise) ITE Land Use 221	63	23	23%	77%	25	61%	39%
			5	18		15	10
Coffee Stand ITE Land Use 936	342 sqft	32	51%	49%	11	50%	50%
			16	16		6	6
TOTAL		55	22	34	36	21	15

We estimate that the new residential portion of this proposed development will generate traffic volumes of **23** vehicles in the AM peak hour and **25** vehicles in the PM peak hour.

We don't expect the small coffee stand to create vehicle trips but we have included an estimate based on ITE Land Use 936 for a worst-case comparison. With this land use included we estimate that the overall development will generate net new additional traffic volumes of **55** vehicles in the AM peak hour and it will generate **21 less** vehicles in the PM peak hour compared with the existing land use (Drinking Place).

3.2 Parking

The underground parking planned for the development will have 75 vehicle parking spaces on two levels and a total of 5 surface parking spaces will be provided at the rear of the building. Each parking level will be accessed by a separate driveway at the eastern end of Seawood Avenue and there will be no internal vehicle connections between parking levels.

A bicycle room is included on parking level P1 which can be used by residents to park their bicycles underground.

No on-site parking is planned for the small coffee stand and we expect that it will not generate vehicle trips and will only serve residents of the development as well as residents in the immediate area.

This redevelopment site 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.

4 Conclusions and Recommendations

- This Traffic Impact Statement has provided a high level overview of the proposed redevelopment of 498 Sackville Drive. The proposed development will replace an existing bar/restaurant with a new 7 storey apartment building that will have 63 apartment units along with a small coffee stand (342 sqft).
- It includes an estimate of potential new site generated trips and an analysis of existing traffic volumes in the surrounding area.
- Underground parking will be provided on two levels with 75 parking spaces and an additional 5 surface parking spaces will be provide at the rear of the building near the entrance to the underground parking. A bicycle room will be provided for underground bicycle storage.
- Access to the development will be from two new driveways at the rear of the property which will connect to the eastern end of Seawood Avenue where there is a cul de sac today. Each driveway will provide access to a single level of underground parking and there will be no internal vehicle connections between parking levels. The existing driveways to Sackville Drive will be removed and there will be no direct vehicle access to Sackville Drive.
- There will be a direct connection between the public sidewalk on Sackville Drive and the main door/access to the development.
- Based on ITE Trip Generation Rates, we estimate that the proposed development will generate **55** new vehicle trips in the AM peak hour if the Coffee Stand is included and **21 less** vehicle trips in the PM peak hour compared with traffic generated by the existing bar/restaurant.
- Site generated traffic will most likely follow existing trip distribution patterns along Sackville Drive in the AM and PM peak hours with the majority of traffic traveling east towards Halifax/Dartmouth in the AM peak hour and this reverses in the PM peak hour as people return home from work. We expect that the majority of site generated traffic will use Seawood Avenue and Leaside Drive for access to Sackville Drive
- Stopping Site Distance is adequate at the proposed new driveways at the eastern end of Seawood Avenue
- The location is well served by Halifax Transit on multiple routes on Sackville Drive with connections to various key transit terminals in the area.
- This redevelopment site 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.
- Traffic that will be created by this proposed development is relatively minor compared to the existing land use and we don't anticipate any significant impacts to the surrounding transportation network on Sackville Drive.