

January 15, 2024

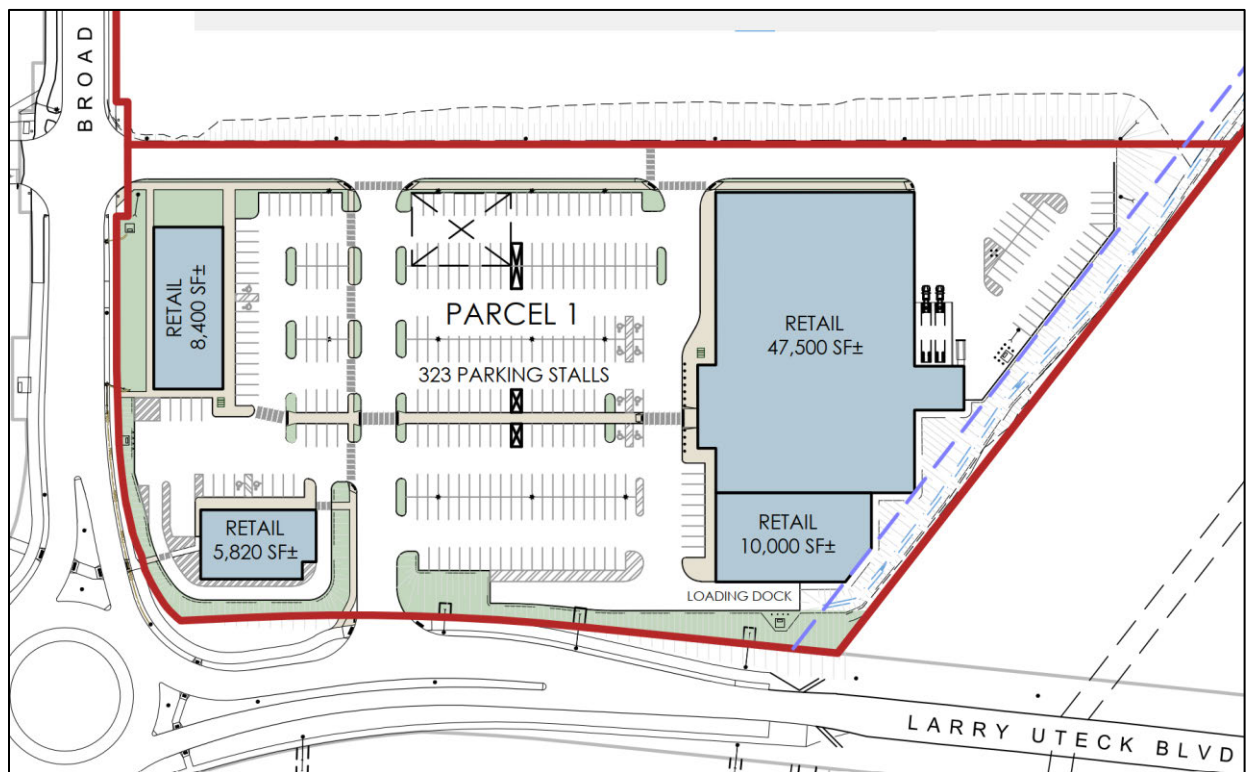
Mr. Ian MacDonald  
Crombie REIT

via email: [Ian.MacDonald3@crombie.ca](mailto:Ian.MacDonald3@crombie.ca)

**RE: Traffic Impact Statement – Sub Area 6 Bedford West Retail Site  
Bedford, Nova Scotia**

Dear Mr. MacDonald,

Plans are being prepared for a commercial development (47,500 square foot grocery store and 24,220 square feet of additional retail floor area) on the land bounded by Larry Uteck Boulevard, Broad Street (North), and the planned residential development in Sub Area 6 of the Bedford West Subdivision in Bedford, Nova Scotia (See Figure 1). This is the Traffic Impact Statement for the proposed development. This portion of the development was planned to include approximately 87,000 square feet of retail development in the previous 2013 plan and this revised development plan is a reduction in the total retail area. Several transportation studies have been completed for the area including *Bedford West Master Plan: Transportation Study* (Delphi-MRC, 2004), *Larry Uteck Interchange Traffic Impact Study* (CBCL, 2008), *Bedford West Master Plan Transportation Study Update* (HRM, 2014), *Proposed Ravines School Development Traffic Impact Study* (GRIFFIN transportation group, 2020), as well as Traffic Impact Statements, Studies, and Warrant Analyses for many of the development phases (WSP). HRM and NSPW have been working to complete the roadway network modifications identified in those studies.



**Figure 1: Development Plan**

### SITE DESCRIPTION AND ACCESS

The proposed development is within the Bedford West area, which is a Master Planned community generally bounded by Highway 102, Hammonds Plains Road, and Larry Uteck Boulevard. Existing bus stops, sidewalks, bikeways, and multi-use pathway networks are located in this area. Vehicular access to the proposed site is via a right-in, right-out connection to Larry Uteck Boulevard as well as full movement connection via a signalized intersection to Broad Street northeast of the planned Larry Uteck Boulevard / Broad Street (North) / Brookline Drive Roundabout (See Figure 1).

### STREET AND INTERSECTION DESCRIPTIONS

**Larry Uteck Boulevard** is an arterial road that runs northwest-southeast approximately 7.5 km between Hammonds Plains Road and the Bedford Highway. In the vicinity of the proposed development, Larry Uteck Boulevard has a two-lane cross section with unpaved shoulders and a 60 km/h posted speed limit.

**Broad Street** is a two-way collector road with concrete sidewalk on one side and a multi-use path on the other side. The street loops through the West Bedford development area with two connections to Larry Uteck Boulevard and has a posted speed limit of 50km/hr.

The Larry Uteck Boulevard at Broad Street (North) / Brookline Drive intersection is four legged with STOP control on Broad Street and Brookline Drive and free flow along Larry Uteck Boulevard. The intersection is expected to be reconstructed as a two-lane roundabout (shown in Figure 1).

### TRANSIT

The proposed new development is within a 5-minute walk of the nearest existing bus stops (#7014 and #2026), located along Larry Uteck Boulevard southeast of Bluewater Road. Transit Route #433 travels along Larry Uteck Boulevard immediately fronting the site, and it is expected that additional transit stops will be placed along Larry Uteck Boulevard as development of the Bedford West area progresses.

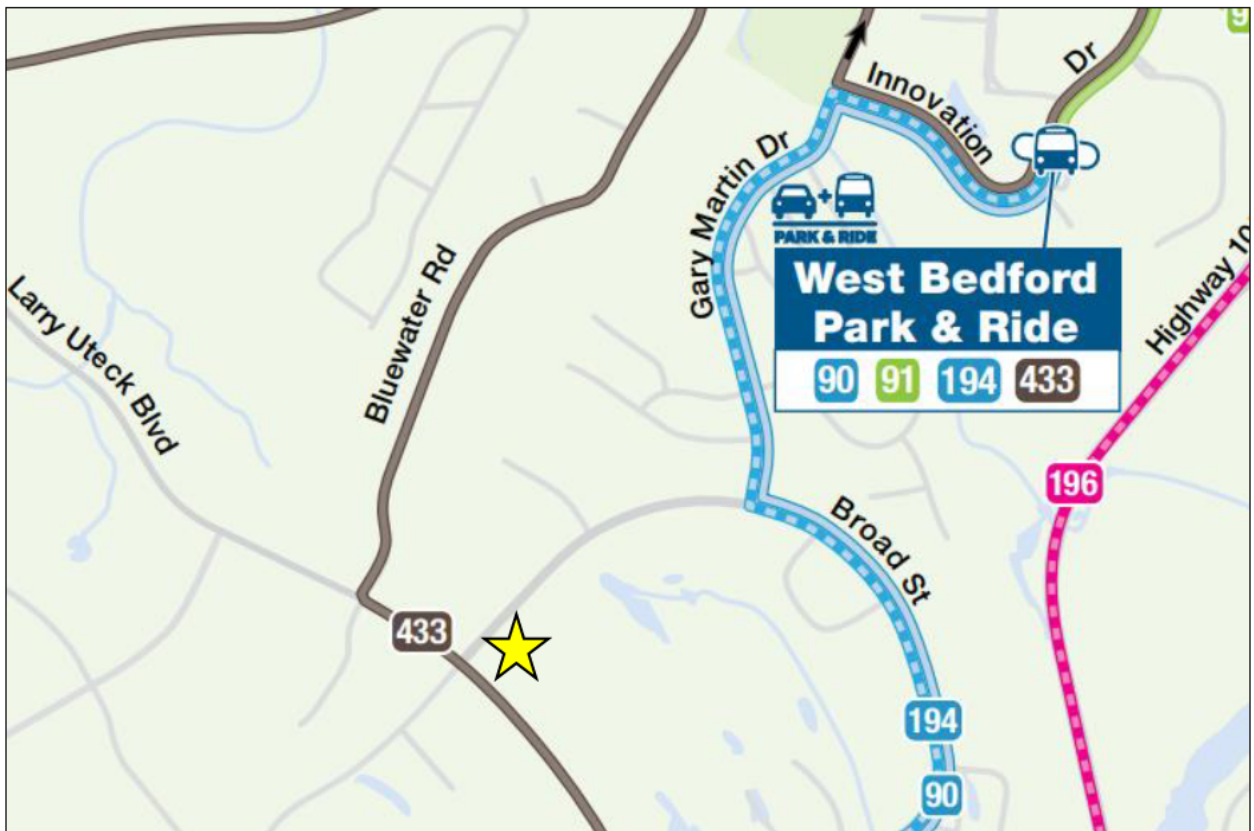


Figure 2 – Existing Transit Routes near Proposed Development

### ACTIVE TRANSPORTATION

HRM has plans to improve active transportation (AT) connectivity in the West Bedford area. Halifax’s *Integrated Mobility Plan (IMP)* identifies Larry Uteck Boulevard, between the Highway 102 interchange and Hammonds Plains Road as a priority connection for multi-use pathways, as shown in Figure 3. It is noted that construction for a new school has started on Broad Street (North) near Larry Uteck Boulevard. Additional upgrades to the existing AT network on Larry Uteck Boulevard may be considered to access the school.

There is an existing multi-use pathway along the west side of this section of Broad Street and a sidewalk on the east (site) side (See Figure 4).

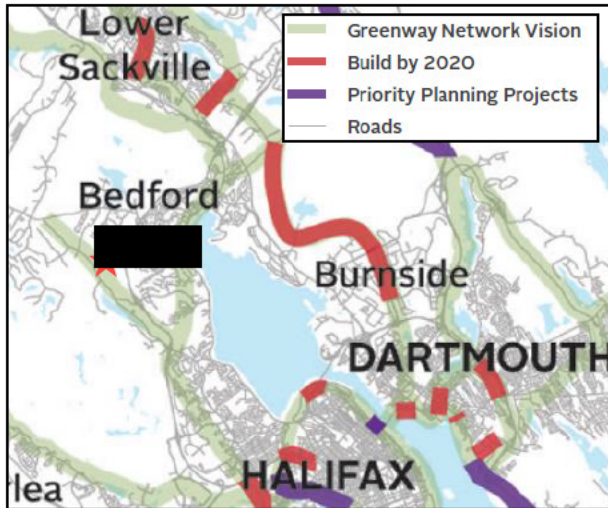


Figure 3 – Priority Connections for Multi-Use Pathways (IMP, 2017)

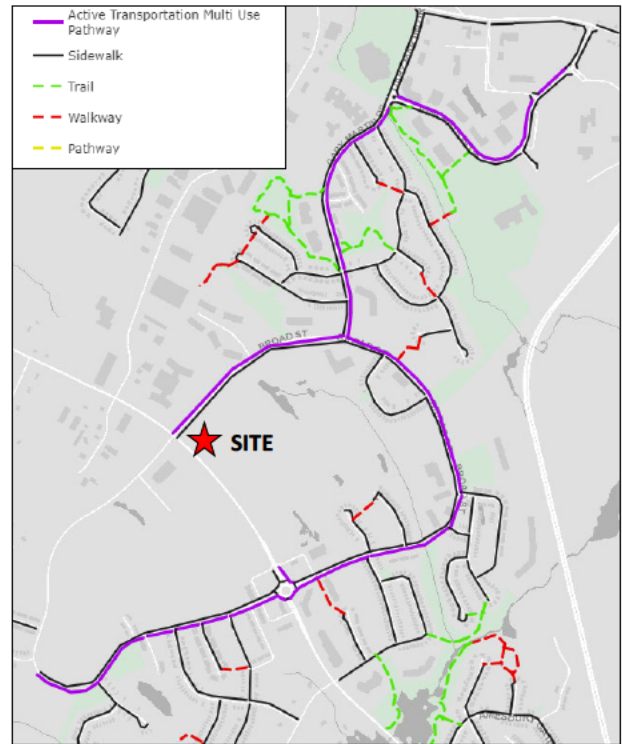


Figure 4 – Existing AT Network (Explore HRM)

### TRIP GENERATION

When using the published trip generation rates in *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. Generated trips for Strip Retail Plaza (Land Use 822) and Supermarket (Land Use 850) are estimated for the AM and PM peak hours of traffic based on the gross floor area. The proposed development includes a Supermarket and additional retail units, as shown in Table 1.

A 10% Pass-By rate for the Commercial development was applied to the site generated trips for the PM peak only. HRM’s *Integrated Mobility Plan* has established a non-auto mode share target of at least 26% for the Inner Suburban Area of the Municipality, however no reduction has been applied to site generated trips for non-auto mode share and no reduction has been applied to account for synergies with the planned residential areas within the Bedford West development. These are conservative assumptions.

The estimated number of primary trips that will be generated by the development includes:

- 188 two-way primary trips (111 entering and 77 exiting) during the AM peak hour; and,
- 512 two-way primary trips (256 entering and 256 exiting) during the PM peak hour.



**Traffic Impact Statement – Sub Area 6, Bedford West Retail Site  
Bedford, Nova Scotia**

**Table 1 - Trip Generation Estimates**

Land Use <sup>1</sup>	Units	Trip Generation Equations <sup>1</sup>	Trip Generation Estimates <sup>2</sup>			
			AM Peak Hour		PM Peak Hour	
			In	Out	In	Out
Strip Retail Plaza (Land Use 822)	24.2 KGFA	(AM) $\text{Ln}(T) = 0.66 \text{Ln}(X) + 1.84$ (60% In / 40% Out) (PM) $\text{Ln}(T) = 0.71 \text{Ln}(X) + 2.72$ (50% In / 50% Out)	31	21	73	73
Supermarket (Land Use 850)	47.5 KGFA	(AM) $T = 2.86$ (KGFA) (59% In / 41% Out) (PM) $\text{Ln}(T) = 0.81 \text{Ln}(X) + 2.92$ (50% In / 50% Out)	80	56	211	211
Unadjusted Total Trip Generation Estimates			111	77	284	284
10% Pass-By for Commercial Land Use during PM peak hour <sup>3</sup>			0	0	28	28
Adjusted Primary Site Generated Trips			111	77	256	256
NOTES: 1. Land Use Codes and Rates / Equations are from <i>Trip Generation, 11th Edition</i> , Institute of Transportation Engineers, 2021 2. Trip Generation Estimates are 'vehicles per hour' 3. A Pass-By Rate of 10% has been used for the Retail trips during the PM peak hour.						

These trip generation estimates are in line with the expected number of trips generated by the commercial development on this parcel that has been planned as part of the Bedford West Sub Area 6 development.

**PREVIOUS VOLUME PROJECTIONS AND ANALYSIS**

The recent TIS that was completed (GRIFFIN transportation group Inc., 2020) for the now open school along Broad Street opposite the proposed retail site includes analysis of both the Larry Uteck Boulevard / Broad Street N roundabout and the planned signalized intersection along Broad Street using 2025 background volumes that were projected from the Bedford West Transportation Master Plan and considers trips generated by this retail site. The traffic analysis prepared for the school TIS finds that two eastbound through lanes should be provided along Broad Street North between the roundabout and the easternmost access for the school to accommodate the traffic queues at the signalized intersection during the AM peak hour within the short spacing (about 65m) between the two intersections along Broad Street.

Many of the trips generated by the proposed development are expected to be from / to the Bedford West community and the supermarket is unlikely to generate many trips before 8AM. The size of the retail area has reduced by over 15,000ft<sup>2</sup> from the area within the Bedford West Master Plan (71,720ft<sup>2</sup> from 87,000ft<sup>2</sup>) and a right-in, right-out connection is now proposed to Larry Uteck Boulevard that would reduce the trips entering the site from Broad Street that originate from the south along Larry Uteck Boulevard. The PM peak hour for the retail development and the school are expected to occur at different times, as was noted in the TIS for the school. With reduced development area and the addition of a right-in, right-out along Larry Uteck Boulevard, this may mitigate the need for an additional eastbound lane along Broad Street that was identified in the school TIS.

The school TIS confirmed that the intersection of Broad Street with the Elementary school / retail development would warrant traffic signalization with full development. Since the school has been constructed and operating and since the proposed retail development will form the fourth leg of the intersection, signalization of this intersection should be planned before the opening of the grocery store.

**ACCESS REVIEW**

The vehicular access to the proposed development is via a right-in, right-out connection to Larry Uteck Boulevard to the southern end of the proposed development and has a full movement connection to a signalized intersection to Broad Street on the north side of the proposed development.

Active mode users can access the site via proposed external connections to the broader area including connections to the existing sidewalk along Broad Street, and future sidewalk along the new roadway connecting to the signalized intersection (Shown on Figure 1).



## Traffic Impact Statement – Sub Area 6, Bedford West Retail Site Bedford, Nova Scotia

### SUMMARY

1. Plans are being prepared for a commercial development on the land bounded by Larry Uteck Boulevard, Broad Street (North), and the planned residential development in the Bedford West Subdivision in Bedford, Nova Scotia.
2. Vehicular access to the proposed development is via Larry Uteck Boulevard (right-in, right-out) and via Broad Street at a planned signalized intersection.
3. Trip generation estimates were prepared using rates published in *Trip Generation, 11<sup>th</sup> Edition* (Institute of Transportation Engineers, Washington 2021). It was estimated that the proposed development will generate:
  - 188 two-way auto trips (111 entering and 77 exiting) during the AM peak hour; and,
  - 512 two-way auto trips (256 entering and 256 exiting) during the PM peak hour.

### RECOMMENDATIONS

4. Since the school has been constructed and is open and since the proposed retail development will form the fourth leg of the intersection, signalization of this intersection should be planned before the opening of the grocery store.

### CONCLUSION

5. The trip estimates for this development are in line with the expected number of trips generated by the commercial development on this parcel that has been planned as part of the Bedford West Sub Area 6 development. This portion of the development was planned to include approximately 87,000 square feet of retail development in 2013 and this proposed square footage has since been reduced to 71,720 square feet. With the new roundabout at Larry Uteck Boulevard and the planned signalization of the Broad Street intersection, the difference in the trips is not expected to have a major impact to the roadways and intersections within this area.

If you have any questions or comments, please contact me by email at [patrick.hatton@wsp.com](mailto:patrick.hatton@wsp.com) or by telephone at 902-444-7712.

Sincerely,



Patrick Hatton, P. Eng.  
Senior Transportation Engineer  
WSP Canada Inc.

