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Project No. 192020

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Re: Traffic Impact Statement, Mixed-Use Development, Wyse Road, Dartmouth, NS

Mr. Saleh,

Harbourside Transportation Consultants has completed a traffic impact statement, as per Halifax Regional Municipality (HRM) requirements, to support the development application for the proposed mixed-use residential and commercial development on Wyse Road in Dartmouth, Nova Scotia.

Study Area and Site Context: The proposed development is located on Wyse Road, immediately northeast of the Angus L. MacDonald Bridge toll plaza. The site includes a number of parcels on Wyse Road, Dawson Street, Faulkner Street and Lyle Street. The site context is illustrated in Figure 1.

Wyse Road is an arterial roadway that runs from Albro Lake Road to Windmill Road. In the vicinity of the proposed development, Wyse Road has three lanes in each direction with intermittent raised medians. Wyse Road has a posted speed limit of 50 km/h and sidewalks on both sides of the roadway.

Windmill Road is a major collector roadway that runs from Victoria Road in the Burnside area to Wyse Road. Wyse Road has three lanes in each direction with intermittent raised medians. In the vicinity of the proposed development, Windmill Road has one lane in each direction and a posted speed limit of 50 km/h.

Dawson Street, Faulkner Street, Lyle Street and William Street are local residential roadways with speed limits of 50 km/h. Sidewalks are provided on both sides of Dawson Street and Faulkner Street and on one side of Lyle Street. There are no sidewalks on William Street.

There bus stops located before and after Dawson Street on Wyse Road and Windmill Road. Wyse Road is serviced by four Halifax Transit routes: Route 3 – Crosstown, Route 39 – Flamingo, Route 53 – Notting Park and Route 64 – Akerley. Windmill Road is serviced by Halifax Transit Route 51 – Windmill. In addition, the site is located within walking distance of the Halifax Transit Bridge Terminal located on Nantucket Avenue which provides connections to 21 transit routes.



Figure 1: Site Context

Description of Proposed Development: The proposed development will include one mixed-use residential and commercial building and six residential buildings. The proposed development will include 17,363 square feet of commercial space and 674 residential units. A detailed breakdown of units and commercial space for each building is provided in Table 1.

Table 1: Building Data

Building	Residential Units	Commercial Space
MU1	268	17,363 ft ²
MU2	60	-
MU3	60	-
MU4	60	-
MU5	60	-
MU6	106	-
MU7	60	-
Total	674	17,363 ft²

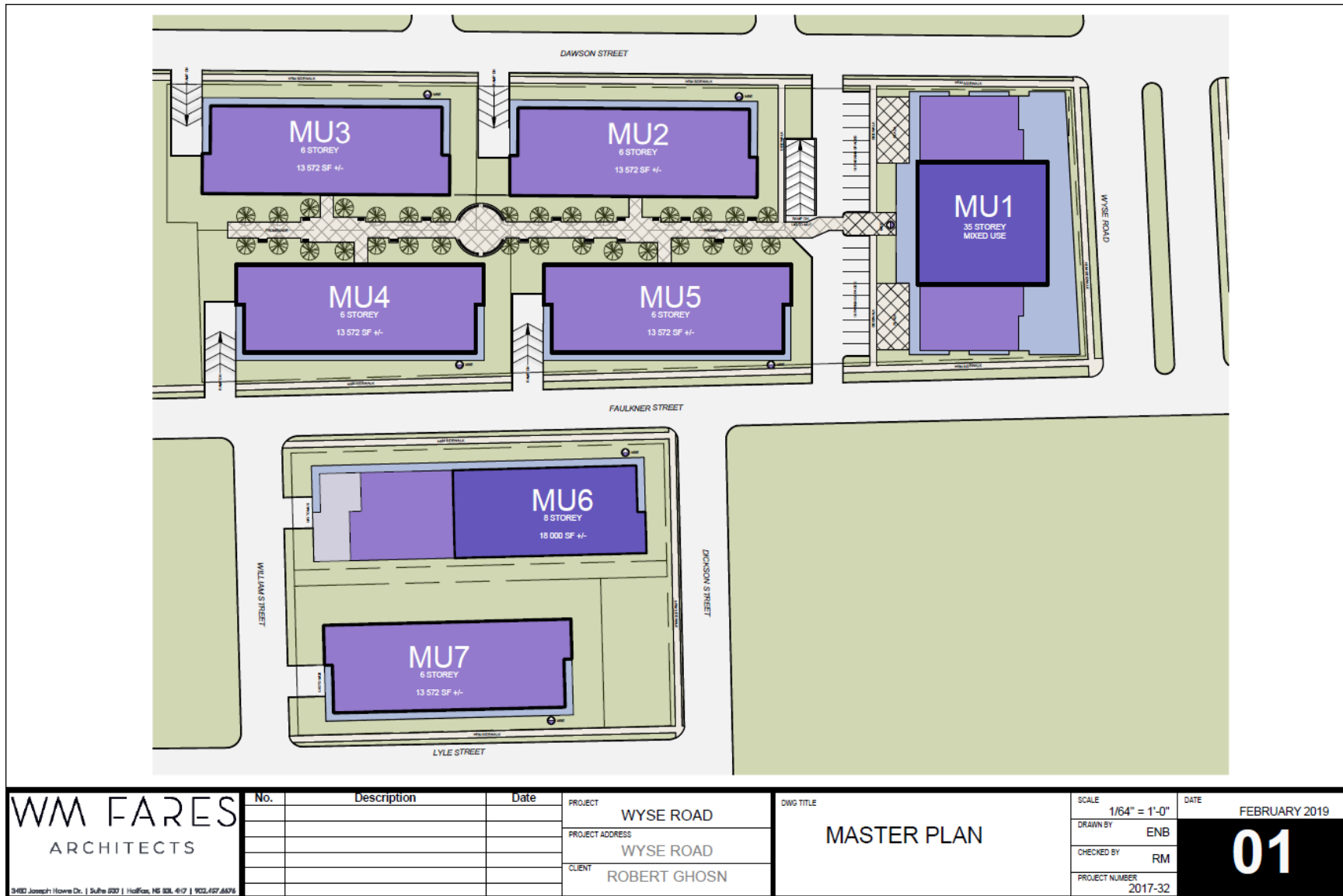


Figure 2: Development Plan

Access: Access to the proposed development will include three driveways on Dawson Street, three driveways on Faulkner Street and two driveways on William Street. Photographs of the sight lines at the approximate locations of the eight driveways are provided in Appendix A.

The sight distance at the proposed driveway locations were reviewed against HRM requirements. For a local roadway with a posted speed limit of 50 km/h, the HRM *Design Guidelines* indicate that 65 metres of sight distance is required at a driveway. The proposed driveway locations meet the sight distance requirement with the following exceptions:

- MU1 driveway on Dawson Street – looking the right: there is less than 65 metres to the intersection with Wyse Road. The intersection is clearly visible from the approximate driveway location.
- MU1 driveway on Faulkner Street – looking to the left: there is less than 65 metres to the intersection with Wyse Road. The intersection is clearly visible from the approximate driveway location.
- MU6 driveway on William Street – in both directions: there is less than 65 metres to the end of William Street in both directions. Both intersections are clearly visible from the approximate driveway location.
- MU7 driveway on William Street – in both directions: there is less than 65 metres to the end of William Street in both directions. Both intersections are clearly visible from the approximate driveway location.

Estimation of Site Generated Trips: The proposed development will include 17,363 square feet of commercial space and 674 residential units. The vehicle trip generation estimates for the proposed development were quantified using trip generation rates obtained from the 10th edition of the *Trip Generation Manual* published by the Institute of Transportation Engineers (ITE). The weekday morning (AM) and afternoon (PM) peak hours trip generation estimates for the proposed development are summarized in Table 1.

The vehicle trip estimates were adjusted to reflect trips made using non-auto transportation modes such as transit and active transportation. The *Integrated Mobility Plan* (IMP) set mode share targets for different areas of HRM include the Regional Centre, Inner Suburban and Outer Suburban areas. The development falls within the boundary of the Regional Centre, for which the IMP set the target that by 2031, at least 60 percent of trips in the Regional Centre will be made using non-auto modes. The non-auto mode targets are that at least 23 percent of trips will be made using transit and at least 37 percent of trips will be made using active transportation. The vehicle trip estimates were reduced by 60 percent to reflect the non-auto mode share. The proposed development is expected to generate 100 primary trips in the AM peak hour (28 trips in/72 trips out) and 138 primary trips in the PM peak hour (80 trips in/58 trips out).

Table 2: Trip Generation Estimates

Site Plan Reference	Land Use ¹	Units		Trip Generation Rates ²						Trips Generated ³					
				Weekday AM			Weekday PM			Weekday AM			Weekday PM		
				Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out
MU1	ITE LUC 820 - Shopping Centre	17.36	1000 ft ²	0.94	62%	38%	3.81	48%	52%	17	11	6	67	32	35
	ITE LUC 222 - Multifamily Housing (High-Rise)	268	Units	0.31	24%	76%	0.36	61%	39%	84	20	64	97	59	38
MU2	ITE LUC 221 - Multifamily Housing (Mid-Rise)	60	Units	0.36	26%	74%	0.44	61%	39%	22	6	16	27	16	11
MU3	ITE LUC 221 - Multifamily Housing (Mid-Rise)	60	Units	0.36	26%	74%	0.44	61%	39%	22	6	16	27	16	11
MU4	ITE LUC 221 - Multifamily Housing (Mid-Rise)	60	Units	0.36	26%	74%	0.44	61%	39%	22	6	16	27	16	11
MU5	ITE LUC 221 - Multifamily Housing (Mid-Rise)	60	Units	0.36	26%	74%	0.44	61%	39%	22	6	16	27	16	11
MU6	ITE LUC 221 - Multifamily Housing (Mid-Rise)	106	Units	0.36	26%	74%	0.44	61%	39%	39	10	29	47	29	18
MU7	ITE LUC 221 - Multifamily Housing (Mid-Rise)	60	Units	0.36	26%	74%	0.44	61%	39%	22	6	16	27	16	11
Total Vehicle Trips (vph)										250	71	179	346	200	146
Reduction for Non-Auto Modes (60 percent)										150	43	107	208	120	88
Adjusted Vehicle Trips (vph)										100	28	72	138	80	58
Notes:															
1. Land use codes are from the Trip Generation Manual, 10th edition, Institute of Transportation Engineers, 2017.															
2. Trip generation rates are in 'vehicles per hour per unit.'															
3. Trips generated are in 'vehicles per hour'.															

Impact to Surrounding Roadways: Site-generated traffic will travel along Dawson Street and Faulkner Street to access Wyse Road or Windmill Road. Site-generated traffic was assigned to Dawson Street and Faulkner Street based on the location of the proposed driveways. It was assumed that trips to/from MU1 would be split equally between the two roadways and that trips to/from MU6 and MU7 on William Street would use Faulkner Street. The proposed development will add less than 55 two-way trips on Dawson Street and less than 85 two-way trips on Faulkner Street during the peak hours.

Given the location of the proposed development, it is likely that the majority of site-generated traffic will travel to/from the development via Wyse Road. However, a proportion of site-generated traffic may travel via Windmill Road; this would likely be vehicles travelling westbound towards Burnside.

The site-generated traffic will primarily impact the intersections of Wyse Road and Dawson Street and Wyse Road and Faulkner Street. A recent traffic count (<5 years old) was available from HRM for the intersection of Wyse Road and Faulkner Street, the traffic volumes are shown in Figure 3. The traffic volume data indicates the peak-direction of traffic on Wyse Road is eastbound during the AM peak hour (travelling towards the MacDonald Bridge and downtown Dartmouth) and westbound during the PM peak hour. The trip generation estimates indicate that the proposed development will generate less than 80 additional vehicles trips in the peak-direction of traffic during the AM and PM peak hours, which represents an increase in peak-direction traffic volumes of less than 15 percent.

It is anticipated that the new vehicle trips associated with the proposed development can be accommodated along Wyse Road and Windmill Road with a negligible impact on traffic operations. It should be noted that this consists of a high-level qualitative assessment, therefore no analytical capacity calculations have been completed to support the assessment.

2016 Traffic Count												
Weekday AM Peak Hour	Driveway		60		22		Wyse Road		Driveway		229	
			7								7	
	36		17		159		63					
	298		16		599		568		15		44	
599		568		15		274		640		677		
Wyse Road		9		0		55		Wyse Road		14		
37		64		55		Faulkner Street		44		70		
Faulkner Street		Faulkner Street		Faulkner Street		Faulkner Street		Faulkner Street		Faulkner Street		
Weekday PM Peak Hour	Driveway		229		127		Wyse Road		Driveway		44	
			7								7	
	159		63		159		63					
	677		76		443		351		16		569	
443		351		16		640		677		463		
Wyse Road		9		0		55		Wyse Road		14		
44		70		55		Faulkner Street		44		70		
Faulkner Street		Faulkner Street		Faulkner Street		Faulkner Street		Faulkner Street		Faulkner Street		

Figure 3: Wyse Road & Faulkner Street – Peak Hour Traffic Volumes (source: HRM Traffic)

Summary and Conclusions: Harbourside Transportation Consultants has completed a traffic impact statement, as per Halifax Regional Municipality requirements, to support the development application for the proposed mixed-use residential and commercial development located on Wyse Road in Dartmouth, Nova Scotia. The following conclusions were gathered from the traffic impact statement:

- The proposed development will include one mixed-use residential and commercial building and six residential buildings. The seven buildings will include a total of 17,363 square feet of commercial space and 674 residential units.
- Access to the proposed development will include three driveways on Dawson Street, three driveways on Faulkner Street and two driveways on William Street. The proposed driveway locations will meet the sight distance requirements except where there is less distance to the end of the roadway than the required sight distance.
- The vehicle trip generation estimates for the proposed development were quantified using trip generation rates obtained from the ITE Trip Generation Manual (10th edition). The vehicle trip estimates were reduced by 60 percent to reflect the non-auto mode share for the Regional Centre. The proposed development is expected to generate 100 primary trips in the AM peak hour (28 trips in/72 trips out) and 138 primary trips in the PM peak hour (80 trips in/58 trips out).
- Site-generated traffic will travel along Dawson Street and Faulkner Street to access Wyse Road or Windmill Road. Based on the location of the proposed driveways, the proposed development will add less than 55 two-way trips on Dawson Street and less than 85 two-way trips on Faulkner Street during the peak hours.
- Given the location of the proposed development, it is likely that the majority of site-generated traffic will travel to/from the development via Wyse Road. The peak-direction of traffic on Wyse Road is eastbound during the AM peak hour (travelling towards the MacDonald Bridge and downtown Dartmouth) and westbound during the PM peak hour.

- The trip generation estimates indicate that the proposed development will generate less than 80 additional vehicles trips in the peak-direction of traffic during the AM and PM peak hours, which represents an increase in peak-direction traffic volumes of less than 15 percent. It is anticipated that the new vehicle trips associated with the proposed development can be accommodated along Wyse Road and Windmill Road with a negligible impact on traffic operations.

If you have any questions or additional discussion, please feel free to contact the undersigned.

Regards,

Original Signed

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Appendix A

Photographs

MU1 Driveway – Dawson Street



MU1 Driveway – Faulkner Street



MU2 Driveway – Dawson Street



MU3 Driveway – Dawson Street



MU4 Driveway – Faulkner Street



MU5 Driveway – Faulkner Street



MU6 Driveway – William Street



MU7 Driveway – William Street

