

189 Kearney Lake Road Development, Halifax, NS Transportation Impact Review and Statement

ISSUED:

January 28, 2025

Dear Dean,

Fathom Studio carried out a Transportation Impact Review for a proposed residential development at 189 Kearney Lake Road. The property is located on the northeast side of Kearney Lake Road directly

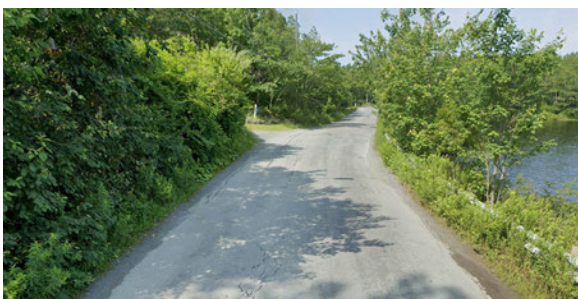
across from Hamshaw Drive and about 500 meters west of Highway 102. The proposed development (left image) is expected to contain up to 105 residential units including a 9 storey residential building, plus four new houses fronting directly onto Kearney Lake Road.

The area surrounding the development is primarily rural in nature with pockets of low density residential development south and west of the site. The REgroup (General Contractor) site is located immediately north

of the development in an old quarry cut. The development is also in close proximity to Kearney Lake, Charles Lake and Washmill Lake, which include a variety of trails around these areas.



Kearney Lake Road features a two-lane rural cross section about 10 meters in width, with one lane in each direction. The cross section includes dedicated painted bike lanes on both sides of the road and a concrete sidewalk on the southwest side of the road extending from Hamshaw Drive through the Highway 102 interchange to points further east. West of the development, the bike lanes continue with gravel shoulders and typical rural ditch drainage in most areas. Pavements adjacent to the development appear to be in good condition.



Hamshaw Drive is a rural local roadway providing access to a limited residential area, small businesses and the Maskwa Aquatic Club. It has a two-lane unmarked cross section 6-meters in width, with one lane in each direction. There is no active transportation infrastructure present and the asphalt pavement appears to be in fair condition.



The proposed development is located in close proximity to schools, baseball & soccer fields, daycares, parks, trails and other amenities east and west of Highway 102. There are existing sidewalks on the south side of Kearney Lake terminating at Hamshaw Drive, and painted bike lanes between Highway 102 and Belle Street. East of Highway 102 there is an active transportation greenway that extends to additional future envisioned greenways and includes access to the Hemlock Ravine Park also just east of Highway 102. At this time, there are no crosswalks on Kearney Lake Road near the development, though a crossing should be considered to reflect the areas likely pedestrian desire lines.

The nearest transit terminal from the proposed development is the Lacewood Terminal located about 3.3 kilometers south of the development and serves thirteen (13) different local and regional routes. This includes Route 433 that run along Kearney Lake Road directly adjacent to the development. Various other routes are also available just east of Highway 102 including Routes 30A/B, 138 and 196.

Access to the stops should be coordinated to include concrete sidewalks between the developments. This should include extension of the sidewalk on the west side of Kearney Lake Road to the existing northbound bus stop (should be in place today), and sidewalk on the east side between the development and the relocated bus stop location.

Existing Traffic

Recent 2023 traffic data was obtained from the HRM open data portal (23VOL798) and show Average Annual Weekday Traffic (AAWT) volumes of about 9600 vehicles per day. AM peak volumes show about 460 inbound and 234 outbound vehicles on Kearney Lake Road, while PM volumes show a more even distribution of about 435 vehicles in both directions.

Trip Generation

The Institute of Transportation Engineers (ITE) Trip Generation Guide (11th Edition) was used to estimate the anticipated trip generation to and from the site using trip code 221 for residential mid-rise developments. Considering the residential nature of the development, the typical weekday peak hours of traffic is likely to be the critical analysis periods for this development.

Land Use	Trip Code	# Units	Variable	Daily			AM Peak			PM Peak		
				Enter	Exit	TOTAL	Enter	Exit	TOTAL	Enter	Exit	TOTAL
Mid-Rise Residential	221	105	Units	227	227	454	8	27	35	25	16	41

Operational Performance

A basic Synchro traffic model was prepared representing the higher PM peak hour volumes and the new traffic volumes from the development. The model shows that the development driveway is expected to operate at less than 10% capacity during the peaks and at Level of Service (LOS) B or C when exiting the site onto Kearney Lake Road. In addition, there is minimal impact to vehicular traffic on Kearney Lake Road as a result of the new development traffic.

Volumes also indicate that dedicated left turn lanes, or higher order traffic control are not required at the driveway intersection.

Safety Considerations



Kearney Lake Road facing north



Kearney Lake Road facing south

The proposed driveway can be aligned opposite Hamshaw Drive to create a typical 4-leg intersection with two-way stop control (TWSC) on Hamshaw and the developments driveway. It is anticipated that the new driveway will have a minor skew (less than 20 degrees) to Kearney Lake Road though is not expected to create any sight line issues.

The driveway is located on a tangent section of roadway just south of a larger radius curve on Kearney Lake, placing the driveway on the outer side of this curve. Sight distances in both directions exceed requirements noted in the Transportation Association of Canada's Geometric Design Guide for Canadian Roads.

Conclusions and Discussion

The proposed development on Kearney Lake Road is anticipated to have a negligible impact on traffic operations on the surrounding road network. The development's driveway can be constructed and coordinated with Hamshaw Drive and operate at very good levels of service as a standard 4-leg intersection with two-way stop control on the side roads.

The development has direct access to a transit route, pedestrian and cycling facilities that allow for smooth integration into the community and connectivity to adjacent residential and commercial areas. It is recommended that consideration be given to adjusting the northbound transit stop to better services both the development and adjacent business and should include sidewalk connections to existing/relocated transit stops. Consideration should also be given to providing a crosswalk across Kearney Lake near the development to accommodate movements to bus stops, sidewalks and amenities on the southwest side of Kearney Lake Road.

Should there be any questions or comments regarding the content of this review, please don't hesitate to get in touch.

Sincerely,



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