

2025-03-06
Project: (240770)

Harry Bye
H. Bye Construction Ltd.
395 Church Street
Mount Forest ON

Dear Mr. Bye:

**RE: TRAFFIC IMPACT BRIEF
VIKING-CIVES EXPANSION, HARRY BYE BOULEVARD, WEST GREY**

H. Bye Construction Limited retained Paradigm Transportation Solutions Limited to conduct this Traffic Impact Brief (TIB) for the Viking-Cives Limited (Viking-Cives) proposed workshop, located on Harry Bye Boulevard in the community of Mount Forest, municipality of West Grey.

This TIB will forecast traffic generation for the proposed development and provide opinion on potential traffic impacts, allowing Grey County (County) and West Grey Municipality (Municipality) staff to determine the need for further traffic impact studies. This study will complete assessments based on the *Grey County and West Grey Pre-Consultation*, held on December 4, 2024.

Background

The subject site is located south of Harry Bye Boulevard, between Norpark Avenue and Viola May Crescent in the Municipality of West Grey.

Figure 1 illustrates the proposed development location with official plan underlay.

The proposed workshop will serve as a second location for the existing Viking-Cives workshop, located at 42626 Grey County Rd 109, Mount Forest. The proposed workshop will store and service snow removal vehicles (SRV), with 20 employees in the short-term, and the possibility to expand to 40 employees with future expansion. The proposed site plan consists of:

- ▶ a proposed 3,900m² workshop, including office and administrative space;
- ▶ a future proposed 3,900m² expansion, solely for increased servicing; and
- ▶ 448 truck body staging spots to store snow removal vehicles prior to servicing.

Figure 2 illustrates the proposed development concept drawing.

Trip Generation

As noted in the Pre-Consultation by County and Municipal Staff, trip generation for the subject site will consider passenger vehicles and truck trips separately, with each method detailed below.

Passenger Vehicles

The Institute of Transportation Engineers (ITE) Trip Generation¹ is referenced to estimate the passenger vehicular site trip generation. Land Use Code (LUC) 110 – General Light Industrial rates were used as this most closely fit the intended use of the proposed development.

Table 1 summarizes the total inbound and outbound passenger vehicle traffic generated during the AM and PM peak hours.

TABLE 1: TRUCK TRIP GENERATION SUMMARY

Land Use Code	Units	AM Peak Hour				PM Peak Hour			
		Rate	In	Out	Total	Rate	In	Out	Total
110: General Light Industrial	40 Employees	(1)	17	4	21	(2)	4	15	19
Total Net Trips			17	4	21		4	15	19

(1) $T(X) = 0.55(X) - 1.28$

(2) $T(X) = 0.50(X) - 1.12$

A total of 21 and 19 passenger vehicle trips are estimated for the AM and PM peak hours, respectively, approximately one trip every three minutes, on average.

Trucks

Truck trips were estimated considering two generators:

- ▶ **ITE Trip Generation LUC 110** – used for truck trips generated by parts and equipment deliveries; and
- ▶ **Viking-Cives Full Capacity Operations** – the maximum number of truck trips generated by SRV service and storage, as per operational information provided by Viking-Cives.

Viking-Cives has estimated a maximum daily SRV truck trip generation of 20 movements (10 arrivals for SRV storage and 10 departures of serviced SRVs). Assuming a 10-hour workday, an average of one arrival and one departure per hour would occur during the AM and PM peak hours.

¹ Institute of Transportation Engineers, Trip Generation Manual, 11th ed., (Washington DC: ITE, 2021). 273-304



Table 2 summarizes the total inbound and outbound truck traffic generated during the AM and PM peak hours.

TABLE 2: TRUCK TRIP GENERATION SUMMARY

Land Use Code	Units	AM Peak Hour				PM Peak Hour			
		Rate	In	Out	Total	Rate	In	Out	Total
110: General Light Industrial	40 Employees	Delivery Trucks							
		0.02	1	0	1	0.03	1	1	2
Viking-Cives Full Capacity Operations		Serviced Trucks							
		(1)	1	1	2	(1)	1	1	2
Total Truck Trips			2	1	3		2	2	4

(1) Rate as per anticipated operations of Viking-Cives Ltd.

A total of 3 and 4 truck trips are estimated for the AM and PM peak hours, respectively, approximately one trip every 17 minutes, on average.

Passenger Car Equivalent Net Total

As per the Highway Capacity Manual (HCM)² and considering the surrounding area is level terrain, a passenger car equivalent (PCE) value of 2.0 is assumed for truck trips to determine the net total number of passenger vehicles generated by the proposed development.

Table 3 summarizes the inbound and outbound PCE traffic generated during the AM and PM peak hours. A total of 27 and 27 PCE trips are forecast for the AM and PM peak hours, respectively, approximately one trip every two minutes.

² Transportation Research Board, Highway Capacity Manual 6th Edition: Exhibit 12-25, (Washington DC: TRB, 2016). 12-35



TABLE 3: PCE TRIP GENERATION SUMMARY

Land Use Code	Units	AM Peak Hour				PM Peak Hour			
		Rate	In	Out	Total	Rate	In	Out	Total
110: General Light Industrial	40 Employees	Vehicles							
		(1)	17	4	21	(2)	4	15	19
		Delivery Trucks							
		0.02	1	0	1	0.03	1	1	2
Viking-Cives Full Capacity Operations		Serviced Trucks							
		(3)	1	1	2	(3)	1	1	2
Total Vehicle Trips			17	4	21		4	15	19
Total PCE Truck Trips*			4	2	6		4	4	8
Total Net Trips*			21	6	27		8	19	27

(1) $T(X) = 0.55(X) - 1.28$ (2) $T(X) = 0.50(X) - 1.12$

(3) Rate as per anticipated operations of Viking-Cives Ltd.

* Truck Trips have been assumed at a PCE of 2.0 for the purposes of Total Net Trips

Conclusions

In conclusion, the proposed development, with the future expansion, is forecast to generate:

- ▶ 21 and 19 passenger vehicle trips during the AM and PM peak hour, respectively;
- ▶ three and four truck trips during the AM and PM peak hour, respectively; and
- ▶ 27 and 27 PCE net total trips during the AM and PM peak hour, respectively.

Recommendations

Given that the proposed development, including the future planned expansion, is forecast to generate 27 PCE trips during the AM and PM peak periods, it is unlikely to impact traffic operations in a significant way and therefore a full traffic impact assessment is not recommended.

Yours very truly,

PARADIGM TRANSPORTATION SOLUTIONS LIMITED

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