

memo

WSE Consulting

To: Town of Cobourg

From: Adam Wilson, P.Eng

Date: August 17, 2024

Re: Starbucks Cobourg - Stormwater Management

WSE has been retained to review drainage for the subject project. The site is located in the north limits of Cobourg as outlined in **Figure 1**.



Figure 1 – Site Location

It is proposed to expand the existing commercial unit along the southern boundary to permit a larger retail space and drive through. A site plan with the building expansion is shown below as **Figure 2**.

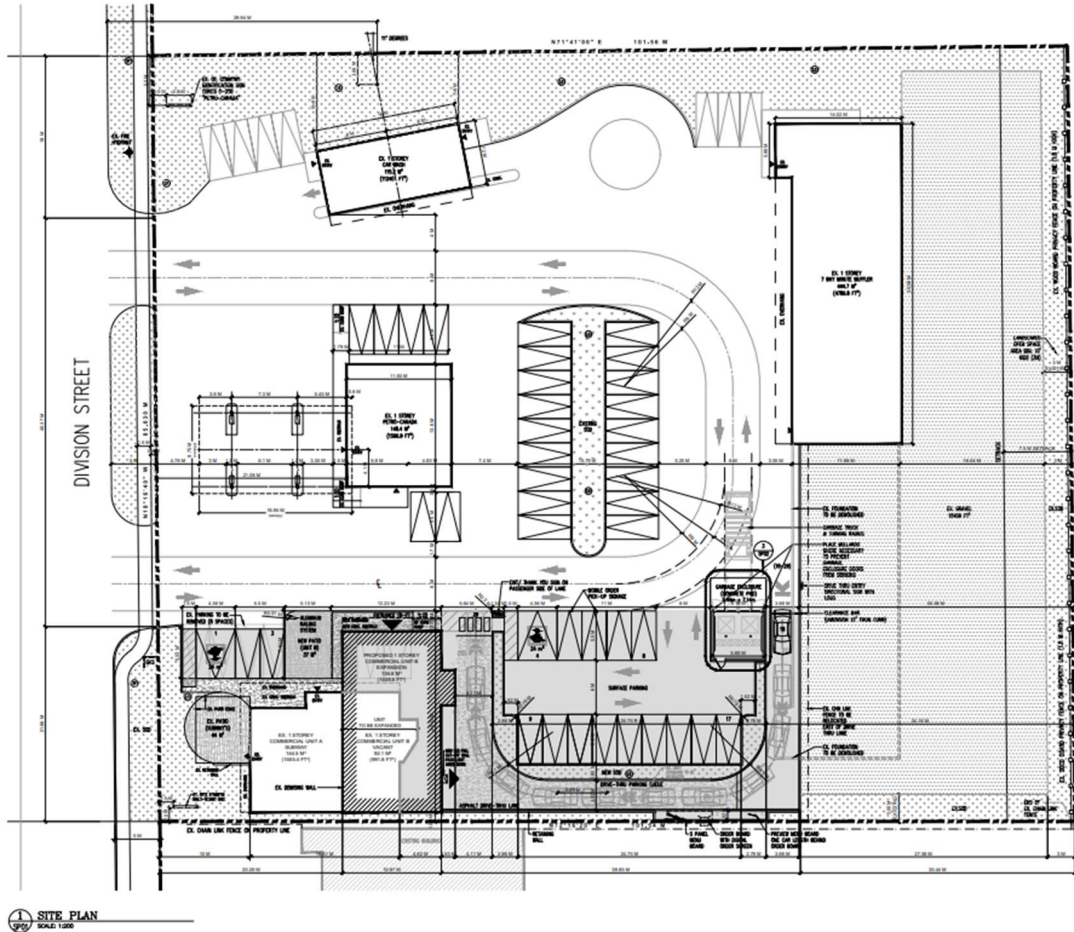


Figure 2 – Proposed Expansion

Existing Drainage Patterns

In its current state the property is in a maintained condition with the majority of the site being paved with some small grassed areas at the west and south property line. The project area is approximately 0.87 ha.

The site has a generally level topography. Drainage is conveyed to the municipal drainage system within Division St. through sheet drainage and a storm sewer collection system within the subject lands.

It has been advised through consultation with the municipality that a historic retention pond was located in the east quadrant of the property and was filled in 2005. Based on site observations the removal of this feature has not generated any adverse drainage impacts.

Proposed Drainage Patterns

Under the developed condition the drainage pattern will be maintained to existing conditions with areas of concentrated flow being directed to the existing municipal drainage.

Quality and Quantity Control

The proposed works will include expansion of the building over existing asphalt with no change in imperviousness, and some grass removal to expand the parking to facilitate the drive through. The change in pervious surface to impervious is estimated at 121m² or 1.4% of the site.

Based on site visits and arial photograph review it is evident that the site is already in a high impervious condition and the minor increase of 1.4% will not have any adverse impacts to the site or municipal drainage and no mitigation measures are recommended for quality or quantity control for the proposed site expansion.

Sediment and Erosion Control

An erosion and sediment control strategy should be implemented to minimize the transfer of silt off-site during construction. The following measures are recommended to be incorporated into the strategy as required:

- Environmental fencing and straw bales
- Regular inspection of the erosion and sediment control devices
- Removal and disposal of the erosion and sediment control devices after the site has been stabilized
- All exposed earth to be re-vegetated within thirty days following the end of construction

Conclusions

- No quality or quantity control measures are required as the sites developed condition has a negligible change from the existing condition.

Sincerely,

WSE Consulting Inc.



Adam Wilson, P.Eng.
Principal Engineer