

August 30, 2023

File: 100382.003 – R0

S.J. Lawrence Architects Incorporated
18 Deakin Street, Suite 205
Ottawa, Ontario
K2E 8B7

Attention: Brandon Lawrence, B.AS, M.Arch, OAA, MRAIC

**Re: Geotechnical Review of Site Grading and Servicing Plan
Proposed Residential Development, 1240 Carling Avenue, Ottawa, Ontario**

At your request, GEMTEC has reviewed the 'Site Grading and Drainage Plan' that has been provided to our firm for review for conformance to the recommendations provided in the geotechnical investigation report that was previously prepared by GEMTEC (Geotechnical Investigation, Proposed Residential Development, 1240 Carling Avenue, Ottawa, Ontario, dated February 10, 2023).

For review, GEMTEC was provided with Drawing No. G-1 – 'Proposed Site Grading and Servicing Plan', prepared by T.L. Mak Engineering Consultants Ltd, dated April 2023.

Based on our review of the details provided on the above noted plan, it is our opinion that the geotechnically related information provided on the plan is in general conformance with the recommendations in the noted geotechnical report.

Further to the above, the following comments are provided:

Proposed Underside of Footing Elevation

The subject plan indicates that the underside of footing elevation will be below the groundwater table and, further, at an elevation that is too low to allow for the footing perimeter drain to connect to the municipal storm sewer and allow drainage by gravity. As such, a sump pit/pump will be installed to convey groundwater from footing level to the storm sewer level. The plan further indicates that the developer should verify the normal high groundwater table prior to proceeding with construction, adjust design details according to the results, and obtain necessary permits accordingly.

During the course of the geotechnical investigation in January 2023, the groundwater level was measured at about elevation 73.8 metres (geodetic) (about 0.4 metres above the elevation of the underside of footings of the proposed building). As indicated in the geotechnical report, the measured groundwater level may not represent the highest groundwater level, past, present, or

future. It is GEMTEC's recommendation that the groundwater level be measured ahead of construction from within the monitoring well that was installed during the geotechnical investigation, and that the current design, contingency measures (e.g., backup generator, additional pump), permitting requirements, etc. be reviewed based on the existing and additional groundwater level information. Given that the current and subsequent measurement may not represent the highest groundwater level, ideally a groundwater monitoring program would be undertaken for a minimum period of one year. The data from such a program would provide a more accurate, although not definitive, indication of the typical, seasonal high groundwater level.

Depth of Service Laterals

The proposed depth of the service laterals (water, storm, sanitary) will be provided with less than the required depth of earth cover required by the City of Ottawa. As indicated on the plan, appropriate measures (e.g., insulation) should be applied to mitigate the condition and provide adequate protection from frost/freezing.

We trust that the information provided above is sufficient for your purposes. Please contact the undersigned should you require additional information.



Matthew Rainville, C.E.T

MR/BC

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Bill Cavers, P.Eng.

