PATERSON GROUP

memorandum

re: **Grading Plan Review**
Proposed Apartment Building
15 Larch Street, Ottawa, Ontario

to: Avenyn Capital Partners LP. – **Mr. Roberto Campagna** – Roberto@rocahomes.ca

to: NOVATECH – **Mr. Jeffrey Kelly** – j.kelly@novatech-eng.com

date: September 15, 2022

file: PG6071-MEMO.02

Further to your request and authorization, Paterson Group (Paterson) prepared the current memorandum to provide a grading plan review from a geotechnical perspective for the proposed apartment building at the aforementioned development. The following memorandum should be read in conjunction with Paterson Report PG6071-1 Revision 1 dated February 11, 2022.

Grading Plan Review

Paterson reviewed the following grading plan prepared by NOVATECH for the aforementioned development:

- Grading, Drainage and Sediment Control Plan - Project No. 120251 - Drawing No. 120251-GR - Revision 2 dated September 2, 2022.

Based on our review of the grading plan provided, the proposed grading is considered acceptable and in compliance with our geotechnical recommendations. Therefore, no lightweight fill or surcharge program is required for the perimeter of the subject building, and conventional construction methods are acceptable. Also, the proposed underside of footing elevations (USF) for the building will provide sufficient frost cover for the proposed footings (minimum 1.5 m below finished grade for heated structures). For Unheated structures, such as stairs, a minimum frost cover of 2.1 m below finished grade is required to provide sufficient frost protection.

Tree Planting Restrictions

In accordance with the City of Ottawa Tree Planting in Sensitive Marine Clay Soils (2017 Guidelines), Paterson completed a review of the soils in the site to determine applicable tree planting setbacks. Atterberg limits testing was completed for recovered silty clay samples at selected locations throughout the subject site. The test results were completed between the design underside of footing elevation and a 3.5 m depth below the finished grade. Reference should be made to Paterson Report PG6071-1 dated February 11, 2022.

Since the modified plasticity limit (PI) does not exceed 40%, large trees (mature height over 14 m) can be planted at the subject site provided a tree to foundation setback equal to the full mature height of the tree can be provided (e.g. in a park or other green space)

According to the City of Ottawa Tree Planting Guidelines, tree planting setback limits may be reduced to 4.5 m for small (mature tree height up to 7.5m) and medium size trees (mature tree height 7.5 m to 14 m) provided that the following conditions are met:

- ❑ The underside of footing (USF) extends to 2.1 m or greater below the lowest finished grade within 10 m from the tree, as measured from the center of the tree trunk and verified by means of the Grading Plan as indicated procedural changes below.
- ❑ A small tree must be provided with a minimum of 25 m3 of available soil volume while a medium tree must be provided with a minimum of 30 m3 of available soil volume, as determined by the Landscape Architect. The developer is to ensure that the soil is generally un-compacted when backfilling in street tree planting locations.
- ❑ The tree species must be small (mature tree height up to 7.5 m) to medium size (mature tree height 7.5 m to 14 m) as confirmed by the Landscape Architect.
- ❑ The foundation walls are to be reinforced at least nominally (minimum of two upper and two lower 15M bars in the foundation wall).
- ❑ Grading surrounding the tree must promote drainage to the tree root zone (in such a manner as not to be detrimental to the tree).

We trust that this information satisfies your requirements.

Paterson Group Inc.

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