



re: Grading Plan Review
Proposed Residential Development
2506 Innes Road – Ottawa, Ontario
to: Concorde Properties – **Jordan Tannis** – jt@concorde-properties.ca
date: May 1, 2024
file: PG6818-MEMO.02

Further to your request and authorization, Paterson Group (Paterson) prepared the following memorandum to document our review of the grading plan for the proposed residential development to be located at 2506 Innes Road in the City of Ottawa. This memorandum should be read in conjunction with Paterson Group Report PG6818-1 dated October 5, 2023.

Grading Plan Review

Paterson reviewed the following drawing prepared by D.B Gray Engineering Inc. for the aforementioned development:

- Grading Plan – 2506 Innes Road – Job No. 23087 – Drawing No. C4 – Revision 3 dated May 1, 2024.

Due to the presence of a silty clay deposit underlying the subject site, a permissible grade raise restriction of 1.5 m was recommended for grading at the subject site. Based on our review of the grading plan, no grade raise exceedances were noted, as such, the proposed grading is considered to be acceptable from a geotechnical perspective.

Landscaping Considerations

Due to the silty clay layer underlying the subject site, the following tree planting restrictions are recommended as per *City of Ottawa Tree Planting in Sensitive Marine Clay Soils – 2017 Guidelines*.

Large trees (mature height over 14 m) can be planted within this area 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). A tree planting setback limit of **7.5 m** is applicable for small (mature tree height up to 7.5 m) and medium size trees (mature tree height 7.5 to 14 m) provided that the following conditions are met:





- ❑ The underside of footing (USF) is 2.1 m or greater below the lowest finished grade for footings within 10 m from the tree, as measured from the centre of the tree trunk and verified by means of the Grading Plan.
- ❑ A small tree must be provided with a minimum of 25 m³ of available soils 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), as noted on the subdivision Grading Plan.

It is well documented in the literature, and is our experience, that fast-growing trees located near buildings founded on cohesive soils that shrink on drying can result in long-term differential settlements of the structures. Tree varieties that have the most pronounced effect on foundations are seen to consist of poplars, willows and some maples (i.e. Manitoba Maples) and, as such, they should not be considered in the landscaping design.

It should be noted that plants such as shrubs and bushes in which root growth is typically limited to the upper 1 m of overburden soils, may be planted within the 7.5 m setback limit.

We trust that this information satisfies your immediate requirements.

Best Regards,

Paterson Group Inc.

Sok Kim, EIT



Kevin A. Pickard, P.Eng.

