



re: Geotechnical Response to City Comments
Proposed Residential Development
100 Steacie Drive, Ottawa, Ontario
to: Brigil - James Battison - jamesbattison@brigil.com
date: June 1, 2026
file: PG5788-MEMO.04

Further to your request and authorization, Paterson Group (Paterson) prepared the following memorandum to provide geotechnical responses to city comments regarding the proposed residential development, at the aforementioned site. This memorandum should be read in conjunction with Paterson Group Report PG5788-1 Revision 4, dated December 8, 2026.

Comment 2: *Section 2.0 must confirm that the new watermain and existing sanitary sewer are located outside the lateral support zone of the proposed retaining wall PG5788-3.*

Response: Based on our review of the site servicing drawing Project No. 160401570 – Drawing No. SSP-1 Revision 8, dated March 24, 2026, the proposed watermain will be located outside the lateral support zone of the retaining wall.

The existing sanitary pipe is located approximately 9 m below the proposed retaining wall. Due to the depth of the existing sanitary service from the bottom of the retaining wall, no loading will be exerted from the retaining wall to the sewer. Furthermore, any maintenance to the deep sewer will require the use of shoring/temporary trenches boxes to be feasible which will further protect the service. Reference should be made to Figure 1 attached below.

Comment 3: *Referring to Section 3.0:*

- a) Please confirm if the global stability analysis provided under this section is done for a) the berm b) the retaining wall or c) a combination of both.*
- b) Please confirm that a slope stability analysis is not needed anywhere else on site. For instance, beside the underground parking garage ramp, where +20% terracing is proposed (from 90.89 to 88.04), or, to the northeast side of the site, where +32.7% terracing is proposed (from 92.08 to 89.09). Were those areas deemed less critical than Cross-Section A?*
- c) The slope stability assessment for the proposed berm has been carried out assuming groundwater conditions well below the ground surface. It is not clear that this assumption reflects critical or reasonably foreseeable conditions. In particular, periods of intense rainfall and/or spring snowmelt may result in elevated pore water pressures and partial or full saturation within the silty clay fill, which could adversely affect overall stability. With this said, the Consultant is requested to provide clarification on whether the analysis has considered transient or worst-case groundwater conditions, including elevated water levels within the berm associated with saturated conditions. If not, the*



assessment should be updated to evaluate slope stability under these conditions to demonstrate that adequate factors of safety are maintained.

Response:

- a. Global stability analysis has been completed for both the berm and the retaining wall considering the worst-case scenario under static and seismic conditions.
- b. Based on our review the cross-section A- A was selected as the critical section where the berm has the highest slope and retaining wall section with a maximum height of 1.5 m. Based on our analysis, the global stability of the proposed retaining wall and the berm were observed to be stable under static and seismic conditions where a factor of safety more than 1.5 and 1.1, respectively was calculated. Based on this, all the other slopes within the site are considered acceptable from a geotechnical perspective, provided any fill placement is completed in accordance with our geotechnical recommendations. Slope of less than 33% (3:1) are inherently stable and are not normally reviewed by the geotechnical consultant.
- c. The slope stability analysis considering fully saturated groundwater conditions within the berm was also calculated and the factor of safety was still calculated to be more than 1.5 and 1.1 under static and seismic conditions. Refer to Paterson memorandum PG5788-MEMO.03, Revision 3, dated May 26, 2026.

Comment 4: *This memo and associated retaining wall drawings must clearly demonstrate that the proposed retaining wall footing will not encroach onto the adjacent future 6 m wide City-owned watermain easement. Perhaps adding the easement line on the retaining wall cross-sections as a reference point would help confirm that the wall does not encroach onto the easement. Adding a note to plan view would be helpful too.*

Response: Based on our review of the grading plans, the retaining wall base will not encroach into the hydro easement. The retaining wall drawing will be updated to show the limits of the hydro easement.

Comment 5: *Do restrictions apply to tree planting next to the proposed retaining walls? If so, please provide discussion in this memo.*

Response: Small sized, low water demanding trees or shrubs such as blue beech, mulberries, etc., can be planted with a minimum setback of 1.2 m from the retaining walls. Tree planting in reference to the Tree Planting in Areas of Sensitive Marine Clay Soils policy do not applied to segmental block, as these walls are flexible. A typical landscaping setback of 2 m is recommended to tree planting near segmental retaining walls.

Comment 6: *This memo should also confirm that tree planting setback recommendations provided in the geotechnical investigation have been respected on the latest version of the Landscape Plan.*

Response: Based on our review of the structural plans, all the building's foundations are expected to be founded on bedrock or piles and not on silty clay.



Therefore, there are no tree planting restrictions for the proposed building from a geotechnical perspective in relation to the City of Ottawa tree planting guidelines. Refer to our response above for the tree planting recommendations around the retaining walls.

Comment 21: *The Landscape Plan includes many medium and large-growing trees that look to be within 4.5m of the foundation. This does not meet the recommendations within the Geotechnical report. If imported fill is to be used, as noted on the Landscape Plan, the Geotechnical Engineer must confirm in an addendum whether this changes their landscaping recommendations from what is specified in the report.*

Response: Please refer to our response for the previous comment.

Comment 22: *In accordance with the Tree Planting in Areas of Sensitive Marine Clay Soils policy (see excerpts below), the Geotechnical report must provide a map with a signed letter confirming the locations of sensitive marine clay soils on site. These must be provided to the City and the Landscape Architect to demonstrate that the Landscape Plan meets the setback and species recommendations.*

- a) *A Geotechnical Engineer will provide a separate section within the Geotechnical Report on Sensitive Marine Clay soils, which includes a signed letter and corresponding map that confirms the locations of low/medium and/or high sensitivity clay soils, as determined by the plasticity tests (referenced above under Guideline 1).*
- b) *The Geotechnical Report with signed letter and map will be provided to the Landscape Architect prior to preparation of the Landscape Plan in order to inform details of the Landscape Plan.*
- c) *A Landscape Architect will develop a Landscape Plan that is consistent with the information and recommendations provided in the Geotechnical Report to the satisfaction of the Planning, Infrastructure and Economic Development Department and Forestry Services. The Landscape Plan shall include a note indicating that it has been developed as per the Geotechnical Report (date, author), the letter (date, author), and Map (date, title).*

Response: Based on our review of the structural plans, all the building's foundations are expected to be founded on bedrock or piles and not on silty clay. Therefore, there are no tree planting restrictions for the proposed building from a geotechnical perspective in relation to the City of Ottawa tree planting guidelines. Refer to our response above for the tree planting recommendations around the retaining walls.

Comment 43: *The geotechnical report does not reflect the part of the foundations on steel pipe piles shown on the structural drawings. Revise as needed.*



Response: Reference should be made to Paterson Group Report PG5788-1 Revision 4, dated December 8, 2025 - Section 5.3 Foundation Design – End Bearing Pile Foundation for geotechnical recommendations on the end bearing steel pipe foundations.

We trust that the current submission meets your immediate requirements.

Best Regards,

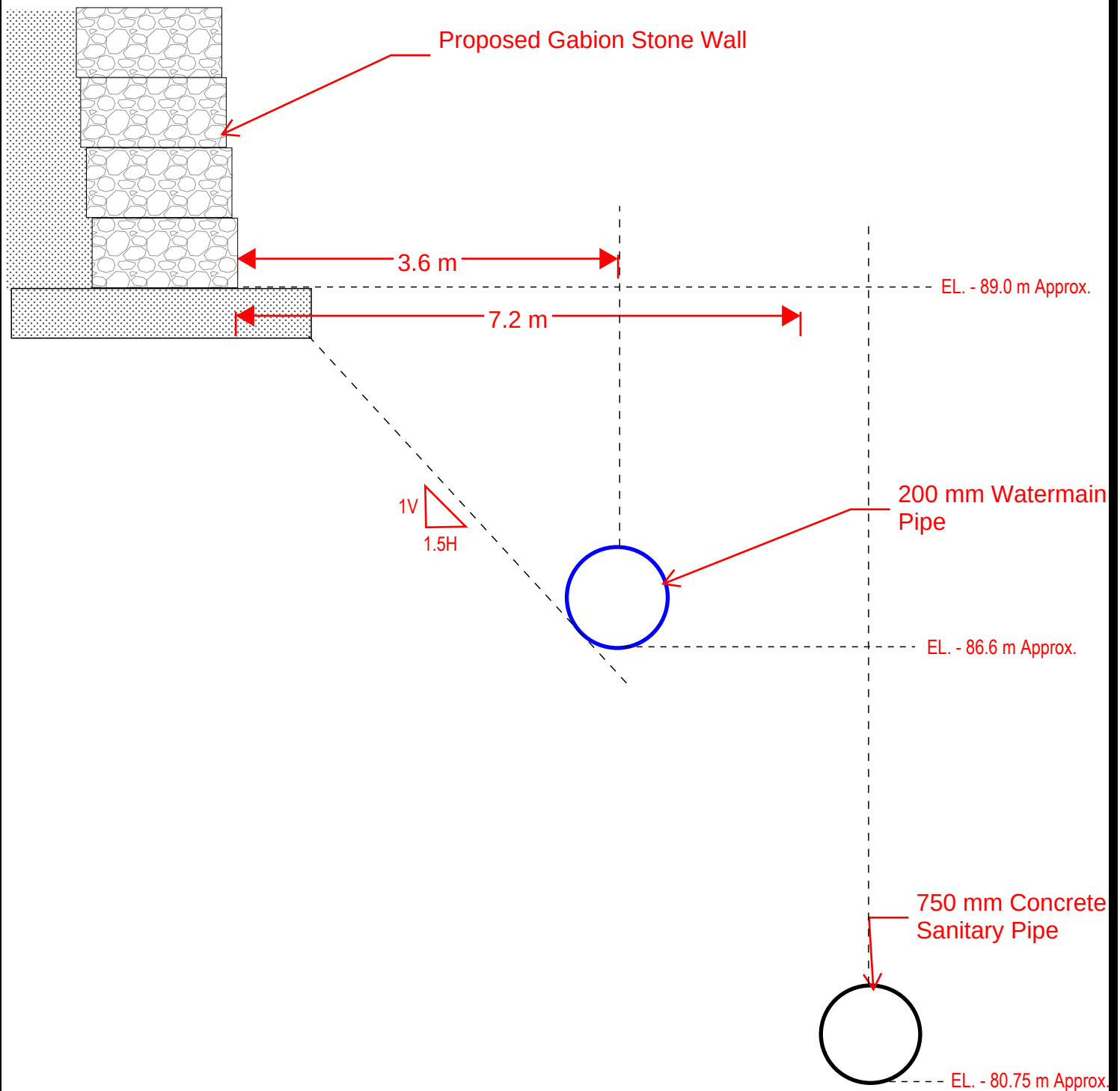
Paterson Group Inc.

Pratheep Thirumoolan, M.Eng.



Joey R. Villeneuve, M.A.Sc., P.Eng.





General Notes:

- The proposed watermain will be located approximately 2.4 m below the proposed armor stone retaining wall and 3.6 m horizontally setback from the edge of the proposed retaining wall. Therefore, the proposed watermain will be located outside the lateral support zone of the retaining wall.
- Due to the depth of the existing sanitary service from the bottom of the retaining wall, no loading will be exerted from the retaining wall to the sewer.
- A suitable temporary shoring / trench box system will be required for any excavation for the proposed watermain or the existing sanitary pipe in the future.

PLAN VIEW:

SCALE 1:150

