

re: **Grading Plan Review**
Proposed Commercial Building Addition
2 Bill Leathem Drive - Ottawa

to: BBS Construction Ltd. – Mr. Frits Bosman - frits@bbsconstruction.ca

date: May 24, 2022

file: PG5257-MEMO.05

Further to your request and authorization, Paterson Group (Paterson) prepared the current memorandum to provide a grading plan review for the proposed commercial building addition at the subject site. The following memorandum should be read in conjunction with Paterson Report PG5257-1 Revision 1 dated August 6, 2020.

Paterson has reviewed the following grading plan prepared by McIntosh Perry for the proposed building addition, as part of this review:

- ☐ Lot Grading and Drainage Plan, Project No. CP-20-0023-01, Drawing C101, Revision 2 dated May 24, 2022.

Grading Plan Review

Based on our review of the above noted plans, it is understood that the finish floor level FFL for the proposed building addition will be at geodetic elevation 91.7m. In addition, the USF of the proposed building addition will be at geodetic elevation 90.18m. It is further understood that there is an existing manhole MH7 located in close proximity to the central portion of the proposed northern foundation wall of the building addition.

Based on information received from BBS Construction Ltd., it is understood that the invert level for MH 7 is at approximate geodetic elevation 87.5m.

Based on our review of the available information and drawings, it is understood that the horizontal separation between MH7 and the central portion of the northern foundation wall is approximately 0.8m. Also, the vertical separation between the invert level of MH7 and the USF of the proposed building addition is 2.7m.

Based on our review, the lateral support zone of 1.5H:1V for the proposed building addition adjacent to the existing manhole is not protected. Therefore, the USF of the effected footings should extend down to the bottom level MH7 or it can be placed on a near vertical lean concrete infill trench (17MPa, 28-day compressive Strength). The lean concrete infill trench shall extend a minimum 150mm from the face of the footing on each side. Furthermore, the lean concrete infill trench shall extend at least 2.0 from the face of MH7 from each side. The lean concrete trench can then be stepped upward at a slope of 1H:1V. Further details are provided on Figure 1 –Concrete infill trench detail, attached to this memorandum.

Perimeter Drainage

A perimeter drainage system consisting of a minimum 150mm perforated corrugated PVC pipe should be installed at USF level, around the exterior side of the proposed building addition, below the sidewalk, and directed to a storm sewer.

Conclusion

Based on our review, the proposed grade raises are acceptable from a geotechnical perspective, provided our recommendations for the concrete infill trench are followed.

Paterson shall complete periodic inspections to ensure that our recommendations have been implemented.

We trust that the current submission meets your immediate requirements.

Best Regards,

Paterson Group Inc.



Owen Canton, EIT



Maha K. Saleh, M.A.Sc. P.Eng.

Attachments:

- Figure 1 – Concrete Infill Trench Details

Paterson Group Inc.

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Figure 1 - MEMO.05 - CONCRETE INFILL TRENCH DETAIL

