



**re: Geotechnical Review & Recommendation - Proposed
Foundations Adjacent to Underground Stormwater Chambers
Proposed Residential Development
Wateridge Village, Blocks 22 & 23 – Codd's Road, Ottawa, Ontario
Townhouse Blocks 9 and 10 - Ottawa, Ontario**

to: Mattamy Homes – Nahom Tirfe – nahom.tirfe@mattamycorp.com

date: August 26, 2026

file: PG7793-MEMO.07

Further to your request and authorization, Paterson Group (Paterson) prepared the current memorandum to provide geotechnical recommendations regarding construction of the proposed townhouse blocks to be located in proximity to the proposed underground stormwater management chambers at the aforementioned site. The current memorandum should be read in conjunction with Paterson Group Geotechnical Report PG7793-1 Revision 1 dated August 26, 2026.

1.0 Background Information

Paterson reviewed the following drawings prepared by Stantec for the aforementioned development in preparation of the current memorandum:

- ☐ Grading Plan – Project No. 160402276 – Wateridge Village Block 23 – Sheet 4 of 14 – Revision 2, dated August 13, 2026.
- ☐ Site Servicing Plan – Project No. 160402276 – Wateridge Village Block 23 – Sheet 3 of 14 – Revision 2, dated August 13, 2026.

Based on our review of the above-noted drawings, the proposed foundations of townhouse Block 9 and Block 10 will be located in proximity to the proposed underground stormwater chamber, which is to be installed beneath the landscaping area adjacent to the subject proposed buildings.

Subsurface Conditions

Based on nearby test hole data, the proposed townhouse block footings are anticipated to be founded on an engineered fill surface placed over compact to dense silty sand or compact to very dense glacial till subgrade surfaces.

Settlement sensitive structures founded on a native, undisturbed soil deposits are required to be provided a minimum lateral support of 1.5H:1V with respect to proposed building footing construction.



2.0 Geotechnical Review & Recommendations

Review Of Proposed Foundations Adjacent to Underground Stormwater Chambers

Townhouse Block 9

The proposed underside of footing (USF) level at Block 9 is located at a geodetic elevation of 88.21 m and is expected to be founded over engineered fill placed over native, soil bearing medium. The underside of the storage chamber tank will be located at an elevation of 85.00 m, with the bedding layer extending to approximately 84.50 m. The closest horizontal separation between the edge of the footings and the base of the pad is approximately 1.9 m at the front porch area and 3.4 m from the building. As such, the storage tank will be located within the lateral support zone of the footings along the southern portion of the townhouse block.

Lean concrete infilled trenches are recommended to extend the footing loads and lateral support zone below the water storage tank. In order to provide the minimum required 1.5H:1V lateral support to the proposed Block 9 footings, it is recommended that the building footing be founded upon a lean concrete infilled trench extending to a maximum elevation of 85.8 m at the front porch area and 86.7 m for the building foundation.

The trenches should be infilled with lean concrete (minimum 17 MPa, 28-day strength). Typically, the excavation side walls will be used as the form to support the concrete. The trench excavation should be extended at least 300 mm beyond all sides of the footings at the base of the excavation. The additional width of the concrete poured against an undisturbed trench sidewall will suffice in providing a direct transfer of the footing load to the underlying soils. Once the trench excavation is approved by the geotechnical engineer, lean concrete can be poured up to the proposed founding elevation.

For the footings located perpendicular to the storage tank (i.e. at the southwest corner of the building), the extent of the concrete in-filled trench should be a minimum 2 m horizontally (in the direction away from the storage tank) followed by a minimum 3H:1V taper. This will provide the footing with a proper transition between the concrete trench bearing medium into the native soil bearing medium to lessen the impact of differential settlements.

The same bearing capacities and post-construction settlement values for native, soil bearing medium presented in the above noted Geotechnical Report are applicable to footings founded upon lean concrete infilled trenches bearing on an undisturbed bearing surface approved by Paterson personnel.



Townhouse Block 10

The proposed USF level at Block 10 is located at a geodetic elevation of 88.02 m and is expected to be founded over engineered fill placed over native, soil bearing medium. The underside of the storage chamber tank will be located at an elevation of 85.00 m, with the bedding layer extending to approximately 84.50 m. The closest horizontal separation between the edge of footing and the base of the storage chamber is approximately 6.0 m for the front porch and approximately 7.5 m from the foundation. As such, adequate lateral support of greater than 1.5H:1V has been provided to these footings.

We trust that the current submission meets your immediate requirements.

Best Regards,

Paterson Group Inc.

Nicole Patey, P.Eng.



- Kevin A. Pickard, P.Eng.

