SOIL-MAT ENGINEERS & CONSULTANTS LTD.

www.soil-mat.ca info@soil-mat.ca TF: 800.243.1922

Hamilton: 130 Lancing Drive L8W 3A1 T: 905.318.7440 F: 905.318.7455
Milton: PO Box 40012 Derry Heights PO L9T 7W4 T: 800.243.1922

PROJECT NO.: SM 166905-G June 21, 2019

LANDFORM DEVELOPMENT GROUP INC.
980 Fraser Drive, Suite 205
Burlington, Ontario
L7L 5P5

Attention: Mr. Andrew Bear, CPA, CA

SUPPLEMENTAL GEOTECHNICAL COMMENTS – SLOPE RECONSTRUCTION
PROPOSED MULTI-STOREY BUILDING
401 TO 417 MARTHA STREET
BURLINGTON, ONTARIO

Dear Mr. Bear,

Further to our geotechnical investigation and slope stability assessment reports, along with our recent discussions with the design team, Soil-Mat Engineers is pleased to offer the following comments.

The top of stable slope has been determined, as illustrated on the drawing in our March 2019 report. The above grade structure is noted to be well 'uphill' of the established top of stable slope, however the below grade parking levels are proposed to extend closer to the creek. It is expected that this will require the excavation and removal of a portion of the slope to facilitate foundation construction. In this regard it is noted that Rambo Creek has been heavily urbanized, including entombment over a significant portion of its length. As well, the existing slope has been shown to consist of variable sand fill. As such, it would be appropriate to stabilise or reconstruct the slope using a retaining wall or reinforced earth embankment. This would allow for the slope to be reinstated and/or stabilised in order to meet the existing flood line, and thus minimize or eliminate any impact on the flood storage in the creek channel.

Our initial slope stability assessment report [SM 166905-G, dated March 24, 2017] provided comments and recommendations on the design of retaining walls or reinforced earth embankments. The use of a reinforced earth embankment option would likely be preferable as it would provide for a vegetated 'green' finished slope face. Available proprietary products, such as TerraSlope 35 or TerraSlope 45 by Terrafix, would be well suited to the site conditions. This system would allow the slope to be constructed at an inclination as steep as 45 degrees, with the finished face vegetated. Where the grading allows the slope to be reinstated at flatter than about 2.5 horizontal to 1 vertical it would be appropriate to construct as simple engineered fill, without the need for geogrid reinforcement.

Based on the present design plan there would be sufficient room to accommodate reconstruction of the slope at 1 horizontal to 1 vertical, and possibly flatter, in order to reinstate the grade at the established 100-year flood line. In this fashion there would be no reduction in the storage volume of the creek channel.

We trust that this supplemental geotechnical report is sufficient for your present requirements. Should there be any questions regarding the content or comments within this report please do not hesitate to contact our office.

Yours very truly,
SOIL-MAT ENGINEERS & CONSULTANTS LTD.



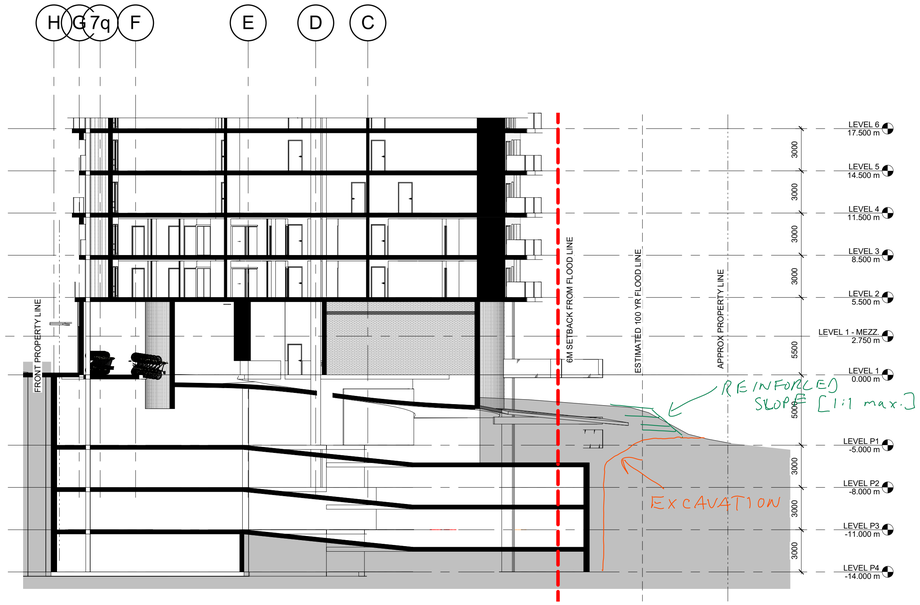
Ian Shaw, P. Eng.
Senior Engineer

Enclosures: Mark up of Building Sections – Concept Slope Reconstruction

Distribution: Landform Development Group Inc. [1, plus pdf]



3 SCHEMATIC PARKING SECTION
1 : 200



2 SITE SECTION 3
1 : 200



1 SITE SECTION 1
1 : 200

GENERAL NOTES

1. **DO NOT SCALE DRAWINGS**. WRITTEN DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS.

2. ALL WORK SHALL COMPLY WITH THE 2012 ONTARIO BUILDING CODE AND AMENDMENTS.

3. CONTRACTORS MUST CHECK AND VERIFY ALL DIMENSIONS AND SPECIFICATIONS AND REPORT ANY DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.

4. ALL CONTRACTORS AND SUB-CONTRACTORS SHALL HAVE A SET OF APPROVED CONSTRUCTION DOCUMENTS ON SITE AT ALL TIMES.

5. ALL DOCUMENTS REMAIN THE PROPERTY OF THE ARCHITECT. UNAUTHORIZED USE, MODIFICATION, AND/OR REPRODUCTION OF THESE DOCUMENTS IS PROHIBITED WITHOUT WRITTEN PERMISSION. THE CONTRACT DOCUMENTS WERE PREPARED BY THE CONSULTANT FOR THE ACCOUNT OF THE OWNER.

6. THE MATERIAL CONTAINED HEREIN REFLECTS THE CONSULTANTS BEST JUDGEMENT IN LIGHT OF THE INFORMATION AVAILABLE TO HIM AT THE TIME OF PREPARATION. ANY USE WHICH A THIRD PARTY MAKES OF THE CONTRACT DOCUMENTS, OR ANY RELIANCE ON/OR DECISIONS TO BE MADE BASED ON THEM ARE THE RESPONSIBILITY OF SUCH THIRD PARTIES.

7. THE CONSULTANT ACCEPTS NO RESPONSIBILITY FOR DAMAGES, IF ANY, SUFFERED BY ANY THIRD PARTY AS A RESULT OF DECISIONS MADE OR ACTIONS BASED ON THE CONTRACT DOCUMENTS.

No.	Date	Revision

srm ARCHITECTS INC.

Project No	17032
Issue Date	2018-10-18
Drawn by	KJ
Checked by	WC
Plot Date / Time	2018-10-18 3:18:57 PM

401-417 MARTHA STREET

BUILDING SECTIONS

ONTARIO ASSOCIATION OF ARCHITECTS
EDWARD THOMAS
LICENCE
5572

Drawing Scale	As indicated
Status	
Drawing No.	Revision No.
A3.2	

Do not scale drawings. Contractors must check and verify all dimensions and report any discrepancies to the Architect before proceeding with the work. All documents remain the property of the Architect. Unauthorized use, modification, and/or reproduction of these documents is prohibited without written permission. The Contract Documents were prepared by the Consultant for the account of the Owner.
The material contained herein reflects the Consultants best judgement in light of the information available to him at the time of preparation.Any use which a third party makes of the Contract Documents, or any reliance on or decisions to be made based on them are the responsibility of such third parties. The Consultant accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on the Contract Documents.