



January 30, 2024

1000062217 Ontario Inc.
12 Trotter Court
Barrie, Ontario
L4N 5S4

Attn: Mr. Dave Seaman

**RE: Supplemental Geotechnical Review
Proposed Armstrong Estates Residential Subdivision
Mansfield, Ontario
Project No. 2204585**

GEI Consultants Ltd. has been retained by 1000062217 Ontario Inc. to provide geotechnical consulting services for the proposed Armstrong Estates Residential Subdivision, Mansfield, Ontario.

The project package has been submitted for draft of subdivision approval. Comments were received back on the submission and there are some comments that require geotechnical input.

It is noted that previous geotechnical reports for the project were completed by others and were provided for GEI's review, as listed below:

- *"Geotechnical/Hydrogeological Investigation Proposed Residential Development, 937045 Airport Road, Mansfield, Ontario", by Peto MacCallum Ltd., PML Ref.:21BF019, Report 1, Revised, dated September 21, 2021.*
- *"Geotechnical/Hydrogeological Investigation Proposed Residential Development, 937045 Airport Road, Mansfield, Ontario", by Peto MacCallum Ltd., PML Ref.:21BF019, Report 1, Revision 2, dated November 3, 2021.*

In addition, the Functional Servicing Report (FSR) for the project was provided to GEI for review.

Supplemental geotechnical confirmation was requested by the Client to address the following two comments (Comments 4 and 5) from the Nottawasaga Valley Conservation Authority (NVCA):

- ***Comment 4:*** *Please provide an existing conditions erosion hazard limit drawing that is signed and sealed by the qualified professional. Please include with a legend that clearly identifies the separate components of the slope erosion hazard limit assessment, including a clearly defined long-term stable top of slope limit line from the assessment, plus a separate 6 m access allowance limit line. This separate information is not clear in several*

locations on the proposed conditions Draft Plan, considering the text provided with the line types.

GEI Response to Comment 4: A PDF of the requested drawing is attached.

- **Comment 5:** *Please confirm that the report references the preliminary design of the SWM measures including enhanced roadside swales and dry ponds has been reviewed and determined to be suitable considering soils and groundwater.*

GEI Response to Comment 5: No detailed plans for the SWM measures are available at this time. The concepts provided in the FSR were reviewed with the geotechnical reports provided.

Two SWM facilities are proposed due the division created by the watercourse creek. South of the creek a smaller SWM pond is proposed and north of the creek a larger facility is proposed. The storm sewers will carry the storm water from paved areas to the ponds and house lot and park drainage will be conveyed to the SWM facility via ditching. It is understood that both ponds will be dry ponds. The large north pond will be about 2 m deep (top of the berm is proposed at Elev. 308 and the base of the pond is proposed at Elev. 306). Side slopes of 5H:1V are proposed. Based on the existing topographic information the pond will be constructed mainly through cut. The southern pond will have the same top of berm and pond base elevation. The southern pond will also be constructed mainly through cut. Side slopes of the southern pond are proposed at 3H:1V. Both ponds will outlet to the watercourse in a controlled fashion.

Based on the geotechnical reports provided, the northern pond will be constructed in sand/sand and gravel/silty sand soil with the groundwater table a minimum 1 m below the base of the pond. The southern pond will be constructed in sand and the groundwater table is more than 1 m below the proposed base of the pond. The design concept follows the general design parameters provided in the geotechnical report and is considered appropriate. Slightly flatter slopes may be required in the southern pond. Ditching is considered appropriate along the roads. It is noted that due to the sandy conditions at the site a large portion of the surface water run-off will infiltration in the ground before the ditching can carry the flow to the SWM ponds.

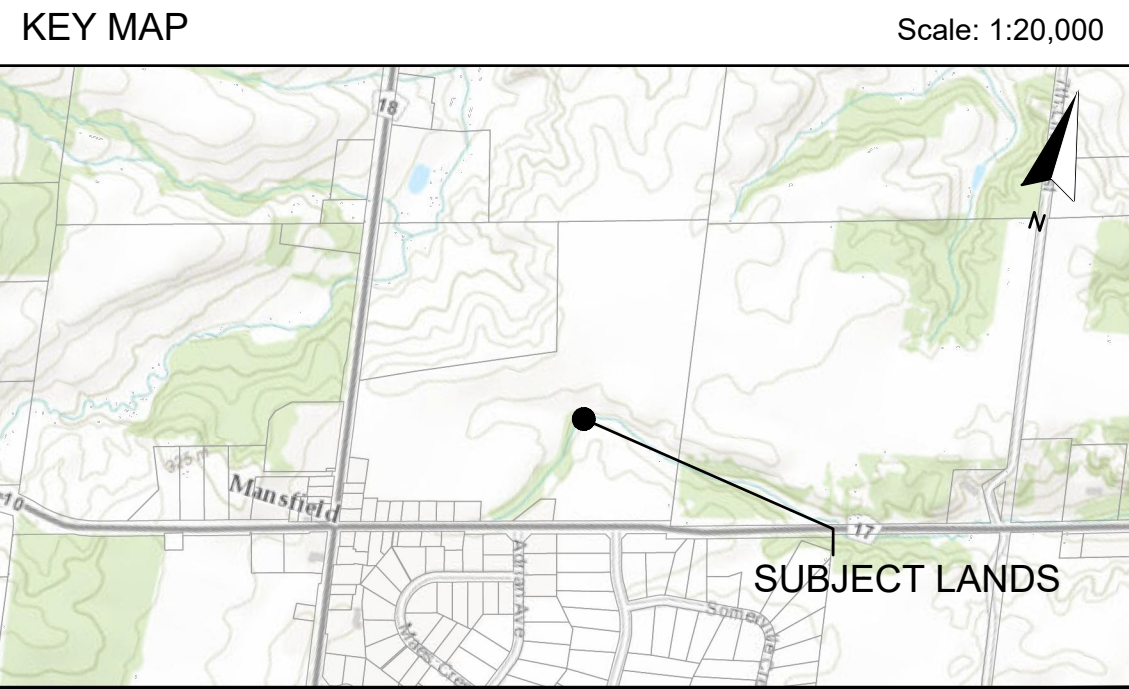
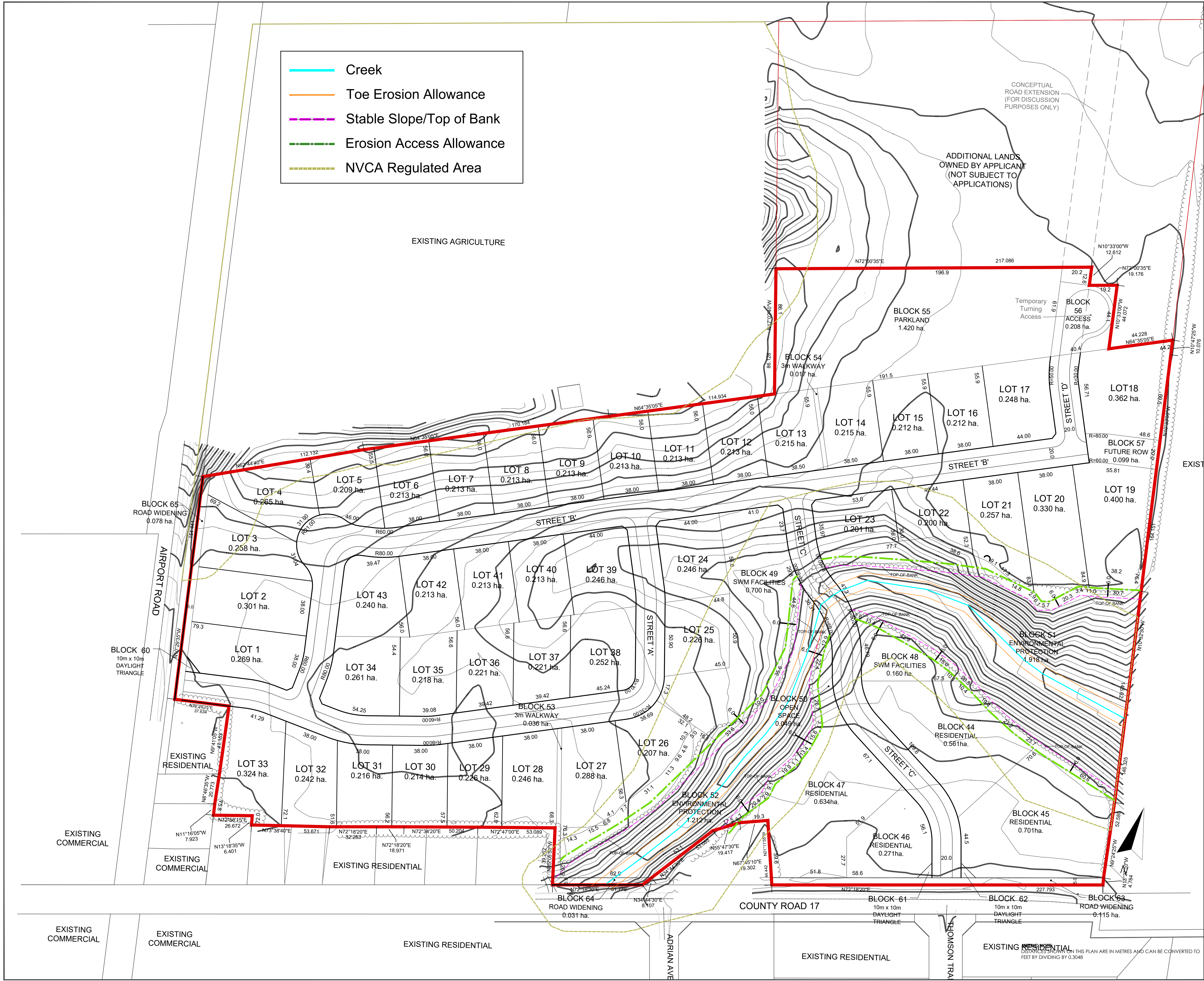
We trust this information is sufficient for your present purposes. Should you have any questions concerning the above, or can be of any further assistance, please do not hesitate to contact the undersigned.

Yours truly,
GEI Consultants



A handwritten signature in blue ink, which appears to be "G.R. White", written over a horizontal line.

Geoffrey R. White, P.Eng.
Geotechnical Practice Lead



DRAFT PLAN OF SUBDIVISION ARMSTRONG ESTATES OF MANSFIELD

Part of Lot 11, Concession 7
East of Hurontario Street
Township of Mulmur
County of Dufferin

Scale 1:1250

0 25 50 75 100 125m

SUBJECT LANDS - 21.510 ha.

6.0m SETBACK FROM TOP-OF-BANK

LAND USE SCHEDULE

Land Use	Lot / Block No.	Units	Area (ha.)	%
RESIDENTIAL SINGLE LOT (30.0m / 2,000m ²)	1-43	43	10.38	48.2
RESIDENTIAL SEM-DETACHED BLOCKS (9.0m / 30')	44-47	28	2.17	10.1
STORMWATER MANAGEMENT FACILITIES	Blocks 48, 49		0.86	4.0
OPEN SPACE	Block 50		0.05	0.2
ENVIRONMENTAL PROTECTION	Blocks 51, 52		3.13	14.6
3.0m WALKWAYS	Blocks 60, 61		0.05	0.2
PARKLAND	Block 55		1.42	6.6
ACCESS	Block 56		0.21	1.0
FUTURE R.O.W.	Block 57		0.10	0.5
8.0m ACCESS	Block 59		0.04	0.2
DAYLIGHT TRIANGLES	Blocks 59-62		0.02	0.1
ROAD WIDENINGS	Blocks 63-65		0.23	1.0
STREETS	Streets A - D		2.85	13.3
TOTAL		71	21.50	100.0

OWNER'S CERTIFICATE

I, THE UNDERSIGNED, BEING THE REGISTERED OWNER OF THE SUBJECT LANDS, HEREBY AUTHORIZE INNOVATIVE PLANNING SOLUTIONS TO PREPARE THIS DRAFT PLAN OF SUBDIVISION AND TO SUBMIT SAME TO THE COUNTY OF DUFFERIN FOR APPROVAL.

DATE

SURVEYOR'S CERTIFICATE

I CERTIFY THAT THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED AND THEIR RELATIONSHIP TO ADJACENT LANDS ARE ACCURATELY AND CORRECTLY SHOWN.

DATE

ADDITIONAL INFORMATION REQUIRED UNDER SECTION 51(17) OF THE PLANNING ACT

a) SHOWN ON PLAN	b) SHOWN ON PLAN	c) SHOWN ON PLAN	d) RESIDENTIAL, OPEN SPACE
e) SHOWN ON PLAN	f) SHOWN ON PLAN	h) NONE	
g) SHOWN ON PLAN	i) MUNICIPAL WATER	j) SAND	
j) SHOWN ON PLAN	k) PRIVATE SEPTIC	l) NONE	

SCHEDULE OF REVISIONS

No.	Date	Description	By
1	Sept. 7, 2021	Adjust top-of-bank limits;	A.S.
2	Sept. 8, 2021	Adjust top-of-bank limits;	A.S.
3	Sept. 27, 2021	Adjust EP Limits, updated lots & blocks	B.H.
4	Mar. 7, 2022	For Signature	B.H.
5	Apr. 4, 2022	Dimension Top-of-Bank Setback	B.H.
6	Dec. 1, 2022	Road & lot revisions	B.H.
7	Sept. 29, 2023	Road & lot revisions along Street C	B.H.
8	Dec. 22, 2023	Road & lot revisions along Street C	A.S.

IPS INNOVATIVE PLANNING SOLUTIONS
PLANNERS • PROJECT MANAGERS • LAND DEVELOPERS
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Date:	August 12, 2021	Drawn By:	BH
File:	20-1019	Checked:	GB