# 7085 GOREWAY DRIVE DEVELOPMENT

FLOOD HAZARD ASSESSMENT PROJECT 18-528



Last Revised March 14, 2023 June 2, 2022 August 30<sup>th</sup>, 2019 November 2, 2018

PREPARED BY Greck and Associates Limited 5770 Highway 7, Unit 3 Woodbridge, ON L4L 1T8

7085 Goreway Drive Developments Limited 5400 Yonge Street Toronto, Ontario M2N 5R5



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ROUNCE OF ON

## Prepared by

**SIGNATURE** 

Scott Sexton, P. Eng

## Reviewed and Approved by

**SIGNATURE** 

Eric Greck, P. Eng

## Limitations

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# 7085 GOREWAY DRIVE DEVELOPMENT FLOOD HAZARD ASSESSMENT

## 1.0 Introduction

Fieldgate Developments Inc. (Client) in association with Redwood Properties is proposing the re-development of an existing commercial property located at 7085 Goreway Drive within the City of Mississauga, Ontario (**Figure 1**). The Client proposes to redevelop the property with a high-rise residential condominiums and a townhouse complex, and their associated roadways and underground parking. The property is bounded by Goreway drive to the west, Mimico Creek to the south/east and a City of Mississauga Firehall to the north. A vacant lot, previously a gas station, exists directly south-east of the property limit. This gas station was demolished in approximately 2002.

Based on preliminary floodplain mapping information provided by the Toronto and Region Conservation Authority (TRCA), the regulatory floodplain encroaches on the existing property limits.

Under Ontario Regulation 166/06, Toronto and Region Conservation Authority: Regulation of Development, Interference with Wetlands and Alternations to Shorelines and Watercourses the TRCA regulates development taking place within valley and stream corridors. Development includes the "construction, reconstruction, erection or placing of a building or structure of any kind." Regulation 166/06 3. (1) states that "The Authority may grant permission for the development in or on the areas described in subsection 2 (1) if, in its opinion, the control of flooding, erosion, dynamic beaches pollution or the conservation of land will not be affected by the development".

The Client has retained Greck and Associates Limited (Greck) to facilitate development within a regulated area. Specifically, this report confirms the existing regulatory floodplain limit on the subject property through an assessment and update of TRCA's existing Mimico Creek regulatory hydraulic modeling using recent topographic information. In addition, an assessment and analysis has been undertaken with consideration of proposed development conditions, regulatory impacts and TRCA policy. This includes an engineered design concept supported by hydraulic, floodproofing and a cut-fill analysis founded on engineering/scientific principles in accordance with TRCA policy and ministry guidelines.





## 1.1 PROJECT SITE AND BACKGROUND INFORMATION

The primary source of potential flood hazard to the property originates from Mimico Creek, located along the eastern property limits. Mimico Creek flows in a southwesterly direction where it is conveyed through a bridge crossing located at Goreway Drive. The Goreway Bridge crossing is an approximate 9.25m span structure with a rise of 2.70m and a length of approximately 32.60m.

A concrete/asphalt trail is located along the property limits, providing pedestrian access to a trail network throughout Mimico Creek.

A topographic survey of the property was completed on June 20, 2017, by KRCMAR Surveyors Ltd. A copy of the topographic survey and proposed building layout is provided in **Appendix A**.

## 1.2 Scope of Work

The Client has requested the services of Greck to perform a hydraulic assessment and to establish the following:

- Update the existing TRCA Regulatory Hydraulic Model for Mimico Creek using up to date topographic information;
- Update hydraulic model to incorporate the proposed conceptual development;
- Undertake a cut-fill analysis as required to offset flood hazard related development impacts;
- · Prepare updated floodplain mapping
- Provide design recommendations for flood protection and flood hazard mitigation
- Technical report outlining supporting methodology, data, calculations and recommendations.

## 2.0 FLOOD HAZARD ASSESSMENT

To assess and confirm the existing flood hazard limit within the property, an update to the existing HEC-RAS hydraulic model was required. Greck was responsible for completing the hydraulic modelling throughout Mimico Creek in 2009 and since then the model has received minor revisions. Official floodplain mapping was updated in April 2020 by the TRCA for the Mimico Creek Watershed. The modelling and corresponding floodplain mapping was completed using Light Detection and Ranging (LIDAR) topographic information. Upon receiving a detailed topographic survey of the subject property, and updated Goreway Drive bridge crossing information, an update to the existing hydraulic

model was undertaken to more accurately define flood hazard conditions (characteristics).

## 2.1 HYDRAULIC MODEL UPDATE

The most recent Mimico Creek regulatory HEC-RAS hydraulic model (TRCA Model) was acquired from the TRCA in January 2021 for the Mimico Creek Watershed. The TRCA model was then updated to reflect existing conditions using the topographic survey to confirm the bridge structure dimensions and road profile information.

## 2.1.1 Existing Hydraulic Model

The Goreway Drive bridge is located within the Mimico Creek watershed, more specifically, within the "East Mim Creek" River, Reach "East 1", with the bridge being labeled as structure 483.91. The bridge is modelled as a 9.25 m span bridge with a rise of 2.55 m from the soffit to the bottom of the channel. The bridge deck has a width of 25 m within the model.

Five (5) HEC-RAS river stations are located within the property limits and existing development (River Stations 671.78, 615.05, 566.92, 511.74 and 490.61). The existing TRCA Model indicates a backwater effect due to the presence of the bridge crossing at Derry Road approximately 280 m downstream of the Goreway Bridge. This Derry Road Bridge is severely undersized creating a backwater effect that creates a cascading effect upstream towards the Goreway Bridge.

## 2.1.2 Updated Existing Model

The existing hydraulic model was then updated to reflect the existing conditions. This model is referred to as the "Greck Existing Condition model" (EC Model). Specific items that were revised include the following:

- Goreway Drive road profile;
- Goreway Bridge opening dimensions (span, rise);
- Goreway Bridge Length;
- Internal bridge cross sections; and
- River Stations 490.61, 511.74, 566.92, 615.05, 671.78, and 734.23.

It should be noted that the extents of the topographic survey did not capture the entire extent of the existing river stations. Therefore, only a portion of the river station was updated (from the right bank northwards within the subject property).

The Goreway Bridge contains barricades directly above the bridge opening. The barricade is a concrete structure with metal rails at the top of the structure. In the model it is assumed that the rails are fully blocked to be consistent with the previous modelling and conservative procedures.

All results presented for the updated regulatory flood elevation and proposed regulatory flood elevations using HEC-RAS 6.3.1

**Table 1** presents the Regulatory water surface elevations of the TRCA Model and EC Model.

TABLE 1 – UPDATED EXISTING REGULATORY FLOOD ELEVATIONS

HEC-RAS Cross Section ID	TRCA Existing Regulatory Flood Elevation (m)	Greck Updated Regulatory Flood Elevation (m)	Change in Water Surface Elevation from Existing Condition (m)	
734.23	165.16	165.15	-0.01	
671.78	165.07	165.06	-0.01	
615.05	165.01	164.99	-0.02	
566.92	164.94	164.93	-0.01	
511.74	164.94	164.93	-0.01	
<b>490.61</b> 164.95		164.94	-0.01	
483.91		Goreway Drive		
446.07	164.82	164.84	+0.02	
411.67	164.73	164.73	0	

It is common for the regulatory floodplain elevation to change upon updating a hydraulic model with more accurate topographic survey information, opposed to LIDAR information, or refined watercourse crossing information due to updated topographic survey.

The increase in flood elevation extends approximately 200 m upstream from the Goreway Bridge. Results of the HEC-RAS model and profile plot are provided in **Appendix B**.

## 2.1.3 Proposed Development

A hydraulic assessment was completed based on conceptual design plans to assess the impacts of encroachment into the regulatory floodplain as well as considerations for flood protection and flood hazard mitigation opportunities. The latest architectural design plans can be found in **Appendix D**.

The preferred option includes the following key features:

- Maintain existing primary point of ingress/egress
- Safe pedestrian ingress and egress via pedestrian walkways towards sidewalk along Goreway Drive
- Provides safe ingress/egress for emergency vehicles during a flooded scenario
- Dry flood protection with freeboard,
- · Balanced cut/fill earthworks utilizing 3:1 side slopes, and
- No significant hydraulic impacts to Mimico Creek.

The conceptual option includes a primary roadway access (day to day) from Goreway Drive via the south-west limit of the site, with a centreline of road elevation is approximately 164.15m at Goreway Drive. The gutter elevation along the north-eastern travel line is noted to be 164.28m.

Pedestrian access can be made via the north-eastern sidewalk associated with Goreway drive, which is noted to be outside of the Regulatory floodplain and as such, provides safe ingress/egress.

Several criteria for pedestrian and vehicular ingress/egress were considered and are provided below in **Table 2** below. These criteria are as per the Ministry of Natural Resources and Forestry (MNRF) Technical Guide – River & Stream Systems: Flood Hazard Limit, 2002.

TABLE 2: INGRESS/EGRESS REQUIREMENTS- REGULAR ACCESS

Criteria	MNRF Requirement	Criteria		
Pedestrian Access	"depths in excess of about 0.98 m (3.2 ft). would be sufficient to float young children)"	<= 0.98 m		
Emergency Vehicular Access				
Private Vehicular Access	"for most family automobiles something in the range of about 0.3 m – 0.4 m would be the maximum flooding before potential egress problems would result"	<= 0.3 m		
Depth-Velocity Product	"people would be at risk of the product (multiple) of the velocity and depth exceeded 0.8 m²/s	<= 0.8 m <sup>2</sup> /s		

As per the updated existing hydraulic model, the primary access, provides approximately 79cm of flood depth at the centreline of the road, and 66cm at the gutter line on Goreway Drive during the Regulatory storm event.

It should be noted that flows overtopping Goreway would be concentrated at the low point along the road, located 110m southwest of the proposed access. As such flow velocities are significantly reduced at the proposed access, this is demonstrated in the HEC-RAS model where the right bank velocity is 0.6m/s in comparison to the channel velocity of 1.43m/s immediately at the Goreway Bridge (at HEC-RAS Cross Section 483.91 BR U).

This equates to a depth velocity product at the proposed access of 0.47m<sup>2</sup>/s and 0.36m<sup>2</sup>/s at Goreway Drive Centreline and gutterline, respectively. As such, the proposed access provides safe emergency vehicular ingress/egress.

The proposed access does not provide safe ingress/egress for private vehicles during the Regulatory storm event, however, is noted to provide safe ingress/egress for all other storm events (100-year and less). As such, the risks associated with private vehicles are low. Greck is of the opinion that the fact that safe pedestrian and emergency access are a priority during flooded events, and as such, safe access to the proposed site is provided.

The preferred option includes fill within the floodplain, while providing a vegetated, 3:1 (H:V) slope along the south-east limit of the site. The proposed works is to be graded such that the regulatory flood does not encroach within the proposed development, including private access road and building. The proposed grading works are to provide a minimum 0.3m of freeboard from the determined regulatory flood elevation. The adjacent vacant, gravel lot would be replaced with the 3:1 vegetated slope, providing more naturalized valley land as opposed to a gravel lot.

The conceptual design includes proposed cut within the north-eastern property limits to ensure an overall cut-fill balance is achieved. This grading works would include some minor grading within the City owned valley lands. It is proposed to cut at a 3:1 (H:V) slope along with extended grading works to a maximum of 13 m within the city lands. This option would provide a net increase in flood storage (cut) of 218 m³, see proposed cut-fill grading plan **Drawing FPM.** This option results in an insignificant change to local hydraulics including flood conveyance and attenuation as seen in **Table 3.** Detailed incremental cut-fil calculations are provided in **Appendix C**.

It should be noted that no grading works within the valley lands are proposed at or below the 100-year flood elevation, and therefore flood storage volumes would remain unaffected for up to the 100-year storm event. During the Regulatory event, an incremental cut/fill balance was not achieved due to site limitations. However, impacts are deemed insignificant considering only the Regional event is impacted and a net cut is achieved. Under these conditions there will be an overall net benefit to the valley lands flood storage capacity.

The preferred concept will require permission to grade from the City as well as the partial removal of the asphalt pathway associated with an adjacent trail network.

**Table 3** presents the regulatory water surface elevations of the conceptual design. No increases in the regulatory flood elevation throughout the property will occur. Minor variance in flood elevations can be associated with model instability and calculation tolerances.

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TABLE 3 – UPDATED EXISTING REGULATORY FLOOD ELEVATIONS

HEC-RAS Cross Section ID	Greck Updated Regulatory Flood Elevation (m)	Proposed Conceptual Regulatory Flood Elevation (m)	Delta (m)
734.23	165.15	165.14	-0.01
671.78	165.06	165.06	0
615.05	164.99	164.98	-0.01
566.92	164.94* <del>164.93</del>	164.94* <del>164.93</del>	0
511.74	164.94* <del>164.93</del>	164.94* <del>164.93</del>	0
490.61	164.94	164.94	0
483.91		Goreway Drive	
446.07	164.84	164.84	0
411.67	164.73	164.73	0

<sup>\*</sup>Flood elevation adjusted to downstream flood elevation

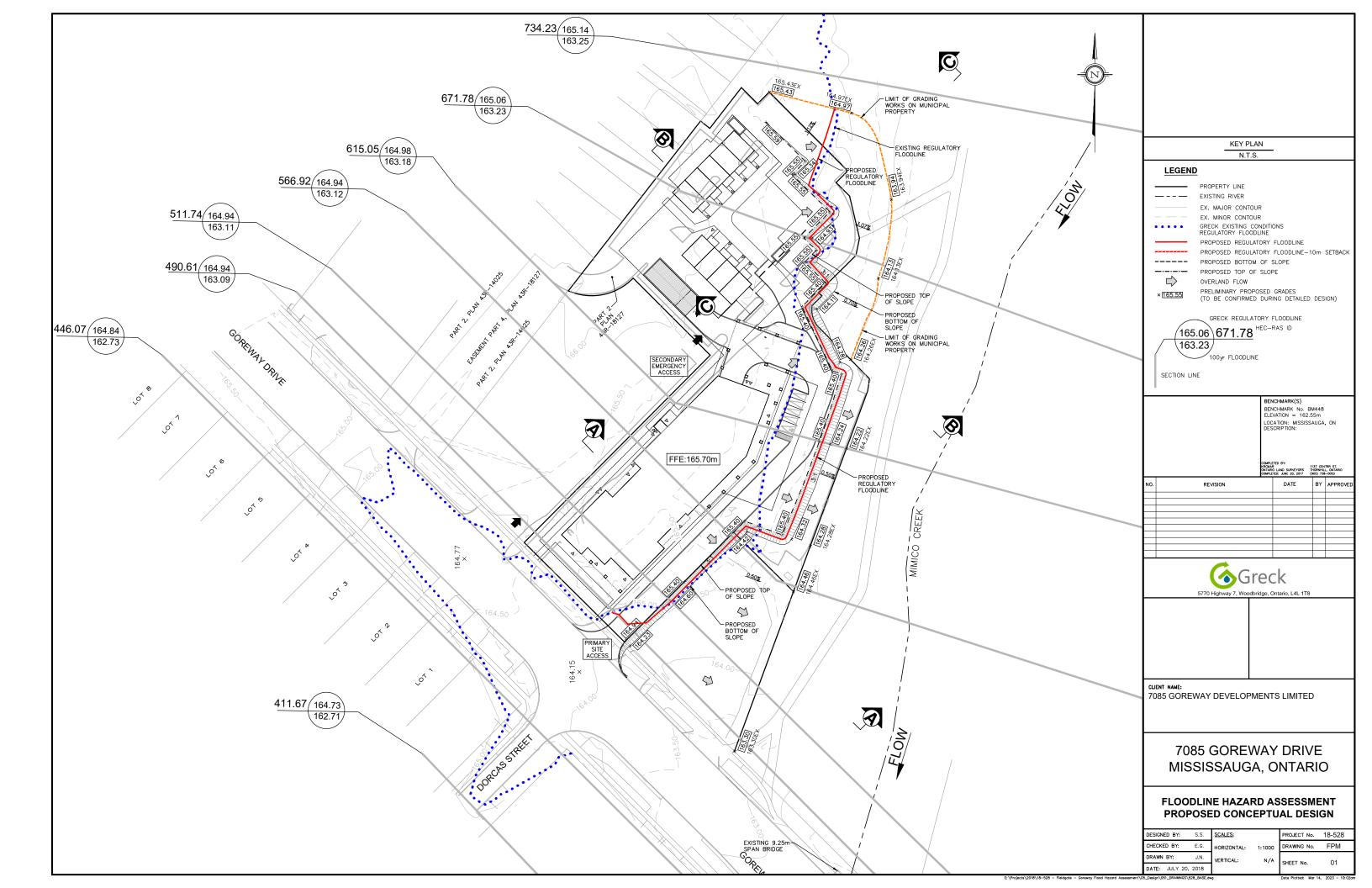
## 2.2 FLOODPLAIN MAPPING

The resulting existing (revised) and proposed floodplain has been plotted on **Drawing FPM**. During the proposed condition, it is demonstrated that the extents of the floodplain have decreased in comparison to the existing condition due to the revised grading, with no adverse effects to the regulatory flood elevation.

As indicated, the proposed building, parking garage lie entirely outside of the proposed floodline.

All buildings are to be a minimum 0.3m above the Regulatory flood elevation to provide necessary freeboard / factor of safety, as indicated in **Drawing FPM**.

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## 3.0 TRCA CONSULTATION

In January 2019, the development team met with TRCA planning and engineering staff to discuss the results of this report (revision: November 2, 2018). Like this report, the proposed development plan included a conceptual lot layout utilizing cut/fill in the floodplain and development buffers. TRCA provided comments and general feedback at the meeting which was incorporated into future deliverables.

In fall 2019, Greck provided TRCA with an updated report, revision: August 30<sup>th</sup>, 2019. This report was reviewed by TRCA staff and comments were provided to The City of Mississauga following a DARC meeting with the project team in October, 2019, see **Appendix E**. These comments were later submitted to the development team.

On February 5<sup>th</sup>, 2020, TRCA staff and the retained geotechnical engineer, Grounded Engineering Inc. along with Greck undertook a site visit and assessment to confirm the limits of natural features and hazards on the property. After which, TRCA provided a letter dated February 10, 2020 responding to the meeting and review of our report, see **Appendix E**.

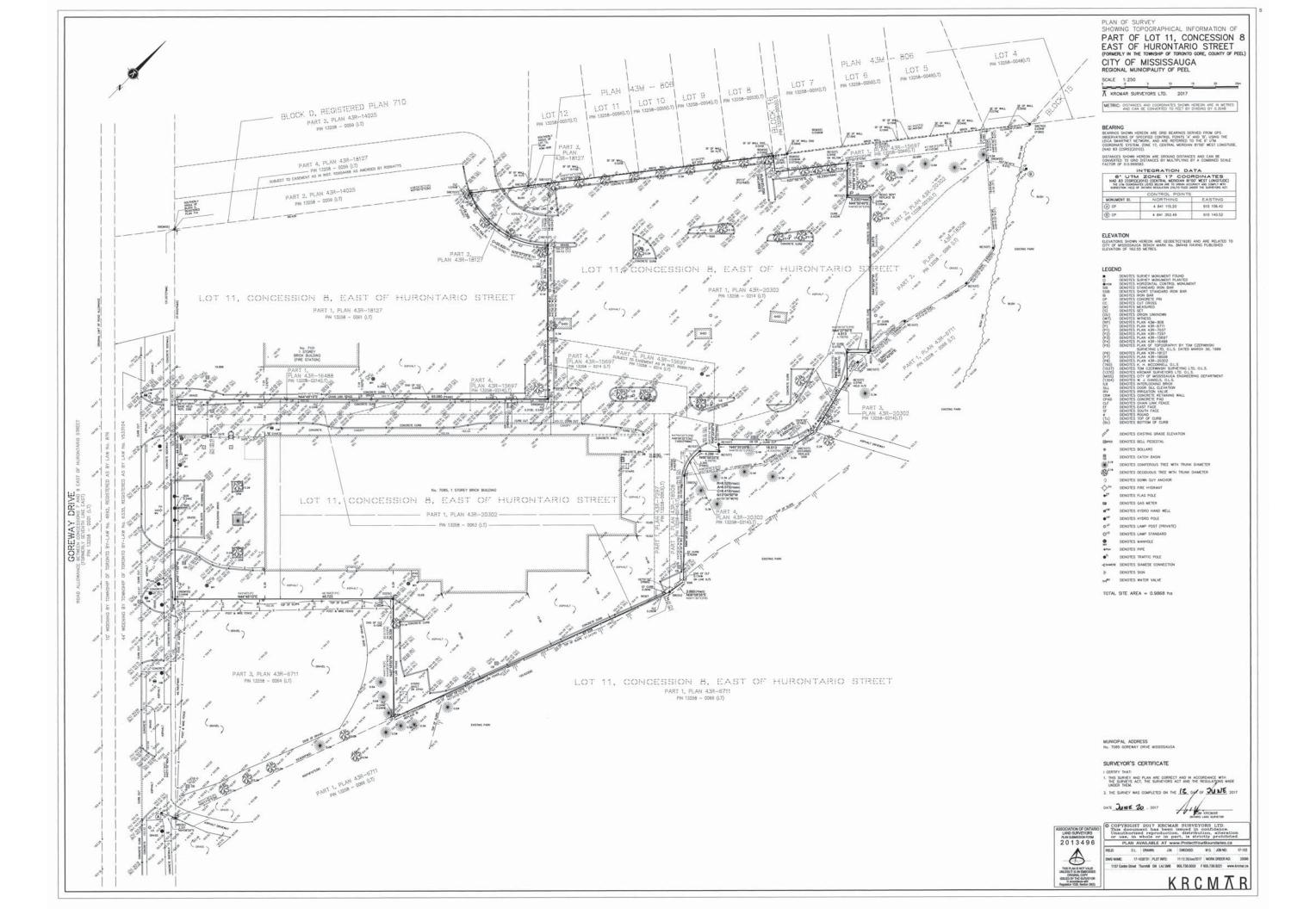
A response to TRCA's February 10, 2020 letter and October, 2019 comments has been provided with this report.

## 4.0 Conclusions / Recommendations

This technical study details our flood hazard assessment for 7085 Goreway Drive, within the City of Mississauga and regulatory area of TRCA. Founded on engineering/scientific principles, in accordance with TRCA policy and ministry guidelines, the hydraulic, floodproofing and cut-fill analysis completed presents no negative impacts to the existing regulated area. Proposed conditions demonstrate that there will be a net improvement to the flood storage available within the channel corridor and that there will be sufficient flood hazard protection, including safe access from Goreway Drive and dry floodproofing for all development structures above a minimum 0.3m freeboard.

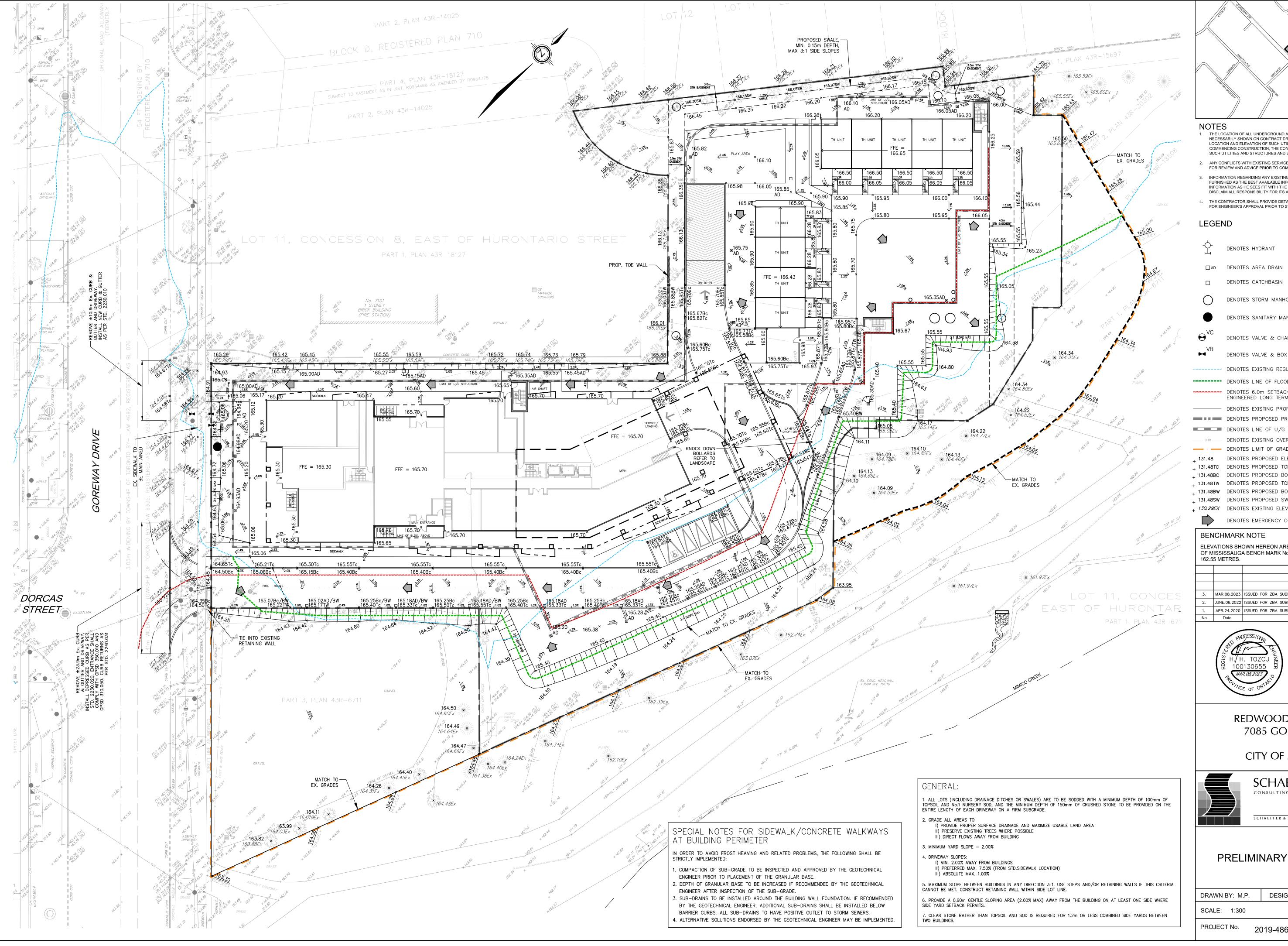
# APPENDIX A

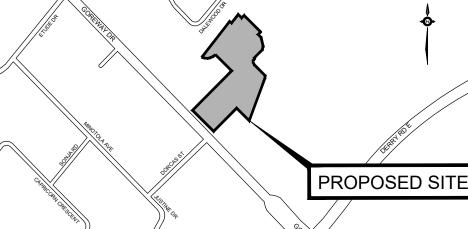
TOPOGRAPHIC SURVEY



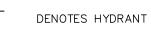
# APPENDIX B

**HEC-RAS MODEL OUTPUT** 





- 1. THE LOCATION OF ALL UNDERGROUND AND ABOVE GROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON CONTRACT DRAWINGS, AND WHERE SHOWN THE ACCURACY OF THE LOCATION AND ELEVATION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. PRIOR TO OMMENCING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF SUCH UTILITIES AND STRUCTURES AND SHALL ASSUME ALL LIABILITIES OF DAMAGE.
- ANY CONFLICTS WITH EXISTING SERVICES AND/OR UTILITIES SHALL BE REPORTED TO THE ENGINEER FOR REVIEW AND ADVICE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- INFORMATION REGARDING ANY EXISTING SERVICES AND/OR UTILITIES SHOWN ON THIS DRAWING ARE FURNISHED AS THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL INTERPRET THIS INFORMATION AS HE SEES FIT WITH THE UNDERSTANDING THAT THE OWNER, ENGINEER AND CITY DISCLAIM ALL RESPONSIBILITY FOR ITS ACCURACY AND/OR SUFFICIENCY.
- 4. THE CONTRACTOR SHALL PROVIDE DETAILS FOR SUPPORT OF Ex. SERVICES AND/OR UTILITIES FOR ENGINEER'S APPROVAL PRIOR TO START OF CONSTRUCTION.



☐ AD DENOTES AREA DRAIN

□ DENOTES CATCHBASIN

DENOTES STORM MANHOLE

DENOTES SANITARY MANHOLE

DENOTES VALVE & BOX

DENOTES VALVE & CHAMBER

DENOTES EXISTING REGULATORY FLOODPLAIN

DENOTES LINE OF FLOODPLAIN (REGIONAL) DENOTES 6.0m SETBACK FROM PROPOSED ENGINEERED LONG TERM STABLE TOP OF SLOPE

----- DENOTES EXISTING PROPERTY LINE DENOTES PROPOSED PROPERTY LINE

---- OHR---- DENOTES EXISTING OVERHEAD HYDRO

--- DENOTES LIMIT OF GRADING 131.48 DENOTES PROPOSED ELEVATION + 131.48TC DENOTES PROPOSED TOP OF CURB

+ 131.48BC DENOTES PROPOSED BOTTOM OF CURB + 131.48TW DENOTES PROPOSED TOP OF WALL 131.48BW DENOTES PROPOSED BOTTOM OF WALL

+ 131.48SW DENOTES PROPOSED SWALE + 130.29EX DENOTES EXISTING ELEVATION

DENOTES EMERGENCY OVERLAND FLOW ARROW

# BENCHMARK NOTE

ELEVATIONS SHOWN HEREON ARE GEODETIC(1928) AND ARE RELATED TO CITY OF MISSISSAUGA BENCH MARK No. BM448 HAVING PUBLISHED ELEVATION OF 162.55 METRES.

3.	MAR.08.2023	ISSUED FOR ZBA SUBMISSION	
2.	JUNE.06.2022	ISSUED FOR ZBA SUBMISSION	
١.	APR.24.2020	ISSUED FOR ZBA SUBMISSION	
No.	Date		Issued for



# **REDWOOD ON GOREWAY** 7085 GOREWAY DRIVE

# CITY OF MISSISSAUGA



**SCHAEFFERS** 

6 Ronrose Drive, Concord, Ontario L4K 4R3 Tel: (905) 738-6100 Fax: (905) 738-6875 E-mail:

design@schaeffers.com

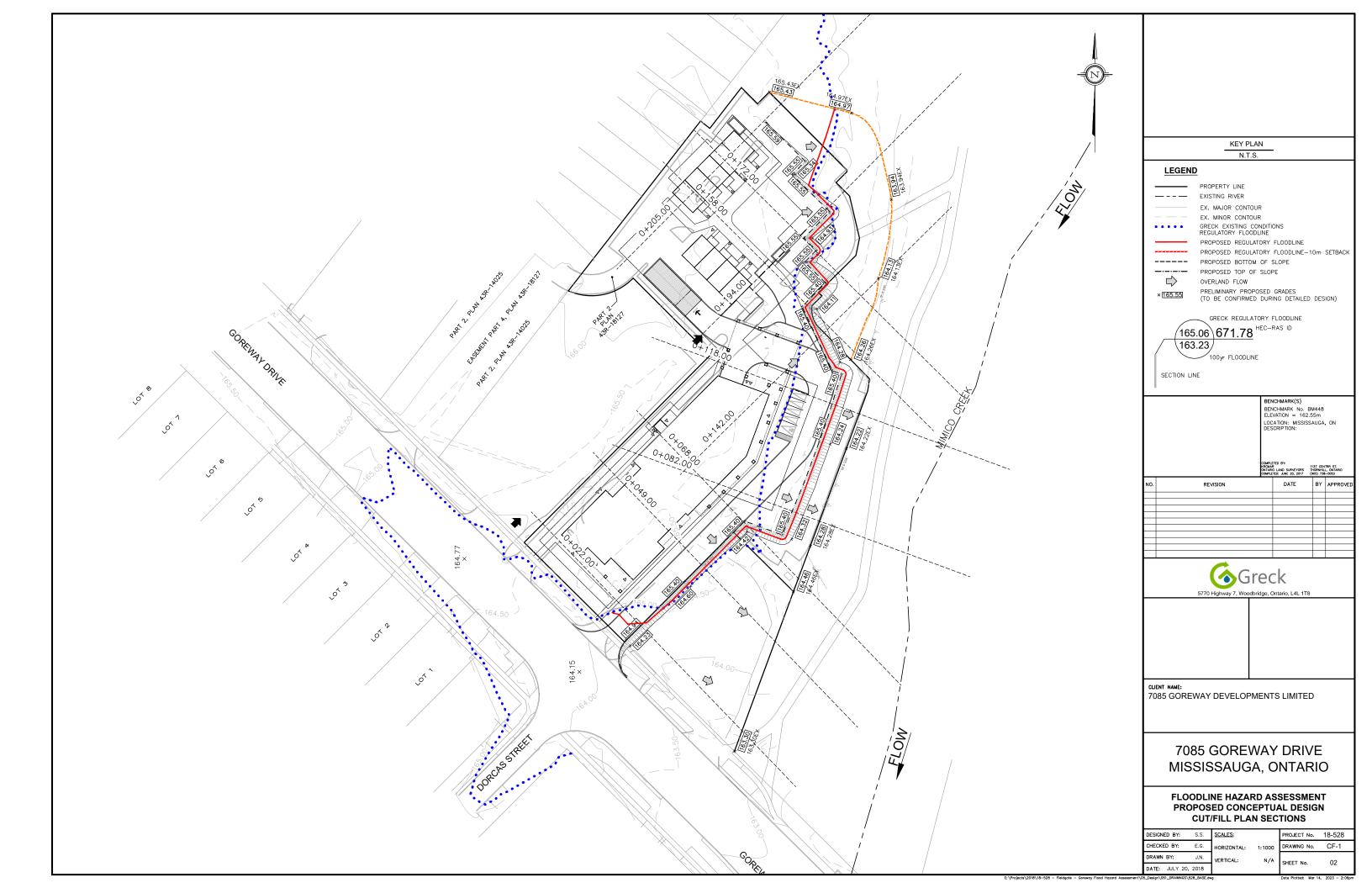
SCHAEFFER & ASSOCIATES LTD.

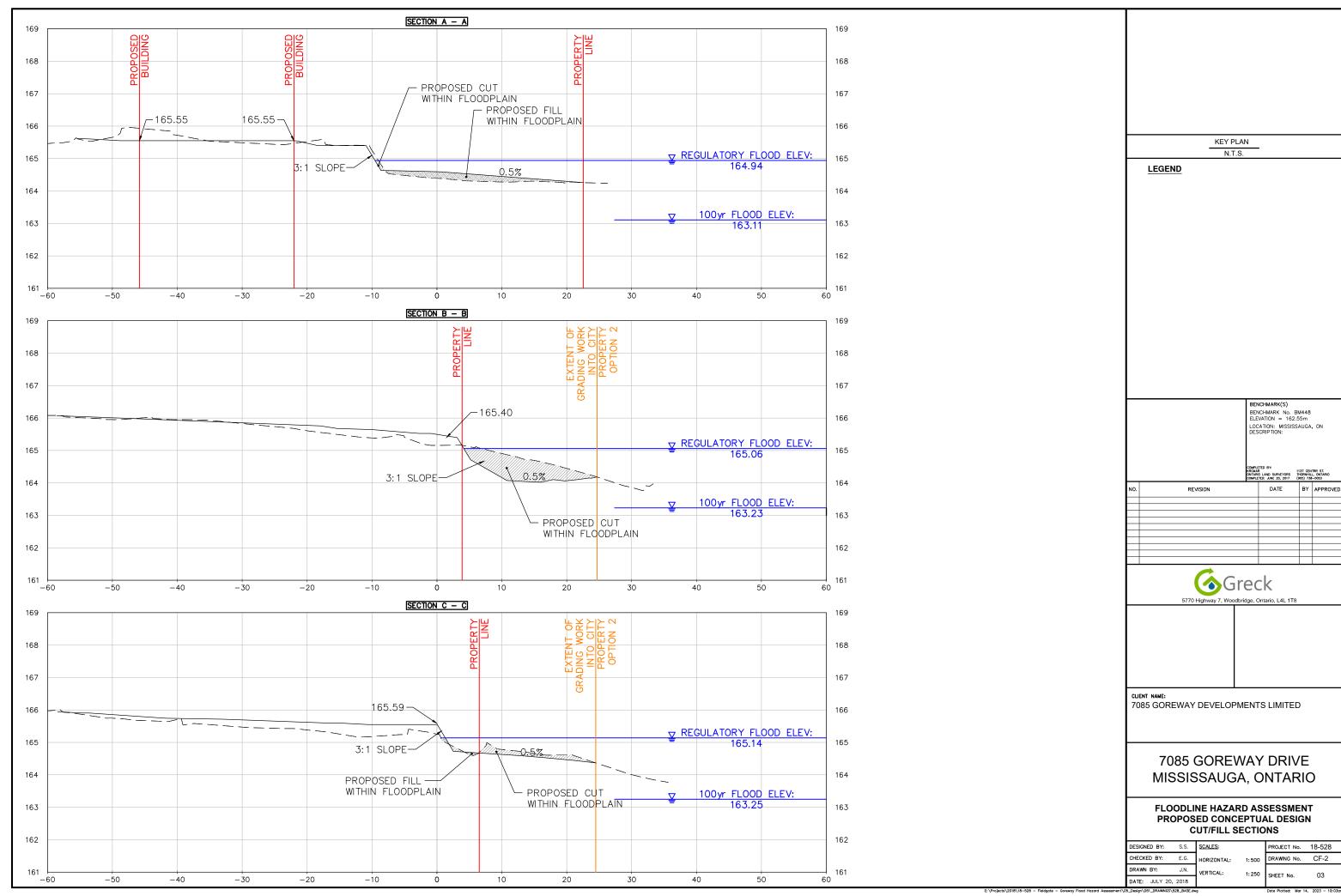
PRELIMINARY SITE GRADING PLAN

DRAWN BY: M.P.	DESIGNED I	BY: M.P. CHECKED BY: H.S.			
SCALE: 1:300		DATE: AF	PR. 2020		
PROJECT No.	2019-4866	DRAWING	S No.	SG-1	

# APPENDIX C

**CUT-FILL CALCULATIONS** 





## Floodplain Cut and Fill Balance



PROJECT: Fieldgate Goreway Flood Hazard Assessment LOCATION: Mississauga, Ontario

NOTES: Completed using the average end area method

CALCULATED BY: James Norris REVIEWED BY: Scott Sexton, P.Eng

DATE: March 2023

## Floodline Elevation: 165.00m (Regional)

Increr	nental		Sections (Fill)										
Elevati	ion (m)	0+017 to 0+022	0+022 to 0+049	0+049 to 0+068	0+068 to 0+082	0+082 to 0+118	0+118 to 0+142	0+142 to 0+158	0+158 to 0+172	0+172 to 0+194	0+194 to 0+227.50	0+227.50 to 0+235	Total Volume (m³)
162.90	163.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
163.20	163.50	1.48	7.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.47
163.50	163.80	12.32	66.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.85
163.80	164.10	14.49	78.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	92.74
164.10	164.40	3.01	60.66	31.94	11.47	35.42	4.81	0.00	0.00	0.00	0.00	0.00	147.30
164.40	164.70	0.55	70.13	47.50	28.62	133.20	40.09	0.06	0.00	2.84	4.32	0.00	327.31
164.70	165.00	7.72	41.69	0.00	36.94	225.43	131.90	29.96	0.67	1.29	0.37	0.00	475.96
To	tal	39.56	325.24	79.44	77.03	394.06	176.81	30.02	0.67	4.13	4.69	0.00	1131.63

Increr	mental		Sections (Cut)										
Elevati	ion (m)	0+017 to 0+022	0+022 to 0+049	0+049 to 0+068	0+068 to 0+082	0+082 to 0+118	0+118 to 0+142	0+142 to 0+158	0+158 to 0+172	0+172 to 0+194	0+194 to 0+227.50	0+227.50 to 0+235	Total Volume (m³)
162.90	163.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
163.20	163.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
163.50	163.80	0.14	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88
163.80	164.10	0.00	0.00	0.00	0.00	0.00	13.72	15.74	8.91	4.94	0.00	0.00	43.30
164.10	164.40	0.43	2.32	0.00	0.27	3.67	148.22	163.15	114.86	90.50	0.44	0.00	523.86
164.40	164.70	0.41	3.36	74.76	54.50	0.00	83.48	109.15	99.51	117.99	53.57	0.00	596.72
164.70	165.00	0.00	3.54	21.64	14.11	0.00	7.13	32.30	37.56	39.82	28.44	0.00	184.53
To	tal	0.98	9.96	96.40	68.88	3.67	252.55	320.34	260.83	253.24	82.44	0.00	1349.29

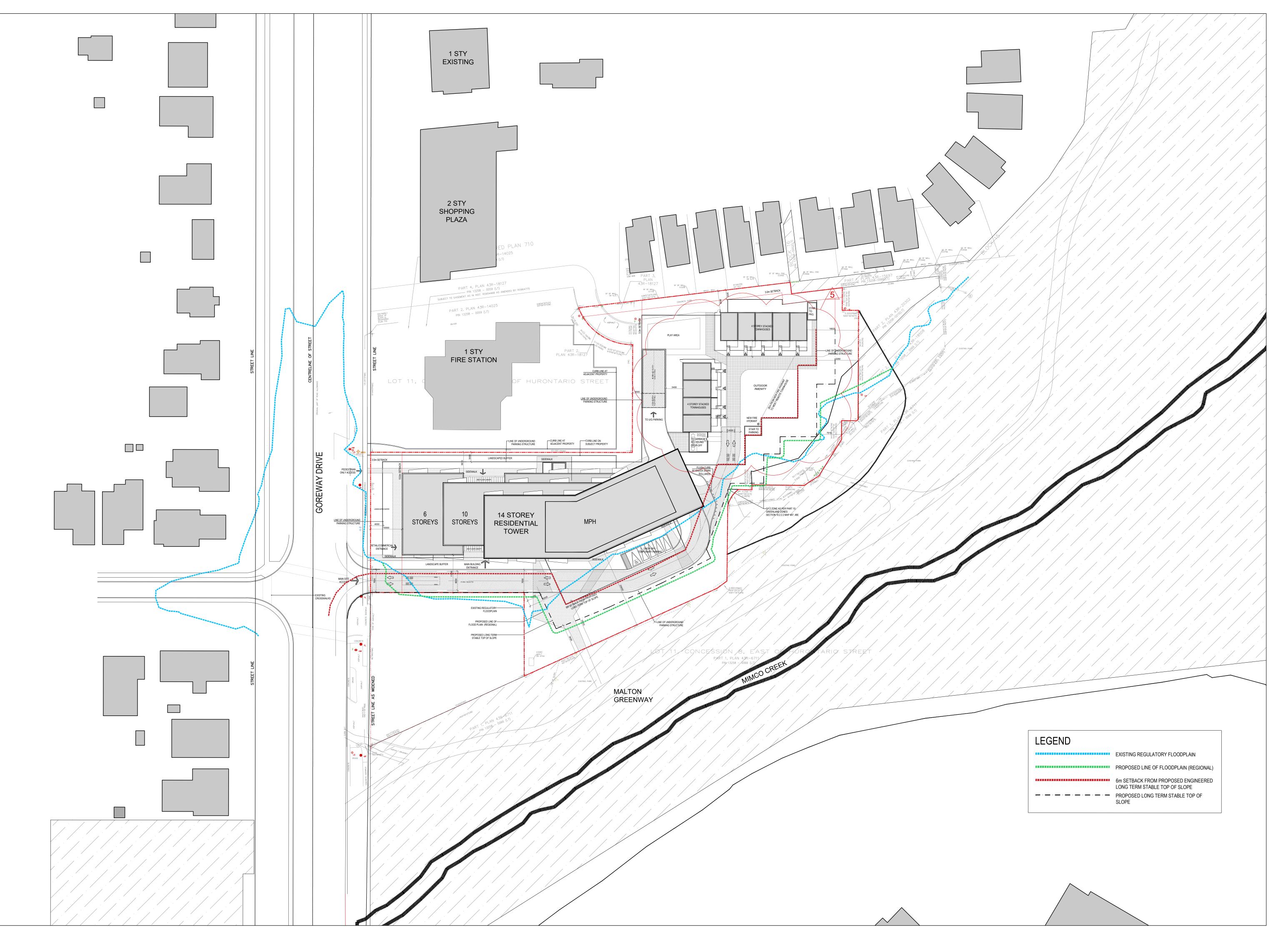
Floodplain cut/fill balance summary Total Volumes								
Incremental Elevation (m) Difference (m³)								
162.90	163.20	0.00	-					
163.20	163.50	FILL						
163.50	163.80	77.97	FILL					
163.80	164.10	49.43	FILL					
164.10	164.40	-376.56	CUT					
164.40	164.70	-269.41	CUT					
164.70	165.00	291.43	FILL					
То	Total -217.66 CUT							

<sup>\*100</sup> yr Average Flood Elevation= 163.16m

Regulatory Average Flood Elevation= 165.00m

# APPENDIX D

ARCHITECTURAL DESIGN PLANS



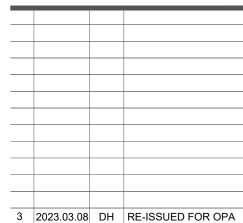
# IBI

IBI GROUP
7th Floor-55 St. Clair Avenue West
Toronto ON M4V 2Y7 Canada
tel 416 596 1930 fax 416 596 0644
ibigroup.com

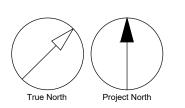
**KEY PLAN** 



SUBMISSION



2 2022.06.13 DH RE-ISSUED FOR OPA
1 2020.08.12 DH ISSUED FOR OPA
# Date By Comment



SEAL:



PROJECT:



# REDWOOD ON GOREWAY

7085 Goreway Drive, Mississauga, Ontario

TITLE : Context Plan

DATE: 2022-02-02

SCALE: 1:500

**DRAWN:** SL/DV/EK

CHECKED: DH

**PROJ. NO.** 120212

A-100

# APPENDIX E

TRCA CORRESPONDENCE



June 1, 2020 Greck No.: 18-528 TRCA CFN: 62517.01

Toronto and Region Conservation Authority (TRCA) 101 Exchange Avenue Vaughan, ON L4K 5R6

Attention: Anthony Syhlonyk Planner, Planning and Development, TRCA

Reference: TRCA Concept Development Application 7085 Goreway Drive

City if Mississauga, Peel Region

**Owner: 7085 Goreway Drive Developments Limited** 

Dear Mr. Syhlonyk,

Thank you for reviewing Greck and Associates Limited's (Greck) application and attending our site visit in February. Greck has prepared this letter in response to the comment letter received from TRCA, dated February 10, 2020. In addition, we provide a response to applicable comments received from Shaesta Hussen at the City of Mississauga following our October 16, 2019 a DARC meeting with the City on behalf of TRCA and Adam Miller (previous planner). A copy of this email letter is appended for reference.

Please find below an itemized response to your last comments. These responses have been incorporated into an updated flood hazard assessment report appended with this letter and have been forwarded to the rest of the design team to support their recent submissions. Comments are in bold followed by our response.

Please submit the digital copy of the existing revised and proposed HEC-1. RAS models for review.

A digital copy can be downloaded from the following link:

https://greckassociates-my.sharepoint.com/:f:/g/personal/ssexton\_greck\_ca/ Eo2yiLVrS4xOt8FgHqKX6BcB1xiXiND1HEHAALmu2Hb9AA?e=G7Fckh

2. It is noted that underground garage is proposed. Please note that the openings leading to the garage should be located above the Regulatory Flood elevation plus 0.3m. This should be shown on all applicable plans

Agreed. All garage openings are above the Regulatory Flood elevation plus 0.3m.

3. TRCA Existing Regulatory Floodplain mapping shows that a section of the neigbouring property (7085 Goreway Drive) is outside of the flood plain, however, Sheet No 1 shows that under proposed condition the entire 7085 Goreway Drive will be under Regulatory Floodlines. This is not acceptable. Please revise the grading plan so that the existing flooding risk on the adjacent property is maintained.

It should be recognized that TRCA mapping had to be updated to more accurately reflect existing conditions. As per the report, a detailed survey was completed and the Goreway bridge structure was recoded. This resulted in the flood risk you noted. Not proposed conditions.

4. Sheet No 1 shows that grading will be undertaken on the northwest section of the neighbouring property (7085 Goreway Drive). Please note that the applicant should acquire permission from the owner of 7085 Goreway Drive and provide a record as part of future applications.

Agreed. The City has already provided verbal approval of the proposed grading works, a record will be provided as part of future applications.

As part of a future application, an ESC plan will be required. Please refer to TRCA's Erosion and Sediment Control Guideline for Urban Construction, which can be found here: http://www.trca.on.ca/dotAsset/40035.pdf

Relevant ESC notes can be found here: http://www.trca.on.ca/dotAsset/93458.pdf.

a. Please ensure the proponent has permission to erect and maintain Erosion and Sediment Controls on city property for the area they are grading. Erosion and Sediment Controls are often placed at the furthest extent of disturbance.

To be provided under separate cover by the Civil Engineering Consultant.

Please consider where water will be discharged to during construction and post-construction at final design. TRCA discourages additional water to be directly discharged to Mimico Creek and encourages the use of storm and sanitary sewers. For dewatering discharge please see the Erosion and Sediment Control Guidelines for Urban Construction for optimal placement and discharge locations.

To be provided under separate cover by the Civil Engineering Consultant as per requirements by the geotechnical/hydrogeological engineer.

Please find below an itemized response to Adam Miller's October 7<sup>th</sup>, 2019 comments provided to Shaesta Hussen at the City of Mississauga.

A DARC Meeting was held with the same applicant in mid-January 2019. At that meeting, we expressed our concern with a large retaining structure proposed as part of the initial plan to facilitate the development and alleviate the flood hazard.

The originally proposed retaining wall concept has since been removed and a new 3:1 engineered vegetated slope is proposed.

2. A subsequent meeting was held with the applicant in late January 2019. At the meeting, we identified a willingness to consider grading options/solutions that would be acceptable to TRCA, and consistent with TRCA's cut and fill balance procedures. Options discussed included the removal of the large retaining wall, re-establishing a gradual valley slope to contain the floodplain and provide greater development efficiencies for the site, incorporating the required 10 m buffer from the limit of the floodplain and valley corridor, and providing restoration and enhancement within the valley corridor to achieve an ecological net gain for this reach of the Mimico Creek Watershed.

The latest design incorporates a cut and fill balance plan that results in a net increase in available flood storage for the regional storm event. A 0.3m freeboard is provided for all buildings to provide acceptable flood hazard protection. In addition, the retained geotechnical engineer has confirmed that the proposed 3:1 vegetated engineered slope will be stable and therefore no buffer for slope stability is required. Moreover, erosion hazards are not applicable given the distance from the development to Mimico Creek.

As it pertains to conservation of land requirements, an ecological assessment and restoration enhancement plan was prepared by Palmer Consulting, and it has been demonstrated that the development can be compensated for and existing conditions significantly improved in support of TRCA policy to conserve and enhance the natural environment and Etobicoke Creek corridor.

Based on engineered and scientific principals, a conservative 6m buffer has been provided for most of the development along the proposed engineered top of slope.

3. Based on my preliminary review of the revised plan, it is unclear how these objective have been incorporated into the design. It appears that a large structure (i.e., underground parking garage foundation) is still proposed within the valley corridor and floodplain.

A revised plan has been provided. All buildings and underground infrastructure are proposed outside of the future floodplain area including freeboard.

Significant portions of the proposed development provide a 0 m buffer to the valley corridor and floodplain. This is not supported.

See comment #2. The revised plan includes a 6m buffer from the proposed engineered top of slope.

5. An EIS Report is required in support of the proposed development demonstrating impacts, mitigation measures and proposed environmental enhancements and restoration to achieve an ecological net gain.

Understood, an EIS report has been prepared by Palmer and is provided under separate cover.

6. An updated flood study has been submitted. We require the opportunity to review this report. Our typical review is 30 to 60 days. However, given the above noted concerns, we feel it is best to hold of on our review as the broader key objectives previously discussed do not appear to be incorporated into the design of the proposed development.

An updated flood study report (April 2020) reflecting and updated development plan has been submitted on behalf of the Owner and development team.

We trust our response meets your requirements in support of the proposed development application. Should you have questions or require further details, please feel free to contact me at (289) 657-9797 ext. 222 or egreck@greck.ca.

Sincerely,

**GRECK AND ASSOCIATES LIMITED** 

Eric Greck, P.Eng.

Principal



February 10, 2020 **CFN:** 62517.01

## BY E-MAIL: egreck@greck.ca

Eric Greck 5770 Highway 7 Vaughan, ON L4L 1T8

Dear Mr. Greck:

Re: TRCA Concept Development Application

7085 Goreway Drive

City if Mississauga, Peel Region

**Owner: 7085 Goreway Drive Developments Limited** 

Thank you for the opportunity to review the above application. This letter will outline how the subject property is affected by the policies and programs of the Toronto and Region Conservation Authority (TRCA), including Ontario Regulation 166/06, as amended, TRCA's Living City Policies for Planning and Development in the Watersheds of the TRCA (LCP) and relevant Provincial Policies.

This letter provides confirmation that a Site Visit exercise was completed on February 5, 2020 at 7085 Goreway Drive, in the City of Mississauga. Toronto and Region Conservation Authority (TRCA) staff including Katharine McCarter (Planning Ecology) and Anthony Syhlonyk (Planner) were in attendance. Also, in attendance was Eric Greck (Greck) and the proponent's geotechnical consultant.

## **Purpose of the Application**

Based on our review of the conceptual plans submitted, it is our understanding that the purpose of this application is to facilitate two high rise condominiums and a townhouse block with associated roadways and underground parking.

## **Application-Specific Comments**

TRCA staff completed the site visit at the request of the applicant to confirm the limits of natural features and hazards on the property from the adjacent watercourse. From the results of the site visit, it was determined that the valley is unconstrained without a clearly defined natural Top of Slope and as such, a Top of Slope staking was considered unnecessary. While the main slope was gentle without any signs of erosion, the channel of the watercourse itself showed signs of more extensive erosion. Given the lack of geotechnical concerns, it has been determined that the hazard of the flood plain will form the greatest constraint on the proposed development. To facilitate TRCA's continued review of the above application, we offer our detailed comments in Appendix I of this letter.

### Conclusion

This letter provides information on matters that may affect the limits of the Natural System on the subject property and what must be submitted to our office as it relates to the Site Visit that occurred on February 5, 2020. This letter does not provide formal comments or clearance with respect to TRCA's position on any application relating to the subject site.

We do advise that a portion of the subject lands are regulated by TRCA pursuant to the *Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses* (Ontario Regulation 166/06). A permit will be required from our office for any development or site alteration within the regulated portion of the subject lands.

Please ensure all future proposals for works on the subject property are circulated to TRCA for our review and approval prior to commencement of the works. Our full submission requirements for planning and permit applications can be accessed by contacting the undersigned or visiting our website at: <a href="http://www.trca.on.ca/planning-services-permits/">http://www.trca.on.ca/planning-services-permits/</a>

This letter is based on current policy, which may change from time to time. Any future development proposal would be subject to the policies in effect at the time of application.

We thank you for the opportunity to review the subject application and provide our comments as per our commenting and regulatory role. Further, we trust these comments are of assistance. Should you have any additional questions or comments, please do not hesitate to contact the undersigned.

Sincerely,

Anthony Syhlonyk

Planner

Planning and Development

Extension 5272

## **Appendix I: TRCA Technical Comments**

- 1. Please submit the digital copy of the existing revised and proposed HEC-RAS models for review.
- 2. It is noted that underground garage is proposed. Please note that the openings leading to the garage should be located above the Regulatory Flood elevation plus 0.3m. This should be shown on all applicable plans.
- 3. TRCA Existing Regulatory Floodplain mapping shows that a section of the neighbouring property (7085 Goreway Drive) is outside of the flood plain, however, Sheet No 1 shows that under proposed condition the entire 7085 Goreway Drive will be under Regulatory Floodlines. This is not acceptable. Please revise the grading plan so that the existing flooding risk on the adjacent property is maintained.
- 4. Sheet No 1 shows that grading will be undertaken on the northwest section of the neigbouring property (7085 Goreway Drive). Please note that the applicant should acquire permission from the owner of 7085 Goreway Drive and provide a record as part of future applications.
- 5. As part of a future application, an ESC plan will be required. Please refer to TRCA's Erosion and Sediment Control Guideline for Urban Construction, which can be found here: http://www.trca.on.ca/dotAsset/40035.pdf

Relevant ESC notes can be found here: http://www.trca.on.ca/dotAsset/93458.pdf.

- a. Please ensure the proponent has permission to erect and maintain Erosion and Sediment Controls on city property for the area they are grading. Erosion and Sediment Controls are often placed at the furthest extent of disturbance.
- 6. Please consider where water will be discharged to during construction and post-construction at final design. TRCA discourages additional water to be directly discharged to Mimico Creek and encourages the use of storm and sanitary sewers. For dewatering discharge please see the Erosion and Sediment Control Guidelines for Urban Construction for optimal placement and discharge locations.

 From:
 Adam Miller

 To:
 Shaesta Hussen

 Cc:
 Lorie Sterritt

 Subject:
 RE: DARC 19-266 W5 - 7085 Goreway Drive

 Date:
 Monday, October 7, 2019 7:19:22 PM

Attachments: <u>image004.png</u>

image001.png

Hi Shaesta.

Unfortunately, I am not available to attend the DARC Meeting on October 16<sup>th</sup>. However, I provide the following high-level comments to assist in your discussions:

- A DARC Meeting was held with the same applicant in mid-January 2019. At that meeting, we expressed our concern with a large retaining structure proposed as part of the initial plan to facilitate the development and alleviate the flood hazard.
- A subsequent meeting was held with the applicant in late January 2019. At the meeting, we identified a willingness to consider grading options/solutions that would be acceptable to TRCA, and consistent with TRCA's cut and fill balance procedures. Options discussed included the removal of the large retaining wall, re-establishing a gradual valley slope to contain the floodplain and provide greater development efficiencies for the site, incorporating the required 10 m buffer from the limit of the floodplain and valley corridor, and providing restoration and enhancement within the valley corridor to achieve an ecological net gain for this reach of the Mimico Creek Watershed.
- Based on my preliminary review of the revised plan, it is unclear how these objective have been incorporated into the design. It appears that a large structure (i.e., underground parking garage foundation) is still proposed within the valley corridor and floodplain.
- Significant portions of the proposed development provide a 0 m buffer to the valley corridor and floodplain. This is not supported.
- An EIS Report is required in support of the proposed development demonstrating impacts, mitigation measures and proposed environmental enhancements and restoration to achieve an ecological net gain.
- An updated flood study has been submitted. We require the opportunity to review this report. Our typical review is 30 to 60 days. However, given the above noted concerns, we feel it is best to hold of on our review as the broader key objectives previously discussed do not appear to be incorporated into the design of the proposed development.

Also, Leilani is no longer with TRCA.

I trust these comments are of assistance. Thank you,

Adam

## Adam Miller, BES, MCIP, RPP

Senior Planner

Development Planning and Permits | Development and Engineering Services

T: (416) 661-6600 ext. 5244

E: adam.miller@trca.ca

A: 101 Exchange Avenue, Vaughan, ON, L4K 5R6 | trca.ca



From: Shaesta Hussen <shaesta.hussen@mississauga.ca>

Sent: Friday, October 4, 2019 3:43 PM

To: Adam Miller <Adam.Miller@trca.ca>; Leilani Lee-Yates <Leilani.LeeYates@trca.ca>

**Cc:** Lorie Sterritt < Lorie. Sterritt@mississauga.ca> **Subject:** DARC 19-266 W5 - 7085 Goreway Drive

Good afternoon Adam and Leilani,

We have received a DARC Submission from Redwood Properties for 7085 Goreway Drive (Ward 5) located in the Malton Neighbourhood. The property is located on the east side of Goreway Drive, north of Derry Road East. The proposal is for two apartment buildings (16 and 18-storeys with a shared 2-storey podium) containing 245 units and 16 2-storey at-grade townhouse dwellings and 2 levels of underground parking. This proposal will require Official Plan and Zoning By-law Amendment Applications.

I have attached the DARC Summary Sheet as well as the Applicant's Cover Letter, proposed Concept Plan, Site statistics, and the Flood Study that will be reviewed by the DARC members at the October 16<sup>th</sup> DARC Meeting. As the property is within the TRCA Screening Area, we were hoping that the TRCA could provide any comments and/or submission requirements in advance of development applications. A representative from the TRCA is also more than welcome to attend the DARC meeting.

If you have any questions or require further information, you can contact me at ext.5532 or Lorie Sterritt at ext.5403 as she has been involved in previous discussions with the applicant and the Councillor's office regarding previous iterations of this proposal.

Regards, Shaesta



Shaesta Hussen, BES, MPH, MCIP, RPP Planner, Planning Services Centre T 905-615-3200 ext.5532 shaesta.hussen@mississauga.ca

<u>City of Mississauga</u> | Planning and Building Department, Development and Design Division