



# LOWER TRENT CONSERVATION

714 Murray Street, R.R. 1, Trenton, Ontario K8V 0N1

■ Tel: 613-394-4829 ■ Fax: 613-394-5226 ■ Website: [www.ltc.on.ca](http://www.ltc.on.ca) ■ Email: [information@ltc.on.ca](mailto:information@ltc.on.ca)

Registered Charitable Organization No. 107646598RR0001

## NOTICE OF HEARING BOARD MEETING LOWER TRENT CONSERVATION

TO BE HELD AT

Administration Office, 714 Murray Street, Trenton, ON / Virtually [Join Meeting HERE](#)

Monday March 17, 2025, at 1:00 PM

FOR

O. Reg. 41/24 Permit Application #RP-24-232

**APPLICANT:** Al LeBlanc (LeBlanc Enterprises) - Property Owner  
Jewell Engineering Inc. – Agent

**LOCATION:** Vacant lot on Cedar Street  
Municipality of Brighton, Northumberland County  
Geographic Township of Cramahe, Concession 1, Part of Lot 1

### AGENDA

1. Meeting called to order by the Chair
2. Motion for the Board of Directors to sit as the Hearing Board
3. Opening Remarks by Chair for **RP-24-232**
4. Disclosure of pecuniary interests
5. Staff Report and Presentation
6. Applicant Presentation
7. Additional Information Sharing
  - a. Additional Questions from the Board
  - b. Comments or Questions from the Applicant
  - c. Comments or Questions from Staff
8. Deliberation (In-Camera if required)
9. Motion on the Hearing Board Decision for RP-24-232
10. Motion to adjourn the Hearing Board

Page # 2

Page # 127

**PLEASE CONTACT THE OFFICE IF YOU WILL BE UNABLE TO ATTEND THIS MEETING**

**Chitra Gowda 613-394-3915 ext. #215 | [chitra.gowda@ltc.on.ca](mailto:chitra.gowda@ltc.on.ca)**



## STAFF REPORT

**Date:** February 28, 2025  
**To:** Lower Trent Conservation Hearing Board  
**Re:** Ontario Regulation 41/24 application for permission RP-24-232 to develop within the Butler and Arena Creek floodplain and within 30-metres from a wetland feature  
**Prepared by:** Gage Comeau, Manager, Watershed Management, Planning and Regulations

<b>DATE</b>	February 28, 2025
<b>DATE RECEIVED</b>	Permit application received October 15, 2024 Permit application submission deemed complete – January 30, 2025 Request for Hearing received February 10, 2025
<b>APPLICANT</b>	Property Owner: Al LeBlanc (LeBlanc Enterprises) Agent: Jewell Engineering Inc.  (Copy of application, grading plans, sediment and erosion control plan, Flood Mitigation Report from Jewell Engineering by Elliott Fledderus, P. Eng. <b>Appendices 1-4</b> )
<b>LOCATION</b>	Vacant lot of Cedar Street (ARN: 140810806018102000) Municipality of Brighton, Northumberland County Geographic Township of Cramahe, Concession 1, Part of Lot 1 (Map(s) attached, see <b>Appendix 5</b> )
<b>OVERVIEW</b>	Lower Trent Region Conservation Authority (LTC) received an application to undergo the required site preparation to support future development including the placement of approximately 31,000 m <sup>3</sup> of engineered fill material, excavation of an existing deteriorated berm and construction of a drainage channel to convey the potential Arena Creek spill. The proposed development is considered major development within the floodplain and does not comply with LTC's Ontario Regulation 41/24 Policy Document (June 2024) and therefore, a permit cannot be issued by staff.
<b>PROPOSAL</b>	The proponent is seeking approval from LTC for the placement of fill, excavation of existing deteriorated berm, and construction of a drainage channel to convey the Arena Creek spill area. The proposed works would

take place within the Butler and Arena Creek floodplain, and within 30-metres from a wetland as identified in their submitted plans, engineering report and LTC map (**Appendix 3-5**).

#### **SUMMARY**

LTC is responsible for the administration of the Conservation Authorities Act and Ontario Regulation 41/24. In order to guide the implementation of Ontario Regulation 41/24 made pursuant to Section 28.5 of the *Conservation Authorities Act*, the LTC Board of Directors has approved policies, most recently updated in June 2024. Where a proposal for development or alteration follows the approved policies or is not a significant deviation from the approved policies, designated authority staff may grant permission.

The vacant property is located within the Butler and Arena Creek and the current proposal is to undergo the required site preparation to support future development including the placement of approximately 31,000 m<sup>3</sup> of engineered fill material, excavation of an existing deteriorated berm and construction of a drainage channel to convey the potential Arena Creek spill

The proposed development activities trigger the below noted policies with respect to development in the One Zone Regulatory Floodplain. Designated staff are not in a position to grant approval of the Ontario Regulation 41/24 permit application as it does not conform with the policies. It is important to note that other policies associated with other key features such as the field verified wetland area are in compliance with the Board Approved Regulatory policies.

Key issue: A permit from LTC is required for the proposed development as they are to take place within a regulated area as described in subparagraph 2 i of subsection 28 (1) of the *Conservation Authorities Act*, specifically, hazardous lands (i.e., floodplain), and Section 2 (3) of Ontario Regulation 41/24 pursuant to the Act (i.e., 30-metre wetland setback from a field verified wetland).

Pursuant to Ontario Regulation 41/24, “hazardous land” means land that could be unsafe for development because of naturally occurring processes associated with flooding, erosion, dynamic beaches or unstable soil or bedrock.

#### **Lower Trent Region Conservation Authority Ontario Regulation 41/24 Policy Document (June 2024)**

Below are the applicable policies that are relevant to this permit

application:

**5.3.1.1 Development within One-Zone Regulatory Floodplain of River or Stream Valleys (including inland lakes)**

- 1) Development within the Regulatory floodplain shall not be permitted.
- 2) Placement of fill, flood hazard protection and/or bank stabilization works to allow for future/proposed development or an increase in development envelope within the Regulatory floodplain shall not be permitted.
- 4) Major development within the Regulatory floodplain shall not be permitted.

(LTC's 2024 Policies attached, see **Appendix 6**– Relevant sections only).

The applicant was notified that staff could not approve the permit application and of their right to a Hearing before the Authority's Board of Directors (see LTC Permit Status Letter, February 7, 2025– **Appendix 7**).

The proponent requested LTC staff to proceed with the necessary arrangements for a Hearing (February 14, 2025 Notice of Hearing scheduled for March 17, 2025 – **Appendix 8**).

The proponent was provided the Hearing Guidelines.  
(LTC's 2024 Hearing Guidelines attached, see **Appendix 9**).

**FLOODPLAIN  
MAPPING**

In March 2024, the Board of Directors approved the updated regulatory floodplain mapping for the Butler and Arena Creek (see **Appendices 10-11**). The approved mapping was completed by Jewell Engineering Inc., and the analyses for the project were conducted in accordance with the requirements outlined in the Ministry of Natural Resources technical guidelines (MNR Technical Guide – River & Stream Systems: Flooding Hazard Limit (2002)) and Natural Resources Canada Federal Flood Mapping Guidelines Series.

It is important to note that the previous floodplain mapping for Butler Creek was completed in 1987 and there was an approved two-zone floodplain mapping that is associated with the Brighton Official Plan. Prior to the updated floodplain mapping being approved in 2024, there was no previous floodplain mapping for Arena Creek.

**BACKGROUND**

On March 19, 2024, LTC staff were contacted by RFA Planning Consultant Inc., to discuss a proposed development on the subject lands, and regulatory comments and information related to the updated Butler Creek and Arena Creek floodplain mapping was provided to RFA Planning Consultants Inc. were provided by staff.

On September 18, 2024, a pre-consultation meeting was conducted with Jewell Engineering to discuss the property and floodplain mapping. Jewell provided information associated with a potential fill proposal to provide a building envelope on the property for future development of the subject lands. Comments and direction were provided by staff for a future permit application.

On October 15, 2024, a permit application was submitted to LTC staff for review. A notice of review and comments were provided to Jewell Engineering (agent) on October 28, 2024, in relation to a complete application. The permit was deemed incomplete and required the submission of an Erosion and Sediment Control Measures plan, grading plan and topographic plan.

On December 19, 2024, an updated submission was provided with the requested documentation and a revised engineering report. This information was reviewed on January 10, 2025. A phone call meeting was scheduled with Jewell Engineering to discuss the updated submission and go over the file to address any outstanding items including payment for the permit fee. On January 30, 2025, the permit fee for the application was paid, and the permit was deemed complete. As noted above, a letter providing notice regarding staff's inability to approve the permit was issued on February 7, 2025 and possible options were provided for the next steps (see **Appendix 7**).

LTC staff received a request for a hearing before the Hearing Board on February 10, 2025. Following receipt of this request, the hearing was registered, and a Notice of Hearing letter was issued for a hearing on March 17, 2025 (see **Appendix 8**).

**DEVELOPMENT  
WITHIN HAZARD  
LANDS**

The proposed works would involve the placement of fill within hazard lands, specifically the Butler Creek and Arena Creek floodplain. This development activity is considered as a "development activity" pursuant to Ontario Regulation 41/24: Prohibited Activities, Exemptions and Permits made under the *Conservation Authorities Act*. Subsection 28 (1) of *Conservation Authorities Act* states that no person shall undertake development or permit another person to undertake development in or on the areas within the jurisdiction of the Authority that are hazard lands. Pursuant to subsection 28.1 (1), the Authority may grant permission for development in or on the areas that would otherwise be prohibited by

section 28, if, in the opinion of the Authority,

- (a) the activity is not likely to affect the control of flooding, erosion, dynamic beaches or unstable soil or bedrock
- (b) the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property; and
- (c) any other requirements that may be prescribed by the regulations are met.

The applicant has submitted the requested documentation for a complete application and the submission has been deemed complete. As noted previously, this development is proposed to undergo the required site preparation to support future development including the placement of approximately 31,000 m<sup>3</sup> of engineered fill material, excavation of an existing deteriorated berm and construction of a drainage channel to convey the potential Arena Creek spill. Based on a review of the relevant policies that are applicable to this proposal, staff are not in a position to support the application as it does not conform with the policies.

#### STAFF CONCLUSION

Hazard land management was delegated by the Province to LTC through the administration of the *Conservation Authorities Act* and Ontario Regulation 41/24. Through the administration of the Act and Regulation, LTC staff review development proposals in an effort to limit development and protect people and property in flood susceptible areas. Overall, it is the goal of the Regulation Policy document and staff to minimize or prevent the impact of flooding. Deviation from the policies represents a risk that requires careful consideration.

The proposal requires a permit from LTC pursuant to the Conservation Authorities Act and O.Reg. 41/24, and does not conform to LTC's Ontario Regulation 41/24 Regulation Policy Document (see **Appendix 6**). Limiting development proposals such as this is intended to minimize the risk of property damage/loss and investment in an area that is susceptible to natural hazards. As such, staff are not in a position to issue the permit as presented.



**LOWER TRENT  
CONSERVATION**

FOR OFFICE USE ONLY			
FILE #		PERMIT #:	
Watershed:		Fee Received:	
Date Received:		Date Deemed Complete:	
Expiry Date:		Pre-consultation Date:	

714 Murray Street  
Trenton, Ontario  
K8V0N1  
(613) 394-4829  
permits@ltc.on.ca

**APPLICATION  
FOR DEVELOPMENT ACTIVITIES / INTERFERENCE WITH A  
WATERCOURSE / WETLAND  
(CONSERVATION AUTHORITIES ACT, PART VI AND ONTARIO REGULATION 41/24)**

<b>Owner's Name:</b>	LeBlanc Enterprises	<b>Telephone:</b>		<b>Cell:</b>
<b>Address:</b>	Box 216, Cobourg, ON	<b>Postal Code:</b>	K9A 4K5	
		<b>Email</b>	al@leblanchomes.com	
<b>Applicant's Name:</b>	Al LeBlanc	<b>Telephone:</b>		<b>Cell:</b>
<b>Address:</b>		<b>Postal Code:</b>		
	ON	<b>Email</b>	al@leblanchomes.com	
<b>Contractor &amp; Site Contact:</b>		<b>Telephone:</b>		<b>Cell:</b>

**Pre-Consultation: Please indicate if you have conducted any pre-application consultation with a LTC Staff Member.**

<b>NO</b>	<b>YES (check method below)</b>
<input type="checkbox"/>	by phone <input type="checkbox"/> by meeting <input checked="" type="checkbox"/> by email <input checked="" type="checkbox"/> by site visit <input type="checkbox"/> by other method <input type="checkbox"/>

**Location/Address where Development Activity / Interference with a Watercourse or Wetland is proposed (provide Registered Plan and lot number, if known):**

<b>Lot:</b>	1	<b>Concession:</b>	1	<b>Municipality:</b>	Brighton	<b>ARN:</b>	060-181-00
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<b>Description of Proposed Works:</b>	Placement of fill to remove lands from floodplain, excavation of existing deteriorated berm, and drainage channel to convey potential Arena Creek spill.
<b>Type and Approximate Quantity of Fill:</b>	Approximately 10,050 cubic metres of engineered fill material.
<b>Existing Site Conditions or Use:</b>	Vacant Field
<b>Previous Applications to LTC for this Property:</b>	N/A

FOR OFFICE USE ONLY				
Application File Number:	Permit File Number:			
Subwatershed:	Regulated Feature:			
Permit application rec'd:	Application complete:			
Deposit Required:    Ontario Land Surveyor (\$500) <input type="checkbox"/> Yes <input type="checkbox"/> No      Coastal Engineer (\$1,000) <input type="checkbox"/> Yes <input type="checkbox"/> No				
Amendment request rec'd:	Amended application complete:			
<table style="width:100%; border: none;"> <tr> <td style="width: 20%; border: none;">Fee Required:</td> <td style="border: none;"> <input type="checkbox"/> Routine                              <input type="checkbox"/> Minor                              <input type="checkbox"/> Standard                              <input type="checkbox"/> Complex (require review of 1 technical study)                              <input type="checkbox"/> Complex (require review of 2 or more technical studies)                              <input type="checkbox"/> Permit amendment (administrative)                              <input type="checkbox"/> Permit amendment (significant) - 1/2 original application fee                              <input type="checkbox"/> Compliance permit - double the application fee                              <input type="checkbox"/> Restoration agreement - double the application Fee                              <input type="checkbox"/> Deposit                         </td> <td style="width: 10%; border: none; text-align: right; vertical-align: top;">                             \$100                              \$220                              \$550                              \$825                              \$1,100                              \$100                              _____                              _____                              _____                              _____                         </td> </tr> </table>		Fee Required:	<input type="checkbox"/> Routine <input type="checkbox"/> Minor <input type="checkbox"/> Standard <input type="checkbox"/> Complex (require review of 1 technical study) <input type="checkbox"/> Complex (require review of 2 or more technical studies) <input type="checkbox"/> Permit amendment (administrative) <input type="checkbox"/> Permit amendment (significant) - 1/2 original application fee <input type="checkbox"/> Compliance permit - double the application fee <input type="checkbox"/> Restoration agreement - double the application Fee <input type="checkbox"/> Deposit	\$100 \$220 \$550 \$825 \$1,100 \$100 _____ _____ _____ _____
Fee Required:	<input type="checkbox"/> Routine <input type="checkbox"/> Minor <input type="checkbox"/> Standard <input type="checkbox"/> Complex (require review of 1 technical study) <input type="checkbox"/> Complex (require review of 2 or more technical studies) <input type="checkbox"/> Permit amendment (administrative) <input type="checkbox"/> Permit amendment (significant) - 1/2 original application fee <input type="checkbox"/> Compliance permit - double the application fee <input type="checkbox"/> Restoration agreement - double the application Fee <input type="checkbox"/> Deposit	\$100 \$220 \$550 \$825 \$1,100 \$100 _____ _____ _____ _____		
Amount Received: _____      Date Received: _____				
Method of Payment: <input type="checkbox"/> Cheque <input type="checkbox"/> Credit Card <input type="checkbox"/> Cash				
Deposit Returned: _____      Date Returned: _____				
<input type="checkbox"/> <b>Permission for Minor Works:</b> <input type="checkbox"/> Undertake minor landscaping involving the placement, removal or re-grading of material up to 20m <sup>3</sup> (minor fill) <input type="checkbox"/> Minor shoreline protection up to 20m <sup>3</sup> <input type="checkbox"/> Undertake watercourse or shoreline alteration involving less than 20m <sup>2</sup> (minor alteration) <input type="checkbox"/> Construct a non-habitable accessory structure up to 10m <sup>2</sup> <input type="checkbox"/> Construct a habitable addition up to 10m <sup>2</sup> <input type="checkbox"/> Construct a deck up to 23m <sup>2</sup> <input type="checkbox"/> Install a pool up to 10m <sup>2</sup>	<input type="checkbox"/> <b>Permission for Standard or Complex Permit:</b> <input type="checkbox"/> Construct, reconstruct, erect or place a building or structure (greater than 10m <sup>2</sup> ) <input type="checkbox"/> Change building/structure so that it increases its size by 10m <sup>2</sup> or more, or increases the number of dwelling units <input type="checkbox"/> Temporary or permanent placing, dumping or removal of any material originating on the site or elsewhere greater than 20m <sup>3</sup> <input type="checkbox"/> Change or interfere with a wetland <input type="checkbox"/> Change or interfere with a watercourse <input type="checkbox"/> Shoreline protection work <input type="checkbox"/> Construct a deck greater than 23m <sup>2</sup> <input type="checkbox"/> Install a pool greater than 10m <sup>2</sup>			
<table style="width:100%; border: none;"> <tr> <td style="width: 50%; border: none; vertical-align: top;"> <b>Permit Approval:</b>  <div style="border: 2px solid black; border-radius: 15px; height: 80px; margin-top: 5px;"></div> </td> <td style="width: 50%; border: none; vertical-align: top;"> <b>Amendment:</b>  <div style="border: 2px solid black; border-radius: 15px; height: 80px; margin-top: 5px;"></div> </td> </tr> </table>		<b>Permit Approval:</b> <div style="border: 2px solid black; border-radius: 15px; height: 80px; margin-top: 5px;"></div>	<b>Amendment:</b> <div style="border: 2px solid black; border-radius: 15px; height: 80px; margin-top: 5px;"></div>	
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Are there any violations on this Property under Ontario Regulation 163/06 or 41/24?	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes (provide details)	<input type="checkbox"/> Unknown
Are Planning Act approvals in place? (e.g. Zoning, Minor Variance, Site Plan, etc.)	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes (provide details and attach confirmation documents)	<input type="checkbox"/> Unknown
Has this project been through an Environmental Assessment review?	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes (provide details)	<input type="checkbox"/> Unknown
Are there any other required approvals? (e.g. MNRF, Fisheries and Oceans Canada, Health Unit)	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes (provide details)	<input type="checkbox"/> Unknown
Dates when work is to be carried out:	Proposed commencement of work:	2024-12-01	Proposed completion of work:
			2025-06-30

Application is hereby made, to (check appropriate boxes):

<input checked="" type="checkbox"/> Site Grading, Place, Dump or Remove Fill	<input checked="" type="checkbox"/> Place, Dump or Remove Fill in Flood Plain	<input type="checkbox"/> Interference with Wetland
<input type="checkbox"/> Alter, Add to, Reconstruct, Renovate Building	<input type="checkbox"/> Development within Hazardous Land	<input type="checkbox"/> Alteration to Shorelines
<input type="checkbox"/> Demolish, Erect, Place, Construct a New Building/Structure	<input type="checkbox"/> Alter an Existing Watercourse	<input checked="" type="checkbox"/> Large Fill Site

I, <u>Al LeBlanc</u>	declare that the above information is correct to the best of my knowledge, and I agree to abide by the provisions of the <i>Conservation Authorities Act</i> and <i>Ontario Regulation 41/24</i> . By signing this application, I agree to allow Lower Trent Region Conservation Authority (LTC) staff to enter onto the subject property as part of the review process. I also acknowledge and agree to abide by conditions of any permit issued pursuant to this application. Further, any permit issued pursuant to this application may be cancelled if it is issued on the basis of false, inaccurate or misleading information. The personal information on this form is collected under the authority of the <i>Conservation Authorities Act</i> , R.S.O. 1990, c 27, as amended. The personal information will be used for the purposes of administering Parts VI and VII of the <i>Conservation Authorities Act</i> and <i>Ontario Regulation 41/24</i> . Specifically, the information will be used to:
	<ul style="list-style-type: none"> <li>• Evaluate the development proposal</li> <li>• Liaise with other regulatory agencies having jurisdiction</li> <li>• Make a decision on the application or report to the LTC Board of Directors for a decision</li> </ul>
	I understand that this information is part of the public record and is available to the general public.
Date: <u>Oct. 9, 2024</u>	Signature:
	<input checked="" type="checkbox"/> Owner <input checked="" type="checkbox"/> Authorized Applicant Agent

**LANDOWNER AUTHORIZATION**

<b>Subject Property</b>	<b>Lot:</b>		<b>Concession:</b>	
	<b>Street Address:</b>			
	<b>Municipality:</b>			

If this application is to be submitted by a solicitor or agent on behalf of the owner(s), this Landowner Authorization must be completed and signed by the owner(s). If the owner is a corporation acting without agent or solicitor, the application must be signed by an officer of the corporation and the corporation's seal (if any) must be affixed.

**NOTE TO THE OWNER(S):**

If the application is to be prepared by a solicitor or agent, authorization should not be given until the application and its attachments have been examined and approved by you, the owner(s).

I/WE  HEREBY AUTHORIZE  TO PROVIDE AS MY AGENT ANY REQUIRED AUTHORIZATIONS, TO SUBMIT THE ENCLOSED APPLICATION TO THE LOWER TRENT REGION CONSERVATION AUTHORITY, AND TO APPEAR ON MY BEHALF AT ANY HEARING(S) OF THE APPLICATION AND TO PROVIDE ANY INFORMATION OR MATERIAL REQUIRED BY THE BOARD RELEVANT TO THE APPLICATION FOR PURPOSES OF OBTAINING A PERMIT FOR DEVELOPMENT ACTIVITY/INTERFERE WITH A WATERCOURSE/WETLAND, IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONSERVATION AUTHORITIES ACT AND ONTARIO REGULATION 41/24.

**SIGNATURE OF OWNER**

**DATE**

**COMPLETE APPLICATION REQUIREMENTS** (pursuant to subsection 7(1) of Ontario Regulation 41/24)

*Following the required pre-submission consultation process with LTC staff, in order for the application to be deemed complete, the application must be completely filled out, the required fee must be submitted and all technical information requirements must be submitted. The owner/applicant must contact LTC prior to making an application so that detailed information requirements can be determined. This application must be accompanied by detailed plans for the proposed works and the LTC-determined fee. The detailed plans must include the following, where applicable:*

- A **Plan of the Area** showing the **Type** and **Location** of the *Development Activity*
- A **Plan of the Area** showing **Plan View** and **Cross-Section Details** of an *Activity to Straighten, Change, Divert or Interfere with the Existing Channel of a Watercourse or Change or Interfere with a Wetland*
- A **Description** of the **Proposed Use of Any Buildings and Structures** following completion of the *Development Activity*
- A **Statement of Purpose** of an *Activity to Straighten, Change, Divert or Interfere with the Existing Channel of a Watercourse or Change or Interfere with a Wetland*
- The **Start and Completion Dates** of the *Development Activity or Activity to Straighten, Change, Divert or Interfere with the Existing Channel of a Watercourse or Change or Interfere with a Wetland*
- A **Description of the Methods to be Used** in carrying out an *Activity to Straighten, Change, Divert or Interfere with the Existing Channel of a Watercourse or Change or Interfere with a Wetland*
- The **Elevations of Existing Buildings**, if any, and **Existing-Grades and Proposed Elevations of Any Buildings** and **Post-Activity Grades** after the *Development Activity or Activity to Straighten, Change, Divert or Interfere with the Existing Channel of a Watercourse or Change or Interfere with a Wetland*
- Pre- and Post-Drainage Details** for the *Development Activity or Activity to Straighten, Change, Divert or Interfere with the Existing Channel of a Watercourse or Change or Interfere with a Wetland*
- A **Complete Description of Any Type of Fill** proposed to be placed or dumped
- A **Confirmation of Authorization** (see previous section) for the proposed activity given by the Owner if the applicant is not the Owner
- Any **Other Technical Information, Studies or Plans** (see below)

**Drawings/Plans:**

- Legal Survey showing the property boundary(ies) and the parcel(s) within the work(s) are to take place
- Geodetic elevations of the lowest opening(s) in any new building or additions to buildings
- Structural Elevations and Construction Details
- Erosion and Sediment Control Plans
- Grading Plans
- Landscaping/Site Rehabilitation Plan
- Topsoil Stripping Details
- Wetlands/Hydrologic Features Plan

**Reports/Studies (including corresponding Plans):**

- Functional Servicing Report
- Geotechnical/Slope Stability Study
- Coastal Hazards Assessment/Coastal Engineering Report
- Hydrogeological Assessment
- Karst Evaluation Phase 1
- Karst Evaluation Phase 2
- Hydrologic Features Assessment (Headwater Feature/Watercourse Evaluation)
- Hydraulic Assessment/Flood Line Mapping Study
- Hydrostatic Pressure Engineering Assessment Report
- Scoped or Full Environmental Impact and Enhancement Study
- Stormwater Management Study/Facility Design Report
- Fluvial Geomorphological Assessment/Watercourse Erosion Assessment
- Channel Crossing Assessment

- Water Balance Analysis
- Soil Quality Report
- Other reports/studies/plans identified** through pre-submission consultation process

Please note that an incomplete application will delay the processing of an application.

**NOTICE OF DISCLOSURE OF APPLICATION INFORMATION**

This application and supporting documents and any other documentation received relating to this application, may be released, in whole or in part, to other persons in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*, R.S.O. 1990 c. M.56, as amended.

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Refer to Part VI of the *Conservation Authorities Act* and *Ontario Regulation 41/24* for complete statutory requirements:

[ontario.ca/laws/statute/90c27#BK48](http://ontario.ca/laws/statute/90c27#BK48)

[ontario.ca/laws/regulation/240041](http://ontario.ca/laws/regulation/240041)

11/11/2024

F:\IT\PROJECT FILES\IRFA PLANNING\LEBLANC ENTERPRISES - FLOOD MITIGATION\03. RECEIVED\BUTLER CREEK - PROPOSED FILL ELEVATIONS



**GENERAL NOTES:**

- ALL INFORMATION TO BE VERIFIED ON SITE PRIOR TO COMMENCING ANY WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT IMMEDIATELY.
- ALL UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL CONFIRM THE LOCATION ON SITE AND ASSUME ALL LIABILITY FOR DAMAGE TO ALL UTILITIES.
- EXCLUDING THE BENCHMARK AND DESCRIPTION PROVIDED FOR THIS PROJECT, NO OTHER ELEVATIONS ARE TO BE USED AS A REFERENCE ELEVATION FOR ANY PURPOSE.

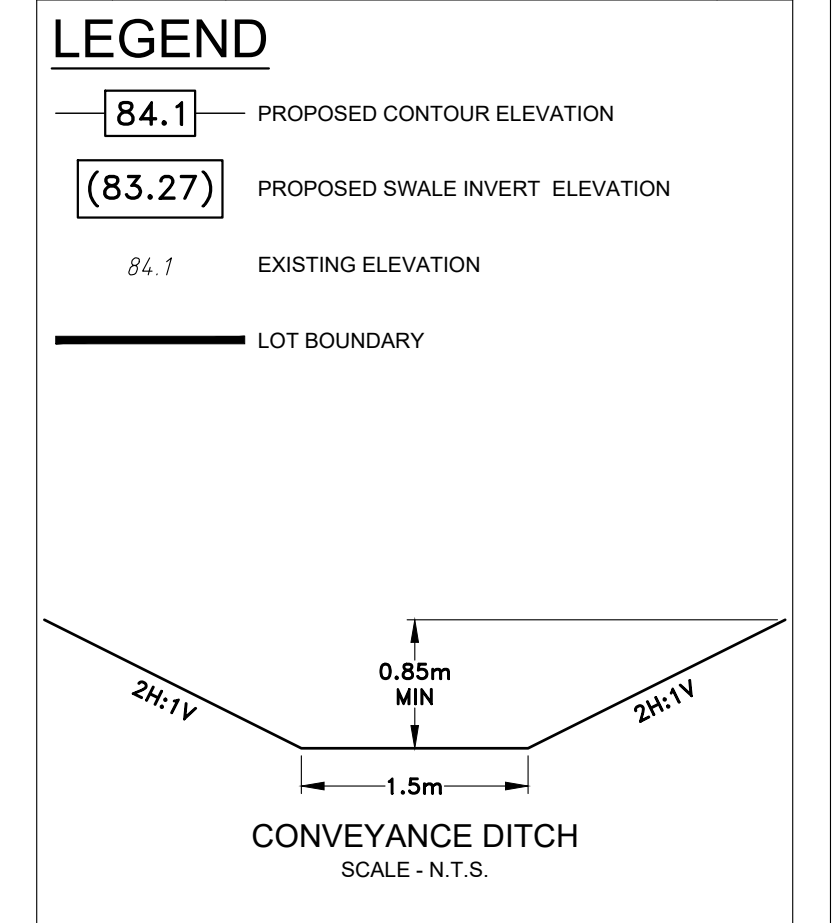
**METRIC NOTE:**

- ALL DIMENSIONS SHOWN ARE IN METRES OR MILLIMETRES, UNLESS OTHERWISE NOTED.

**GEOMETRIC NOTE:**

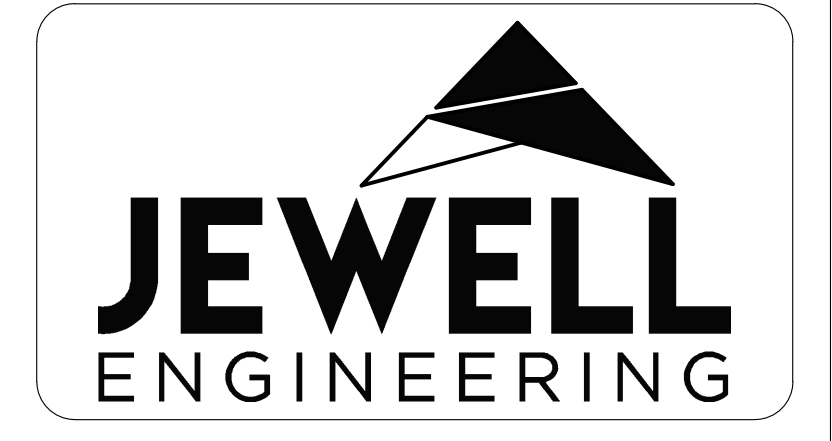
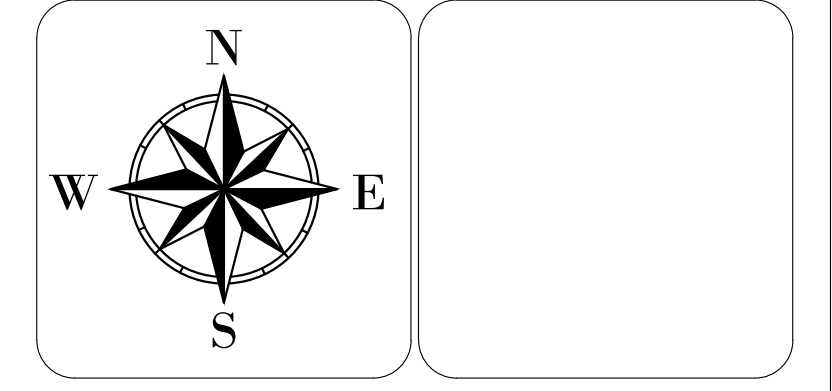
- ALL SURVEY DATA SHOWN ON THIS DRAWING WAS RECORDED USING REAL-TIME KINEMATIC (RTK) GPS OBSERVATIONS IN REFERENCE TO UTM 18 NORTH COORDINATE SYSTEM.
- ALL ELEVATIONS ARE IN REFERENCE TO LOCAL DATUM NADS 3 - GEODETIC MODEL HTF.2 UNLESS DESCRIBED OTHERWISE.
- \*\* DRAWINGS ARE NOT TO BE SCALED \*\*

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	12/11/2024	FOR LTC PERMIT APPLICATION	JH



**NOTE:**  
THIS PLAN WAS PREPARED FOR THE SOLE PURPOSE OF THE CONSERVATION AUTHORITY PERMIT APPLICATION. JEWELL MAY PROVIDE A 'ISSUED FOR CONSTRUCTION' DRAWING UPON REQUEST FROM THE OWNER AND/OR CONTRACTOR PRIOR TO THE WORKS TO ENSURE AN AGREED UPON BENCHMARK AND LOCAL DATUM ARE UTILIZED.

**DATUM NOTE:**  
ELEVATIONS PROVIDED ARE IN VERTICAL DATUM CGVD2013



LEBLANC ENTERPRISES  
FLOOD MITIGATION  
MUNICIPALITY OF BRIGHTON

PROPOSED FILL PLAN

DRAWN BY: JH	PROJECT NO:
DESIGNED BY:	DATE: December 2024
CHECKED BY: EF	SCALE: HORIZONTAL - 1:600 VERTICAL - N/A
APPROVED BY:	CONTRACT NO:      DRAWING NO: 1

12/12/2024

F:\IT\PROJECT FILES\IRFA PLANNING\LEBLANC ENTERPRISES - FLOOD MITIGATION\03\_RECEIVED\BUTLER CREEK - SEDIMENT AND EROSION



### EROSION AND SEDIMENT CONTROL NOTES

1. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES TO PROVIDE THE PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE DURING CONSTRUCTION ACTIVITIES. THIS INCLUDES LIMITING THE AMOUNT OF EXPOSED SOIL AND INSTALLING SILT FENCES AND OTHER SEDIMENT TRAPS.
2. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING EROSION AND SEDIMENT CONTROL MEASURES ARE INSTALLED CORRECTLY.
3. HEAVY DUTY SILT FENCE BARRIER, USE OPSD 219.130.
4. FOR STRAW BALE FLOW CHECK DAM, USE OPSD 219.180.
5. FOR FIBER ROLL FLOW CHECK DAM, USE OPSD 219.191 AND 219.120.
6. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO DEVELOPMENT.
7. ALL APPROVED SEDIMENT AND EROSION CONTROL MEASURES ARE TO BE MONITORED REGULARLY AND MAINTAINED AS NECESSARY TO ENSURE GOOD WORKING ORDER, AND REMAIN IN PLACE UNTIL LANDSCAPING HAS BEEN ESTABLISHED.
8. IN THE EVENT THAT THE CONTROL MEASURES ARE DEEMED NOT TO BE PERFORMING ADEQUATELY, THE CONTRACTOR SHALL UNDERTAKE ADDITIONAL MEASURES AS APPROPRIATE TO THE SITUATION TO THE SATISFACTION OF THE OCA, PROJECT MANAGER AND/OR MUNICIPAL STAFF.
9. ANY DISTURBED AREA NOT SCHEDULED FOR FURTHER CONSTRUCTION WITHIN FORTY FIVE (45) DAYS WILL BE PROVIDED WITH A SUITABLE TEMPORARY MULCH AND SEED COVER WITHIN SEVEN (7) DAYS OF THE COMPLETION OF THAT PARTICULAR PHASE OF CONSTRUCTION.
10. ALL DISTURBED AREAS THAT WILL NOT BE FURTHER DISTURBED SHALL BE REVEGETATED WITH PERMANENT COVER IMMEDIATELY FOLLOWING COMPLETION OF CONSTRUCTION.
11. A MUD MAT IS TO BE INSTALLED PRIOR TO SITE WORKS AND MAINTAINED DURING CONSTRUCTION. IT MUST BE A MINIMUM OF 15m IN LENGTH AND MINIMUM 7m WIDE. THE PAD SHOULD BE A MINIMUM OF 400mm THICK. THE PAD SHOULD BE UNDERLAIN WITH A GEOTEXTILE (OR GRADED AGGREGATE FILTER) AND CONSIST OF 200mm DIAMETER ROUNDED STONE. REMOVE AT COMPLETION OF GRANULAR 'A' PLACEMENT.
12. EXISTING ROADWAYS ARE TO BE SWEEPED AND CLEANED FREQUENTLY TO PREVENT THE TRACKING OF MUD AND DEBRIS FROM SITE.
13. NO REFUELING OR CLEANING OF EQUIPMENT NEAR ANY EXISTING WATERWAYS.

**GENERAL NOTES:**

- ALL INFORMATION TO BE VERIFIED ON SITE PRIOR TO COMMENCING ANY WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT IMMEDIATELY.
- ALL UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL CONFIRM THE LOCATION ON SITE AND ASSUME ALL LIABILITY FOR DAMAGE TO ALL UTILITIES.
- EXCLUDING THE BENCHMARK AND DESCRIPTION PROVIDED FOR THIS PROJECT, NO OTHER ELEVATIONS ARE TO BE USED AS A REFERENCE ELEVATION FOR ANY PURPOSE.

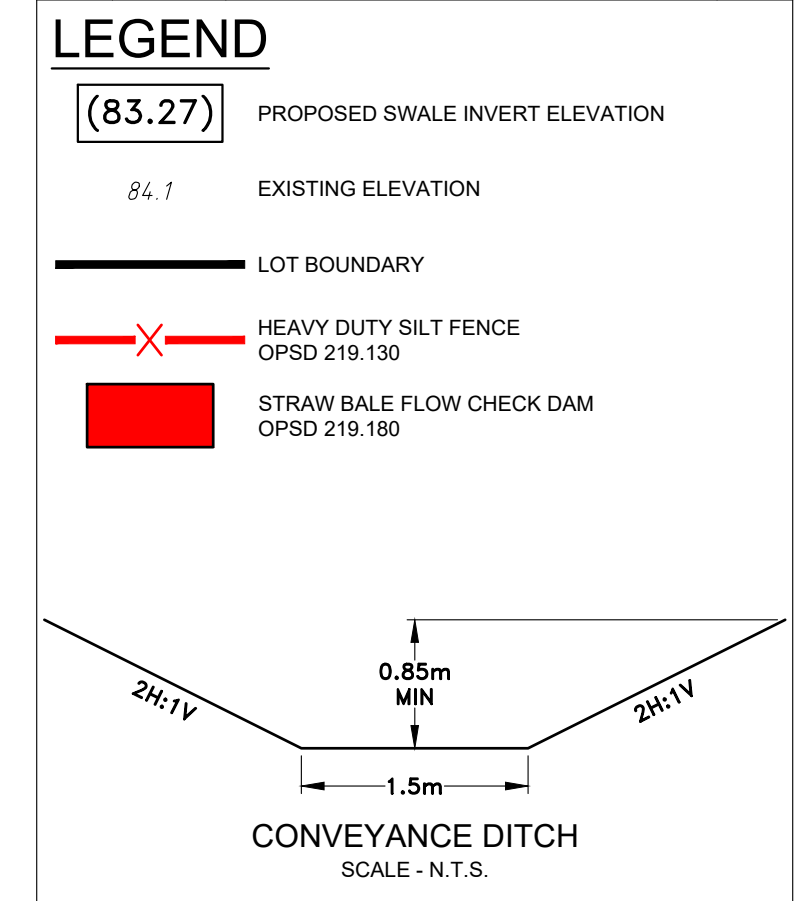
**METRIC NOTE:**

- ALL DIMENSIONS SHOWN ARE IN METRES OR MILLIMETRES, UNLESS OTHERWISE NOTED.

**GEOMETRIC NOTE:**

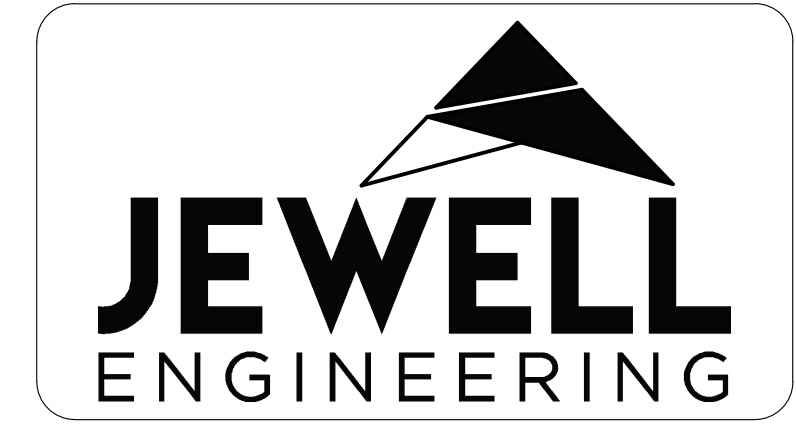
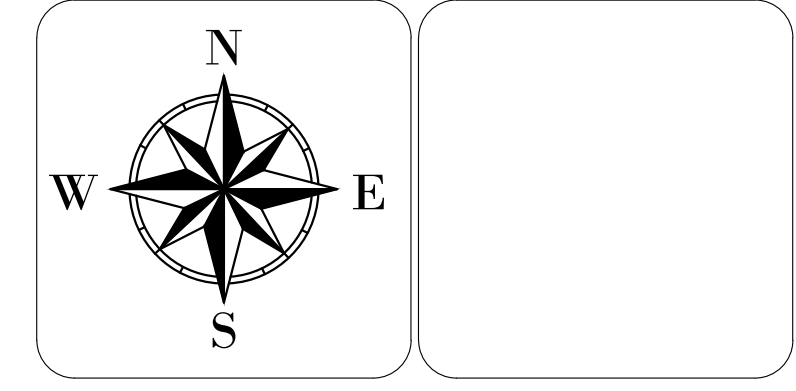
- ALL SURVEY DATA SHOWN ON THIS DRAWING WAS RECORDED USING REAL-TIME KINETIC (RTK) GPS OBSERVATIONS IN REFERENCE TO UTM 18 NORTH COORDINATE SYSTEM.
- ALL ELEVATIONS ARE IN REFERENCE TO LOCAL DATUM NADS 3 - GEODETIC MODEL HTF.2 UNLESS OTHERWISE NOTED.
- \*\* DRAWINGS ARE NOT TO BE SCALED \*\*

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	12/11/2024	FOR LTC PERMIT APPLICATION	JH



**NOTE:**  
THIS PLAN WAS PREPARED FOR THE SOLE PURPOSE OF THE CONSERVATION AUTHORITY PERMIT APPLICATION. JEWELL MAY PROVIDE A 'ISSUED FOR CONSTRUCTION' DRAWING UPON REQUEST FROM THE OWNER AND/OR CONTRACTOR PRIOR TO THE WORKS TO ENSURE AN AGREED UPON BENCHMARK AND LOCAL DATUM ARE UTILIZED.

**DATUM NOTE:**  
ELEVATIONS PROVIDED ARE IN VERTICAL DATUM CGVD2013



LEBLANC ENTERPRISES  
FLOOD MITIGATION  
MUNICIPALITY OF BRIGHTON

SEDIMENT AND EROSION PLAN

DRAWN BY: JH PROJECT NO:  
DESIGNED BY: DATE: December 2024  
CHECKED BY: EF SCALE: HORIZONTAL - 1:600 VERTICAL - N/A  
APPROVED BY: CONTRACT NO: DRAWING NO: 2

**Flood Mitigation Report**

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**Cedar Street Subdivision – Butler Creek North**

**For**

**Leblanc Enterprises**

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**December 19, 2024**



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Belleville, ON, K8N 4Z5

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## Table of Contents

1	Objective .....	1
2	Background / Permitting Process.....	1
3	Existing Flood Hazard Characteristics .....	5
4	Proposed Flood Mitigation .....	10
5	Conclusions & Recommendations .....	18
6	References .....	19
	Appendix A-1: Meeting Notes from November 12, 2024.....	20
	Appendix A-2: Revision Summary .....	21
	Appendix B: Fill Placement (Grading) Plan .....	22
	Appendix C: Sediment and Erosion Control Plan .....	23
	Appendix D: Mannings Open Channel Flow Calculation for Propose Drainage Channel.....	24

## Table of Tables

TABLE 4-1: COMPARISON OF STATED OBJECTIVES FROM SECTION 1 TO FINDINGS OF FLOOD MITIGATION PLAN .....	15
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## Table of Figures

FIGURE 1-1: SITE LOCATION AND EXISTING 100-YR / TIMMINS FLOOD HAZARD LIMITS.....	2
FIGURE 2-1: EXCERPT OF SECTION 28.1 (1) (A) OF THE CONSERVATION AUTHORITIES ACT.....	4
FIGURE 3-1: COMPARISON OF 2024 (RED) AND HISTORICAL (GREEN) TIMMINS REGULATORY FLOOD LIMITS NEAR CEDAR STREET .....	5
FIGURE 3-2: COMPARISON OF 2024 (RED) AND HISTORICAL (GREEN) 100-YR FLOOD LIMITS NEAR CEDAR STREET .....	6
FIGURE 3-3: EXISTING FLOOD BERM UPSTREAM OF CEDAR STREET AND NORTH OF BUTLER CREEK .....	7
FIGURE 3-4: SPILL AT EXISTING FLOOD BERM IN 100-YR UPSTREAM OF CEDAR STREET; 100-YR WSEL OVERLAY (EXCERPT OF FIGURE 5-28 FROM 2024 BUTLER CREEK REPORT) .....	8
FIGURE 3-5: FLOODWATER CHARACTERISTICS UPSTREAM OF CEDAR STREET WITH SPILL OVER EXISTING FLOOD BERM.....	8
FIGURE 3-6: 100-YR WATER SURFACE ELEVATION ABOVE LOW POINT IN BERM UPSTREAM OF CEDAR ST; MAX. 100-YR FLOW DEPTH OVER BERM = 0.5M (EXCERPT OF FIGURE 5-30 FROM 2024 BUTLER CREEK REPORT) .....	9
FIGURE 4-1: EXISTING VS. PROPOSED REGULATORY FLOOD LIMITS WITH PROPOSED MITIGATION (FILL + BERM EXCAVATION) .....	12
FIGURE 4-2: ARENA CREEK SPILL DRAINAGE CHANNEL ALONG PERIMETER OF PROPOSED DRY-FLOODPROOFED LANDS ...	13
FIGURE 4-3: PROPOSED FILL ELEVATIONS FOR SUBJECT PERMIT APPLICATION TO REMOVE LANDS FROM REGULATORY FLOODPLAIN .....	14
FIGURE 4-4: SUMMARY OF PROPOSED CHANNEL DIMENSIONS WITH 1.5M BOTTOM WIDTH, 0.5% SLOPE, AND 2:1 SIDE SLOPES .....	15



## 1 Objective

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Jewell Engineering Inc. (JE) has prepared this *Flood Mitigation Report* to support an engineered mitigation alternative for the development lands north of Butler Creek and west of Cedar Street as shown in **Figure 1-1**.

This report is prepared as a revision to the original *Flood Mitigation Report* following feedback received from Lower Trent Region Conservation Authority (LTC) and their review engineer. This feedback was received via email and in a Teams meeting on November 12, 2024. A summary of the meeting notes is provided in **Appendix A-1**.

A summary of revisions in this report is provided in **Appendix A-2**.

In addition to the engineer peer review, LTC required a fill placement (i.e. grading) plan and a sediment and erosion control plan. These are provided in **Appendix B and C**, respectively.

For Jewell to support a permit application for floodproofing of the subject lands, the following objectives must be met:

1. There must be no negative impacts to adjacent property owners.
2. The mitigation measures should provide a net benefit to the community. This can be done accomplished by achieving a mitigation plan that results in:
  - a. Reduced flood risk on off-site lands.
  - b. Floodproofing of the subject lands per Conservation Authority guidelines.
  - c. More homes to be built within an area already designated for residential land use.
  - d. Increased land use efficiency that benefits the environment by reducing the need for urban sprawl.

## 2 Background / Permitting Process

---

A concept plan for the 4.48 ha site was previously created by RFA Planning Consultant Inc. (RFA) based on the historical floodplain mapping. It is anticipated that future development would include condominium and apartment buildings in addition to a commercial block.

The *2024 Butler Creek Floodplain Mapping Update* was recently published and is more restrictive than the previous mapping at the subject property. The current flood hazard limits were shown in **Figure 1-1**. Evidently, the existing flood hazard presents a constraint.

The Butler Creek flood hazard is regulated by Lower Trent Region Conservation Authority (LTC) and a permit would be required prior to taking action on mitigation solutions.

LTC staff would make a decision on the permit application based on the direction provided in their Policy Document. The wording in the Policy Document may occasionally restrict staff from issuing a permit for an application that has sound engineering solutions. In these instances, staff may deny the permit while simultaneously having no concern with the application itself; the purpose of denying the application is to defer the decision to the LTC board, who have a so-called longer leash in terms of making regulatory decisions.

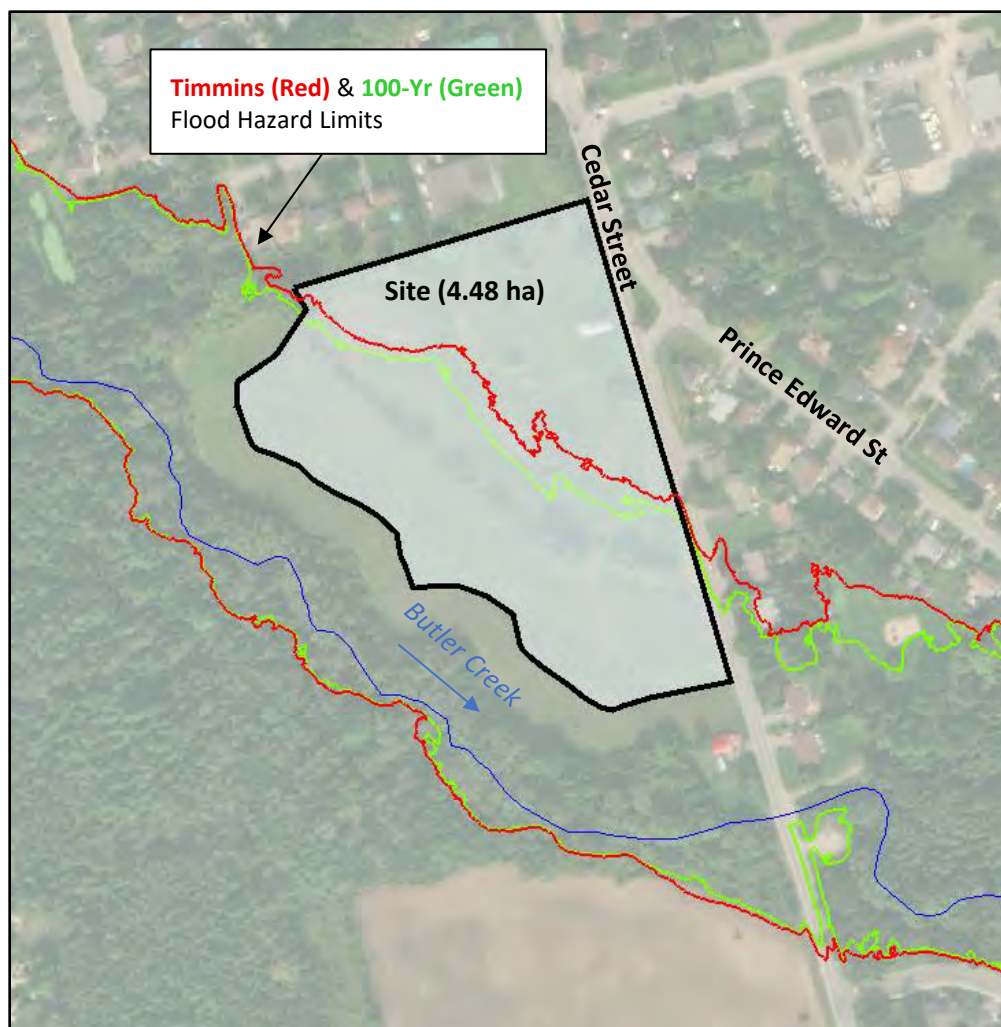


Figure 2-1: Site Location and Existing 100-Yr / Timmins Flood Hazard Limits

The LTC board have greater discretion on application decisions since they are governed by the **Regulations**. The Regulations are law, and override the Policy Document. The Regulations tend to be more permissible in their wording, thereby allowing decisions to be made based on engineering analysis and judgement.

Jewell participated in an informal meeting with LTC staff on September 18, 2024. A 2<sup>nd</sup> meeting occurred with the LTC review team on November 12, 2024 due to the expiration of the previous LTC reviewer's contract. At the November 12<sup>th</sup> meeting, the reviewers requested additional information based on their preliminary review. This requested information is provided in **Appendix B**.

The objective of both meetings was for Jewell to present the findings of our analysis and reasoning for supporting the permit application that corresponds to this *Flood Mitigation Report*. Both meetings had good dialogue and this report is submitted to further detail our recommendations.

While LTC staff may or may not have concerns with the information presented herein, we anticipate staff will be obligated to deny the application based on the 2024 LTC *Policy Document*.

In the likely event of an LTC board hearing, the board members will be able to make a decision based on *Ontario Regulation (O. Reg.) 41/24* and the *Conservation Authorities Act, R.S.O 1990, c. C.27*.

More specifically, *Section 28.1 (1) (a)* of the *Conservation Authorities Act* provides the information needed for a board hearing decision to be made. An excerpt of this section is provided in **Figure 2-1**.

Our interpretation of this section, in terms of this application, is that the LTC Board may issue a permit that would otherwise be prohibited if the LTC Board is convinced the subject application will not negatively affect the control of flooding for Butler Creek.

Jewell has established the objectives in Section 1 so that if the objectives are met, then we can recommend approval to the LTC Board on the basis of:

*The control of flooding for Butler Creek would be maintained or improved with the mitigation measures proposed in Section 4 of this report.*

**Permits**

**28.1 (1)** An authority may issue a permit to a person to engage in an activity specified in the permit that would otherwise be prohibited by section 28, if, in the opinion of the authority,

- (a) the activity is not likely to affect the control of flooding, erosion, dynamic beaches or unstable soil or bedrock;
- (b) the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property; and
- (c) any other requirements that may be prescribed by the regulations are met. 2017, c. 23, Sched. 4, s. 25; 2022, c. 21, Sched. 2, s. 9 (1).

Figure 2-2: Excerpt of *Section 28.1 (1) (a)* of the *Conservation Authorities Act*

### 3 Existing Flood Hazard Characteristics

Figures 3-1 and 3-2 provide a comparison of historical flood limits to the 2024 Butler Creek (existing condition) flood limits. The 2024 Butler Creek floodplain limits were officially adopted by LTC in June of this year. The proposed flood limits will be presented in Section 4 of this report.

**Note:** The historical flood limits have no impact on the flood mitigation measures described in this report. We show the historical limits to provide context as it relates to the existing 2024 flood hazard.

The figures below show that while the flood limits are similar upstream of Cedar Street in the Timmins event, there is a noticeable difference between historical and current flood limits for the 100-yr storm.

Figure 3-3 shows an existing flood berm and drainage channel upstream of Cedar Street and north of Butler Creek. The historic flood limits suggest the previous modelers expected the berm to fully block the flows in the 100-yr flood. A review of the LiDAR data identifies a low point in the berm at elevation 84.28m (datum CGVD 2013). This low point allows for 1.2 m<sup>3</sup>/s of flow in the 100-yr event to breach the berm (see Figure 3-4) and drain towards an existing drainage ditch and overbank area north of Butler Creek, ultimately contributing to the wider floodplain extents in this area in the 100-yr flood (see Figure 3-5).

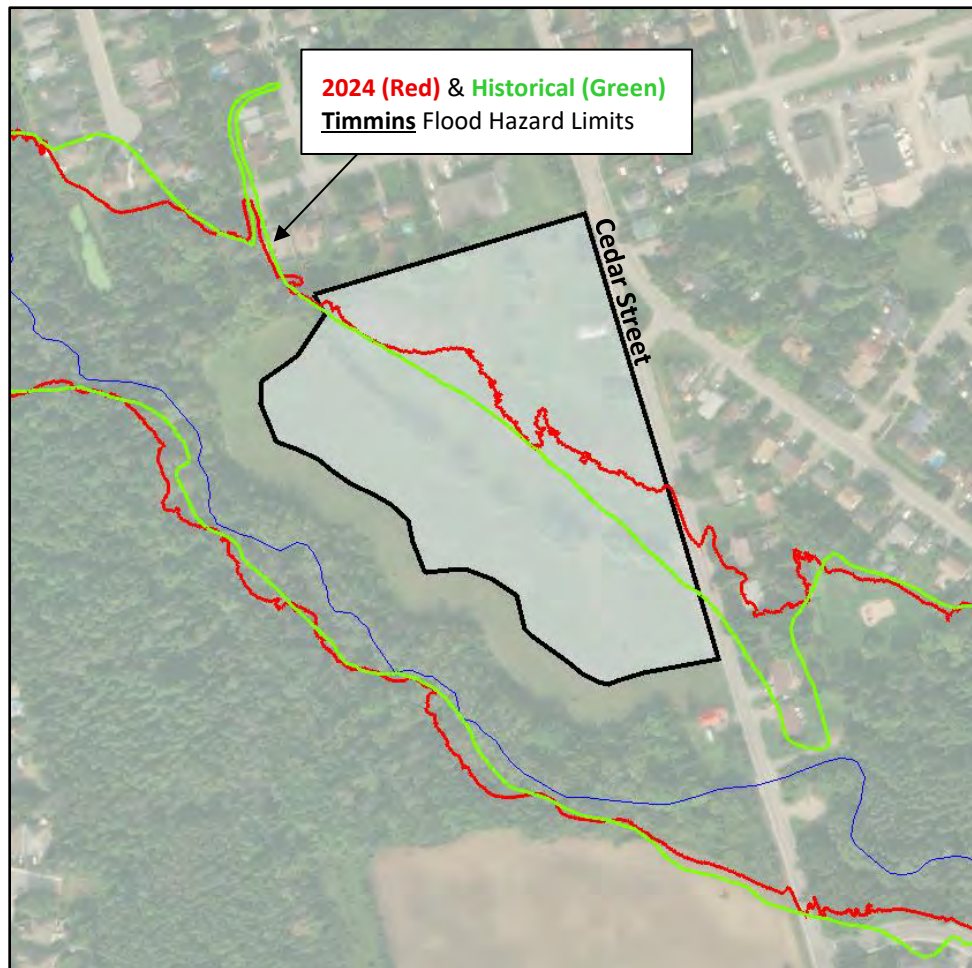


Figure 3-1: Comparison of 2024 (Red) and Historical (Green) Timmins Regulatory Flood Limits near Cedar Street

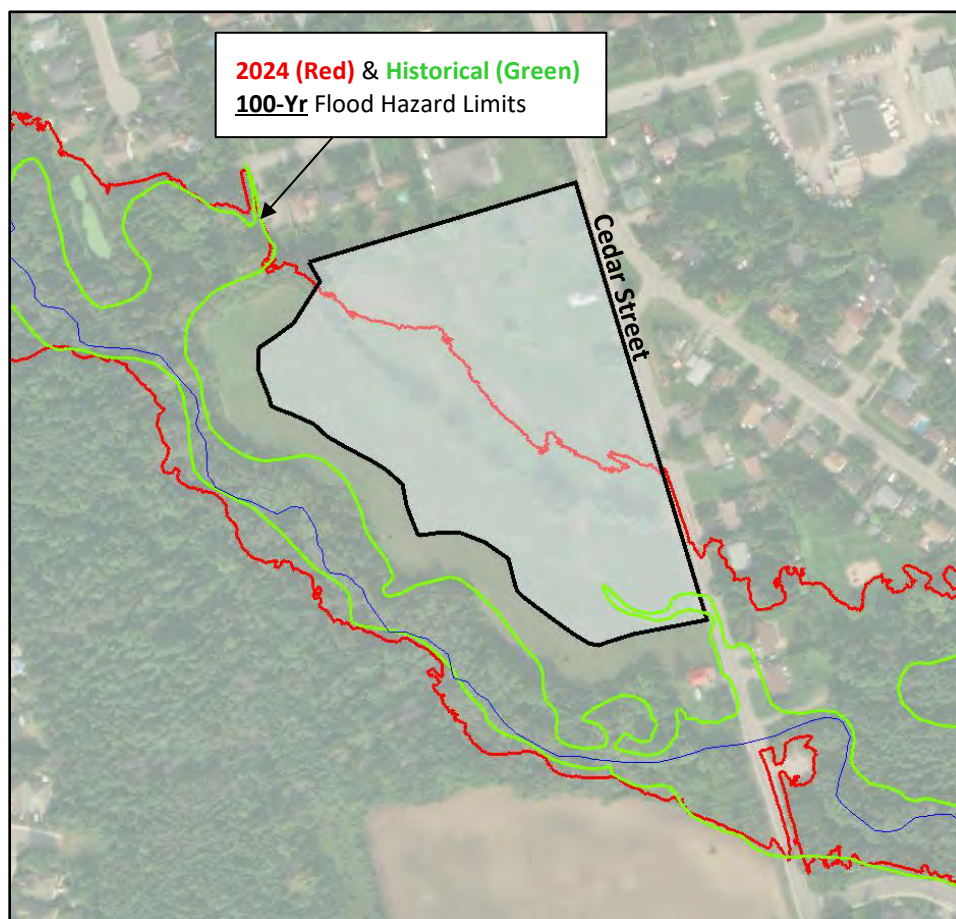


Figure 3-2: Comparison of 2024 (Red) and Historical (Green) 100-Yr Flood Limits near Cedar Street

**Figure 3-6** shows a profile of the top of berm in the vicinity of its low point. This low point is 0.47m lower than the higher portions of the berm that are not breached in the 100-yr storm event. Given that the historical mapping was completed nearly 40 years ago, it is possible that the berm has deteriorated over time or that its original elevations have not been maintained. As **Section 4** will discuss, it is recommended that this berm be excavated to avoid the pinch point it creates that leads to higher localized flood elevations in major storms.

The 2024 Butler Creek floodplain update shows that the relief flow over Cedar Street exceeds 0.3m in the regulatory storm event. This is in part due to the wide flood extents encouraged by the breach of the existing flood berm. **Figure 3-5** shows that after water reaches the subject lands, much of this flood water does not have opportunity to drain back to the main channel prior to overtopping Cedar Street.

The result is that the flood waters are not flowing in the same direction as the creek alignment when overtopping the north side of the Cedar Street crossing. In fact, the water levels on the north end of the Cedar Street crossing are higher than on the south side of the road crossing. A product of this flood characteristic is that there are three (3) dwellings on the downstream (east) side of Cedar Street that are within the regulatory floodplain. As will be shown in **Section 4**, the proposed mitigation measures lower the water level and yield a net reduction to the risk to life and property in this location.

*Cedar Street Subdivision – Butler Creek North  
Flood Mitigation Report*

In addition to the Butler Creek floodplain, there is a spill from Arena Creek that requires consideration. The figure on Page 101 of the *Butler & Arena Creek Floodplain Mapping Update* shows a maximum spill of 3.29 m<sup>3</sup>/s in the Timmins storm that overtops Cedar Street and drains towards Butler Creek.

A portion of this spill would drain towards the drainage channel that outlets to Butler Creek near the west limit of Grimes Street. However, the overland spill route, if culverts were blocked, could end up draining towards the north limit of the subject development lands. As discussed in the meeting between LTC and Jewell, it was agreed that this potential spill should be accounted for in the mitigation plan. An allowance to receive and convey the Arena Creek spill would also be used for the minor amount of rear-yard drainage from the residential lots immediately north of the site. The proposed conveyance measures are discussed in **Section 4**.

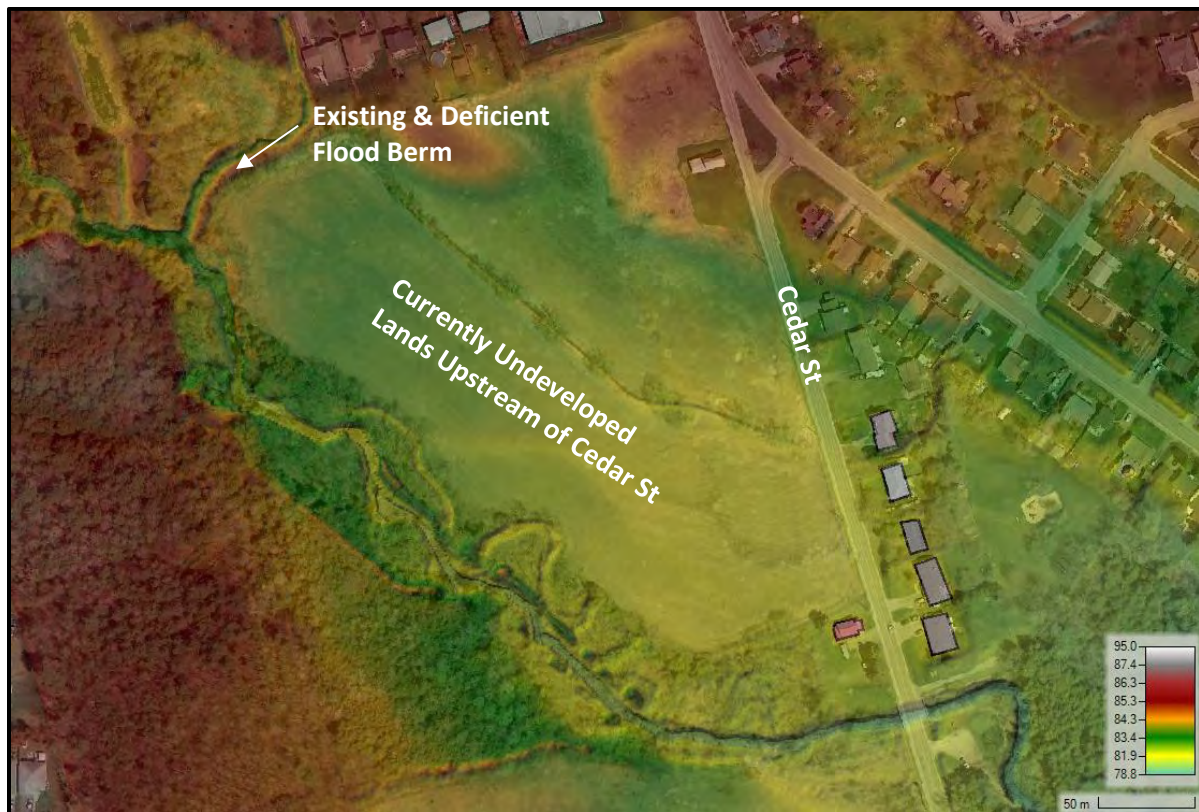


Figure 3-3: Existing Flood Berm Upstream of Cedar Street and North of Butler Creek

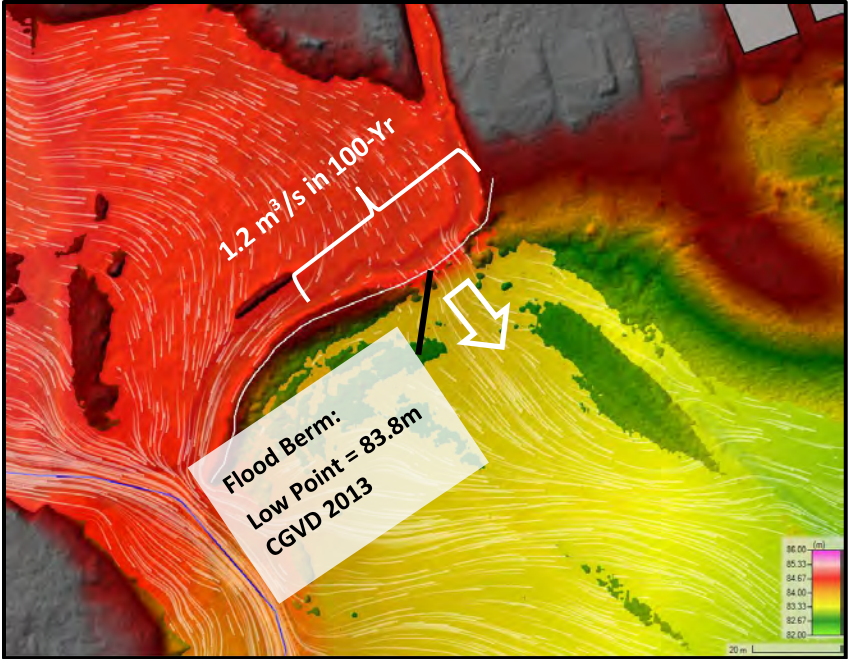


Figure 3-4: Spill at Existing Flood Berm in 100-Yr Upstream of Cedar Street; 100-Yr WSEL Overlay (Excerpt of Figure 5-28 from 2024 Butler Creek Report)

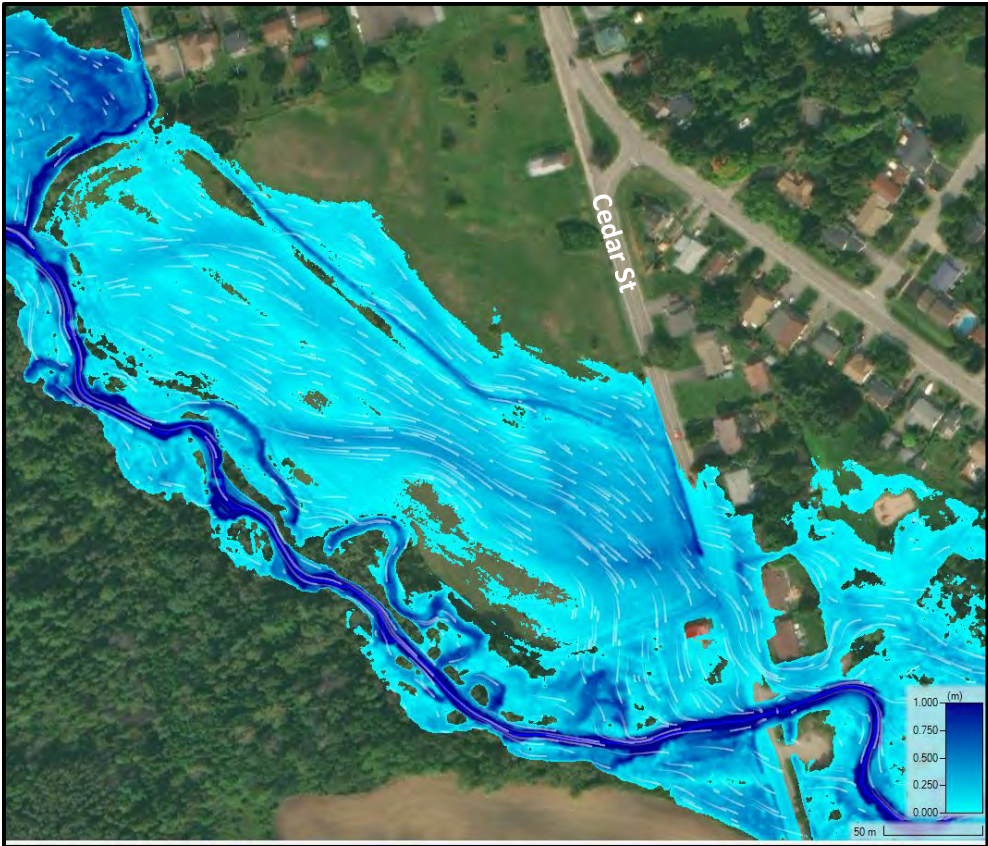


Figure 3-5: Floodwater Characteristics Upstream of Cedar Street with Spill Over Existing Flood Berm



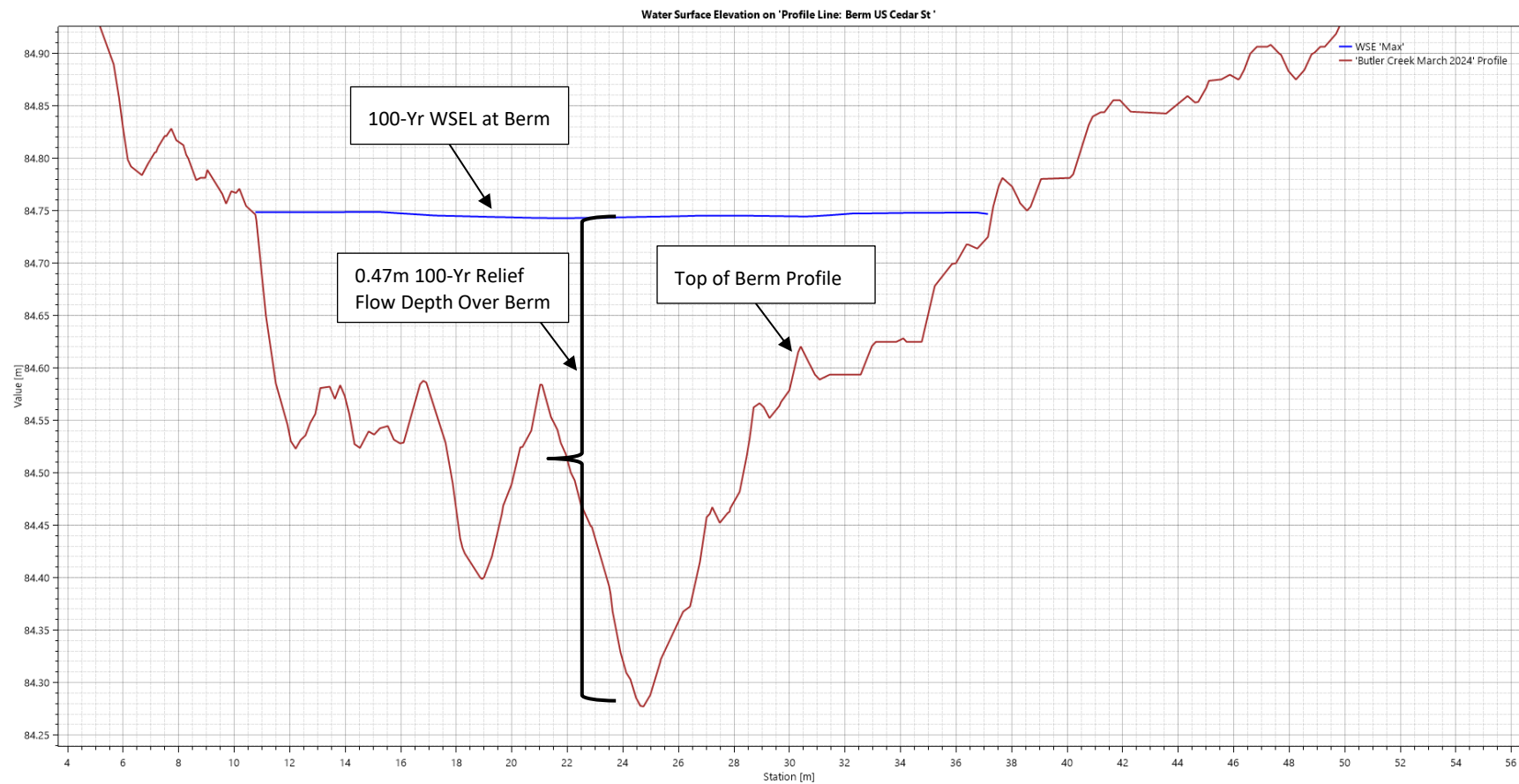


Figure 3-6: 100-Yr Water Surface Elevation Above Low Point in Berm Upstream of Cedar St; Max. 100-Yr Flow Depth Over Berm = 0.5m (Excerpt of Figure 5-30 from 2024 Butler Creek Report)

## 4 Proposed Flood Mitigation

---

The preferred floodproofing method is dry floodproofing. It requires the placement of engineered fill so that the future building is a minimum of 0.3m above the floodplain, ensuring the structure remains dry in the flood event.

Generally speaking, the concern of fill within the floodplain is whether it affects the storage or conveyance of the flood waters. Site-specific topography, spill points, peak flows, buildings, culvert sizes, and road profiles are all important factors, none of which are identical in any floodplain assessment. Therefore, fill within the flood hazard limit needs to be assessed on a case-by-case basis.

After testing several mitigation alternatives and assessing the sensitivity of the floodplain limits with different fill placement options, we concluded three critical components to the proposed mitigation plan:

- 1) Fill must be placed *inside* of the “Limit of Fill” boundary shown in **Figure 4-1**. The fill cannot extend west of this boundary, since the fill limit shown allows that flood waters to gradually narrow towards the middle of the site in a flow efficient manner.

**Of note:**

- a. The **fill area** has a **footprint of 2.82 ha**.
  - b. The existing Timmins flood depth is an **average of 0.36m** within the proposed fill area.
  - c. The **fill volume required** above existing ground to be above the *existing* regulatory flood elevation is **10,050 m<sup>3</sup>**. However, with localized increase in water levels at the subject property, the fill required is expected to be **31,000 m<sup>3</sup>**.
  - d. The proposed fill elevations to remove the lands from the floodplain per this permit application are conceptually shown in **Figure 4-3**. **Appendix C** provides the more detailed grading/fill plan.
- 2) The existing flood berm must be excavated and largely removed. An approximate location of this excavation area is depicted in **Figure 4-1**. In its current state, the earth berm causes a pinch point by creating a wide ineffective flow area within the north overbank. Excavation of the existing (and deficient) berm will alleviate the backwater imposed by the berm and create lower localized flood elevations. This will reduce the flood risk to the adjacent property immediately northwest of the subject lands.
    - a. The proposed excavation is to match the limit shown in Figure 4-1. The bottom of excavation should correspond to elevation 84.10m and the excavation amount is approximately 300 m<sup>3</sup>.
- 3) A drainage channel should be implemented near the north property limit to accommodate the potential spill from Arena Creek.
    - a. The *2024 Butler & Arena Creek Floodplain Mapping Update* identifies a maximum of 3.29 m<sup>3</sup>/s spill from Arena Creek towards Butler Creek. A detailed investigation of the flow path of this spill after it overtops Cedar Street would likely show that a portion the flow gravitates towards the existing channel that outlets to Butler Creek via the outlet easement at the west end of Grimes Street. However, for a conservative approach, we

- have included the provision of a drainage channel at the north end of the subject property sized to convey the *full* 3.29 m<sup>3</sup>/s spill.
- b. The proposed drainage channel for the Arena Creek spill begins at the north end of the subject property and follows the perimeter of the proposed fill limit in a general north-south direction until it outlets to Butler Creek (see **Figures 4-2 and 4-4**).
  - c. The proposed channel has a trapezoidal shape with a 0.5% longitudinal slope, 1.5m bottom width, 2:1 side slopes, and was sized using a Mannings roughness coefficient of 0.035 per *Design Chart 2.01* of the *MTO Drainage Management Manual*. The swale sizing calculation is provided in **Appendix D** and shows the capacity of the proposed swale is 3.52 m<sup>3</sup>/s. This is greater than the full 3.29 m<sup>3</sup>/s conservatively assumed to reach the north drainage ditch from the Arena Creek spill.

The flood mitigation plan was tested in the hydraulic model and other supporting calculations to verify the engineering theory. The model output results confirmed that the proposed mitigation measures would meet each objective from **Section 1**. The matrix in Table 4-1 provides specifics on how each objective is met.

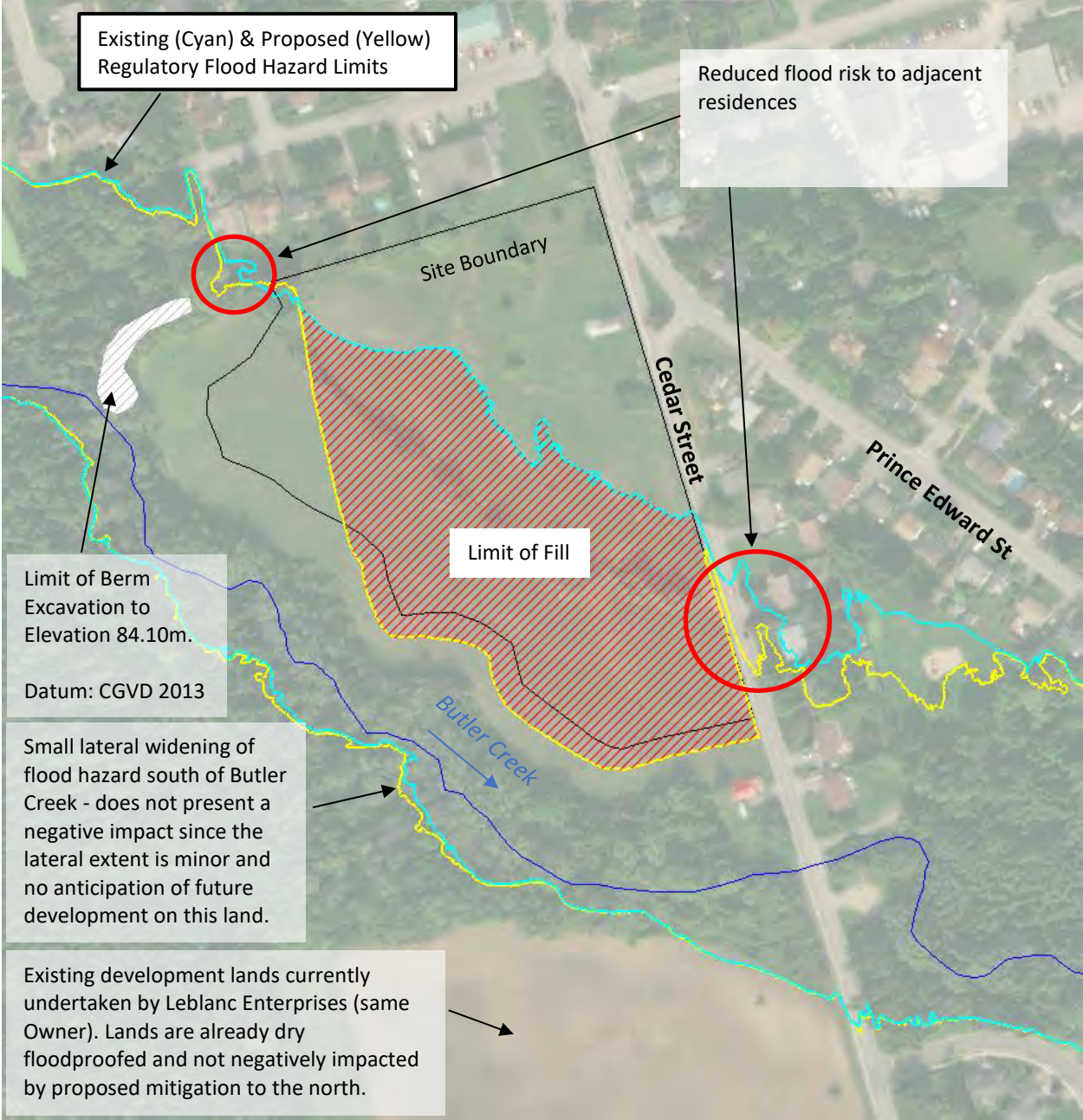


Figure 4-1: Existing vs. Proposed Regulatory Flood Limits with Proposed Mitigation (Fill + Berm Excavation)

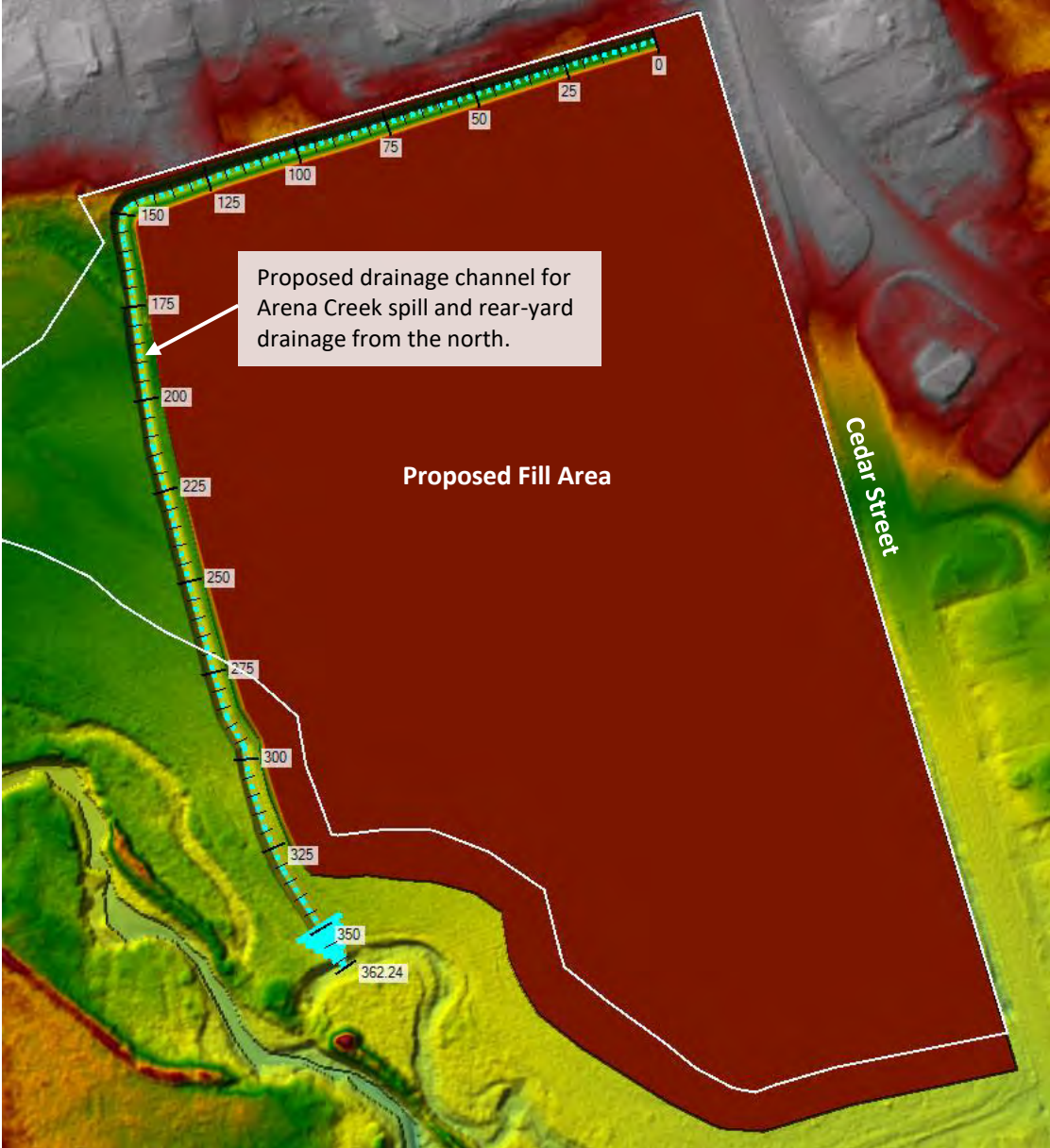


Figure 4-2: Arena Creek Spill Drainage Channel Along Perimeter of Proposed Dry-Floodproofed Lands

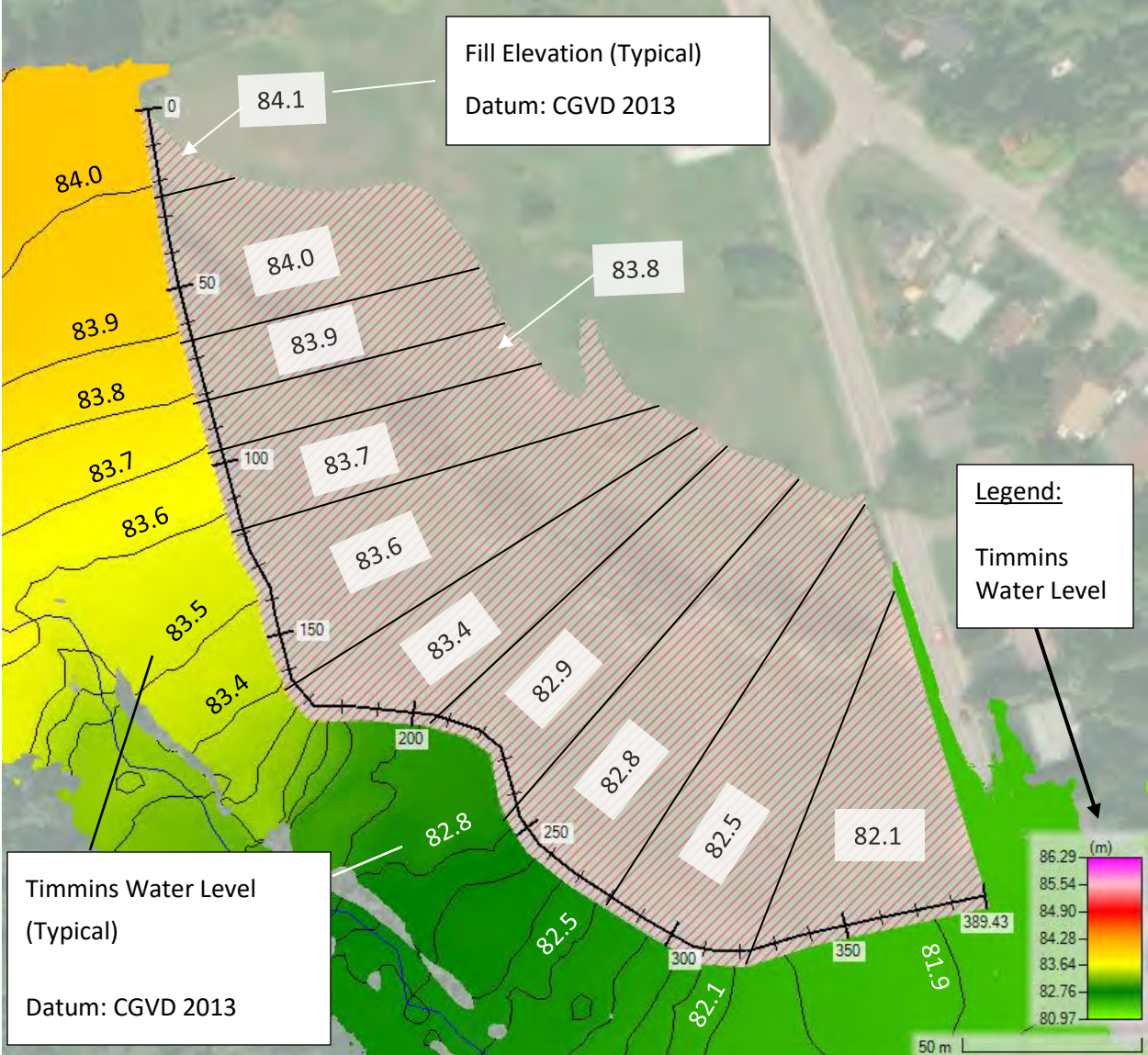


Figure 4-3: Proposed Fill Elevations for Subject Permit Application to Remove Lands from Regulatory Floodplain

Cedar Street Subdivision – Butler Creek North  
Flood Mitigation Report

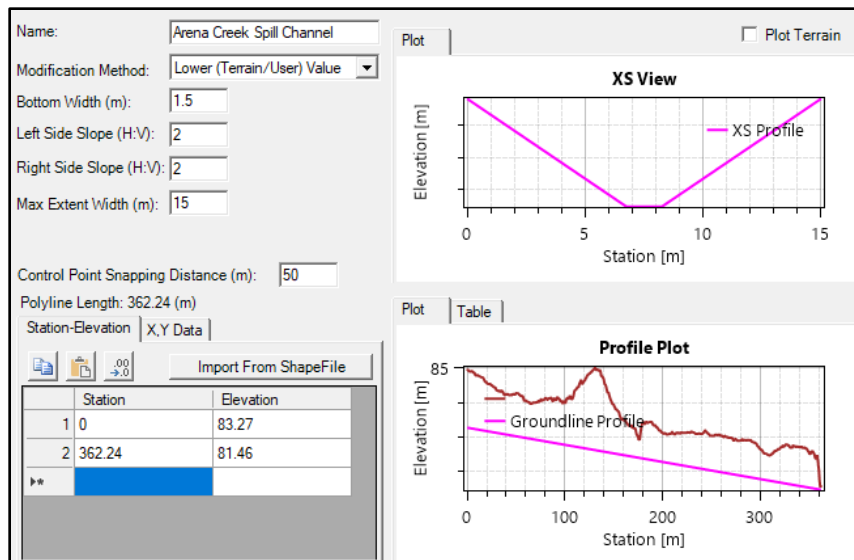





Figure 4-4: Summary of Proposed Channel Dimensions with 1.5m Bottom Width, 0.5% Slope, and 2:1 Side Slopes

Table 4-1: Comparison of Stated Objectives from Section 1 to Findings of Flood Mitigation Plan

#	Stated Objective:	Achieved?
1	<b>There must be no negative impacts to adjacent property owners.</b>	
	<p>This objective is met because:</p> <p>In a review of the surrounding flood limits, there are several instances where the flood limits are improved relative to the existing flood hazard limits. We conclude that there is no meaningful increase in flood risk at any of the surrounding properties. In fact, there are notable improvements as noted in the reasoning that <i>Objective 2a</i> is met as described below.</p>	

2	<p><b>The mitigation measure should provide a net benefit to the community. This can be accomplished by achieving a mitigation measure that results in:</b></p>	
a)	<p>Reduced flood risk on off-site lands.</p> <p>This objective is met because:</p> <p>The flood elevations are reduced in the existing flood locations that present the highest risk to adjacent properties. This includes the adjacent property to the northwest (10 Grimes Street) of the site, where the Butler Creek flood elevation is reduced by approximately 10cm as a result of the mitigation plan. It also includes the two residential properties on the north side of the Cedar Street crossing that receive reduced flood depths with the proposed mitigation plan. We are not concerned with the potential impacts to safe access based on our investigation and response to Request #3 as shown in Appendix B.</p> <p>As shown by the notes on the bottom left of <b>Figure 4-1</b>, the trade-off to the improvements on the north side of the Cedar Street crossing is that there is a small lateral expansion of the floodplain on the south side of Butler Creek. These lands would not be negatively affected since they are either a) already undevelopable due to environmental protection or b) already dry floodproofed as part of the previously approved development to the south.</p>	
b)	<p>Floodproofing of the subject lands per Conservation Authority guidelines.</p> <p>This objective is met because:</p> <p><i>Appendix E - Floodproofing Standards</i> of the LTC Policy Document states that the minimum elevations for dry floodproofing is the Regulatory Flood + 0.3 meters. With the proposed mitigation plan, the fill placement per the subject application will remove the lands from the floodplain and allow for a minimum of 0.3m of fill above the flood elevation to be placed during subdivision construction after other municipal approvals are achieved. Therefore, the mitigation plan provides opportunity to ensure all buildings on the subject site are floodproofed.</p>	



<p><b>c)</b></p>	<p>More homes to be built within an area already designated for residential land use.</p> <p>This objective is met because:</p> <p>The proposed dry floodproofing would result in 2.82 ha of residential-zoned land that would otherwise be non-developable. All levels of government agree there is a need to increase housing supply. The future land use is intended be predominantly condominium and apartment units. High-density housing options meet the intent of this stated objective.</p>	
<p><b>d)</b></p>	<p>Increased land use efficiency that benefits the environment by reducing the need for urban sprawl.</p> <p>This objective is met because:</p> <p>With high-density residential units, the need to expand beyond existing urban boundaries is reduced. Reducing the sprawl of our urban communities mitigates potential degradation to natural setting by not seeking development in these additional areas in the first place.</p>	<p style="text-align: center;">✓</p>

## 5 Conclusions & Recommendations

---

After several design iterations, Jewell has concluded that the flood mitigation plan herein would meet the objectives established in Section 1. We have concluded that in addition to presenting no appreciable impact to the control of flooding and there would be noticeable improvements in the Regulatory storm at three existing residential properties,

The three (3) components of the mitigation plan were summarized in **Figures 4-1 to 4-4** and include the following:

1. Fill placement on the subject lands to allow for dry floodproofing of future buildings.
2. Berm excavation of the existing, deteriorated berm to alleviate the high flood elevations imposed by its pinch point.
3. A drainage channel along the perimeter of the limit of fill to receive and convey the potential Arena Creek spill. The drainage channel would also serve as a drainage route for rear-yard drainage from the residential lots immediately north of the subject lands.

Based on our engineering analysis and judgement, Jewell Engineering recommends approval of the subject application to the LTC Board since we believe the proposed mitigation plan meets the Regulations and serves as a benefit to the community.

Prepared by:



Elliott Fledderus, P.Eng.  
Jewell Engineering Inc.

## 6 References

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(Ministry of Natural Resources). *Floodplain Management in Ontario Technical Guidelines*.

Ministry of Transportation Ontario. (1997). *Drainage Management Manual*.

Appendix A-1:  
Meeting Notes from November 12, 2024

---



## Meeting Notes

Notes by: Elliott Fledderus, P.Eng.

Meeting: November 12, 2024, 10:00AM – 11:00AM

Attendees: Christine Phillibert (QC), Dave Eastcott (QC), Bryon Keene (Jewell), Elliott Fledderus (Jewell)

Location: Teams Meeting

Objective: To participate in a pre-consultation/report review with Quinte Conservation (QC) staff since they have been brought in to review the file since the departure of LTC's review engineer.

RE: Flood Mitigation Plan - Cedar Street North Development (Leblanc Enterprises)

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The goal of the meeting is to discuss potential concerns related to the previously submitted *Flood Mitigation Report*. Since QC was brought in after the initial pre-consultation in September, we also used this opportunity to provide background for the Butler Creek floodplain mapping and some history of our previous meetings with Brighton and RFA regarding potential flood mitigation opportunities.

We anticipate QC will request some additional information be added to the report as discussed in the meeting. Following the revised report, Jewell will re-circulate to LTC and QC staff. Based on the discussion, we anticipate QC will request the following information:

1. The depth and velocity information before and after the flood mitigation plan at the house immediately upstream of Cedar Street.
  - An assessment of smaller return period events was noted to be useful to confirm whether the house is negatively affected in events less than the regulatory storm.
2. In the meeting, Jewell showed the existing and proposed model extents downstream of the subject site, between Cedar Street and Lake Ontario. The intent is to confirm no negative impacts late in the system due to the loss of storage within the subject property. Jewell is to add a figure and brief discussion in the revised report to note this was reviewed and addressed.
3. A profile of water surface elevations in the vicinity of Cedar Street (immediately upstream and downstream) was requested. Jewell to provide in revised report.
4. A profile of depths across the Cedar Street road profile was requested. This would provide further details related to safe access. Jewell to provide in revised report.

The meeting was productive and Jewell is appreciative of the feedback received.

Note: In an email response November 26, 2024, QC noted that velocity information is to be added to the depth profiles for the Cedar Street sections.

Appendix A-2:  
Revision Summary

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**Revision Summary:**

The revision summary below is intended to address the information we anticipate QC will require based on the meeting notes from November 12, 2024 as shown in **Appendix A-1**.

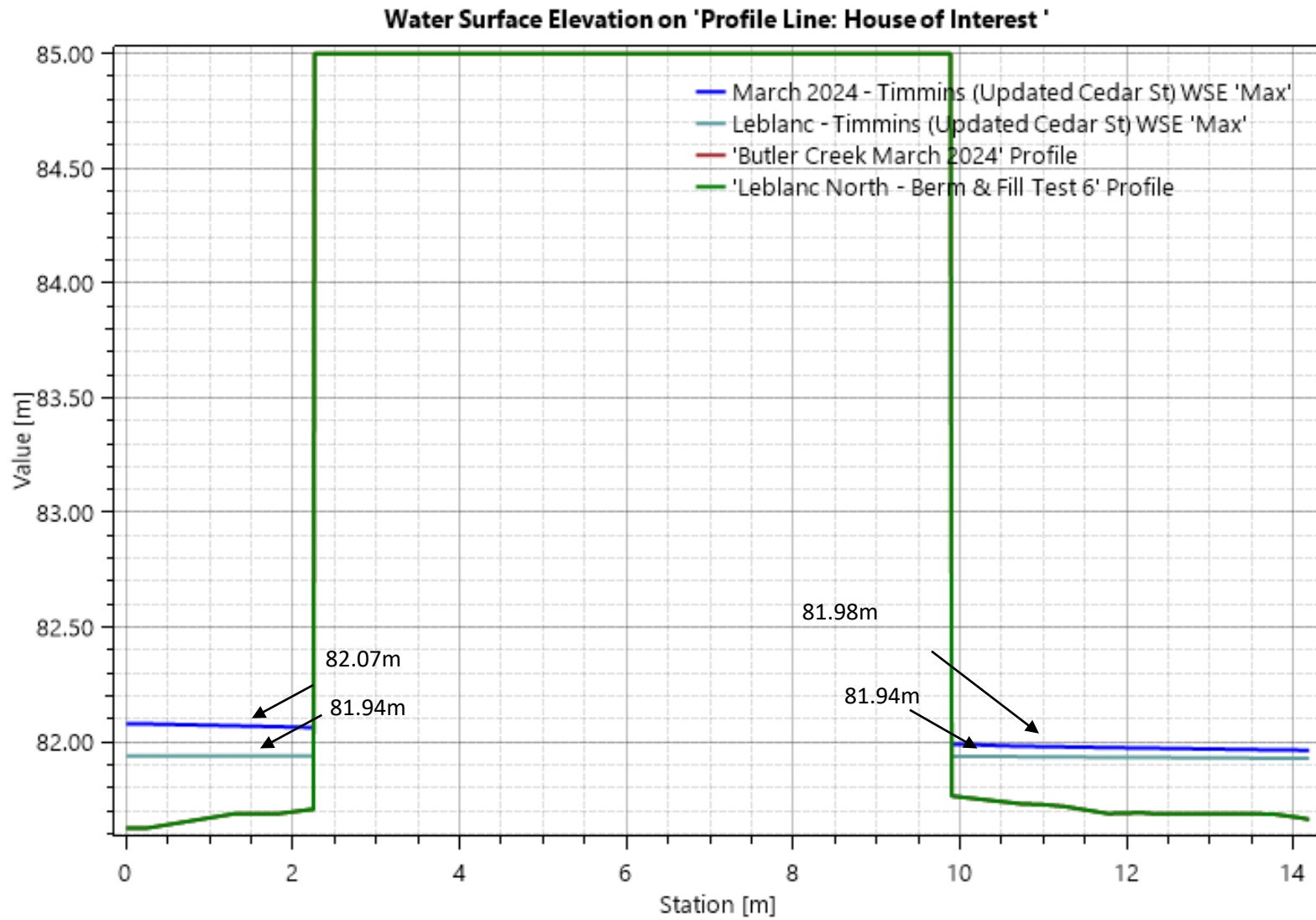
For ease of reference, the revision notes below follow the numbering from **Appendix A-1**.

<b>Request #1:</b>	<p>The depth and velocity information before and after the flood mitigation plan at the house immediately upstream of Cedar Street.</p> <p>An assessment of smaller return period events was noted to be useful to confirm whether the house is negatively affected in events less than the regulatory storm.</p>
Response	<p>A section through the house immediately upstream of Cedar Street was reviewed to compare WSELs, depths, and velocities before and after the flood mitigation plan.</p> <p>The figures below show a comparison of these parameters for the Timmins event. In the Timmins storm, the water level is reduced by up to 13cm, the depth reduced 13cm, and the velocity reduced up to 0.26 m/s.</p> <p>Max. water level, depth, and velocity figures are also provided below for the 1% AEP (100Yr), 2% AEP (50Yr), and 10% AEP (10Yr).</p> <p>Reduced water levels, depths, and velocities at this house location with the flood mitigation plan are consistent throughout the range of return period events, in addition to the Timmins regulatory storm.</p>
<b>Request #2</b>	<p>In the Nov. 12 meeting, Jewell showed the existing and proposed model extents downstream of the subject site, between Cedar Street and Lake Ontario. The intent is to confirm no negative impacts late in the system due to the loss of storage within the subject property. Jewell is to add a figure and brief discussion in the revised report to note this was reviewed and addressed.</p>
Response	<p>A figure below shows the Timmins flood hazard limit extents downstream of the subject site until the outlet to Lake Ontario before and after the Flood Mitigation Plan. There is no concern with the downstream flood hazard limits. Immediately downstream of Cedar Street there is a noticeable improvement (narrowing) of the flood limit. The only downstream crossing after Cedar Street is Harbour Street. The max. WSELs are not increased at Harbour St in either the Timmins or 100-yr with the Flood Mitigation Plan.</p>
<b>Request #3</b>	<p>A profile of water surface elevations in the vicinity of Cedar Street (immediately upstream and downstream) was requested. Jewell to provide in revised report.</p>

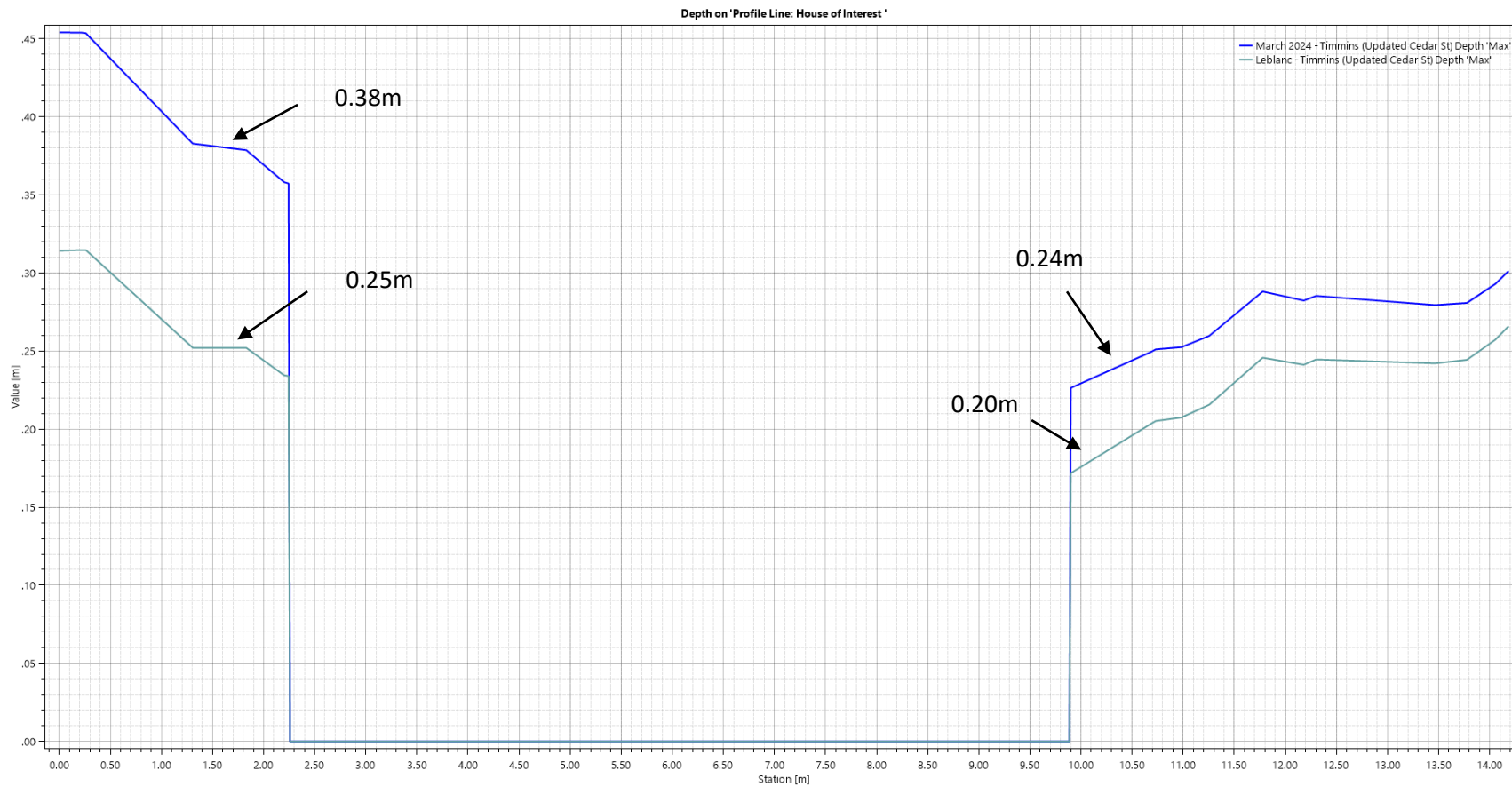
Response	See below figures with profiles of WSELs immediately upstream and downstream of Cedar Street (along with their respective cross section locations).
<b>Request #4</b>	A profile of depths (and velocities) across the Cedar Street road profile was requested. This would provide further details related to safe access. Jewell to provide in revised report.
Response	<p>The depths and velocity profiles for the Timmins, 100-yr, 50-yr, and 10-yr events are shown in the figures below. The table below also summarizes the depths, velocities, and depth*velocity product.</p> <p>Evidently, there is a minor increase in depth over road, although safe access is available in the 100-yr in both existing and proposed conditions, since the depth is &lt;0.3m and the D*V product is &lt; 0.8 m<sup>2</sup>/s.</p> <p>In the Timmins event, the depths are above the 0.3m preferred minimum, but the D*V product is within its acceptable range.</p> <p>The acceptability of a 1-2cm depth increase is subjective, and we respect different opinions from different practitioners. We (Jewell) are of the opinion that for this particular assessment, the lowering of the maximum water surface elevations at the adjacent houses by a more significant margin (up to 13cm) with the new configuration outweighs the trade-off with the 1-2cm increase in depth at the road. The new configuration also reduces the flood depth at the house immediately upstream of Cedar Street to 0 in the 50-yr return period event, whereas the existing conditions still has flood depths &gt;0 at this house in the <u>10</u>-yr return period. Additionally, although the depth at Cedar Street increases 1-2cm in the Timmins and 100-yr storms, the span of flood waters overtopping the Cedar Street is reduced by 41m and 49m in these events, respectively.</p> <p>Note that the safe access limits as recommended by the province are only exceeded in the Timmins event, and for depth only. They are exceeded in both existing and proposed conditions for the Timmins event, but 1-2cm greater in the proposed scenario. It is worth noting that the Timmins peak flow, extrapolated from calibrated model results, corresponds to an 90,000-yr return period based on the 2024 Butler Creek Floodplain Mapping update.</p>
<b>Supplemental</b>	LTC Water Resources Manager requested a fill placement (grading) plan and a sediment & erosion control plan as part of the application.
Response	<p>Fill placement (grading) plan that includes the proposed ditch and fill is provided in Appendix B. This plan includes local topographic survey shots.</p> <p>Sediment and erosion control plan is provided in Appendix C.</p>



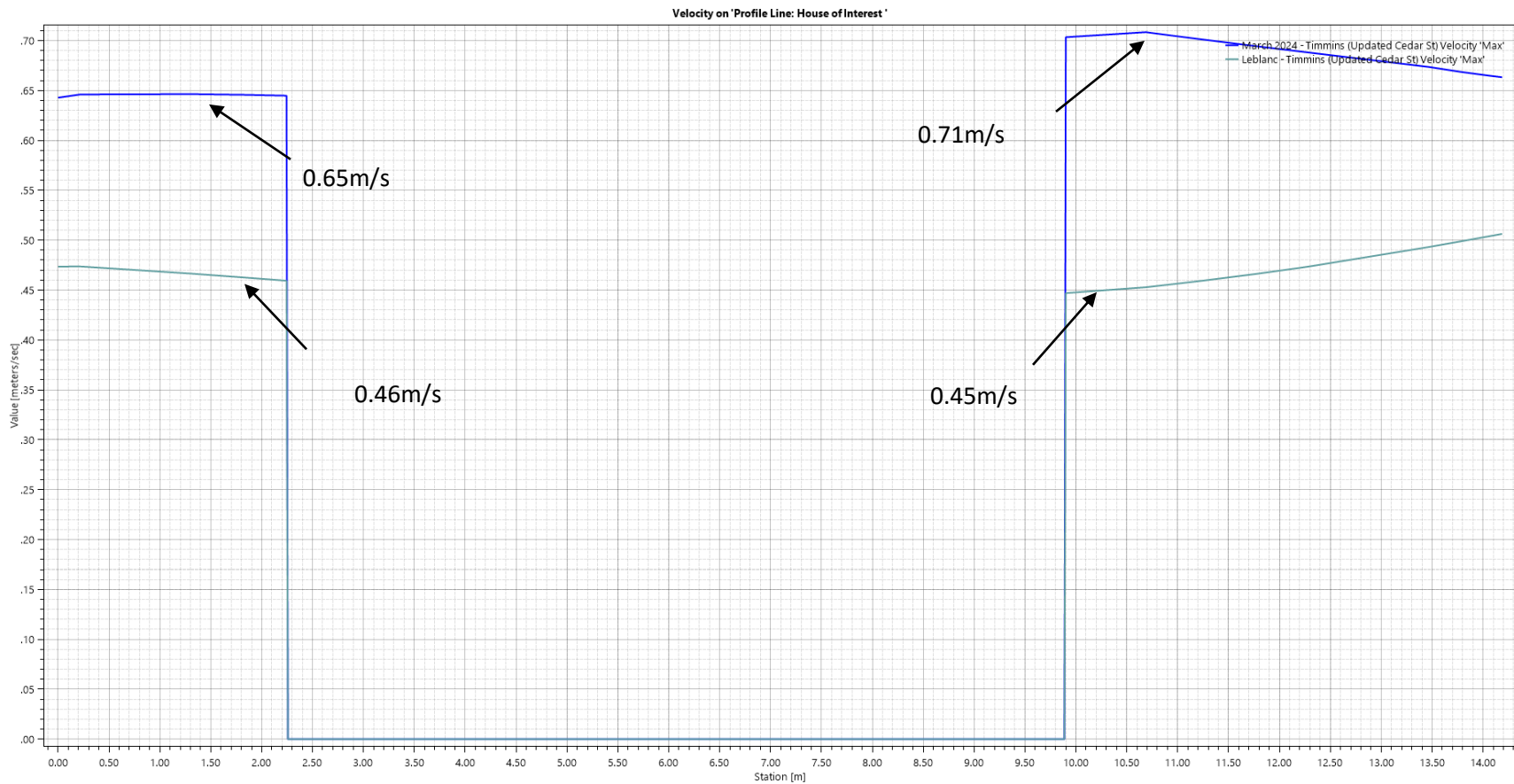
Timmins – WSE Comparison:



### Timmins – Depth Comparison:

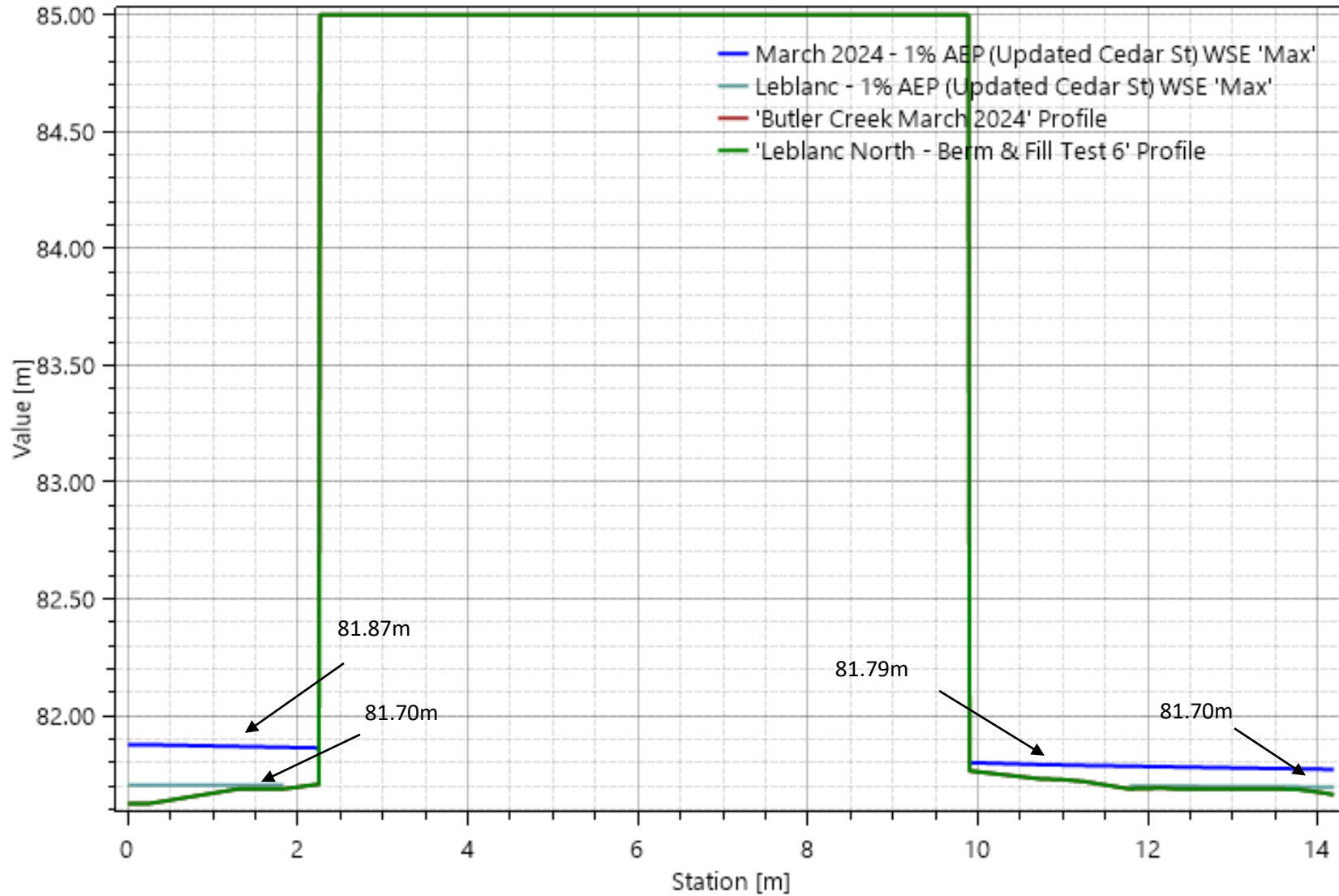


### Timmins – Velocity Comparison:



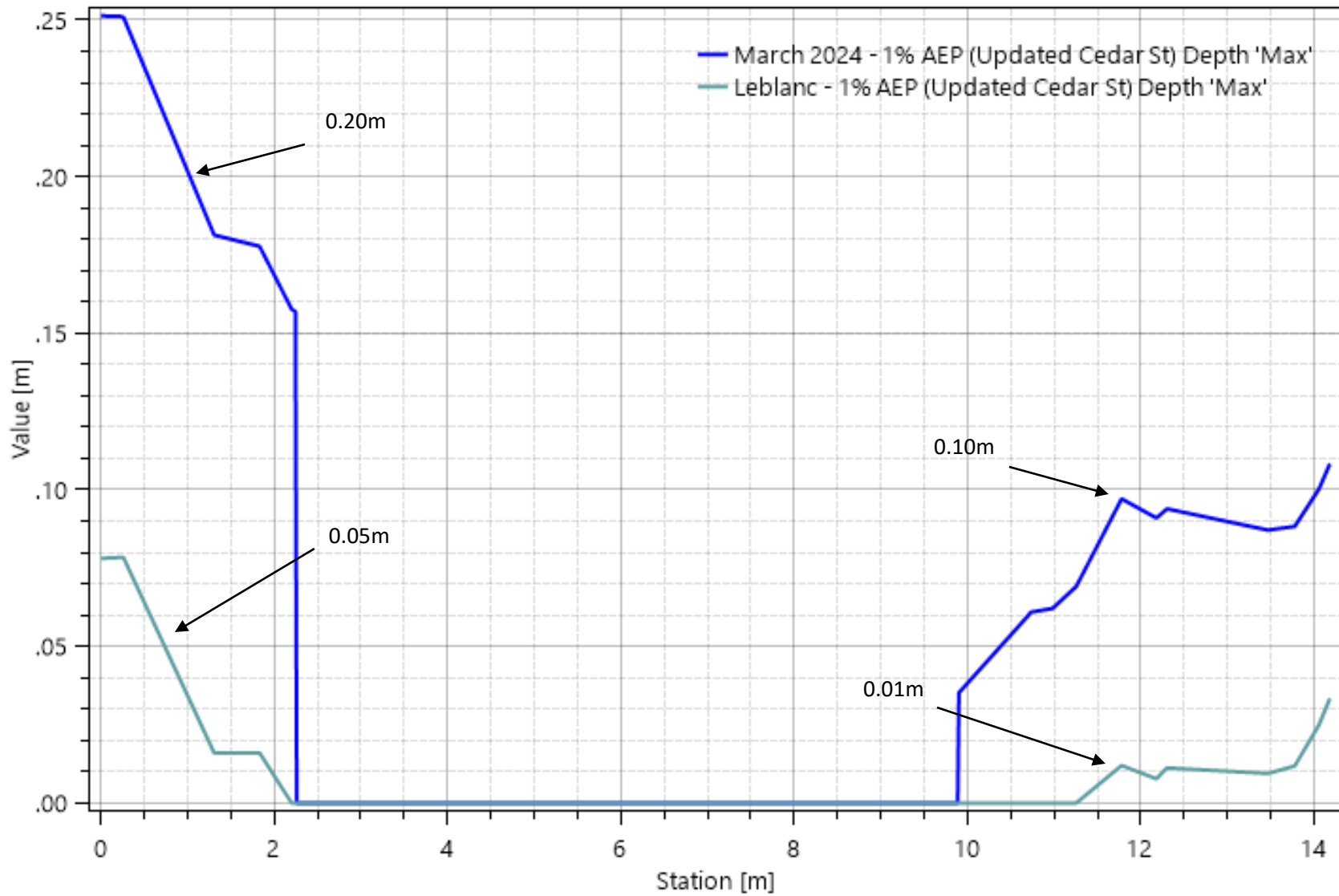
100Yr (1% AEP) – WSE Comparison:

Water Surface Elevation on 'Profile Line: House of Interest'

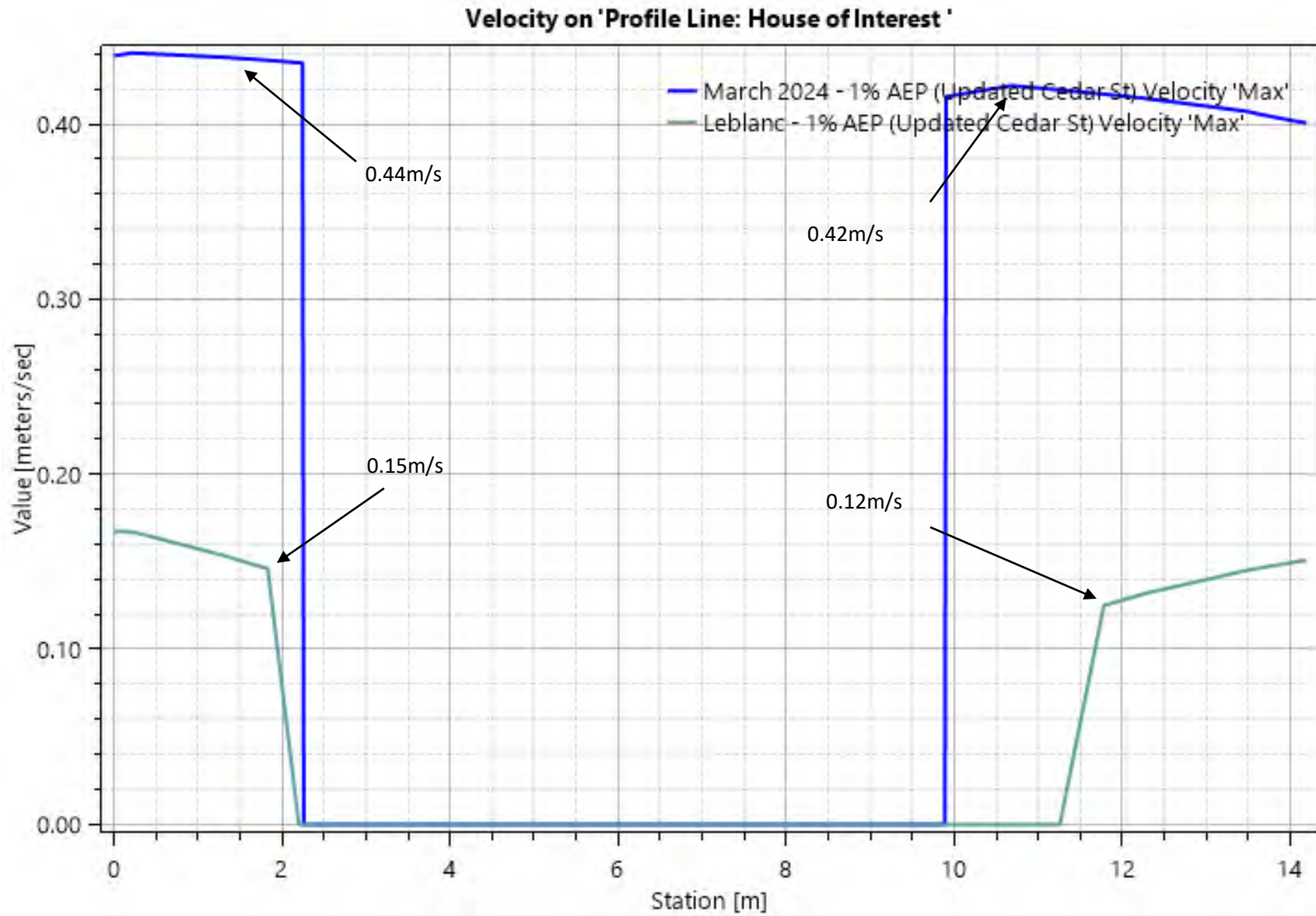


1% AEP – Depth Comparison:

Depth on 'Profile Line: House of Interest'

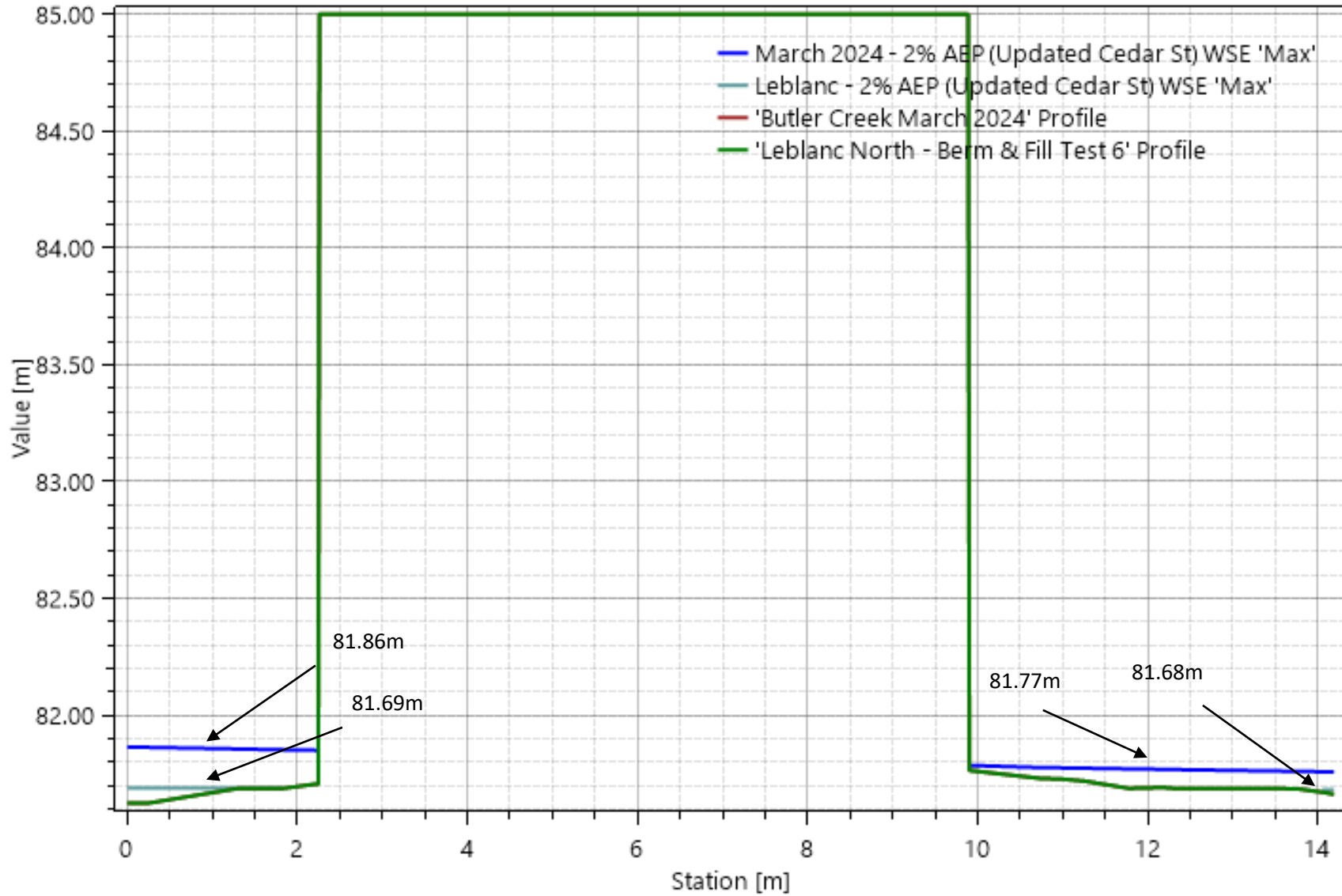


## 1% AEP – Velocity Comparison:



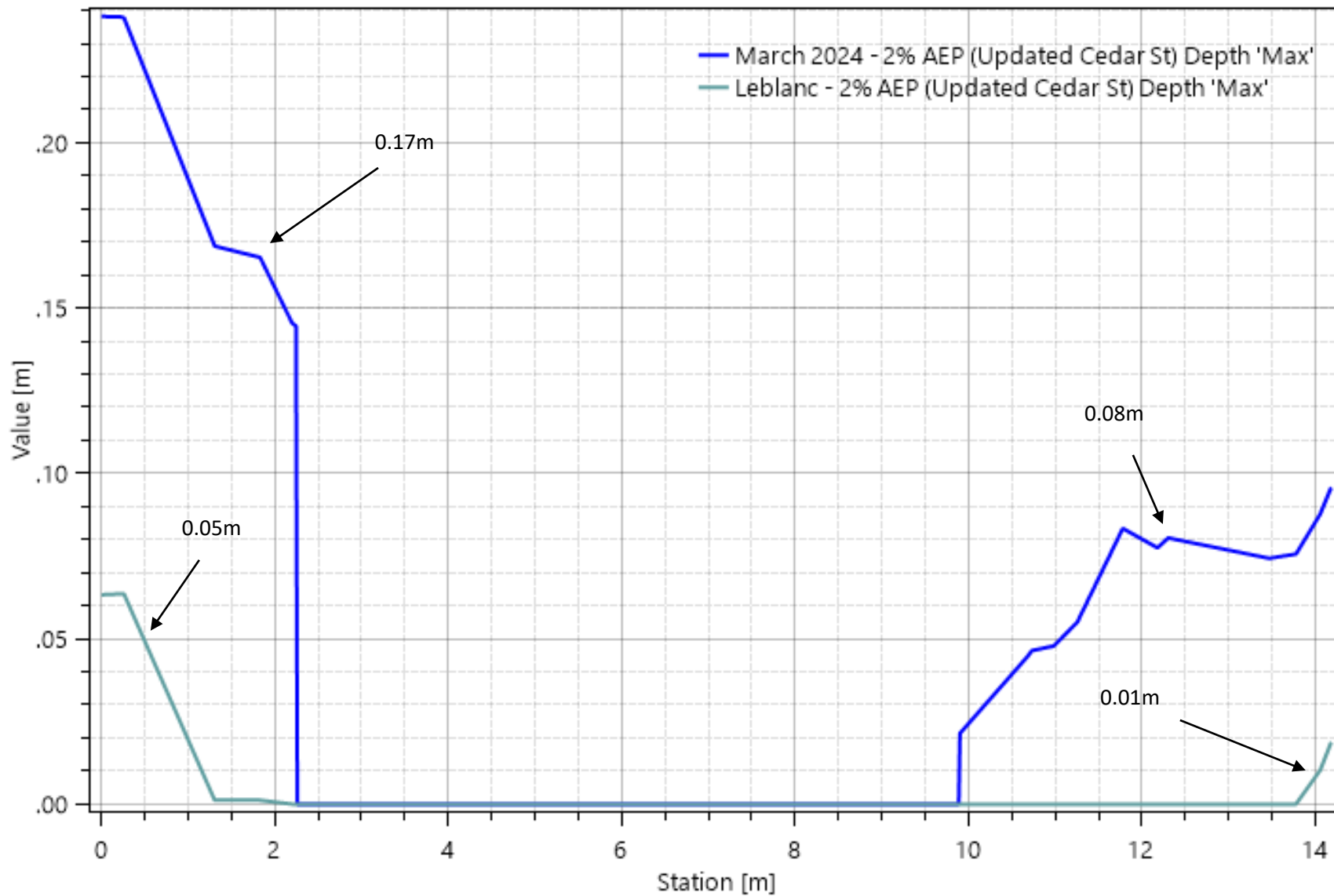
2% AEP – WSE Comparison:

Water Surface Elevation on 'Profile Line: House of Interest'



2% AEP – Depth Comparison:

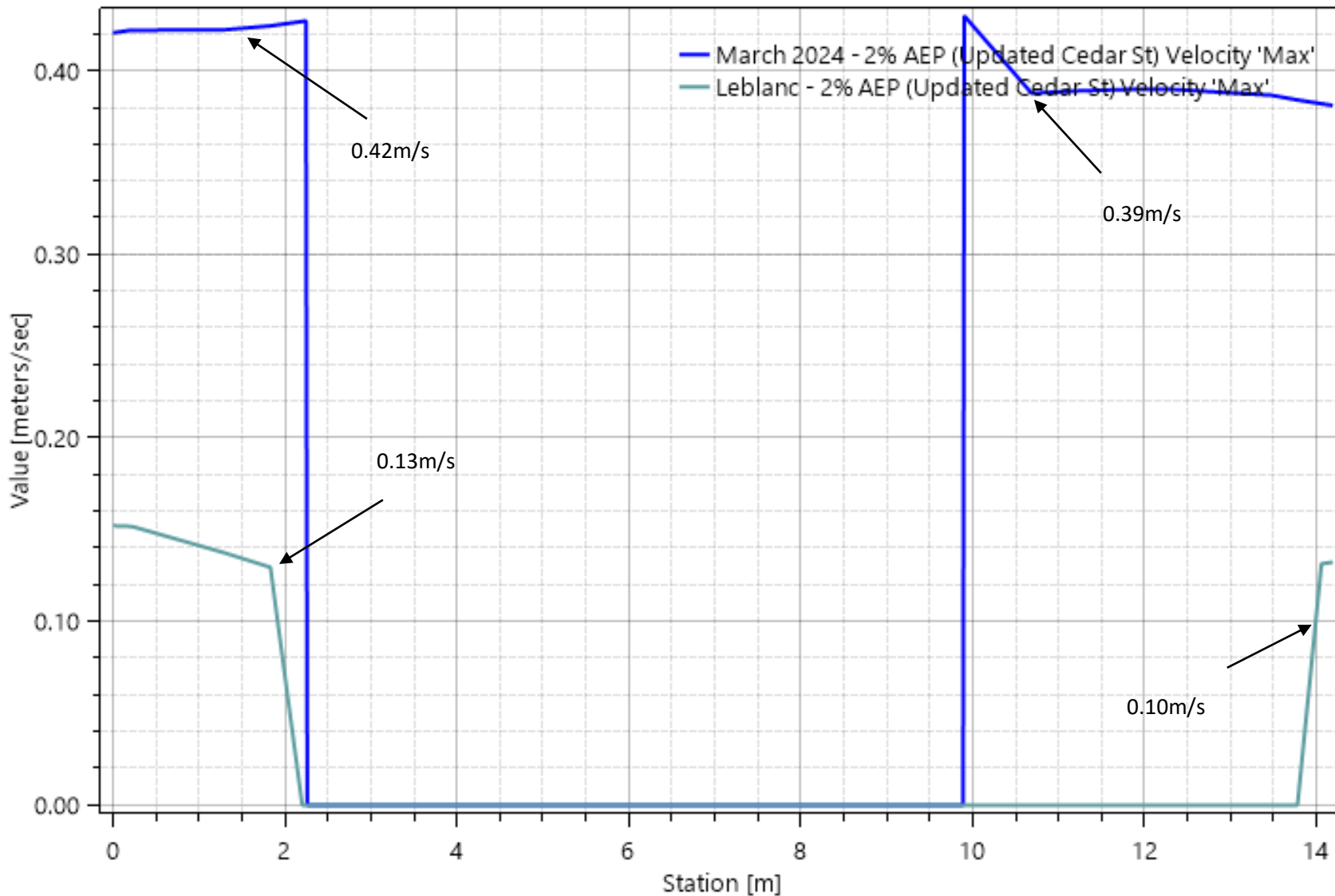
Depth on 'Profile Line: House of Interest'





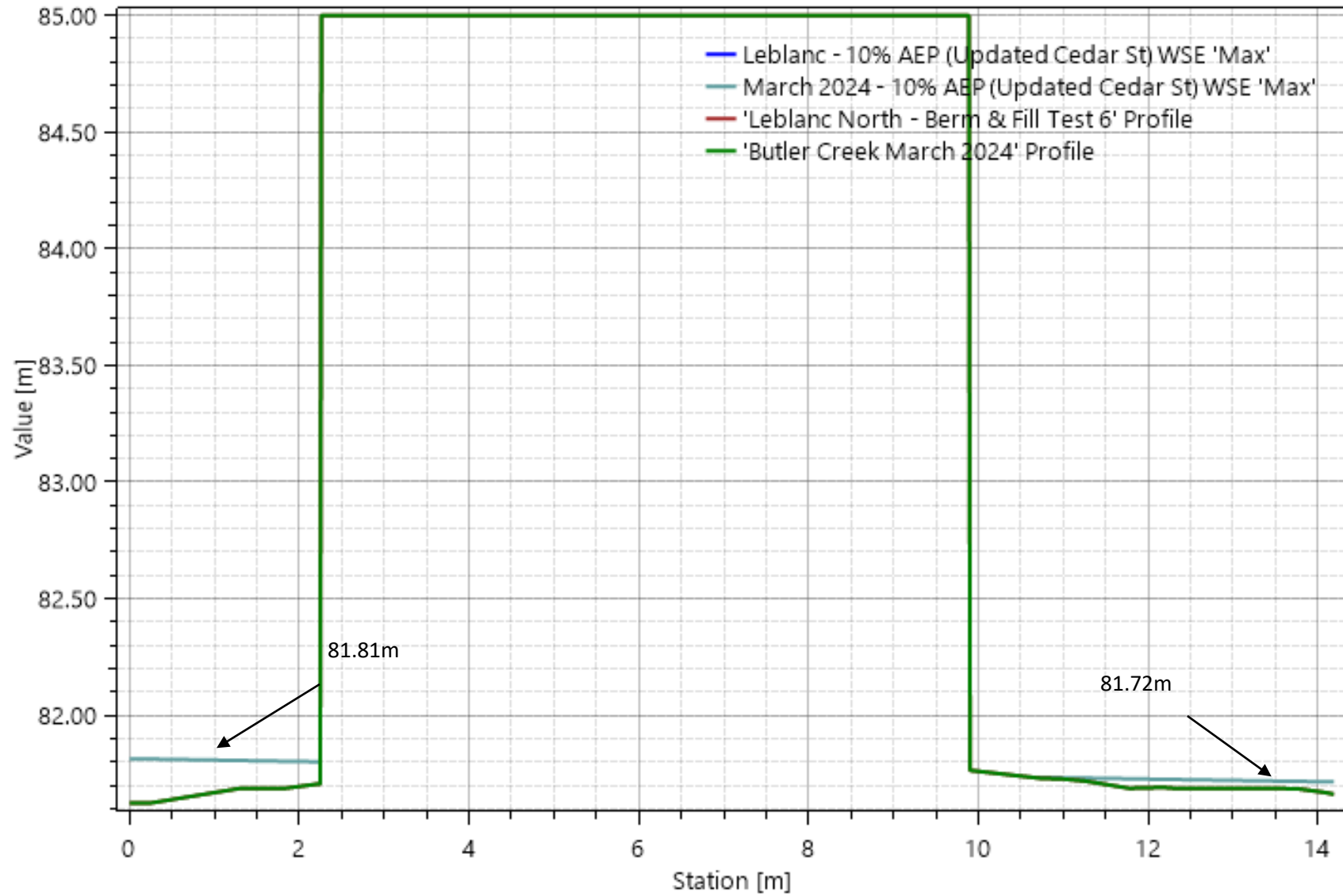
2% AEP – Velocity Comparison:

Velocity on 'Profile Line: House of Interest'



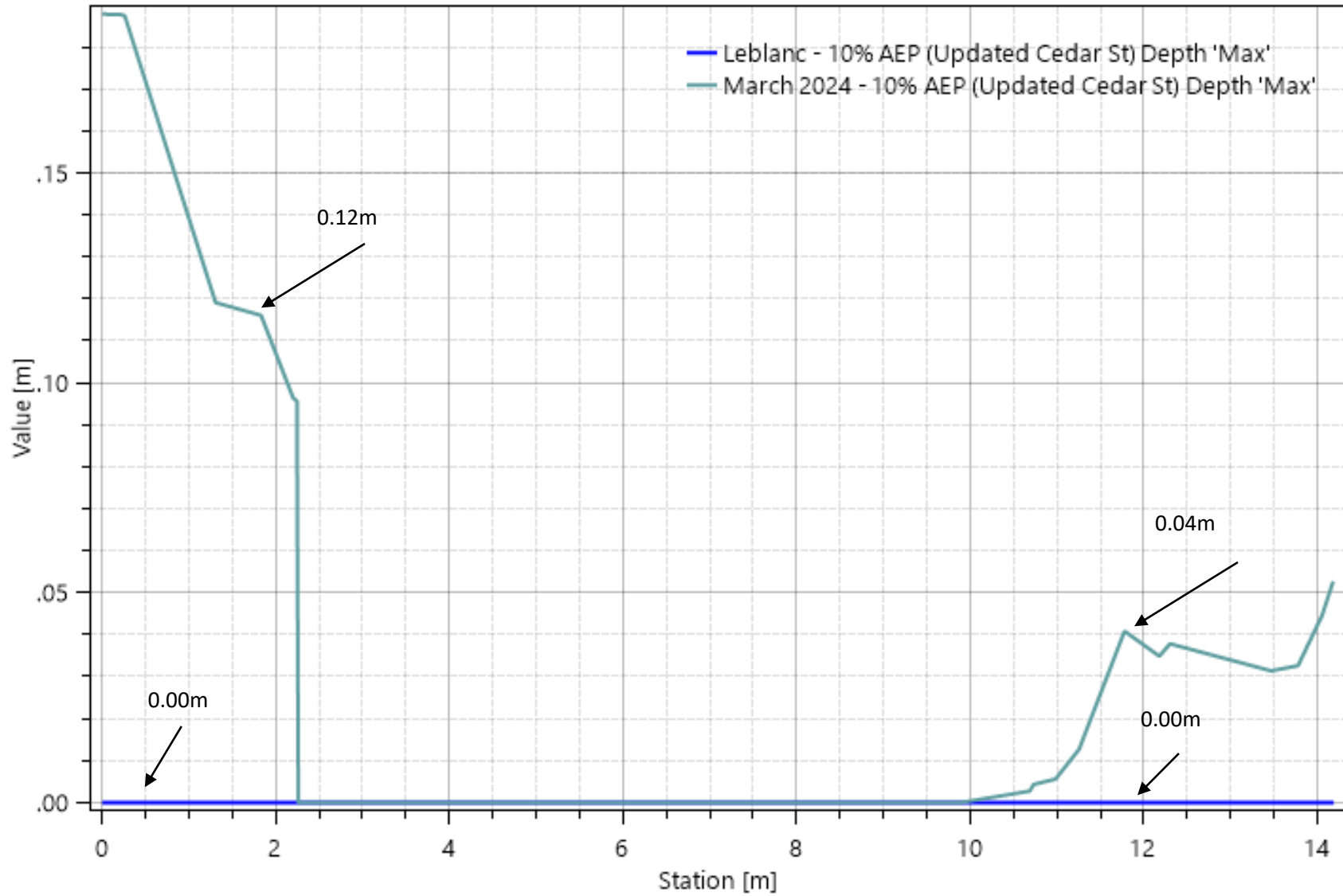
## 10% AEP – WSE Comparison:

Water Surface Elevation on 'Profile Line: House of Interest'



## 10% AEP – Depth Comparison:

Depth on 'Profile Line: House of Interest'



10% AEP – Velocity Comparison:

Velocity on 'Profile Line: House of Interest'

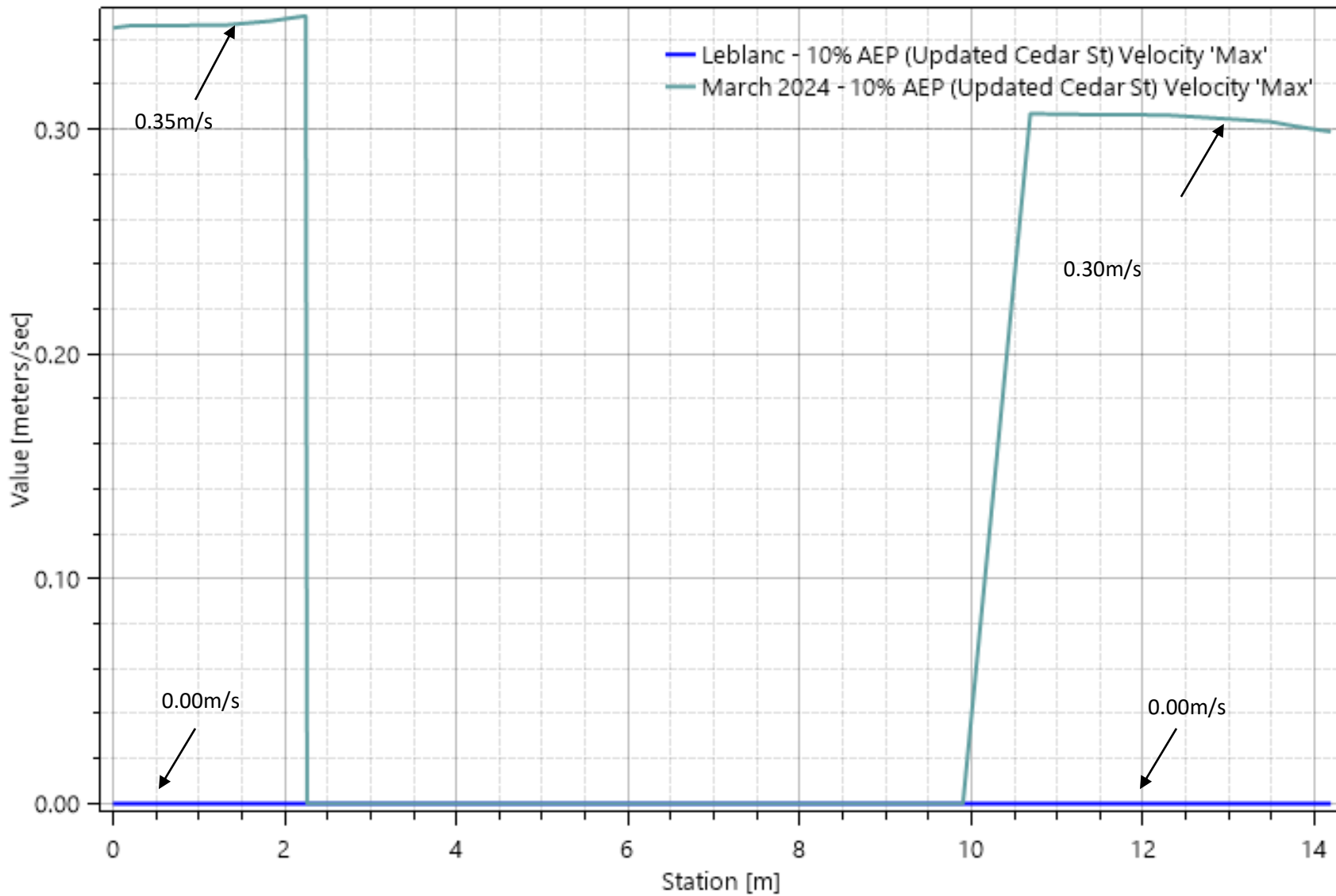


Figure for Request #2 (Yellow = Proposed Timmins; Red = Existing Timmins):

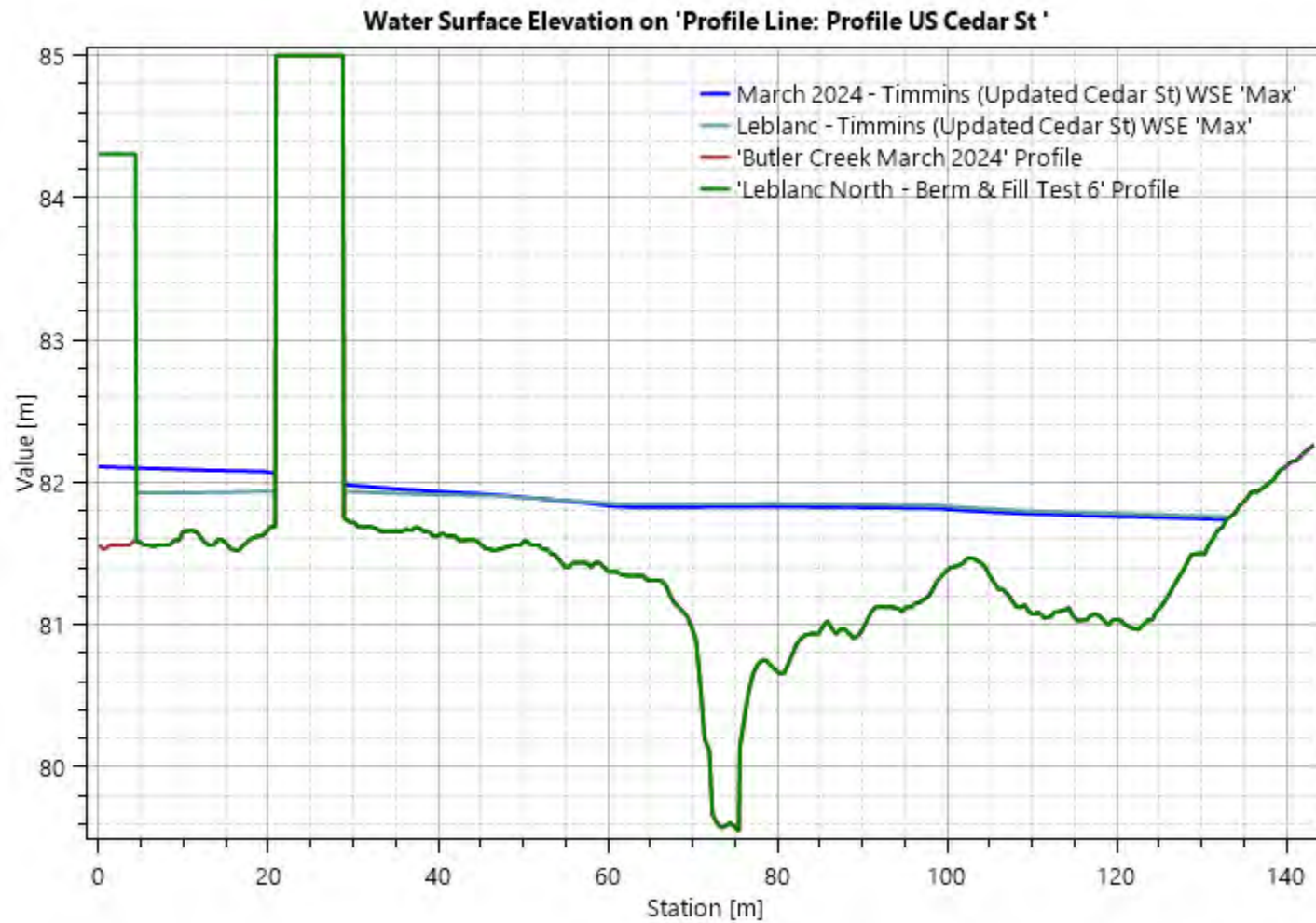


**Figures for Request #3:**

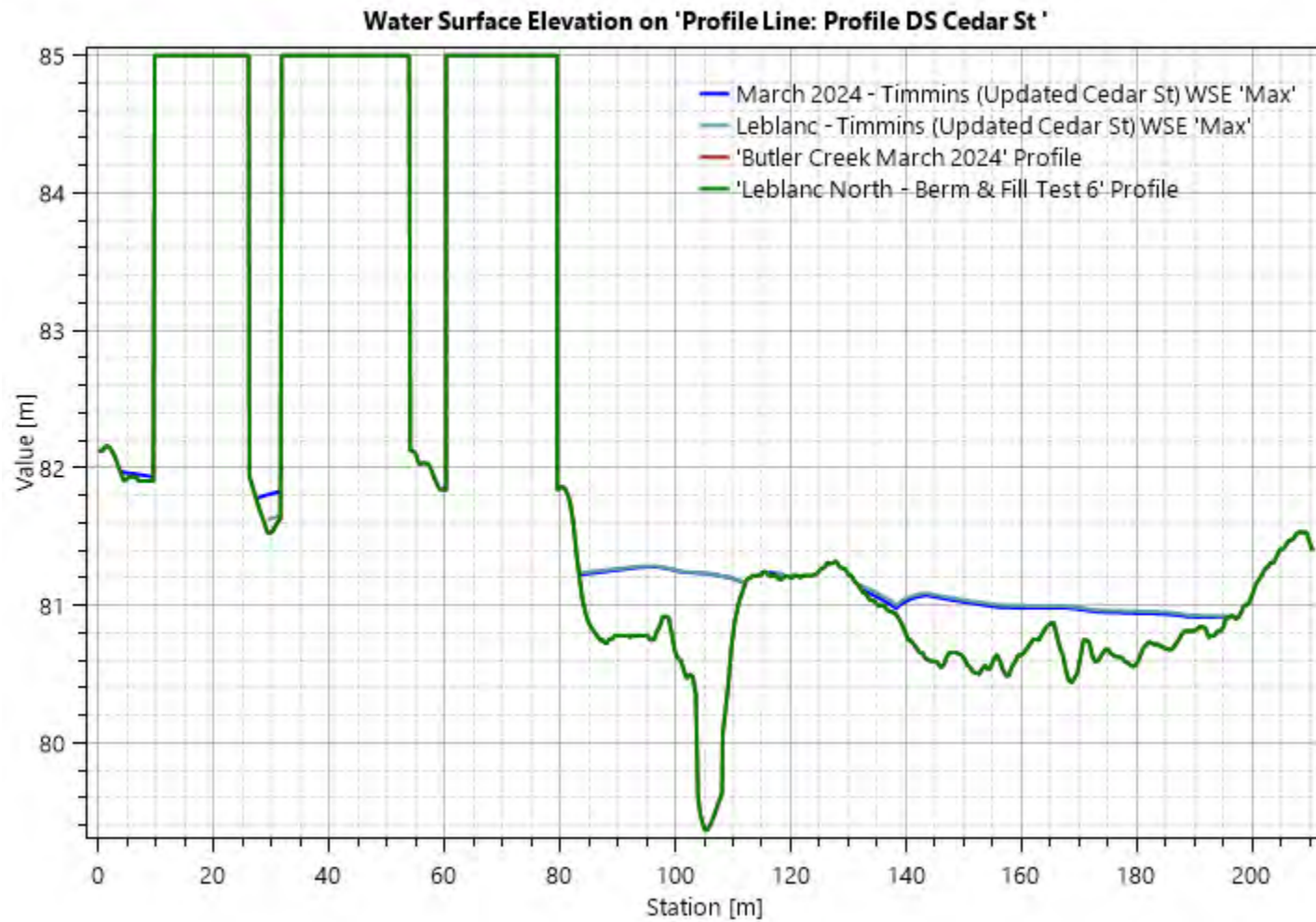
Immediate upstream and downstream cross section locations (black lines) for Cedar Street WSEL profiles:



Profile Immediately Upstream Cedar Street – Timmins with blue line existing and light green is proposed.

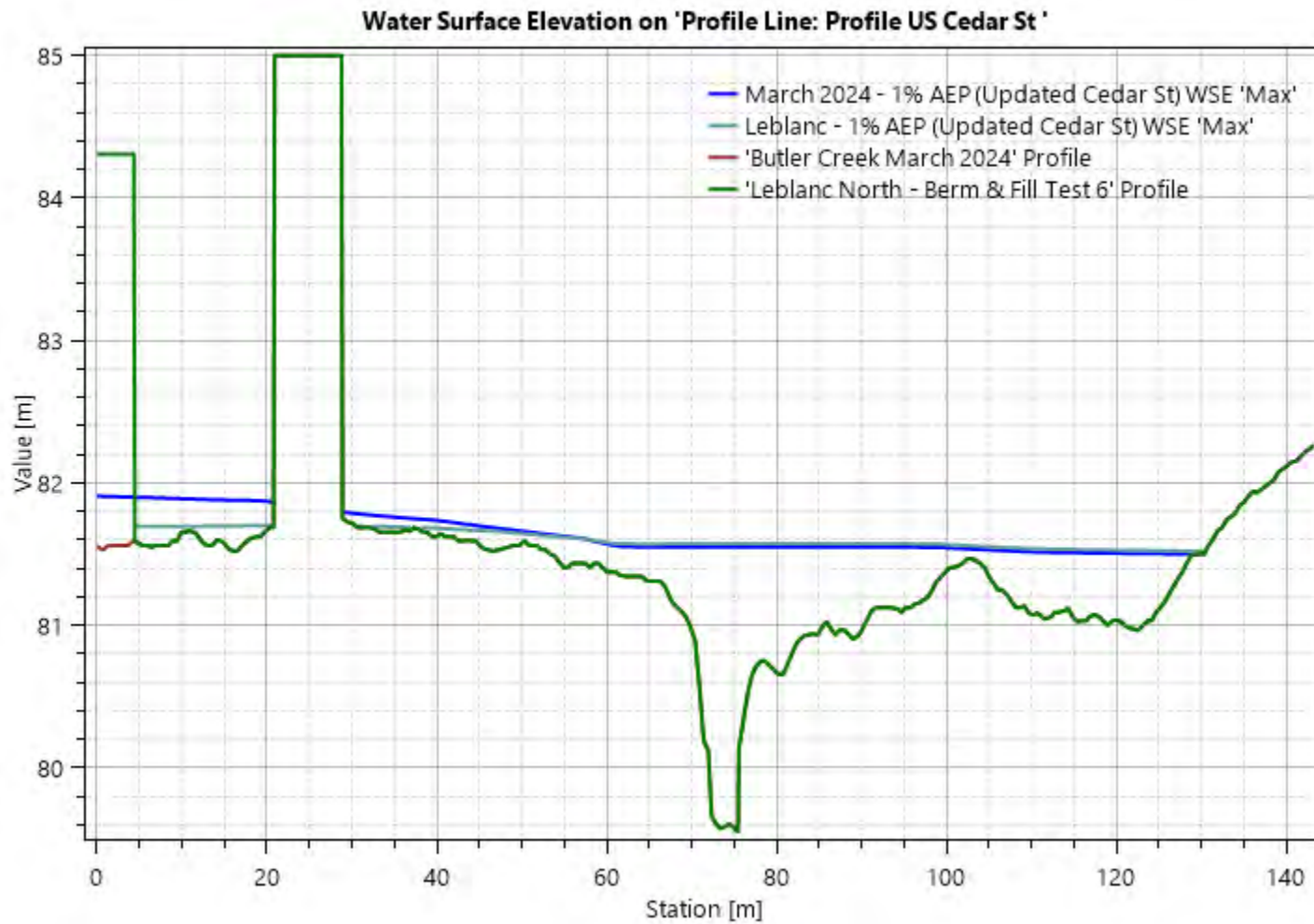


Profile Immediately **Downstream** Cedar Street – **Timmins** with blue line existing and light green proposed.





Profile Immediately **Upstream** Cedar Street – **100-Yr** with blue line existing and light green proposed.



Profile Immediately **Downstream** Cedar Street – **100-Yr** with blue line existing and light green proposed.

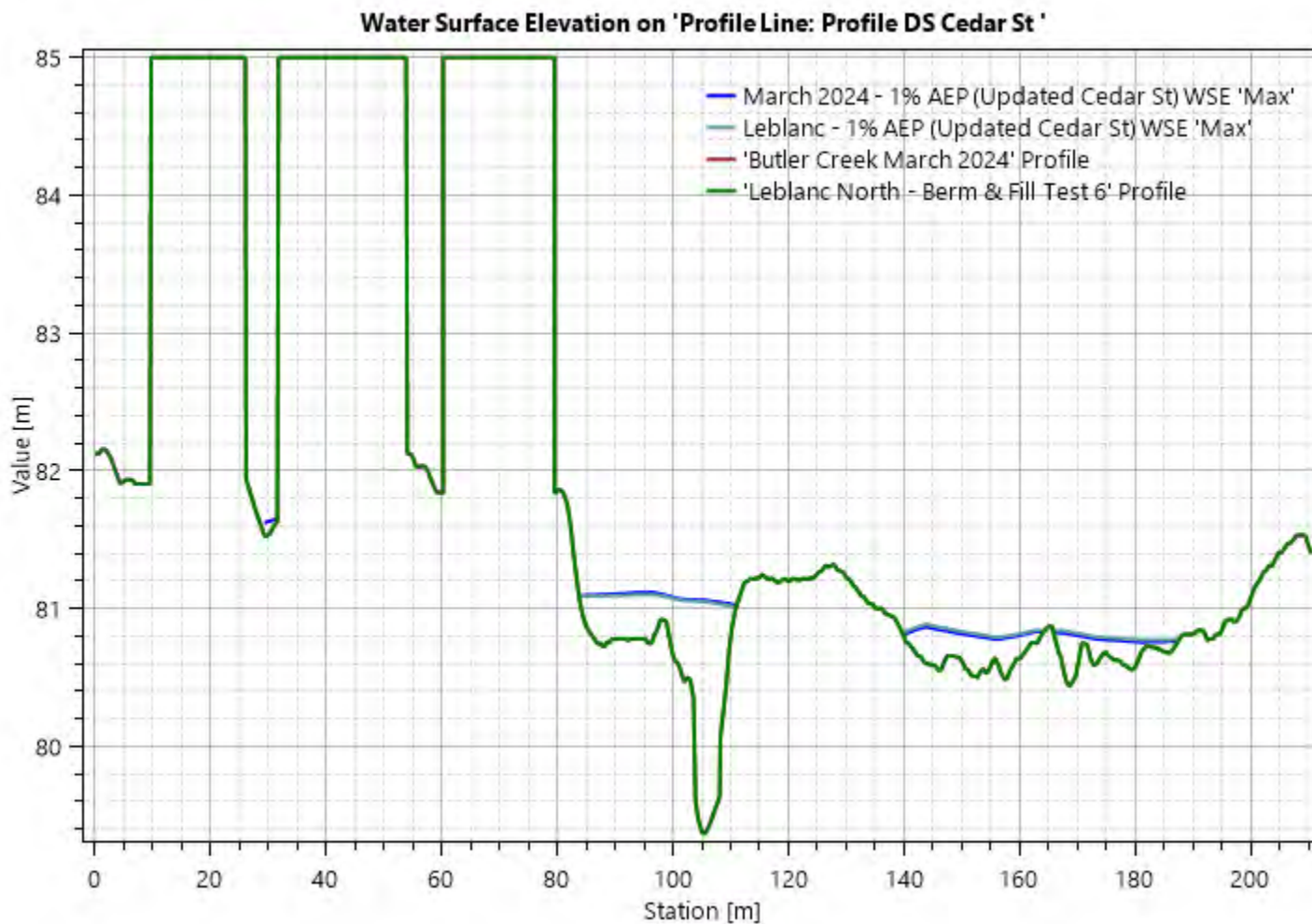
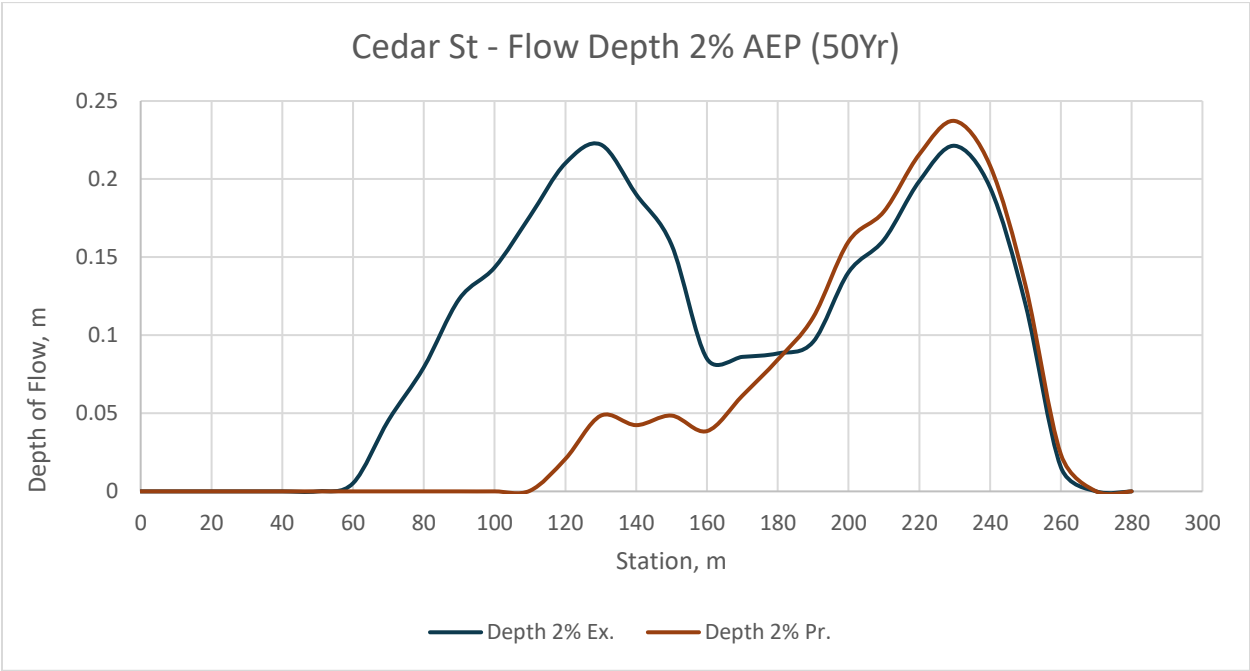
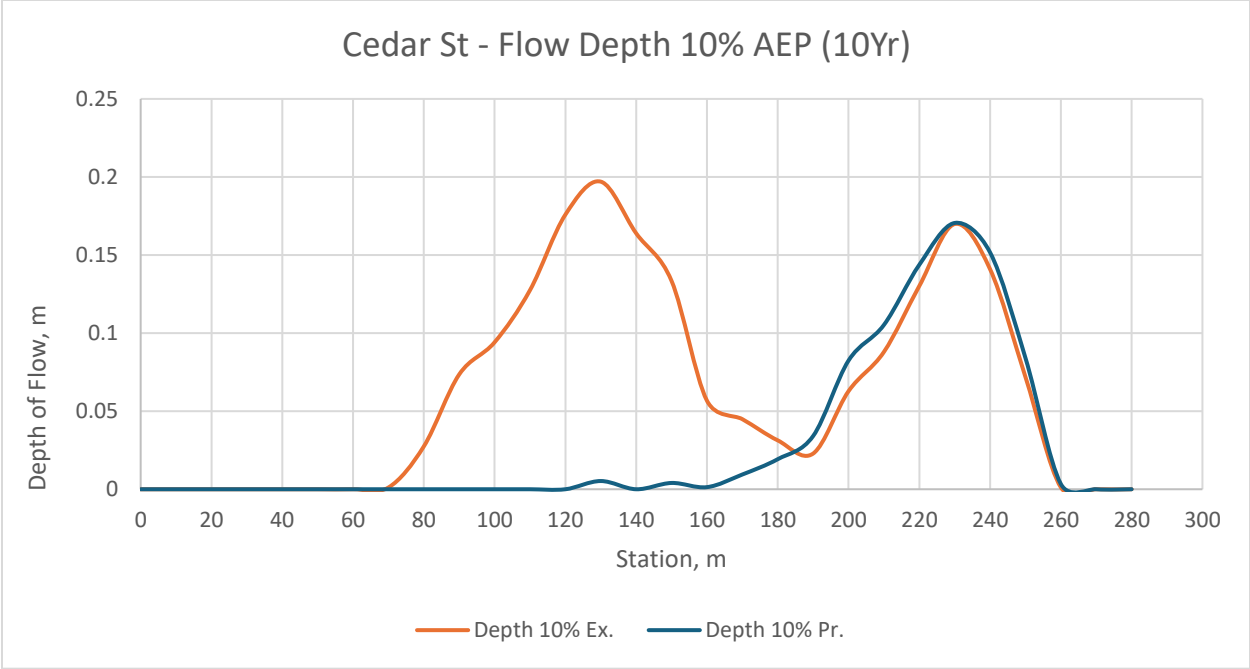


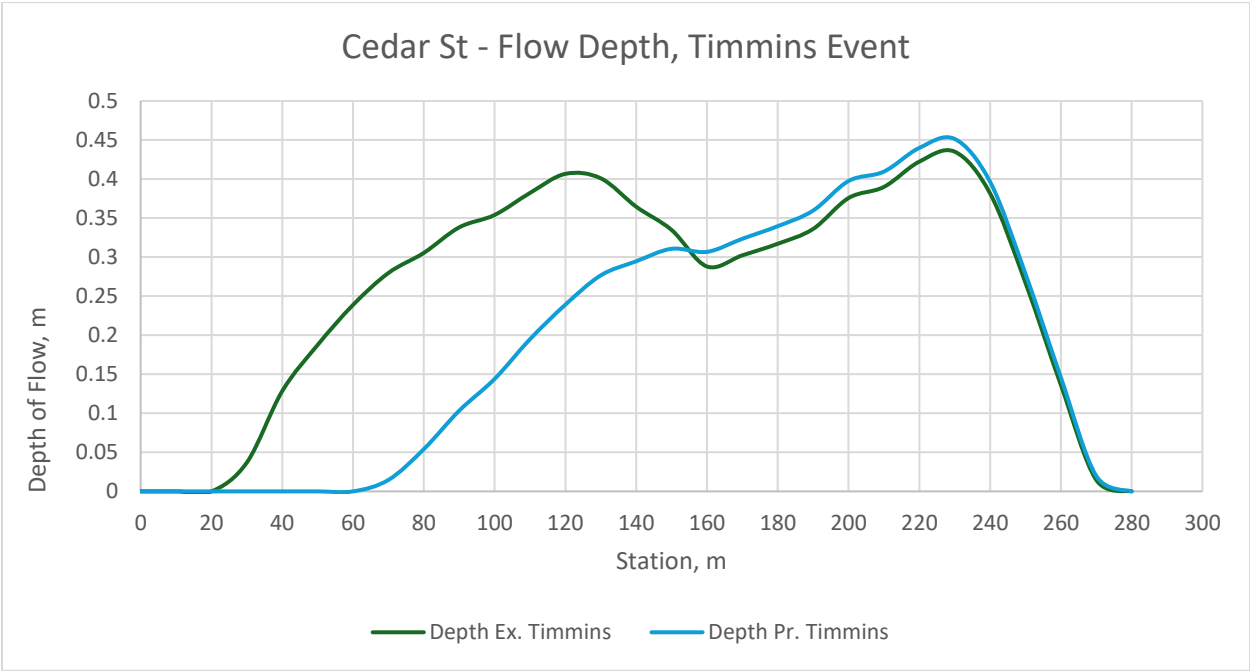
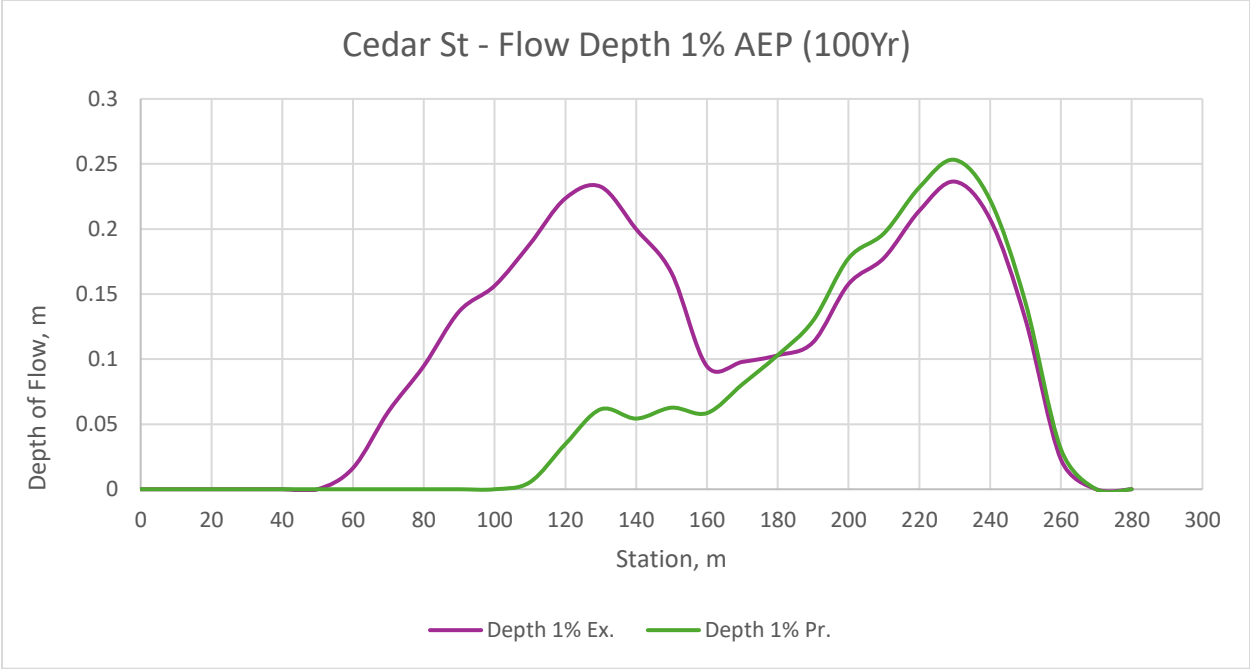
Table for Request #4:

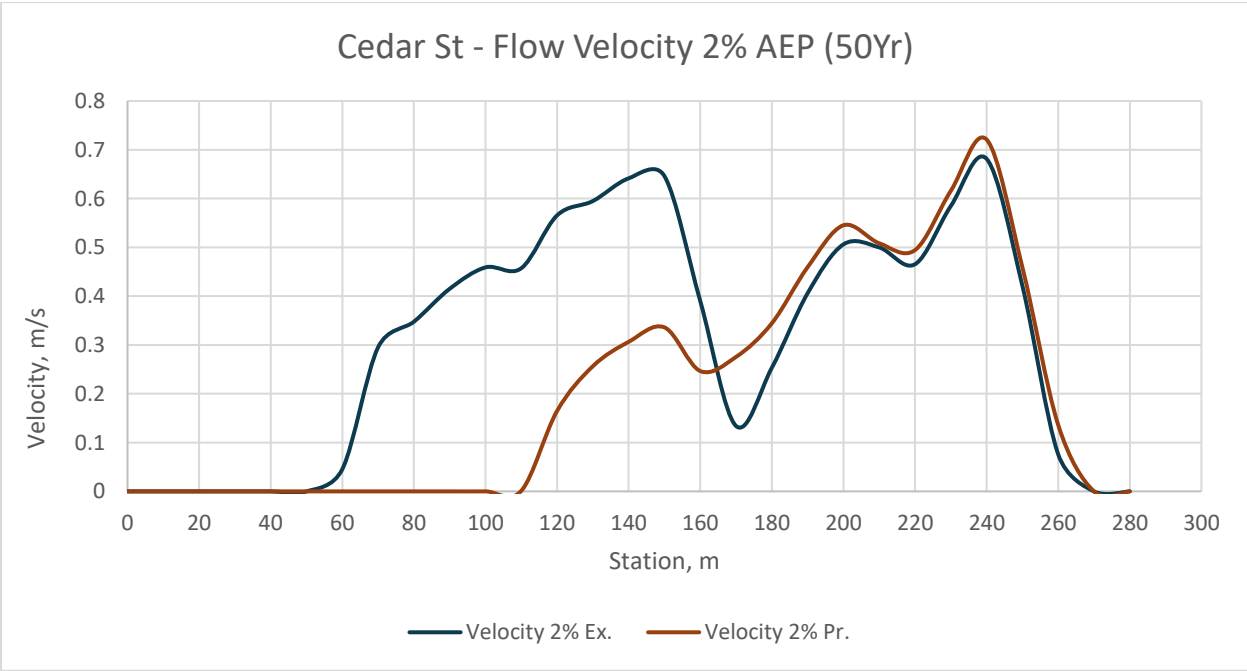
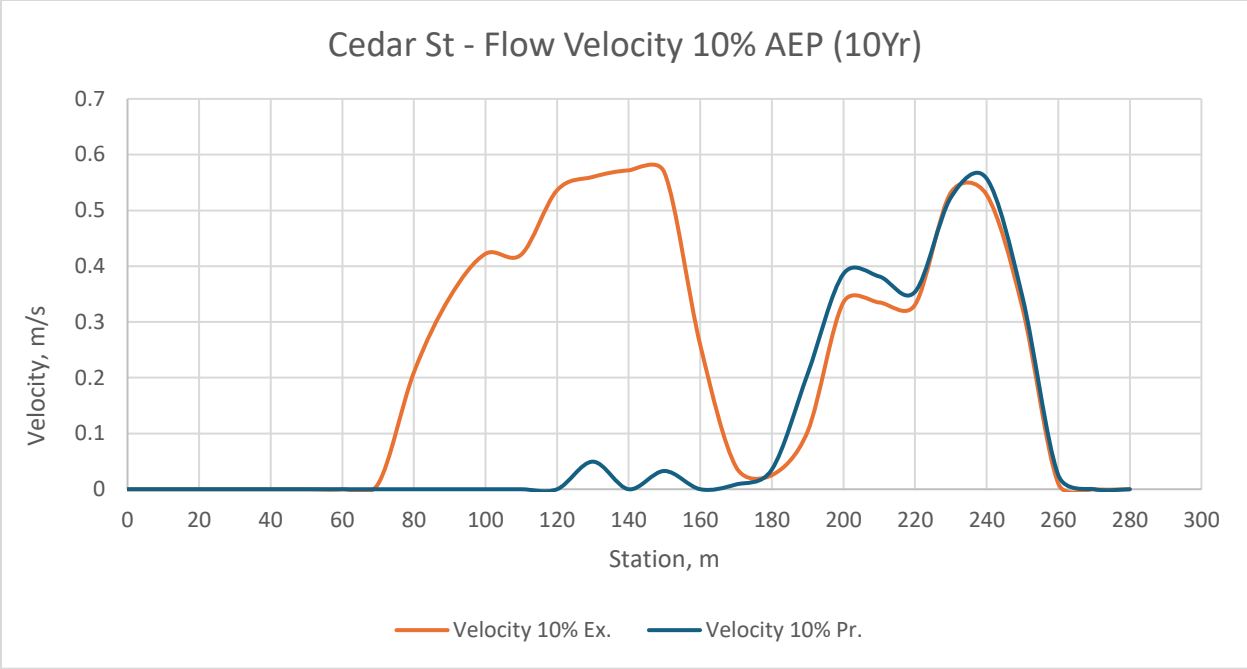
**Cedar Street:**

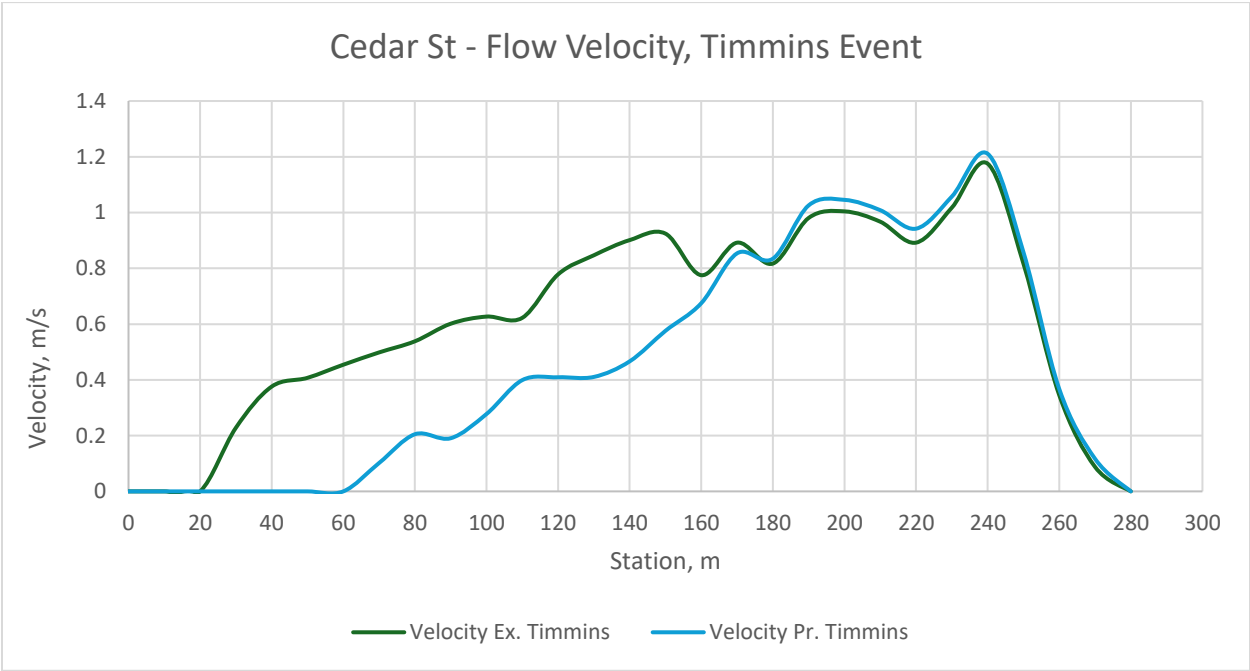
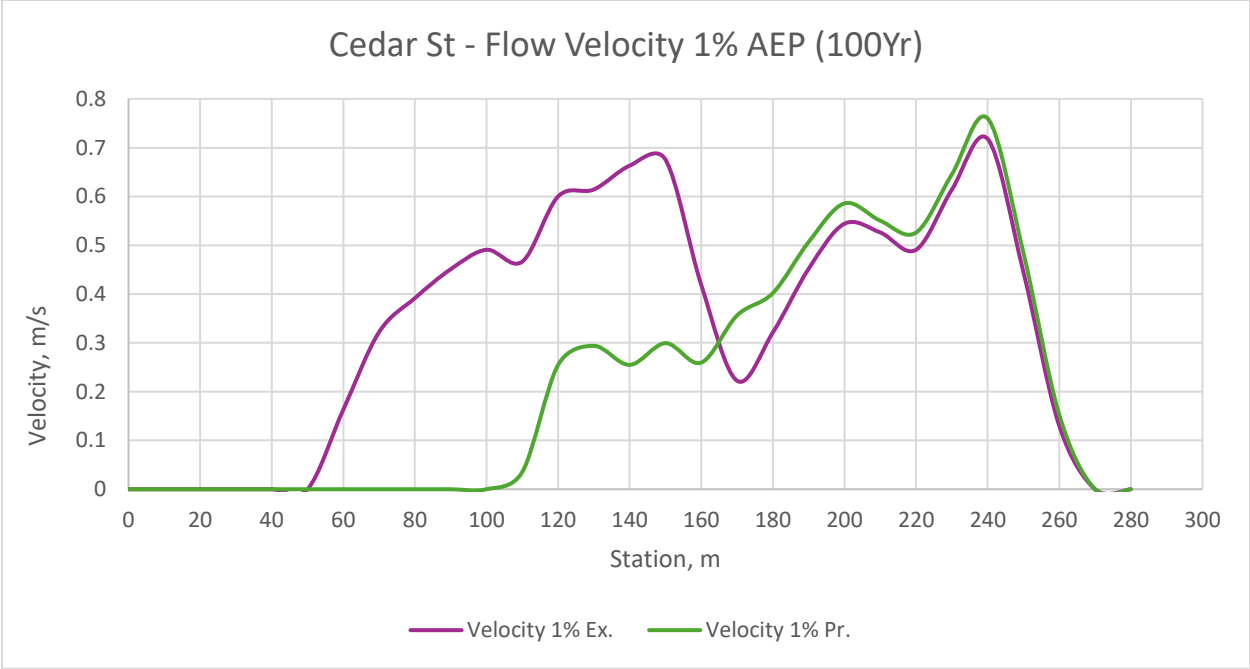
Storm	Max. Depth (m)				Max. Velocity (m/s)			Max. Depth*Velocity (m <sup>2</sup> /s)			
	Ex.	Pr.	Diff.	Check: < 0.3m	Ex.	Pr.	Diff.	Ex.	Pr.	Diff.	Check: < 0.8 m <sup>2</sup> /s
Timmins	0.44	0.45	0.0163	x	1.18	1.21	0.04	0.51	0.55	0.04	✓
100-Yr	0.24	0.25	0.0167	✓	0.72	0.76	0.04	0.17	0.19	0.02	✓
50-Yr	0.22	0.24	0.0151	✓	0.68	0.72	0.04	0.15	0.17	0.02	✓
10-Yr	0.20	0.17	-0.0265	✓	0.57	0.56	-0.01	0.11	0.10	-0.02	✓

**Figures for Request #4:**











**Appendix B:  
Fill Placement (Grading) Plan**

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11/11/2024

F:\IT\PROJECT FILES\IRFA PLANNING\LEBLANC ENTERPRISES - FLOOD MITIGATION\03. RECEIVED\BUTLER CREEK - PROPOSED FILL ELEVATIONS



**GENERAL NOTES:**

- ALL INFORMATION TO BE VERIFIED ON SITE PRIOR TO COMMENCING ANY WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT IMMEDIATELY.
- ALL UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL CONFIRM THE LOCATION ON SITE AND ASSUME ALL LIABILITY FOR DAMAGE TO ALL UTILITIES.
- EXCLUDING THE BENCHMARK AND DESCRIPTION PROVIDED FOR THIS PROJECT, NO OTHER ELEVATIONS ARE TO BE USED AS A REFERENCE ELEVATION FOR ANY PURPOSE.

**METRIC NOTE:**

- ALL DIMENSIONS SHOWN ARE IN METRES OR MILLIMETRES, UNLESS OTHERWISE NOTED.

**GEOMETRIC NOTE:**

- ALL SURVEY DATA SHOWN ON THIS DRAWING WAS RECORDED USING REAL-TIME KINETIC (RTK) GPS OBSERVATIONS IN REFERENCE TO UTM 18 NORTH COORDINATE SYSTEM.
- ALL ELEVATIONS ARE IN REFERENCE TO LOCAL DATUM NADS 3 - GEODETIC MODEL HTF.2 UNLESS DESCRIBED OTHERWISE.
- \*\* DRAWINGS ARE NOT TO BE SCALED \*\*

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	12/11/2024	FOR LTC PERMIT APPLICATION	JH

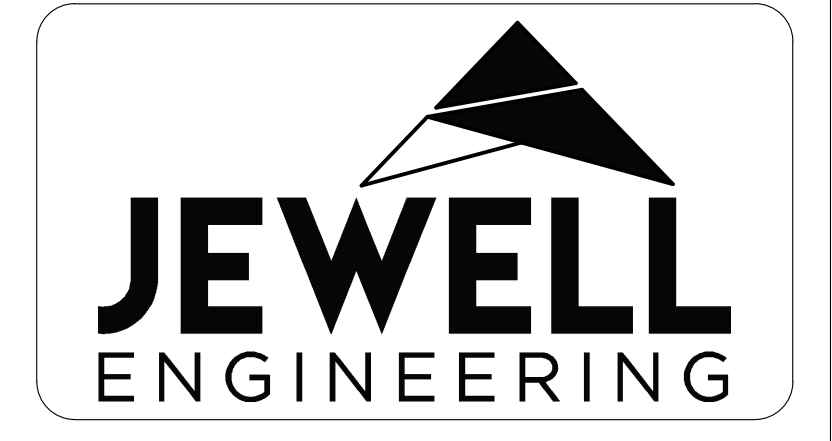
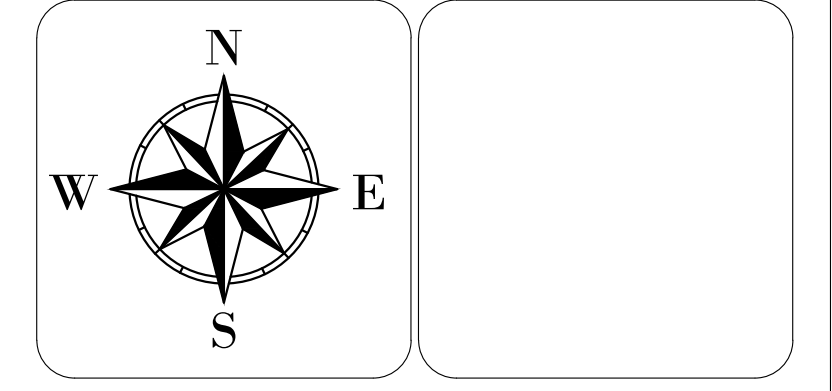
**LEGEND**

- 84.1 PROPOSED CONTOUR ELEVATION
- (83.27) PROPOSED SWALE INVERT ELEVATION
- 84.1 EXISTING ELEVATION
- LOT BOUNDARY

CONVEYANCE DITCH  
SCALE - N.T.S.

**NOTE:**  
THIS PLAN WAS PREPARED FOR THE SOLE PURPOSE OF THE CONSERVATION AUTHORITY PERMIT APPLICATION. JEWELL MAY PROVIDE A "ISSUED FOR CONSTRUCTION" DRAWING UPON REQUEST FROM THE OWNER AND/OR CONTRACTOR PRIOR TO THE WORKS TO ENSURE AN AGREED UPON BENCHMARK AND LOCAL DATUM ARE UTILIZED.

**DATUM NOTE:**  
ELEVATIONS PROVIDED ARE IN VERTICAL DATUM CGVD2013



LEBLANC ENTERPRISES  
FLOOD MITIGATION  
MUNICIPALITY OF BRIGHTON

PROPOSED FILL PLAN

DRAWN BY: JH	PROJECT NO:
DESIGNED BY:	DATE: December 2024
CHECKED BY: EF	SCALE: HORIZONTAL - 1:600 VERTICAL - N/A
APPROVED BY:	CONTRACT NO:      DRAWING NO: 1

**Appendix C:  
Sediment and Erosion Control Plan**

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12/12/2024

F:\IT\PROJECT FILES\IRFA PLANNING\LEBLANC ENTERPRISES - FLOOD MITIGATION\03. RECEIVED\BUTLER CREEK - SEDIMENT AND EROSION



### EROSION AND SEDIMENT CONTROL NOTES

1. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES TO PROVIDE THE PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE DURING CONSTRUCTION ACTIVITIES. THIS INCLUDES LIMITING THE AMOUNT OF EXPOSED SOIL AND INSTALLING SILT FENCES AND OTHER SEDIMENT TRAPS.
2. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING EROSION AND SEDIMENT CONTROL MEASURES ARE INSTALLED CORRECTLY.
3. HEAVY DUTY SILT FENCE BARRIER, USE OPSD 219.130.
4. FOR STRAW BALE FLOW CHECK DAM, USE OPSD 219.180.
5. FOR FIBER ROLL FLOW CHECK DAM, USE OPSD 219.191 AND 219.120.
6. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO DEVELOPMENT.
7. ALL APPROVED SEDIMENT AND EROSION CONTROL MEASURES ARE TO BE MONITORED REGULARLY AND MAINTAINED AS NECESSARY TO ENSURE GOOD WORKING ORDER, AND REMAIN IN PLACE UNTIL LANDSCAPING HAS BEEN ESTABLISHED.
8. IN THE EVENT THAT THE CONTROL MEASURES ARE DEEMED NOT TO BE PERFORMING ADEQUATELY, THE CONTRACTOR SHALL UNDERTAKE ADDITIONAL MEASURES AS APPROPRIATE TO THE SITUATION TO THE SATISFACTION OF THE OCA, PROJECT MANAGER AND/OR MUNICIPAL STAFF.
9. ANY DISTURBED AREA NOT SCHEDULED FOR FURTHER CONSTRUCTION WITHIN FORTY FIVE (45) DAYS WILL BE PROVIDED WITH A SUITABLE TEMPORARY MULCH AND SEED COVER WITHIN SEVEN (7) DAYS OF THE COMPLETION OF THAT PARTICULAR PHASE OF CONSTRUCTION.
10. ALL DISTURBED AREAS THAT WILL NOT BE FURTHER DISTURBED SHALL BE REVEGETATED WITH PERMANENT COVER IMMEDIATELY FOLLOWING COMPLETION OF CONSTRUCTION.
11. A MUD MAT IS TO BE INSTALLED PRIOR TO SITE WORKS AND MAINTAINED DURING CONSTRUCTION. IT MUST BE A MINIMUM OF 15m IN LENGTH AND MINIMUM 7m WIDE. THE PAD SHOULD BE A MINIMUM OF 400mm THICK. THE PAD SHOULD BE UNDERLAIN WITH A GEOTEXTILE (OR GRADED AGGREGATE FILTER) AND CONSIST OF 200mm DIAMETER ROUNDED STONE. REMOVE AT COMPLETION OF GRANULAR 'A' PLACEMENT.
12. EXISTING ROADWAYS ARE TO BE SWEEPED AND CLEANED FREQUENTLY TO PREVENT THE TRACKING OF MUD AND DEBRIS FROM SITE.
13. NO REFUELING OR CLEANING OF EQUIPMENT NEAR ANY EXISTING WATERWAYS.

**GENERAL NOTES:**

- ALL INFORMATION TO BE VERIFIED ON SITE PRIOR TO COMMENCING ANY WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT IMMEDIATELY.
- ALL UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL CONFIRM THE LOCATION ON SITE AND ASSUME ALL LIABILITY FOR DAMAGE TO ALL UTILITIES.
- EXCLUDING THE BENCHMARK AND DESCRIPTION PROVIDED FOR THIS PROJECT, NO OTHER ELEVATIONS ARE TO BE USED AS A REFERENCE ELEVATION FOR ANY PURPOSE.

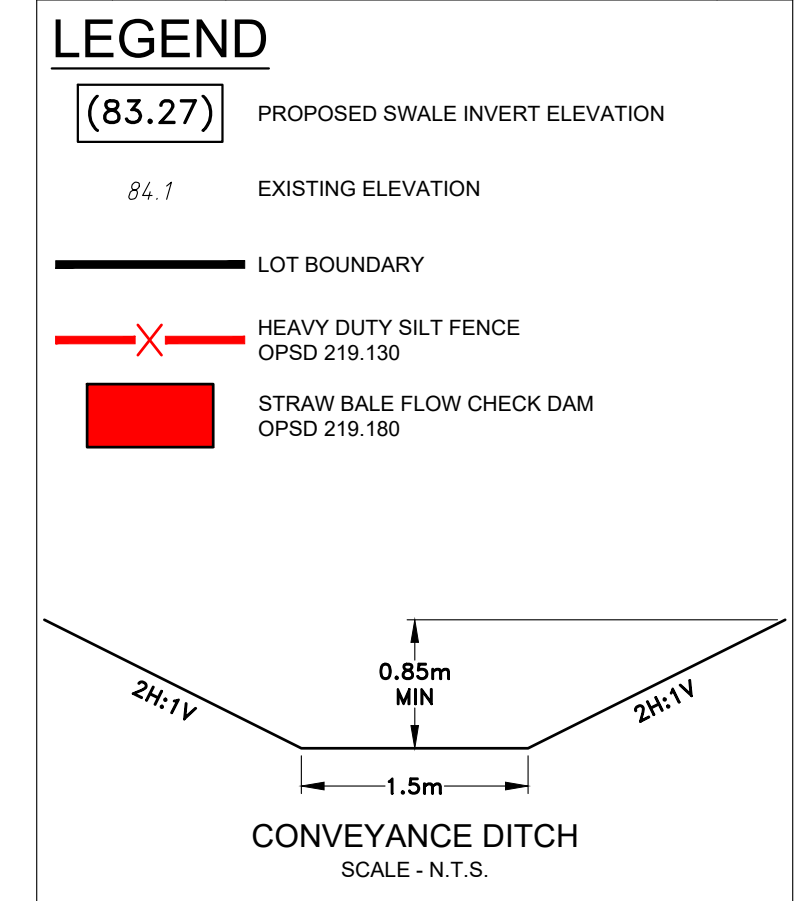
**METRIC NOTE:**

- ALL DIMENSIONS SHOWN ARE IN METRES OR MILLIMETRES, UNLESS OTHERWISE NOTED.

**GEOMETRIC NOTE:**

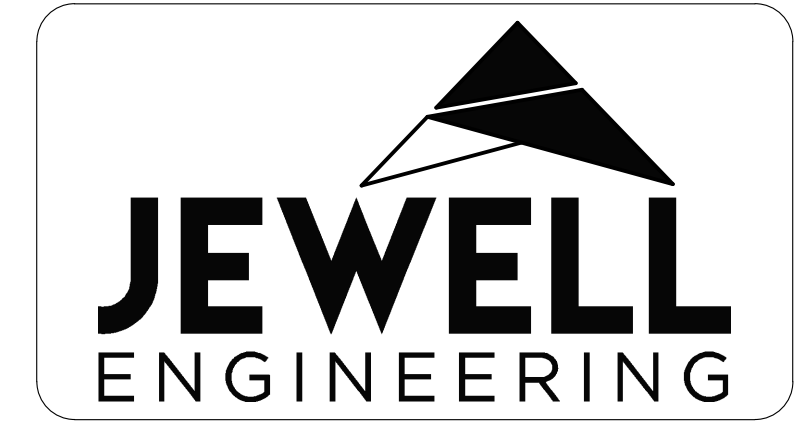
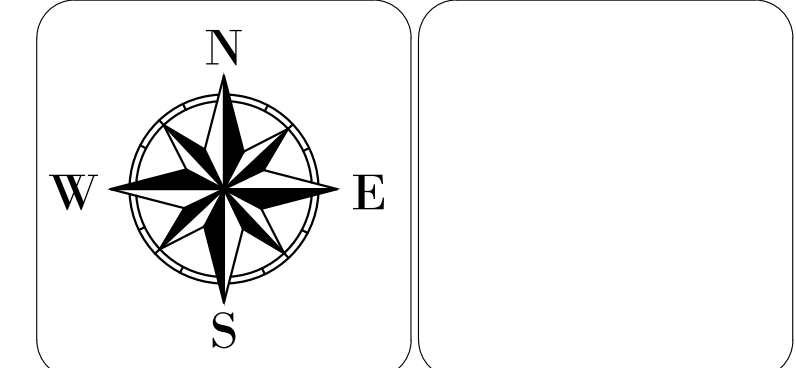
- ALL SURVEY DATA SHOWN ON THIS DRAWING WAS RECORDED USING REAL-TIME KINETIC (RTK) GPS OBSERVATIONS IN REFERENCE TO UTM 18 NORTH COORDINATE SYSTEM.
- ALL ELEVATIONS ARE IN REFERENCE TO LOCAL DATUM NADS 3 - GEODETIC MODEL HTF.2 UNLESS OTHERWISE NOTED.
- \*\* DRAWINGS ARE NOT TO BE SCALED \*\*

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	12/11/2024	FOR LTC PERMIT APPLICATION	JH



**NOTE:**  
THIS PLAN WAS PREPARED FOR THE SOLE PURPOSE OF THE CONSERVATION AUTHORITY PERMIT APPLICATION. JEWELL MAY PROVIDE A 'ISSUED FOR CONSTRUCTION' DRAWING UPON REQUEST FROM THE OWNER AND/OR CONTRACTOR PRIOR TO THE WORKS TO ENSURE AN AGREED UPON BENCHMARK AND LOCAL DATUM ARE UTILIZED.

**DATUM NOTE:**  
ELEVATIONS PROVIDED ARE IN VERTICAL DATUM CGVD2013



LEBLANC ENTERPRISES  
FLOOD MITIGATION  
MUNICIPALITY OF BRIGHTON

SEDIMENT AND EROSION PLAN

DRAWN BY: JH PROJECT NO:  
DESIGNED BY: DATE: December 2024  
CHECKED BY: EF SCALE: HORIZONTAL - 1:600 VERTICAL - N/A  
APPROVED BY: CONTRACT NO: DRAWING NO: 2

**Appendix D:**  
**Mannings Open Channel Flow Calculation for Propose Drainage Channel**

---

**Mannings - Open channel flow for Trapezoidal Weir**  
 $Q = 1/n AR^{2/3}S^{1/2}$

Desired Flow Capacity = **3.29** cms

**Channel Configuration**

Bottom Width	<b>1.5</b>	m
Side Slopes	<b>2</b>	:1
Slope	<b>0.005</b>	m/m
Roughness	<b>0.035</b>	(grass = 0.025, stone = 0.03)
Channel Depth	<b>0.85</b>	m


R = Hydraulic Radius = Area / Wetted Perimeter (m)  
P = Wetted Perimeter (m)  
A= Area (m<sup>2</sup>)

Assume Full Flow

A =	2.72	Length (m) =	20
P =	5.301316	Volume (m <sup>3</sup> ) =	54.4
R =	0.51308		
V = Channel Velocity (m/s) =	<b>1.295</b>		
Q = Channel Flow Capacity =	<b>3.52</b>	<b>cms</b>	

Cedar Street  
Brighton (C)  
Con 1, Lot 1


Legend

 O.Reg. 41/24 Screening Area


 Parcels


Water


 Stream

 Virtual Flow Connector


Wetlands (MNRF)


 Unevaluated wetland


 Evaluated wetland (PSW)

 Evaluated wetland (non-PSW)

Field Verified Wetland

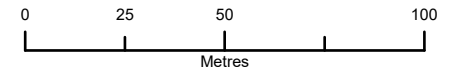
 Yes (Present)

 No (Not Present)

 Potential (Desktop ID)

Flood & Erosion Lines

 Floodlines



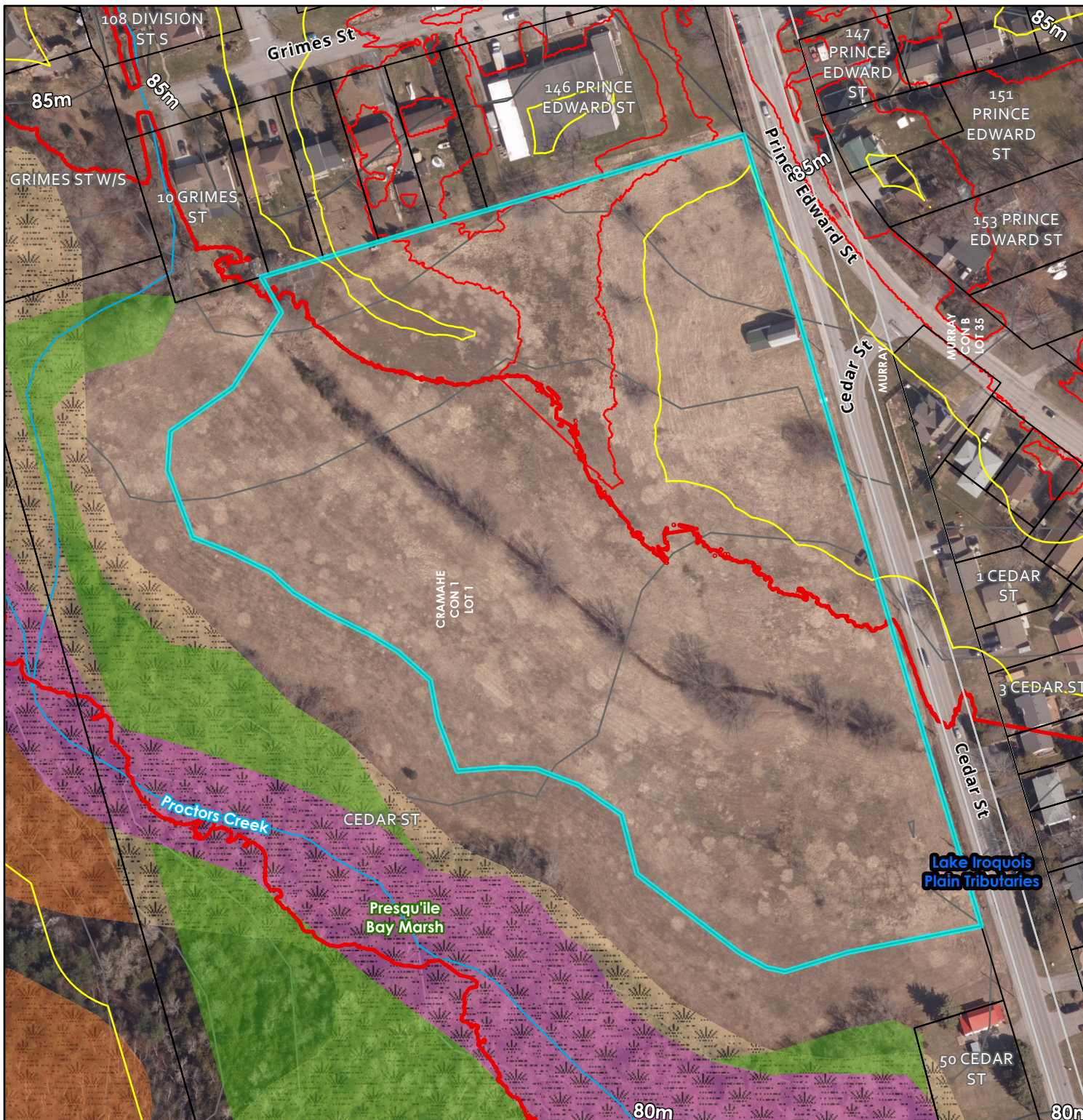
Map produced by Lower Trent Conservation

Includes material Copyright 2025 Queen's Printer for Ontario

Note: Property lines shown on this map are approximate only and may be an inaccurate representation of the legal property limits. A legal survey is required to define the legal property limits.



LOWER TRENT  
CONSERVATION





**Lower Trent Region  
Conservation Authority**

**Ontario Regulation 41/24  
Policy Document**

**Approved by  
Lower Trent Region Conservation Authority  
Board of Directors**

**June 13, 2024**



## 2 GENERAL POLICIES

### **Background:**

Lower Trent Region Conservation Authority (LTC) will be guided by the following general administrative guidance with respect to the implementation of its regulatory responsibilities:

- Development, interference and/or alteration activities shall not be undertaken in a regulated area without written permission from LTC.
- Where a regulated area pertains to more than one water-related hazard (e.g., lands susceptible to flooding that are part of a wetland), policies will be applied jointly, and where applicable, the more restrictive policies will apply.
- Technical studies and/or assessments, site plans and/or other plans submitted as part of an application for permission to undertake development, interference and/or alteration in a regulated area must be completed by a qualified professional to the satisfaction of LTC in conformity with the most current provincial technical guidelines or guidelines accepted by LTC through a Board Resolution.

Note: Information regarding technical standards and guidelines is contained within the Appendices.

Similar to the MNR recommended 6-metre erosion access allowance (Section 3.4, Technical Guide for River and Stream Systems: Erosion Hazard Limit, MNR), LTC recommends that a 6-metre access allowance is applied to all hazard lands. Note that emergency access is required along the hazard as well as between the buildings and the lot line to allow for heavy equipment access to the hazard area.

The guidelines for development within the 15 metre adjacent lands to a hazard include an access setback. Three main principles support the inclusion of an access setback:

- providing for emergency access to hazard areas;
- providing for construction access for regular maintenance and access to the site in the event of a natural hazard or failure of a structure; and
- providing protection against unforeseen or predicted external conditions which could have an adverse effect on the natural conditions or processes acting on or within a hazard prone area.

Activities in regulated areas that are carried out by other provincial ministries or the federal government do not require a permit. Activities conducted on provincial crown land by third-party proponents in a regulated area may require a permit, unless acting as an agent of the Crown.

Works for which permission is required under the Regulation may also be subject to other legislation, policies and standards that are administered by other agencies and municipalities, such as the *Planning Act*, *Public Lands Act*, *Nutrient Management Act*, *Drainage Act*, *Environmental Assessment Act* (EA Act) or the federal *Fisheries Act*, etc. It is the responsibility of the applicant (or applicant's agent) to ensure that all necessary approvals are obtained prior to undertaking any works for which a permit under this Regulation has been obtained.

### **LTC Policies – General Policies:**

Within areas defined by the regulation (i.e., regulated areas), including Lake Ontario shoreline hazard lands and an allowance, river or stream valleys and an allowance, wetlands or other areas where

development could interfere with the hydrologic function of a wetland (areas of interference), watercourses, or hazardous lands, the following general policies will apply:

- 1) Development, interference and/or alteration will not be permitted within a regulated area, except in accordance with the policies contained in this document.
- 2) Notwithstanding Policy 2 (1), the LTC Board of Directors, sitting as the Hearing Board, may grant permission for development, interference and/or alteration where the applicant provides evidence acceptable to the Board that documents that the development and/or activity will have no adverse effect on the control of flooding, erosion, dynamic beaches and unstable soils and bedrock with respect to Lake Ontario shoreline, river or stream valleys, hazardous land, wetlands, and areas of interference or will not result in an unacceptable interference with a watercourse or wetland.
- 3) In addition to specific conditions outlined through this document, development activities, interference and/or alteration within a regulated area may be permitted only where:
  - a) risk to public safety is not increased;
  - b) there is no increase in habitation in the hazard area with the exception of allowable flood fringes or wave uprush hazard areas;
  - c) susceptibility to natural hazards is not increased nor new hazards created (e.g., there will be no impacts on adjacent properties with respect to natural hazards);
  - d) safe ingress/egress is available for proposed development that increases habitation outside of hazard lands;
  - e) sedimentation and erosion during construction and post construction is minimized using best management practices including site, landscape, infrastructure and/or facility design, construction controls, and appropriate remedial measures;
  - f) access for emergency works and maintenance of flood or erosion control works is available;
  - g) proposed development is constructed, repaired and/or maintained in accordance with accepted engineering principles and approved engineering standards or to the satisfaction of LTC, whichever is applicable based on the structural scale and scope, and purpose of the project;
  - h) there are no adverse hydraulic or fluvial effects on rivers, creeks, streams, or watercourses;
  - i) there are no adverse sedimentation or littoral effects on the Lake Ontario shoreline;
  - j) there are no adverse effects on the hydrologic function of wetlands; and,
  - k) the control of flooding, erosion, dynamic beaches and unstable soils and bedrock is not adversely affected during and post development.

#### Prohibited Uses:

- 4) Notwithstanding the General Policies referenced above, in accordance with Section 3.1 of the Provincial Policy Statement, development will not be permitted within hazardous lands as defined in the *Conservation Authorities Act*, where the use is:
  - an institutional use associated with hospitals, nursing homes, pre-school, school nurseries, day care and schools, where there is a threat to the safe evacuation of the sick, the elderly, persons with disabilities or the young during an emergency as a result of flooding, failure of floodproofing and/or protection works, and/or erosion;
  - an essential emergency service such as that provided by fire, police and ambulance stations and electrical substations, which would be impaired during an emergency as result of flooding, failure of flood-proofing measures and/or protection works, and/or erosion; or,
  - uses associated with the disposal, manufacture, treatment or storage of hazardous substances.

## 5 HAZARDOUS LANDS

### 5.1 Conservation Authorities Act

The *Conservation Authorities Act* contains the following sections dealing with hazardous lands:

#### **Activities prohibited (Prohibited activities re watercourses, wetlands, etc.)**

“28 (1) No person shall carry on the following activities, or permit another person to carry on the following activities, in the area of jurisdiction of an authority: ...

2. Development activities in areas that are within the authority’s area of jurisdiction and are,
  - i. hazardous lands, ...

#### **Permits**

28.1 (1) An Authority may issue a permit to a person to engage in an activity specified in the permit that would otherwise be prohibited by s. 28, if, in the opinion of the authority,

- a) the activity is not likely to affect the control of flooding, erosion, dynamic beaches or unstable soil or bedrock; and
- b) the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property; ...

The permit shall be given in writing, with or without conditions.

### 5.2 Ontario Regulation 41/24

The following section indicates the extent of hazardous lands for the purpose of administering the Regulations. The Authority may grant a permit for development activity in or on Hazardous Lands subject to the tests or criteria in the *Conservation Authorities Act*. The Regulation contains the following definition for hazardous lands.

“**hazardous land**” means land that could be unsafe for development because of naturally occurring processes associated with flooding, erosion, dynamic beaches or unstable soil or bedrock.

Therefore, the following policies have been developed to deal with flooding, erosion, unstable soil and unstable bedrock. The dynamic beach hazards were identified in the Great Lakes section along with the flooding and erosion hazards for Great Lakes and Large Inland Lakes.

### 5.3 Policy Standards

The following sections outline the policy standards for LTC’s implementation of the *Conservation Authorities Act* and O. Reg. 41/24 with respect to hazardous lands including flood hazard lands, erosion hazard lands, unstable soil, and unstable bedrock. LTC, in their role through the planning process, should review planning applications to ensure that, in general, all development occurs outside the unstable soil and bedrock boundaries.

LTC may require technical studies be undertaken to demonstrate the suitability of development proposals. Technical studies should be carried out by a qualified professional, with recognized expertise in the appropriate discipline, and should be prepared using established procedures and recognized methodologies to the satisfaction of LTC.

### 5.3.1 Development within Flood Hazard Lands

#### 5.3.1.1 *Development within One-Zone Regulatory Floodplain of River or Stream Valleys (including inland lakes)*

##### **Background**

The following policies are focused on development within the One-Zone Regulatory floodplain. These policies do not apply to development within the allowance adjacent to the One-Zone Regulatory floodplain and the reader should refer to Section 4.2.2 for policies that apply to these areas.

##### **LTC Policies**

- 1) Development within the Regulatory floodplain shall not be permitted.
- 2) Placement of fill, flood hazard protection and/or bank stabilization works to allow for future/proposed development or an increase in development envelope within the Regulatory floodplain shall not be permitted.
- 3) Development associated with new and/or the expansion of existing trailer parks / campgrounds in the Regulatory floodplain shall not be permitted.
- 4) *Major development* within the Regulatory floodplain shall not be permitted.
- 5) Redevelopment of derelict and abandoned buildings within the Regulatory floodplain shall not be permitted.
- 6) Stormwater management facilities within the 100-year floodplain shall not be permitted.
- 7) Basements within the Regulatory floodplain shall not be permitted.
- 8) Underground parking within the Regulatory floodplain shall not be permitted.
- 9) Cut and fill operations will not be permitted within the One-Zone Regulatory floodplain.
- 10) Notwithstanding Section 5.3.1.1 1), public infrastructure (e.g. roads, sewers, flood and erosion control works) and various utilities (e.g. pipelines) may be permitted within the Regulatory floodplain subject to the activity being approved through a satisfactory Environmental Assessment process and/or if it has been demonstrated to the satisfaction of LTC that the control of flooding, erosion, dynamic beaches or unstable soil or bedrock will not be affected.
- 11) Notwithstanding Section 5.3.1.1 1), development associated with public parks (e.g. passive or low intensity outdoor recreation, education, or trail systems) may be permitted within the Regulatory floodplain if it has been demonstrated to the satisfaction of LTC that the control of flooding, erosion, dynamic beaches or unstable soil or bedrock will not be affected.

- 12) Notwithstanding Section 5.3.1.1 1), stream bank slope and valley stabilization to protect existing development and conservation or restoration projects may be permitted within the Regulatory floodplain subject to the activity being approved through a satisfactory Environmental Assessment process and/or if it has been demonstrated to the satisfaction of LTC that the control of flooding, erosion, dynamic beaches or unstable soil or bedrock will not be affected.
- 13) Notwithstanding Section 5.3.1.1 1), *moderate development and* structural repairs may be permitted within the Regulatory floodplain if it has been demonstrated to the satisfaction of LTC that the control of flooding, erosion, dynamic beaches or unstable soil or bedrock will not be affected. The submitted plans must demonstrate that:
- a) there is no feasible alternative site outside of the Regulatory floodplain for the proposed development or in the event that there is no feasible alternative site, that the proposed development is located in an area of least (and acceptable) risk;
  - b) the proposed works do not create new hazards or aggravate flooding on adjacent or other properties and there are no negative upstream and downstream hydraulic impacts;
  - c) the development is protected from the flood hazard in accordance with established floodproofing and protection techniques. Habitable development must be dry floodproofed to 0.3 metres above the Regulatory flood elevation and non-habitable development must be floodproofed to the Regulatory flood elevation;
  - d) the proposed development will not prevent access for emergency works, maintenance, and evacuation;
  - e) the potential for surficial erosion has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/restoration plans;
  - f) the control of flooding, erosion and dynamic beach hazards, and unstable soil and bedrock have been adequately addressed; and,
  - g) for any building where the depth of flooding exceeds 0.8 metres (2.5 ft) an engineering assessment and design carried out by a qualified professional with recognized expertise in the appropriate discipline must be prepared using established procedures and recognized methodologies to the satisfaction of LTC.
- 14) Notwithstanding Section 5.3.1.1 4), detached non-habitable accessory structures greater than 46 m<sup>2</sup> (500 ft<sup>2</sup>) may be permitted within the Regulatory floodplain if it has been demonstrated to the satisfaction of LTC that the control of flooding, erosion, dynamic beaches or unstable soil or bedrock will not be affected. The submitted plans must demonstrate that:
- a) there is no feasible alternative site outside of the Regulatory floodplain for the proposed development or in the event that there is no feasible alternative site, that the proposed development is located in an area of least (and acceptable) risk;

- b) the proposed works do not create new hazards or aggravate flooding on adjacent or other properties and there are no negative upstream and downstream hydraulic impacts;
  - c) the development is protected from the flood hazard in accordance with established floodproofing and protection techniques;
  - d) the proposed development will not prevent access for emergency works, maintenance, and evacuation;
  - e) the potential for surficial erosion has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/restoration plans;
  - f) the control of flooding, erosion and dynamic beach hazards, and unstable soil and bedrock have been adequately addressed; and,
  - g) an engineering assessment and design carried out by a qualified professional with recognized expertise in the appropriate discipline must be prepared using established procedures and recognized methodologies to the satisfaction of LTC.
- 15) Notwithstanding Section 5.3.1.1 4), construction of a second storey addition to a habitable building greater than 46 m<sup>2</sup> (500 ft<sup>2</sup>) may be permitted within the Regulatory floodplain if it has been demonstrated to the satisfaction of LTC that the control of flooding, erosion, dynamic beaches or unstable soil or bedrock will not be affected. Subsequent moderate development proposals as in Section 5.2.1.1 13) which increase the footprint of the structure would not be supported. The submitted plans must demonstrate that:
- a) The original footprint of the building is not increased;
  - b) Habitation is not increased for the entire building;
  - c) the entire building is protected from the flood hazard in accordance with established floodproofing and protection techniques with dry floodproofing to 0.3 metres above the Regulatory flood elevation;
  - d) the potential for surficial erosion has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/restoration plans;
  - e) for any building where the depth of flooding exceeds 0.8 metres (2.5 ft) an engineering assessment and design carried out by a qualified professional with recognized expertise in the appropriate discipline must be prepared using established procedures and recognized methodologies to the satisfaction of LTC.
- 16) Notwithstanding Section 5.3.1.1 1), development associated with existing uses located within the Regulatory floodplain such as marine facilities, in-ground (at existing grade) pools, *minor development*, landscaping retaining walls, grading, etc., may be permitted if it has been demonstrated to the satisfaction of LTC that the control of flooding, erosion, dynamic beaches or unstable soil or bedrock will not be affected.
- 17) Notwithstanding Section 5.3.1.1 1), development may be permitted for the reconstruction or relocation of a building within the Regulatory floodplain, provided that it has not been damaged or destroyed by flooding and if it has been demonstrated to the satisfaction of LTC

that the control of flooding, erosion, dynamic beaches or unstable soils or bedrock land will not be affected. The submitted plans must demonstrate that:

- a) the building or structure meets the criteria described in Policy 13) above;
- b) the building or structure must not be located closer to the hazard than the original building; and,
- c) the building or structure does not exceed the original floor space plus the allowable floor space for a *minor addition*. If the building or structure is enlarged, a future *minor addition* to the building or structure will not be considered.

18) Notwithstanding Section 5.3.1.1 1), development associated with the construction of a driveway or access way through the Regulatory floodplain in order to provide access to lands outside of the Regulatory floodplain may be permitted subject to the provision of safe access as identified in Section 1.8.3 and if it has been demonstrated to the satisfaction of LTC that there is no viable alternative outside of the regulated area and that the control of flooding, erosion, dynamic beaches or unstable soil or bedrock will not be affected.

19) Notwithstanding Section 5.3.1.1 1), removal or placement of *minor fill* and associated site grading may be permitted within the Regulatory floodplain if it has been demonstrated to the satisfaction of LTC that the control of flooding, erosion, dynamic beaches or unstable soils or bedrock will not be affected.

20) Notwithstanding Section 5.3.1.1 1), the replacement of sewage disposal systems may be permitted within the Regulatory floodplain if it does not require greater than 1 metre depth of *fill* and has been demonstrated to the satisfaction of LTC that the control of flooding, erosion, dynamic beaches or unstable soils or bedrock will not be affected. The replacement system should be located outside of the floodplain where possible, and only permitted within the floodplain subject to being located in the area of lowest risk.

21) Notwithstanding Section 5.3.1.1 1), parking areas may be permitted within the Regulatory floodplain if it has been demonstrated to the satisfaction of LTC that the control of flooding, erosion, dynamic beaches or unstable soils or bedrock will not be affected, and that safe pedestrian and vehicular access is achieved.

22) Notwithstanding Section 5.3.1.1 1), boathouses may be permitted within the Regulatory floodplain if it has been demonstrated to the satisfaction of LTC that the control of flooding, erosion, dynamic beaches or unstable soils or bedrock will not be affected, and an engineered design may be required for wet flood proofing.

[REDACTED]

[REDACTED]

[REDACTED]

## 9 GLOSSARY

**100 Year Flood Event Standard:** That flood, based on an analysis of precipitation, snow melt, or a combination thereof, having a return period of 100 years on average, or having a 1% chance of occurring or being exceeded in any given year.

**Alteration to a Waterway:** the act whereby the channel of a watercourse is altered in some manner. Examples of an alteration include, but are not limited to, the following: channelization, full or partial diversions, retaining walls, revetments, bridges, culverts, pipeline crossings erosion protection measures, construction of storm sewer outlets and agricultural tile drain outlets.

**Apparent (confined) river and stream valley:** Ones in which the physical presence of a valley corridor containing a river or stream channel, which may or may not contain flowing water, is visibly discernible (i.e., valley walls are clearly definable) from the surrounding landscape by either field investigations, aerial photography and/or map interpretation. The location of the river or stream channel may be located at the base of the valley slope, in close proximity to the toe of the valley slope (i.e., within 15 metres), or removed from the toe of the valley slope (i.e., greater than 15 metres)."

**Area of interference:** Those lands where development could interfere with the hydrologic function of a wetland.

**Armour:** Artificial surfacing of bed, banks, shores, or embankments to resist scour or erosion.

**Authority:** The Lower Trent Region Conservation Authority, a corporate body established under the *Conservation Authorities Act* (RSO 1990).

**Basement:** One or more storeys of a building located below the first storey (Building Code).

**Breakwall/Breakwater:** An object (especially a groyne or pier) resisting force of waves.

**Boathouse:** Structure meant for storage of water craft and associated boating equipment located on or within 6 metres of a navigable waterway. The boathouse must be anchored and is to be constructed as a single storey with no habitable space. The boathouse is considered a detached accessory structure and it must be wet floodproofed with openings on two sides to allow the flow of water through and no electrical services to be located less than 0.3 metres above the flood elevation.

**Channel:** The area of a watercourse carrying normal flows within the banks.

**Crawl Space:** A Crawl space must be:

(a) less than 1500 mm high between the lowest part of the floor assembly and the ground or other surface below, and

(b) not used for any occupancy.

**Development activity:** a) the construction, reconstruction, erection or placing of a building or structure of any kind, b) any change to a building or structure that would have the effect of altering the use or potential use of the building or structure, increasing the size of the building or structure or increasing the number of dwelling units in the building or structure, c) site grading, or d) the temporary or permanent placing, dumping or removal of any material, originating on the site or elsewhere.



**Diversion:** The process whereby streamflow is directed from the original channel of the watercourse and returned to the original channel at another point on the watercourse. Diversions may be full or partial re-direction of the streamflow. A diversion may also be the redirecting of flow from the channel of one watercourse to the channel of another watercourse.

**Dwelling unit:** One or more habitable rooms, occupied or capable of being occupied as an independent and separate housekeeping establishment, in which separate kitchen and sanitary facilities are provided for the exclusive use of the occupants.

**Dyke (dike):** An embankment or wall, usually along a watercourse or floodplain, to prevent overflow on to adjacent land.

**Dynamic Beach:** That portion of the shoreline where accumulated unconsolidated sediment continuously moves as a result of naturally occurring processes associated with wind and water and changes in the rate of sediment supply.

**Dynamic Beach Hazard:** Areas of inherently unstable accumulations of shoreline sediments along the Great Lakes – St. Lawrence River System and large inland lakes, as identified by provincial standards, as amended from time to time. The dynamic beach hazard limit consists of the flooding hazard limit plus a dynamic beach allowance.

**Erosion:** Continual loss of earth material (i.e., soil or sediment) over time as a result of the influence of water or wind.

**Erosion Hazard:** The loss of land, due to human or natural processes, that poses a threat to life and property. The erosion hazard limit is determined using considerations that include the 100-year erosion rate (the average annual rate of recession extended over a one-hundred-year time span) and an allowance for slope stability and an erosion/erosion access allowance.

**Fill:** Earth, sand, gravel, topsoil, building materials, rubble, rubbish, garbage, or any other material whether similar to or different from any of the aforementioned materials, whether originating on the site or elsewhere, used or capable of being used to raise, lower or in any way affect or alter the contours of the ground.

**Flooding Hazard:** The inundation, under the conditions specified below, of areas adjacent to a shoreline or a river or stream system and not ordinarily covered by water:

- a) along the shorelines of the Great Lakes - St. Lawrence River System and large inland lakes, the flooding hazard limit is based on the one-hundred-year flood level plus an allowance for wave uprush and other water related hazards;
- b) along river, stream and small inland lake systems, the flooding hazard limit is the greater of:
  - a. the flood resulting from the rainfall actually experienced during a major storm such as the Hurricane Hazel storm (1954) or the Timmins storm (1961), transposed over a specific watershed and combined with the local conditions, where evidence suggests that the storm event could have potentially occurred over watersheds in the general area;
  - b. the one-hundred-year flood; and

- c. a flood which is greater than 1. or 2. which was actually experienced in a particular watershed or portion thereof as a result of ice jams and which has been approved as the standard for that specific area by the Minister of Natural Resources and Forestry;

except where the use of the one-hundred-year flood or the actually experienced event has been approved by the Minister of Natural Resources and Forestry as the standard for a specific watershed (where the past history of flooding supports the lowering of the standard).

**Flood Line:** An engineered line delineating the potential extent of flooding.

**Floodplain:** The area, usually low lands, adjoining a watercourse which has been or may be covered by water.

**Floodproofing:** A combination of structural changes and/or adjustments incorporated into the basic design and/or construction or alteration of individual buildings, structures, or properties subject to flooding so as to reduce or eliminate flood damages.

**Floodway:** The channel of a watercourse and the inner portion of the floodplain where flood depths and velocities are generally higher than those experienced in the flood fringe. The floodway represents that area required for the safe passage of flood flow and/or that area where flood depths and/or velocities are considered to be such that they pose a potential threat to life and/or property damage.

**Groyne:** A structure extending from the shore to prevent erosion and arrest sand movement along a shoreline.

**Habitable:** Suitable to live in or on; that can be inhabited. Inhabit means to dwell in, occupy.

**Habitation:** is measured by the number of bedrooms within a dwelling unit.

**Hazardous Land:** Property or lands that could be unsafe for development due to naturally occurring processes associated with flooding, erosion dynamic beaches or unstable soil or bedrock.

**Hydric Soil:** Soil that, in its undrained condition, is saturated, flooded, or ponded long enough during the growing season to develop an anaerobic condition that supports the growth and regeneration of hydrophytic vegetation.

**Hydrologic Function:** The functions of the hydrological cycle that include the occurrence, circulation, distribution, and chemical and physical properties of water on the surface of the land, in the soil and underlying rocks, and in the atmosphere, and water's interaction with the environment including its relation to living things.

**Inert Fill:** Earth or rock fill, or material of a similar nature that contains no putrescible materials or soluble or decomposable chemical substances.

**Ingress/egress:** The ability to access a property or residence by land.

**Interference in any way** (CO Interpretation): Any anthropogenic act or instance which hinders, disrupts, degrades, or impedes in any way the natural features or hydrologic and ecologic functions of a wetland or watercourse.

**Jetty:** A structure that projects from the land out into water.

**Large Inland Lakes:** Waterbody that has a surface area equal to or greater than 100 square kilometers where there is no measurable or predictable response to a single runoff event.

**Major Development:** New structures, additions, or restorations greater than 46 square metres (500 square feet).

**Major Stabilization Work:** stabilization works that have been approved through a satisfactory Environmental Assessment process and/or if it has been demonstrated to the satisfaction of LTC through a detailed engineering design that the control of flooding, erosion, dynamic beaches or unstable soil or bedrock will not be affected.

**Minor Addition:** An addition to an existing structure that does not exceed 46 square metres (500 square feet) and shall not result in an increase in the number of dwelling units. Attached covered structures including decks and garages will be considered habitable space. All new floor space shall be considered when determining the additional floor space including all storeys.

**Minor Alteration:** Alteration of a watercourse not exceeding 20 square metres (215 square feet).

**Minor Development:** A small addition to an existing building or accessory building that does not exceed 15 square metres (160 square feet) and does not increase number of dwelling units in a hazard land. Uncovered decks less than 23 square metres (250 square feet) are also considered minor development.

**Minor Fill:** A volumetric amount of fill not exceeding 20 cubic metres (26 cubic yards).

**Moderate Development:** *Minor additions*, detached accessory buildings and above ground pools that do not exceed 46 square metres (500 square feet). Uncovered decks larger than 23 square metres (250 square feet) are also considered moderate development. All moderate development (excluding uncovered decks) will be considered cumulative and will not exceed the 46 square metres (500 square feet). If cumulative moderate development exceeds 46 square metres (500 square feet) *major development* definitions apply.

**Moderate Stabilization Work:** stabilization works for banks/bluffs two metres or less in height and placement of appropriately sized stone a volumetric amount equivalent of up to one cubic metre per one linear metre of shoreline or stream bank if it has been demonstrated to the satisfaction of LTC that the control of flooding, erosion, dynamic beaches or unstable soil or bedrock will not be affected.

**Non-Habitable:** Detached structure not intended for dwelling in (i.e. garage, uncovered deck, picnic shelter, sun shelter, gazebo, pergola, boathouse)

**Not Apparent (unconfined) river and stream valleys:** Valleys in which a river or stream is present but there is no discernible valley slope or bank that can be detected from the surrounding landscape. For the most part, unconfined systems are found in fairly flat or gently rolling landscapes and may be located within the headwater areas of drainage basins. The river or stream channels contain either perennial (i.e., year round) or ephemeral (i.e., seasonal or intermittent) flow and range in channel configuration from seepage and natural channels to detectable channels.

**Offsetting:** Measures that are undertaken to counterbalance unavoidable impacts to the ecosystem. Offsetting should be identified through an Environmental Impact Study and considered only when all other options have been deemed not feasible.

**One Zone Concept:** An approach whereby the entire floodplain, as defined by the regulatory flood, is treated as one unit, and all development is prohibited or restricted.

**Regulated Lands:** The area within which development, interference and alteration activities are regulated by the Conservation Authority.

**Regulatory floodplain:** See definition of flooding hazard

**Retaining Wall:** A vertical structure designed to resist the lateral pressure of soil and water behind it.

**Revetment:** A vertical or inclined facing of rip-rap or other material protecting a soil surface from erosion.

**Rip-rap:** A layer of stone to prevent the erosion of soil.

**Routine permit applications:** are activities that are documented through another approval process (DART Protocol) or are determined to have limited impacts on the control of flooding, erosion, dynamic beaches, or unstable soil or bedrock (i.e. non-habitable buildings and structures that are less than 10 m<sup>2</sup> in size).

**Rubble:** Waste fragments of stone, brick etc. from old houses; pieces of undressed stone used especially as backfill for walls; loose angular stones; water worn stones.

**Scour:** Local lowering of a streambed by the erosive action of flowing water.

**Sedimentation:** The deposition of detached soil particles.

**Sewage Disposal System:** A system which contains the entire sewage envelope, including both primary and secondary beds, mantle, septic tanks, and reserve areas, as per the requirements of the Ontario *Building Code Act* or the Ministry of the Environment and Climate Change.

**Significant Wetland:** An area identified as provincially significant by the Ministry of Natural Resources and Forestry using evaluation procedures established by the Province, as amended from time to time.

**Static water level:** The 100 year peak or flood level with a one chance in one hundred of occurring in any given year, without the influences of wave uprush, seiche, ship-generated waves, ice-piling, or other water-related hazards

**Storey:** The portion of a building;

- a) that is situated between the top of any floor and the top of the floor next above it, or
- a) that is situated between the top of the floor and the ceiling above the floor, if there is no floor above it.

**Surficial erosion:** The physical removal, detachment, and movement of soil at the ground surface due to water or wind.

**Structure:** Any material, object or work erected either as a unit or constructed or assembled of connected or dependant parts or elements, whether located under, on, and/or above the surface of the ground.

**Top-of-bank:** The point at which the slope of a valley or shoreline meets the horizontal plain of the adjacent table-land.

**Two Zone Floodway-Flood Fringe Concept:** An approach whereby certain areas of the floodplain are considered to be less hazardous than others such that development potentially could occur. The flood fringe defines that portion of the floodplain where development may be permitted, subject to appropriate floodproofing. The floodway defines that portion of the floodplain wherein development is limited. This concept is only implemented after a comprehensive study to evaluate implications has been completed.

**Watercourse:** means a defined channel, having a bed and banks or sides, in which a flow of water regularly or continuously occurs.

**Watershed:** An area that is drained by a river and its tributaries.

**Wetland:** Lands that are seasonally or permanently covered by shallow water, as well as lands where the water table is close to or at the surface. In either case the presence of abundant water has caused the formation of hydric soils and has favoured the dominance of either hydrophytic plants or water tolerant plants. The four major types of wetlands are swamps, marshes, bogs and fens. Periodically soaked or wet lands being used for agricultural purposes which no longer exhibit wetland characteristics are not considered to be wetlands for the purposes of this definition.

*Note: Additional definitions may be found in the MNRF Technical Guidelines, Natural Heritage Guidelines and the Provincial Policy Statement under the Planning Act.*



714 Murray Street, R.R. 1, Trenton, Ontario K8V 0N1

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Registered Charitable Organization No. 107646598RR0001

February 7, 2025

LTC File: **RP-24-232**

Property Owner: Leblanc Enterprises

Email to: [al@leblanchomes.com](mailto:al@leblanchomes.com)

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Re: Vacant Lot on Cedar Street (ARN: 140810806018102000), Municipality of Brighton, Northumberland County Concession 1, Lot 1, Geographic Township of Cramahe

Application for permission to undertake development pursuant to Part VI of the *Conservation Authorities Act* and Ontario Regulation 41/24: Prohibited Activities, Exemptions and Permits

### **LTC Staff Cannot Grant Approval**

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Dear Applicants,

Lower Trent Region Conservation Authority (LTRCA) received the above noted application to undergo the required site preparation to support future development including the placement of approximately 31,000 m<sup>3</sup> of engineered fill material, excavation of an existing deteriorated berm and construction of a drainage channel to convey the potential Arena Creek spill on the subject lands within an area that is regulated by LTRCA under Ontario Regulation 41/24 and Part VI of the *Conservation Authorities Act*. Staff have reviewed the applications and the property information available on record including, but not limited to provincial mapping, aerial and satellite imagery and supplementary documents provided as part of the permit submission (i.e., engineering report completed by Jewell Engineering Inc., dated December 19, 2024).

In 2024, LTRCA updated the Regulation Policy Document with respect to Ontario Regulation 41/24. The full Ontario Regulation 41/24 Policy Document, with all appendices, can be viewed on the LTRCA website at this link: <https://ltc.on.ca/planning-permits/policies-guidelines/>. Please note that Sections 5.3.1 *Development within Flood Hazards* is the applicable section of the Policy Document for the proposed development on this property.

According to our review of the development proposal with consideration for the policies contained within the applicable sections noted above, we can confirm that the proposed development is in direct conflict with the following policies:

#### **5.3.1 Development within Flood Hazard Lands**

##### **5.3.1.1 Development within One-Zone Regulatory Floodplain of River or Stream Valleys (including inland lakes)**

- 1) Development within the Regulatory floodplain shall not be permitted.
- 2) Placement of fill, flood hazard protection and/or bank stabilization works to allow for future/proposed development or an increase in development envelope within the Regulatory floodplain shall not be permitted.
- 4) Major development within the Regulatory floodplain shall not be permitted.

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The policies contained in the document represent thresholds and guidelines that have been approved by the LTRCA Board of Directors to enable designated staff to approve permit applications. It is our opinion that the proposed development does not comply with the above noted policies and therefore, staff approval cannot be granted.

Based on the above noted information, there are two options available for you to proceed with your application:

- You may review the information above and withdraw your application for permission under Ontario Regulation 41/24; or,
- You may request a Hearing before the Board as you have a right to a hearing where staff are recommending refusal of the application.

If you intend to proceed with the second bulleted option above the next available date for a Hearing is **March 13, 2025**. However, an alternate date may be scheduled by the Board of Directors. Please confirm **in writing** by **February 14, 2025** which of the above-noted options you would prefer so that the necessary arrangements can be made. Please note that the LTC Hearing Guidelines have been attached with this letter for your information.

We look forward to hearing back from you on your chosen option. If you require further assistance, please do not hesitate to contact me at 613-394-3915 ext. 224.

Sincerely,



Gage Comeau, M. Sc. Provincial Offences Officer  
Manager, Watershed Management, Planning and Regulations  
Lower Trent Conservation

Encl: Appendix F – Hearing Guidelines



714 Murray Street, R.R. 1, Trenton, Ontario K8V 0N1

■ Tel: 613-394-4829 ■ Fax: 613-394-5226 ■ Website: [www.ltc.on.ca](http://www.ltc.on.ca) ■ Email: [information@ltc.on.ca](mailto:information@ltc.on.ca)

Registered Charitable Organization No. 107646598RR0001

February 14, 2025

LTC File No.: **RP-24-232**

**Property Owner:** Leblanc Enterprises  
Email to: [al@leblanchomes.com](mailto:al@leblanchomes.com)

**Agent:** Elliott Fledderus  
Jewell Engineering Inc.  
Email to: [elliott@jewelleng.ca](mailto:elliott@jewelleng.ca)

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### NOTICE OF HEARING

#### IN THE MATTER OF

The Conservation Authorities Act, R.S.O. 1990, Chapter 27

**AND IN THE MATTER OF** an application by **JEWELL ENGINEERING INC** for **LEBLANC ENTERPRISES**

**FOR THE PERMISSION OF THE CONSERVATION AUTHORITY**

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Pursuant to Regulations made under Section 28.1, Subsection 5 of the said Act

**TAKE NOTICE THAT** a Hearing before the Full Board of the Lower Trent Region Conservation Authority will be held under Section 28.1, Subsection 5 of the Conservation Authorities Act at the offices of the said Authority located at 714 Murray Street, RR #1 Trenton, Ontario K8V 0N1 at the hour of **1:00 p.m., on the 17<sup>th</sup> of March, 2025** with respect to the application by **JEWELL ENGINEERING INC. for LEBLANC ENTERPRISES** to permit development activities within an area regulated by the Authority in order to ensure there are no adverse effects on ***the control of flooding and erosion as a result of development in the Butler and Arena Creek floodplain and within 30-metres from an identified wetland area (i.e., field verified wetland feature)***. Specifically, this hearing is to request permission to undergo the required site preparation to support future development including the placement of approximately 31,000 m3 of engineered fill material, excavation of an existing deteriorated berm and construction of a drainage channel to convey the potential Arena Creek spill in the Municipality of Brighton, Northumberland County, Geographic Township of Cramahe, Part of Lot 1, Concession 1, on a vacant property on Cedar Street (ARN: 140810806018102000).

**TAKE NOTICE THAT** you are invited to make a delegation and submit supporting written material to the Hearing Board for the meeting of **March 17, 2025**. If you intend to appear, please contact Gage Comeau, Manager, Watershed Management, Planning and Regulations with notice and confirmation. Written material will be required by **February 28, 2025**, to enable the Hearing Board members to review the material prior to the meeting.

**TAKE NOTICE THAT** this hearing is governed by the provisions of the *Statutory Powers Procedure Act*. Under the Act, a witness is automatically afforded a protection that is similar to the protection of the Ontario Evidence Act.

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This means that the evidence that a witness gives may not be used in subsequent civil proceedings or in prosecutions against the witness under a Provincial Statute. It does not relieve the witness of the obligation of this oath since matters of perjury are not affected by the automatic affording of the protection. The significance is that the legislation is Provincial and cannot affect Federal matters. If a witness requires the protection of the Canada Evidence Act that protection must be obtained in the usual manner. The Ontario Statute requires the tribunal to draw this matter to the attention of the witness, as this tribunal has no knowledge of the effect of any evidence that a witness may give.

**AND FURTHER TAKE NOTICE** that if you do not attend at this Hearing, the Hearing Board of the Conservation Authority may proceed in your absence, and you will not be entitled to any further notice in the proceedings.

**DATED** the 14<sup>th</sup> Day of February, 2025.

The Board of Directors of the Lower Trent Region Conservation Authority

Per: Rhonda Bateman

CAO/ Secretary-Treasurer (Signing Authority):

  
Rhonda T. Bateman



**LOWER TRENT**  
CONSERVATION

**APPENDIX F**

**HEARING GUIDELINES**

**May 31, 2024**

## TABLE OF CONTENTS

<b>F-1. PURPOSE OF HEARING GUIDELINES:</b>	<b>1</b>
F-1.1 Hearing Guideline Updates	1
F-1.2 Additional Hearing Considerations – 2021	1
<b>F-2. PRE-HEARING PROCEDURES</b>	<b>2</b>
F-2.1 Role of the Hearing Board	2
F-2.2 Application	2
F-2.3 Notice of Hearing	3
F-2.4 Pre-submission of Reports	3
F-2.5 Hearing Information	4
<b>F-3. HEARING</b>	<b>4</b>
F-3.1 Public Hearing	4
F-3.2 Hearing Participants	4
F-3.3 Attendance of Hearing Board Members	4
F-3.4 Adjournments	4
F-3.5 Orders and Directions	4
F-3.6 Information Presented at Hearings	4
F-3.7 Conduct of Hearing	5
F-3.7.1 Record of Attending Hearing Board Members	5
F-3.7.2 Opening Remarks	5
F-3.7.3 Presentation of Authority Staff Information	5
F-3.7.4 Presentation of Applicant Information	6
F-3.7.5 Questions	6
F-3.7.6 Deliberation	6
<b>F-4. DECISION</b>	<b>6</b>
F-4.1 Notice of Decision	7
F-4.2 Adoption	7
<b>F-5. RECORD</b>	<b>7</b>
<b>F-6. HEARINGS UNDER SECTION 28.1.2 CAA</b>	<b>7</b>

## Appendices:

Appendix F-1: Notice of Hearing – Section 28.1 (5)

Appendix F-2: Hearing Procedures

Appendix F-3: Chair’s Remarks When Dealing with Hearing with respect to Part VI of the Conservation Authorities Act and Ontario Regulation 41/24.

Appendix F-4: Notice of Decision – Hearing Pursuant to Section 28.1 (7))

Appendix F-5: Notice of Decision – Hearing Pursuant to Section 28.1 (7)) (with permit)

Appendix F-6: Notice of Hearing - Section 28.1.2 (7)

Appendix F-7: Chair’s Remarks When Dealing with Section 28.1.2 (7)

### Revision Notes:

May 12, 2016 – Original Hearing Guidelines – Approved by Board (Resolution G67/16)

Revision 1: April 13, 2017 – Clarifications and Consistency Updates (Resolution G44/17)

Revision 2: November 16, 2018 – Admin Updates

Revision 3: March 26, 2021 – Include Electronic Hearings (Resolution G51/21)

Revision 4: February 10, 2022 – MZO Hearings and OLT Reference (Resolution G20/22)

Revision 5: May 31, 2024 Update to reflect changes to the Act and addition of Ontario Regulation 41/24

## F-1. PURPOSE OF HEARING GUIDELINES:

The Conservation Authorities Act requires that the applicant be provided with an opportunity for a hearing by the local Conservation Authority Board, or Executive Committee (sitting as a Hearing Board) as the case may be, for an application to be refused or approved with contentious conditions. Further, a permit may be refused if, in the opinion of the Authority, the proposal adversely affects the control of flooding, erosion, dynamic beaches, unstable soils or bedrock. The Hearing Board is empowered by law to make a decision, governed by the *Statutory Powers Procedures Act (SPPA)*.

The Hearing Rules are adopted under the authority of Section 25.1 of the *Statutory Powers Procedures Act (SPPA)*. The SPPA applies to the exercise of a statutory power of decision where there is a requirement to hold or to afford the parties to the proceeding an opportunity for a hearing before making a decision. The SPPA sets out minimum procedural requirements governing such hearings and provides rule-making authority for to establish rules to govern such proceedings.

The Hearing Board shall hear and decide whether the application will be approved with or without conditions or refused. In the case of hearings related to applications submitted purposed to Section 28.1.2, the Hearing Board shall determine what conditions, if any, will be attached to the permission. See Section F-6 for further details.

These guidelines have been prepared as an update to previous hearing guidelines and are intended to provide a step-by-step process to conducting hearings required under Section 28.1 (5), (7) of the Conservation Authorities Act. It is expected that hearings meet the legal requirements of the *Statutory Powers Procedures Act* without being unduly legalistic or intimidating to the participants. Additional considerations have been included related to hearings under Section 28.1.2 (7) in Section F-6 of this document.

### F-1.1 Hearing Guideline Updates

Note that these Guidelines have been revised based on changes in legislation to incorporate various considerations as noted below:

- Revised in May 2018 - Housekeeping amendments made reflecting changes to appeal process as a result of the *Building Better Communities and Conserving Watersheds Act, 2017* and subsequent *Order in Council*. Note: changes to appeal process are no longer valid.
- Revised in March 2021 - Amendments made to incorporate the use of electronic hearings.
- Revised in February 2022 - Amendments made to incorporate hearings under 28.0.1 (now changed to 28.1.2 as of April 1, 2024) and update references to the Ontario Land Tribunal (OLT).
- Revised in May 2024 – Amendments made to incorporate changes to the Conservation Authorities Act, removal of O.Reg. 163/06 and implementation of O.Reg. 41/24

### F-1.2 Additional Hearing Considerations – 2021

With the passage of *Bill 229, Protect, Support and Recover from COVID-19 Act (Budget Measures), 2020*, a new section of the Conservation Authorities Act came into force. Section 28.0.1 (Permission for development, zoning order) applies to applications for permission submitted to an Authority where a zoning order has been made by the Minister of Municipal Affairs and Housing authorizing the proposed

development project. While the Act outlines that the Authority must issue these permissions, an Authority has the ability to attach conditions to the permission. In the case of these applications for permission, applicants must be given the opportunity for a hearing before the Authority, prior to conditions being attached. As noted above, Section 28.0.1 has been changed to 28.1.2 within the updated Conservation Authorities Act as of April 1, 2024.

As such, hearings under section 28.1.2 of the Act differ from those under section 28, in that the intent of the hearing is not to determine whether or not to issue a permission, but rather, to finalize the conditions of a permission. The purpose of the interim update to the Hearing Guidelines is to incorporate direction for hearings under section 28.1.2 of the Conservation Authorities Act in Section G-6 of this document.

Further, with the passage of Bill 245, Accelerating Access to Justice Act, 2021, on June 1st, 2021 the Local Planning Appeal Tribunal, Environmental Review Tribunal, Board of Negotiation, Conservation Review Board and Mining and Lands Tribunal were merged into a new single tribunal called the Ontario Land Tribunal (OLT). Amendments have been throughout the Hearing Guidelines to update references to the Mining and Lands Tribunal to now reference the Ontario Land Tribunal.

## F-2. PRE-HEARING PROCEDURES

### F-2.1 Role of the Hearing Board

In considering the application, the Hearing Board is acting as a decision-making tribunal. The tribunal is to act fairly. Under general principles of administrative law relating to the duty of fairness, the tribunal is obliged not only to avoid any bias but also to avoid the appearance or reasonable apprehension of bias. The following are three examples of steps to be taken to avoid apprehension of bias where it is likely to arise.

- a) No member of the Authority taking part in the hearing should have prior involvement with the application that could lead to a reasonable apprehension of bias on the part of that member. Where a member has a personal interest, the test is whether a reasonable well-informed person would consider that the interest might have an influence on the exercise of the official's public duty. Where a member is a municipal councillor, the *Municipal Conflict of Interest Act* applies. In the case of preciously expressed opinion, the test is that of an open mind, i.e. is the member capable of persuasion in participating in the decision making.
- b) If material relating to the merits of an application that is the subject of a Hearing is distributed to Board members before the Hearing, the material should be distributed to the applicant. The applicant may be afforded an opportunity to distribute similar pre-hearing material. These materials can be distributed to the applicable parties electronically.
- c) The applicant will be given an opportunity to attend the Hearing before a decision is made; however, the applicant does not have to be present for a decision to be made.

### F-2.2 Application

An applicant has the right to a hearing when:

- staff are recommending refusal of a permit application because it doesn't comply with the

- approved policies;
- or
- the applicant objects to the conditions of approval.

The applicant is entitled to reasonable notice of the hearing pursuant to the *Statutory Powers Procedures Act*.

### F-2.3 Notice of Hearing

The Notice of Hearing shall be sent to the applicant within sufficient time to allow the applicant to prepare for the hearing. To ensure that reasonable notice is given, it is recommended that prior to sending the Notice of Hearing, the applicant be consulted to determine an agreeable date and time based on the local Conservation Authority's regular meeting schedule.

The Notice of Hearing must contain the following:

- a) Reference to the applicable legislation under which the hearing is to be held (i.e., the Conservation Authorities Act)
- b) The date, time, place and the purpose of the hearing, or for electronic hearings: the time, purpose of the hearing, and details about the manner in which the hearing will be held. Note: for electronic hearings the Notice must also contain a statement that the applicant should notify the Authority if they believe holding the hearing electronically is likely to cause them significant prejudice. The Authority shall assume the applicant has no objection to the electronic hearing if no such notification is received.
- c) Particulars to identify the applicant, property and the nature of the application which are the subject of the hearing. Note: If the applicant is not the landowner but the prospective owner, the applicant must have written authorization from the registered landowner.
- d) The reasons for the proposed refusal or conditions of approval shall be specifically stated. This should contain sufficient detail to enable the applicant to understand the issues so they can be adequately prepared for the hearing. It is sufficient to reference in the Notice of Hearing that the recommendation for refusal or conditions of approval is based on the reasons outlined in previous correspondence or a hearing report that will follow.
- e) A statement notifying the applicant that the hearing may proceed in the applicant's absence and that the applicant will not be entitled to any further notice of the proceedings. Except in extreme circumstances, it is recommended that the hearing not proceed in the absence of the applicant.
- f) Reminder that the applicant is entitled to be represented at the hearing by a representative such as legal counsel, if desired. The Conservation Authority may be represented at the Hearing by counsel and/or staff.
- g) A copy of the Authority's Hearing Guidelines.

It is recommended that the Notice of Hearing be directed to the applicant and/or landowner by registered mail or other method where confirmation of delivery can be verified.

Refer to **Appendix F-1** for an example **Notice of Hearing**.

### F-2.4 Pre-submission of Reports

It is the practice of the Lower Trent Region Conservation Authority to submit reports to the Board

members in advance of the hearing (i.e., inclusion on an Authority Agenda) and the applicant will be provided with the same opportunity. The applicant will be given reasonable time to prepare a report once the reasons for the staff recommendations have been received. Subsequently, this may affect the timing and scheduling of the staff hearing reports. The applicant will be required to provide sufficient copies of this report for inclusion in the Agenda.

### F-2.5 Hearing Information

Prior to the hearing, the applicant should be advised of the local Conservation Authority's hearing procedures. (a copy of this document should be provided with the staff report).

## F-3. HEARING

### F-3.1 Public Hearing

Pursuant to the *Statutory Powers Procedure Act*, hearings, including electronic hearings, are required to be held in public. For electronic hearings, public attendance should be synchronous with the hearing. The exception is in very rare cases where public interest in public hearings is outweighed by the fact that intimate financial, personal or other matters would be disclosed at hearings.

### F-3.2 Hearing Participants

The Conservation Authorities Act does not provide for third party status at the Hearing. The Hearing however is open to the public. Any information provided by third parties should be incorporated within the presentation of information by, or on behalf of, the applicant or Authority staff as appropriate.

### F-3.3 Attendance of Hearing Board Members

In accordance with case law relating to the conduct of hearings, those members of the Authority who will decide whether to grant or refuse the application must be present during the full course of the hearing. If it is necessary for a member to leave, the remaining members can continue with the Hearing and render a decision.

### F-3.4 Adjournments

The Board may adjourn a hearing on its own motion or that of the applicant or Authority staff where it is satisfied that an adjournment is necessary for an adequate hearing to be held. Any adjournments form part of the hearing record.

### F-3.5 Orders and Directions

The Authority is entitled to make orders or directions to maintain order and prevent the abuse of its hearing processes. A hearing procedures example has been included as **Appendix F-2**.

### F-3.6 Information Presented at Hearings

a) The *Statutory Powers Procedure Act* requires that a witness be informed of their right to object



pursuant to the *Canada Evidence Act*. The *Canada Evidence Act* indicates that a witness shall not be excused from answering questions on the basis that the answer may be incriminating. Further, answers provided during the hearing are not admissible against the witness in any criminal trial or proceeding. This information should be provided to the applicant as part of the Notice of Hearing.

- b) It is the decision of the hearing members as to whether information is presented under oath or affirmation. It is not a legal requirement. The applicant must be informed of the above, prior to or at the start of the hearing.
- c) The Board may authorize receiving a copy rather than the original document. However, the Board can request certified copies of the document if required.
- d) Privileged information, such as solicitor/client correspondence, cannot be heard.
- e) Information that is not directly within the knowledge of the speaker (hearsay), if relevant to the issues of the hearing, can be heard.
- f) The Board may take into account matters of common knowledge such as geographic or historic facts, times measures, weights, etc. or generally recognized scientific or technical facts, information or opinions within its specialized knowledge without hearing specific information to establish their truth.

## F-3.7 Conduct of Hearing

### F-3.7.1 Record of Attending Hearing Board Members

A record should be made of the members of the Hearing Board.

### F-3.7.2 Opening Remarks

The Hearing Board Chair should convene the hearing with opening remarks which; identify the applicant, the nature of the application, and the property location; outline the hearing procedures; and advise on requirements of the *Canada Evidence Act*. Please reference **Appendix G-3** for the Opening Remarks Template. In an electronic hearing, all the parties and members of the Hearing Board must be able to clearly hear one another and any witnesses throughout the hearing.

### F-3.7.3 Presentation of Authority Staff Information

Staff of the Authority presents the reasons supporting the recommendation for the refusal or conditions of approval of the application. Any reports, documents or plans that form part of the presentation should be properly indexed and received.

Staff of the Authority should not submit new technical information at the Hearing as the applicant will not have had time to review and provide a professional opinion to the Hearing Board.

Consideration should be given to the designation of one staff member or legal counsel who coordinates the presentation of information on behalf of Authority staff and who asks questions on behalf of Authority staff.

### F-3.7.4 Presentation of Applicant Information

The applicant has the opportunity to present information at the conclusion of the Authority staff presentation. Any reports, documents or plans which form part of the submission should be properly indexed and received.

The applicant shall present information as it applies to the permit application in question. For instance, does the requested activity affect the control of flooding, erosion, dynamic beaches, unstable soils or bedrock? The hearing does not address the merits of the activity or appropriateness of such a use in terms of planning.

- The applicant may be represented by legal counsel or agent, if desired.
- The applicant may present information to the Board and/or have invited advisors to present information to the Board.
- The applicant's presentation may include technical witnesses, such as an engineer, ecologist, hydro-geologist etc.

The applicant should not submit new technical information at the hearing as the Staff of the Authority will not have had time to review and provide a professional opinion to the Hearing Board.

### F-3.7.5 Questions

Members of the Hearing Board may direct questions to each speaker as the information is being heard. The applicant and/or agent can make any comments or questions on the staff report. Staff will be given an opportunity to respond to questions posed by either the Board or the applicant. Staff may also rebut comments or pose questions to the applicant at this time.

Pursuant to the *Statutory Powers Procedure Act*, the Board can limit questioning where it is satisfied that there has been full and fair disclosure of the facts presented. Please note that the courts have been particularly sensitive to the issue of limiting questions and there is a tendency to allow limiting of questions only where it has clearly gone beyond reasonable or proper bounds.

### F-3.7.6 Deliberation

After all the information is presented, the Board may adjourn the hearing and retire in private to confer. The Board may reconvene on the same date or at some later date to advise the applicant of the Board's decision. The Board members should not discuss the hearing with others prior to the decision of the Board being finalized.

## F-4. DECISION

The applicant must receive written notice of the decision. The applicant should be informed of the right to appeal the decision within 15 days to the Minister and/or 90 days upon receipt of the written decision to the Ontario Land Tribunal.

It is important that the hearing participants have a clear understanding of why the application was

refused or approved. The Board should itemize and record information of particular significance which led to their decision.

### F-4.1 Notice of Decision

The decision notice should include the following information:

- a) The identification of the applicant, property and the nature of the application that was the subject of the hearing.
- b) The decision to refuse or approve the application. A copy of the Hearing Board resolution should be attached.

It is recommended that the written Notice of Decision be forwarded to the applicant by registered mail or other method where confirmation of delivery can be verified.

A sample Notice of Decision and cover letter has been included as **Appendix F-4**. Note that if the decision of the Board is to approve the application, the written notice of decision can be included as part of the Permit Cover Letter. An example of Permission Granted through Hearing has been included as **Appendix F-5**.

### F-4.2 Adoption

A resolution advising of the Board's decision and particulars of the decision should be adopted.

## F-5. RECORD

The Authority shall compile a record of the hearing. In the event of an appeal, a copy of the record should be forwarded to the Ontario Land Tribunal. The record must include the following:

- a) The application for the permit.
- b) The Notice of Hearing.
- c) Any orders made by the Board (e.g. for adjournments).
- d) All information received by the Board.
- e) Attendance of Hearing Board members.
- f) The transcript/minutes, if one exists, of the oral presentations made at the hearing.
- g) The decision and reasons for decision of the Board.
- h) The Notice of Decision sent to the applicant.

## F-6. HEARINGS UNDER SECTION 28.0.1 CAA

Section 28.1.2 of the Conservation Authorities Act came into force with the Royal Assent of *Bill 229, Protect, Support and Recover from COVID-19 Act (Budget Measures), 2020*. This section applies to any application submitted to an authority under a regulation made under Section 28 of the Act for permission to carry out all or part of a development project associated with an approved Minister's Zoning Order (MZO). For such applications, an Authority must grant permission to the applicant to carry out the activity, provided an MZO has been made by the Minister of Municipal Affairs and Housing, and provided that the authority's regulated area in which the development activity is proposed to take place

## APPENDIX F – HEARING GUIDELINES

is not located in the Greenbelt Area designated under section 2 of the Greenbelt Act. A permission which is granted under s.28.1.2 may be subject to conditions as prescribed by the issuing Authority.

Understanding that an Authority must grant permission for applications submitted pursuant to an approved MZO (pending the above-noted conditions are met), hearings for these applications differ from those under Section 28(12) of the Act, in that a hearing cannot be held to determine if a permission should be refused. The Authority may refuse to grant a permit only if i) a zoning order has not been made to authorize the development project, ii) the project is proposed to be carried out in the Greenbelt Area, and iii) if all other prescribed requirements have not been satisfied. Per s.28.1.2 (7) of the Act, the applicant for a permission will be given the opportunity to be heard by the Authority prior to any conditions being attached to the granted permission.

The following table is intended to provide a step-by-step process to conducting hearings required under Section 28.1.2 (7) of the Conservation Authorities Act. It is recognized that much of the guidance provided in the body of the Section 28 Hearing Guidelines will be applicable to the s. 28.1.2 (7) hearing process. Where processes differ, the table outlines the necessary considerations for the s. 28.1.2(7) processes. Where the processes are the same, the table refers to the appropriate sections of the Section 28(5) hearing guidelines.

<b>Sections of the <i>Section 28 Conservation Authorities Act Hearing Guidelines</i></b>	<b>Specific Guidance and/or Processes for S. 28.1.2 (7) Hearings</b>
1.0 Purpose of Hearing Guidelines	<p>The <i>Conservation Authorities Act</i> requires that the applicant be provided with an opportunity for a hearing by the local Conservation Authority Board, or Executive Committee (sitting as a Hearing Board) as the case may be, for an application to be refused or approved with contentious conditions. In the case of hearings related to applications submitted pursuant to s. 28.1.2 of the <i>Conservation Authorities Act</i>, the Authority must grant permission to the applicant, provided the requirements set out under this section are met. In this scenario, a hearing will only be held to determine conditions which will be attached to a permission.</p> <p>Further, a permit may be refused if in the opinion of the Authority the proposal adversely affects the control of flooding, unstable soils or bedrock, and additional erosion and dynamic beaches. In the case of applications submitted pursuant to s. 28.1.2 of the <i>Conservation Authorities Act</i>, the Authority may refuse to grant a permit only if i) a zoning order has not been made to authorize the development project, ii) the project is proposed to be carried out in the Greenbelt Area, and iii) if all other prescribed requirements have not been satisfied. The Hearing Board is empowered by law to make a decision, governed by the <i>Statutory Powers Procedures Act</i>.</p>

## APPENDIX F – HEARING GUIDELINES

	<p>The Hearing Rules are adopted under the authority of Section 25.1 of the <i>Statutory Powers Procedures Act</i> (SPPA). The SPPA applies to the exercise of a statutory power of decision where there is a requirement to hold or to afford the parties to the proceeding an opportunity for a hearing before making a decision. The SPPA sets out minimum procedural requirements governing such hearings and provides rule-making authority for to establish rules to govern such proceedings.</p> <p>The Hearing Board shall hear and decide whether the application will be approved with or without conditions or refused. In the case of hearings related to applications submitted purposed to Section 28.1.2, the Hearing Board shall determine what conditions, if any, will be attached to the permission. See Section G-6 for further details.</p> <p>These guidelines have been prepared as an update to the October 1992 hearing guidelines and are intended to provide a step-by-step process to conducting hearings required under Section 28.1 (5), (7) of the <i>Conservation Authorities Act</i>. It is hoped that the guidelines will ensure that hearings meet the legal requirements of the <i>Statutory Powers Procedures Act</i> without being unduly legalistic or intimidating to the participants. Additional considerations have been included related to hearings under Section 28.1.2 (7) in Section G-6</p>
2.0 Prehearing Procedures	Not applicable to S.28.1.2(7) hearings
2.1 Role of the Hearing Board	<p>In considering the application, the Hearing Board is acting as a decision-making tribunal. The tribunal is to act fairly. Under general principles of administrative law relating to the duty of fairness, the tribunal is obliged not only to avoid any bias but also to avoid the appearance or reasonable apprehension of bias.</p> <p>The following are three examples of steps to be taken to avoid apprehension of bias where it is likely to arise.</p> <p>(a) No member of the Authority taking part in the hearing should have prior involvement with the application that could lead to a reasonable apprehension of bias on the part of that member. Where a member has a personal interest, the test is whether a reasonably well-informed person would consider that the interest might have an influence on the exercise of the official's public duty. Where a member is a municipal councillor, the <i>Municipal Conflict of Interest Act</i> applies. In the case of a previously expressed opinion, the test is that of an</p>

## APPENDIX F – HEARING GUIDELINES

	<p>open mind, i.e. is the member capable of persuasion in participating in the decision making</p> <p>(b) If material relating to the merits of an application that is the subject of a hearing is distributed to Board members before the hearing, the material shall be distributed to the applicant at the same time. The applicant may be afforded an opportunity to distribute similar pre-hearing material. These materials can be distributed electronically.</p> <p>(c) The applicant will be given an opportunity to attend the hearing before a decision is made; however, the applicant does not have to be present for a decision to be made.</p> <p>(d) Where a hearing is required for applications submitted pursuant to s. 28.1.2 of the <i>Conservation Authorities Act</i> (e.g., to determine the conditions of the permission), final decisions on the conditions shall not be made until such a time as the applicant has been given the opportunity to attend a hearing.</p>
2.2 Application	The right to a hearing arises where staff is recommending refusal of an application or is recommending conditions to the approval of an application. Additionally, in the case of applications submitted pursuant to s. 28.1.2 of the CA Act, the authority shall not attach conditions to a permission unless the applicant has been given an opportunity to be heard by the authority. The applicant is entitled to reasonable notice of the hearing pursuant to the <i>Statutory Powers Procedures Act</i> .
2.3 Notice of Hearing	<i>Refer to Section 2.3</i>
2.4 Presubmission of Reports	<i>Refer to Section 2.4</i>
3.0 Hearing	Not applicable to S.28.1.2(7) hearings
3.1 Public Hearing	<i>Refer to Section 3.1</i>
3.2 Hearing participants	<i>Refer to Section 3.2</i>
3.3 Attendance of Hearing Board Members	<i>Refer to Section 3.3</i>
3.4 Adjournments	<i>Refer to Section 3.4</i>
3.5 Orders and Directions	<i>Refer to Section 3.5</i>
3.6 Information Presented at Hearings	<i>Refer to Section 3.6</i>
3.7 Conduct of Hearing	N/A
3.7.1 Record of Attending Hearing Board Members	<i>Refer to Section 3.7.1</i>
3.7.2 Opening Remarks	<i>Refer to Section 3.7.2</i>
3.7.3 Presentation of Authority Staff Information	<i>Refer to Section 3.7.3</i>
3.7.4 Presentation of Applicant Information	<i>Refer to Section 3.7.4</i>
3.7.5 Questions	<i>Refer to Section 3.7.5</i>

## APPENDIX F – HEARING GUIDELINES

3.7.6 Deliberation	<i>Refer to Section 3.7.6</i>
4.0 Decision	<i>Refer to Section 4.0</i>
4.1 Notice of Decision	<p>The decision notice should include the following information:</p> <p>(a) The identification of the applicant, property and the nature of the application that was the subject of the hearing.</p> <p>(b) The decision to refuse or approve the application, and in the case of applications under s. 28.1.2 of the CA Act, the decision to approve the application with or without conditions. A copy of the Hearing Board resolution should be attached.</p> <p>It is recommended that the written Notice of Decision be forwarded to the applicant by registered mail. A sample Notice of Decision and cover letter has been included as <b>Appendix F-4</b>.</p>
4.2 Adoption	<i>Refer to section 4.2</i>
5.0 Record	<i>Refer to Section 5.0</i>
Appendix G-6	A new Appendix F-6 has been prepared which provides an example “Notice of Hearing” for hearings under Section 28.1.2 (7) of the <i>Conservation Authorities Act</i>
Appendix G-7	A new Appendix F-7 has been prepared which provides an example “Notice of Decision” for hearings under Section 28.1.2 (7) of the <i>Conservation Authorities Act</i>

## Appendix F-1

### NOTICE OF HEARING

#### IN THE MATTER OF

The Conservation Authorities Act, R.S.O. 1990, Chapter 27

**AND IN THE MATTER OF** an application by **XXXXXX**

#### **FOR THE PERMISSION OF THE CONSERVATION AUTHORITY**

Pursuant to Regulations made under Section 28.1, Subsection 5 of the said Act

**TAKE NOTICE THAT** a Hearing before the Full Board of the Lower Trent Region Conservation Authority will be held under Section 28.1, Subsection 5 of the Conservation Authorities Act at the offices of the said Authority located at 714 Murray Street, RR #1 Trenton, Ontario K8V 0N1 at the hour of , **on the day of , 20\_\_**, [for electronic hearings, include details about the manner in which the hearing will be held] with respect to the application by **(NAME)** to permit development within an area regulated by the Authority in order to ensure no adverse effect on **(the control of flooding, erosion, dynamic beaches or unstable soils or bedrock/alter or interfere with a watercourse or wetland)** on Lot , Plan/Lot , Concession, **(Street)** in the City of , Regional Municipality of , River Watershed.

**TAKE NOTICE THAT** you are invited to make a delegation and submit supporting written material to the Hearing Board for the meeting of **(meeting number)**. If you intend to appear, [for electronic hearings: or if you believe holding the hearing is likely to cause significant prejudice], please contact **(name)**. Written material will be required by **(date)**, to enable the Hearing Board members to review the material prior to the meeting.

**TAKE NOTICE THAT** this hearing is governed by the provisions of the *Statutory Powers Procedure Act*. Under the Act, a witness is automatically afforded a protection that is similar to the protection of the Ontario Evidence Act. This means that the evidence that a witness gives may not be used in subsequent civil proceedings or in prosecutions against the witness under a Provincial Statute. It does not relieve the witness of the obligation of this oath since matters of perjury are not affected by the automatic affording of the protection. The significance is that the legislation is Provincial and cannot affect Federal matters. If a witness requires the protection of the Canada Evidence Act that protection must be obtained in the usual manner. The Ontario Statute requires the tribunal to draw this matter to the attention of the witness, as this tribunal has no knowledge of the effect of any evidence that a witness may give.

**AND FURTHER TAKE NOTICE** that if you do not attend at this Hearing, the Hearing Board of the Conservation Authority may proceed in your absence, and you will not be entitled to any further notice in the proceedings.

**DATED** the \_\_\_ day of , \_\_\_\_\_ 20\_\_.



APPENDIX F – HEARING GUIDELINES

The Board of Directors of the Lower Trent Region Conservation Authority

Per:

Staff Member, Title: \_\_\_\_\_

Chief Administration Officer/ Secretary Treasurer: \_\_\_\_\_

## Appendix F-2

### HEARING PROCEDURES

1. Motion to sit as Hearing Board.
2. Roll Call followed by the Chair's opening remarks. For electronic hearings, the Chair shall ensure that all parties and the Hearing Board are able to clearly hear one another and any witnesses throughout the hearing.
3. Staff will introduce to the Hearing Board the applicant/owner, his agent and others wishing to speak.
4. Staff will indicate the nature and location of the subject application and the conclusions.
5. Staff will present the staff report included in the Authority agenda.
6. The applicant and/or his agent will speak and also make any comments on the staff report, if he so desires.
7. The Hearing Board will allow others to speak, and, if necessary, the applicant in rebuttal.
8. The Hearing Board will question, if necessary, both the staff and the applicant/agent.
9. The Hearing Board will move into camera. For electronic hearings, the Hearing Board will separate from the other participants.
10. Members of the Hearing Board will move and second a motion.
11. A motion will be carried which will culminate in the decision.
12. The Hearing Board will move out of camera. For electronic meeting, the Hearing Board will reconvene with other participants.
13. The Chair or Acting Chair will advise the owner/applicant of the Hearing Board decision.
14. If decision is "to refuse" or "approve with conditions", the Chair or Acting Chair shall notify the owner/applicant of his/her right to appeal the decision to the Minister within 15-days of receiving the decision and/or the Ontario Land Tribunal within 90 days of receipt of the reasons for the decision.
15. Motion to move out of Hearing Board and sit as the Board of Directors.

## Appendix F-3

### CHAIR'S REMARKS WHEN DEALING WITH HEARINGS WITH RESPECT TO Part VI of the Conservation Authorities Act and ONTARIO REGULATION 41/24.

**Date:** Month XX, XXXX  
**O.Reg. 41/24:** Permit Application # RP-XX-XXX  
**Applicant:** Name

We are now going to conduct a hearing under Section 28.1 of the Conservation Authorities Act in respect of an application by \_\_\_\_\_: , for permission to: \_\_\_\_\_

The Authority has adopted regulations under section 28.1 of the Conservation Authorities Act which requires the permission of the Authority for development within an area regulated by the Authority in order to ensure no adverse effect on the control of flooding, erosion, dynamic beaches, unstable soils or bedrock, or to permit alteration to a shoreline or watercourse or interference with a wetland. This Hearing is about granting permission to develop under the Authority regulations; a separate matter from approvals under the *Planning Act*.

The Staff has reviewed this proposed work and a copy of the staff report has been given to the applicant.

The Conservation Authorities Act (Section 28.1 [5]) provides that:

“(5) An authority shall not refuse an application for a permit or attach conditions to a permit unless the applicant for the permit has been given an opportunity to be heard by the authority.”

While holding this hearing, the Hearing Board is to determine whether or not a permit is to be issued, with or without conditions. In doing so, we can only consider the application in the form that is before us, the staff report, such evidence as may be given and the submissions to be made on behalf of the applicant. Only information disclosed prior to the hearing is to be presented at the hearing. It is not our place to suggest alternative development methods.

It is to be noted that if the Hearing Board decision is “to refuse” or not support the proposed work within the permit submission, the Chair or Acting Chair shall notify the owner/applicant of his/her right to appeal the decision to the Ontario Land Tribunals.

The proceedings will be conducted according to the *Statutory Powers Procedure Act*. Under Section 5 of the Canada Evidence Act, a witness may refuse to answer any question. The procedure in general shall be informal without the evidence before it being given under oath or affirmation.

If the applicant has any questions to ask of the Hearing Board or of the Authority representative, they must be directed to the Chair of the Board.

At this time, if any member of this Board has intervened on behalf of the Applicant with regards to this matter, they should recuse themselves so there is no apprehension of bias and that a fair and impartial Hearing may be conducted.

## Appendix F-4

(Date) BY REGISTERED MAIL/ EMAIL

(name) , (address)

Dear:

**RE: NOTICE OF DECISION**

**Hearing Pursuant to Section 28.1(5) of the Conservation Authorities Act**

**Proposed Residential Development**

**Lot , Plan ; ?? Drive, City of**

**(Application #)**

In accordance with the requirements of the Conservation Authorities Act, the Lower Trent Region Conservation Authority provides the following Notice of Decision:

On **(meeting date and number)**, the Hearing Board of the Lower Trent Region Conservation Authority refused/approved your application/approved your application with conditions. A copy the Board's Resolution # \_\_\_\_\_ has been attached for your records. Please note that this decision is based on the following reasons: **(the proposed development/alteration to a watercourse adversely affects the control of flooding, erosion, dynamic beaches, unstable soils or bedrock.)**

In accordance with Section 28.1 (7) of the Conservation Authorities Act, an applicant who has been refused permission or who objects to conditions imposed on a permission may, within 15 days of receiving the reasons under subsection (7), appeal to the Minister who may refuse the permission; or grant permission, with or without conditions. Additionally, if a decision is not made by the Minister within 30-days after receiving the request, an applicant may appeal the decision to the Ontario Land Tribunal Through Order in Council 332/2018 the responsibility for hearing the appeal has been transferred to the Ontario Land Tribunal. For your information, should you wish to exercise your right to appeal the decision, a letter by you or your agent/counsel setting out your appeal must be sent within 90 days of receiving this decision addressed to:

Ontario Land Tribunal  
655 Bay Street, Suite 1500  
Toronto, Ontario M5G 2K4

A carbon copy of this letter should also be sent to Lower Trent Region Conservation Authority. Should you require any further information, please do not hesitate to contact **(staff contact)** or the undersigned.

Yours truly,

Chief Administration Officer/ Secretary Treasurer

Enclosure

## Appendix F-5

Date

FILE #: RP-XX-XXX

PERMIT#: P-XX-XXX

Name of Applicant

Address of Applicant

**ATTENTION:** It is important that you read and understand the contents of this letter and ensure that all necessary parties (i.e., landowner(s) and anyone conducting site works) are aware of any special mitigation requirements contained herein.

RE: Location where Permission Applies

Application for permission to (development, interference and/or alteration) pursuant to Part VI of the Conservation Authorities Act and Ontario Regulation 41/24 – *Prohibited Activities, Exemptions and Permits*

As you are aware, your application to allow for (Proposed development/interference/alteration) on the property noted above was heard and approved by the Lower Trent Region Conservation Authority's (LTC) Hearing Board on Hearing Date. The following resolution was passed (draft resolution for final approval at the upcoming LTC's Board of Directors' meeting – Next Meeting Date):

**RES: HC2/17 Moved by: Board Member Seconded by: Board Member**  
***THAT the permit application RP-XX-XXX by Applicant for permission (development/interference/alteration) in the (Regulated Area) be approved.***  
**Carried**

Please accept this letter as formal notice of the decision of the Hearing Board.

The proposed (development/alteration/interference) is situated within regulated areas associated with (Regulated Area). Attached you will find a copy of Permit No. P-XX-XXX issued for the works noted above in accordance with Ontario Regulation 41/24. The permit has been issued based on the information, plans and specifications submitted with the application as well as your acceptance of the general conditions of approval detailed in the application. The plans and specifications are attached as part of the approved documentation.

The following mitigation measures are expected to be implemented as part of the approval from LTC:

- 1) *Listed Conditions of Permission;*

Should you require any further information, please do not hesitate to contact (**staff contact**) or the undersigned.

## Appendix F-6

### NOTICE OF HEARING

(Subsection 28.1.2 (7) of the Conservation Authorities Act)

#### IN THE MATTER OF

The Conservation Authorities Act, R.S.O. 1990, Chapter 27

**AND IN THE MATTER OF** an application by

#### **FOR THE PERMISSION OF THE CONSERVATION AUTHORITY**

Pursuant to Regulations made under Section 28.1.2, Subsection 7 of the said Act

**TAKE NOTICE THAT** a Hearing before the Hearing Board of the Conservation Authority will be held under Section 28.1.2, Subsection 7 of the Conservation Authorities Act at the offices of the said Authority (located at 714 Murray Street, RR #1 Trenton, Ontario K8V 0N1), at the hour of XX:XX, on the XX day of XXX, 20XX, [for electronic hearings, include details about the manner in which the hearing will be held] with respect to the application by (NAME) to permit development within an area regulated by the Authority in association with a Minister's Zoning Order (REGULATION NUMBER) on Lot, Plan/Lot, Concession, (Street) in the City of, Regional Municipality of, River Watershed.

**TAKE NOTICE THAT** you are invited to make a delegation and submit supporting written material to the Hearing Board for the meeting of (meeting date). If you intend to appear [For electronic hearings: or if you believe that holding the hearing electronically is likely to cause significant prejudice], please contact (name). Written material will be required by (date), to enable the Committee members to review the material prior to the meeting.

**TAKE NOTICE THAT** pursuant to Section 28.1.2 of the Conservation Authorities Act, a conservation authority is required to grant the permission applied for and may only impose conditions to the permission. The Hearing will therefore focus on the conditions to be imposed to the granting of the permission.

**TAKE NOTICE THAT** this hearing is governed by the provisions of the *Statutory Powers Procedure Act*. Under the Act, a witness is automatically afforded a protection that is similar to the protection of the *Ontario Evidence Act*. This means that the evidence that a witness gives may not be used in subsequent civil proceedings or in prosecutions against the witness under a Provincial Statute. It does not relieve the witness of the obligation of this oath since matters of perjury are not affected by the automatic affording of the protection. The significance is that the legislation is Provincial and cannot affect Federal matters. If a witness requires the protection of the Canada Evidence Act that protection must be obtained in the usual manner. The Ontario Statute requires the tribunal to draw this matter to the attention of the witness, as this tribunal has no knowledge of the affect of any evidence that a witness may give.

**AND FURTHER TAKE NOTICE** that if you do not attend at this Hearing, the Hearing Board of the Conservation Authority may proceed in your absence, and you will not be entitled to any further

notice in the proceedings.

DATED the \_\_\_ day of , \_\_\_\_\_202X

The Hearing Board of the Conservation Authority

Per:

Chief Administrative Officer/Secretary-Treasurer

## Appendix F-7

### HEARING BOARD CHAIR'S REMARKS WHEN DEALING WITH HEARINGS

(Section 28.1.2, Subsection 7 of the Conservation Authorities Act)

WITH RESPECT TO Part VI of the Conservation Authorities Act and ONTARIO REGULATION 41/24

We are now going to conduct a hearing under section 28.1.2 of the Conservation Authorities Act in respect of an application by \_\_\_\_\_: , for permission to: \_\_\_\_\_

Under Section 28.1.2 of the Conservation Authorities Act, an Authority is required to grant permission for any application submitted under a regulation made under subsection 28.1.2 (1) for permission to carry out all or part of a development project, in an area regulated by the Authority, associated with a Minister's Zoning Order, provided the criteria listed under subsection 28.1.2 (1) are met. A permission is subject to any conditions as may be prescribed by the Authority.

The Staff has reviewed this proposed work and prepared a staff report, including the proposed conditions of approval for the proposed work, which has been given to the applicant and the Board. The applicant was invited to file material in response to the staff report, a copy of which has also been provided to the Board.

Under Section 28.1.2 (7) of the Conservation Authorities Act, the person requesting permission has the right to a hearing before the Authority/ Hearing Board.

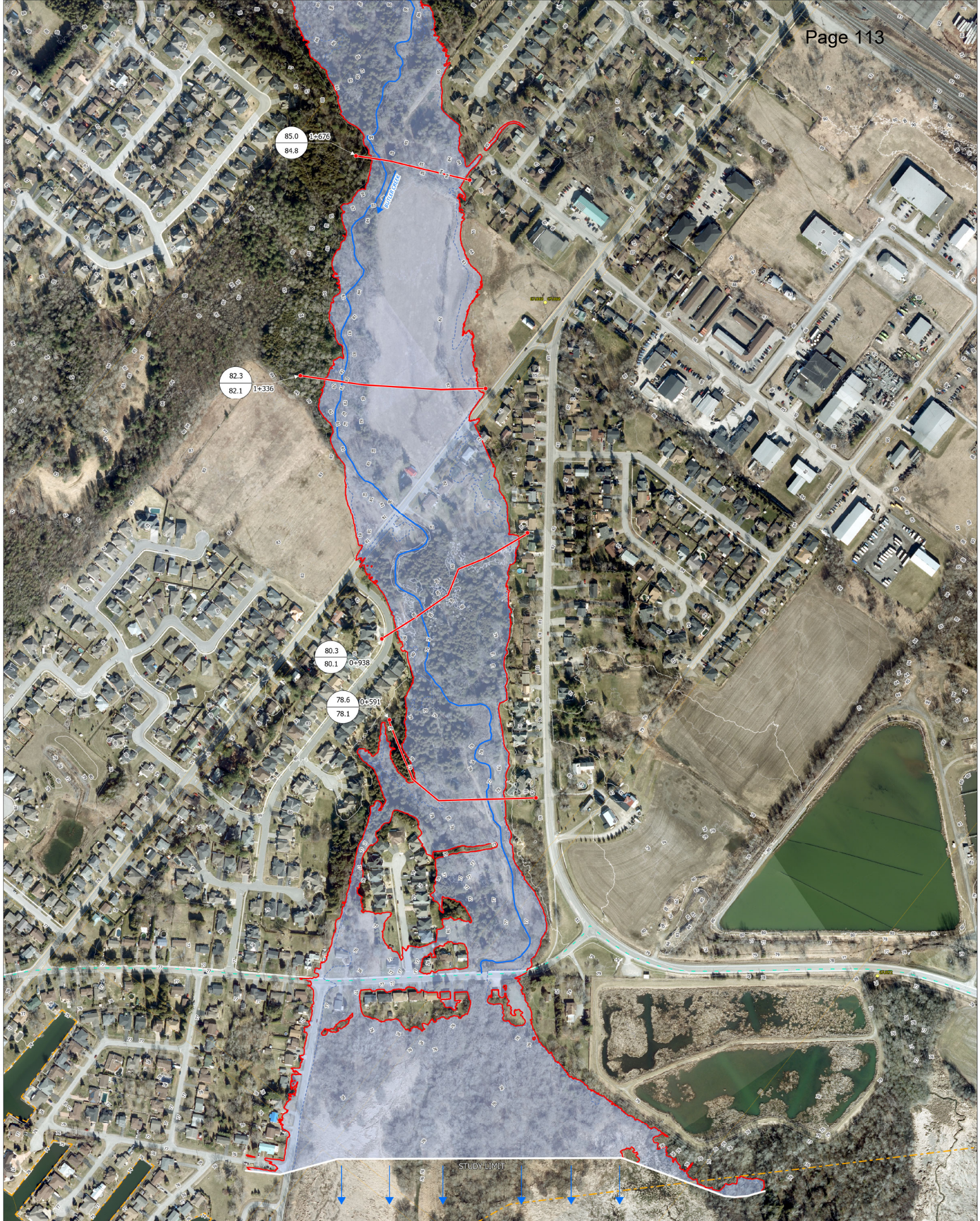
In holding this hearing, the Authority Board/ Hearing Board is to determine the prescribed conditions to be attached to the approved permission. In doing so, we can only consider the application in the form that is before us, the staff report, such evidence as may be given and the submissions to be made on behalf of the applicant. Only Information disclosed prior to the hearing is to be presented at the hearing.

The proceedings will be conducted according to the *Statutory Powers Procedure Act*. Under Section 5 of the *Canada Evidence Act*, a witness may refuse to answer any question on the ground that the answer may tend to incriminate the person, or may tend to establish his/her liability to a civil proceeding at the instance of the Crown or of any person.

The procedure in general shall be informal without the evidence before it being given under oath or affirmation unless decided by the hearing members.

If the applicant has any questions to ask of the Hearing Board or of the Authority representative, they must be directed to the Chair of the board.





**LEGEND:**

- SYMBOLS:**
  - BENCHMARK
  - ⊗ VERTICAL CONTROL POINT
  - ⊕ WATER AND WEATHER NON-STATION
- LINE TYPES:**
  - BUTLER CREEK CROSS SECTIONS
  - - - LOT TRAIL NETWORK
  - BUTLER CREEK WATER COURSE
  - REGIONAL FLOOD LIMIT
  - - - INFRASTATION AREA
  - - - 100 YEAR (1% AEP) FLOOD ELEV
  - PARK / CONSERVATION AREA
  - GOLF COURSE
- AREA TYPES:**
  - LOT AND CONCESSION LINES
  - URBAN BOUNDARY
  - RAIL ROAD TRACKS
  - MINOR CON (1-h)
  - MAJOR CON (2-h)
  - RECREATIONAL AREAS
  - PARK / CONSERVATION AREA
  - GOLF COURSE
- CROSS SECTION MARKERS:**
  - TIMING FLOOD ELEV
  - 100 YEAR FLOOD ELEV
  - CROSS SECTION NUMBER
  - CROSS SECTION

**BUTLER CREEK FLOOD PLAIN**  
**WATER COURSE BUTLER CREEK**  
**SHEET: BUTL4**  
**SHEETS: 4 OF 4**

DESIGNED BY: [Redacted] AGC: [Redacted] TOWNSHIP: MUNICIPALITY OF BRANTFORD  
 APPROVED BY: [Redacted] DATE: 02\_26\_2024 COUNTY: NORTHBRIDGEMOUNTAIN  
 PROJECT NUMBER: 2305192

**PROJECT DIRECTOR:** [Redacted]

**DESIGN ENGINEER:** ELIOTT FLEDERER, P. ENG.

**CLIENT:** LOWER TRENT COUNCIL OF TOWNSHIPS  
 714 HURON ST. QUINTE WEST, ONT. N0M 1W0

**CLIENT:** BRANTFORD MUNICIPALITY OF BRANTFORD  
 25 ALICE ST. QUILT, ONT. N0M 1W0

**JEWELL ENGINEERING**  
 71 MILLERMAN PARKWAY, UNIT 1  
 BELLEVILLE, ONT. K0N 1A2

SCALE: 1:2000  
 HATCH CONTOUR INTERVAL: 5m  
 MINOR CONTOUR INTERVAL: 1m  
 LONGITUDINAL GATEWAY: ROAD #3 CROSS  
 HORIZONTAL GATEWAY: ROAD #3 CROSS  
 VERTICAL GATEWAY: CGSD 2013

PROJECT 2018, IN PARTNERSHIP OF PROFIT & LAND INFORMATION ONTARIO  
 LEGAL DATA WAS COLLECTED FOR BELLEVILLE QUINTE 2002 DEAR COLLECTION BY  
 AERBONE IMAGING, BETWEEN OCT. 14 AND OCT. 20, 2012.

**KEY MAP**

ELEVATIONS ARE IN METERS. BENCH MARK DATA WAS DOWNLOADED FROM COSENE Online Service, PRRF, <https://www.ontario.ca/page/geodesy>





**LOWER TRENT**  
CONSERVATION

# HEARING

## Ontario Regulation 41/24 Permit Application: RP-24-232

*Property Owner: Al LeBlanc (LeBlanc Enterprises)  
Vacant lot on Cedar Street Ave.(ARN:140810806018102000)  
Municipality of Brighton, Con 1, Lot 1*

Presented to: Lower Trent Region Conservation Authority Hearing Board  
Presented by: Gage Comeau, Manager, Watershed Management, Planning & Regulations

Date: March 17, 2025

# Contents

- File Timelines
- Subject Property
- LTC Regulatory Mapping
- Development Proposal
- O. Reg. 41/24 LTC Policies
- Staff Conclusion

# Permit Application: RP-24-232

- Pre-consultation meeting: September 18, 2024
- Permit Application received: October 15, 2024
- Complete Application: January 30, 2025
- Permit Status Letter: February 7, 2025
- Request for Hearing: February 10, 2025
- Notice of Hearing: February 14, 2025
- Hearing Date: March 17, 2025

# Subject lands

- Vacant lot west of Cedar Street
- Sections of the property are located within the Butler (Proctors) Creek and Arena Creek floodplain
  - Floodplain delineated by Jewell Engineering and approved by the Board in March 2024

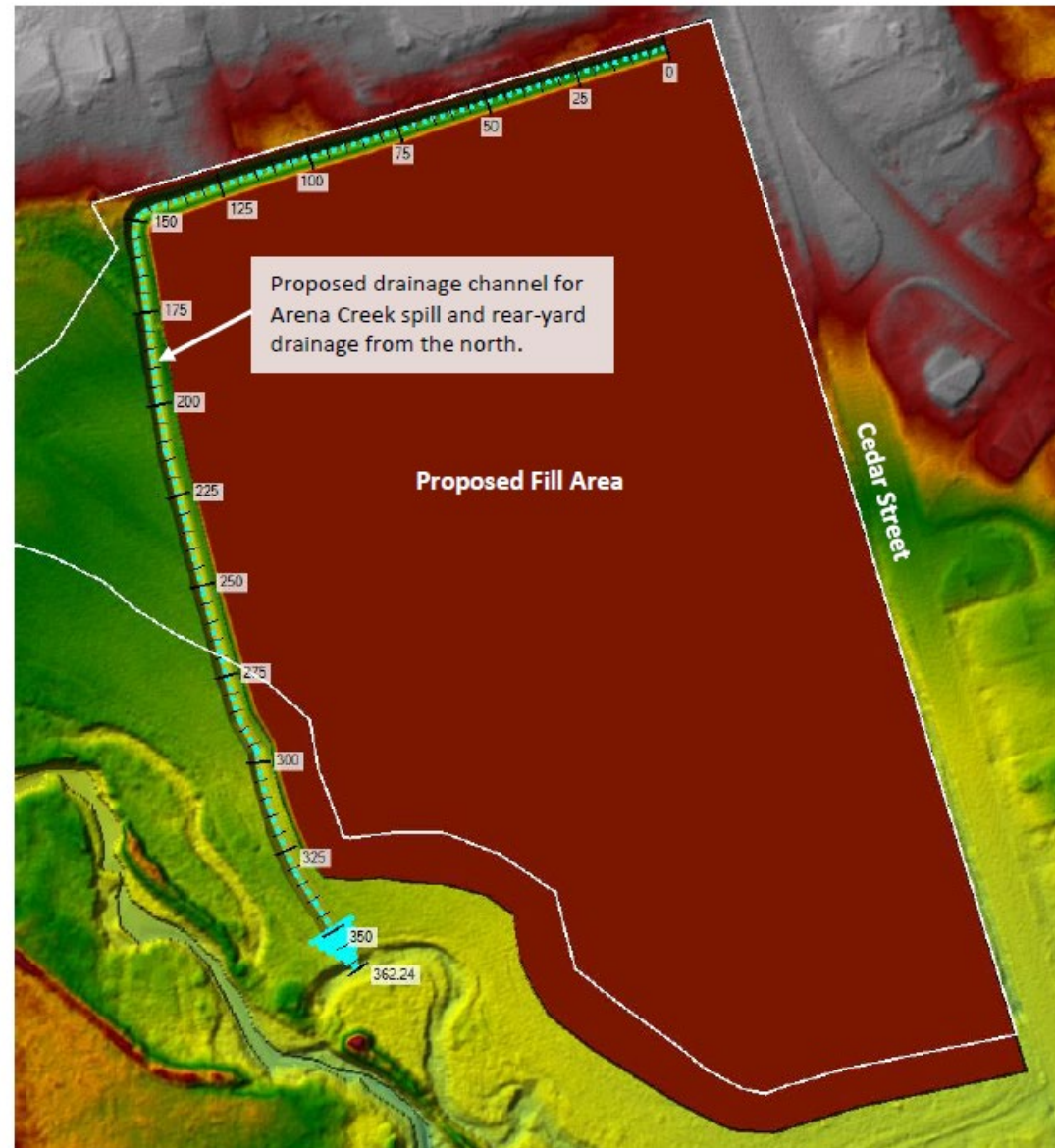


# LTC Regulatory Mapping



# Development Proposal

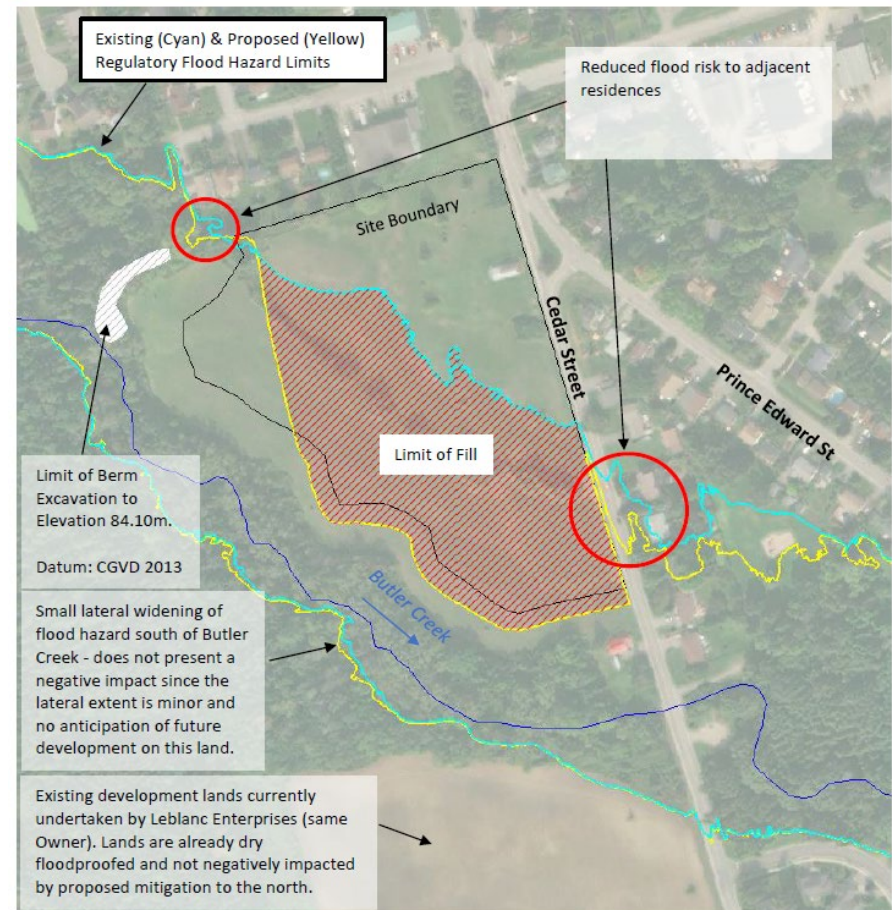
- Permit Application received: October 15, 2024
  - To undergo the placement of fill material on the property to alter the existing floodplain, excavate the existing deficient berm and install a drainage channel to convey the potential Arena Creek spill
  - The proposal is intended to accommodate future development of a single-family dwelling





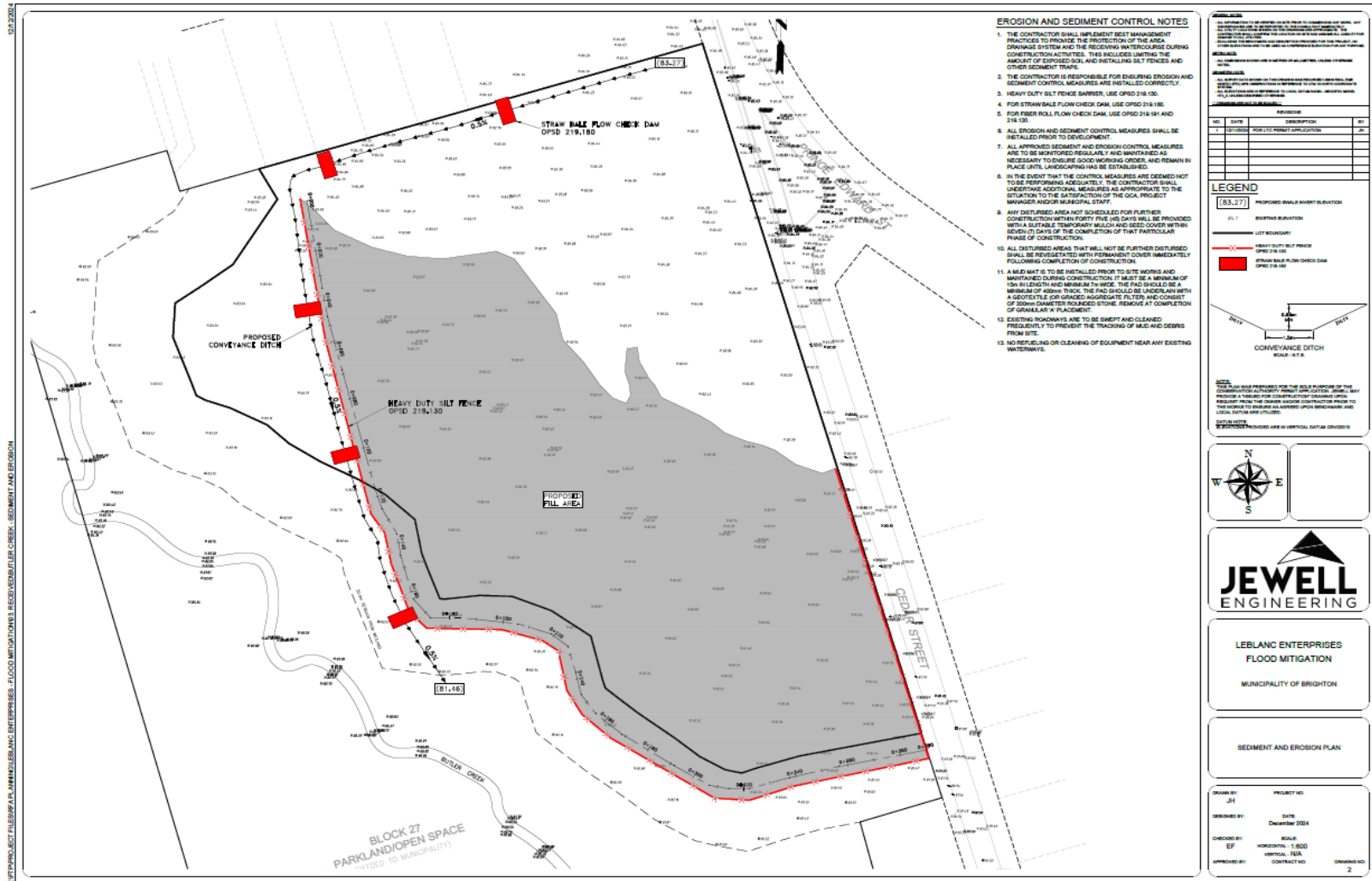
# Development Proposal

- Floodplain area – 81.9-84.0 metres CGVD2013
- Existing Timmins depth of flooding is 0.36 metres
- Proposed works reduced impact to the control of flooding for the subject property nearby adjacent lands

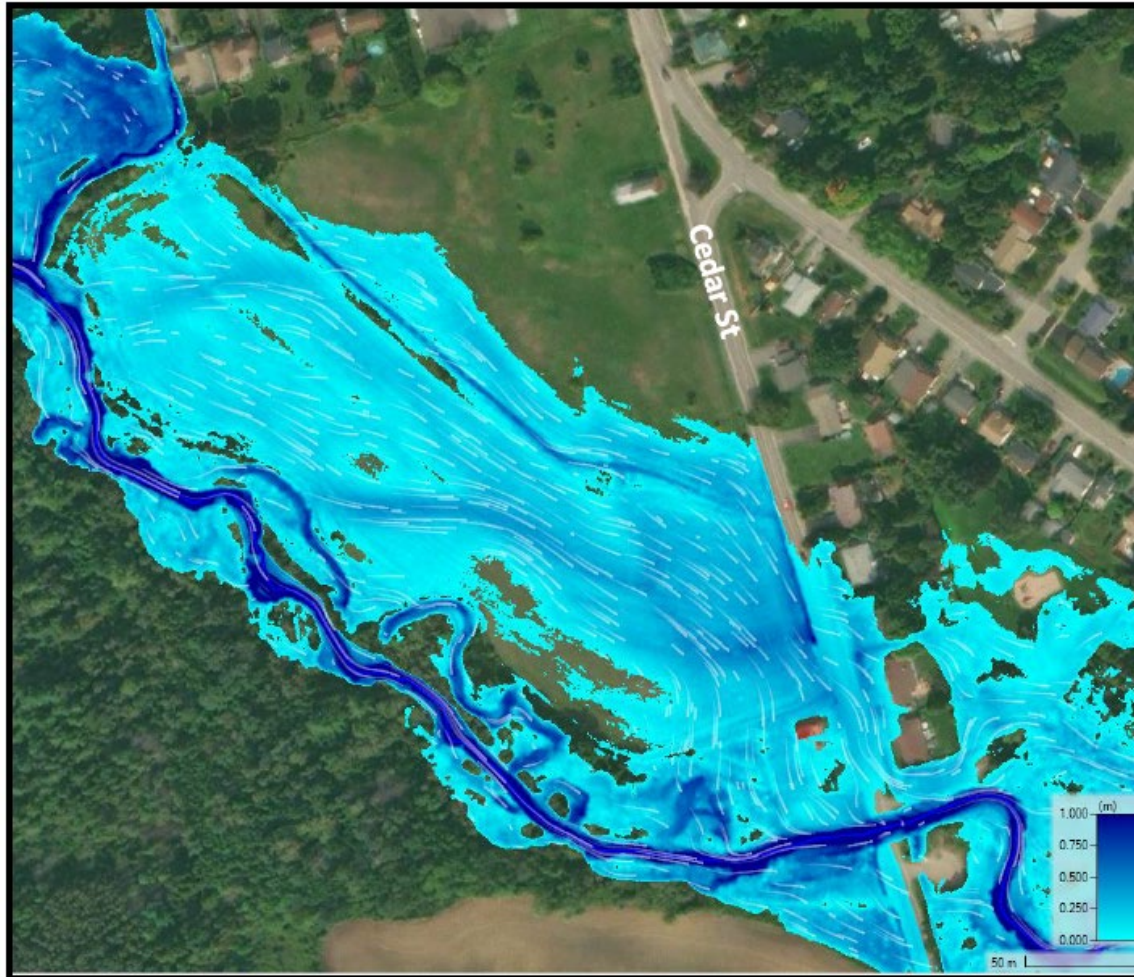




# Sediment and Erosion Controls



# Development Proposal



# Ontario Regulation 41/24 Policy Document

- **General Policies**

- a) risk to public safety is not increased.
- c) susceptibility to natural hazards is not increased nor new hazards created (e.g., there will be no impacts on adjacent properties with respect to natural hazards).
- f) safe ingress/egress is available for proposed development.
- k) the control of flooding, erosion, dynamic beaches, pollution and/or the conservation of land is not adversely affected during and post development.

- **5.3.1.1 Development within One-Zone Regulatory Floodplain of River or Stream Valleys**

1. Development within the Regulatory floodplain shall not be permitted.
2. Placement of fill, flood hazard protection and/or bank stabilization works to allow for future/proposed development or an increase in development envelope within the Regulatory floodplain shall not be permitted.
4. Major development within the Regulatory floodplain shall not be permitted.

# Staff Conclusion

Based on a review of the relevant policies that are applicable to this proposal, staff are not in a position to support the application as it does not conform with the policies.

# Cedar Street Flood Mitigation

LTC Board Hearing

March 17, 2025 @ 1pm

Applicant: Leblanc Enterprises

Agent: Jewell Engineering Inc.



# Site Location



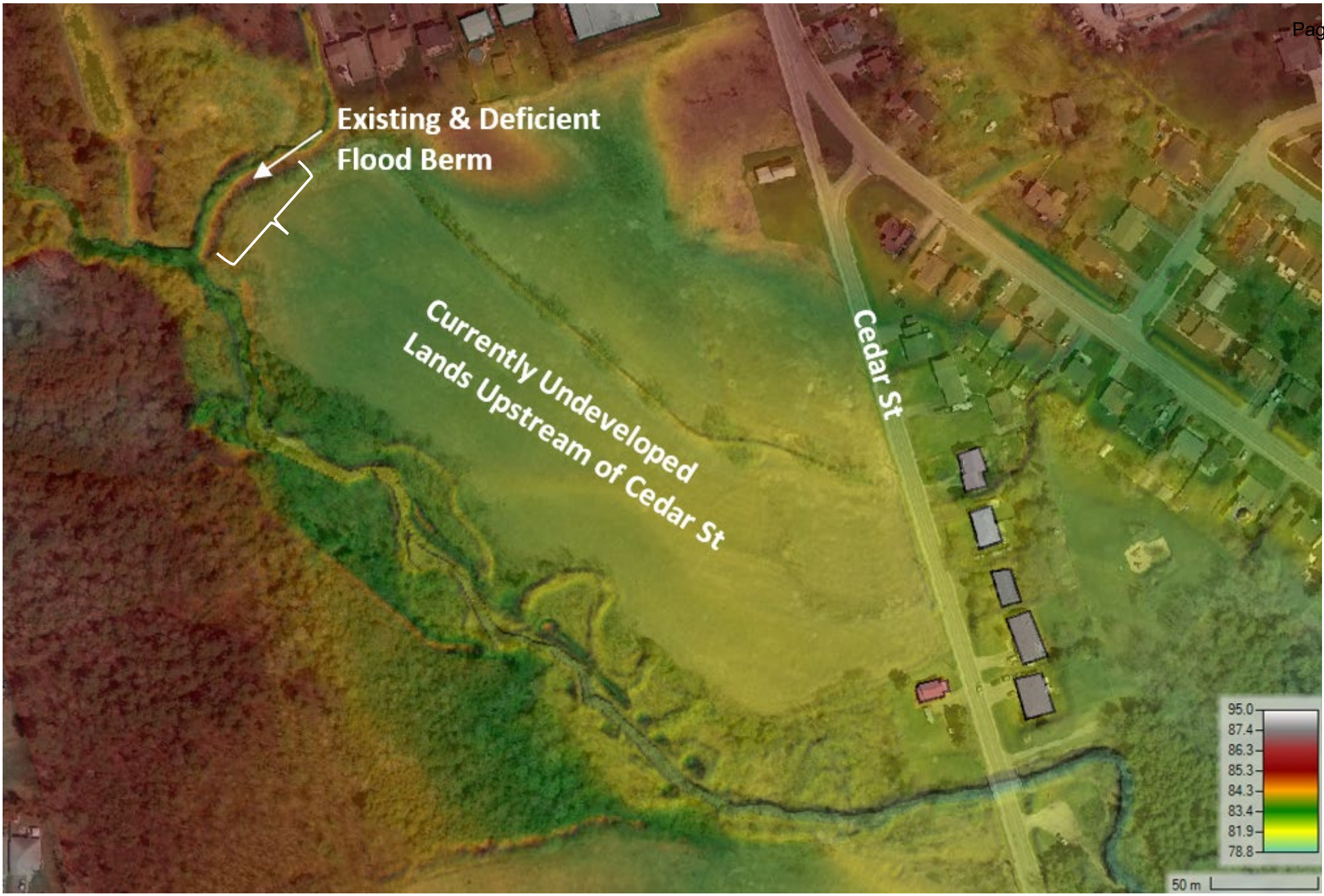


# Butler Creek Flood Hazard Limit

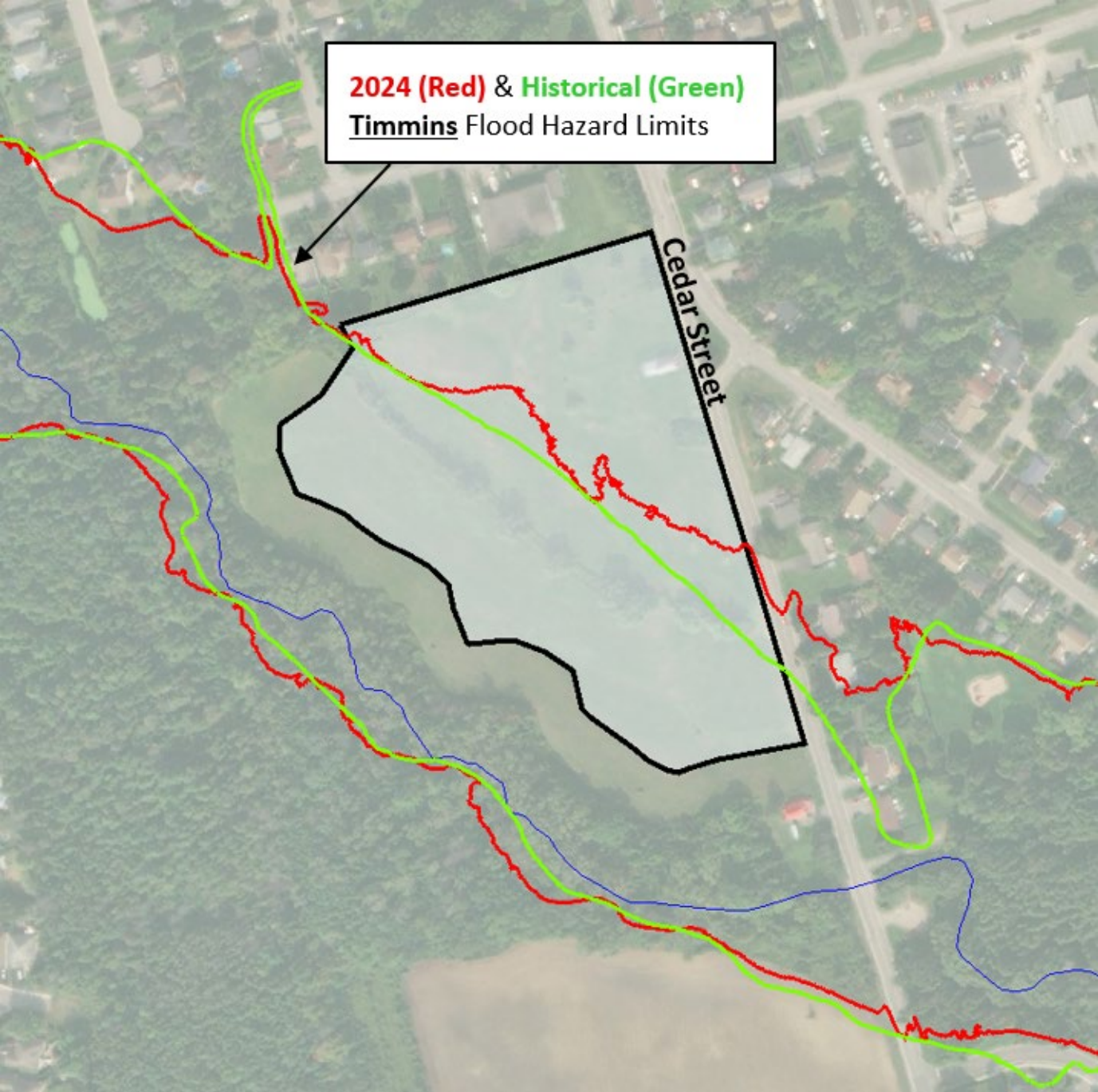
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- Updated in 2024 by Lower Trent Conservation with support from Municipality of Brighton and the Provincial and Federal Governments.
- Engineering support for *2024 Butler Creek Mapping Update* provided by Jewell Engineering.
- Current mapping more restrictive than previous mapping at subject development location.









# Flood Mitigation Objectives

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- Meet *Ontario Regulation (O. Reg.) 41/24*
- More specifically, *Section 28.1 (1) (a)* of the Conservation Authorities Act

# Flood Mitigation Objectives

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## Permits

**28.1 (1)** An authority may issue a permit to a person to engage in an activity specified in the permit that would otherwise be prohibited by section 28, if, in the opinion of the authority,

- (a) the activity is not likely to affect the control of flooding, erosion, dynamic beaches or unstable soil or bedrock;
- (b) the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property; and
- (c) any other requirements that may be prescribed by the regulations are met. 2017, c. 23, Sched. 4, s. 25; 2022, c. 21, Sched. 2, s. 9 (1).



# Flood Mitigation Objectives

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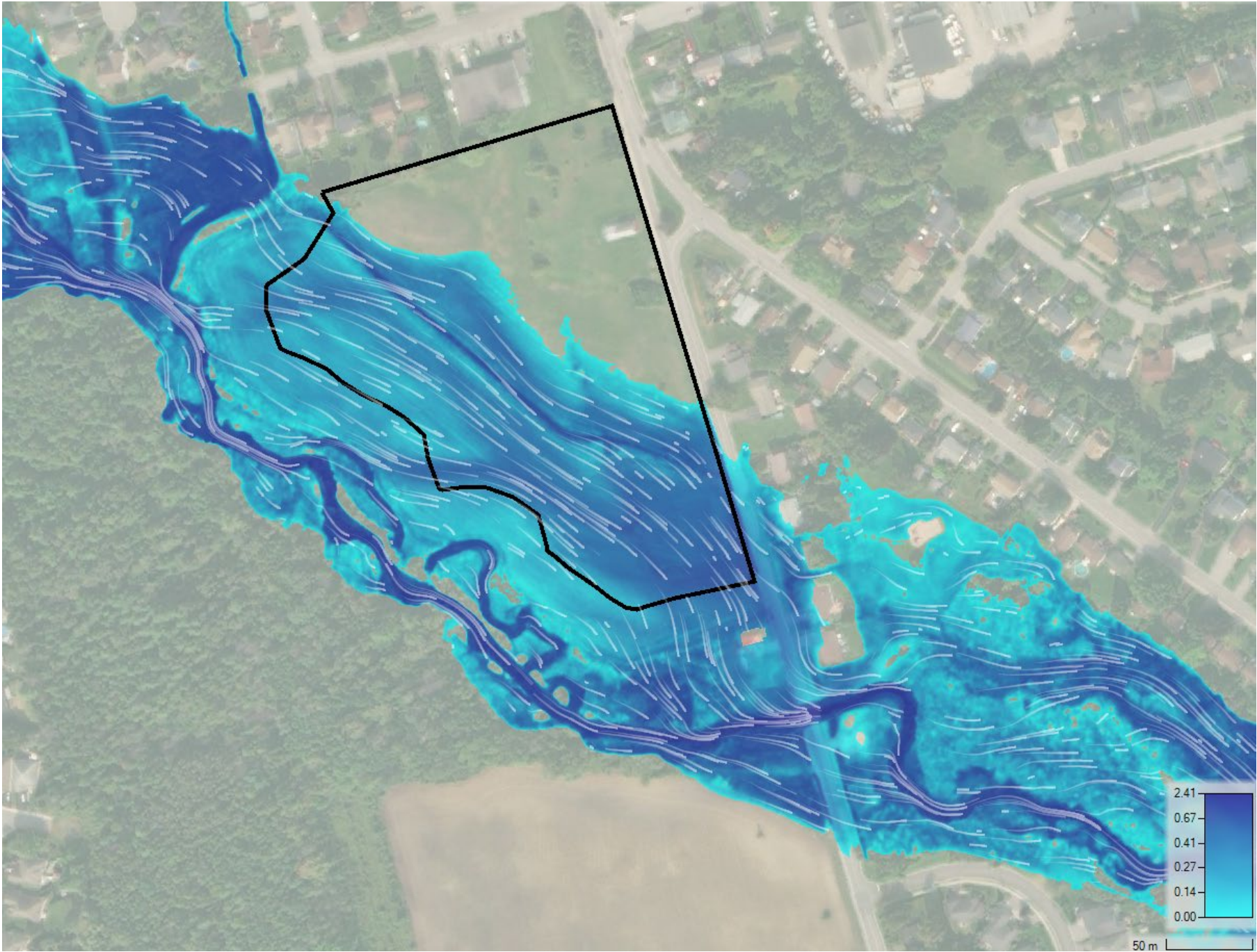
*The control of flooding for Butler Creek is to be maintained or improved with proposed flood mitigation measures.*

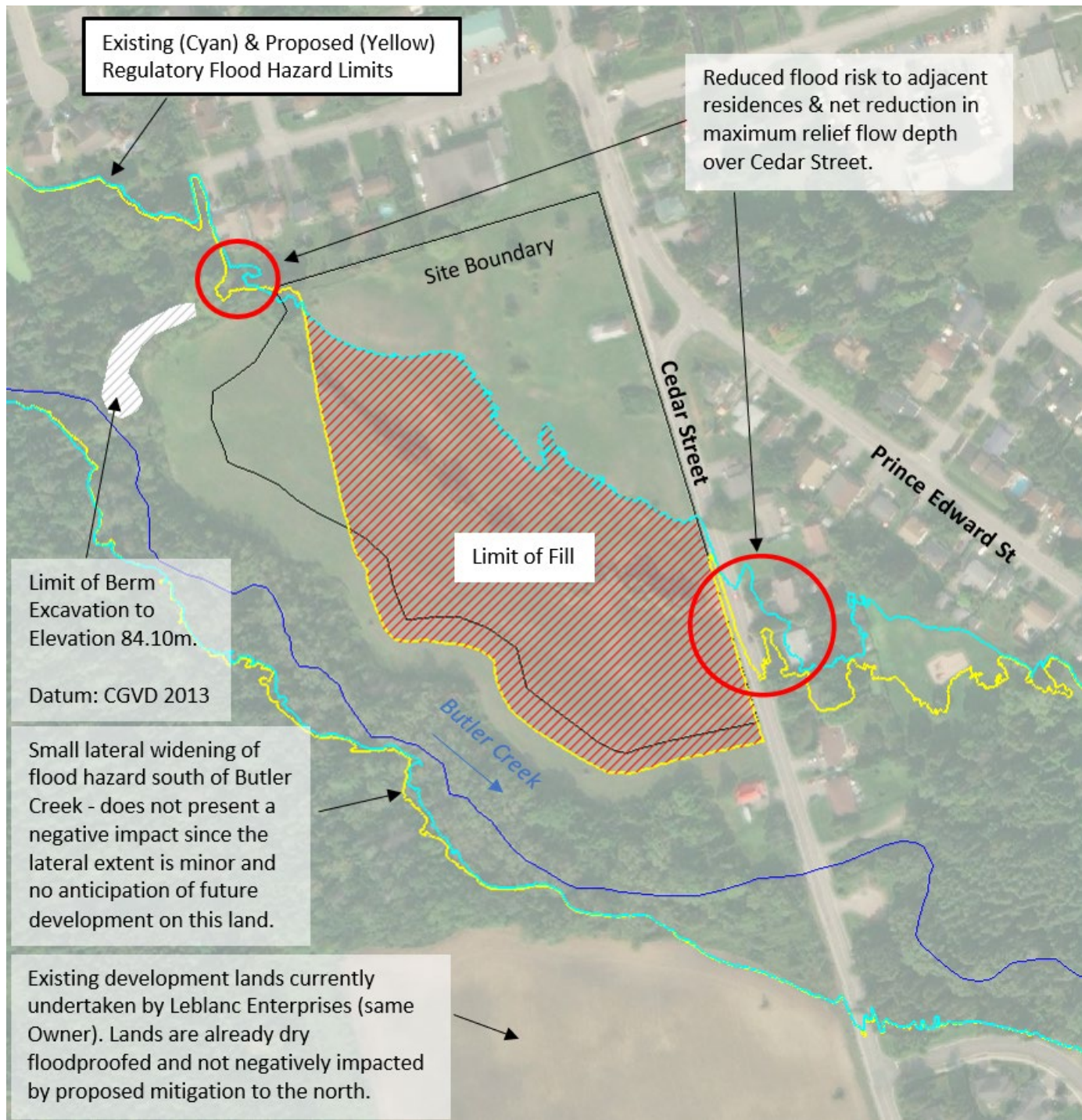
# Flood Mitigation Objectives

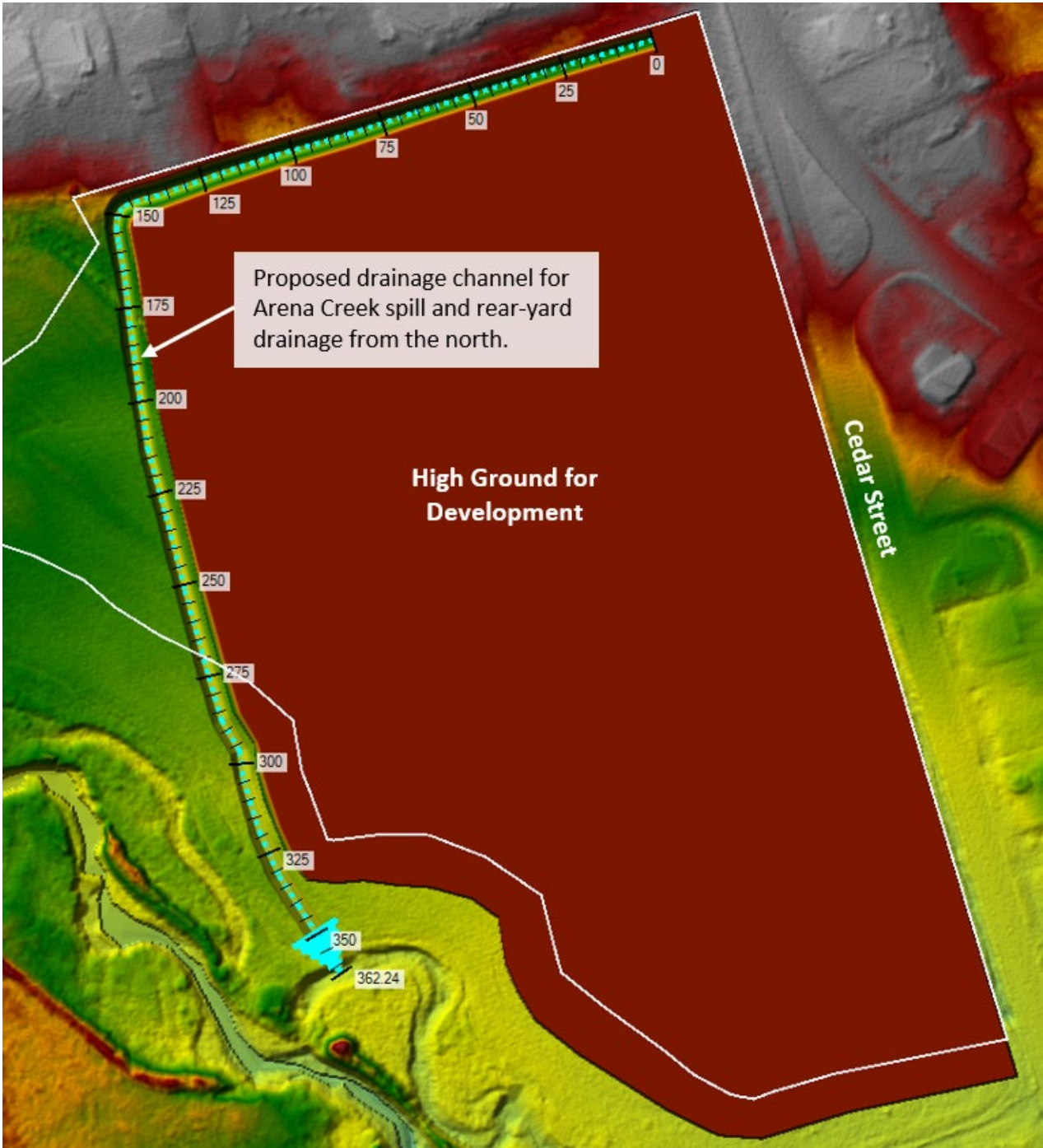
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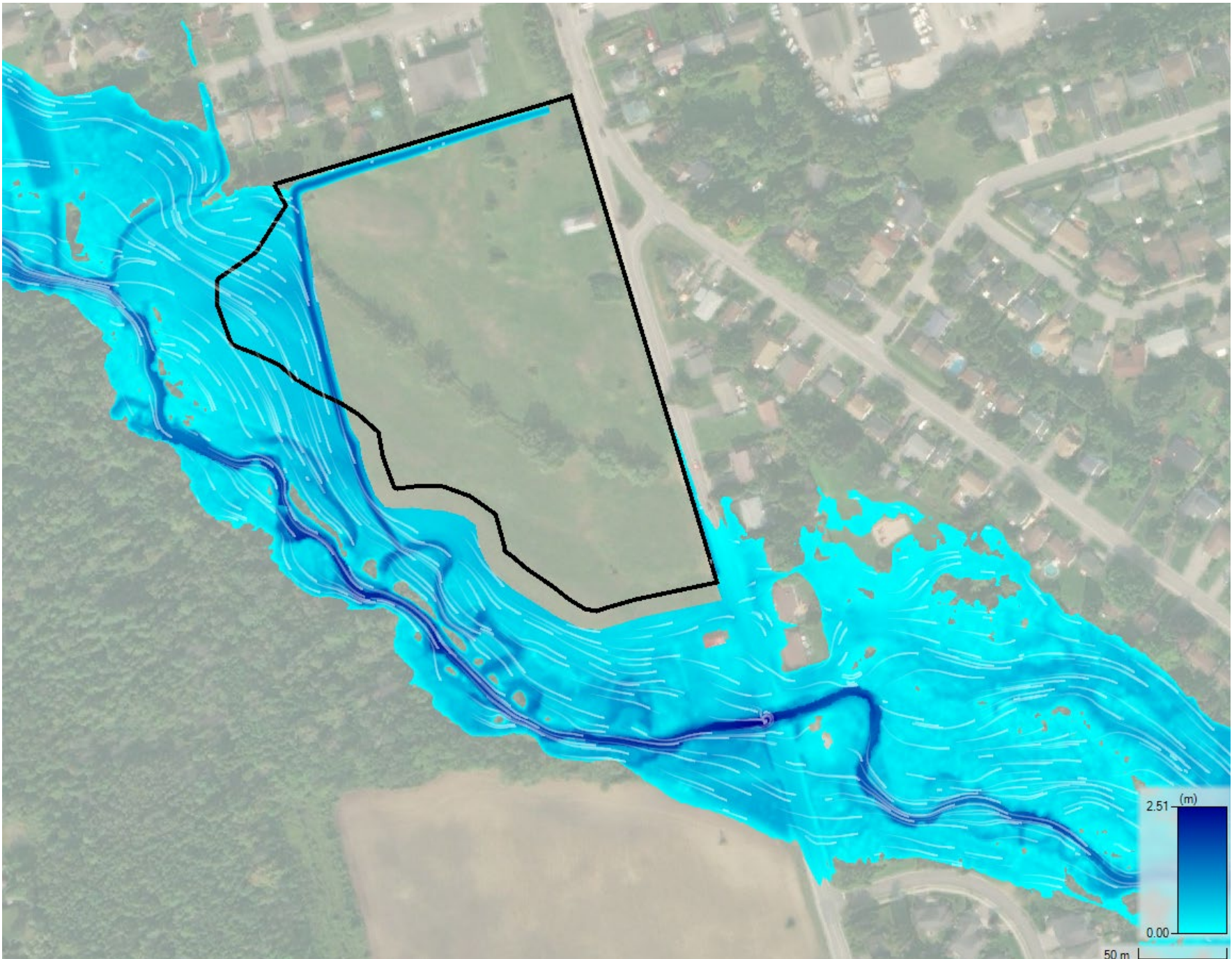
1. There must be no negative impacts to adjacent property owners.
2. There must be no negative impacts to future residents at the site.

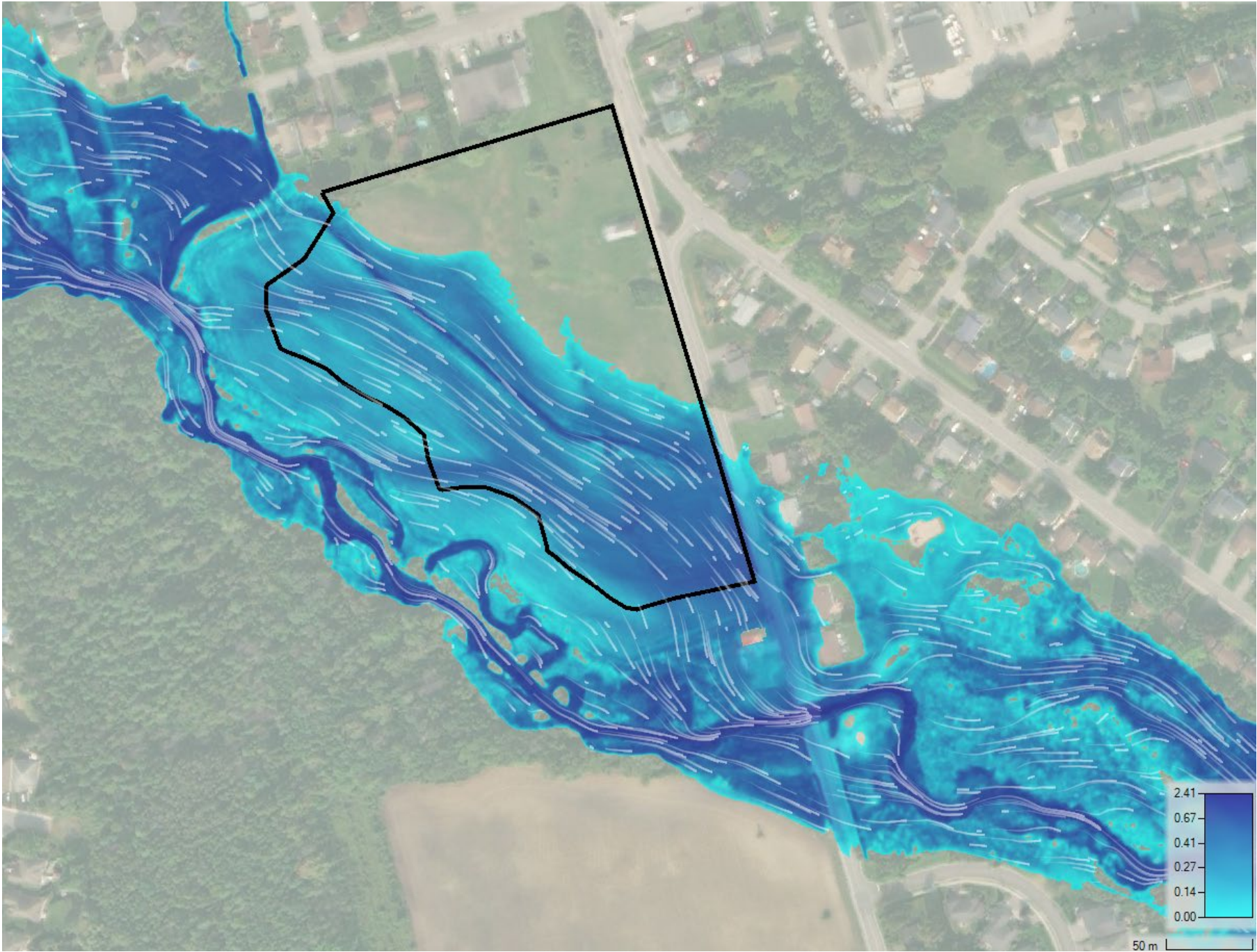


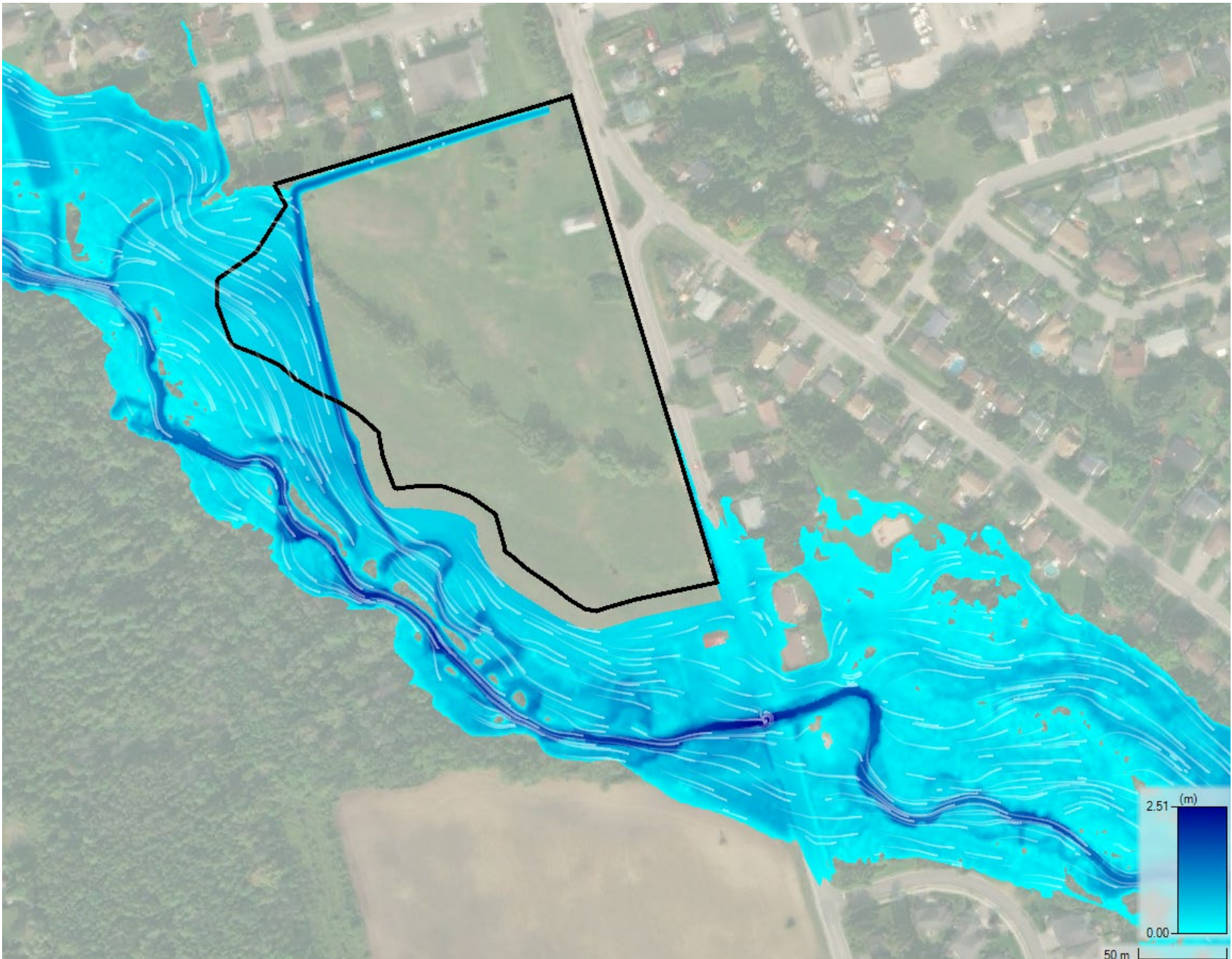




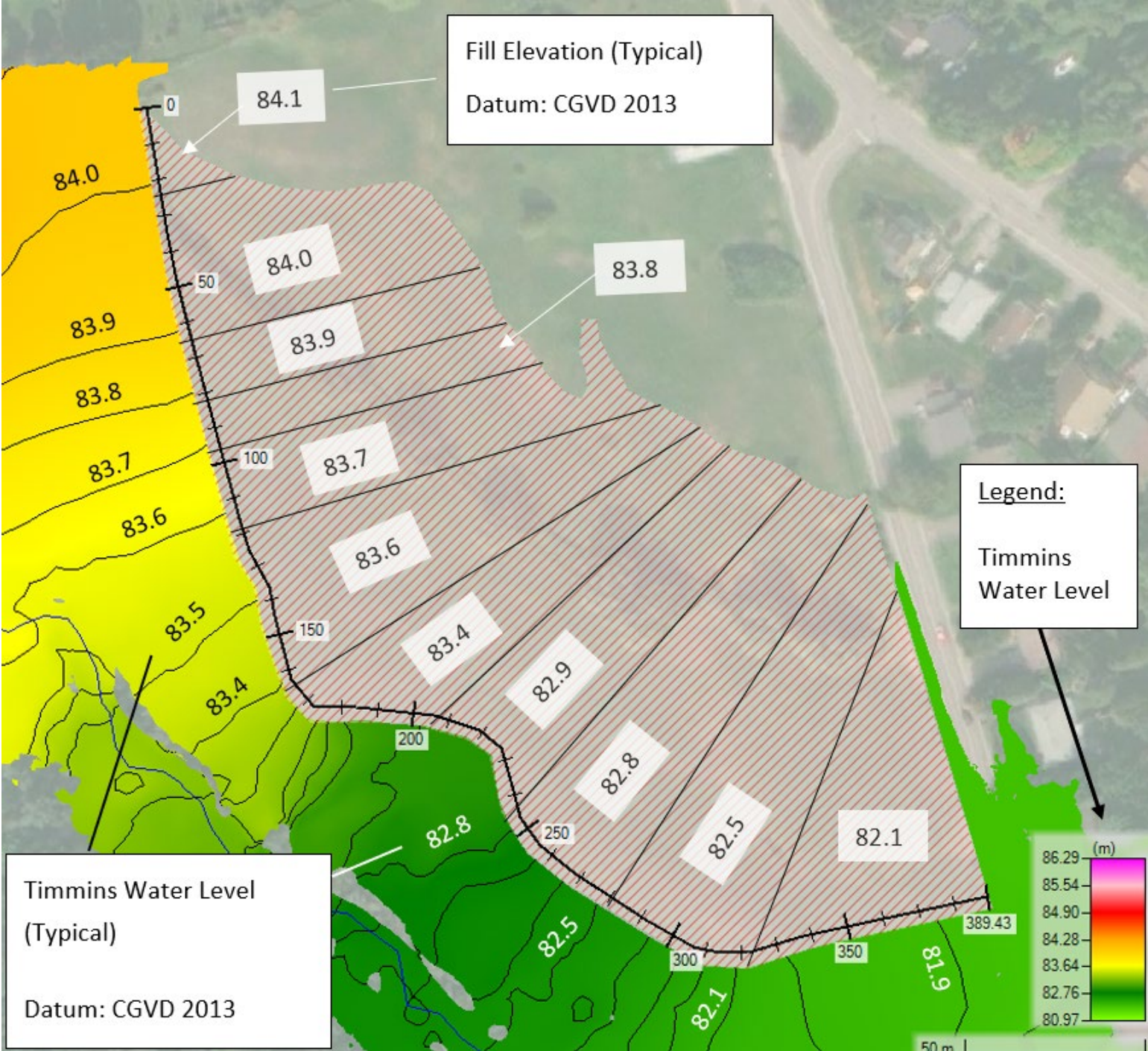














**REVISIONS**

ALL REVISIONS TO THIS PLAN SHALL BE MADE BY THE ENGINEER. ANY CHANGES TO THE PLAN SHALL BE MADE BY THE ENGINEER. THE ENGINEER SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED. THE ENGINEER SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED. THE ENGINEER SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED.

NO.	DATE	DESCRIPTION	BY
1	07/01/2024	FOR LTO PERMIT APPLICATION	JH

**LEGEND**

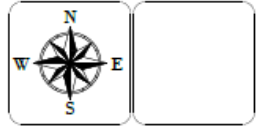
- 84.1 PROPOSED CONTOUR ELEVATION
- 85.27 PROPOSED DRAIN INVERT ELEVATION
- 81.7 EXISTING ELEVATION
- LOT BOUNDARY

**NOTES**

THIS PLAN WAS PREPARED FOR THE SOLE PURPOSE OF THE SUBMITTAL TO THE MUNICIPALITY OF BRIGHTON FOR THE PURPOSE OF OBTAINING A PERMIT FOR CONSTRUCTION. THE ENGINEER SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED. THE ENGINEER SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED. THE ENGINEER SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED.

**SCALE**

VERTICAL: AS SHOWN




LEBLANC ENTERPRISES  
 FLOOD MITIGATION  
 MUNICIPALITY OF BRIGHTON

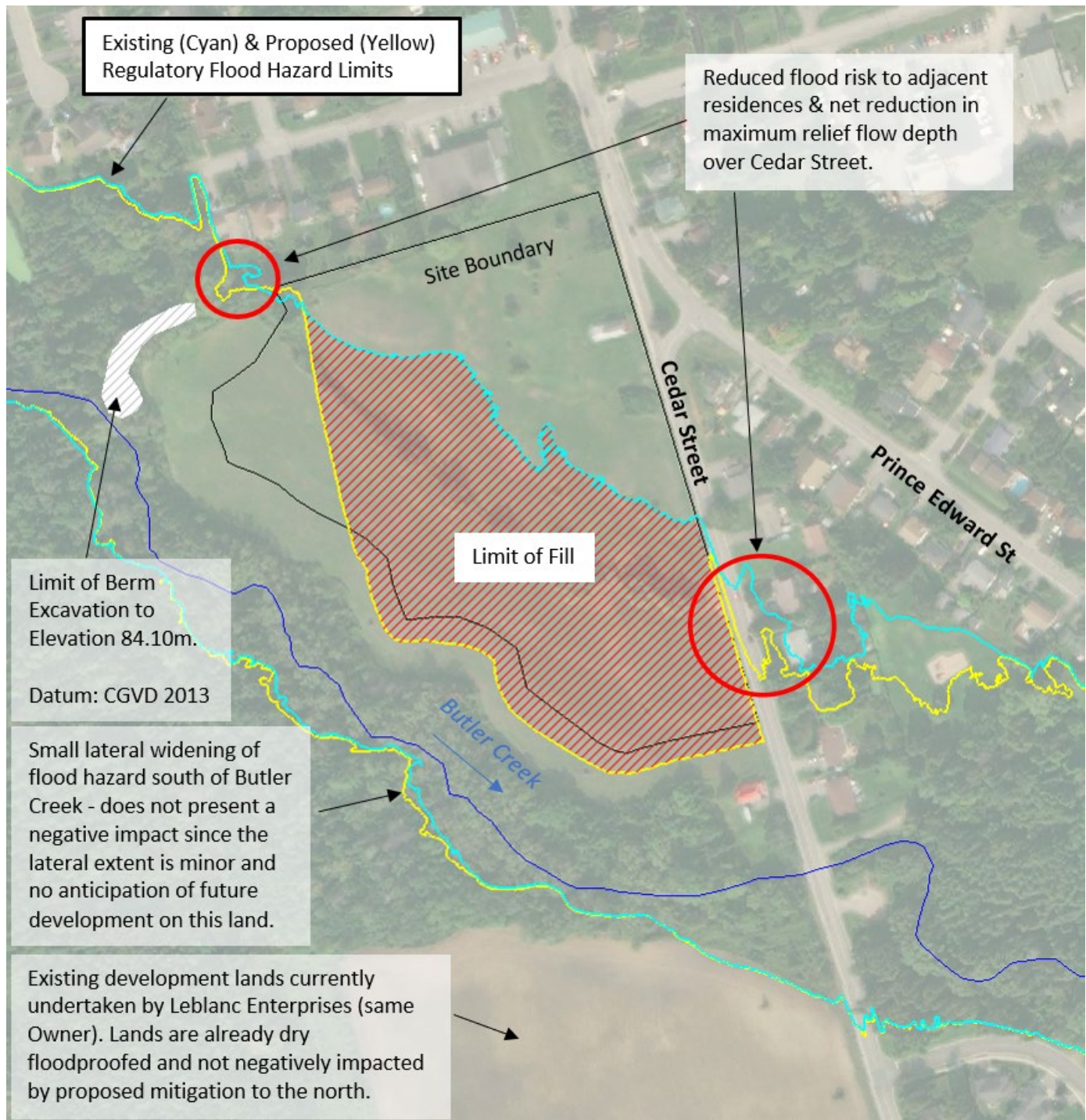
PROPOSED FILL PLAN

DRAWN BY: JH	PROJECT NO:
DESIGNED BY:	DATE: December 2024
CHECKED BY: EF	SCALE: HORIZONTAL: 1:500 VERTICAL: N/A
APPROVED BY:	CONTRACT NO: DRAWING NO: 1

# Flood Mitigation Objectives

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1. There must be no negative impacts to adjacent property owners. 
  - Several instances where flood limits improved.
  - No meaningful increase in flood risk at surrounding properties.





# Flood Mitigation Objectives

---

2. There must be no negative impacts to future residents at the site. ✓
- Fill will remove subject lands from the flood hazard limit.
  - A minimum 0.3m vertical freeboard per *LTC Floodproofing Guidelines* will provide the appropriate contingency.
  - Channel at west perimeter of development designed by Jewell to accommodate drainage from the north.



**BLOCK 27  
PARKLAND/OPEN SPACE**  
DEDICATED TO MUNICIPALITY

**REVISIONS**

ALL DIMENSIONS SHOWN IN METERS OR MILLIMETERS UNLESS OTHERWISE NOTED.

ALL DIMENSIONS SHOWN ON THIS DRAWING ARE TO BE CONSIDERED AS APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LOCATIONS IN THE FIELD AND MAKE ALL NECESSARY ADJUSTMENTS TO THE DRAWING TO REFLECT THE ACTUAL CONDITIONS.

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**REVISIONS**

NO.	DATE	DESCRIPTION	BY
1	03/05/2024	FOR LTO PERMIT APPLICATION	JH

**LEGEND**

84.1 PROPOSED CONTOUR ELEVATION

85.27 PROPOSED DRAIN INVERT ELEVATION

81.7 EXISTING ELEVATION

LOT BOUNDARY

CONVEYANCE DITCH  
SCALE: 1:1.5

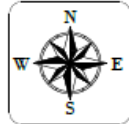
**NOTES**

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**SCALE**

VERTICAL: AS SHOWN

HORIZONTAL: AS SHOWN



**LEBLANC ENTREPRISES  
FLOOD MITIGATION**

MUNICIPALITY OF BRIGHTON

**PROPOSED FILL PLAN**

DESIGNED BY: JH	PROJECT NO.:
CHECKED BY: EF	DATE: December 2024
APPROVED BY:	SCALE: HORIZONTAL: 1:500 VERTICAL: N/A
	CONTRACT NO.:
	DRAWING NO.:
	1

# Flood Mitigation Objectives

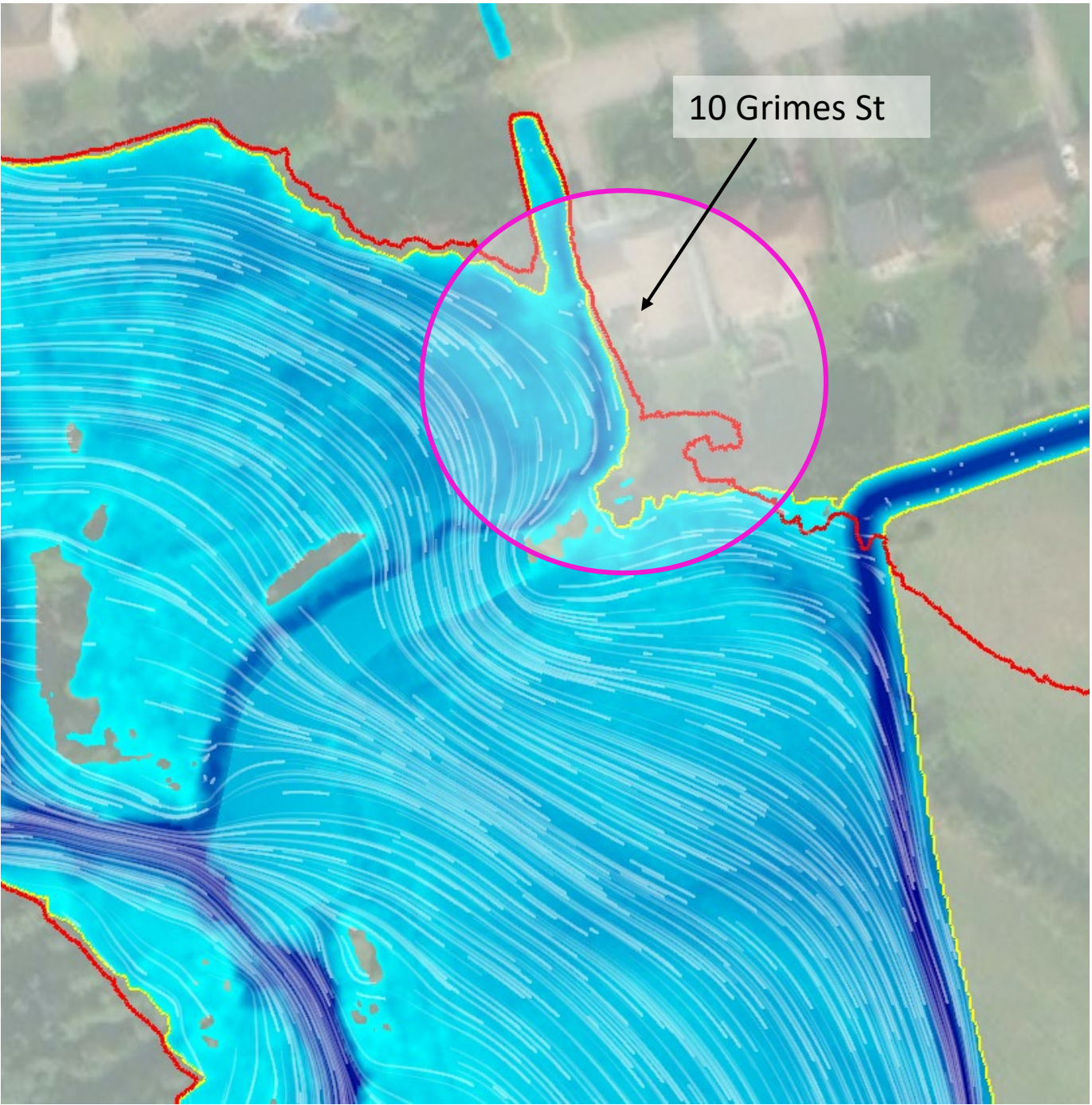
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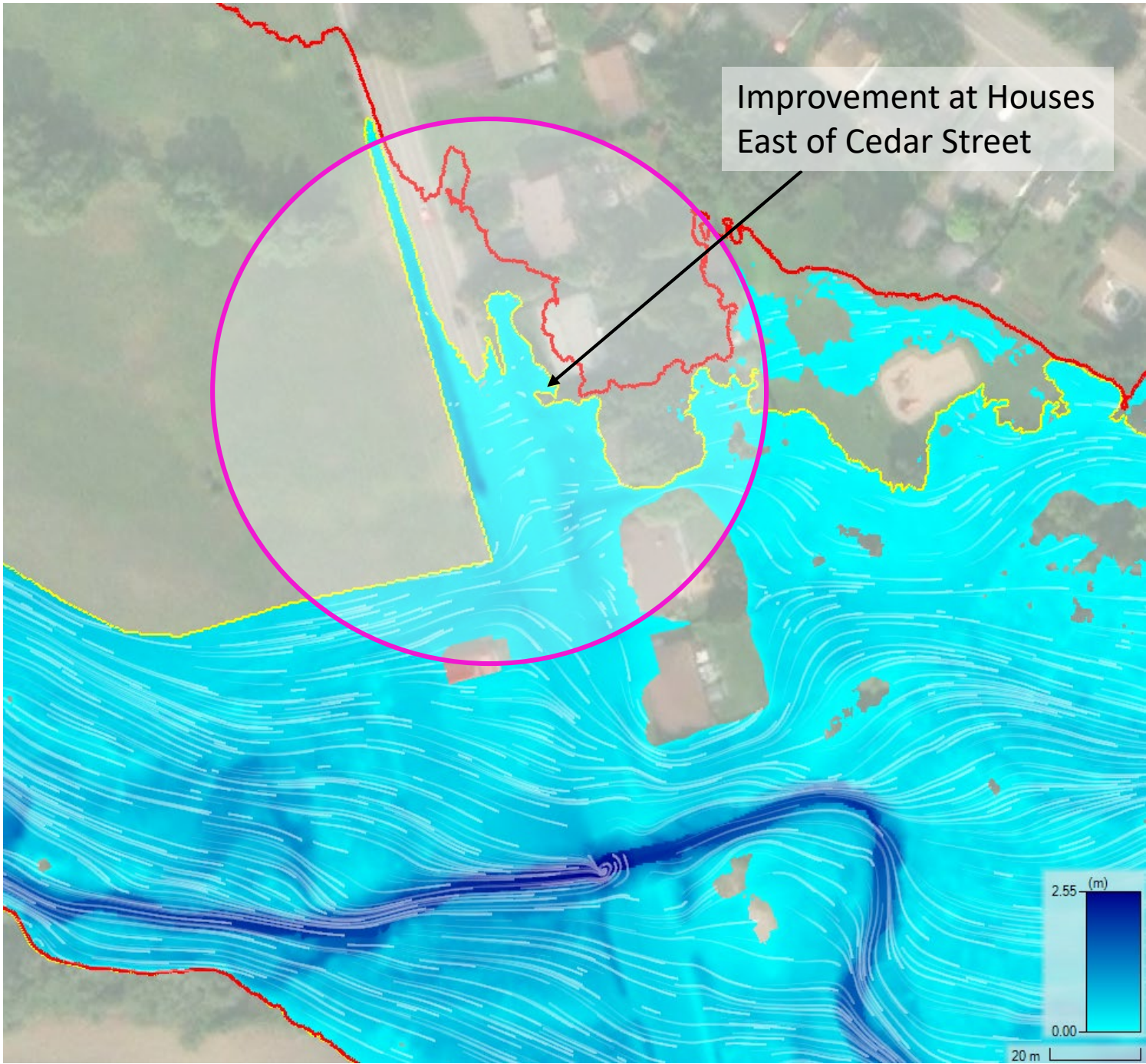
## 3. Bonus Objective:

Provide flood mitigation measures that result in a net benefit to the community. 

- 10 Grimes Street – 10cm regulatory water level improvement (reduction).
- Two houses on the east side of Cedar Street become partially or full removed from the floodplain.
- The proposed dry floodproofing results in 2.82 ha of residential-zone land that would otherwise be non-developable. The future land use is intended to be predominantly condominium and apartment units. The high-density housing options will help increase housing supply.









**BLOCK 27  
PARKLAND/OPEN SPACE**  
DEDICATED TO MUNICIPALITY

**REVISIONS**

ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED ARE IN METERS OR MILLIMETERS. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR.

NO.	DATE	DESCRIPTION	BY
1	03/01/2024	FOR LTO PERMIT APPLICATION	JH

**LEGEND**

- 84.1 PROPOSED CONTOUR ELEVATION
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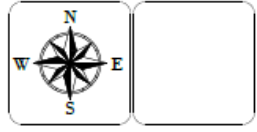
CONVEYANCE DITCH  
SCALE: 1:1.5

**NOTES**

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**SCALE**

VERTICAL: AS SHOWN  
HORIZONTAL: AS SHOWN



**LEBLANC ENTREPRISES  
FLOOD MITIGATION**

MUNICIPALITY OF BRIGHTON

**PROPOSED FILL PLAN**

DESIGNED BY: JH	PROJECT NO.:
CHECKED BY: EF	DATE: December 2024
APPROVED BY:	SCALE: HORIZONTAL: 1:500 VERTICAL: N/A
	CONTRACT NO.:
	DRAWING NO.:

# Flood Mitigation Objectives

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## 4. Bonus Objective:

Improve land use efficiency to benefit the environment by reducing the need for urban sprawl.

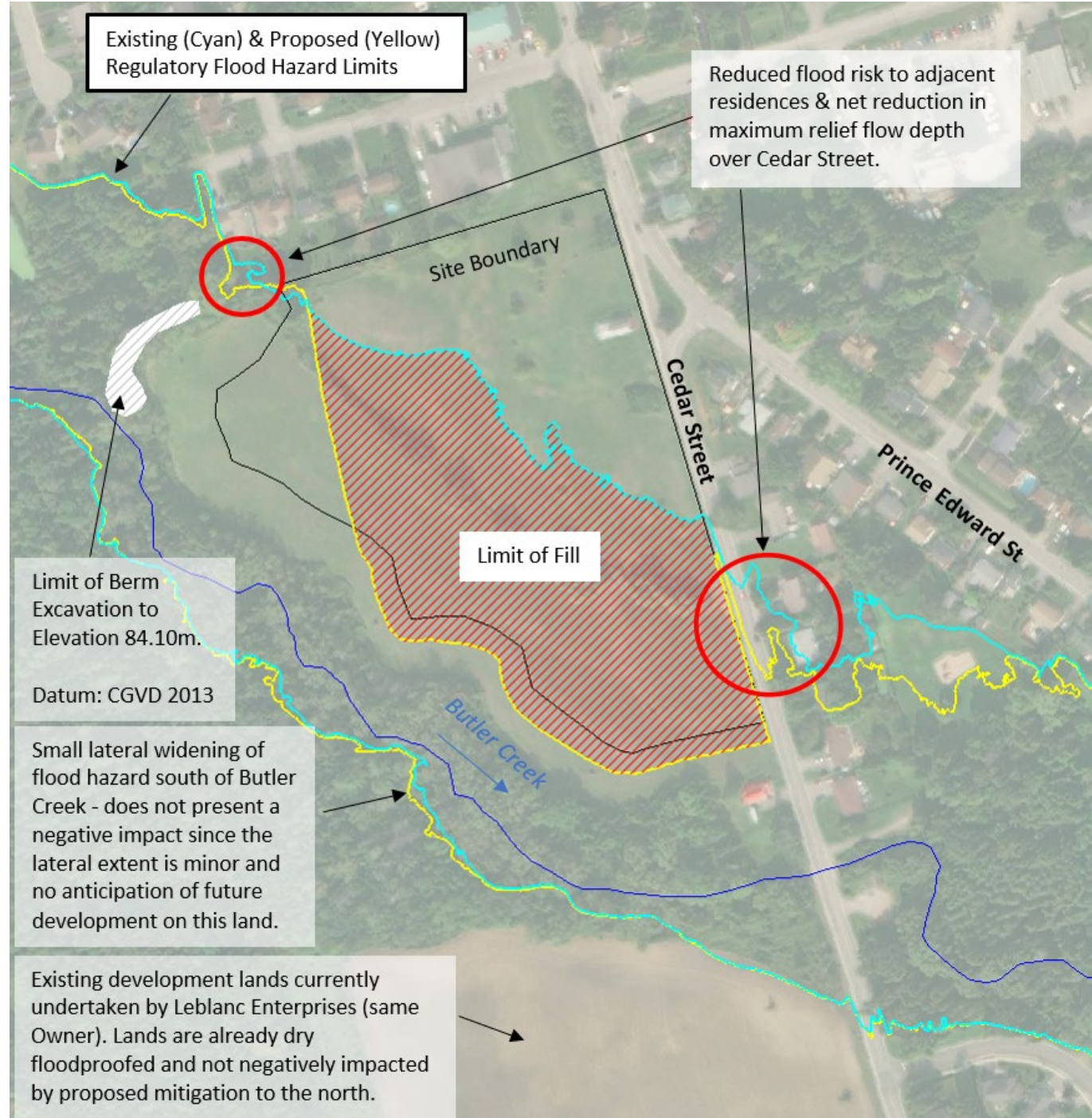


- With medium and high density units, the need to expand beyond existing urban is reduced.
- Reducing the sprawl of urban communities mitigates potential degradation to the natural setting by not seeking development in these additional areas in the first place.

# Summary: Butler Creek Flood Mitigation @ Cedar Street

---

1. Place fill on subject lands to allow dry floodproofing for future residential units.
2. Excavate the existing and deteriorated berm to alleviate the high flood elevations imposed by its pinch point.
3. Construct drainage channel along perimeter of fill limit to receive and convey potential drainage from the north (including Arena Creek Spill).



# Conclusion & Recommendations

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Based on a thorough engineering analysis,

1. Jewell recommends approval to the LTC Board.
2. We believe the proposed mitigation plan meets the Regulations and serves as a benefit to the community.

**Flood Mitigation Report**

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**Cedar Street Subdivision – Butler Creek North**

**For**

**Leblanc Enterprises**

---

**December 19, 2024**



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## Table of Contents

1	Objective .....	1
2	Background / Permitting Process.....	1
3	Existing Flood Hazard Characteristics .....	5
4	Proposed Flood Mitigation .....	10
5	Conclusions & Recommendations .....	18
6	References .....	19
	Appendix A-1: Meeting Notes from November 12, 2024.....	20
	Appendix A-2: Revision Summary .....	21
	Appendix B: Fill Placement (Grading) Plan .....	22
	Appendix C: Sediment and Erosion Control Plan .....	23
	Appendix D: Mannings Open Channel Flow Calculation for Propose Drainage Channel.....	24

## Table of Tables

TABLE 4-1: COMPARISON OF STATED OBJECTIVES FROM SECTION 1 TO FINDINGS OF FLOOD MITIGATION PLAN .....	15
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## Table of Figures

FIGURE 1-1: SITE LOCATION AND EXISTING 100-YR / TIMMINS FLOOD HAZARD LIMITS.....	2
FIGURE 2-1: EXCERPT OF <i>SECTION 28.1 (1) (A)</i> OF THE <i>CONSERVATION AUTHORITIES ACT</i> .....	4
FIGURE 3-1: COMPARISON OF 2024 (RED) AND HISTORICAL (GREEN) TIMMINS REGULATORY FLOOD LIMITS NEAR CEDAR STREET .....	5
FIGURE 3-2: COMPARISON OF 2024 (RED) AND HISTORICAL (GREEN) 100-YR FLOOD LIMITS NEAR CEDAR STREET .....	6
FIGURE 3-3: EXISTING FLOOD BERM UPSTREAM OF CEDAR STREET AND NORTH OF BUTLER CREEK .....	7
FIGURE 3-4: SPILL AT EXISTING FLOOD BERM IN 100-YR UPSTREAM OF CEDAR STREET; 100-YR WSEL OVERLAY (EXCERPT OF <i>FIGURE 5-28</i> FROM 2024 BUTLER CREEK REPORT) .....	8
FIGURE 3-5: FLOODWATER CHARACTERISTICS UPSTREAM OF CEDAR STREET WITH SPILL OVER EXISTING FLOOD BERM.....	8
FIGURE 3-6: 100-YR WATER SURFACE ELEVATION ABOVE LOW POINT IN BERM UPSTREAM OF CEDAR ST; MAX. 100-YR FLOW DEPTH OVER BERM = 0.5M (EXCERPT OF <i>FIGURE 5-30</i> FROM 2024 BUTLER CREEK REPORT) .....	9
FIGURE 4-1: EXISTING VS. PROPOSED REGULATORY FLOOD LIMITS WITH PROPOSED MITIGATION (FILL + BERM EXCAVATION) .....	12
FIGURE 4-2: ARENA CREEK SPILL DRAINAGE CHANNEL ALONG PERIMETER OF PROPOSED DRY-FLOODPROOFED LANDS ...	13
FIGURE 4-3: PROPOSED FILL ELEVATIONS FOR SUBJECT PERMIT APPLICATION TO REMOVE LANDS FROM REGULATORY FLOODPLAIN .....	14
FIGURE 4-4: SUMMARY OF PROPOSED CHANNEL DIMENSIONS WITH 1.5M BOTTOM WIDTH, 0.5% SLOPE, AND 2:1 SIDE SLOPES .....	15

## 1 Objective

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Jewell Engineering Inc. (JE) has prepared this *Flood Mitigation Report* to support an engineered mitigation alternative for the development lands north of Butler Creek and west of Cedar Street as shown in **Figure 1-1**.

This report is prepared as a revision to the original *Flood Mitigation Report* following feedback received from Lower Trent Region Conservation Authority (LTC) and their review engineer. This feedback was received via email and in a Teams meeting on November 12, 2024. A summary of the meeting notes is provided in **Appendix A-1**.

A summary of revisions in this report is provided in **Appendix A-2**.

In addition to the engineer peer review, LTC required a fill placement (i.e. grading) plan and a sediment and erosion control plan. These are provided in **Appendix B and C**, respectively.

For Jewell to support a permit application for floodproofing of the subject lands, the following objectives must be met:

1. There must be no negative impacts to adjacent property owners.
2. The mitigation measures should provide a net benefit to the community. This can be done accomplished by achieving a mitigation plan that results in:
  - a. Reduced flood risk on off-site lands.
  - b. Floodproofing of the subject lands per Conservation Authority guidelines.
  - c. More homes to be built within an area already designated for residential land use.
  - d. Increased land use efficiency that benefits the environment by reducing the need for urban sprawl.

## 2 Background / Permitting Process

---

A concept plan for the 4.48 ha site was previously created by RFA Planning Consultant Inc. (RFA) based on the historical floodplain mapping. It is anticipated that future development would include condominium and apartment buildings in addition to a commercial block.

The *2024 Butler Creek Floodplain Mapping Update* was recently published and is more restrictive than the previous mapping at the subject property. The current flood hazard limits were shown in **Figure 1-1**. Evidently, the existing flood hazard presents a constraint.

The Butler Creek flood hazard is regulated by Lower Trent Region Conservation Authority (LTC) and a permit would be required prior to taking action on mitigation solutions.

LTC staff would make a decision on the permit application based on the direction provided in their Policy Document. The wording in the Policy Document may occasionally restrict staff from issuing a permit for an application that has sound engineering solutions. In these instances, staff may deny the permit while simultaneously having no concern with the application itself; the purpose of denying the application is to defer the decision to the LTC board, who have a so-called longer leash in terms of making regulatory decisions.

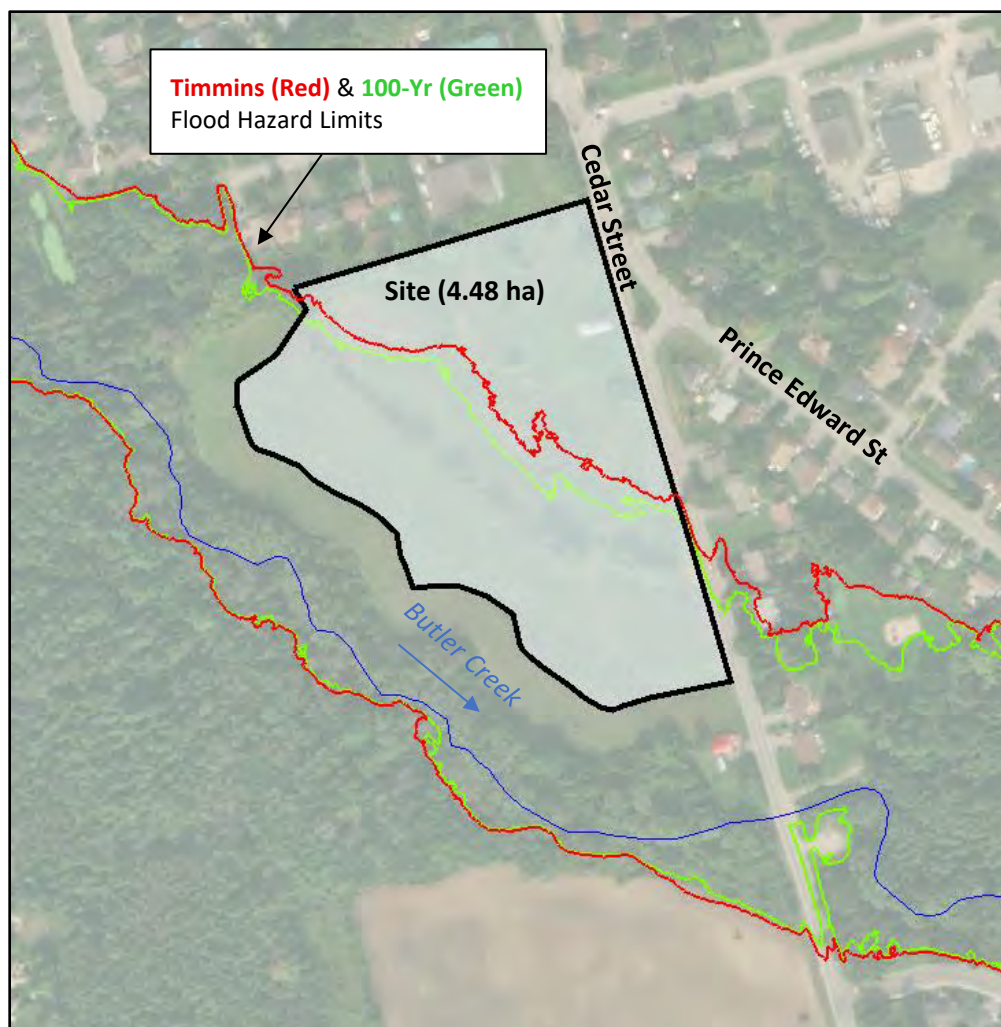


Figure 2-1: Site Location and Existing 100-Yr / Timmins Flood Hazard Limits

The LTC board have greater discretion on application decisions since they are governed by the **Regulations**. The Regulations are law, and override the Policy Document. The Regulations tend to be more permissible in their wording, thereby allowing decisions to be made based on engineering analysis and judgement.

Jewell participated in an informal meeting with LTC staff on September 18, 2024. A 2<sup>nd</sup> meeting occurred with the LTC review team on November 12, 2024 due to the expiration of the previous LTC reviewer's contract. At the November 12<sup>th</sup> meeting, the reviewers requested additional information based on their preliminary review. This requested information is provided in **Appendix B**.

The objective of both meetings was for Jewell to present the findings of our analysis and reasoning for supporting the permit application that corresponds to this *Flood Mitigation Report*. Both meetings had good dialogue and this report is submitted to further detail our recommendations.

While LTC staff may or may not have concerns with the information presented herein, we anticipate staff will be obligated to deny the application based on the 2024 LTC *Policy Document*.

In the likely event of an LTC board hearing, the board members will be able to make a decision based on *Ontario Regulation (O. Reg.) 41/24* and the *Conservation Authorities Act, R.S.O 1990, c. C.27*.

More specifically, *Section 28.1 (1) (a)* of the *Conservation Authorities Act* provides the information needed for a board hearing decision to be made. An excerpt of this section is provided in **Figure 2-1**.

Our interpretation of this section, in terms of this application, is that the LTC Board may issue a permit that would otherwise be prohibited if the LTC Board is convinced the subject application will not negatively affect the control of flooding for Butler Creek.

Jewell has established the objectives in Section 1 so that if the objectives are met, then we can recommend approval to the LTC Board on the basis of:

*The control of flooding for Butler Creek would be maintained or improved with the mitigation measures proposed in Section 4 of this report.*

**Permits**

**28.1 (1)** An authority may issue a permit to a person to engage in an activity specified in the permit that would otherwise be prohibited by section 28, if, in the opinion of the authority,

- (a) the activity is not likely to affect the control of flooding, erosion, dynamic beaches or unstable soil or bedrock;
- (b) the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property; and
- (c) any other requirements that may be prescribed by the regulations are met. 2017, c. 23, Sched. 4, s. 25; 2022, c. 21, Sched. 2, s. 9 (1).

Figure 2-2: Excerpt of *Section 28.1 (1) (a)* of the *Conservation Authorities Act*

### 3 Existing Flood Hazard Characteristics

Figures 3-1 and 3-2 provide a comparison of historical flood limits to the 2024 Butler Creek (existing condition) flood limits. The 2024 Butler Creek floodplain limits were officially adopted by LTC in June of this year. The proposed flood limits will be presented in Section 4 of this report.

**Note:** The historical flood limits have no impact on the flood mitigation measures described in this report. We show the historical limits to provide context as it relates to the existing 2024 flood hazard.

The figures below show that while the flood limits are similar upstream of Cedar Street in the Timmins event, there is a noticeable difference between historical and current flood limits for the 100-yr storm.

Figure 3-3 shows an existing flood berm and drainage channel upstream of Cedar Street and north of Butler Creek. The historic flood limits suggest the previous modelers expected the berm to fully block the flows in the 100-yr flood. A review of the LiDAR data identifies a low point in the berm at elevation 84.28m (datum CGVD 2013). This low point allows for 1.2 m<sup>3</sup>/s of flow in the 100-yr event to breach the berm (see Figure 3-4) and drain towards an existing drainage ditch and overbank area north of Butler Creek, ultimately contributing to the wider floodplain extents in this area in the 100-yr flood (see Figure 3-5).

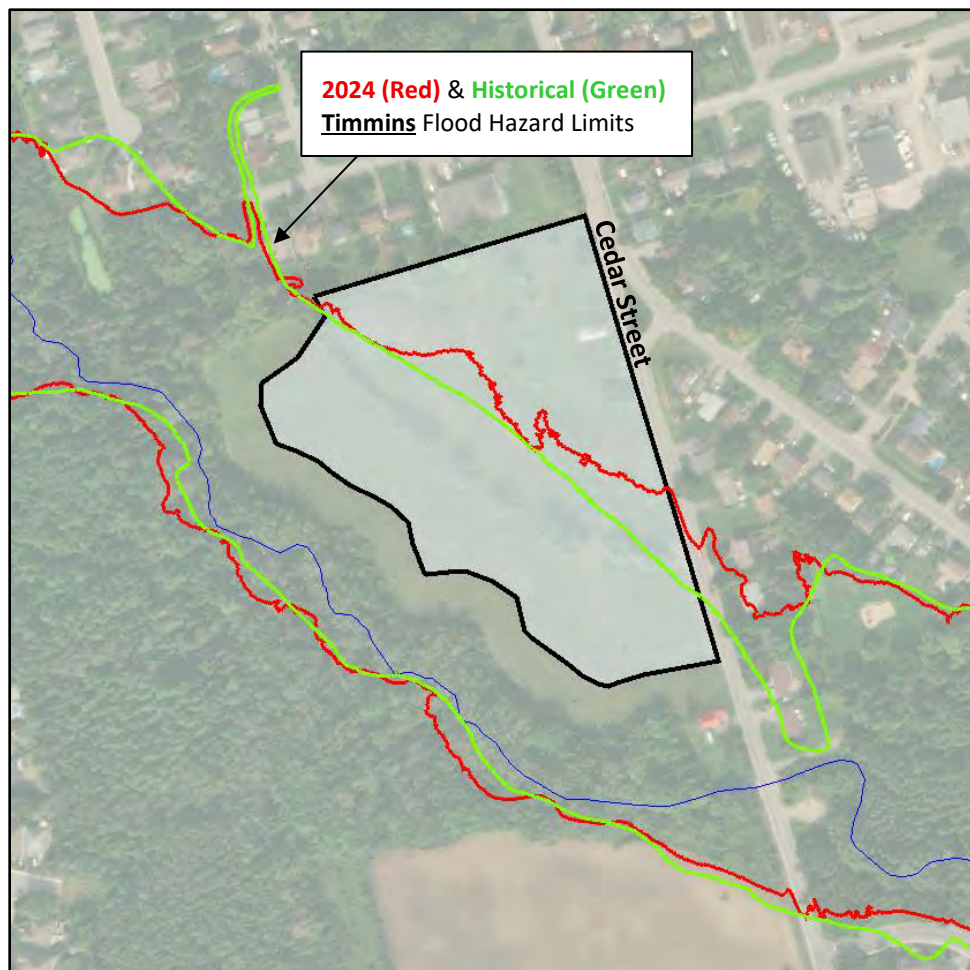


Figure 3-1: Comparison of 2024 (Red) and Historical (Green) Timmins Regulatory Flood Limits near Cedar Street

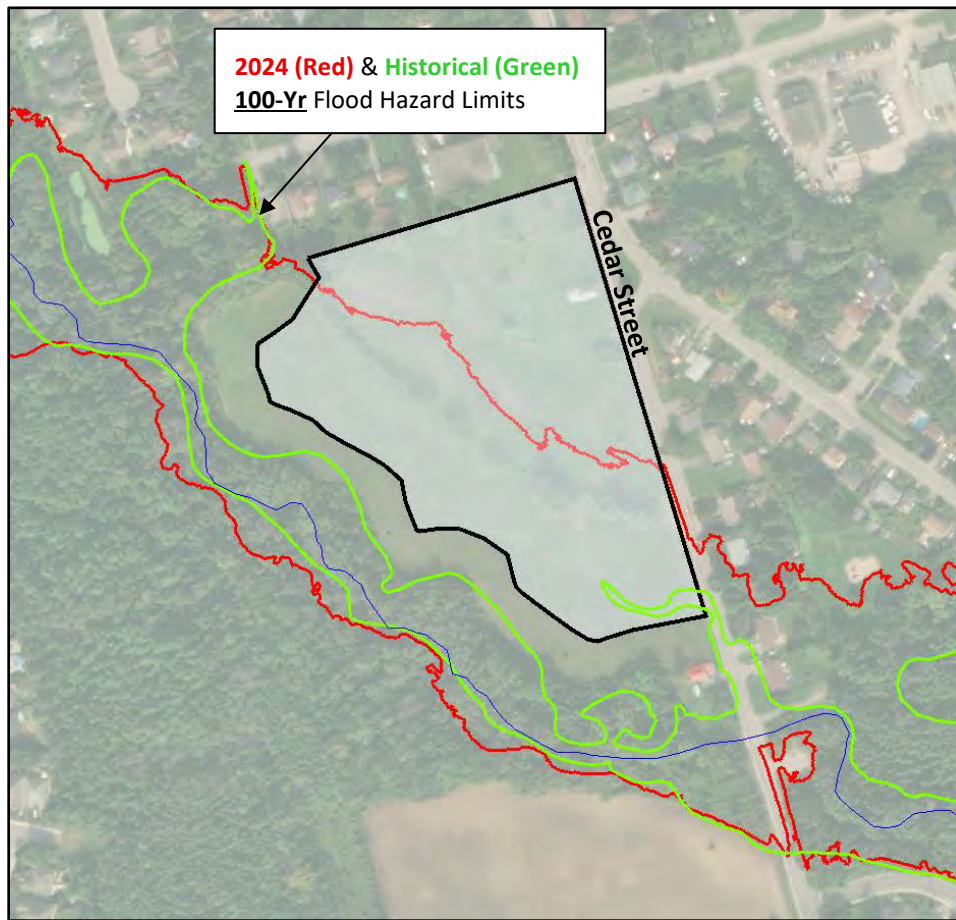


Figure 3-2: Comparison of 2024 (Red) and Historical (Green) 100-Yr Flood Limits near Cedar Street

Figure 3-6 shows a profile of the top of berm in the vicinity of its low point. This low point is 0.47m lower than the higher portions of the berm that are not breached in the 100-yr storm event. Given that the historical mapping was completed nearly 40 years ago, it is possible that the berm has deteriorated over time or that its original elevations have not been maintained. As Section 4 will discuss, it is recommended that this berm be excavated to avoid the pinch point it creates that leads to higher localized flood elevations in major storms.

The 2024 Butler Creek floodplain update shows that the relief flow over Cedar Street exceeds 0.3m in the regulatory storm event. This is in part due to the wide flood extents encouraged by the breach of the existing flood berm. Figure 3-5 shows that after water reaches the subject lands, much of this flood water does not have opportunity to drain back to the main channel prior to overtopping Cedar Street.

The result is that the flood waters are not flowing in the same direction as the creek alignment when overtopping the north side of the Cedar Street crossing. In fact, the water levels on the north end of the Cedar Street crossing are higher than on the south side of the road crossing. A product of this flood characteristic is that there are three (3) dwellings on the downstream (east) side of Cedar Street that are within the regulatory floodplain. As will be shown in Section 4, the proposed mitigation measures lower the water level and yield a net reduction to the risk to life and property in this location.

*Cedar Street Subdivision – Butler Creek North  
Flood Mitigation Report*

In addition to the Butler Creek floodplain, there is a spill from Arena Creek that requires consideration. The figure on Page 101 of the *Butler & Arena Creek Floodplain Mapping Update* shows a maximum spill of 3.29 m<sup>3</sup>/s in the Timmins storm that overtops Cedar Street and drains towards Butler Creek.

A portion of this spill would drain towards the drainage channel that outlets to Butler Creek near the west limit of Grimes Street. However, the overland spill route, if culverts were blocked, could end up draining towards the north limit of the subject development lands. As discussed in the meeting between LTC and Jewell, it was agreed that this potential spill should be accounted for in the mitigation plan. An allowance to receive and convey the Arena Creek spill would also be used for the minor amount of rear-yard drainage from the residential lots immediately north of the site. The proposed conveyance measures are discussed in **Section 4**.

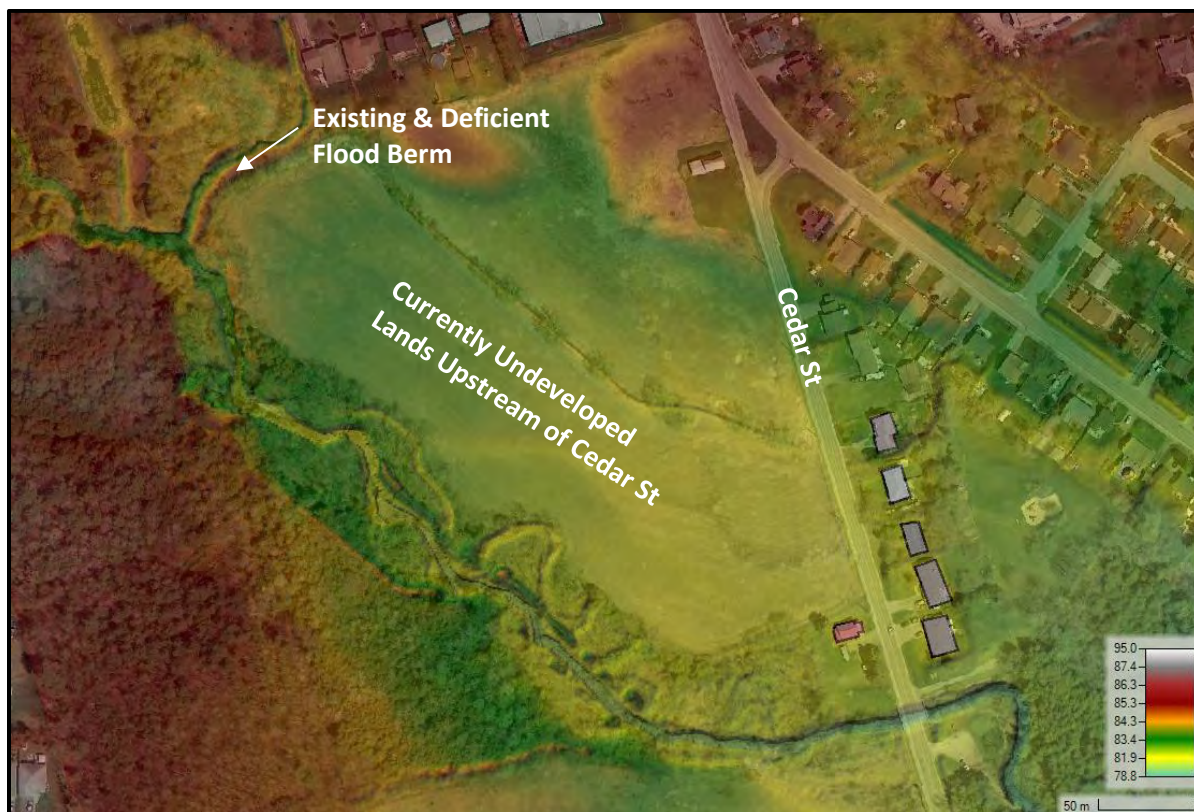


Figure 3-3: Existing Flood Berm Upstream of Cedar Street and North of Butler Creek



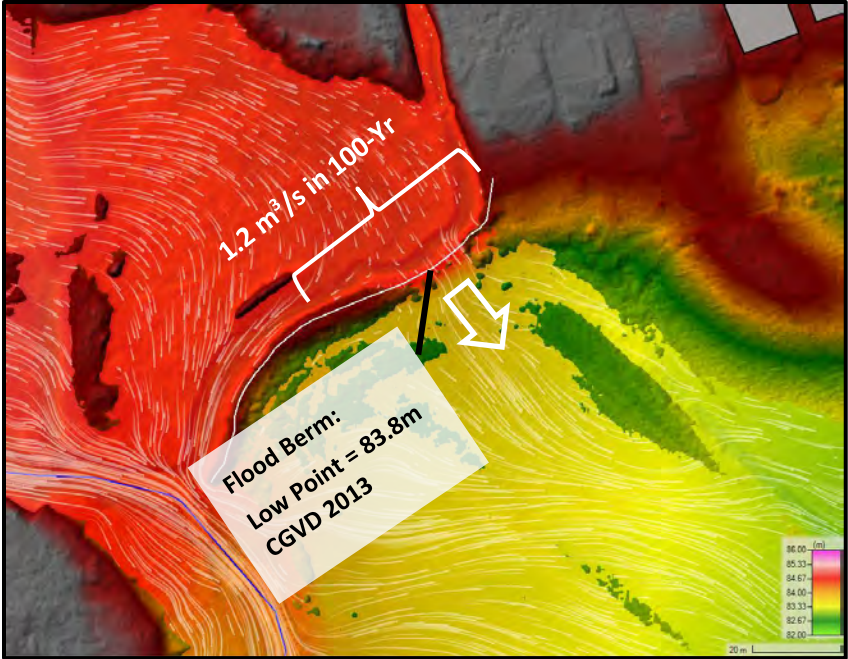


Figure 3-4: Spill at Existing Flood Berm in 100-Yr Upstream of Cedar Street; 100-Yr WSEL Overlay (Excerpt of Figure 5-28 from 2024 Butler Creek Report)

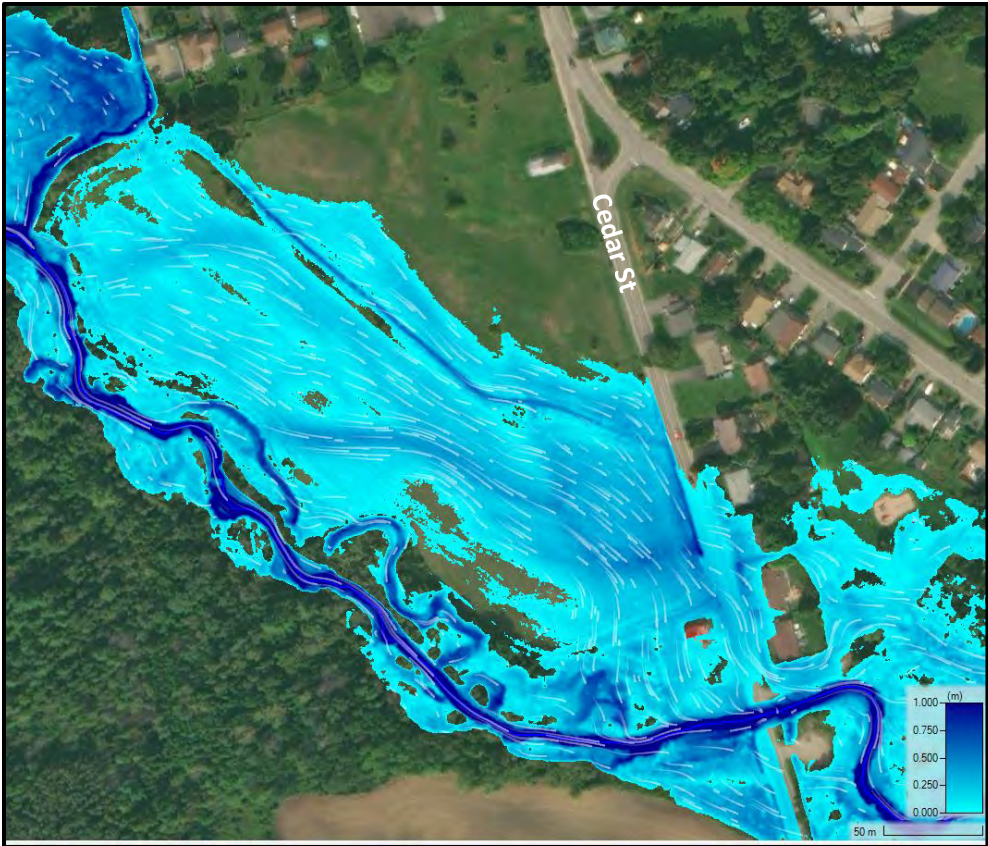


Figure 3-5: Floodwater Characteristics Upstream of Cedar Street with Spill Over Existing Flood Berm

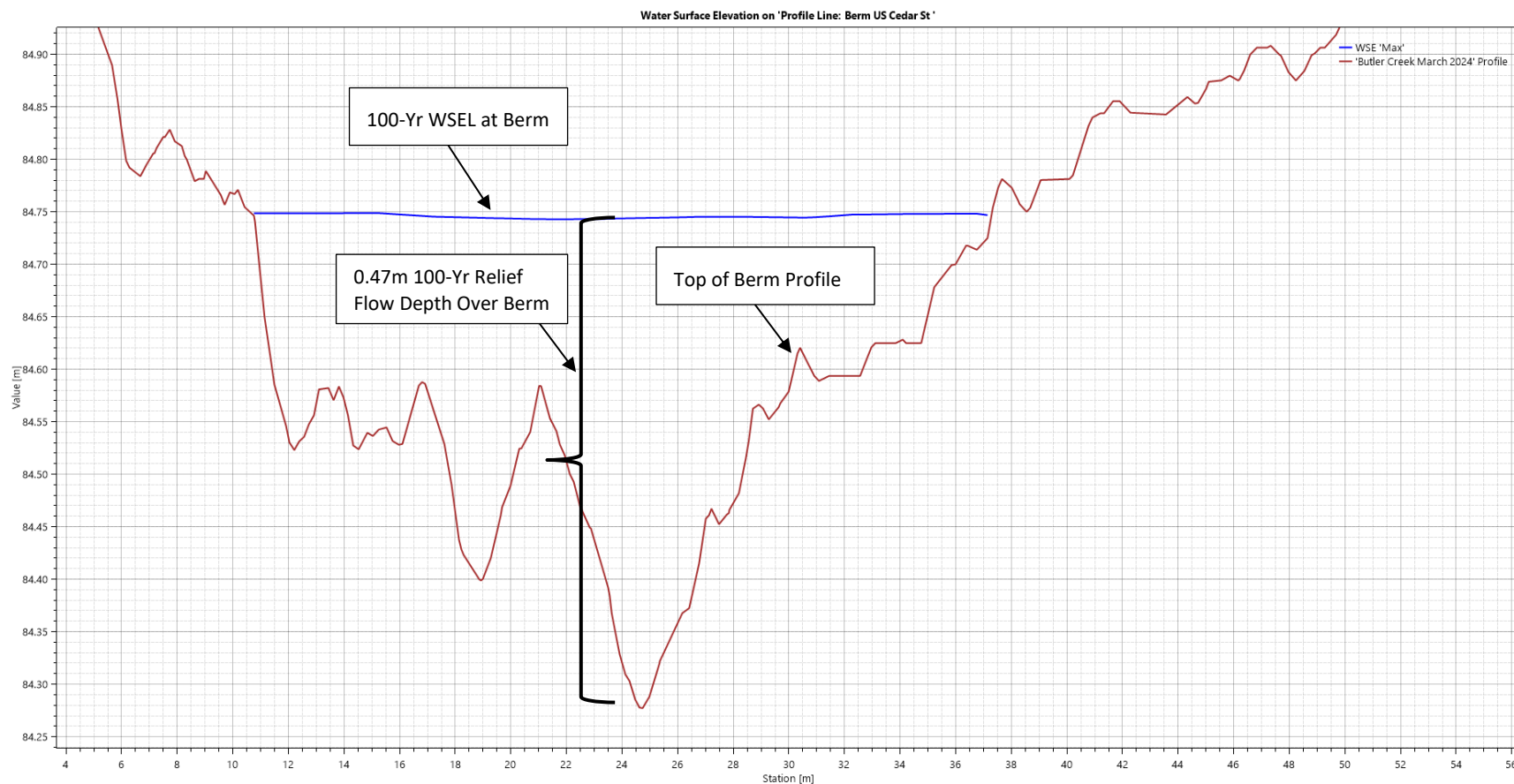


Figure 3-6: 100-Yr Water Surface Elevation Above Low Point in Berm Upstream of Cedar St; Max. 100-Yr Flow Depth Over Berm = 0.5m (Excerpt of Figure 5-30 from 2024 Butler Creek Report)

## 4 Proposed Flood Mitigation

The preferred floodproofing method is dry floodproofing. It requires the placement of engineered fill so that the future building is a minimum of 0.3m above the floodplain, ensuring the structure remains dry in the flood event.

Generally speaking, the concern of fill within the floodplain is whether it affects the storage or conveyance of the flood waters. Site-specific topography, spill points, peak flows, buildings, culvert sizes, and road profiles are all important factors, none of which are identical in any floodplain assessment. Therefore, fill within the flood hazard limit needs to be assessed on a case-by-case basis.

After testing several mitigation alternatives and assessing the sensitivity of the floodplain limits with different fill placement options, we concluded three critical components to the proposed mitigation plan:

- 1) Fill must be placed *inside* of the “Limit of Fill” boundary shown in **Figure 4-1**. The fill cannot extend west of this boundary, since the fill limit shown allows that flood waters to gradually narrow towards the middle of the site in a flow efficient manner.

**Of note:**

- a. The **fill area** has a **footprint of 2.82 ha**.
  - b. The existing Timmins flood depth is an **average of 0.36m** within the proposed fill area.
  - c. The **fill volume required** above existing ground to be above the *existing* regulatory flood elevation is **10,050 m<sup>3</sup>**. However, with localized increase in water levels at the subject property, the fill required is expected to be **31,000 m<sup>3</sup>**.
  - d. The proposed fill elevations to remove the lands from the floodplain per this permit application are conceptually shown in **Figure 4-3**. **Appendix C** provides the more detailed grading/fill plan.
- 2) The existing flood berm must be excavated and largely removed. An approximate location of this excavation area is depicted in **Figure 4-1**. In its current state, the earth berm causes a pinch point by creating a wide ineffective flow area within the north overbank. Excavation of the existing (and deficient) berm will alleviate the backwater imposed by the berm and create lower localized flood elevations. This will reduce the flood risk to the adjacent property immediately northwest of the subject lands.
    - a. The proposed excavation is to match the limit shown in Figure 4-1. The bottom of excavation should correspond to elevation 84.10m and the excavation amount is approximately 300 m<sup>3</sup>.
- 3) A drainage channel should be implemented near the north property limit to accommodate the potential spill from Arena Creek.
    - a. The *2024 Butler & Arena Creek Floodplain Mapping Update* identifies a maximum of 3.29 m<sup>3</sup>/s spill from Arena Creek towards Butler Creek. A detailed investigation of the flow path of this spill after it overtops Cedar Street would likely show that a portion the flow gravitates towards the existing channel that outlets to Butler Creek via the outlet easement at the west end of Grimes Street. However, for a conservative approach, we

have included the provision of a drainage channel at the north end of the subject property sized to convey the *full* 3.29 m<sup>3</sup>/s spill.

- b. The proposed drainage channel for the Arena Creek spill begins at the north end of the subject property and follows the perimeter of the proposed fill limit in a general north-south direction until it outlets to Butler Creek (see **Figures 4-2 and 4-4**).
- c. The proposed channel has a trapezoidal shape with a 0.5% longitudinal slope, 1.5m bottom width, 2:1 side slopes, and was sized using a Mannings roughness coefficient of 0.035 per *Design Chart 2.01* of the *MTO Drainage Management Manual*. The swale sizing calculation is provided in **Appendix D** and shows the capacity of the proposed swale is 3.52 m<sup>3</sup>/s. This is greater than the full 3.29 m<sup>3</sup>/s conservatively assumed to reach the north drainage ditch from the Arena Creek spill.

The flood mitigation plan was tested in the hydraulic model and other supporting calculations to verify the engineering theory. The model output results confirmed that the proposed mitigation measures would meet each objective from **Section 1**. The matrix in Table 4-1 provides specifics on how each objective is met.

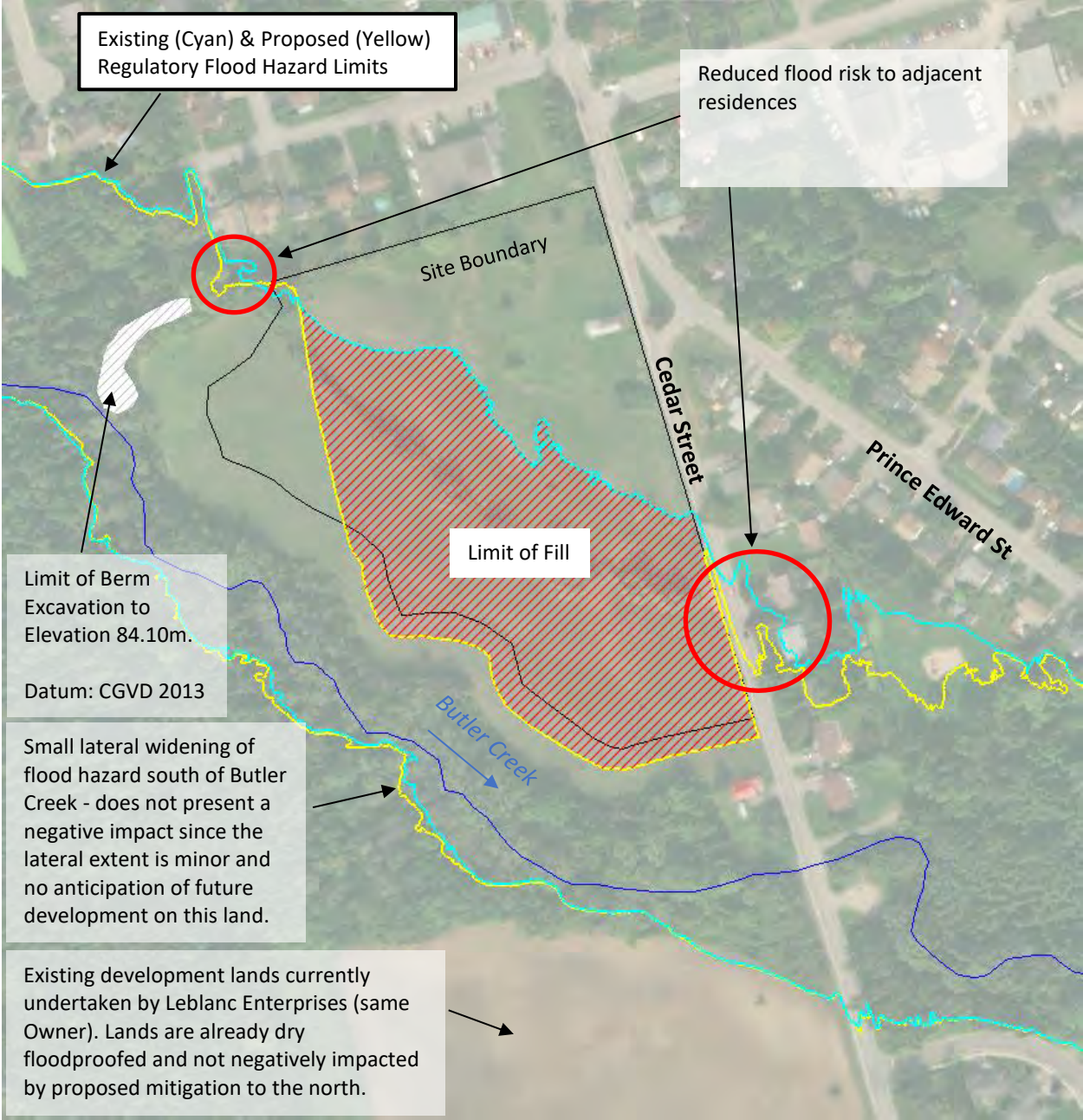


Figure 4-1: Existing vs. Proposed Regulatory Flood Limits with Proposed Mitigation (Fill + Berm Excavation)

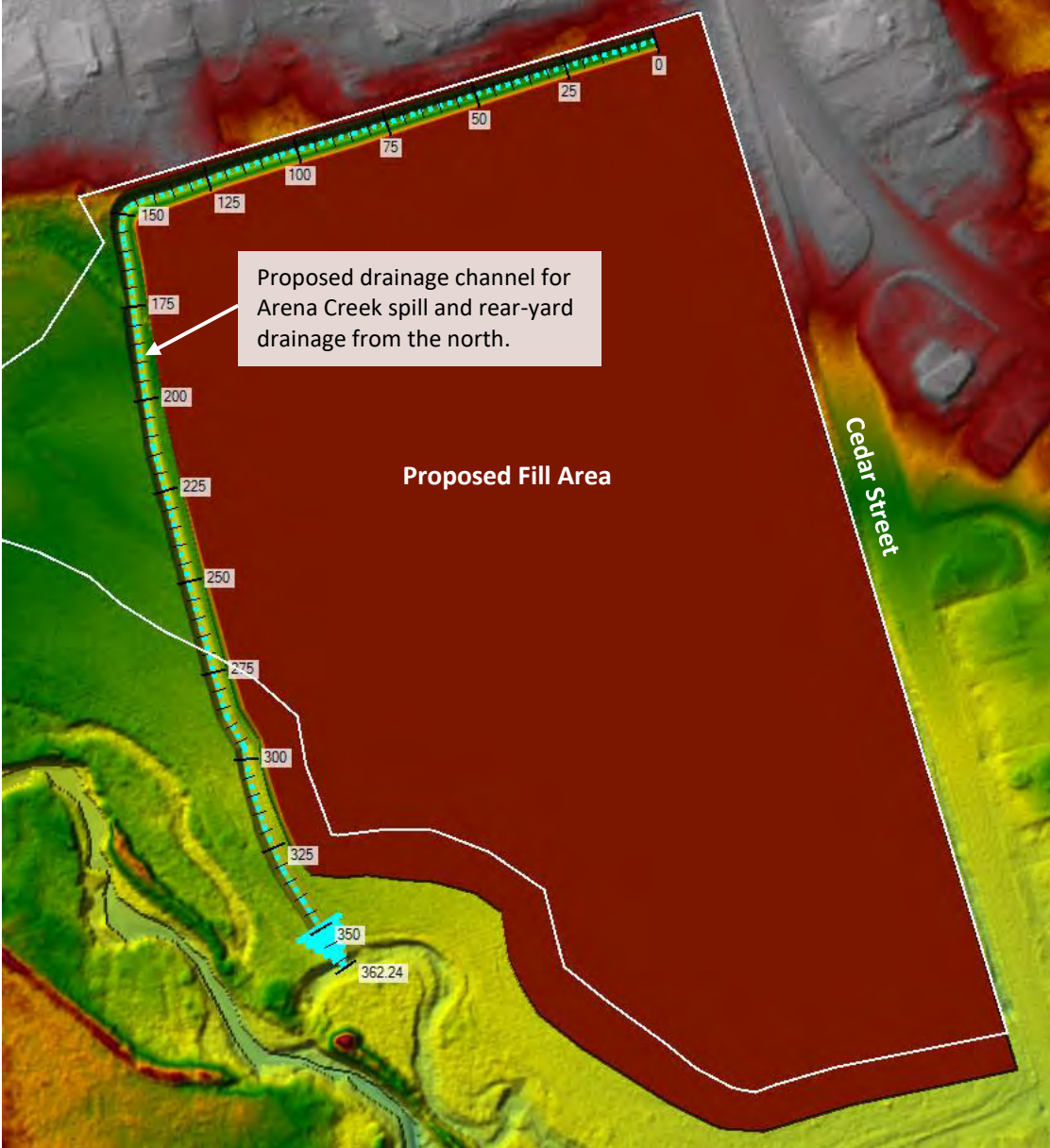


Figure 4-2: Arena Creek Spill Drainage Channel Along Perimeter of Proposed Dry-Floodproofed Lands

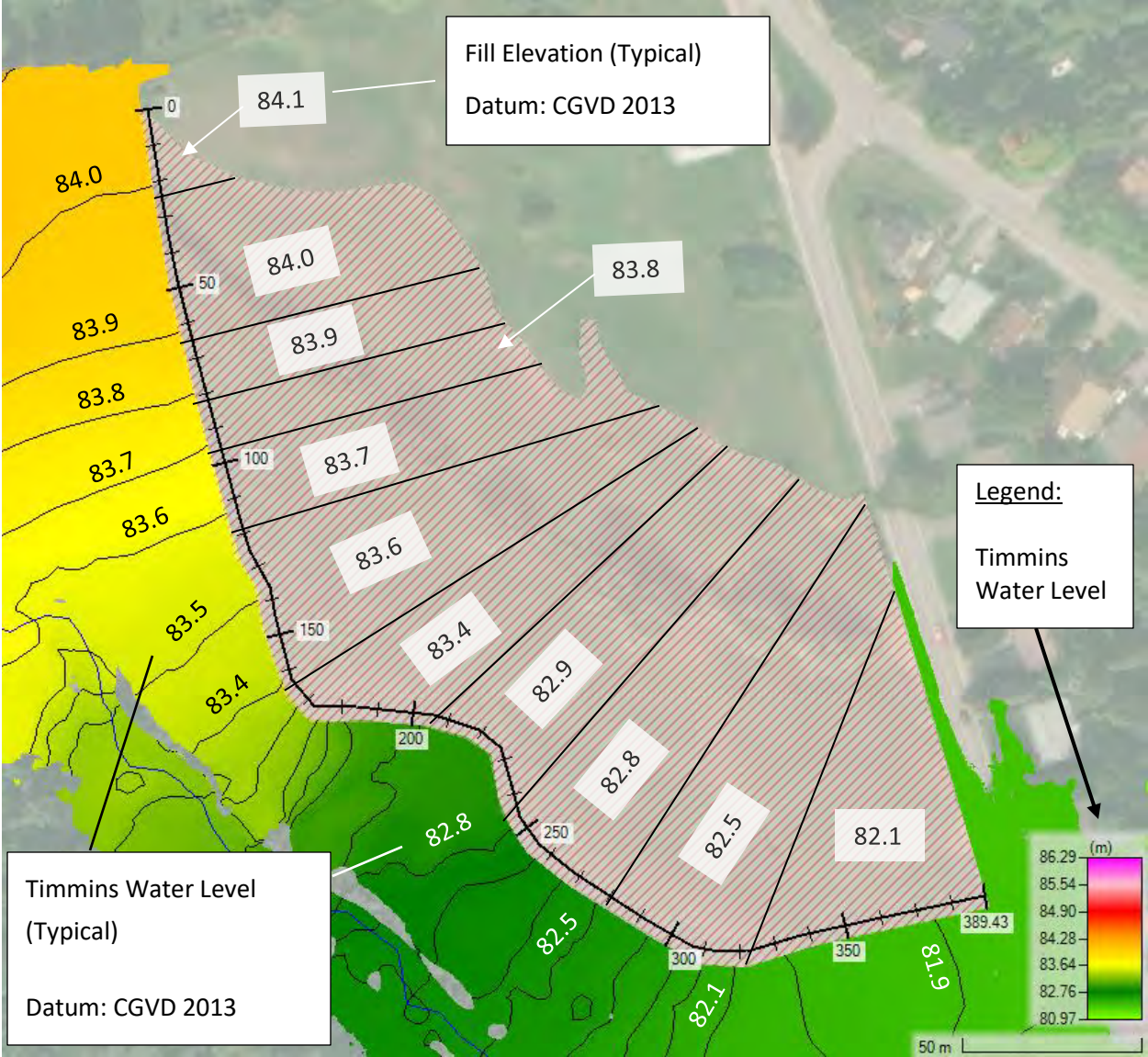


Figure 4-3: Proposed Fill Elevations for Subject Permit Application to Remove Lands from Regulatory Floodplain

Cedar Street Subdivision – Butler Creek North  
Flood Mitigation Report

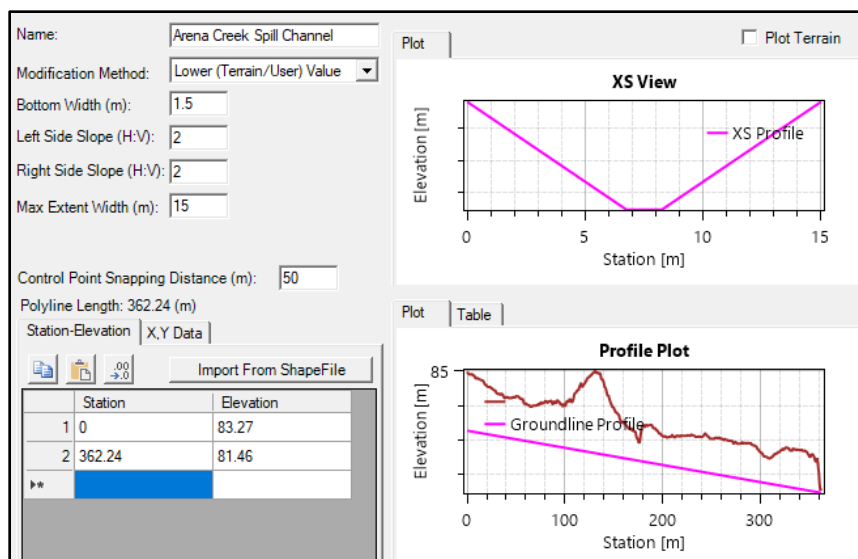






Figure 4-4: Summary of Proposed Channel Dimensions with 1.5m Bottom Width, 0.5% Slope, and 2:1 Side Slopes

Table 4-1: Comparison of Stated Objectives from Section 1 to Findings of Flood Mitigation Plan

#	Stated Objective:	Achieved?
1	<b>There must be no negative impacts to adjacent property owners.</b>	
	<p>This objective is met because:</p> <p>In a review of the surrounding flood limits, there are several instances where the flood limits are improved relative to the existing flood hazard limits. We conclude that there is no meaningful increase in flood risk at any of the surrounding properties. In fact, there are notable improvements as noted in the reasoning that <i>Objective 2a</i> is met as described below.</p>	



2	<p><b>The mitigation measure should provide a net benefit to the community. This can be accomplished by achieving a mitigation measure that results in:</b></p>	
a)	<p>Reduced flood risk on off-site lands.</p> <p>This objective is met because:</p> <p>The flood elevations are reduced in the existing flood locations that present the highest risk to adjacent properties. This includes the adjacent property to the northwest (10 Grimes Street) of the site, where the Butler Creek flood elevation is reduced by approximately 10cm as a result of the mitigation plan. It also includes the two residential properties on the north side of the Cedar Street crossing that receive reduced flood depths with the proposed mitigation plan. We are not concerned with the potential impacts to safe access based on our investigation and response to Request #3 as shown in Appendix B.</p> <p>As shown by the notes on the bottom left of <b>Figure 4-1</b>, the trade-off to the improvements on the north side of the Cedar Street crossing is that there is a small lateral expansion of the floodplain on the south side of Butler Creek. These lands would not be negatively affected since they are either a) already undevelopable due to environmental protection or b) already dry floodproofed as part of the previously approved development to the south.</p>	
b)	<p>Floodproofing of the subject lands per Conservation Authority guidelines.</p> <p>This objective is met because:</p> <p><i>Appendix E - Floodproofing Standards</i> of the LTC Policy Document states that the minimum elevations for dry floodproofing is the Regulatory Flood + 0.3 meters. With the proposed mitigation plan, the fill placement per the subject application will remove the lands from the floodplain and allow for a minimum of 0.3m of fill above the flood elevation to be placed during subdivision construction after other municipal approvals are achieved. Therefore, the mitigation plan provides opportunity to ensure all buildings on the subject site are floodproofed.</p>	

<p><b>c)</b></p>	<p>More homes to be built within an area already designated for residential land use.</p> <p>This objective is met because:</p> <p>The proposed dry floodproofing would result in 2.82 ha of residential-zoned land that would otherwise be non-developable. All levels of government agree there is a need to increase housing supply. The future land use is intended be predominantly condominium and apartment units. High-density housing options meet the intent of this stated objective.</p>	
<p><b>d)</b></p>	<p>Increased land use efficiency that benefits the environment by reducing the need for urban sprawl.</p> <p>This objective is met because:</p> <p>With high-density residential units, the need to expand beyond existing urban boundaries is reduced. Reducing the sprawl of our urban communities mitigates potential degradation to natural setting by not seeking development in these additional areas in the first place.</p>	

## 5 Conclusions & Recommendations

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After several design iterations, Jewell has concluded that the flood mitigation plan herein would meet the objectives established in Section 1. We have concluded that in addition to presenting no appreciable impact to the control of flooding and there would be noticeable improvements in the Regulatory storm at three existing residential properties,

The three (3) components of the mitigation plan were summarized in **Figures 4-1 to 4-4** and include the following:

1. Fill placement on the subject lands to allow for dry floodproofing of future buildings.
2. Berm excavation of the existing, deteriorated berm to alleviate the high flood elevations imposed by its pinch point.
3. A drainage channel along the perimeter of the limit of fill to receive and convey the potential Arena Creek spill. The drainage channel would also serve as a drainage route for rear-yard drainage from the residential lots immediately north of the subject lands.

Based on our engineering analysis and judgement, Jewell Engineering recommends approval of the subject application to the LTC Board since we believe the proposed mitigation plan meets the Regulations and serves as a benefit to the community.

Prepared by:



Elliott Fledderus, P.Eng.  
Jewell Engineering Inc.

## 6 References

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(Ministry of Natural Resources). *Floodplain Management in Ontario Technical Guidelines*.

Ministry of Transportation Ontario. (1997). *Drainage Management Manual*.

Appendix A-1:  
Meeting Notes from November 12, 2024

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## Meeting Notes

Notes by: Elliott Fledderus, P.Eng.

Meeting: November 12, 2024, 10:00AM – 11:00AM

Attendees: Christine Phillibert (QC), Dave Eastcott (QC), Bryon Keene (Jewell), Elliott Fledderus (Jewell)

Location: Teams Meeting

Objective: To participate in a pre-consultation/report review with Quinte Conservation (QC) staff since they have been brought in to review the file since the departure of LTC's review engineer.

RE: Flood Mitigation Plan - Cedar Street North Development (Leblanc Enterprises)

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The goal of the meeting is to discuss potential concerns related to the previously submitted *Flood Mitigation Report*. Since QC was brought in after the initial pre-consultation in September, we also used this opportunity to provide background for the Butler Creek floodplain mapping and some history of our previous meetings with Brighton and RFA regarding potential flood mitigation opportunities.

We anticipate QC will request some additional information be added to the report as discussed in the meeting. Following the revised report, Jewell will re-circulate to LTC and QC staff. Based on the discussion, we anticipate QC will request the following information:

1. The depth and velocity information before and after the flood mitigation plan at the house immediately upstream of Cedar Street.
  - An assessment of smaller return period events was noted to be useful to confirm whether the house is negatively affected in events less than the regulatory storm.
2. In the meeting, Jewell showed the existing and proposed model extents downstream of the subject site, between Cedar Street and Lake Ontario. The intent is to confirm no negative impacts late in the system due to the loss of storage within the subject property. Jewell is to add a figure and brief discussion in the revised report to note this was reviewed and addressed.
3. A profile of water surface elevations in the vicinity of Cedar Street (immediately upstream and downstream) was requested. Jewell to provide in revised report.
4. A profile of depths across the Cedar Street road profile was requested. This would provide further details related to safe access. Jewell to provide in revised report.

The meeting was productive and Jewell is appreciative of the feedback received.

Note: In an email response November 26, 2024, QC noted that velocity information is to be added to the depth profiles for the Cedar Street sections.

## Appendix A-2: Revision Summary

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**Revision Summary:**

The revision summary below is intended to address the information we anticipate QC will require based on the meeting notes from November 12, 2024 as shown in **Appendix A-1**.

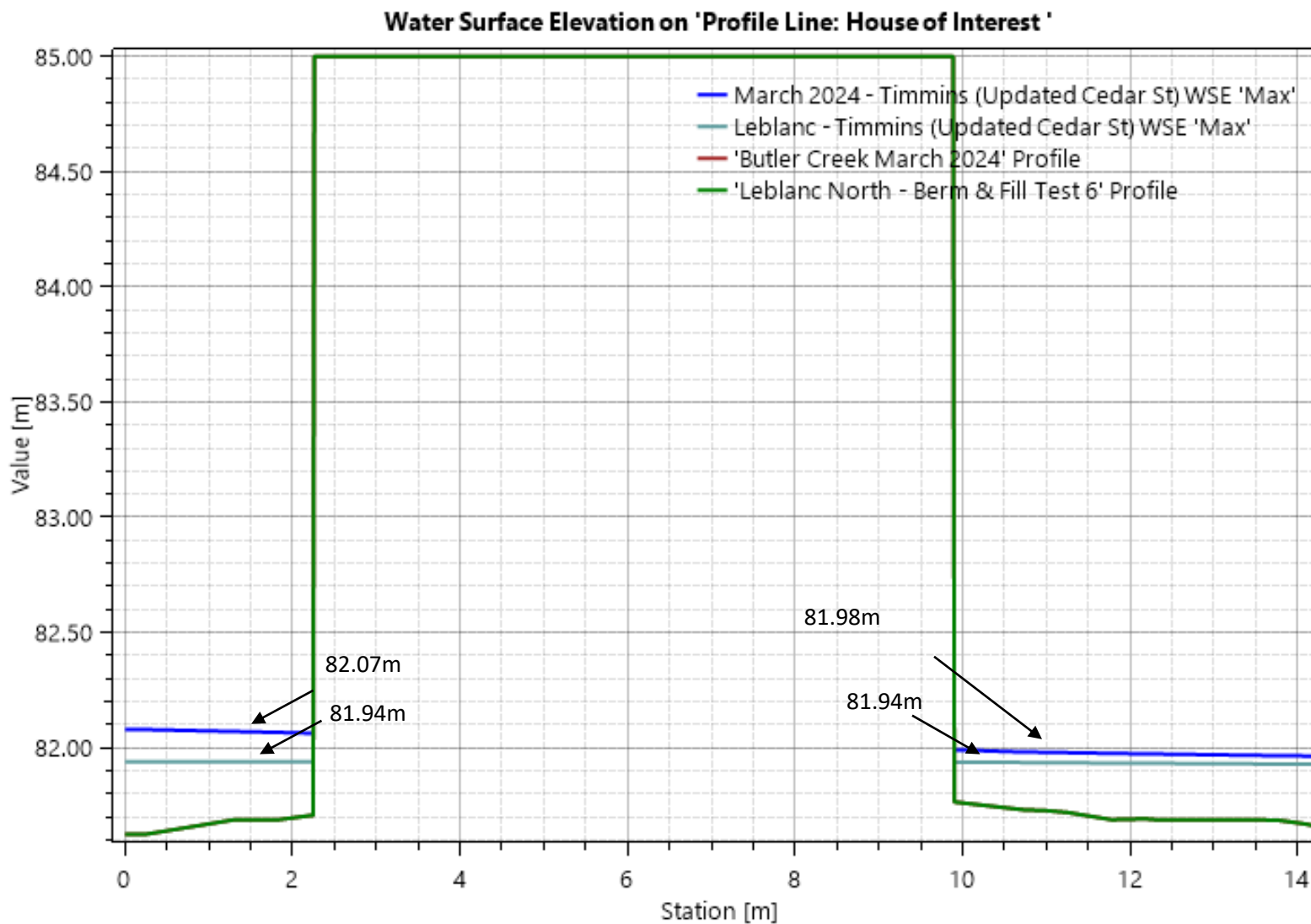
For ease of reference, the revision notes below follow the numbering from **Appendix A-1**.

<b>Request #1:</b>	<p>The depth and velocity information before and after the flood mitigation plan at the house immediately upstream of Cedar Street.</p> <p>An assessment of smaller return period events was noted to be useful to confirm whether the house is negatively affected in events less than the regulatory storm.</p>
Response	<p>A section through the house immediately upstream of Cedar Street was reviewed to compare WSELs, depths, and velocities before and after the flood mitigation plan.</p> <p>The figures below show a comparison of these parameters for the Timmins event. In the Timmins storm, the water level is reduced by up to 13cm, the depth reduced 13cm, and the velocity reduced up to 0.26 m/s.</p> <p>Max. water level, depth, and velocity figures are also provided below for the 1% AEP (100Yr), 2% AEP (50Yr), and 10% AEP (10Yr).</p> <p>Reduced water levels, depths, and velocities at this house location with the flood mitigation plan are consistent throughout the range of return period events, in addition to the Timmins regulatory storm.</p>
<b>Request #2</b>	<p>In the Nov. 12 meeting, Jewell showed the existing and proposed model extents downstream of the subject site, between Cedar Street and Lake Ontario. The intent is to confirm no negative impacts late in the system due to the loss of storage within the subject property. Jewell is to add a figure and brief discussion in the revised report to note this was reviewed and addressed.</p>
Response	<p>A figure below shows the Timmins flood hazard limit extents downstream of the subject site until the outlet to Lake Ontario before and after the Flood Mitigation Plan. There is no concern with the downstream flood hazard limits. Immediately downstream of Cedar Street there is a noticeable improvement (narrowing) of the flood limit. The only downstream crossing after Cedar Street is Harbour Street. The max. WSELs are not increased at Harbour St in either the Timmins or 100-yr with the Flood Mitigation Plan.</p>
<b>Request #3</b>	<p>A profile of water surface elevations in the vicinity of Cedar Street (immediately upstream and downstream) was requested. Jewell to provide in revised report.</p>

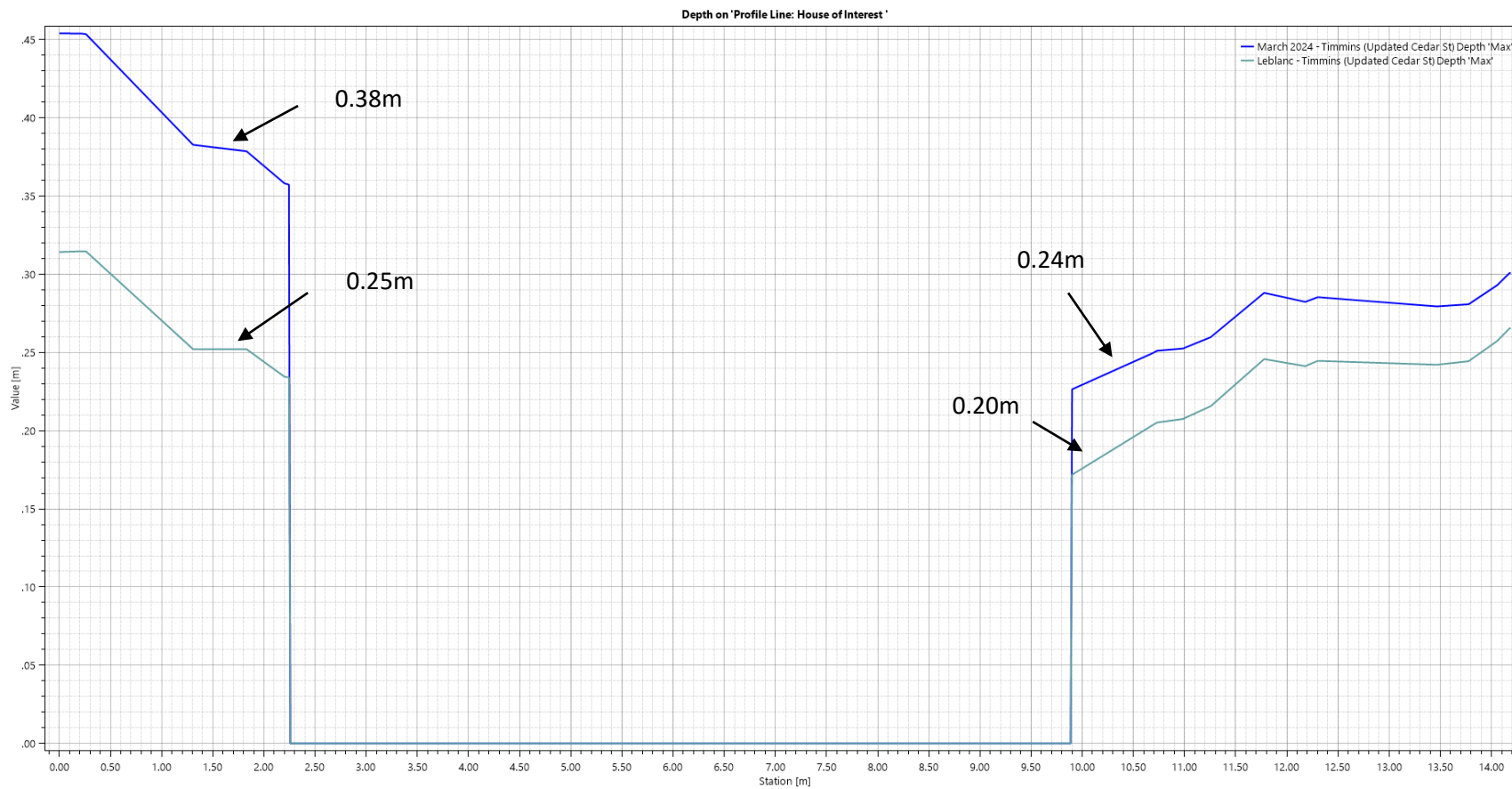


Response	See below figures with profiles of WSELs immediately upstream and downstream of Cedar Street (along with their respective cross section locations).
<b>Request #4</b>	A profile of depths (and velocities) across the Cedar Street road profile was requested. This would provide further details related to safe access. Jewell to provide in revised report.
Response	<p>The depths and velocity profiles for the Timmins, 100-yr, 50-yr, and 10-yr events are shown in the figures below. The table below also summarizes the depths, velocities, and depth*velocity product.</p> <p>Evidently, there is a minor increase in depth over road, although safe access is available in the 100-yr in both existing and proposed conditions, since the depth is &lt;0.3m and the D*V product is &lt; 0.8 m<sup>2</sup>/s.</p> <p>In the Timmins event, the depths are above the 0.3m preferred minimum, but the D*V product is within its acceptable range.</p> <p>The acceptability of a 1-2cm depth increase is subjective, and we respect different opinions from different practitioners. We (Jewell) are of the opinion that for this particular assessment, the lowering of the maximum water surface elevations at the adjacent houses by a more significant margin (up to 13cm) with the new configuration outweighs the trade-off with the 1-2cm increase in depth at the road. The new configuration also reduces the flood depth at the house immediately upstream of Cedar Street to 0 in the 50-yr return period event, whereas the existing conditions still has flood depths &gt;0 at this house in the <u>10</u>-yr return period. Additionally, although the depth at Cedar Street increases 1-2cm in the Timmins and 100-yr storms, the span of flood waters overtopping the Cedar Street is reduced by 41m and 49m in these events, respectively.</p> <p>Note that the safe access limits as recommended by the province are only exceeded in the Timmins event, and for depth only. They are exceeded in both existing and proposed conditions for the Timmins event, but 1-2cm greater in the proposed scenario. It is worth noting that the Timmins peak flow, extrapolated from calibrated model results, corresponds to an 90,000-yr return period based on the 2024 Butler Creek Floodplain Mapping update.</p>
<b>Supplemental</b>	LTC Water Resources Manager requested a fill placement (grading) plan and a sediment & erosion control plan as part of the application.
Response	<p>Fill placement (grading) plan that includes the proposed ditch and fill is provided in Appendix B. This plan includes local topographic survey shots.</p> <p>Sediment and erosion control plan is provided in Appendix C.</p>

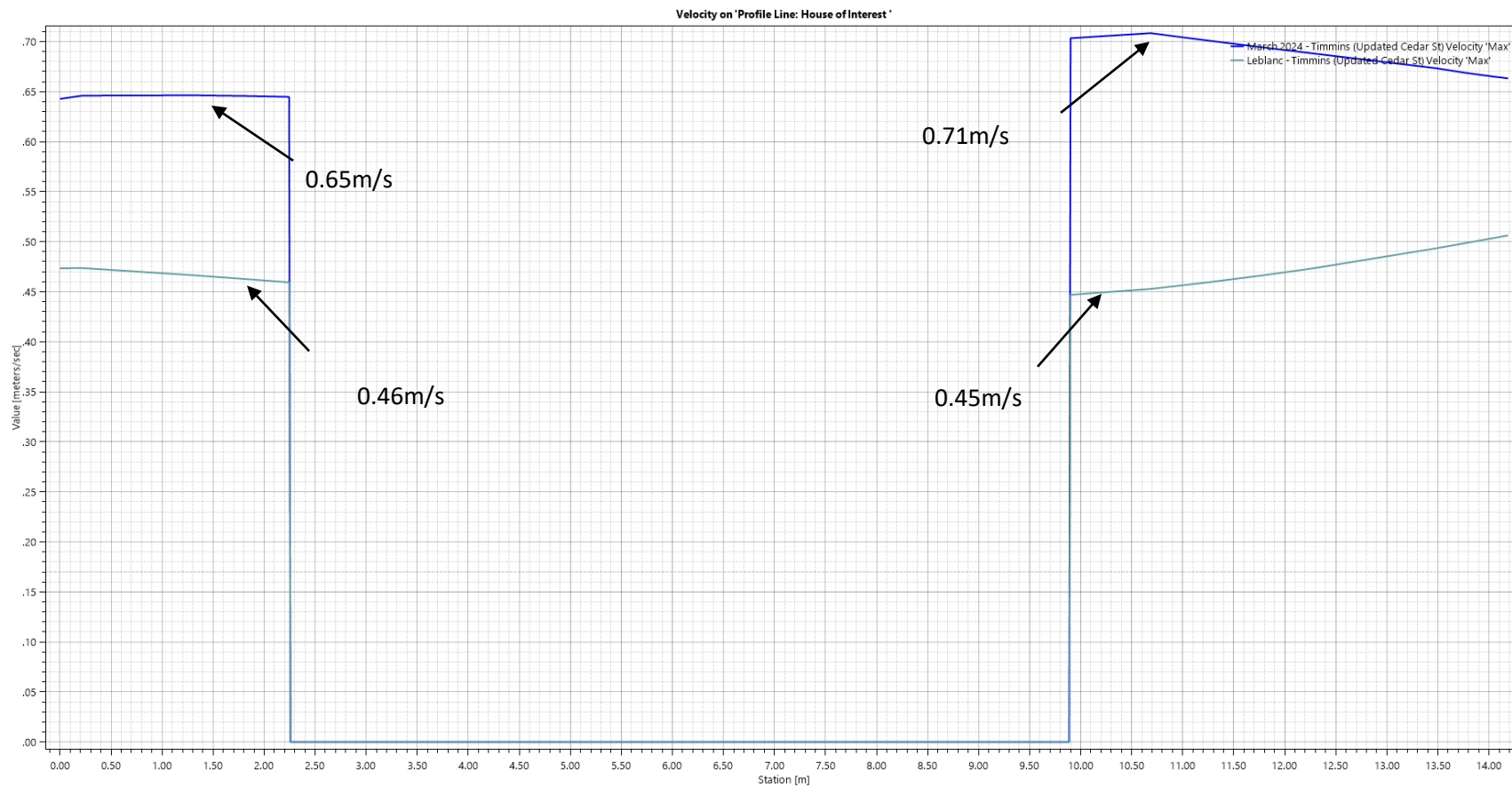
Timmins – WSE Comparison:



Timmins – Depth Comparison:

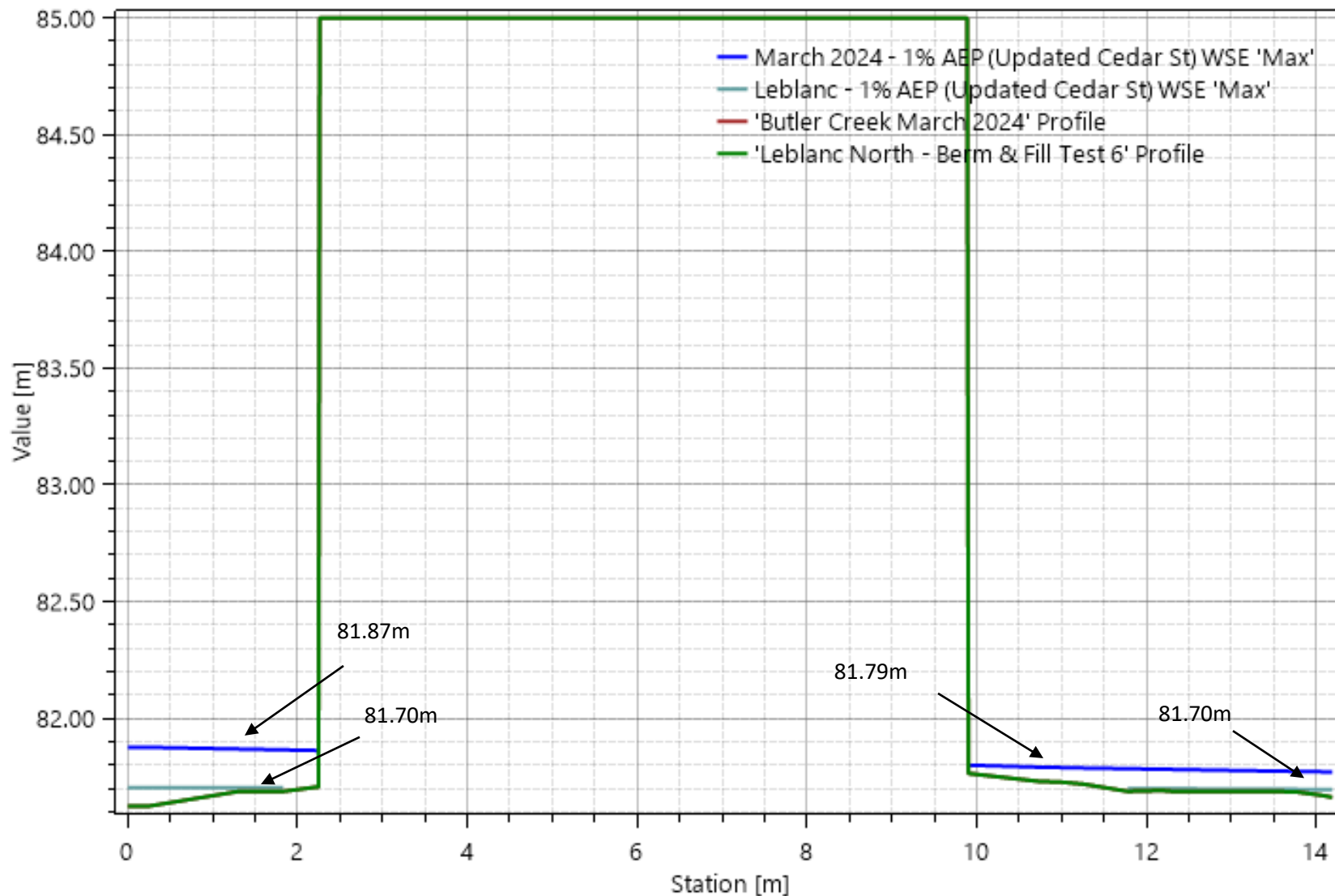


### Timmins – Velocity Comparison:



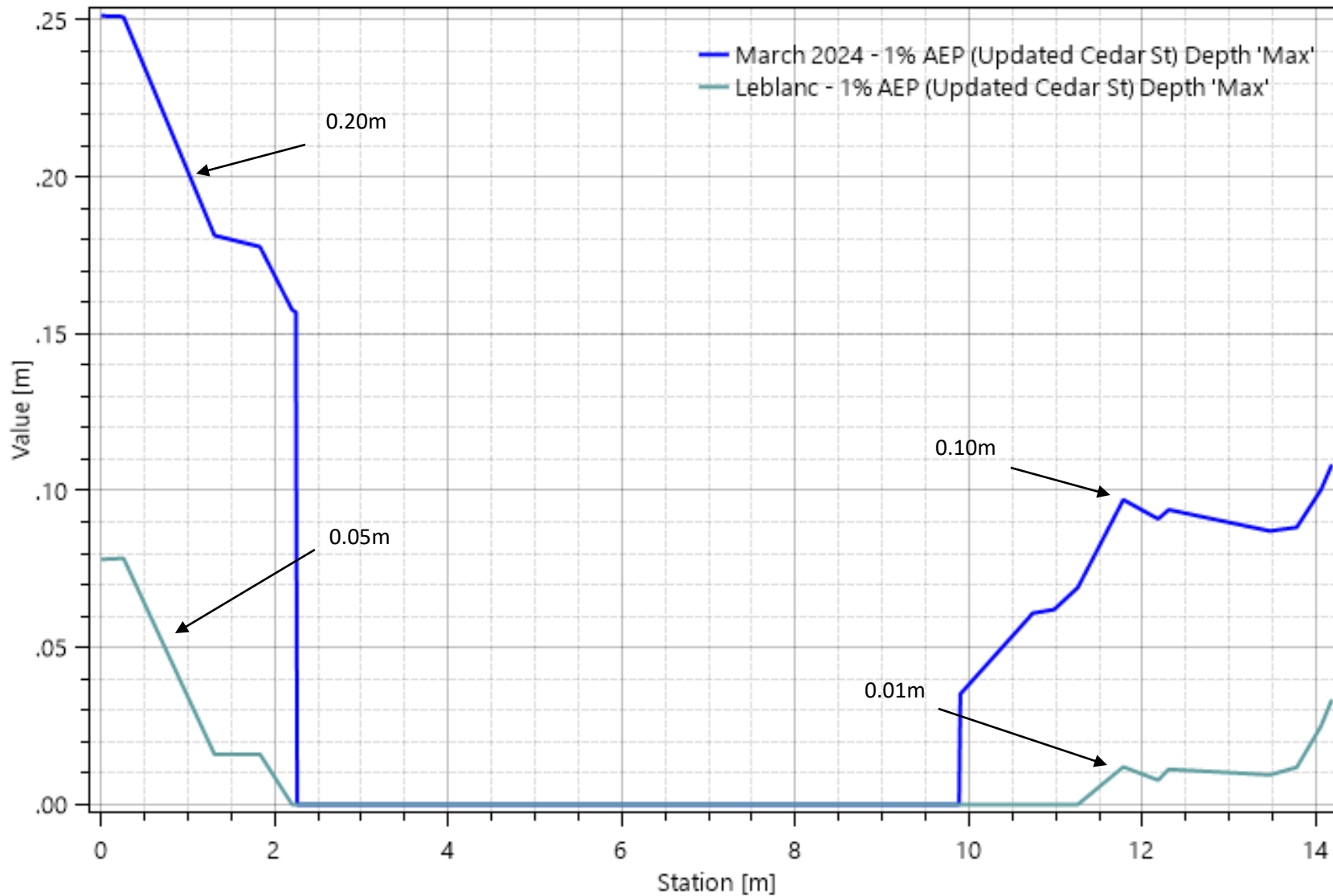
100Yr (1% AEP) – WSE Comparison:

Water Surface Elevation on 'Profile Line: House of Interest'

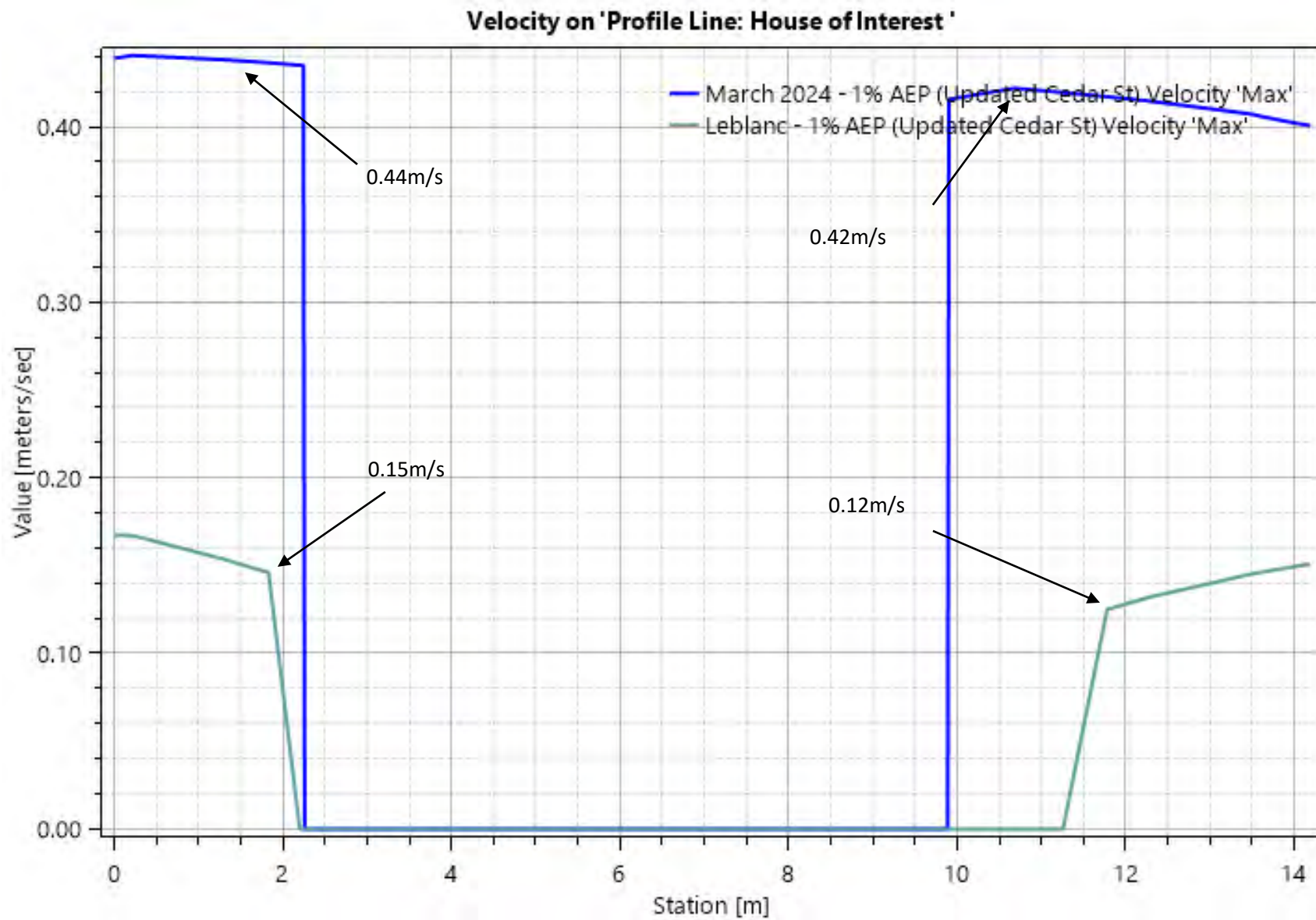


1% AEP – Depth Comparison:

Depth on 'Profile Line: House of Interest'

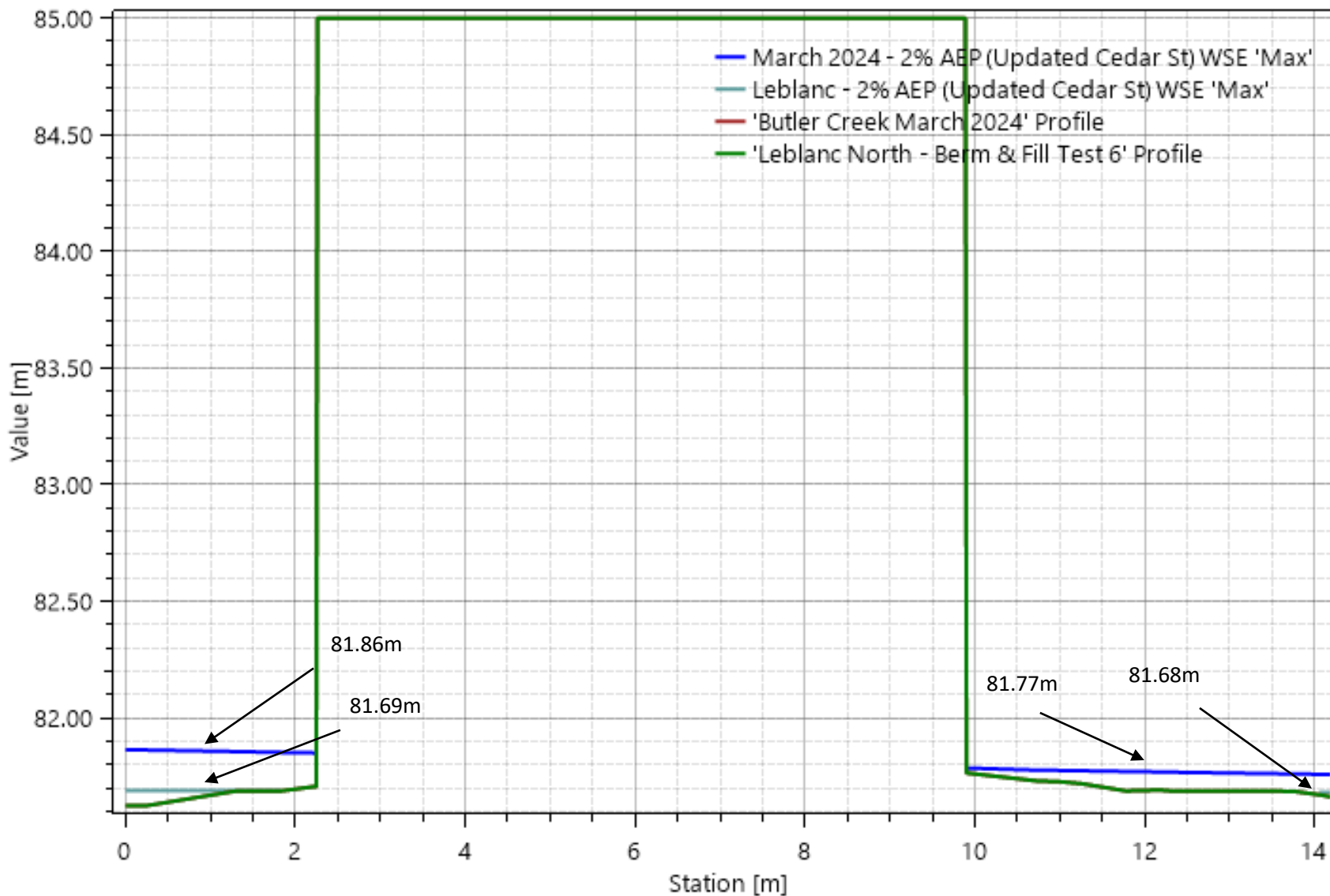


## 1% AEP – Velocity Comparison:



2% AEP – WSE Comparison:

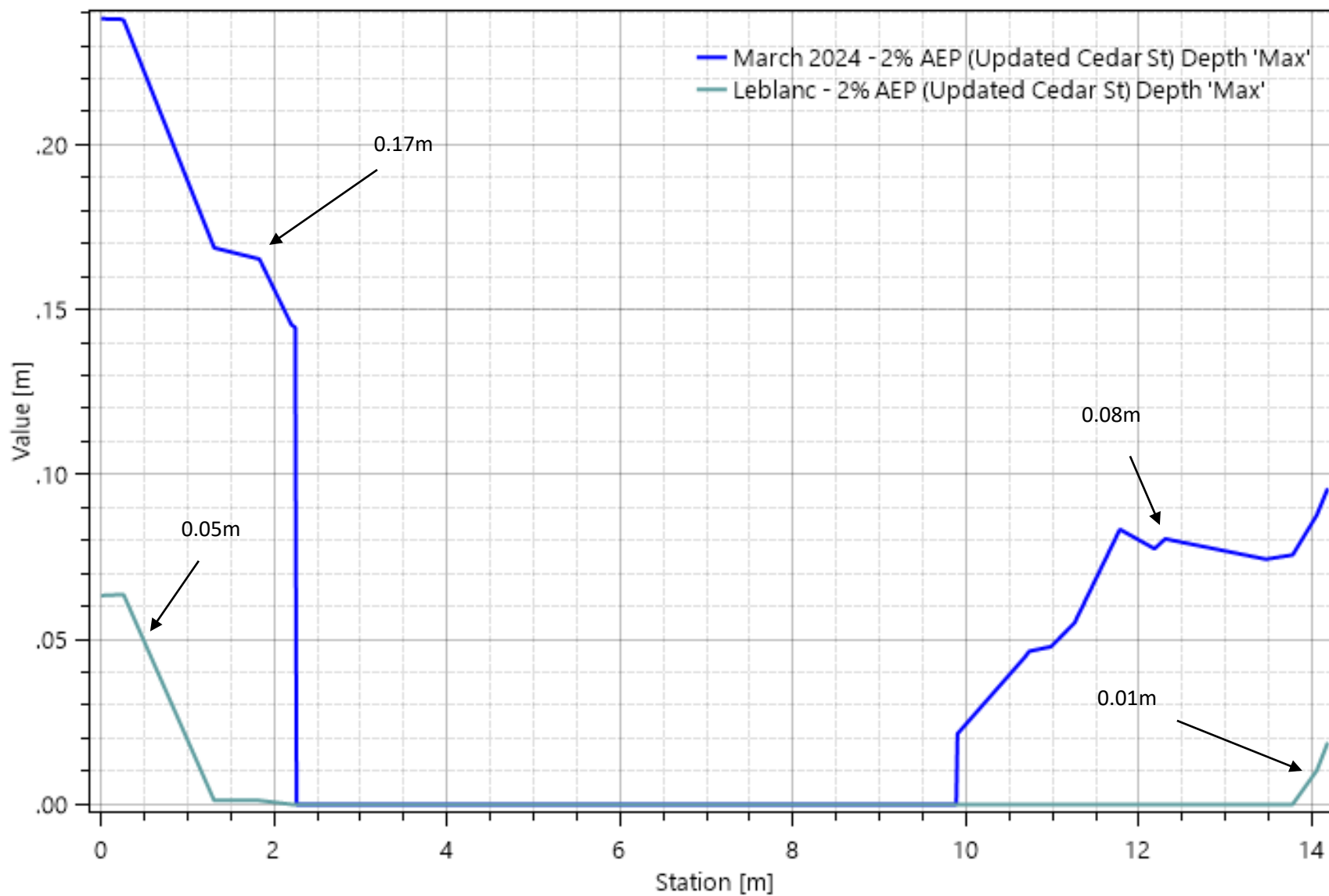
Water Surface Elevation on 'Profile Line: House of Interest'





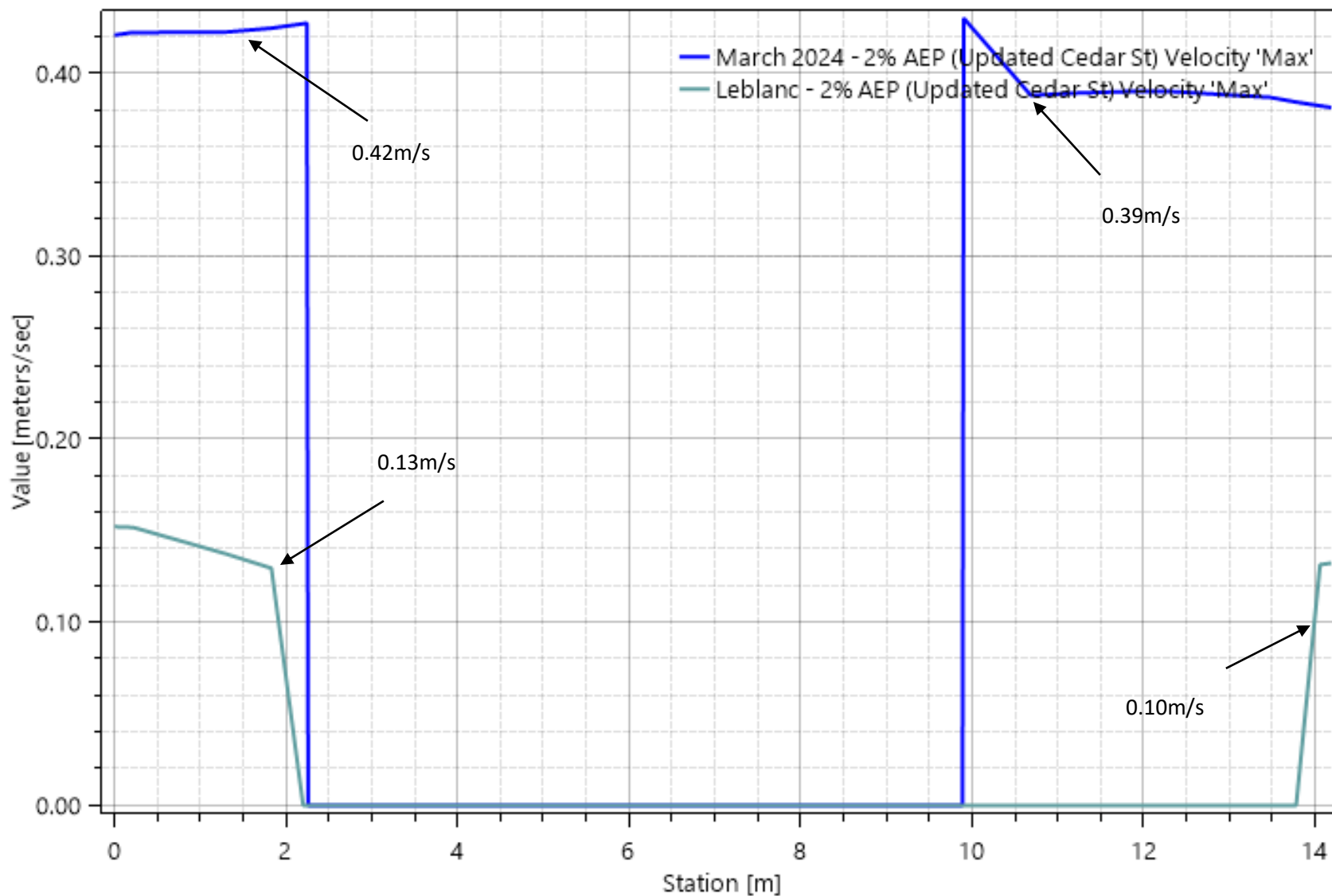
## 2% AEP – Depth Comparison:

Depth on 'Profile Line: House of Interest'



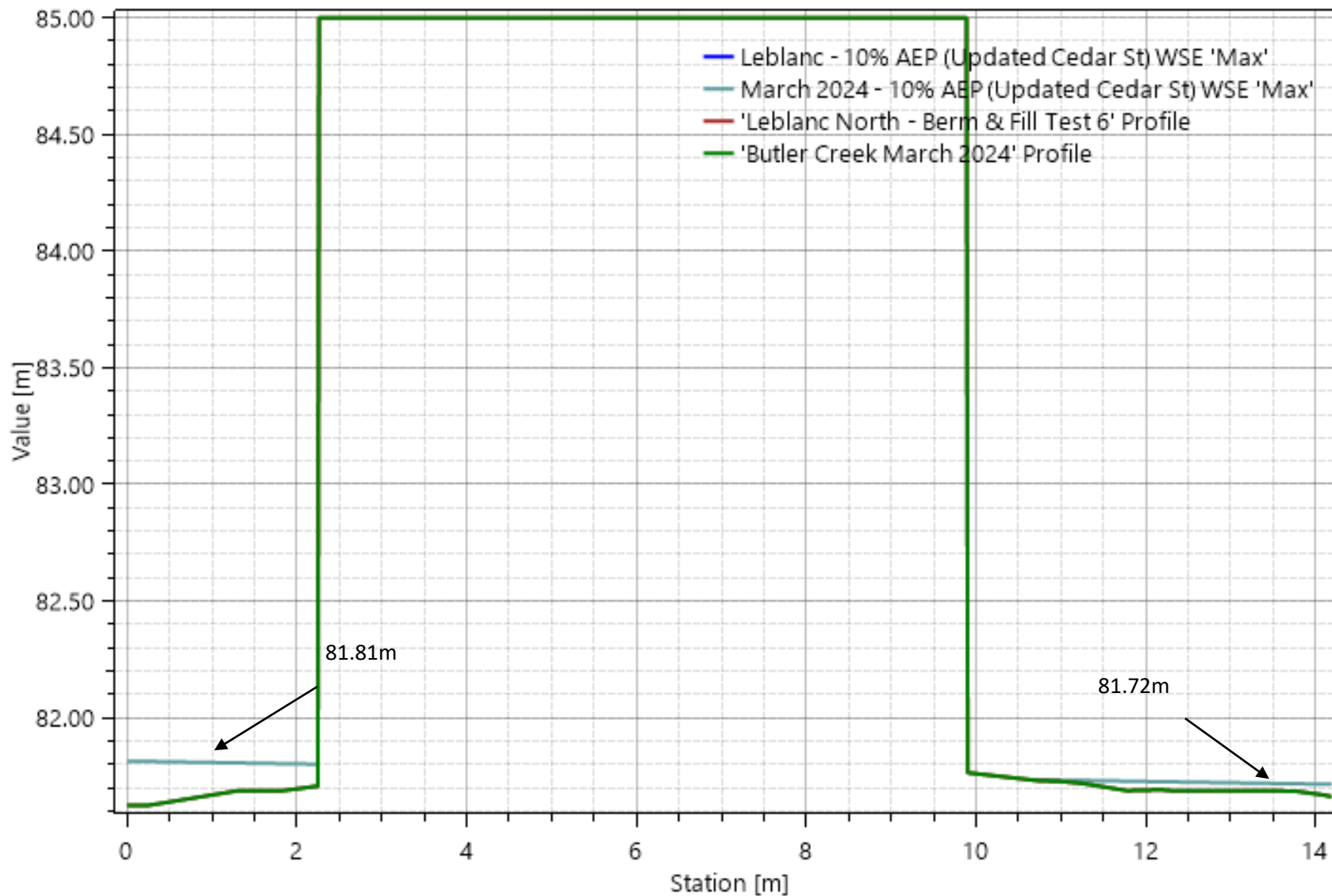
## 2% AEP – Velocity Comparison:

Velocity on 'Profile Line: House of Interest'



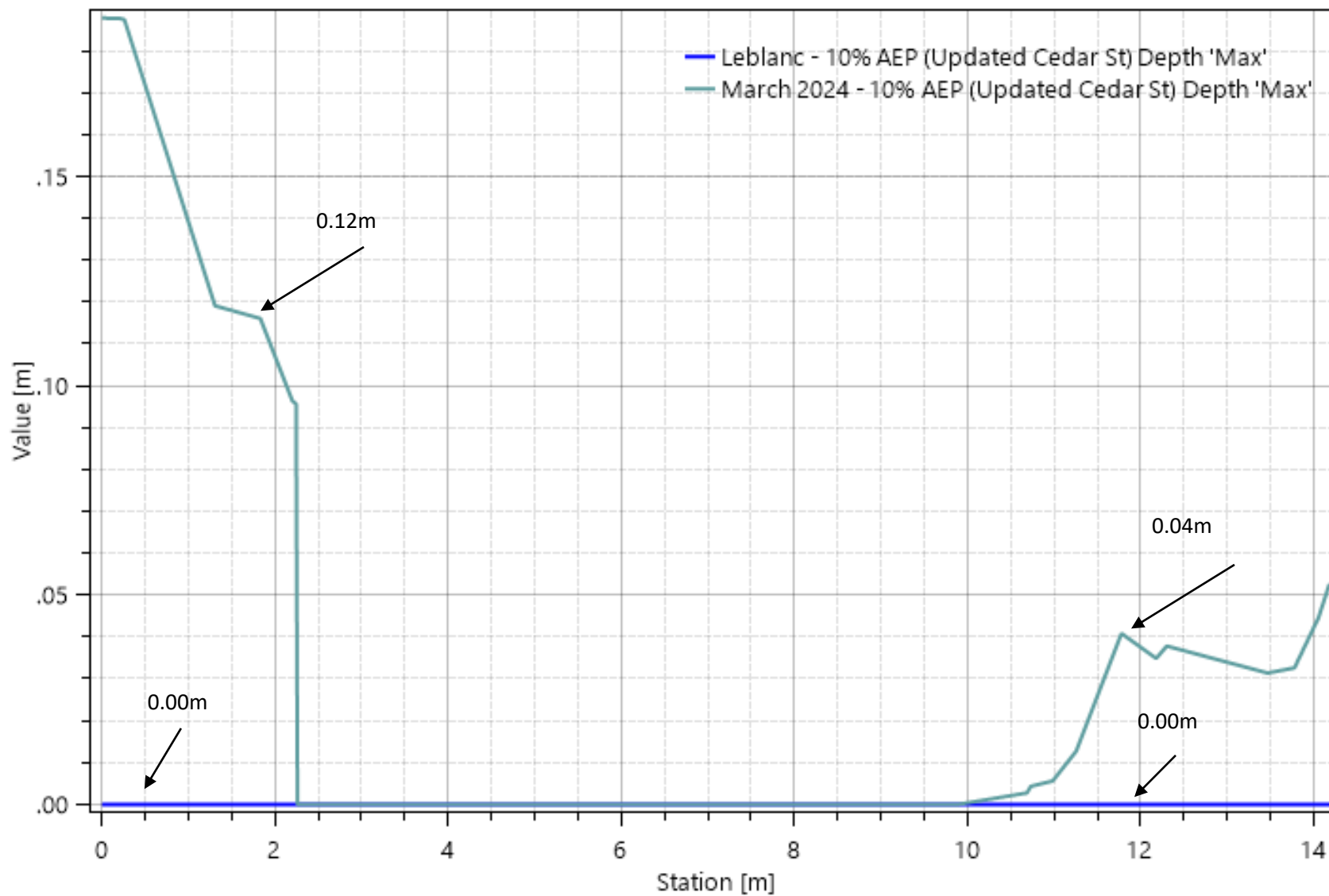
10% AEP – WSE Comparison:

Water Surface Elevation on 'Profile Line: House of Interest'



## 10% AEP – Depth Comparison:

Depth on 'Profile Line: House of Interest'



## 10% AEP – Velocity Comparison:

Velocity on 'Profile Line: House of Interest'

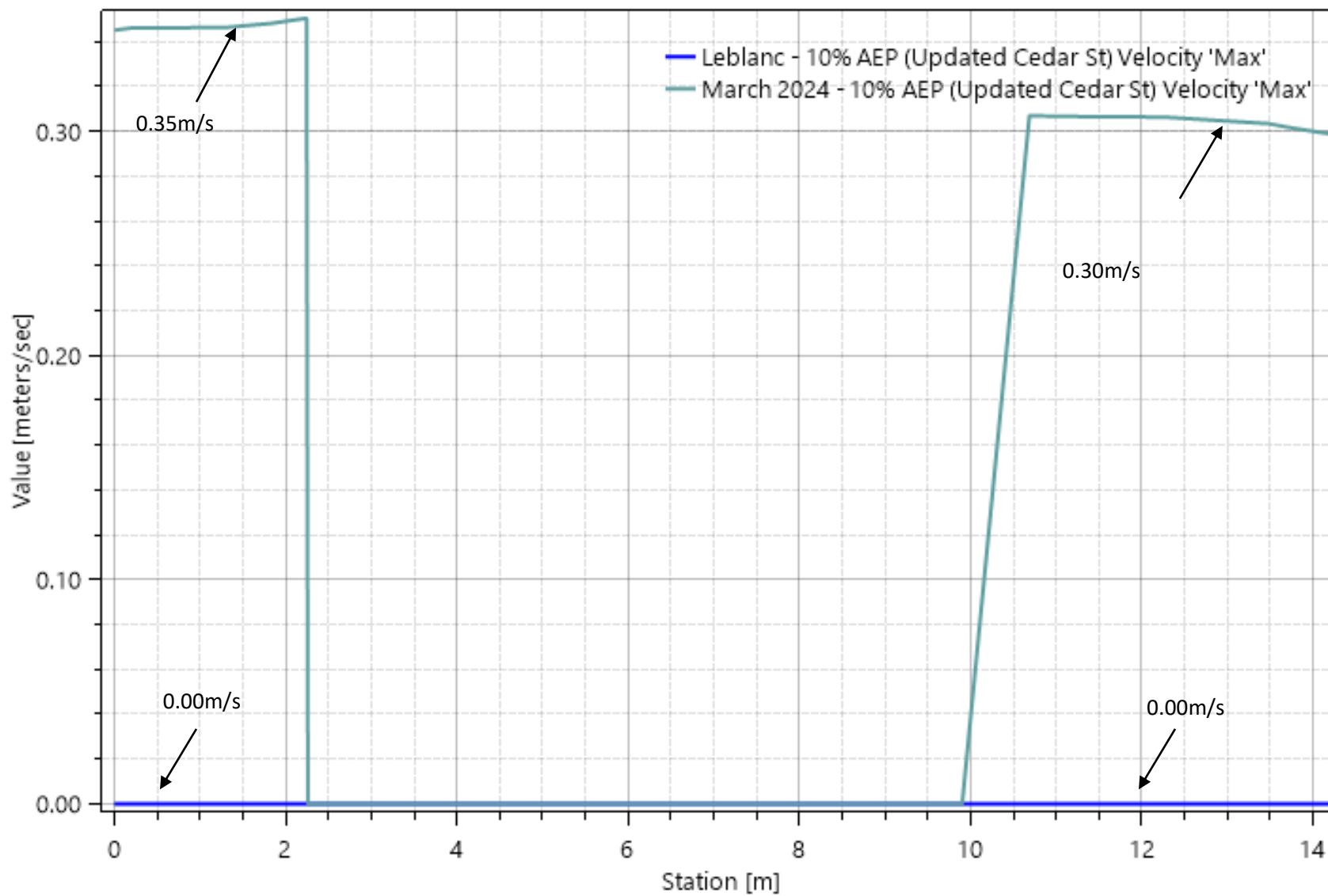


Figure for Request #2 (Yellow = Proposed Timmins; Red = Existing Timmins):

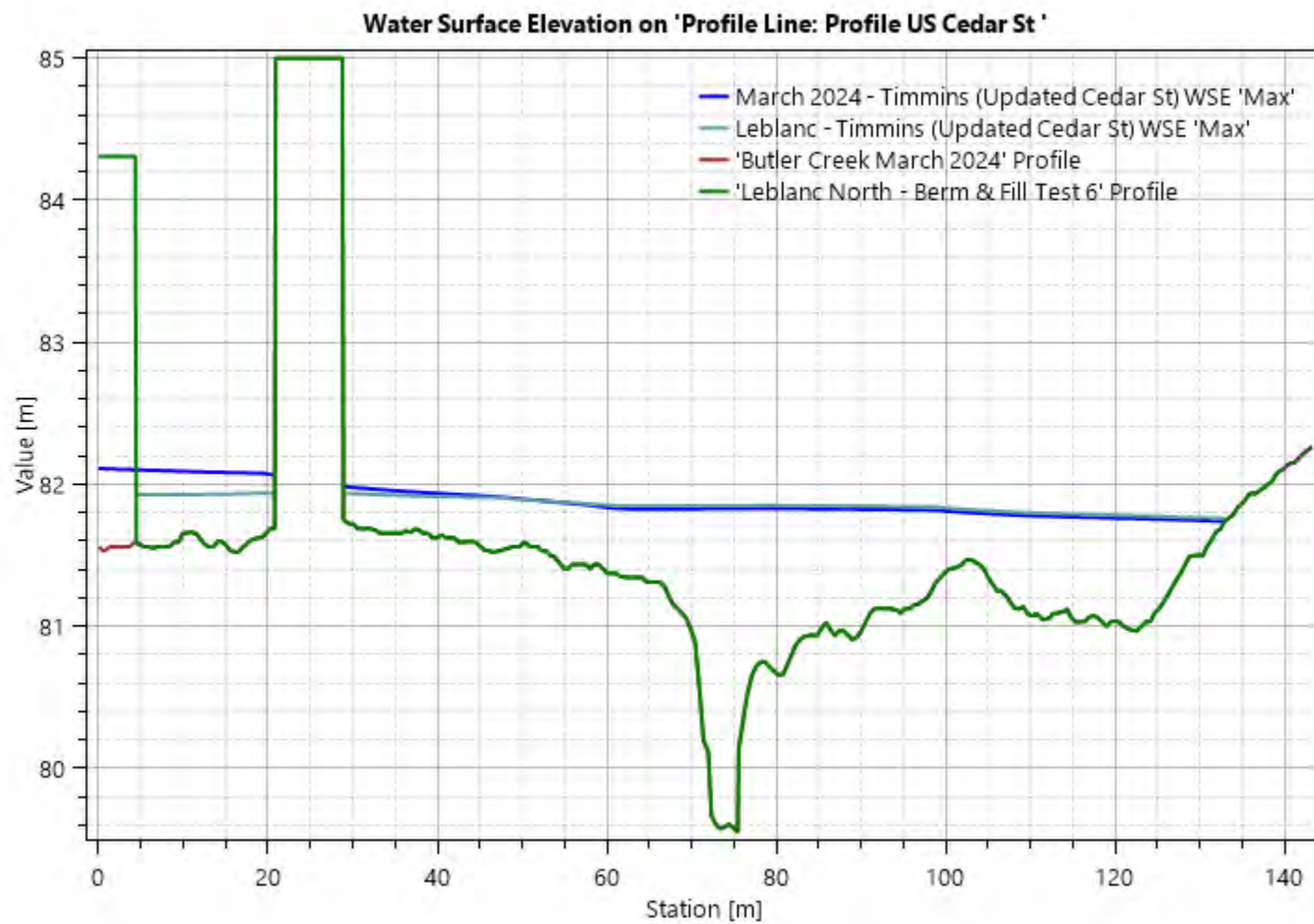


**Figures for Request #3:**

Immediate upstream and downstream cross section locations (black lines) for Cedar Street WSEL profiles:

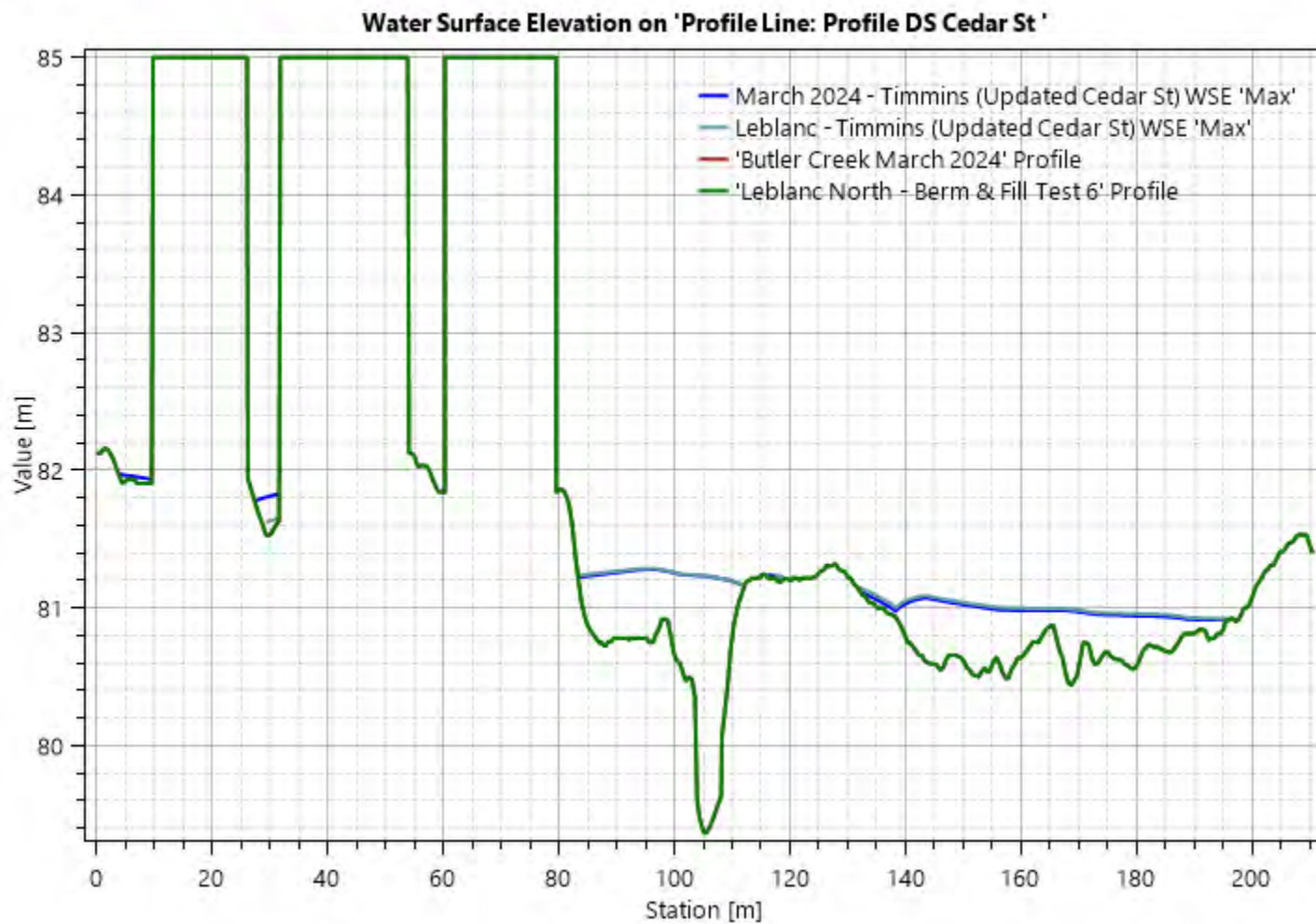


Profile Immediately **Upstream** Cedar Street – **Timmins** with blue line existing and light green is proposed.

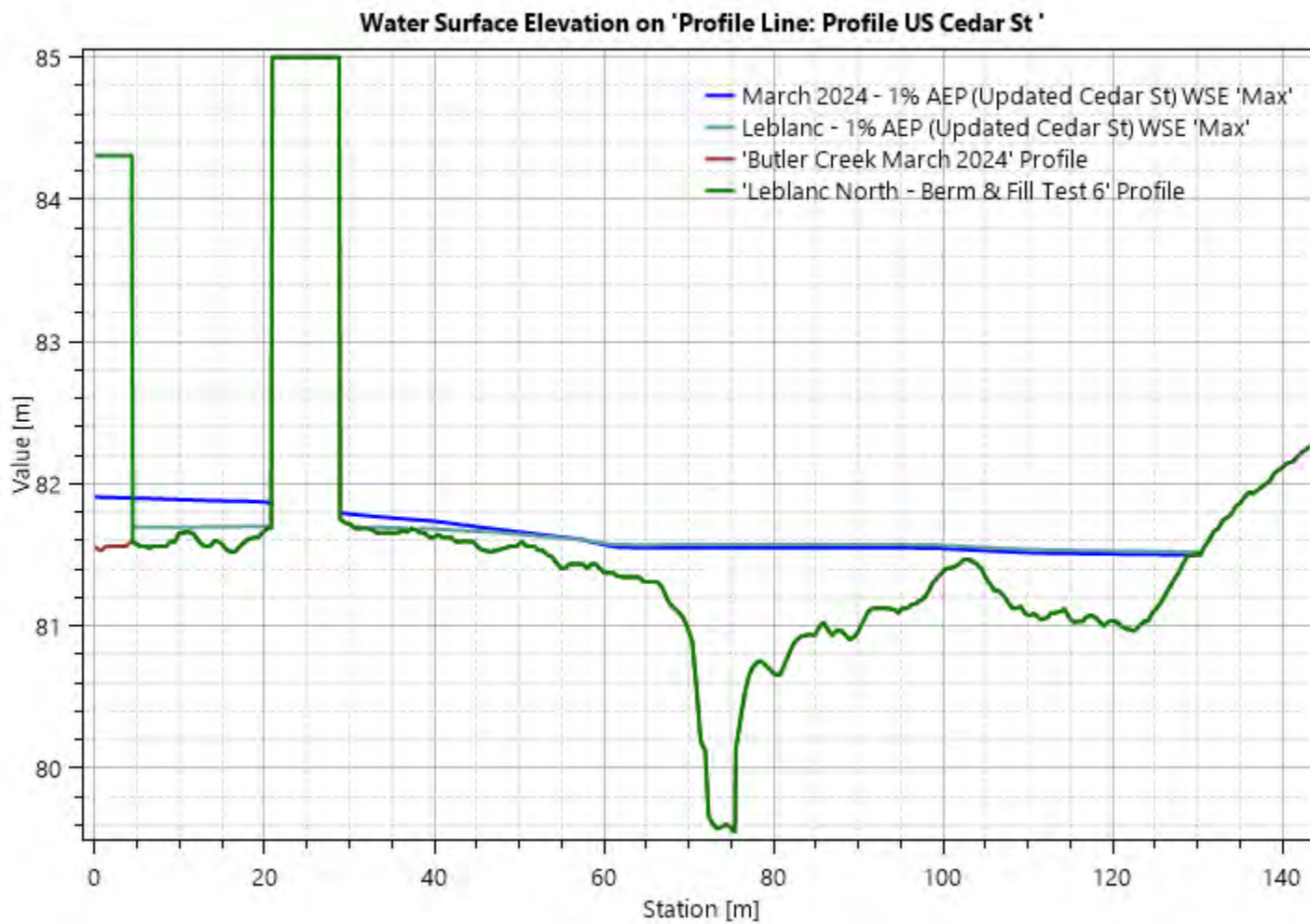




Profile Immediately **Downstream** Cedar Street – **Timmins** with blue line existing and light green proposed.



Profile Immediately **Upstream** Cedar Street – **100-Yr** with blue line existing and light green proposed.



Profile Immediately **Downstream** Cedar Street – **100-Yr** with blue line existing and light green proposed.

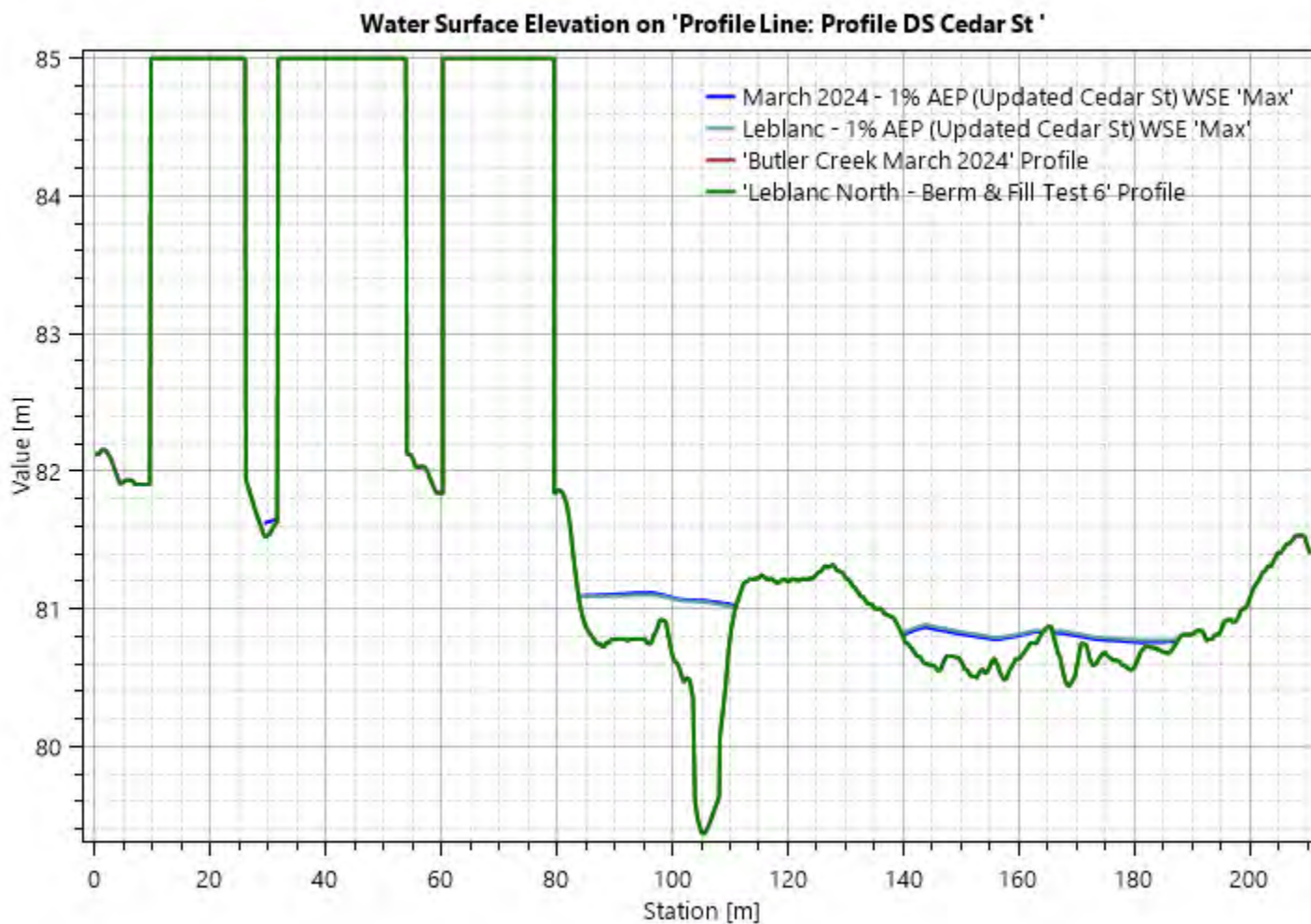
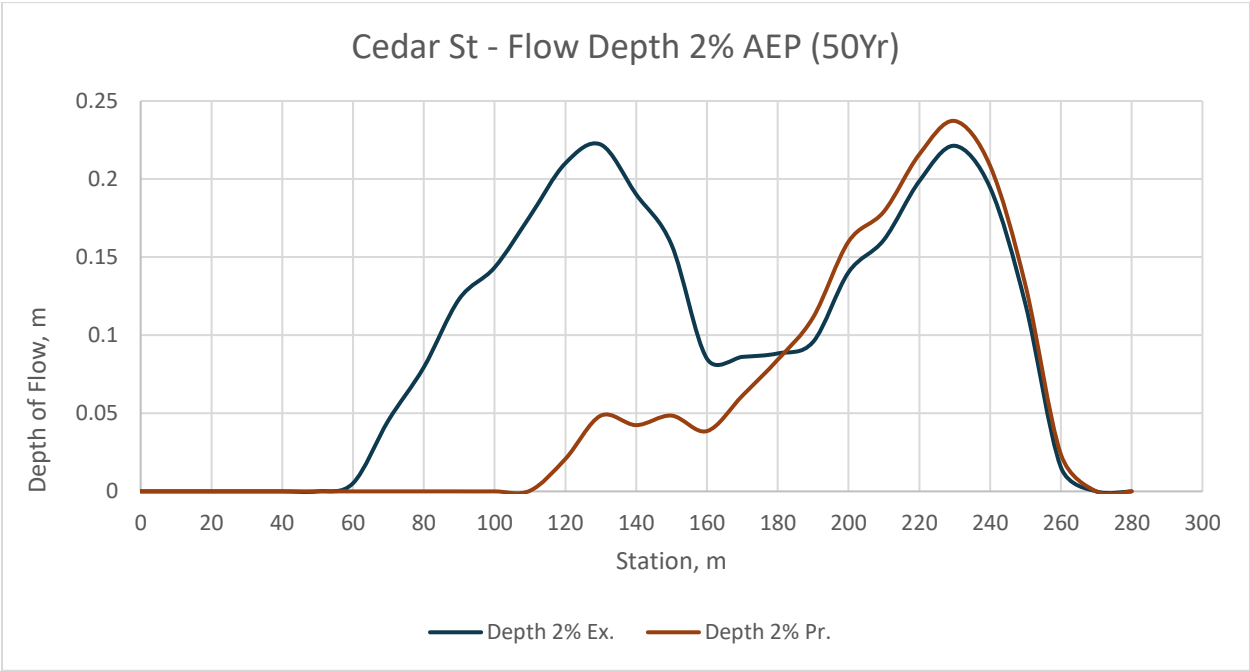
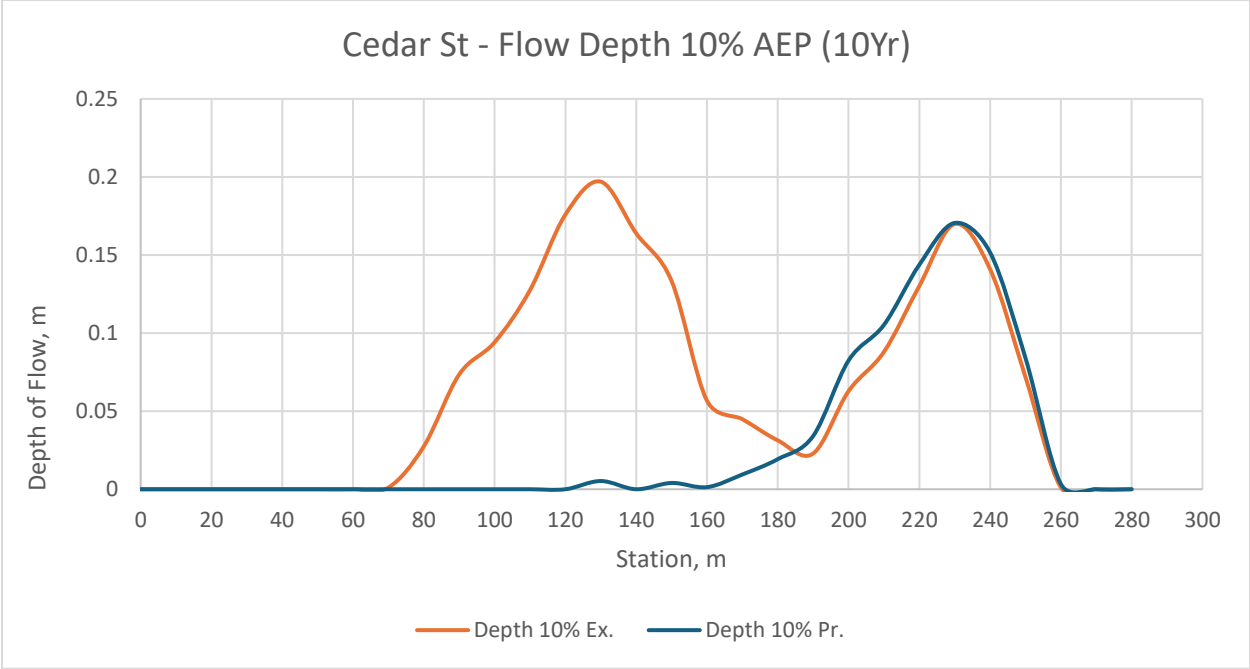


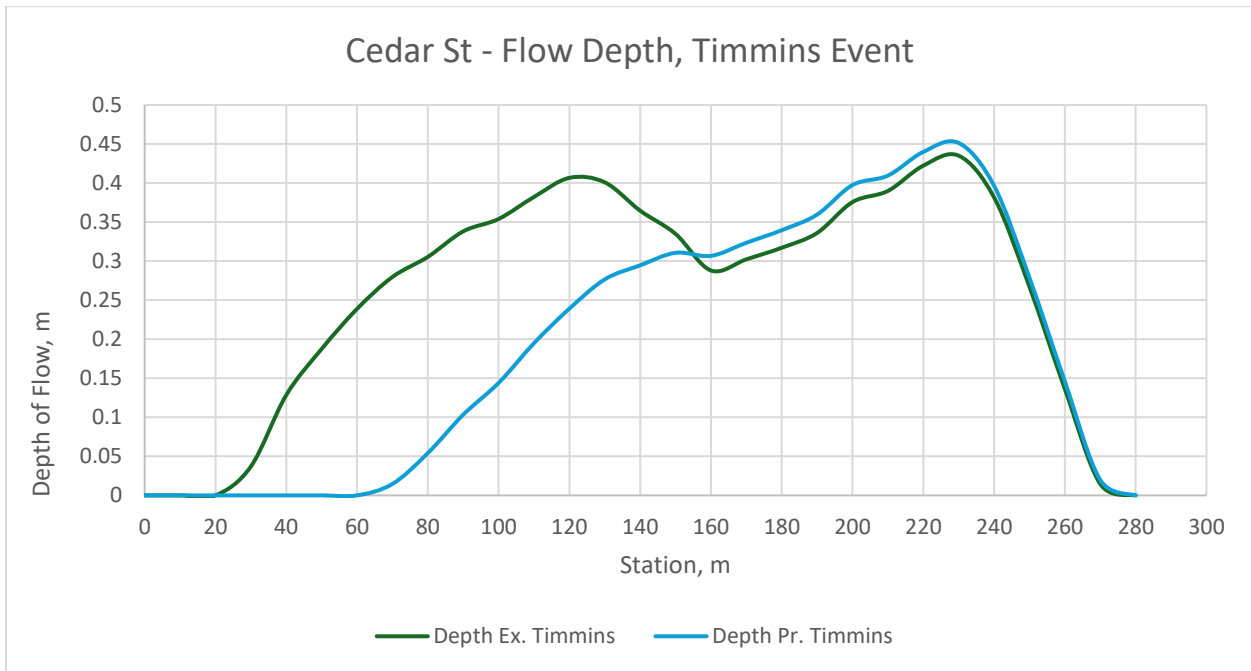
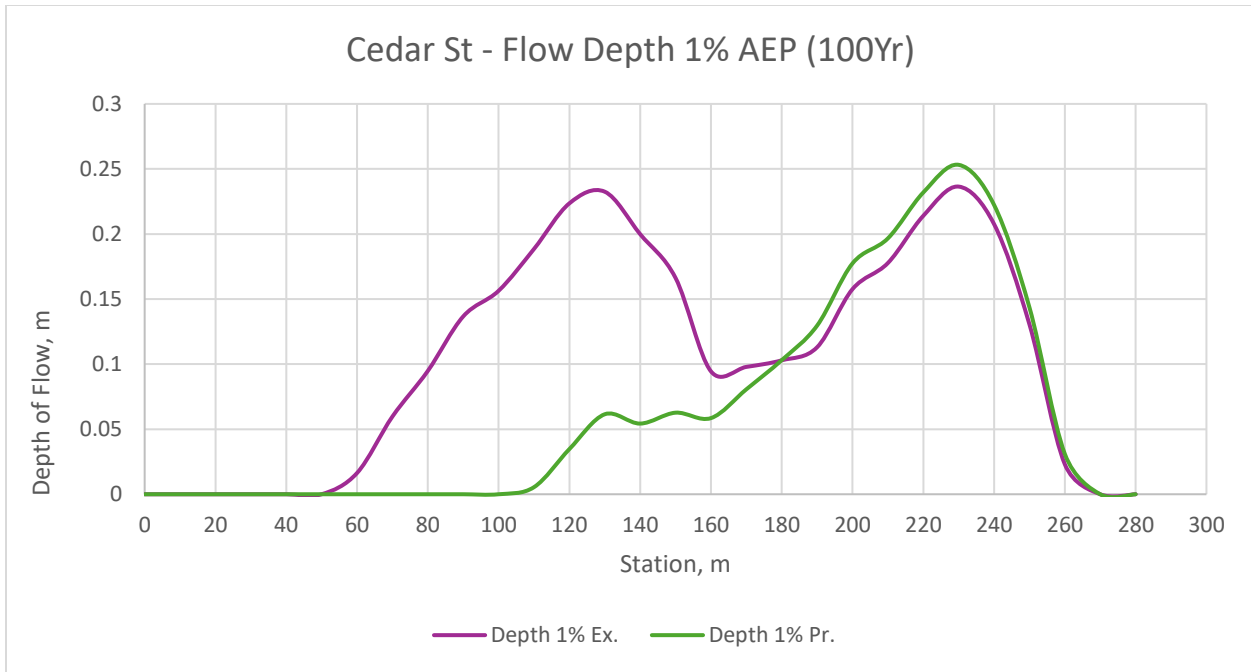
Table for Request #4:

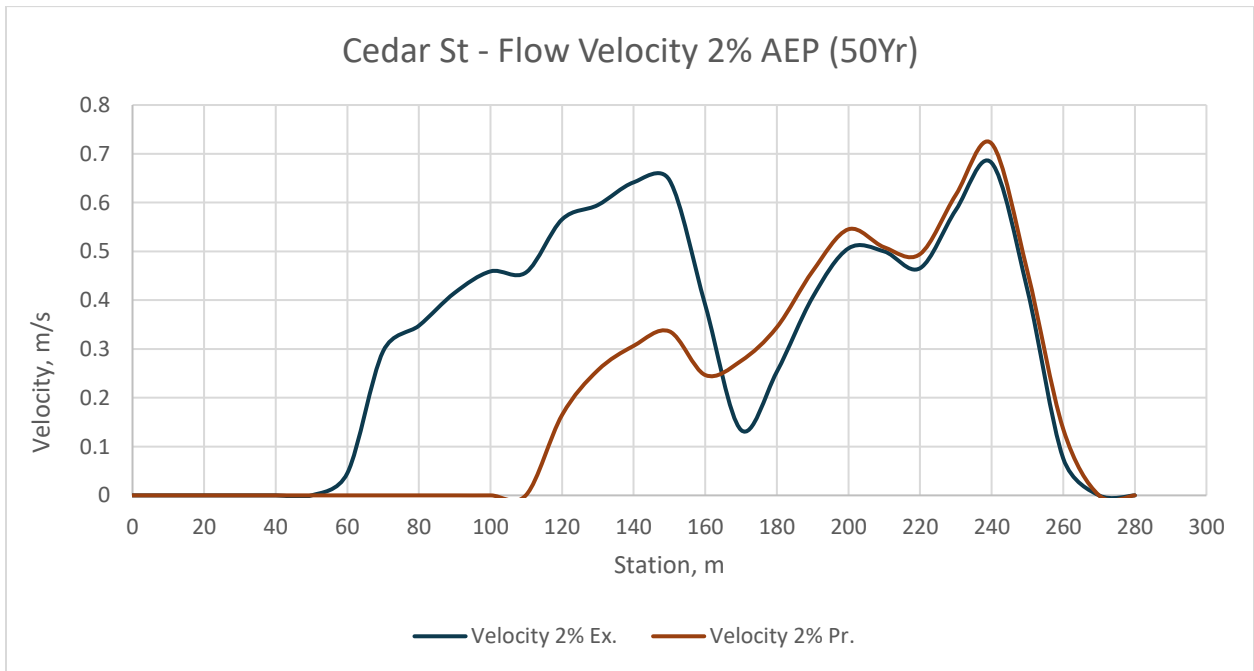
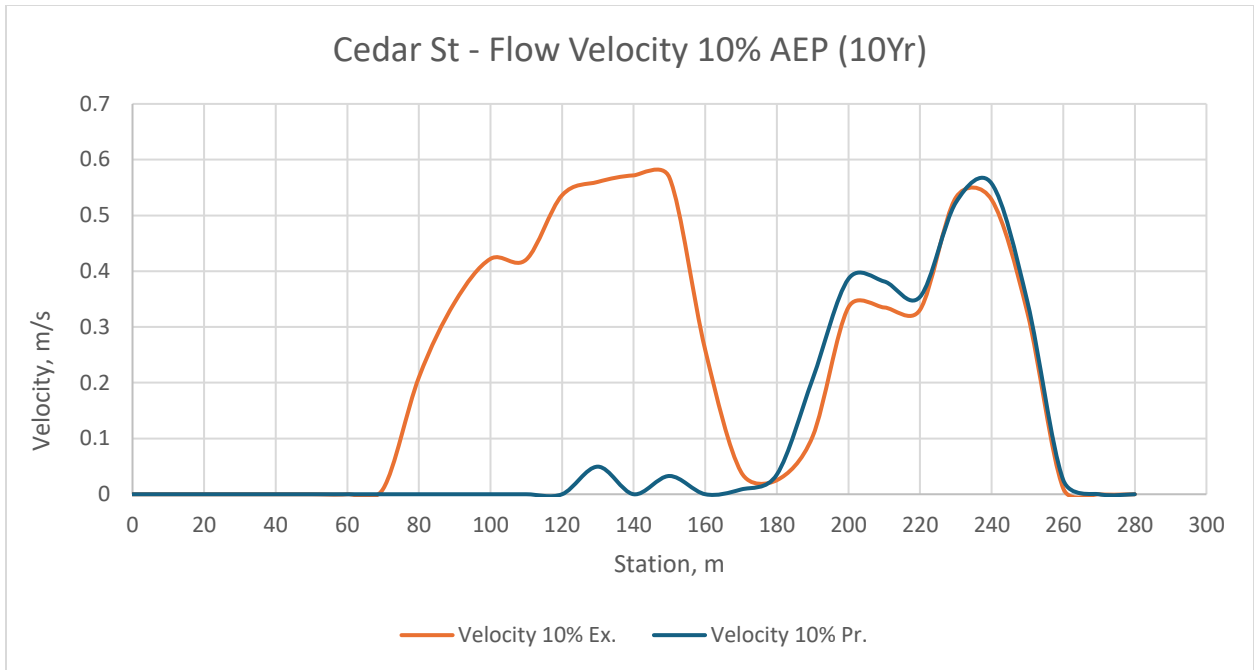
**Cedar Street:**

Storm	Max. Depth (m)				Max. Velocity (m/s)			Max. Depth*Velocity (m <sup>2</sup> /s)			
	Ex.	Pr.	Diff.	Check: < 0.3m	Ex.	Pr.	Diff.	Ex.	Pr.	Diff.	Check: < 0.8 m <sup>2</sup> /s
Timmins	0.44	0.45	0.0163	x	1.18	1.21	0.04	0.51	0.55	0.04	✓
100-Yr	0.24	0.25	0.0167	✓	0.72	0.76	0.04	0.17	0.19	0.02	✓
50-Yr	0.22	0.24	0.0151	✓	0.68	0.72	0.04	0.15	0.17	0.02	✓
10-Yr	0.20	0.17	-0.0265	✓	0.57	0.56	-0.01	0.11	0.10	-0.02	✓

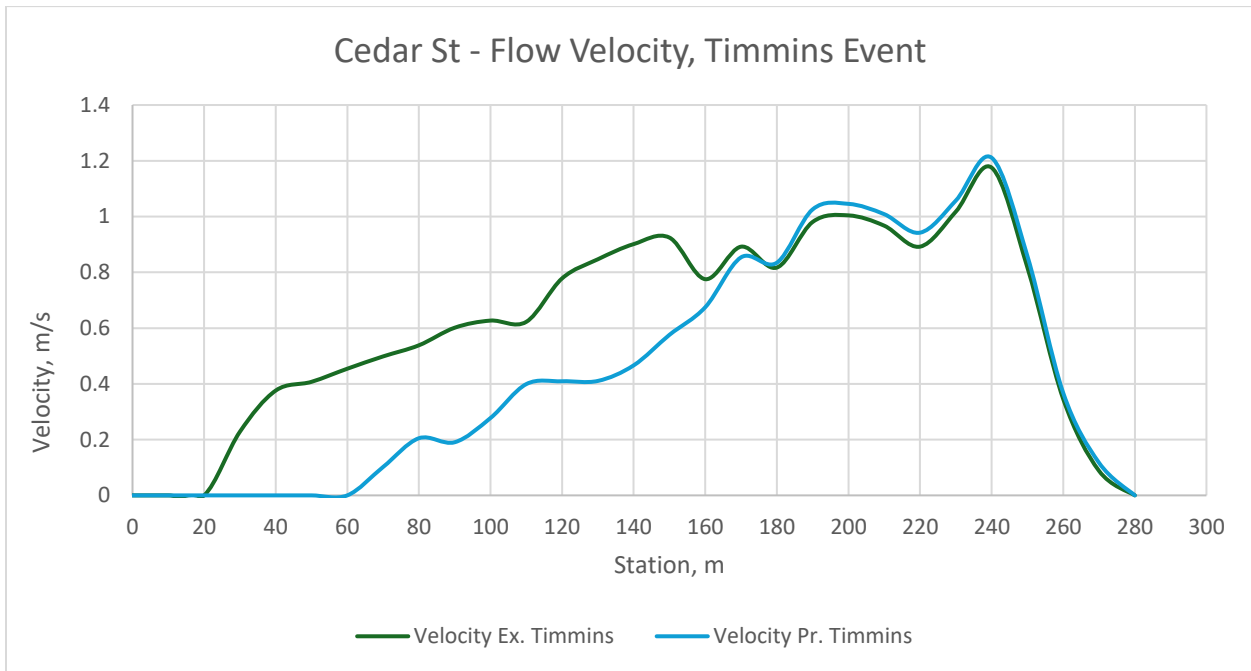
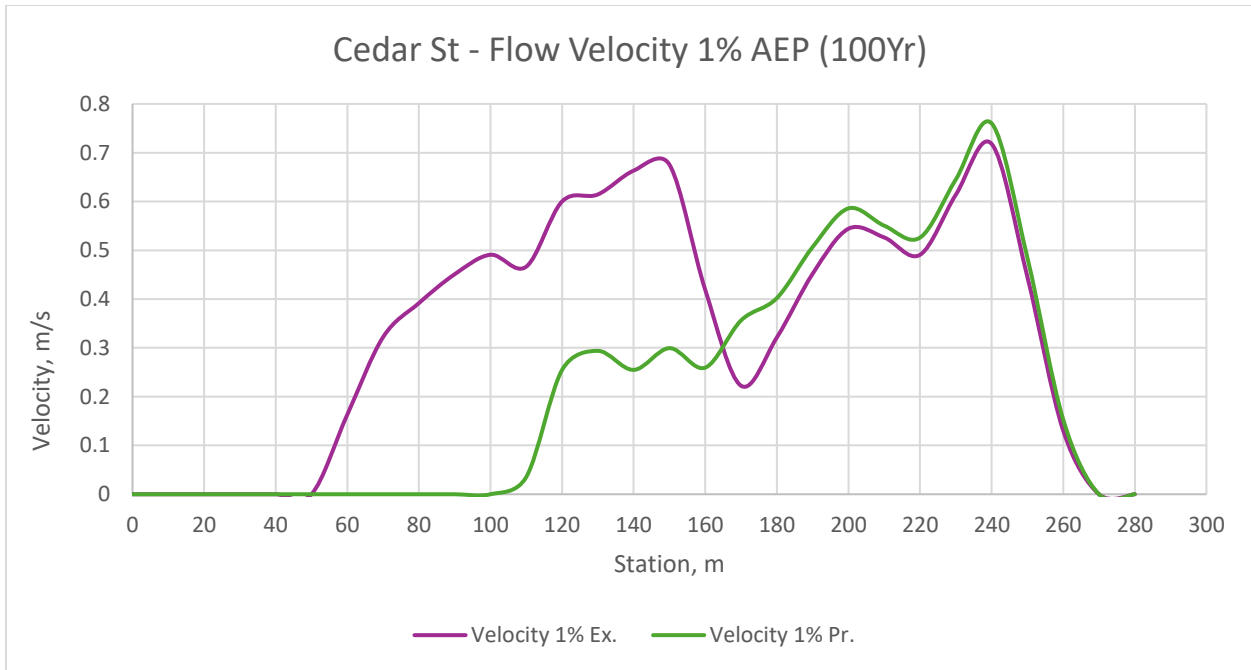
**Figures for Request #4:**





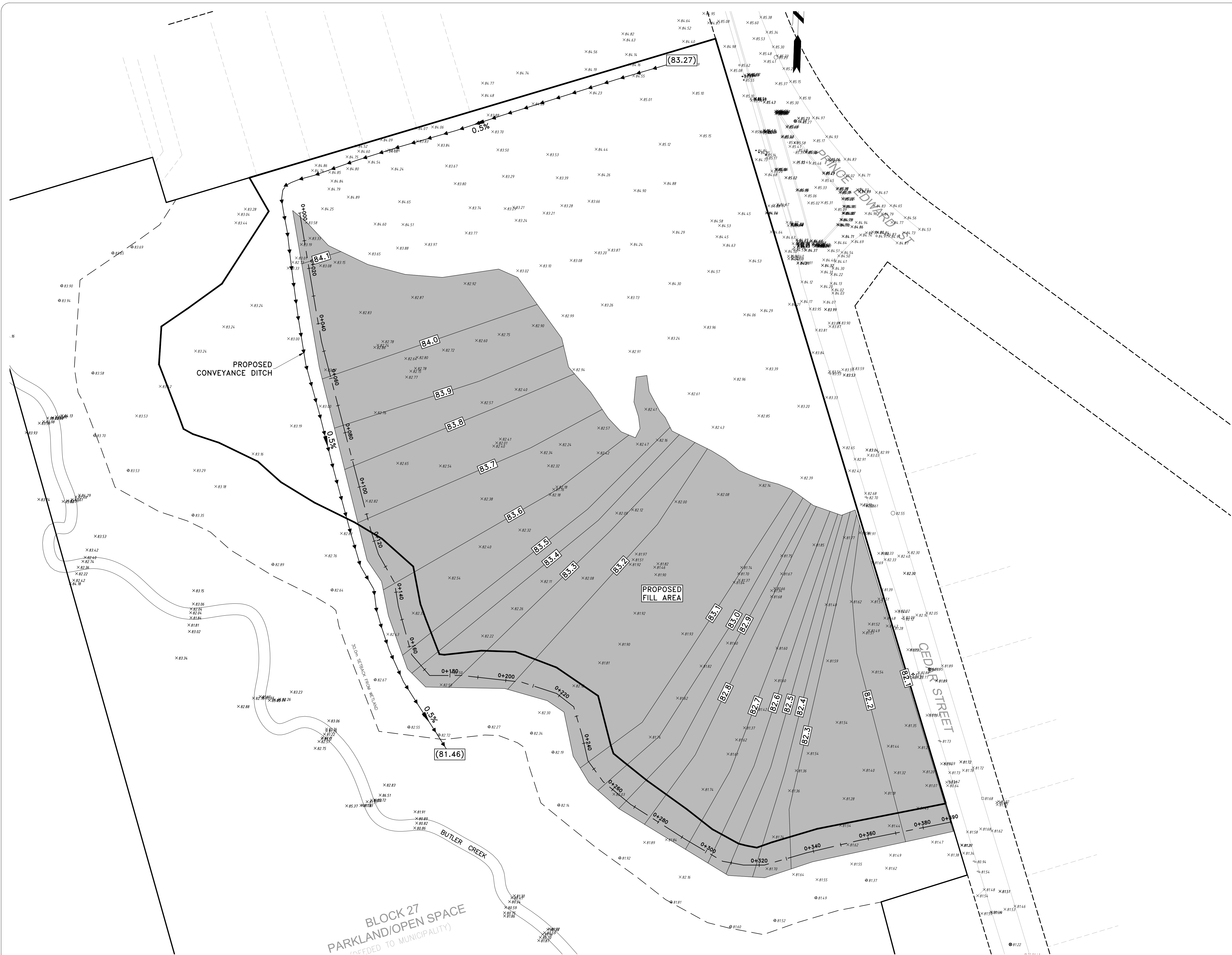






**Appendix B:  
Fill Placement (Grading) Plan**

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**GENERAL NOTES:**

- ALL INFORMATION TO BE VERIFIED ON SITE PRIOR TO COMMENCING ANY WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT IMMEDIATELY.
- ALL UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL CONFIRM THE LOCATION ON SITE AND ASSUME ALL LIABILITY FOR DAMAGE TO ALL UTILITIES.
- EXCLUDING THE BENCHMARK AND DESCRIPTION PROVIDED FOR THIS PROJECT, NO OTHER ELEVATIONS ARE TO BE USED AS A REFERENCE ELEVATION FOR ANY PURPOSE.

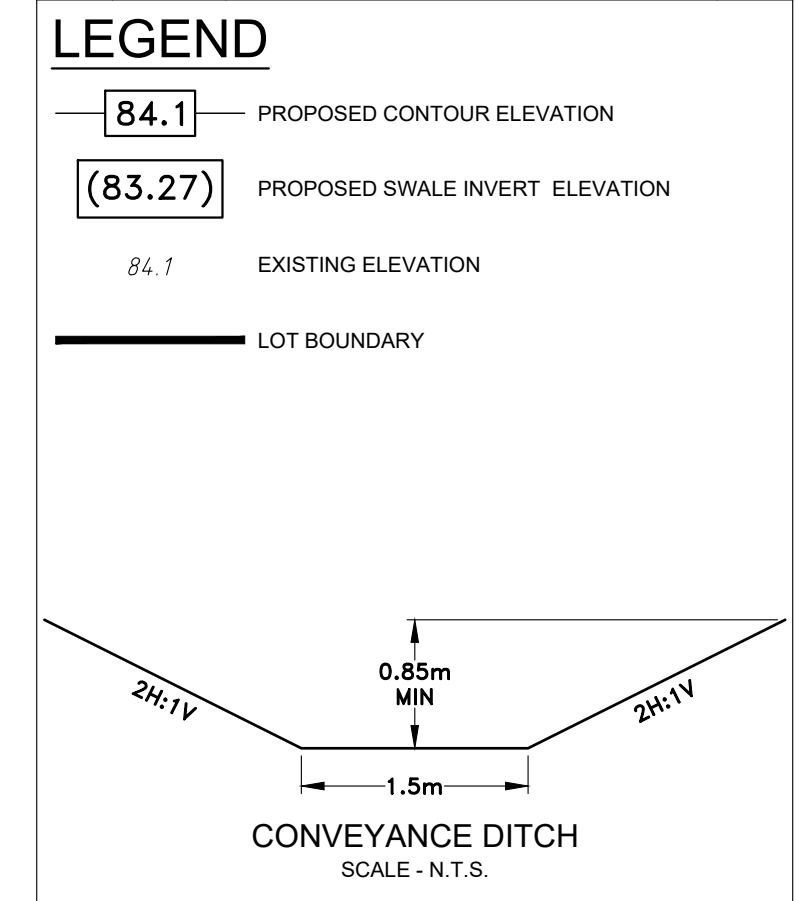
**METRIC NOTE:**

- ALL DIMENSIONS SHOWN ARE IN METRES OR MILLIMETRES, UNLESS OTHERWISE NOTED.

**GEOMETRIC NOTE:**

- ALL SURVEY DATA SHOWN ON THIS DRAWING WAS RECORDED USING REAL-TIME KINETIC (RTK) GPS OBSERVATIONS IN REFERENCE TO UTM 18 NORTH COORDINATE SYSTEM.
- ALL ELEVATIONS ARE IN REFERENCE TO LOCAL DATUM NADS 3 - GEODETIC MODEL HTF.2, UNLESS DESCRIBED OTHERWISE.
- \*\* DRAWINGS ARE NOT TO BE SCALED \*\*

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	12/11/2024	FOR LTC PERMIT APPLICATION	JH

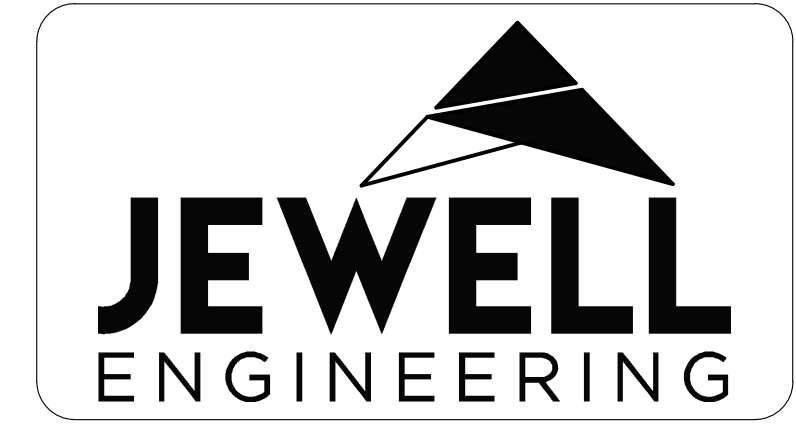
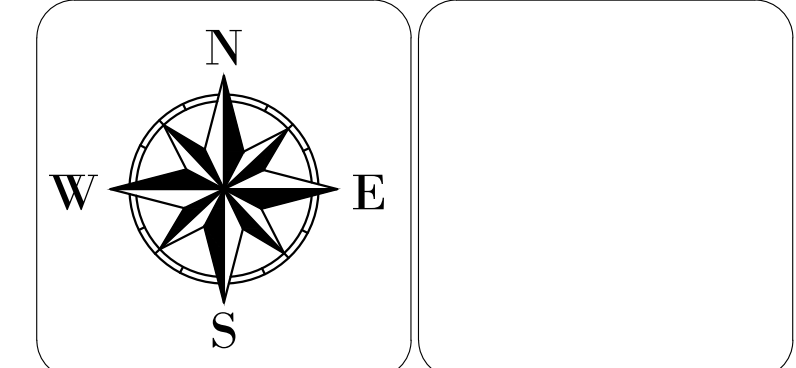


**NOTE:**

THIS PLAN WAS PREPARED FOR THE SOLE PURPOSE OF THE CONSERVATION AUTHORITY PERMIT APPLICATION. JEWELL MAY PROVIDE A 'ISSUED FOR CONSTRUCTION' DRAWING UPON REQUEST FROM THE OWNER AND/OR CONTRACTOR PRIOR TO THE WORKS TO ENSURE AN AGREED UPON BENCHMARK AND LOCAL DATUM ARE UTILIZED.

**DATUM NOTE:**

ELEVATIONS PROVIDED ARE IN VERTICAL DATUM CGVD2013



LEBLANC ENTERPRISES  
FLOOD MITIGATION  
MUNICIPALITY OF BRIGHTON

PROPOSED FILL PLAN

DRAWN BY: JH	PROJECT NO:
DESIGNED BY:	DATE: December 2024
CHECKED BY: EF	SCALE: HORIZONTAL - 1:600 VERTICAL - N/A
APPROVED BY:	CONTRACT NO:      DRAWING NO: 1

**Appendix C:**  
**Sediment and Erosion Control Plan**

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**EROSION AND SEDIMENT CONTROL NOTES**

1. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES TO PROVIDE THE PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE DURING CONSTRUCTION ACTIVITIES. THIS INCLUDES LIMITING THE AMOUNT OF EXPOSED SOIL AND INSTALLING SILT FENCES AND OTHER SEDIMENT TRAPS.
2. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING EROSION AND SEDIMENT CONTROL MEASURES ARE INSTALLED CORRECTLY.
3. HEAVY DUTY SILT FENCE BARRIER, USE OPSD 219.130.
4. FOR STRAW BALE FLOW CHECK DAM, USE OPSD 219.180.
5. FOR FIBER ROLL FLOW CHECK DAM, USE OPSD 219.191 AND 219.120.
6. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO DEVELOPMENT.
7. ALL APPROVED SEDIMENT AND EROSION CONTROL MEASURES ARE TO BE MONITORED REGULARLY AND MAINTAINED AS NECESSARY TO ENSURE GOOD WORKING ORDER, AND REMAIN IN PLACE UNTIL LANDSCAPING HAS BEEN ESTABLISHED.
8. IN THE EVENT THAT THE CONTROL MEASURES ARE DEEMED NOT TO BE PERFORMING ADEQUATELY, THE CONTRACTOR SHALL UNDERTAKE ADDITIONAL MEASURES AS APPROPRIATE TO THE SITUATION TO THE SATISFACTION OF THE OCA, PROJECT MANAGER AND/OR MUNICIPAL STAFF.
9. ANY DISTURBED AREA NOT SCHEDULED FOR FURTHER CONSTRUCTION WITHIN FORTY FIVE (45) DAYS WILL BE PROVIDED WITH A SUITABLE TEMPORARY MULCH AND SEED COVER WITHIN SEVEN (7) DAYS OF THE COMPLETION OF THAT PARTICULAR PHASE OF CONSTRUCTION.
10. ALL DISTURBED AREAS THAT WILL NOT BE FURTHER DISTURBED SHALL BE REVEGETATED WITH PERMANENT COVER IMMEDIATELY FOLLOWING COMPLETION OF CONSTRUCTION.
11. A MUD MAT IS TO BE INSTALLED PRIOR TO SITE WORKS AND MAINTAINED DURING CONSTRUCTION. IT MUST BE A MINIMUM OF 15m IN LENGTH AND MINIMUM 7m WIDE. THE PAD SHOULD BE A MINIMUM OF 400mm THICK. THE PAD SHOULD BE UNDERLAIN WITH A GEOTEXTILE (OR GRADED AGGREGATE FILTER) AND CONSIST OF 200mm DIAMETER ROUNDED STONE. REMOVE AT COMPLETION OF GRANULAR 'A' PLACEMENT.
12. EXISTING ROADWAYS ARE TO BE SWEEPED AND CLEANED FREQUENTLY TO PREVENT THE TRACKING OF MUD AND DEBRIS FROM SITE.
13. NO REFUELING OR CLEANING OF EQUIPMENT NEAR ANY EXISTING WATERWAYS.

**GENERAL NOTES:**

- ALL INFORMATION TO BE VERIFIED ON SITE PRIOR TO COMMENCING ANY WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT IMMEDIATELY.
- ALL UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL CONFIRM THE LOCATION ON SITE AND ASSUME ALL LIABILITY FOR DAMAGE TO ALL UTILITIES.
- EXCLUDING THE BENCHMARK AND DESCRIPTION PROVIDED FOR THIS PROJECT, NO OTHER ELEVATIONS ARE TO BE USED AS A REFERENCE ELEVATION FOR ANY PURPOSE.

**METRIC NOTE:**

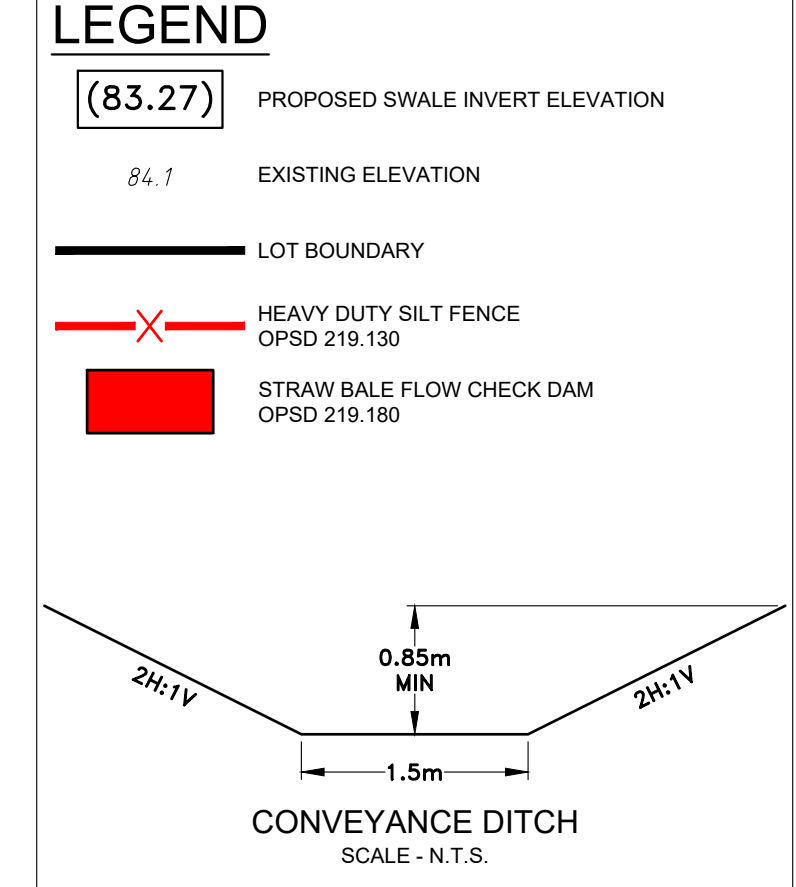
- ALL DIMENSIONS SHOWN ARE IN METRES OR MILLIMETRES, UNLESS OTHERWISE NOTED.

**GEOMETRIC NOTE:**

- ALL SURVEY DATA SHOWN ON THIS DRAWING WAS RECORDED USING REAL-TIME KINETIC (RTK) GPS OBSERVATIONS IN REFERENCE TO UTM 18 NORTH COORDINATE SYSTEM.
- ALL ELEVATIONS ARE IN REFERENCE TO LOCAL DATUM NADS 3 - GEODETIC MODEL HTF.2 UNLESS DESCRIBED OTHERWISE.
- \*\* DRAWINGS ARE NOT TO BE SCALED \*\*

**REVISIONS**

NO.	DATE	DESCRIPTION	BY
1	12/11/2024	FOR LTC PERMIT APPLICATION	JH

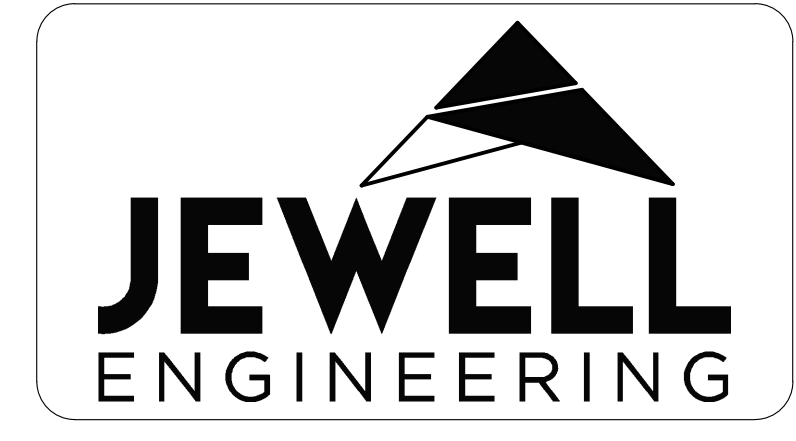
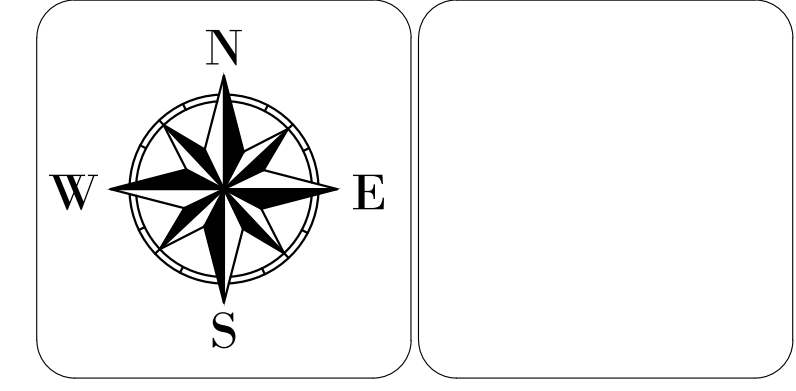


**NOTE:**

THIS PLAN WAS PREPARED FOR THE SOLE PURPOSE OF THE CONSERVATION AUTHORITY PERMIT APPLICATION. JEWELL MAY PROVIDE A 'ISSUED FOR CONSTRUCTION' DRAWING UPON REQUEST FROM THE OWNER AND/OR CONTRACTOR PRIOR TO THE WORKS TO ENSURE AN AGREED UPON BENCHMARK AND LOCAL DATUM ARE UTILIZED.

**DATUM NOTE:**

ELEVATIONS PROVIDED ARE IN VERTICAL DATUM CGVD2013



**LEBLANC ENTERPRISES  
FLOOD MITIGATION**

MUNICIPALITY OF BRIGHTON

**SEDIMENT AND EROSION PLAN**

<b>DRAWN BY:</b> JH	<b>PROJECT NO.:</b>
<b>DESIGNED BY:</b> EF	<b>DATE:</b> December 2024
<b>CHECKED BY:</b> EF	<b>SCALE:</b> HORIZONTAL - 1:600 VERTICAL - N/A
<b>APPROVED BY:</b>	<b>CONTRACT NO.:</b>
	<b>DRAWING NO.:</b> 2

**Appendix D:**  
**Mannings Open Channel Flow Calculation for Propose Drainage Channel**

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**Mannings - Open channel flow for Trapezoidal Weir**  
 $Q = 1/n AR^{2/3}S^{1/2}$

Desired Flow Capacity = **3.29** cms

**Channel Configuration**

Bottom Width	<b>1.5</b>	m
Side Slopes	<b>2</b>	:1
Slope	<b>0.005</b>	m/m
Roughness	<b>0.035</b>	(grass = 0.025, stone = 0.03)
Channel Depth	<b>0.85</b>	m

R = Hydraulic Radius = Area / Wetted Perimeter (m)  
P = Wetted Perimeter (m)  
A= Area (m<sup>2</sup>)

Assume Full Flow

A =	2.72	Length (m) =	20
P =	5.301316	Volume (m <sup>3</sup> ) =	54.4
R =	0.51308		
V = Channel Velocity (m/s) =	<b>1.295</b>		
Q = Channel Flow Capacity =	<b>3.52</b>	<b>cms</b>	