

# Beverley Acres German Mills Creek Erosion Control

## Community Liaison Committee Meeting #2

March 27th, 2024



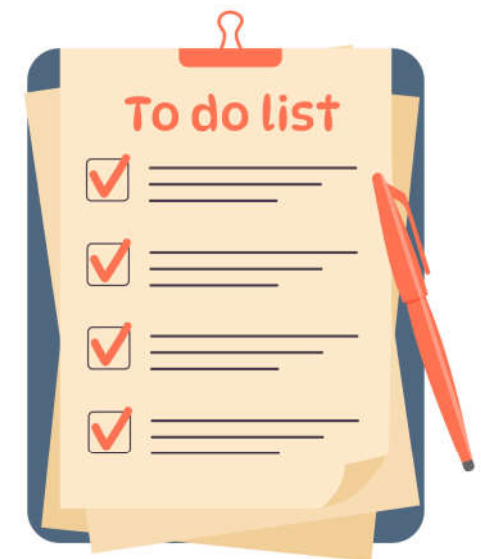
2023/08/16

# AGENDA



Beverley Acres German Mills Creek Erosion Control

1. Land Acknowledgement
2. Project Overview
3. Roles and Introductions
4. Background Information
5. Schedule B Municipal Class Environmental Assessment (MCEA) Process
6. Municipal Class Environmental Assessment Problem Statement
7. Technical Assessments
8. Preliminary Identification of Alternative Solutions
9. Conceptual Design Drawings
10. Evaluation of Alternatives
11. Selection of the Preliminary Preferred Alternative
12. Public Consultation
13. FAQs
14. Project Schedule & Next Steps



# Land Acknowledgment



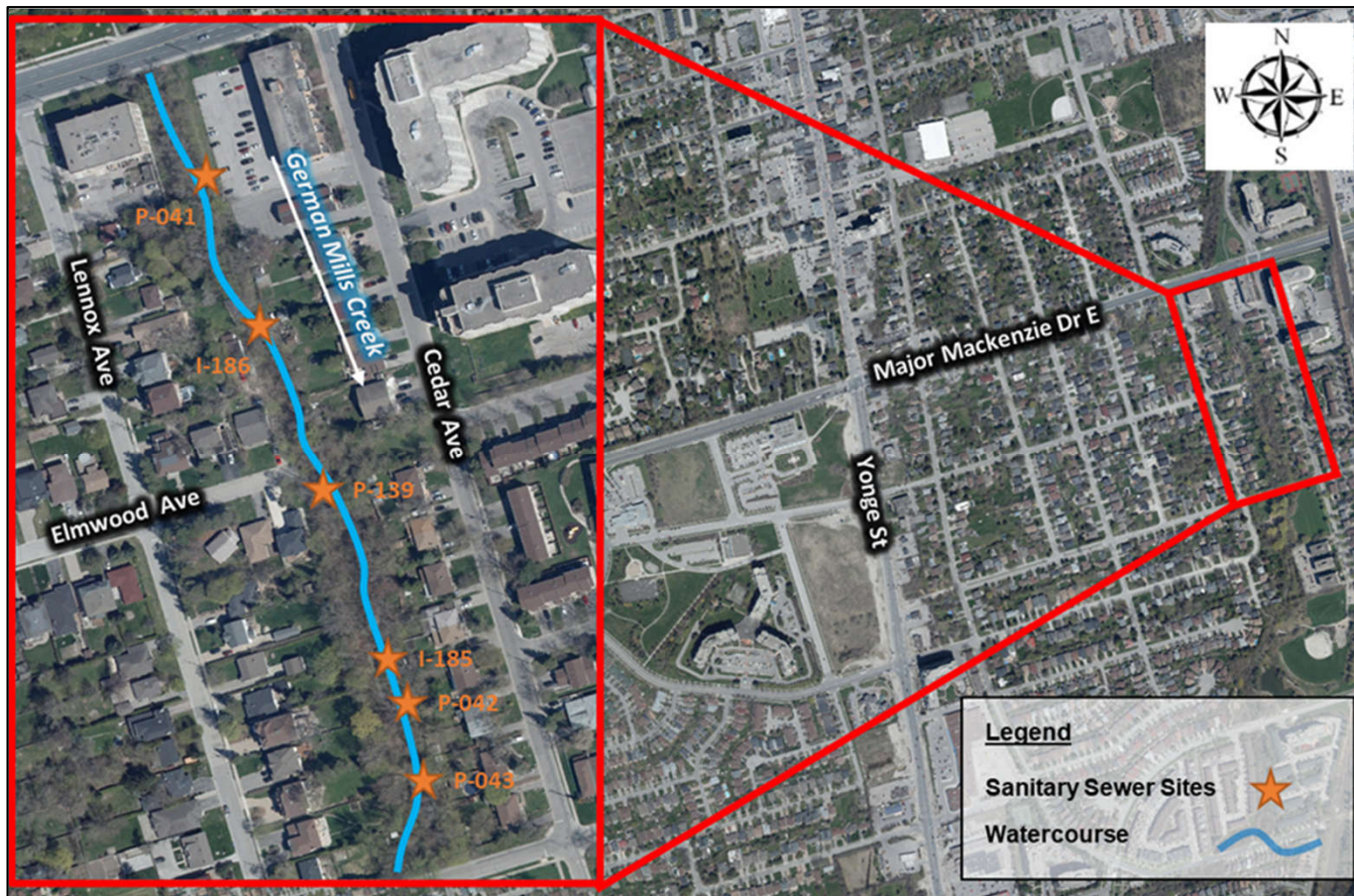
Beverley Acres German Mills Creek Erosion Control

We respectfully acknowledge the lands we are situated on are Traditional Territories and Treaty Lands, in particular those of the Mississaugas of the Credit, as well as the Anishinaabeg of the Williams Treaty First Nations, the Huron-Wendat, the Haudenosaunee, and are now home to many diverse First Nations, Inuit and Métis peoples. Toronto and Region Conservation Authority appreciates and respects the history and diversity of the land and is grateful to have the opportunity to work and meet in this territory.



# Project Overview

Erosion and natural hazards are placing York Region sanitary sewer infrastructure at risk along a portion of German Mills Creek in the Beverly Acres Community of Richmond Hill. A total of six (6) sanitary sewer risk sites have been identified. TRCA, in partnership with York Region, have retained Aquafor Beech Limited to complete an Environmental Assessment and detailed design to address the risks to York Region infrastructure.



*Project Study Area*



# Roles and Introductions



Beverley Acres German Mills Creek Erosion Control

## Aquafor Beech Staff

- Rob Amos – 416.705.2367 – [amos.r@aquaforbееch.com](mailto:amos.r@aquaforbееch.com)
- Jacob Ursulak – [ursulak.j@aquaforbееch.com](mailto:ursulak.j@aquaforbееch.com)
- Terrance Singh – [singh.t@aquaforbееch.com](mailto:singh.t@aquaforbееch.com)



## Toronto and Region Conservation Authority Staff

- Phil Wolfrain – 365.566.2383 - [Phil.Wolfrain@trca.ca](mailto:Phil.Wolfrain@trca.ca) **(Lead Contact)**
- Iris Yan – [Iris.Yan@trca.ca](mailto:Iris.Yan@trca.ca)



# Background Information

Historic and recently constructed bank protection works within German Mills Creek are common within the study area, including:

- Wooden retaining walls, gabion baskets and timber channel lining

These bank protection measures have started to degrade, fail, and become outflanked and undermined, leading to accelerated erosion

This erosion has placed the adjacent sanitary sewer and residential private properties at risk



*Outflanked historic timber  
channel lining*



*Undermined gabion baskets and  
heavily eroded channel banks*

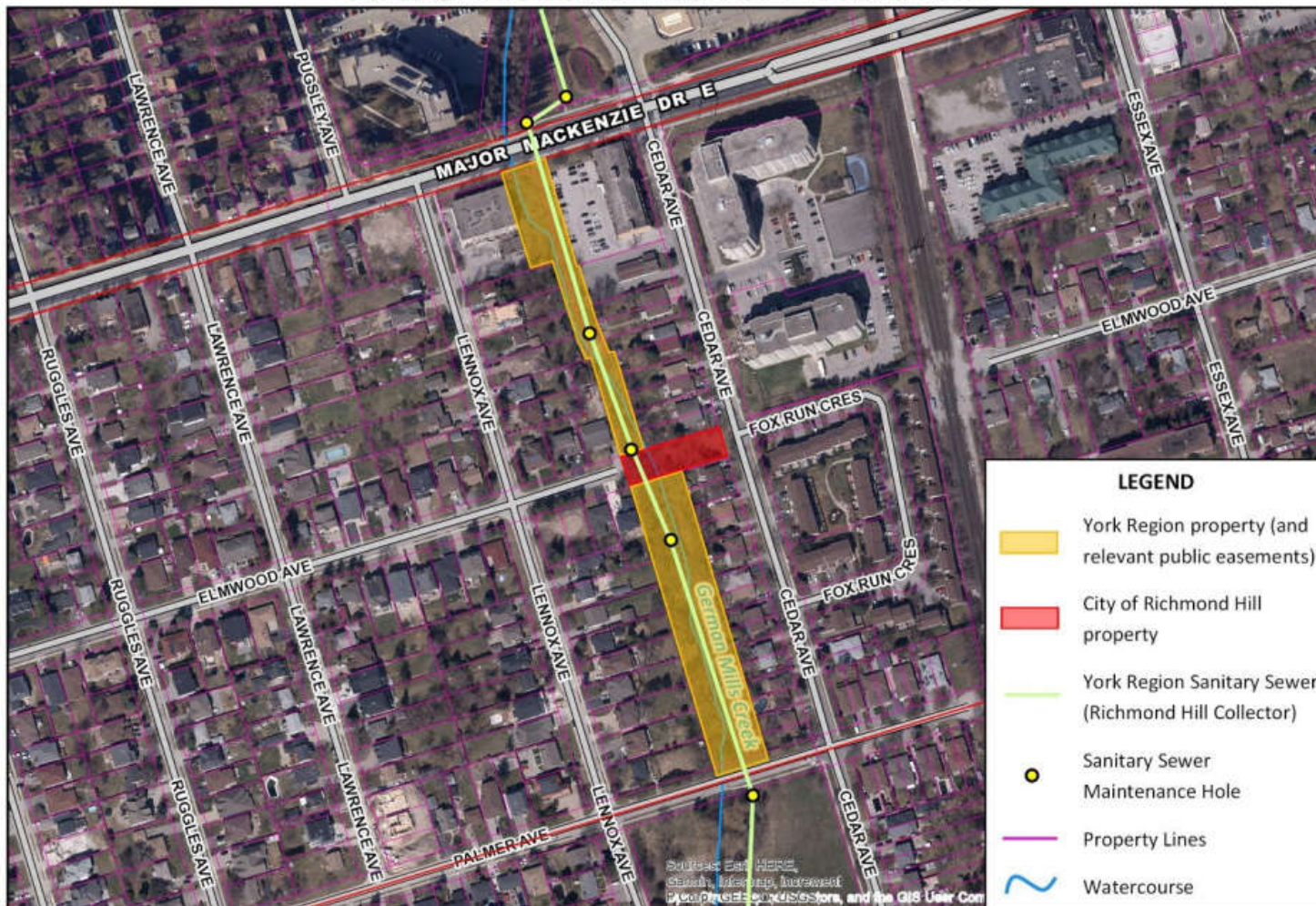


*Bank erosion impacting adjacent  
residential properties*



# Property Ownership

Beverley Acres German Mills Creek Erosion Control



Property ownership within the Study Area is split between:

1. York Region owned lands
2. City of Richmond Hill owned lands
3. Private properties
4. Public easements for infrastructure maintenance

# Municipal Class Environmental Assessment Process



Beverley Acres German Mills Creek Erosion Control

Many projects related to municipal systems are similar in nature, are carried out routinely, and have predictable and mitigatable environmental effects which are investigated according to the Municipal Engineers Association “Municipal Class Environmental Assessment” process (October 2000, as amended in 2007, 2011, 2015 & 2023).

The Beverley Acres German Mills Creek Erosion EA will follow a Schedule B project under the Municipal Class Environmental Assessment process. The chart below highlights the required phases of the project, and the flow chart on the following slide illustrates the key steps to be undertaken as part of the EA process.

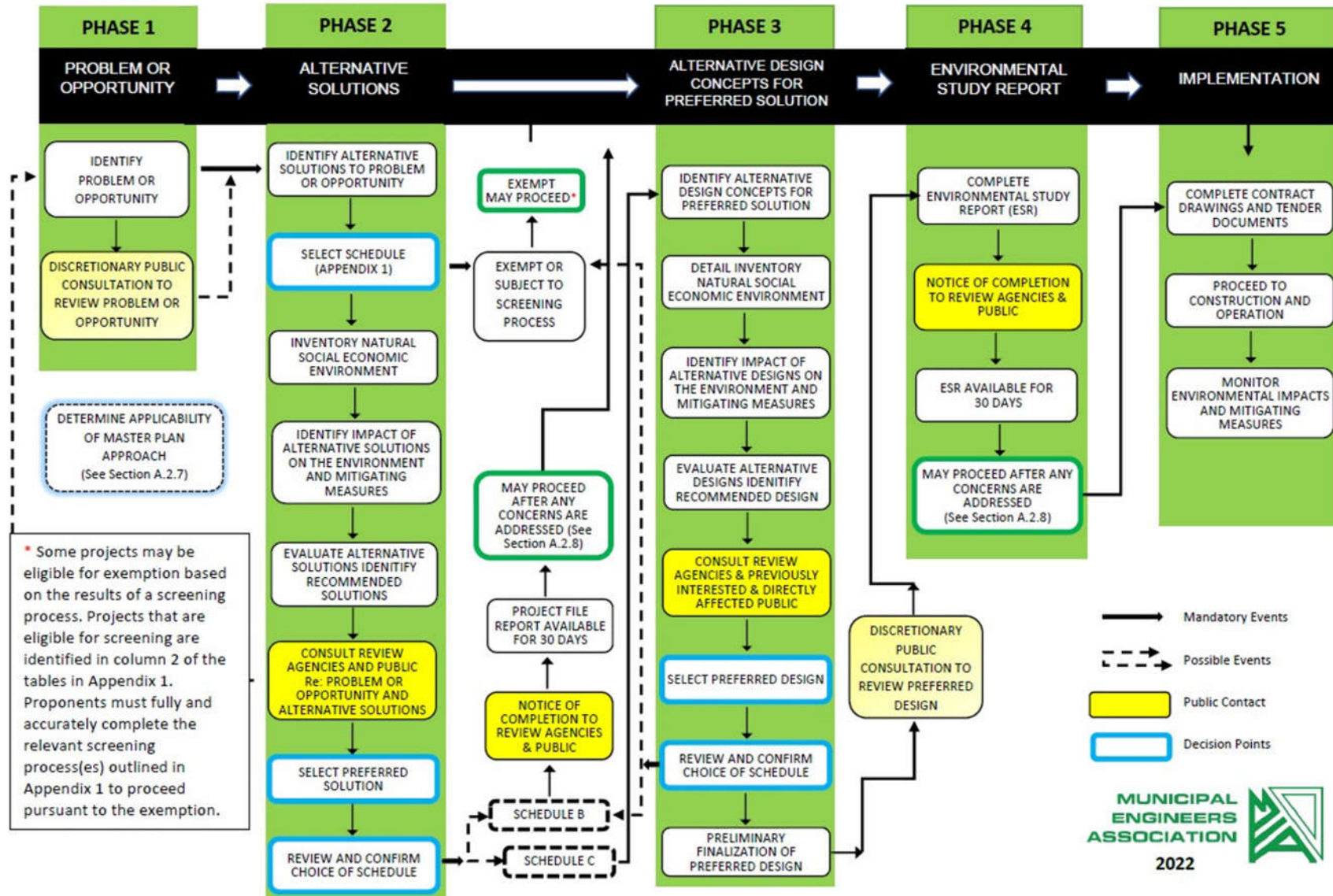
	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5
<b>BASIC PROCESS</b> (See Exhibit A.2 for detailed flow chart)	PROBLEM OR OPPORTUNITY → ALTERNATIVE SOLUTIONS → ALTERNATIVE DESIGN CONCEPTS FOR PREFERRED SOLUTION → ENVIRONMENTAL STUDY REPORT → IMPLEMENTATION				
Consultation Requirements	Optional	Mandatory	Mandatory	Mandatory	Optional
EXEMPT	✓				✓
SCHEDULE B PROJECTS	✓	✓			✓
SCHEDULE C PROJECTS	✓	✓	✓	✓	✓
MASTER PLANS	✓	✓	✓	✓	✓



# Municipal Class Environmental Assessment Process

## EXHIBIT A.2. MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS

NOTE: This flow chart is to be read in conjunction with Part A of the MCEA



# Problem Statement



Beverley Acres German Mills Creek Erosion Control

Toronto and Region Conservation Authority, in partnership with the Regional Municipality of York is initiating a Municipal Class Environment Assessment to identify erosion control solutions for sanitary infrastructure protection. The study area includes municipal lands and easements along German Mills Creek between Major Mackenzie Drive East and Palmer Avenue, in the City of Richmond Hill.





# Technical Assessments

The following technical assessments have been completed in support of the EA and Detailed Design:

1. Topographical survey
2. Geomorphic analysis

The following technical assessments are currently underway in support of the EA and Detailed Design:

1. Tree inventory and arborist report
2. Terrestrial and aquatic ecological inventories including Species at Risk screening
3. Hydraulic modelling investigation
4. Geotechnical investigation



*Topographic Survey of Study Area*

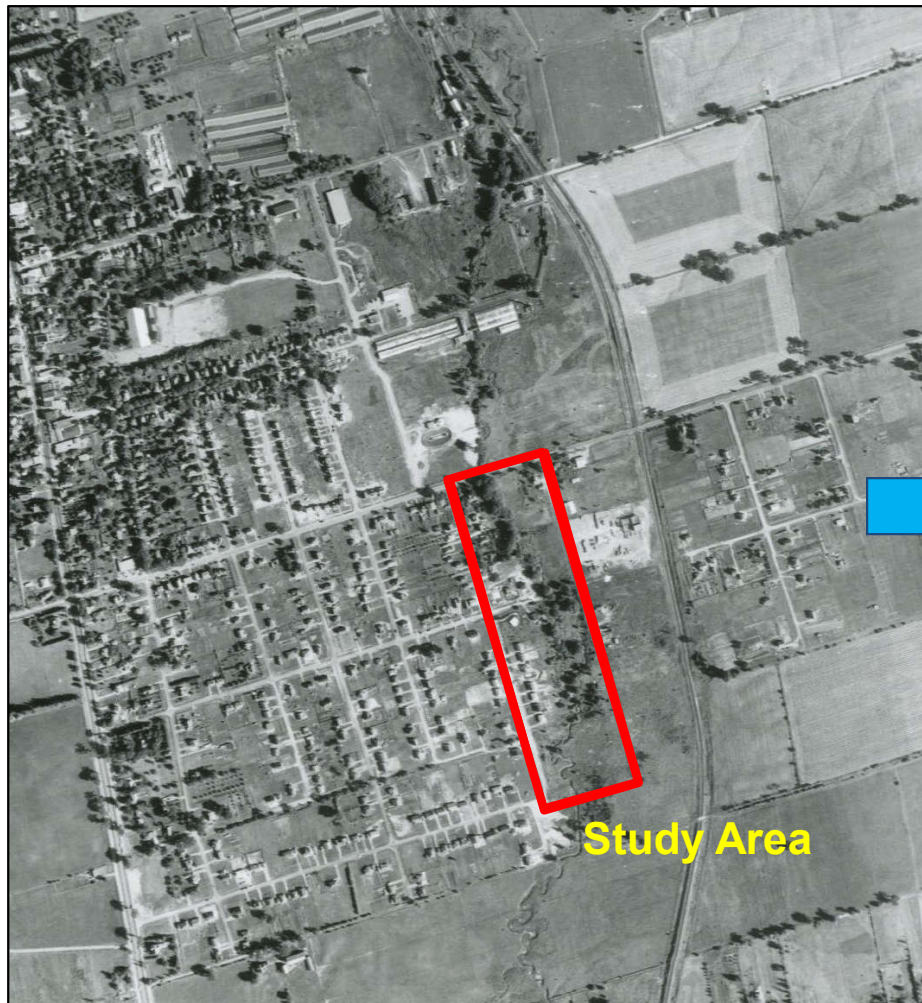


*Geomorphic Analysis of German Mills Creek*

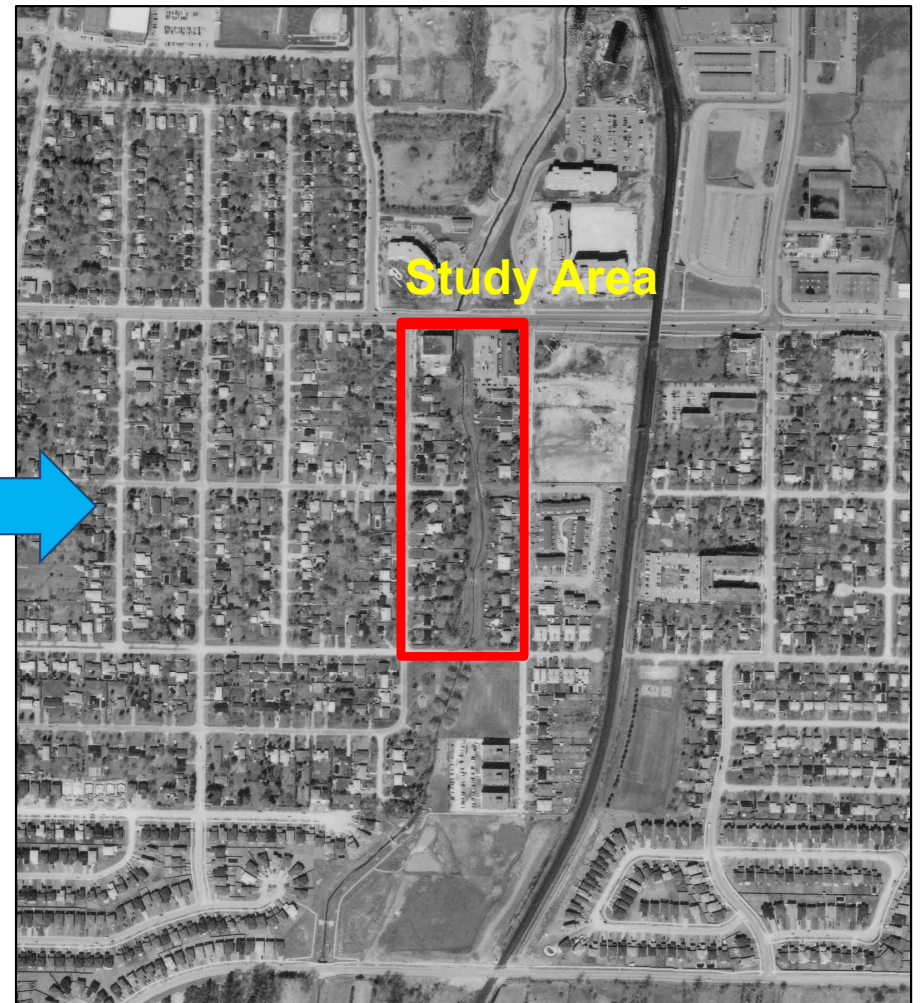


# Geomorphic Analysis

Aquafor's fluvial geomorphology team has reviewed available background information and existing site conditions to define key geomorphic parameters including: substrate composition, watercourse stability, dominant geomorphic processes and estimated rates of erosion.



*Historic Ortho Imagery - 1954*



*Historic Ortho Imagery - 1988*



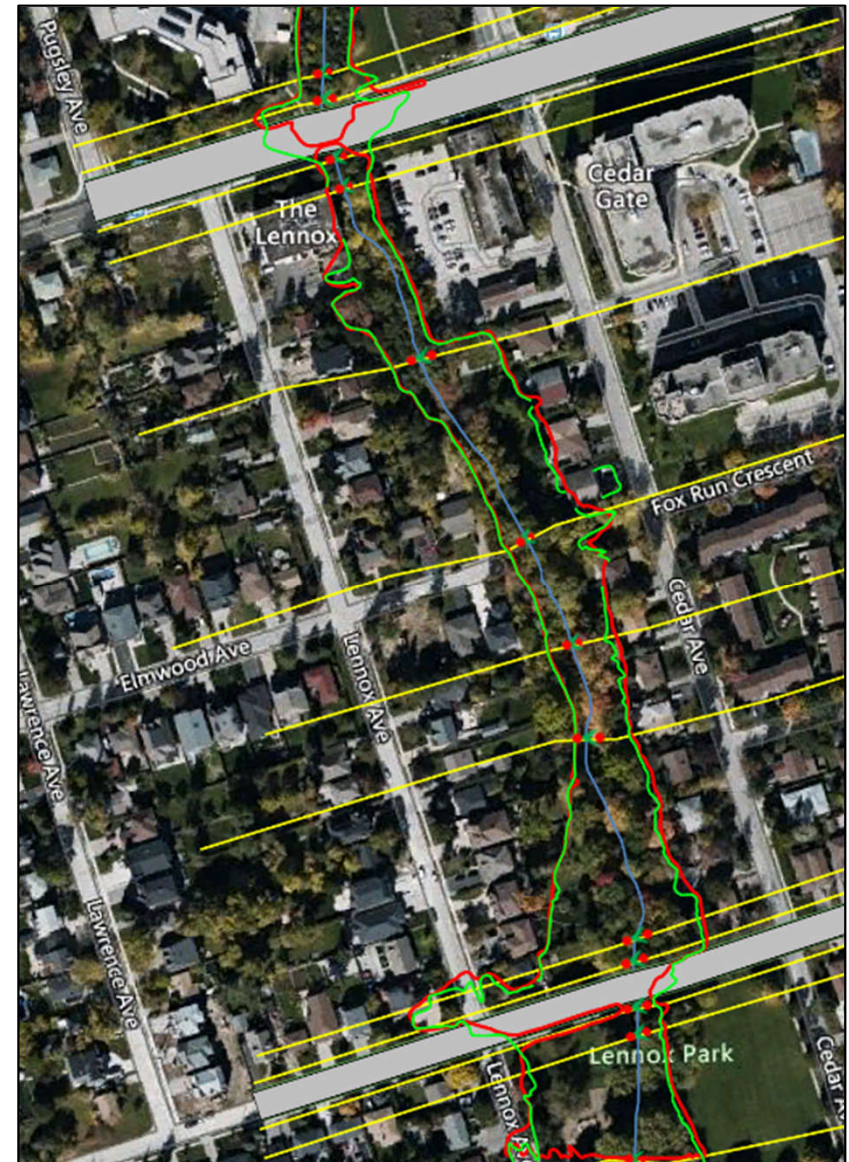
# Hydraulic Modelling Investigation

TRCA's HEC-RAS model will be used to define the impact of the proposed design on:

- Water surface elevations and modelled flood line extents
- Erosion forces (i.e., channel velocities and shear stress values)
- Fish passage potential

The design will ensure there is no negative impact with respect to flooding or erosion control when compared to existing conditions.

Detailed hydraulic modelling and confirmation of flood line extents will be completed at the detailed design phase.



*Preliminary Hydraulic Analysis within Study Area*

# Preliminary Alternative Solutions

## Alternative 0 – Do Nothing

- Define existing levels of risk and continue monitoring until further restoration works are required.

## Alternative 1 – Localized Channel Restoration

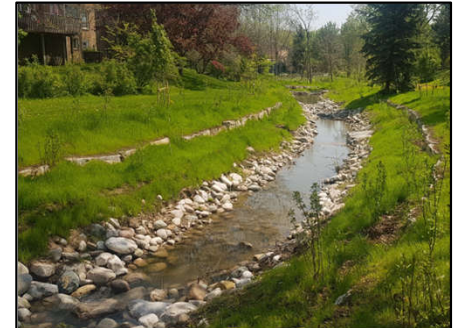
- Includes localized bank protection and channel restoration works at high-risk areas.

## Alternative 2 – Extended Naturalized Channel Restoration

- Includes comprehensive restoration works for the entire study area using naturalized methods.

## Alternative 3 – Extended Hardscaped Channel Restoration

- Includes comprehensive restoration works for the entire study area using hardened protection measures.





# Existing Conditions – Do Nothing

## Alternative 0 – Do Nothing Summary

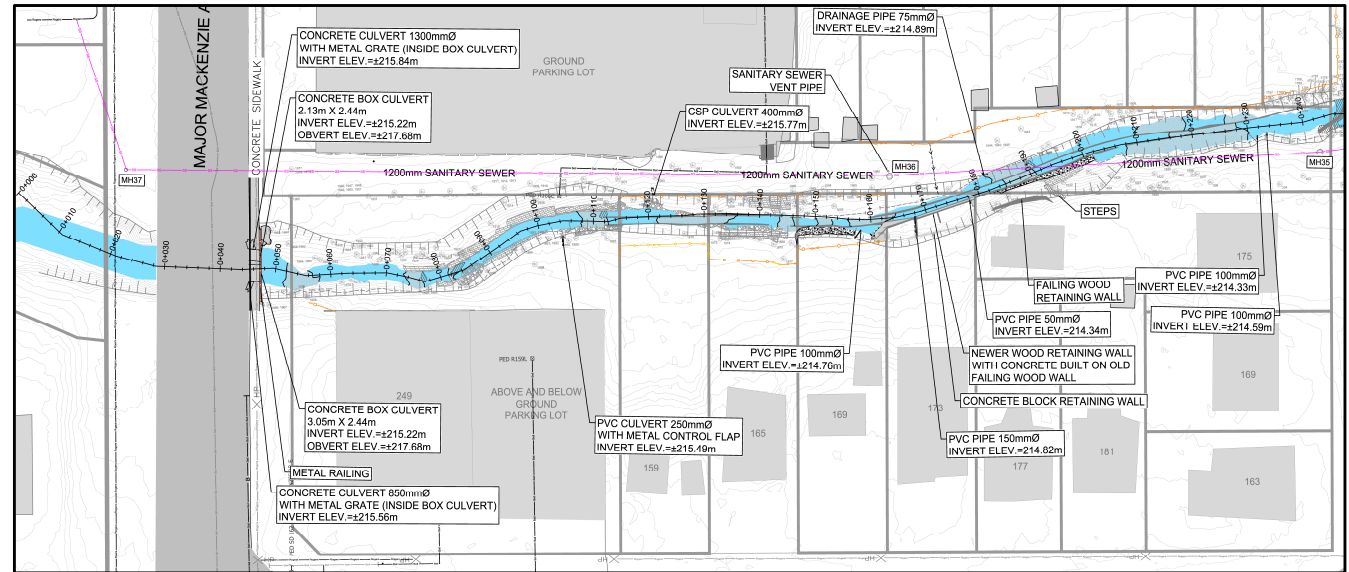
- Monitoring of the study area
- Continued erosion of German Mills Creek

## Alternative 0 Advantages

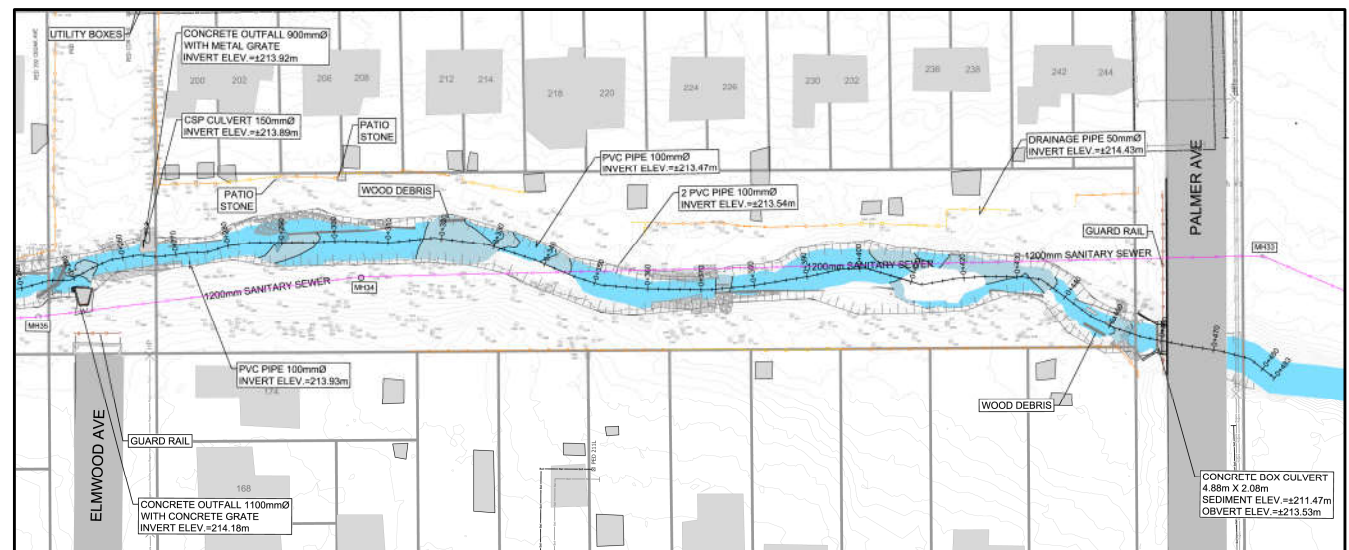
- No construction disturbance
- No immediate cost

## Alternative 0 Disadvantages:

- Sanitary sewer and private properties at continued risk of erosion
- No reduction of flood levels to surrounding properties
- Future emergency works/maintenance likely required if infrastructure becomes damaged



Alternative 0: Do Nothing – Reach #1



Alternative 0: Do Nothing – Reach #2

# Existing Conditions – Do Nothing

## Alternative 0 – Do Nothing

- Unprotected bank and channel bed within German Mills Creek
- Severely degraded or failed historic erosion control structures
- At-risk private properties and sanitary sewer infrastructure



*Active Bank Erosion*



*Active Channel Widening*



# Conceptual Design Drawings – Localized Channel Restoration



Beverley Acres German Mills Creek Erosion Control

## Alternative 1 - Localized Channel Restoration

### Design Summary

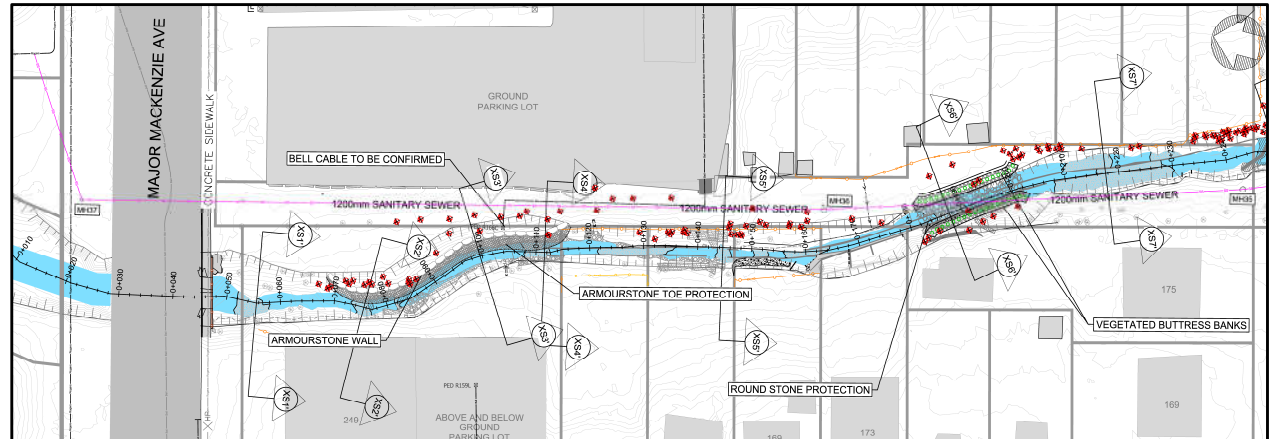
- Localized bank protection and channel restoration works
- Design consists of a combination of Armourstone wall, vegetated buttresses, and roundstone bed treatment

### Alternative 1 Advantages

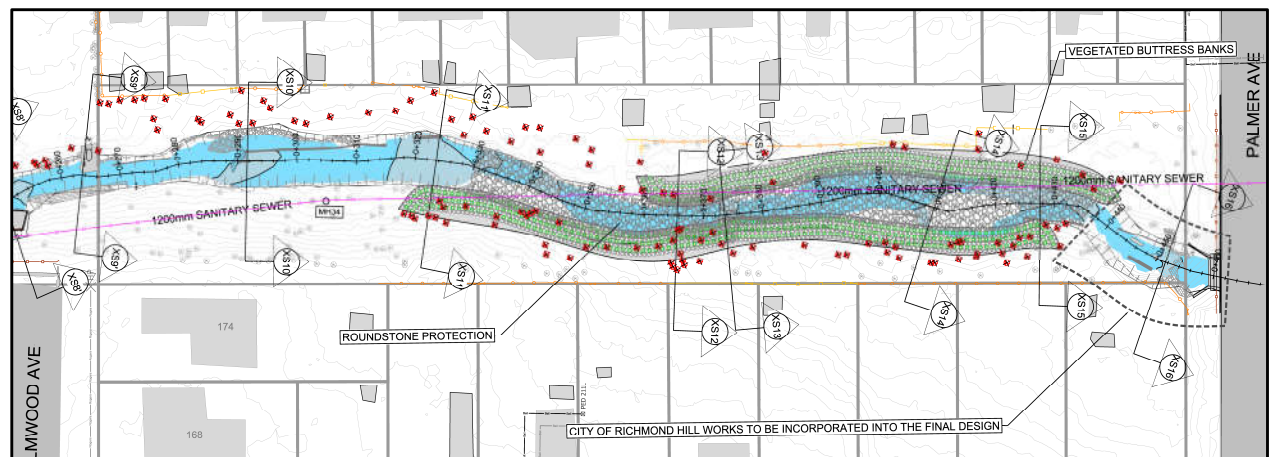
- Critical sewer and private property protection in localized areas
- Comparatively low cost and minimal construction disturbance

### Alternative 1 Disadvantages:

- Continued erosion risk to sewer and private properties at some locations
- Does not include upstream channel widening by Major Mackenzie
- No reduction in modelled flood elevations



*Alternative 1: Localized Channel Restoration (Reach 1)*



*Alternative 1: Localized Channel Restoration (Reach 2)*



# Example – Localized Channel Restoration



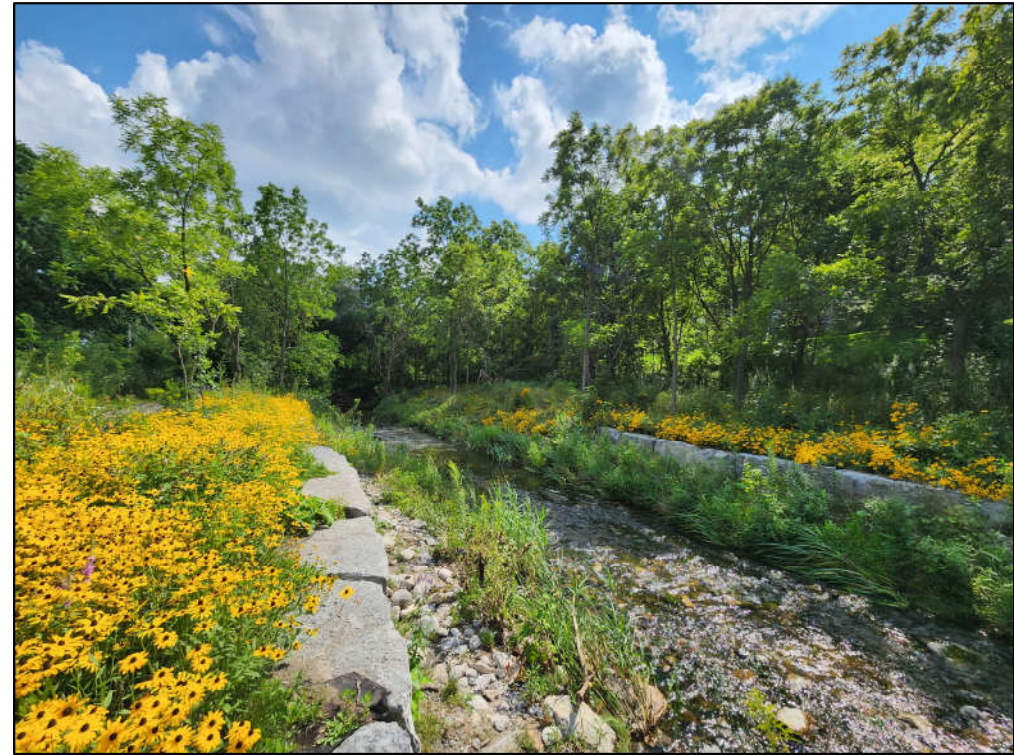
Beverley Acres German Mills Creek Erosion Control

## Erosion Restoration of Mount Joy Creek – City of Markham

- 40 m of channel restoration works to protect an at-risk maintenance hole and sewer crossing
- Increased depth of cover over sewer
- Armourstone retaining walls installed to prevent lateral bank erosion



*Pre-Construction – September 2019*



*Two Years Post Construction – August 2023*



# Conceptual Design Drawings – Extended Naturalized Channel Restoration



Beverley Acres German Mills Creek Erosion Control

## Alternative 2 - Extended Naturalized Channel Restoration

### Design Summary

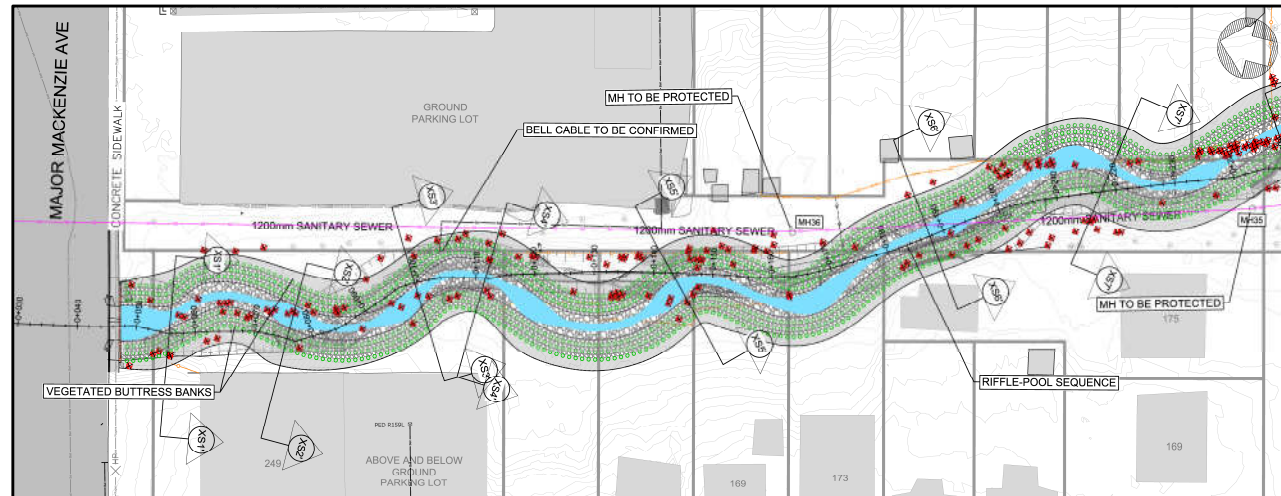
- Restoration works for the entire study area
- Design consists of vegetated buttress bank protection and roundstone bed protection along entire length of channel

### Alternative 2 Advantages:

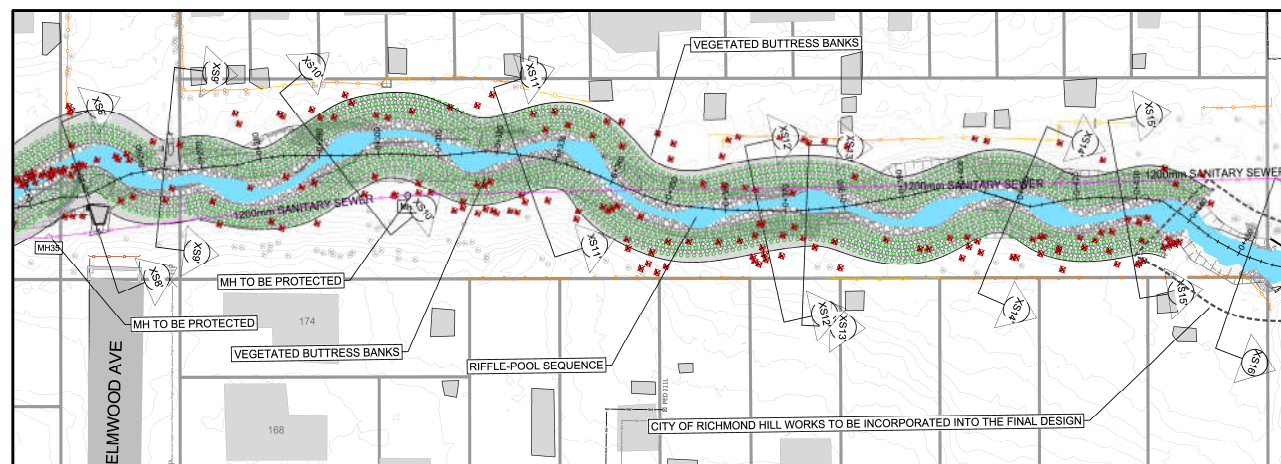
- Critical erosion protection to sanitary sewer and adjacent private properties along entire study area
- General widening of channel resulting in minor reduction to flood levels
- Enhanced aquatic and riparian habitat

### Alternative 2 Disadvantages:

- Significant tree removals required
- Wider channel form requires more space, leading to potential private property impacts



*Alternative 2: Extended Naturalized Channel Restoration  
(Reach 1)*



*Alternative 2: Extended Naturalized Channel Restoration  
(Reach 2)*

# Example – Extended Naturalized Channel Restoration



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## Roseland Creek Restoration – City of Burlington

- ~800 m of continuous channel restoration works to protect at-risk infrastructure and private properties
- Combination of natural channel design and traditional engineering design principles



*Pre-Construction – August 2014*



*Post Construction – May 2018*



# Community Poll #1



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## QUESTION

**\*\*For residents only\*\***

Would you be supportive of voluntarily moving your fence line back to create a wider meandering channel?

## ANSWER

☐ Yes

☐ No

# Conceptual Design Drawings – Extended Hardscaped Channel Restoration



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## Alternative 3 – Extended Hardscaped Channel Restoration Design Summary

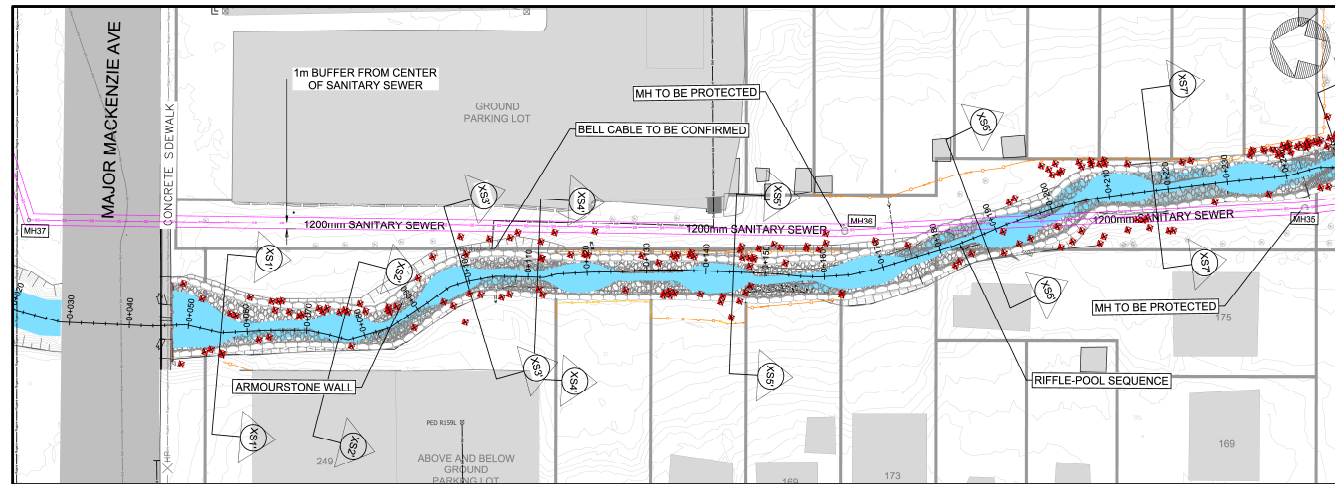
- Remediation of the entire length of channel using “hard” erosion controls
- Design consists of armourstone wall bank protection and roundstone bed treatment along entire length of channel

### Alternative 3 Advantages:

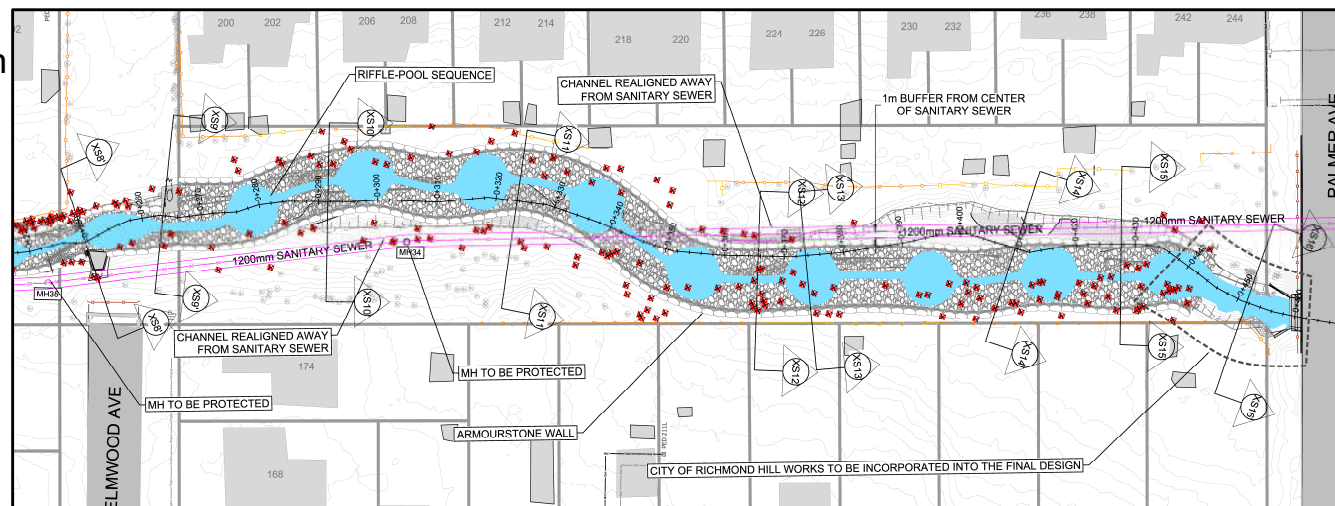
- Critical sewer and adjacent private property protection along entire study area
- General widening of channel resulting in minor reduction in flood levels
- Relative to Alternative 2, a more confined channel width, minimizing private property impacts

### Alternative 3 Disadvantages:

- “Hard” engineering approach has reduced habitat restoration potential
- Significant tree removals required
- Highest cost



*Alternative 3: Extended Hardscaped Channel Restoration  
(Reach 1)*



*Alternative 3: Extended Hardscaped Channel Restoration  
(Reach 2)*



# Example – Extended Hardscaped Channel Restoration



Beverley Acres German Mills Creek Erosion Control

## Mimico Creek at Van Dusen – City of Toronto

- 130 m of channel restoration works to protect at-risk sanitary sewer infrastructure
- Consisting of armourstone retaining walls and armourstone channel bed lining
- Provided comprehensive protection to sanitary sewer infrastructure



*Exposed Sanitary Sewer and Failed Armourstone Retaining Wall (August 2020)*



*Armourstone Bank and Bed Control (June 2023)*

# Preliminary Hydraulic Modelling Results



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A coarse high-level hydraulic modelling assessment has been completed for each of the proposed design alternatives to guide and inform the evaluation process.

The proposed design for each alternative was incorporated into the hydraulic model, and the following preliminary results were observed:

## **Alternative #1: Localized Channel Restoration**

- No significant improvement to flooding reduction within study area

## **Alternative #2: Extended Naturalized Channel Restoration**

- Moderate improvement to flooding reduction of up to 0.25 metres within the study area for the 100 year storm event

## **Alternative #3 – Extended Hardscaped Channel Restoration**

- Moderate improvement to flooding reduction of up to 0.20 metres within the study area for the 100 year storm event

These results are preliminary and are intended to guide the alternative evaluation process. Following the completion of public consultation, the preferred alternative will be further characterized and a more refined hydraulic model will be created.



# Evaluation of Alternatives



Beverley Acres German Mills Creek Erosion Control

Each reach will be specifically evaluated to determine the preferred method for rehabilitation.

The evaluation uses a ranking scheme which accounts for York Region infrastructure Risk, Physical and Natural Environment, Social and Cultural Environment, Technical Considerations, Constructability, Financial Considerations, and Public Safety.

A preliminary ranking has been applied to each alternative for each reach. The alternative with the highest score will define which alternative is preferred for each reach.

The ranking score has been normalized to provide equal weighting for each category of evaluation criteria.

The ranking will be finalized once public input has been incorporated.

Scoring Scale				
1	2	3	4	5
Least Preferred	Less Preferred	Neutral	More Preferred	Most Preferred

*Category Scoring Scale*

Category	Weighting Factor	Maximum Points for Category
York Region Infrastructure Risk Criteria	0.2	20
Physical and Natural Environment Criteria	0.2	20
Social and Cultural Environment Criteria	0.2	20
Technical Criteria	0.2	20
Constructability	0.2	20
Financial Criteria	0.2	20
Public Safety Criteria	0.2	20
Total	1.4	140

*Category Weighting Factors*

# Evaluation Criteria



Beverley Acres German Mills Creek Erosion Control

## York Region Infrastructure Risk

<b>Risk Reduction</b>	Ability to reduce the risk to York Region infrastructure caused by watercourse erosion
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## Physical and Natural Environment Criteria

<b>Flooding</b>	Impact on surface drainage, flooding; ability to meet legislated criteria for flooding and water management
<b>Erosion</b>	Impacts on soils, geology, rates of erosion
<b>Terrestrial Habitat</b>	Impacts on connectivity, diversity, and sustainability
<b>Aquatic Habitat</b>	Impacts on connectivity, spawning potential, habitat, and sustainability

## Constructability

<b>Complexity of Treatment</b>	Requirements for specialized services to design or install unique or proprietary specifications that must be completed by a certified contractor or consultant
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## Financial Criteria

<b>Capital Cost</b>	Rough Order of Magnitude (ROM) capital costs for the permitting and construction of the proposed concept
<b>Maintenance Costs</b>	Rough Order of Magnitude (ROM) costs to maintain the proposed structure

## Technical Criteria

<b>Regulatory Agency Acceptance</b>	Satisfy TRCA, MNRF, MECP, and DFO criteria (as relevant)
<b>Impacts on Existing Infrastructure</b>	Protection of non-regional infrastructure (e.g., storm sewers, culverts, outfalls, etc.)
<b>Maintenance Requirements</b>	Requirement for regular, irregular, or no maintenance activities (e.g., structural or vegetation maintenance)
<b>Climate Change Resilience</b>	Ability of the design alternative to persist under the effects of climate change including higher peak flows leading to increased erosive forces

## Social and Cultural Environment Criteria

<b>Aesthetic Value</b>	Impact on the aesthetic value of the study area
<b>Benefit to Community</b>	Ability of the design to maintain or enhance community safety, satisfaction, use and enjoyment of the riparian corridor, specifically with regard to properties directly backing onto German Mills Creek within the Study Area
<b>Archaeological Features</b>	Impacts on existing archaeological features

## Public Safety

<b>Potential Risk to the Public</b>	Impact to public safety and requirement for safety features (e.g., safety fences)
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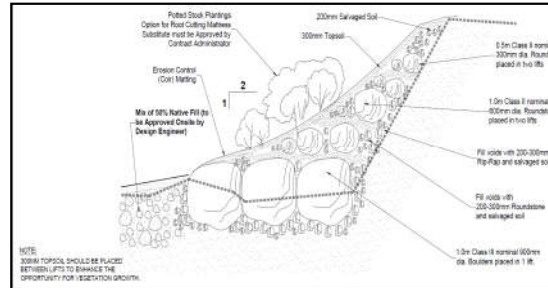
# Evaluation Table For Sub-Reach #1A

## Selection of the Preliminary Preferred Alternative

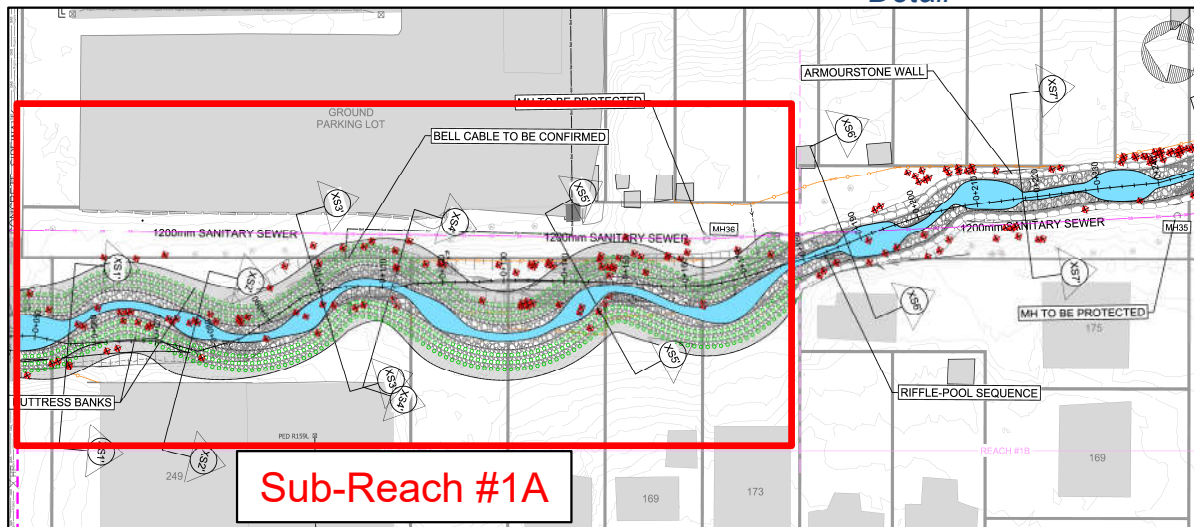
- Alternative #2 – Extended Naturalized Channel Restoration
- Comprehensive protection to private properties and sanitary sewer infrastructure
- Naturalizes and opens up channel directly downstream of Major Mackenzie Avenue, where historical filling has occurred



Implementation of Extended  
Naturalized Channel Restoration



Typical Vegetated Buttress  
Detail



Sub-Reach #1A

Reach #1 Preferred Alternatives

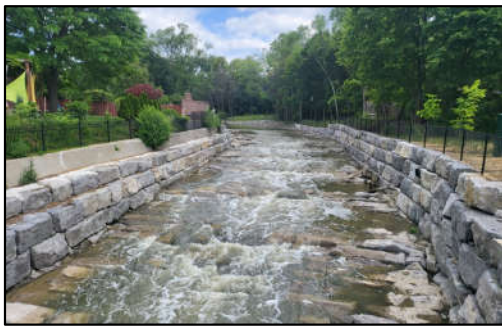
Sub-Reach #1A - Evaluation Matrix						
Category	Evaluation Criteria	Score	Alt. 0 - Do	Alt. 1 -	Alt. 2 -	Alt. 3 -
York Region Infrastructure Risk	Risk Reduction	5	1	3	4	5
	Criteria Subtotal		1.00	3.00	4.00	5.00
	Weighted Score (maximum of 20 points)		4.00	12.00	16.00	20.00
Physical And Natural Environment	Flooding	5	3	3	4	4
	Erosion	5	1	3	4	5
	Terrestrial Habitat	5	2	3	4	2
	Aquatic Habitat	5	2	4	5	3
	Criteria Subtotal		8.00	13.00	17.00	14.00
	Weighted Score (maximum of 20 points)		8.00	13.00	17.00	14.00
Social and Cultural Environment	Aesthetic Value	5	1	2	4	3
	Benefit to Community	5	3	4	2	5
	Archaeological Features	5	3	3	3	3
	Criteria Subtotal		7.00	9.00	9.00	11.00
	Weighted Score (maximum of 20 points)		9.33	12.00	12.00	14.67
Technical Criteria	Regulatory Agency Acceptance	5	1	3	5	3
	Impact on Existing Infrastructure	5	1	3	5	5
	Maintenance Requirements	5	1	4	4	5
	Climate Change Resilience	5	1	3	5	5
	Criteria Subtotal		4.00	13.00	19.00	18.00
	Weighted Score (maximum of 20 points)		4.00	13.00	19.00	18.00
Contractability	Complexity of Treatment	5	5	4	3	2
	Criteria Subtotal		5.00	4.00	3.00	2.00
	Weighted Score (maximum of 20 points)		20.00	16.00	12.00	8.00
Financial Criteria	Capital Cost	5	5	4	3	2
	Maintenance Costs	5	2	4	5	5
	Criteria Subtotal		7.00	8.00	8.00	7.00
	Weighted Score (maximum of 20 points)		14.00	16.00	16.00	14.00
Public Safety	Potential Risks to the Public	5	2	3	4	4
	Criteria Subtotal		2.00	3.00	4.00	4.00
	Weighted Score (maximum of 20 points)		8.00	12.00	16.00	16.00
Total Score (Maximum of 140 points)			67.33	94.00	108.00	104.67

Highest Score =  
Preferred Alternative

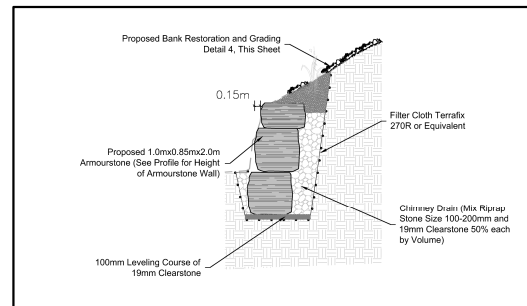
# Evaluation Table For Sub-Reach #1B

## Selection of the Preliminary Preferred Alternative

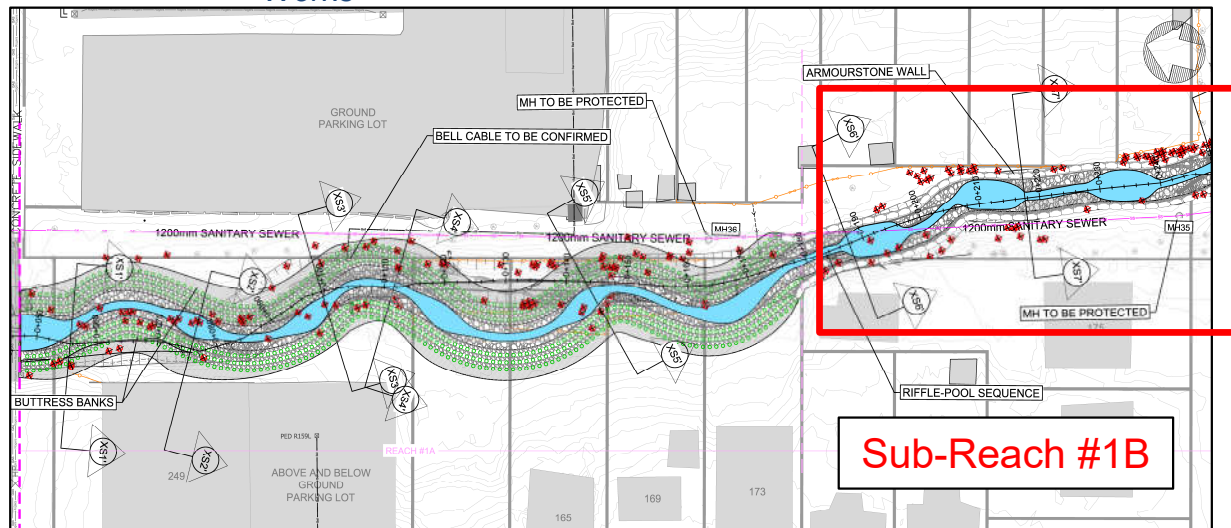
- Alternative 3 – Extended Hardscaped Channel Restoration
- Comprehensive protection to private properties and sanitary sewer infrastructure for the entire sub-reach using hardened protection measures



Implementation of Extended  
Hardscaped Channel Restoration  
Works



Typical Armourestone Wall  
Detail



Reach #1 Preferred Alternatives

Sub-Reach #1B - Evaluation Matrix						
Category	Evaluation Criteria	Score	Alt. 0	Alt. 1	Alt. 2	Alt. 3
York Region Infrastructure Risk	Risk Reduction	5	1	3	4	5
	Criteria Subtotal		1.00	3.00	4.00	5.00
	Weighted Score (maximum of 20 points)		4.00	12.00	16.00	20.00
Physical And Natural Environment	Flooding	5	3	3	4	4
	Erosion	5	1	3	4	5
	Terrestrial Habitat	5	2	3	4	2
	Aquatic Habitat	5	2	4	5	3
	Criteria Subtotal		8.00	13.00	17.00	14.00
	Weighted Score (maximum of 20 points)		8.00	13.00	17.00	14.00
Social and Cultural Environment	Aesthetic Value	5	1	2	4	3
	Benefit to Community	5	3	4	2	5
	Archaeological Features	5	3	3	3	3
	Criteria Subtotal		7.00	9.00	9.00	11.00
	Weighted Score (maximum of 20 points)		9.33	12.00	12.00	14.67
Technical Criteria	Regulatory Agency Acceptance	5	1	3	2	5
	Impact on Existing Infrastructure	5	1	3	5	5
	Maintenance Requirements	5	1	4	4	5
	Climate Change Resilience	5	1	3	5	5
	Criteria Subtotal		4.00	13.00	16.00	20.00
	Weighted Score (maximum of 20 points)		4.00	13.00	16.00	20.00
Contractability	Complexity of Treatment	5	5	4	3	2
	Criteria Subtotal		5.00	4.00	3.00	2.00
	Weighted Score (maximum of 20 points)		20.00	16.00	12.00	8.00
Financial Criteria	Capital Cost	5	5	4	2	2
	Maintenance Costs	5	2	4	5	5
	Criteria Subtotal		7.00	8.00	7.00	7.00
	Weighted Score (maximum of 20 points)		14.00	16.00	14.00	14.00
Public Safety	Potential Risks to the Public	5	2	3	4	4
	Criteria Subtotal		2.00	3.00	4.00	4.00
	Weighted Score (maximum of 20 points)		8.00	12.00	16.00	16.00
Total Score (Maximum of 140 points)			67.33	94.00	103.00	106.67

Highest Score  
= Preferred  
Alternative



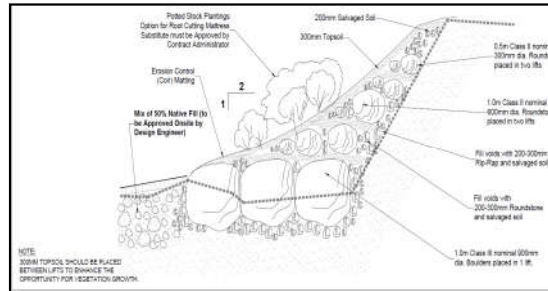
# Evaluation Table For Reach #2

## Selection of the Preliminary Preferred Alternative

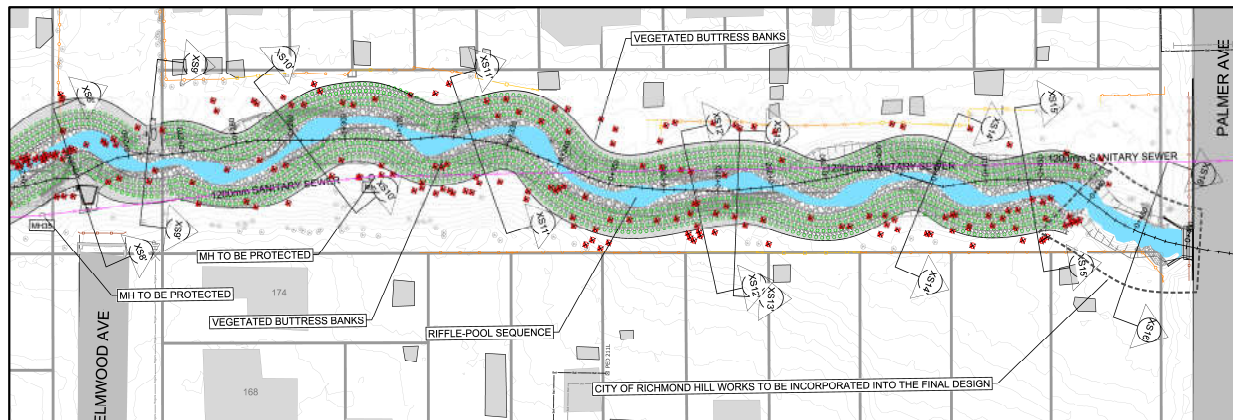
- Alternative #2 – Extended Naturalized Channel Restoration
- Comprehensive protection to private properties and sanitary sewer infrastructure
- Integrates smoothly into preliminary preferred alternative for Reach #1



Implementation of Extended Naturalized Channel Restoration Works in Roseland Creek



Typical Vegetated Buttress Detail



Alternative 2: Extended Naturalized Channel Restoration

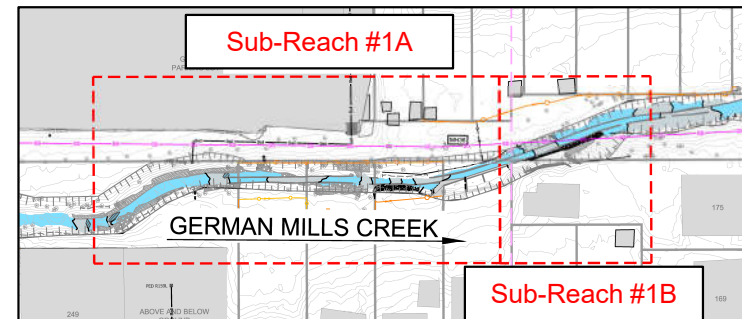
Category	Evaluation Criteria	Alt. 0 - Do Nothing	Alt. 1 - Localized Channel Works	Alt. 2 - Extended Naturalized Channel Restoration	Alt. 3 - Extended Hardscaped Channel Restoration
York Region Infrastructure Risk	Risk Reduction	1	4	5	5
	Criteria Subtotal	1.00	4.00	5.00	5.00
	Weighted Score (maximum of 20 points)	4.00	16.00	20.00	20.00
Physical And Natural Environment	Flooding	3	3	4	4
	Erosion	1	2	4	5
	Terrestrial Habitat	2	3	4	2
	Aquatic Habitat	2	3	5	2
	Criteria Subtotal	8.00	11.00	17.00	13.00
	Weighted Score (maximum of 20 points)	8.00	11.00	17.00	13.00
Social and Cultural Environment	Aesthetic Value	1	2	4	3
	Benefit to Community	1	2	4	3
	Archaeological Features	3	3	3	3
	Criteria Subtotal	5.00	7.00	11.00	9.00
	Weighted Score (maximum of 20 points)	6.67	9.33	14.67	12.00
Technical Criteria	Regulatory Agency Acceptance	1	3	5	3
	Impact on Existing Infrastructure	1	3	5	5
	Maintenance Requirements	1	4	4	5
	Climate Change Resilience	1	3	5	5
	Criteria Subtotal	4.00	13.00	19.00	18.00
	Weighted Score (maximum of 20 points)	4.00	13.00	19.00	18.00
Constructability	Complexity of Treatment	5	4	3	2
	Criteria Subtotal	5.00	4.00	3.00	2.00
	Weighted Score (maximum of 20 points)	20.00	16.00	12.00	8.00
Financial Criteria	Capital Cost	5	4	3	2
	Maintenance Costs	2	4	5	5
	Criteria Subtotal	7.00	8.00	8.00	7.00
	Weighted Score (maximum of 20 points)	14.00	16.00	16.00	14.00
Public Safety	Potential Risks to the Public	2	3	5	4
	Criteria Subtotal	2.00	3.00	5.00	4.00
	Weighted Score (maximum of 20 points)	8.00	12.00	20.00	16.00
Total Score (Maximum of 140 points)		64.67	93.33	118.67	101.00

Highest Score =  
Preferred  
Alternative

# Community Poll #2

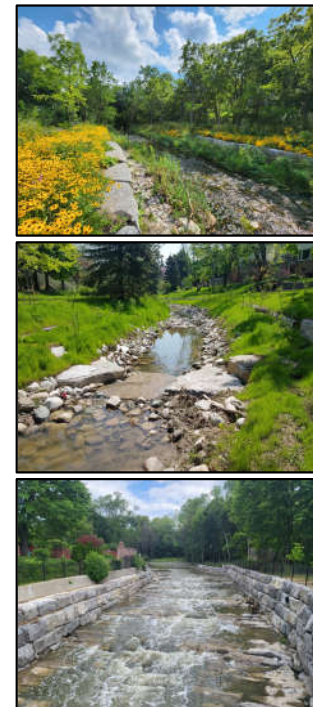
## QUESTION

I prefer Alternative \_\_\_\_ for Sub-Reach 1A:



## ANSWER

- ☐ Alternative 1 – Localized Channel Restoration
- ☐ Alternative 2 – Extended Naturalized Channel Restoration
- ☐ Alternative 3 – Extended Hardscaped Channel Restoration

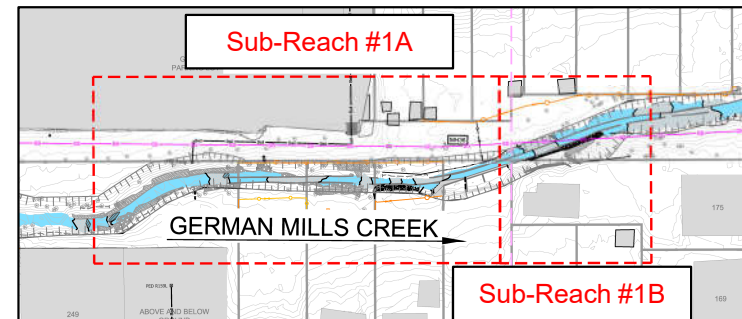




# Community Poll #3

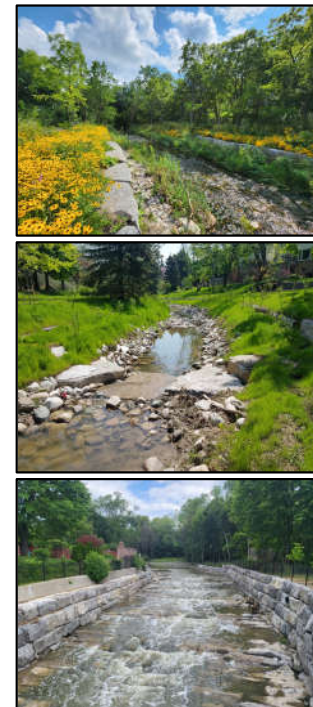
## QUESTION

I prefer Alternative \_\_\_\_ for Sub-Reach 1B:



## ANSWER

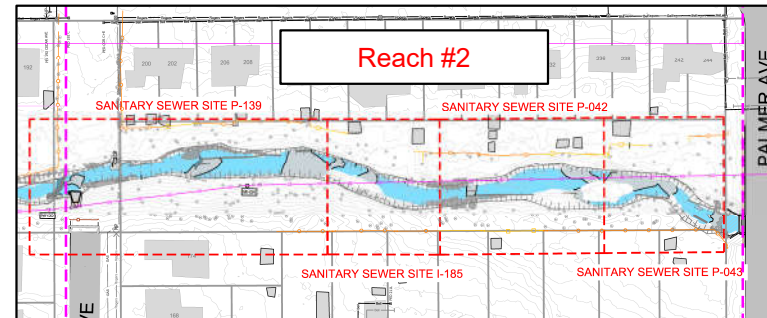
- ☐ Alternative 1 – Localized Channel Restoration
- ☐ Alternative 2 – Extended Naturalized Channel Restoration
- ☐ Alternative 3 – Extended Hardscaped Channel Restoration



# Community Poll #4

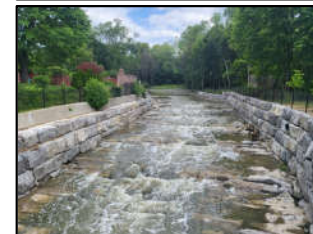
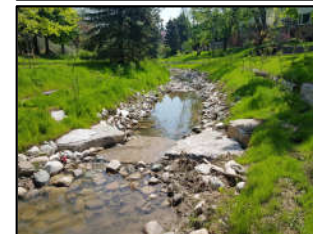
## QUESTION

I prefer Alternative \_\_\_\_\_ for Reach 2:



## ANSWER

- ☐ Alternative 1 – Localized Channel Restoration
- ☐ Alternative 2 – Extended Naturalized Channel Restoration
- ☐ Alternative 3 – Extended Hardscaped Channel Restoration





# Public Consultation



Beverley Acres German Mills Creek Erosion Control

Effective consultation is a key component of the EA and Detailed Design process.

## **The following key consultation activities are Completed:**

- Issue Notice of Commencement (October 2023)
- x1 Technical Advisory Committee (TAC) meeting (October 2023)
- x1 Community Liaison Committee (CLC) meeting (October 2023)
- x1 Technical Advisory Committee (TAC) meeting (March 2024)
- x1 Community Liaison Committee (CLC) meeting (March 2024)

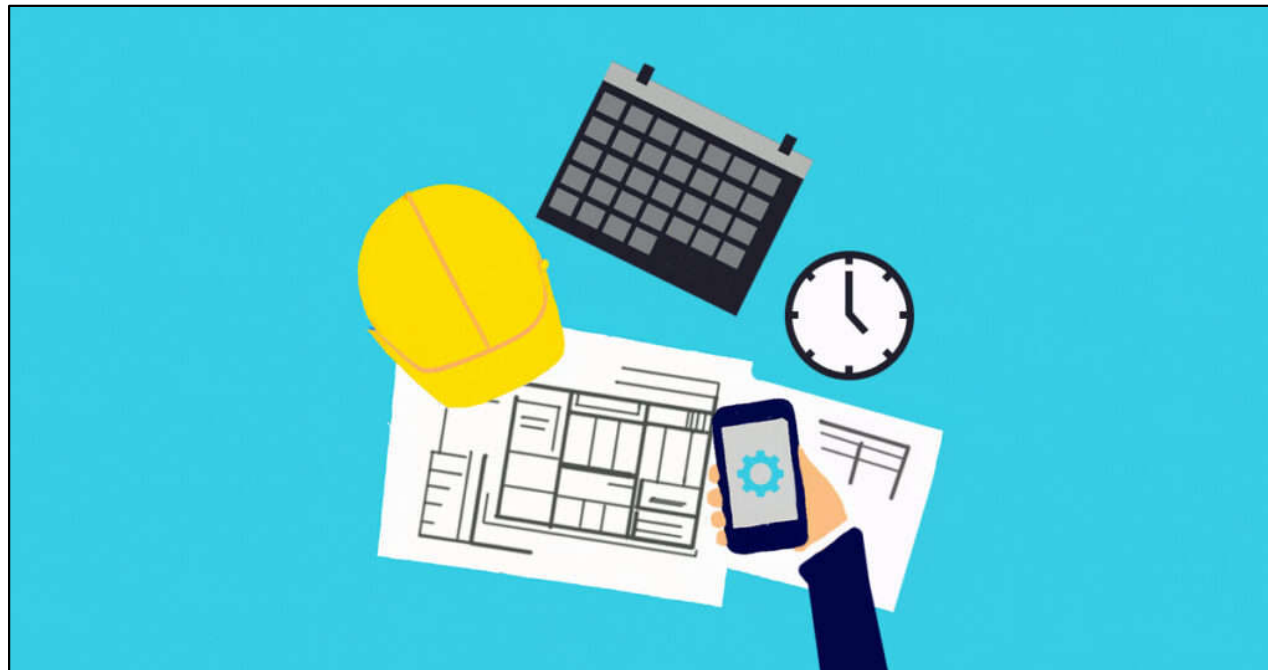
## **The following key consultation activities are Planned:**

- x1 Public Information Centre (PIC) (April 2024)
- Issue Notice of Completion (Summer 2024)



# Project Schedule & Next Steps

- Final MCEA Project File and MCEA Concept Evaluation Report - June 2024
- TRCA to approach impacted landowners with design & agreements - 2025
- Commencement of Construction - Winter 2026





# Frequently Asked Questions



Beverley Acres German Mills Creek Erosion Control

## QUESTION

What impact will each alternative have on flood lines?

## ANSWER

Preliminary hydraulic modelling indicates Alternative 1 will have no significant changes to existing flood lines.

Alternative 2 and 3 will lower flood lines. Alternative 2 has the greatest benefit with the reduction of up to 0.25m at the 100-year storm event. Alternative 3 is estimated to provide a reduction of up to 0.20m at the 100-year storm event.

# Frequently Asked Questions



Beverley Acres German Mills Creek Erosion Control

## QUESTION

How does this project consider existing and future developments upstream of the Project Area?

## ANSWER

Development outside the study limits are subject to regulatory and municipal standards that are distinct from this environmental assessment process. New developments must obtain independent regulatory and municipal approvals, including in such areas as stormwater control. The analysis and modelling for this study include factors of safety and conservative estimates for future hydrologic and hydraulic changes that could arise through both landscape and climatic changes throughout the design life of this proposed work.



# Frequently Asked Questions



Beverley Acres German Mills Creek Erosion Control

## QUESTION

Will there be any disruption to existing roads, parks, recreational areas, water service and other services during the construction phase?

## ANSWER

Water, wastewater and stormwater services will not be impacted during construction. The parkette on Cedar Ave will be closed for construction access for the duration of the implementation. The exact location of road closures will be determined during detailed design; however, short-term duration lane closures on Major Mackenzie Drive East, Cedar Avenue, and Palmer Ave can be expected during construction.

# Frequently Asked Questions



Beverley Acres German Mills Creek Erosion Control

## QUESTION

What is the proposed construction timeline?

## ANSWER

Construction is expected to commence in the fall of 2026 with final restoration in 2027, pending the receipt of all approvals. Construction is anticipated to take approximately 6 months, as weather conditions permit.



# Frequently Asked Questions



Beverley Acres German Mills Creek Erosion Control

## QUESTION

The preliminary preferred alternative indicates restoration work will be conducted on my property. What are the next steps?

## ANSWER

The Project Team will be undertaking detailed design confirming the treatment limits and methods in 2024 following the completion of the MCEA. TRCA will be reaching out to impacted landowners in early 2025 to review the detailed designs and proposed changes to your property. A Works and Access Agreement will be executed with impacted landowners prior to construction beginning in 2026.

# QUESTIONS ?



Beverley Acres German Mills Creek Erosion Control

Please provide any comments in writing by Tuesday April 9th, 2024

Please join us for the in-person PIC:

Date: Monday, April 22nd, 2024

Time: 6:00 PM to 8:00 PM

Location: Bayview Hill Community Centre & Pool - Program Room

Address: 114 Spadina Road, Richmond Hill, ON L4B 2Y9

For further questions,  
please contact:

Robert Amos MAsC., P.Eng  
Amos.R@Aquaforbeech.com  
416-705-2367

Phil Wolfrain  
Phil.Wolfrain@trca.ca  
365-566-2383

