YELLOW CREEK NEAR HEATH STREET EAST EROSION CONTROL AND SLOPE STABILIZATION PROJECT

Community Liaison Committee (CLC) Meeting
June 25, 2018

The Living City Foundation

Toronto and Region Conservation for The Living City

AGENDA

7:05 – 7:15 PM: Welcome and Introductions

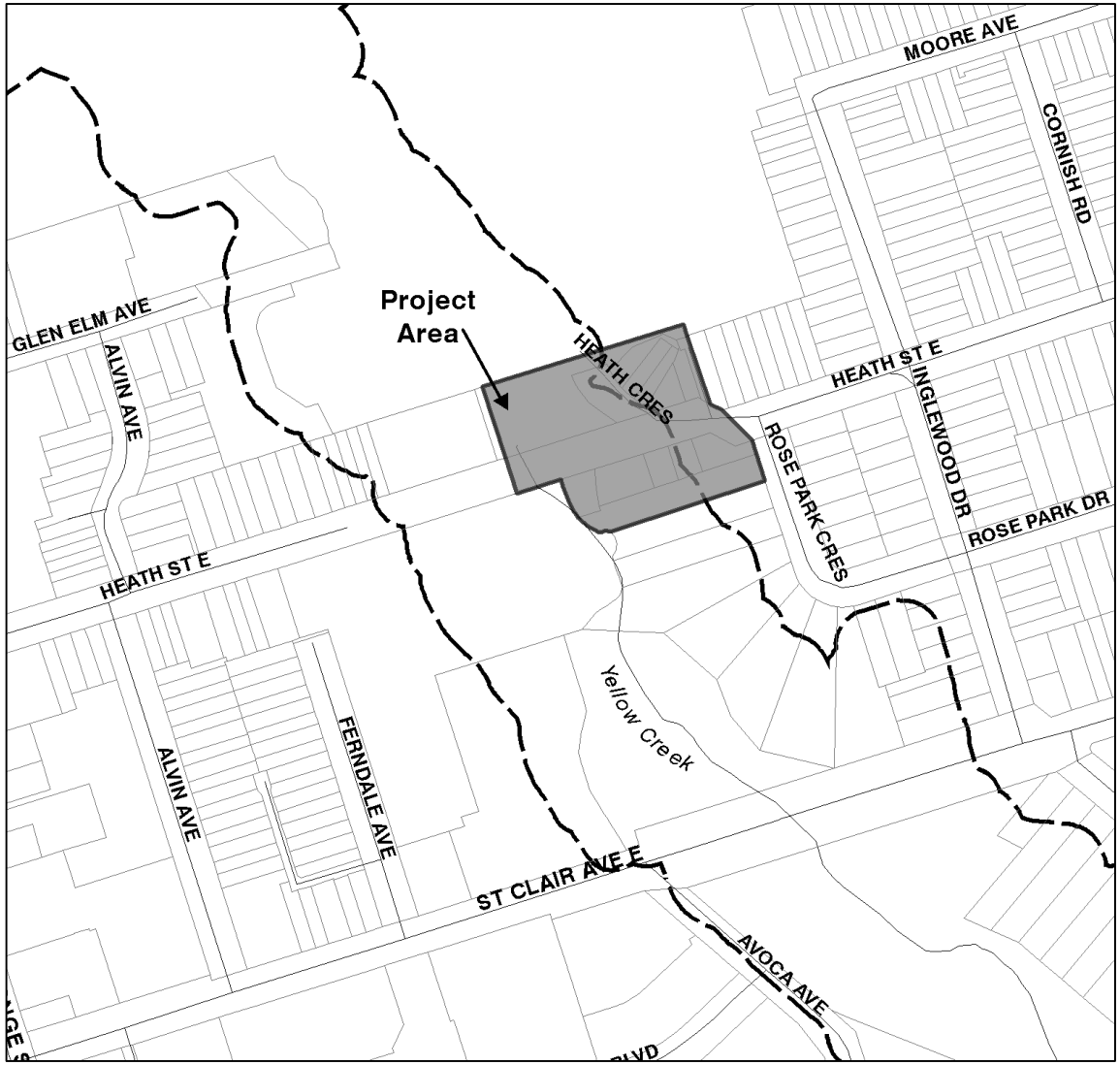
7:15 – 7:45 PM: Presentation by TRCA

- Recap of Public Meeting on April 23, 2018
- Class EA Planning Process – Overview of our progress to date
- Potential alternative solutions for slope areas of interest
- Proposed Next steps – Detailed evaluation of alternatives through summer 2018 & presentation of TRCA's preferred alternatives for comment by stakeholders in fall 2018

7:40 – 8:15 PM: Question & Answer Session

RECAP OF PUBLIC MEETING ON APRIL 23, 2018

YELLOW CREEK NEAR HEATH STREET EAST EROSION CONTROL AND SLOPE STABILIZATION PROJECT



Identification of Erosion and Slope Instability Issues

- Heath Street East and Heath Crescent have been identified as priority candidates for work based on risk to residential properties and City of Toronto infrastructure at the top of slope (GeoTerre Ltd., 2017)

- Toronto and Region Conservation Authority (TRCA) has proposed to a develop a preferred solution to stabilize the slope as required to **protect life and property from the hazards of flooding and erosion** through TRCA's Erosion Risk Management Program

PROJECT OBJECTIVES

- Primary Objective: Stabilize the slope as required to provide long term, low maintenance protection for the residential properties and City infrastructure identified to be at risk at the top of slope

- Project to be planned in accordance with Conservation Ontario's *Class Environmental Assessment for Remedial Flood and Erosion Control Projects* (amended 2013)

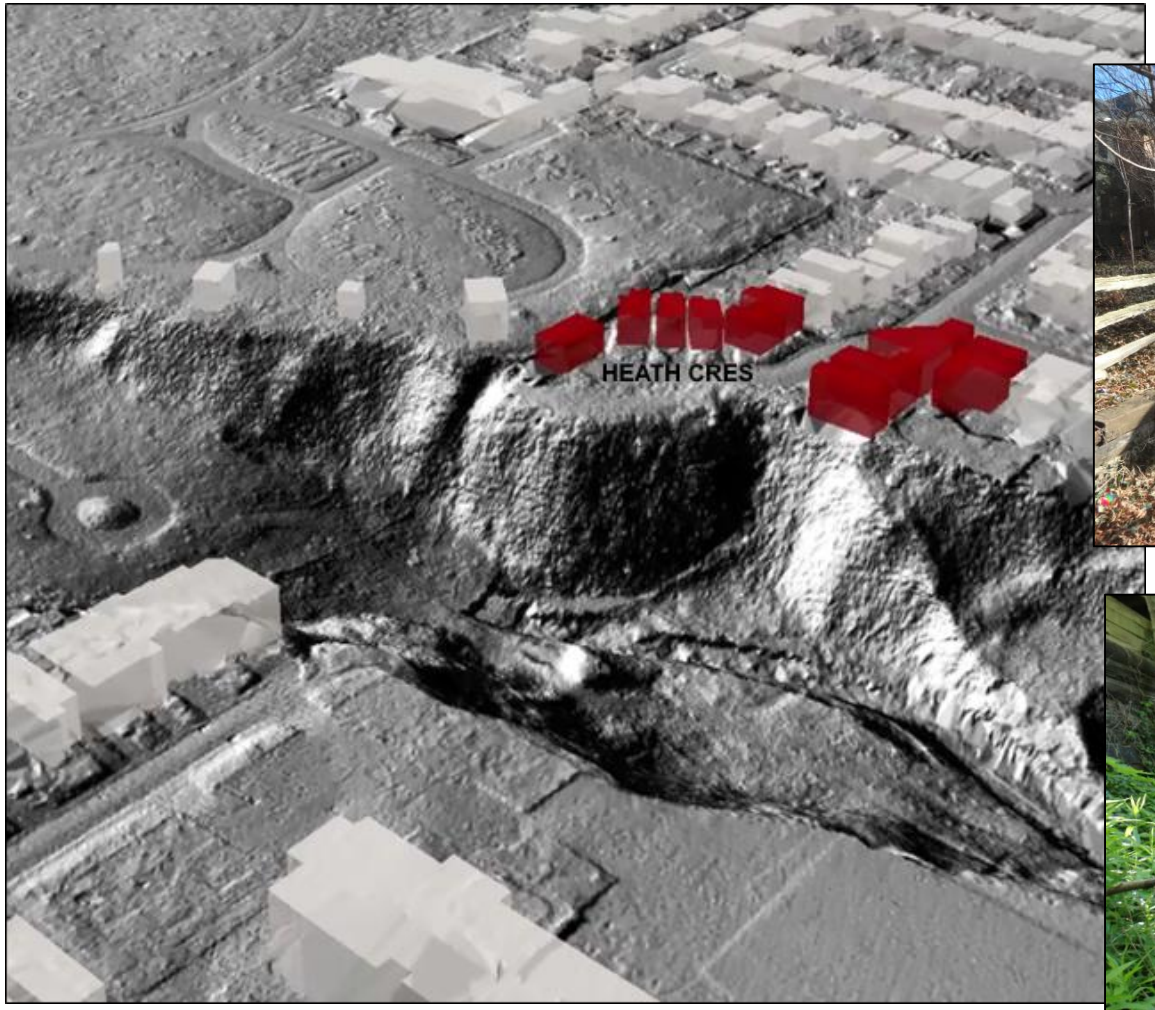
- All designs and technical reports will be provided to the CoT to facilitate future channel works within Yellow Creek and the Vale of Avoca Ravine

ACTION ITEMS FROM APRIL 23rd MEETING

✓ 1. TRCA to file Notice of Intent formally initiating the Class EA planning process – Initiated on June 8, 2018

✓ 2. TRCA to present range of preliminary alternative solutions to stakeholders in June 2018 – TRCA to present an overview of a range of alternatives which will be evaluated in detail through summer 2018

PROPOSED PROJECT LIMITS – SLOPE



PROPOSED PROJECT LIMITS – CHANNEL

Upstream limits of project area within Yellow Creek

Failed gabion baskets within Yellow Creek

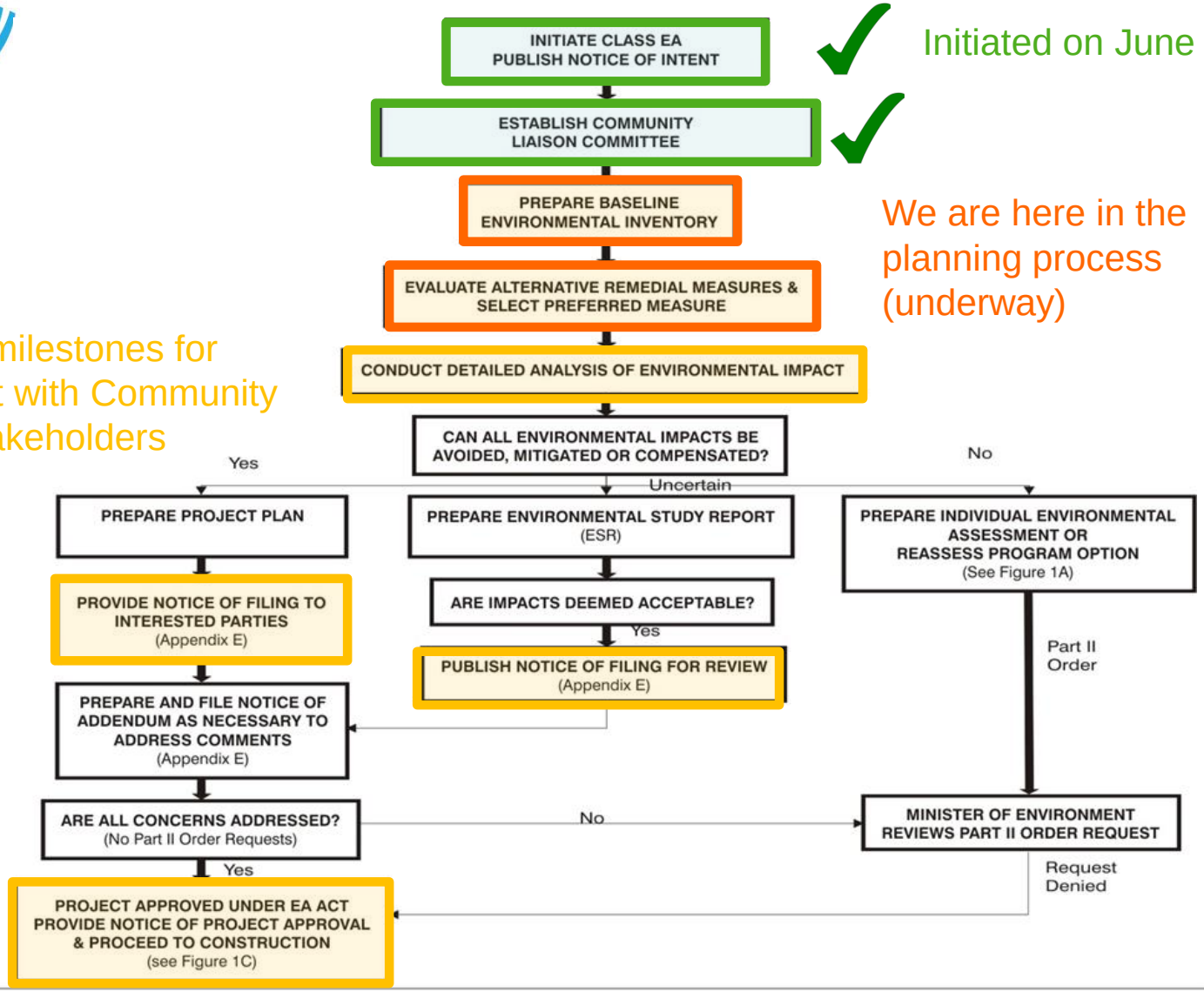
CLASS ENVIRONMENTAL ASSESSMENT PLANNING PROCESS:

OUR PROGRESS TO DATE

Initiated on June 8, 2018

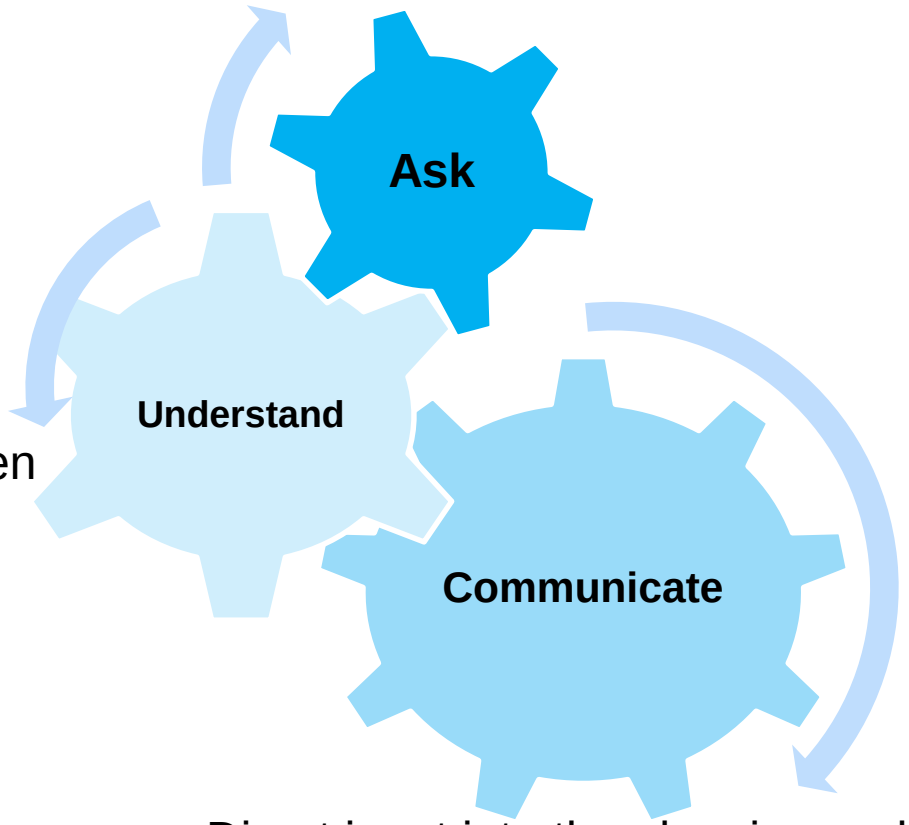
We are here in the planning process (underway)

Major milestones for contact with Community and stakeholders



YOUR ROLE AS THE COMMUNITY LIAISON COMMITTEE

Questions during the planning process



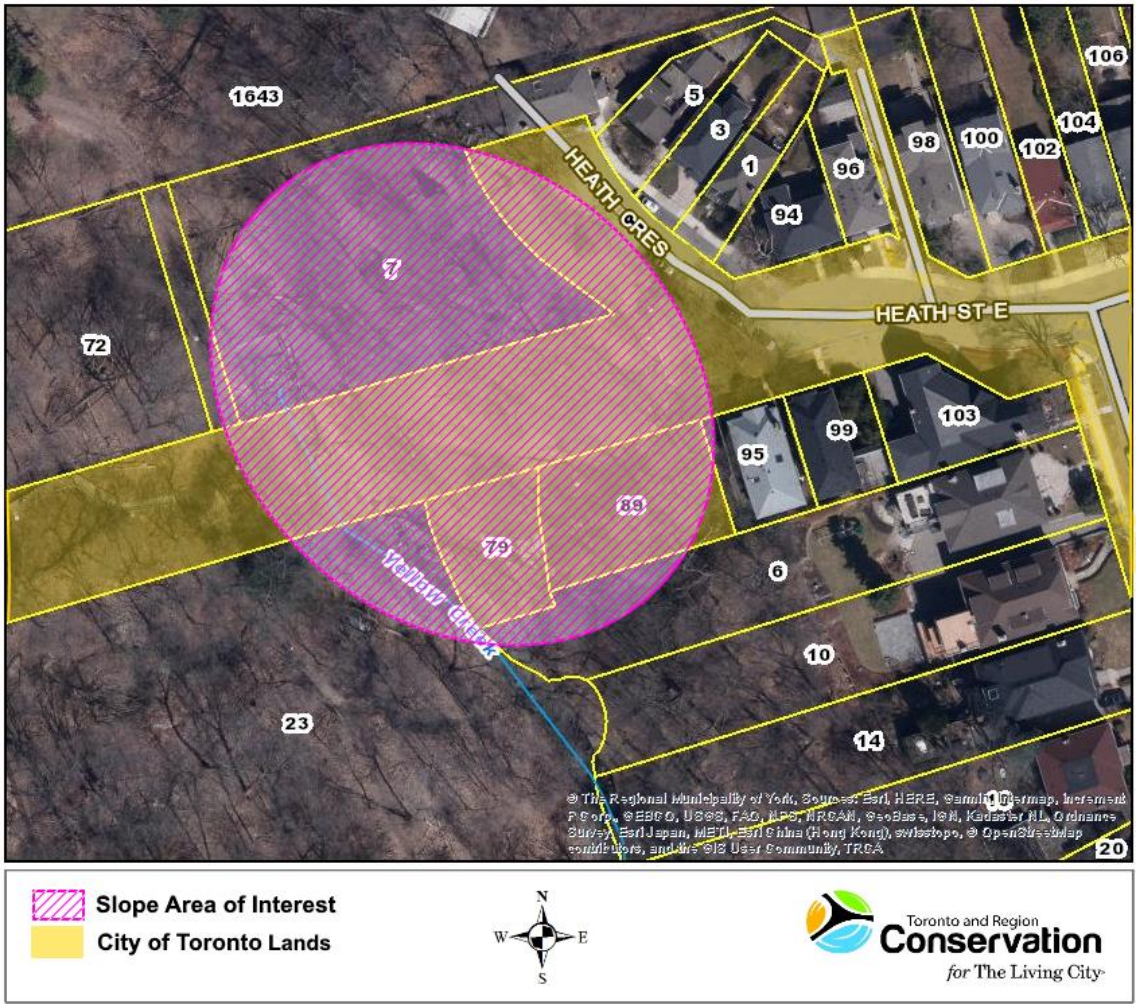
How decisions have been made and reached

Direct input into the planning and design process

EXAMPLES OF PRELIMINARY ALTERNATIVE SOLUTIONS FOR CONSIDERATION

TRCA will conduct a detailed evaluation of alternatives through summer 2018. The detailed evaluation may include the alternatives presented today in addition to other options that are proposed by the Consultant

PROJECT CONSTRAINTS



Slope Area of Interest
City of Toronto Lands

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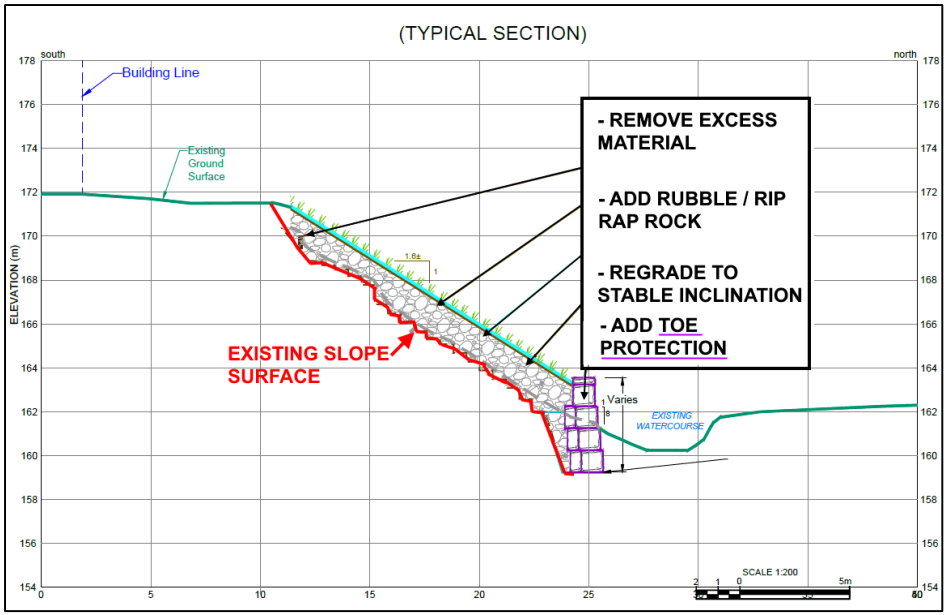
Toronto and Region Conservation *for The Living City*

- Complex property boundaries > Slope instability and channel degradation transcends property boundaries
- Ongoing negotiation with multiple private landowners could impact extent of stabilization and which alternatives are viable
- Steep, high slope (26 m); historic fill placement on slope face; constrained valley and floodplain
- **Not all slope areas may need stabilization**
- Minimizing impacts to mature trees and vegetation

POTENTIAL OPTION – RUBBLE FILL / RIP RAP BUTTRESS WITH TOE PROTECTION

- Engineered by filling in front of the slope using rubble/rip rap material to buttress the slope at a stable inclination



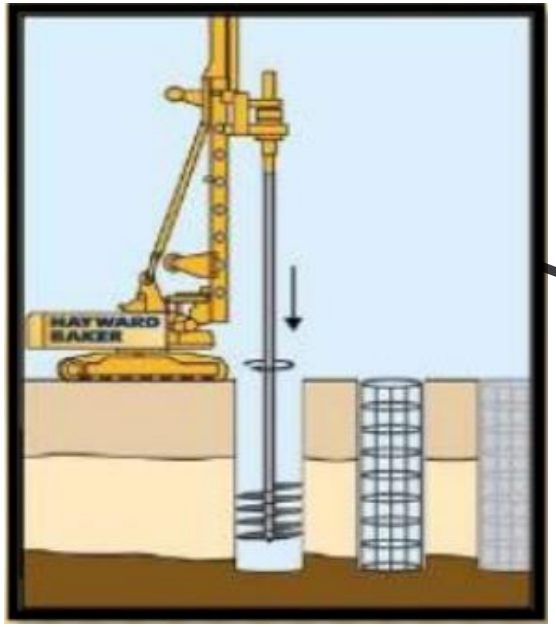
EXAMPLE – RUBBLE FILL / RIP RAP BUTTRESS WITH TOE PROTECTION

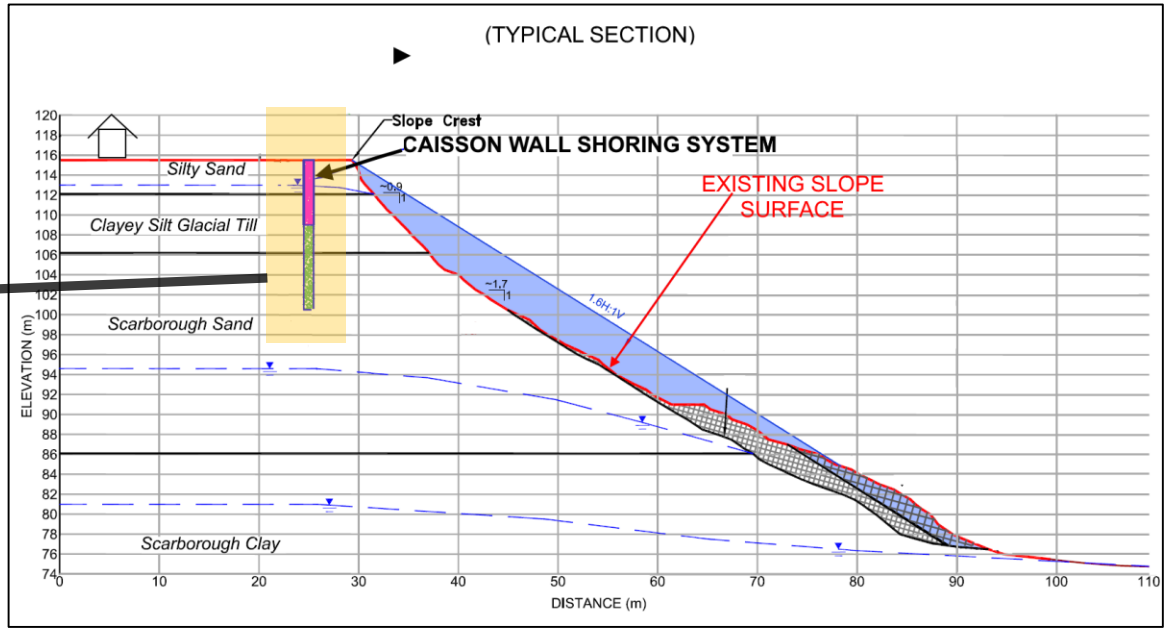
Post construction

During construction

POTENTIAL OPTION – CAISSON WALL

- Continuous and overlapping concrete/caisson columns are drilled in the ground to provide rigid support to retain the soil and maintain the integrity of the structures located on the tableland





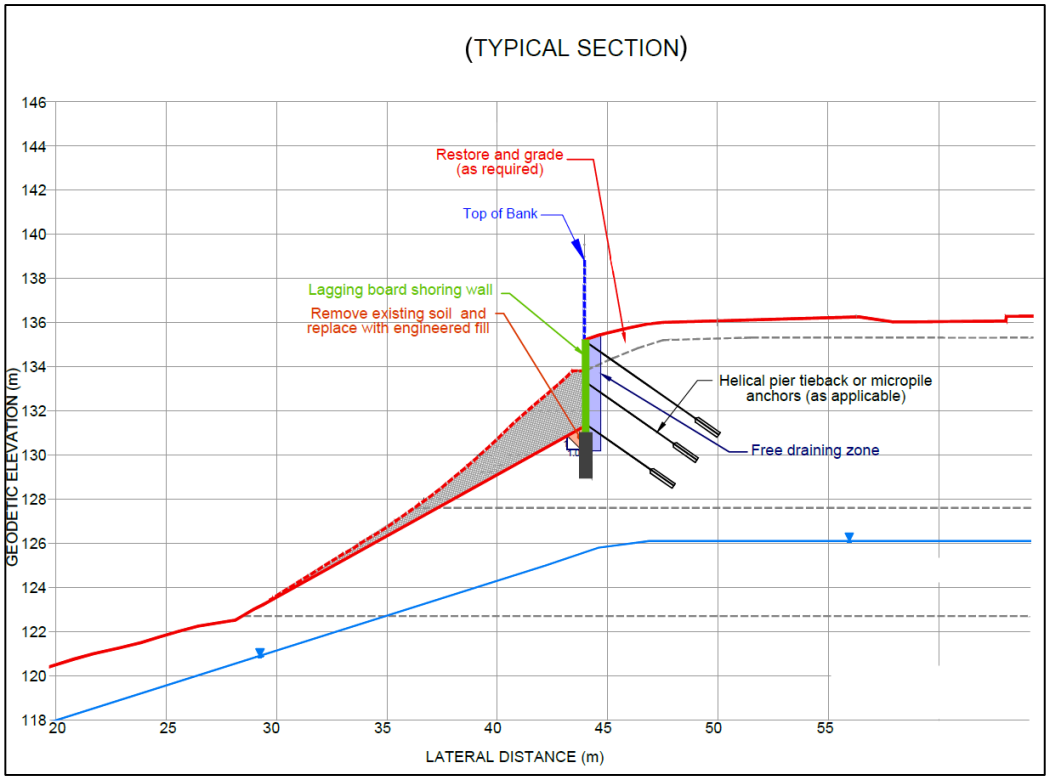
EXAMPLE – CAISSON WALL

During construction

During construction

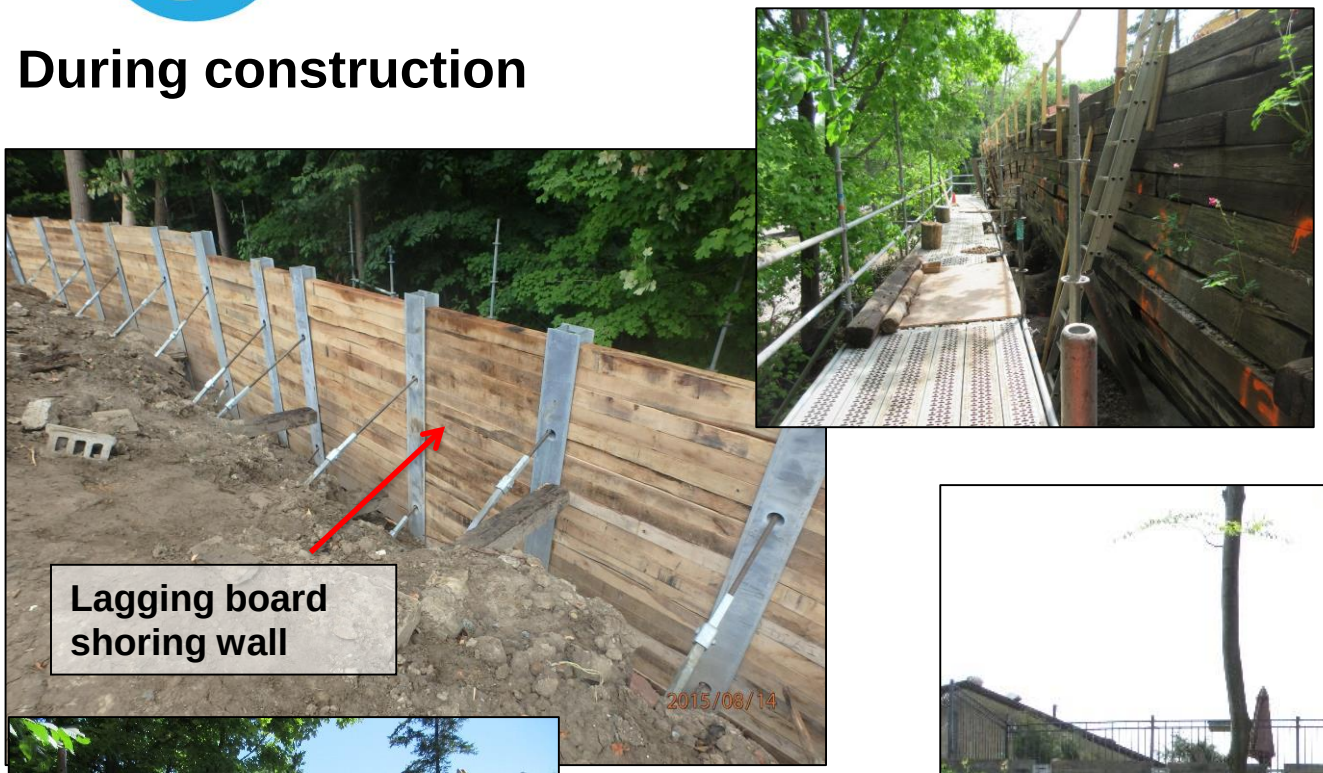
POTENTIAL OPTION – MICROPILE & LAGGING SYSTEM

- Soil is retained by wood planks/boards (lagging) supported either side on a steel beam
- Micropile unit embedded in the ground provides adequate support to the soil and maintains the integrity of the structures located on the tableland



EXAMPLES – MICROPILE & LAGGING SYSTEM

During construction

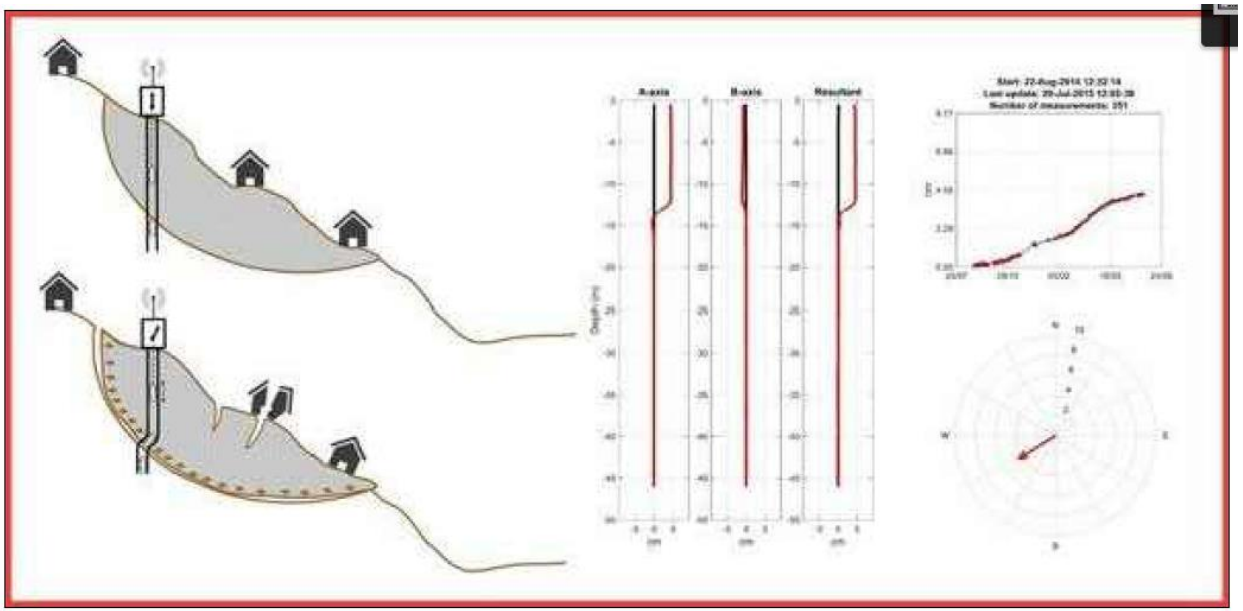


Post construction

POTENTIAL OPTION – LONG TERM MONITORING: INCLINOMETERS

Inclinometers are used to provide a quantifiable assessment by **monitoring the early detection** of **subsurface movements and deformations** with a relative position. Applications include:

- Establishing whether movement is constant or accelerating in slope applications
- Accessing if movements are within tolerable limits



NEXT STEPS AND TIMELINES

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1. Please fill out the general comment form by July 25, 2018 to provide your feedback
2. TRCA to conduct a **detailed evaluation of alternative solutions through summer 2018** for presentation to stakeholders. The evaluation may include the alternatives presented today in addition to other options that are proposed by the Consultant
3. Upon completion of the detailed evaluation, TRCA to recommended a preferred alternative and coordinate a meeting for stakeholder comment in fall 2018

OPEN Q & A SESSION

THANK YOU FOR ATTENDING!