West Caledon Storage Facility and Transmission Main
Schedule ‘C’ Class Environmental Assessment

Public Information Centre No. 2

Margaret Dunn Valleywood
Library and Community Room

20 Snelcrest Drive, Caledon ON, L7C 1B5

Date: September 20, 2023
Time: 5 p.m. – 7 p.m.

BluePlan ENGINEERING

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Public Information Centre No. 2 Objectives

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Key Dates

SEPTEMBER 20, 2023

PIC No. 2 materials posted to project website (access via link or scan the QR code with a smart-phone):

https://www.peelregion.ca/public-works/environmental-assessments/caledon/west-caledon-storage-facility.asp

SEPTEMBER 20 to OCTOBER 11, 2023

If you have any questions or wish to provide your input, please speak with one of the project team members, and/or you may contact the Region of Peel Project Manager at **Sogol.Bandehali@peelregion.ca**

OCTOBER 25, 2023

Responses to questions and comments posted to project website.

Public Information Centre (PIC) Objectives

- **Provide study background review and present the study objectives.**
- **Present study progress updates and what has been previously completed and confirmed.**
- **Present the preliminary preferred servicing strategies for the storage facility site location and transmission main alignment.**
- **Receive feedback on the evaluation process and preliminary results.**

Be on the lookout for this prompt. This indicates content we are looking for your feedback on!

Get Engaged!

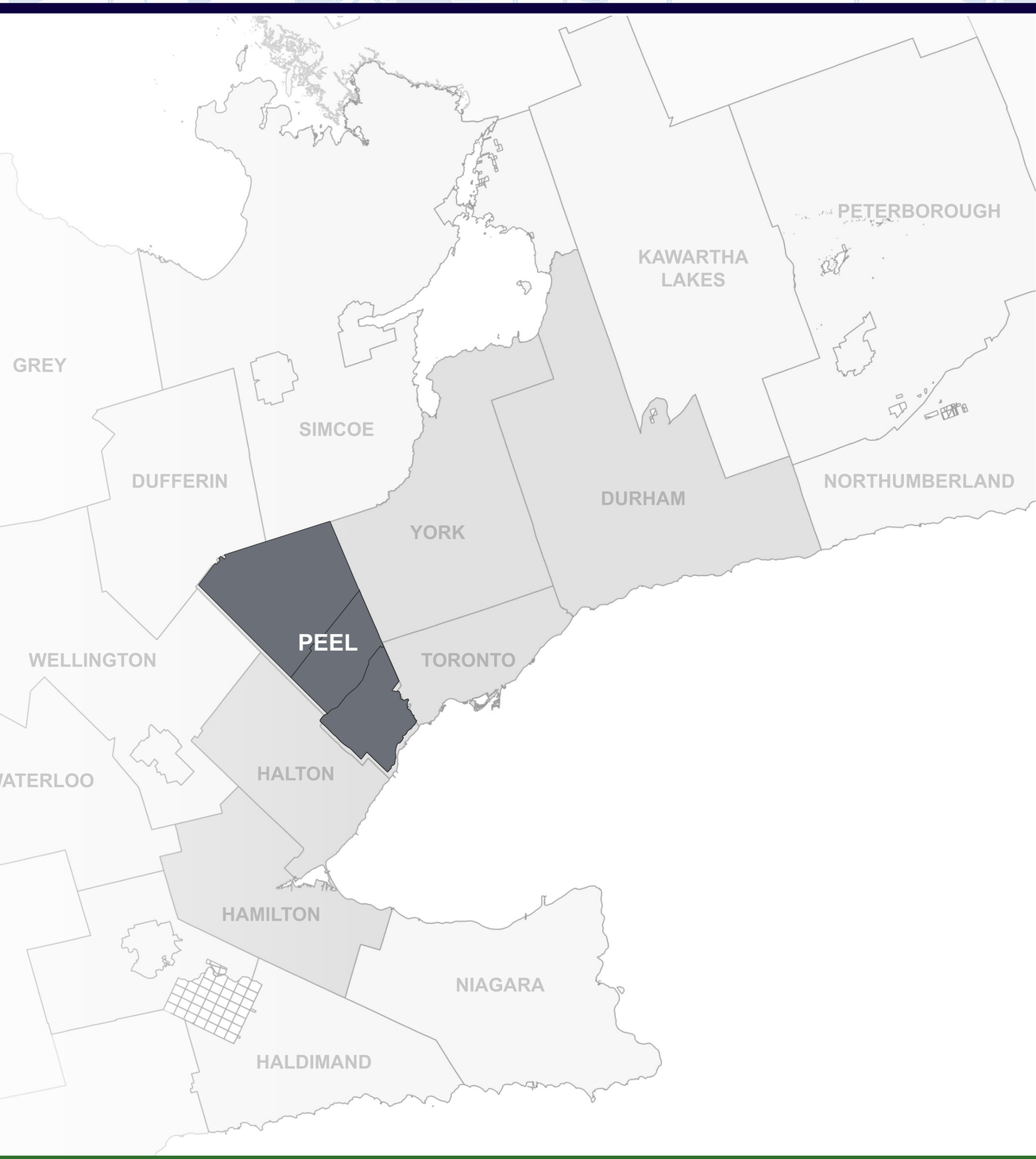
- ✓ Please sign in and take a comment sheet.
- ✓ Have a look at the project information on display and chat with the Project Team.
- ✓ Provide your feedback regarding the information presented.

Land Acknowledgement

We would like to begin by acknowledging the land on which we gather, and which the Region of Peel operates, is part of the Treaty Lands and Territory of the Mississaugas of the Credit. For thousands of years, Indigenous peoples inhabited and cared for this land, and continue to do so today.

In particular we acknowledge the territory of the Anishinabek, Huron-Wendat, Haudenosaunee and Ojibway/Chippewa peoples; the land that is home to the Metis; and most recently, the territory of the Mississaugas of the Credit First Nation who are direct descendants of the Mississaugas of the Credit.

We are grateful to have the opportunity to work on this land, and by doing so, give our respect to its first inhabitants.



What is this Study about?
Study Background

The Region of Peel operates a lake-based water system servicing the City of Mississauga, the City of Brampton, and parts of the Town of Caledon.

Water is collected from Lake Ontario, treated at the Region's water treatment plants (WTP), and delivered to residents via pumping stations, transmission mains, and storage facilities.

Future Growth Projections

Places to Grow is the Government of Ontario's framework for implementing growth in the Greater Golden Horseshoe Region. The new 2051 growth projections require additional storage in Pressure Zone (PZ) 7 West (7W).

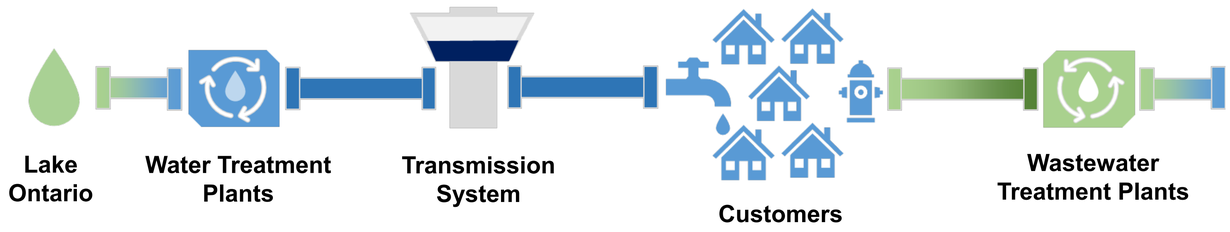
Planning Year	Population Growth
2031	20,800
2041	37,600
2051	60,000
Buildout (Post 2051)	122,000

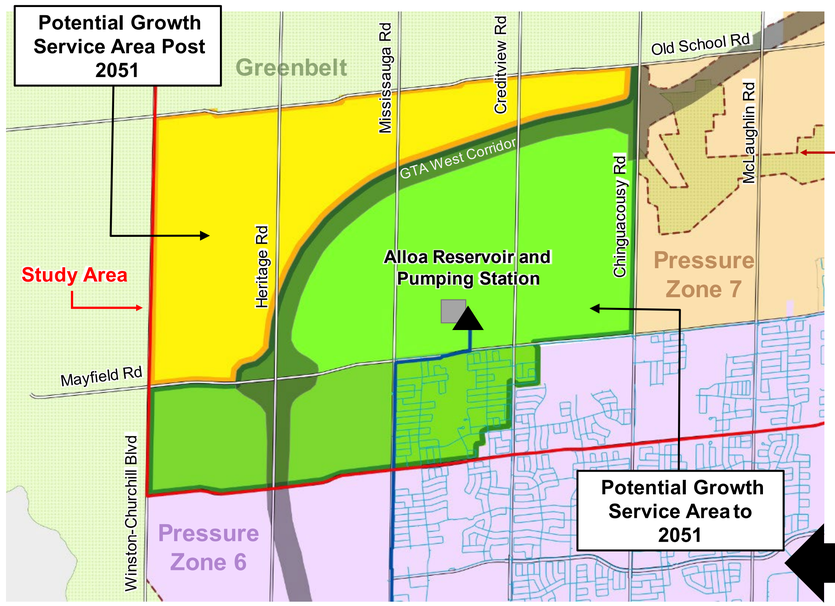
Existing Zone 7 Storage

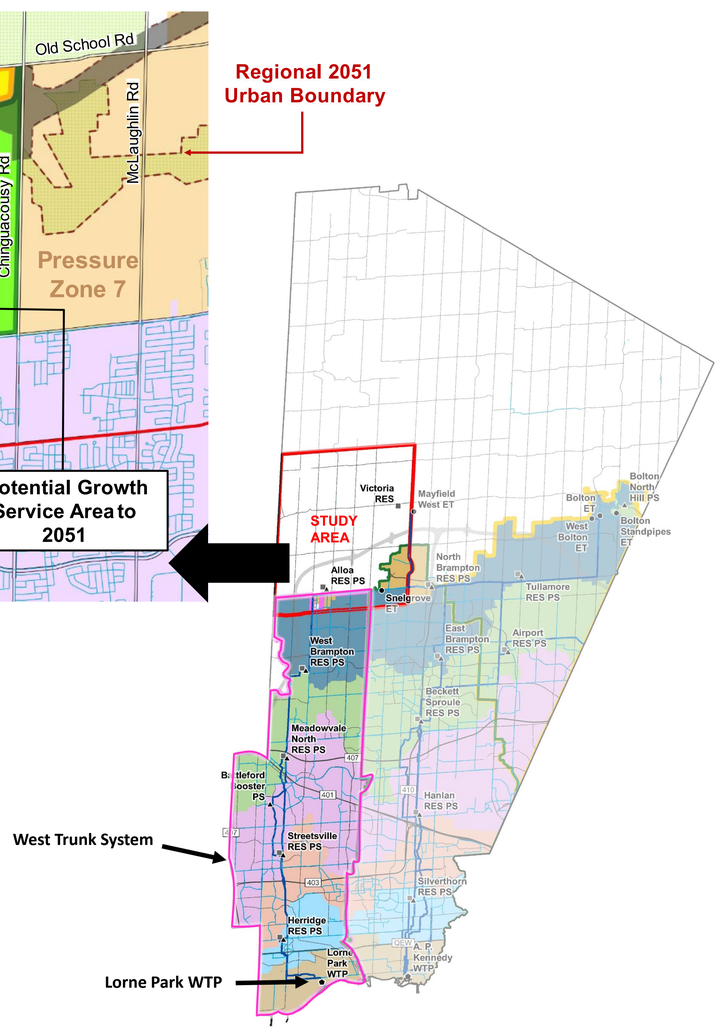
- Mayfield West Elevated Tank (PZ 7-Central (7C))
- North Brampton Reservoir (PZ 7C-Pumped)
- Alloa Reservoir (PZ 7W-Pumped) – Provides 100% of 7W storage until additional floating storage is constructed.

Planning Year	Zone 7W Storage Requirements
2031	8 Mega Litres (ML)
2041	16 ML
2051	20 ML
Buildout (Post 2051)	32 ML

Lake-Based Water System Servicing Process







Study Purpose and MCEA Process

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Problem and Opportunity:

The Region of Peel completed a **Water and Wastewater Master Servicing Plan Update (2020)** which identified the need to construct new water storage infrastructure for Pressure Zone 7 West. The goal of this study is to develop, evaluate, and select a preferred storage facility and transmission main alignment to service projected growth to 2051.

Key Strategic Goals:

1. Protect the environment.
2. Increase system capacity to service future growth.
3. Ensure the best use and enhancement of the existing water infrastructure.

The project is being undertaken as a Schedule ‘C’ Class Environmental Assessment, satisfying Phases 1 to 4 of the Municipal Class Environmental Assessment (MCEA) process.

PHASE 1	PHASE 2	PHASE 3	PHASE 4
Problem or Opportunity	Alternative Solutions	Alternative Design Concepts for Preferred Solution	Environmental Study Report (ESR)
Identify Problem or Opportunity	Identify Alternative Solutions to Problem or Opportunity	Identify Alternative Solutions to Problem or Opportunity	Complete Environmental Study Report (ESR)
Discretionary Public Consultation to Review Problem or Opportunity	Inventory Natural, Social, Economic Environment	Detail Inventory Natural, Social, Economic Environment	Notice of Completion to Review Agencies and Public
	Identify Impact of Alternative Solutions on the Environment, and Mitigating Measures	Identify Impact of Alternative Designs on Environment, and Mitigating Measures	Copy of Notice of Completion to Ministry of Environment Environmental Assessment Branch
	Consult Review Agencies and Public. RE: Problem or Opportunity and Alternative Solutions (PIC 1)	Evaluate Alternative Designs: Identify Recommended Solutions	Environmental Study Report Placed on Public Record
	Evaluate Alternative Solutions: Identify Recommended Solutions	Consult Review Agencies and Previously Interested and Directly Affected Public. (PIC 3)	Opportunity to Request Minister Within 30 Days of Notification to Request and Order
	Consult Review Agencies and Previously Interested and Directly Affected Public (PIC 2)	Select Preferred Design	
	We are here!	Preliminary Finalization of Preferred Design	
	Select Preferred Solution		

What has been completed?

Study Progress Updates

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Phase 1

- Prepare profile of Study Area
- Develop Problem and Opportunity Statement
- Project initiation and visioning
- Determine preliminary service area storage needs

Phase 2

- Identify Alternative Storage Concept Types
- Develop Screening Criteria and Evaluation Method

Technical Studies to Support Evaluation of Concepts

- Desktop Baseline of Natural Features Assessment
- Desktop Cultural Heritage Screening
- Desktop Archaeological Screening

Analysis and Evaluation of Concepts

- Storage Analysis
- Policy and Standards
- Cost Benefit
- Potential Environmental Impacts

Key Decision / Outcome

Selected Preferred Storage Concept (Elevated Tank)

- Develop Long List of Alternative Storage Sites
- Develop Screening Criteria

Analysis of Long List of Sites

- Screening of Long List of Sites
- Indigenous Engagement, Municipal and Public Agency Meetings
- Refine Screening Analysis
- **PIC No. 1** Preliminary Preferred Storage Concepts and Long List Sites and Alignments (November 2022)

Key Decisions/ Outcome

Selected Long List of Alternative Sites (Infrastructure Focus Area)

Technical Studies to Support Evaluation of Long List of Sites and Alignments

- Desktop Baseline Hydrogeology and Geotechnical Assessment
- Windshield Survey Natural Features Assessment
- Agricultural Impact Assessment

- Develop Short List of Alternative Storage Sites and Alignments
- Develop Scoring Criteria and Evaluation Method

Analysis of Short List of Sites and Alignments

- Analysis and Evaluation of Short List of Sites
- Indigenous Engagement, Municipal and Public Agency Meetings
- Refine Evaluation
- **PIC No. 2** Preliminary Preferred Site and Alignment (September 2023)

We are here!

Key Decisions/ Outcome

Select Preferred Site and Alignment

Phase 3

Technical Studies to Confirm Preferred Site and Alignment

- Traffic Impact Assessment
- Natural Features Impact Assessment
- Stage 2 Cultural Heritage / Archaeological Assessment (if required)

- Develop Alternative Design Concepts for Water Storage Facility and Transmission Main Alignment
- Review and Evaluate Design Concepts
- Indigenous Engagement, Municipal and Public Agency Meetings
- Obtain Approvals in Principle
- Assess Impacts and Redefine Design Concepts
- **PIC No. 3** Preliminary Preferred Design Concept (Spring 2024)

Key Decisions/ Outcome

Select Preferred Design Concept (Construction Method, Design Details)

Phase 4

- Confirm Mitigation Measures, Monitoring and Permitting Requirements
- Prepare Notice of Study Completion
- Support During 30-Day Review

Final ESR

Confirmed from PIC No.1

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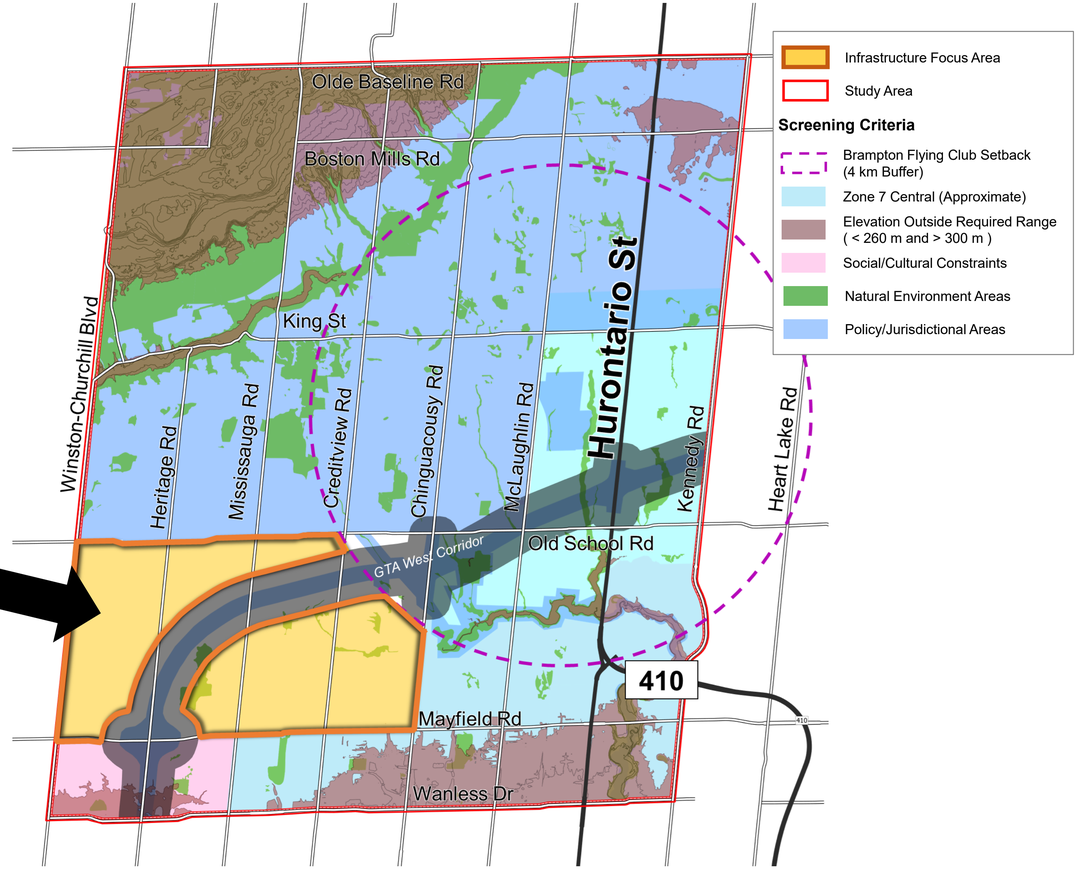
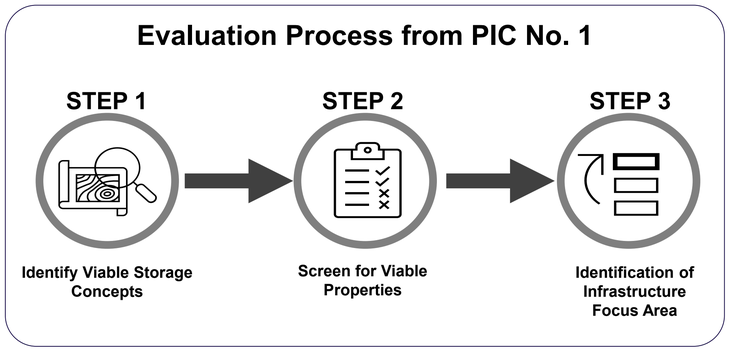
The Class EA Study and presented at PIC No. 1 confirmed:

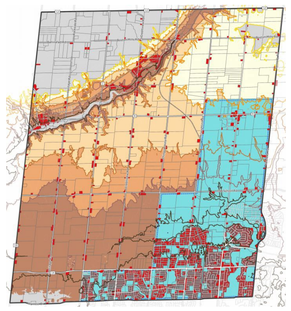
1. The new Zone 7 West storage facility will be an elevated water tower;
2. A new feeder water main will be required from Alloa Reservoir and Pumping Station to the new elevated water tower;
3. Screening criteria was applied to the study area to avoid constraints and to minimize impact to the environment; and
4. Based on use of the screening criteria and technical requirements an Infrastructure Focus Area was selected within the Study Area in order to prepare a shortlist of sites for further consideration.



Evaluation Process from PIC No. 1



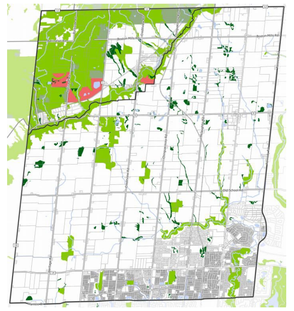
Technical Viability



Screened Out:

- X Properties outside required elevation
- X Properties less than 2 hectares
- X Properties in pressure zone 7 central

Natural Environment



Screened Out:

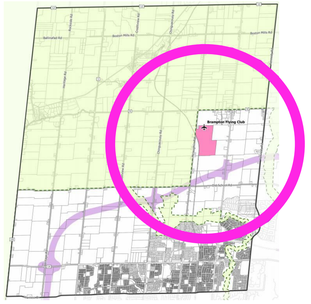
- X Properties in Niagara Escarpment
- X Environmentally Sensitive Areas
- X Area of Natural and Scientific Interest

Social / Cultural

Screened Out:

- X Archeological and Cultural Heritage Properties
- X Existing Urban Areas

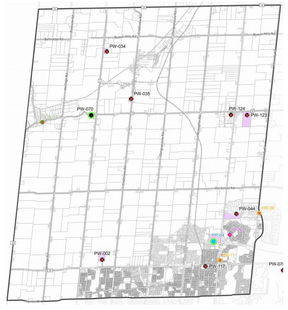
Policy / Jurisdictional



Screened Out:

- X Properties in the Greenbelt
- X Technically preferred corridor for Hwy 413 (GTA West)
- X 4 km radius of Brampton Flying Club

Economic



Screened Out:

- X Existing Region-owned properties that are not available

Long-List of Alternatives and Evaluation

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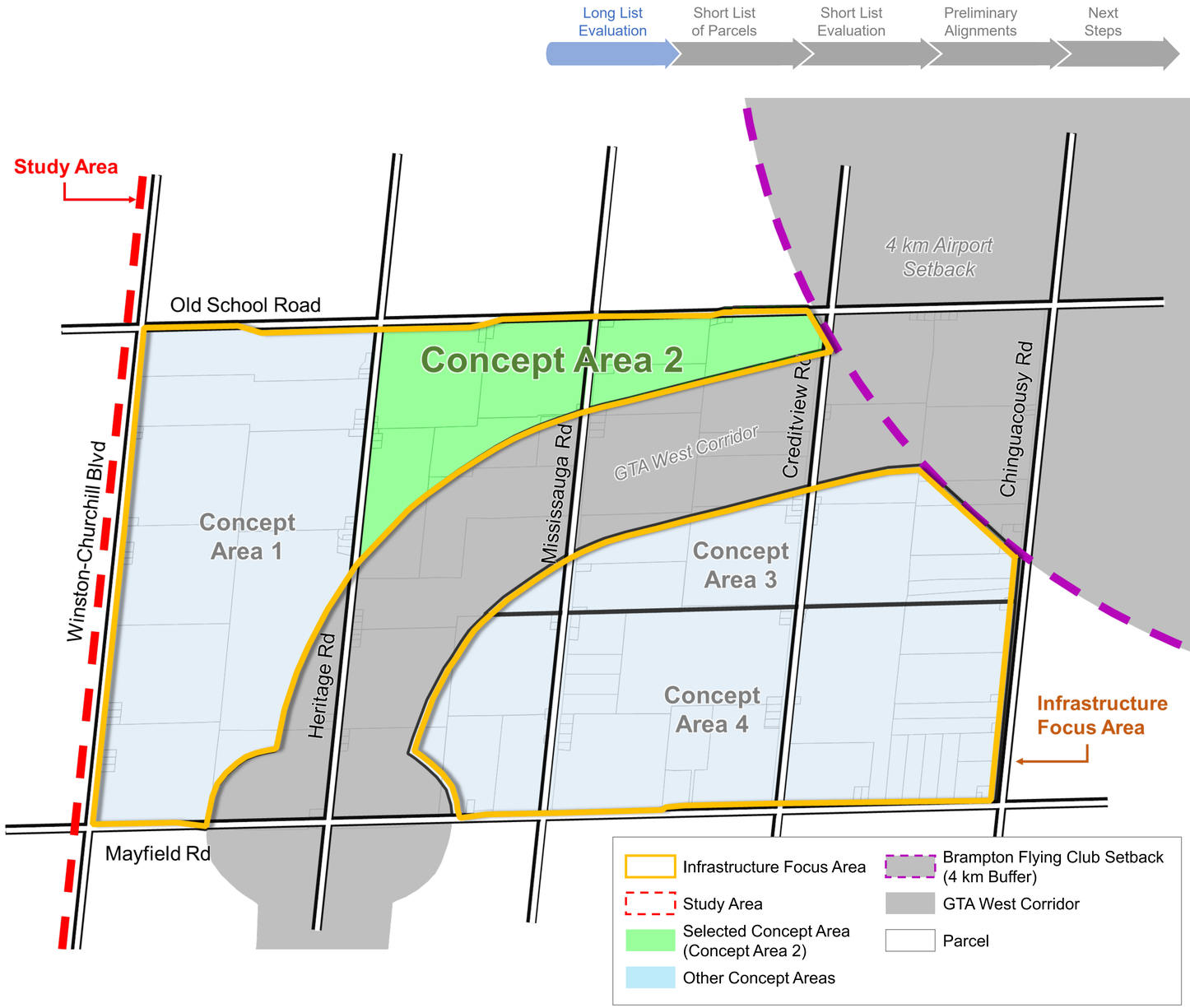
To support the site selection process, the Infrastructure Focus Area was separated into **four (4) concept areas** which grouped similar properties based on geographic location, to be further evaluated and screened. The evaluation considered the five key criteria of environment, cultural/heritage, technical, legal/ jurisdictional and financial to determine preferred.

Concept Area 2 was selected, as the area:

- Has minimal natural environmental features and crossings;
- Minimizes permits and/or approvals from conservation authorities (Credit Valley Conservation and Toronto Region Conservation Authority);
- Is centrally located within the future service area, minimizing water age concerns;
- Presents more opportunities to utilize either north-south or east-west frontages for operations and maintenance (O&M) efficiencies; and
- Consists of higher elevation, supporting the shortest elevated tank height.



Do you have any thoughts on the conceptual area selected? Please let us know!

Short-List of Alternatives

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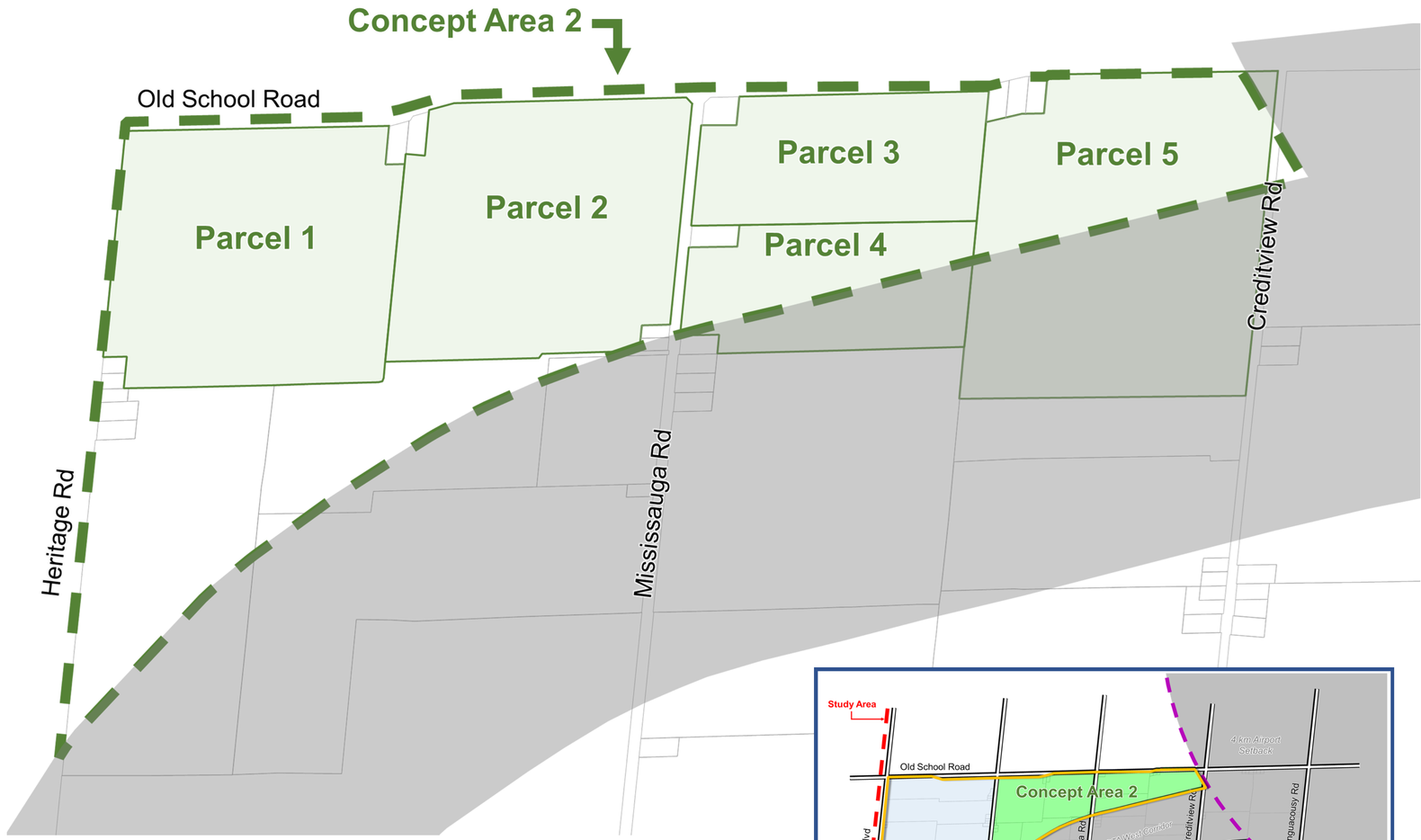
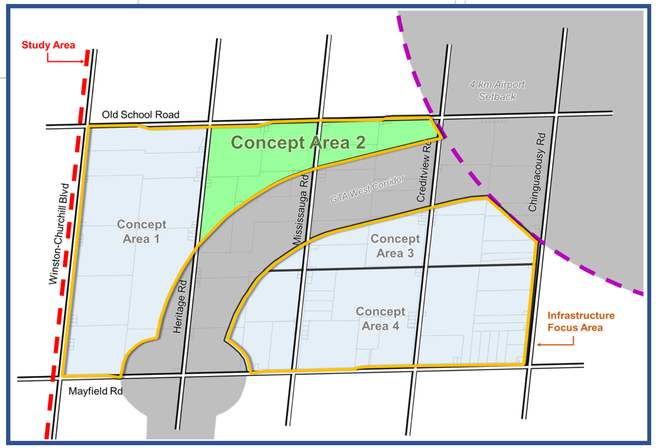
Long List Evaluation → Short List of Parcels → Short List Evaluation → Preliminary Alignments → Next Steps

Five (5) parcels were selected from Concept Area 2. Within each selected parcel, there is opportunity to site the elevated tank satisfying the requirements below:

Site Requirements	Criteria Component
Site Size	• Minimum site area of 1.5 hectares, ideal site area of 2 hectares
Site Elevation	• Ideal site elevation greater than 270 metres • Allow a constructable tank height of 60 metres to 70 metres, ideally less than 60 metres
Site Location	• Avoid being at intersections • Have north-south or east-west road frontage • Not within Highway 413 corridor or the Brampton Flying Club 4 kilometre buffer • Avoid areas of environmental significance
Site Impacts	• Buffer of 100 metres from existing residential structures to avoid shadow impacts on adjacent parcels



2Ha Example of a 2-ha site (to scale)



What servicing solutions are being further evaluated?

Summary of Short-List Evaluation

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	Parcel 1	Parcel 2	Parcel 3	Parcel 4	Parcel 5
Natural Environment	All parcels have opportunity to avoid siting the elevated tank within environmental features. All parcels require further field validation to assess potential impacts				
	1	1	1	1	1
Socio-Economic	• All parcels have opportunity to meet minimum distance from existing residential • There is 1 farm field access to the parcel and 2 adjacent farm operations; moderate potential traffic impacts anticipated • The proposed HWY413 will have little impact on the future agricultural viability of the parcel • Potential loss of 2-ha of systematic tile drainage	• All parcels have opportunity to minimum distance from existing residential • There is 1 farm field access to the parcel and 1 adjacent farm operation; moderate potential traffic impacts anticipated • The proposed HWY413 will have little impact on the future agricultural viability of the parcel • Potential loss of 2-ha of systematic tile drainage	• All parcels have opportunity to meet minimum distance from existing residential • There are two farm field access points to the parcel; moderate potential traffic impacts anticipated • The smaller parcel size will result in the remaining parcel to be managed less efficiently for future agricultural uses • There is no systematic tile drainage on the parcel	• All parcels have opportunity to meet minimum distance from existing residential • There are no farm field access points to the parcel directly from the ROW; minimal potential traffic impacts anticipated • The proposed HWY 413 will consume 42.04% of the parcel and will reduce the future agricultural priority of these lands • There is no systematic tile drainage on the parcel	• All parcels have opportunity to meet minimum distance from existing residential • There are no farm field access points to the parcel and 2 adjacent farm operations; high potential traffic impacts anticipated • The proposed HWY 413 will consume 54.95% of the parcel and will reduce the future agricultural priority of these lands • Potential loss of 1-ha of systematic tile drainage
	3	2	2	1	2
Cultural Heritage	Stage 1 Archeological Screening and Stage 1 Cultural Heritage Screening complete, all parcels require Stage 2 Archeological Assessment and Stage 2 Cultural Heritage Assessment				
	2	2	2	2	2
Technical Suitability	• Risk of groundwater contamination is low • Potential for higher inflows associated with deep open cut excavations, dewatering needs to be further reviewed • The parcel is further from service area which may impact water quality mitigation needs and operations	• Risk of groundwater contamination is low • Potential for higher inflows associated with deep open cut excavations, dewatering needs to be further reviewed • The parcel is close to service area which will benefit water quality operations	• Risk of groundwater contamination is higher due to proximity to HVA • Potential for higher inflows associated with deep open cut excavations, dewatering needs to be further reviewed • The parcel is further from service area which may impact water quality mitigation needs and operations	• Risk of groundwater contamination is higher due to proximity to SGRA • Potential for higher inflows associated with deep open cut excavations, dewatering needs to be further reviewed • The parcel is closest to service area which will benefit water quality operations	• Risk of groundwater contamination is low • Lower potential for high inflows associated with deep open cut excavations, dewatering needs to be further reviewed • The parcel is further from service area which may impact water quality mitigation needs/operations
	2	1	3	2	2
Financial	• Marginal height difference between parcels, capital cost for ET is similar • Transmission main alignment with most direct route is the longest and will require highest capital cost	• Marginal height difference between parcels, capital cost for ET is similar • Transmission main alignment with most direct route is the second shortest and will require less capital cost	• Marginal height difference between parcels, capital cost for ET is similar • Transmission main alignment with most direct route is the second longest and will require higher capital cost	• Marginal height difference between parcels, capital cost for ET is similar • Transmission main alignment with most direct route is the shortest and will require least capital cost	• Marginal height difference between parcels, capital cost for ET is similar • Transmission main alignment with most direct route is the third shortest and will require less capital cost
	3	2	2	1	2

1 Most Preferred and Least Potential Impact

2 Not Preferred and Moderate Potential Impact

3 Least Preferred and Most Potential Impact

Preliminary Preferred Site Location

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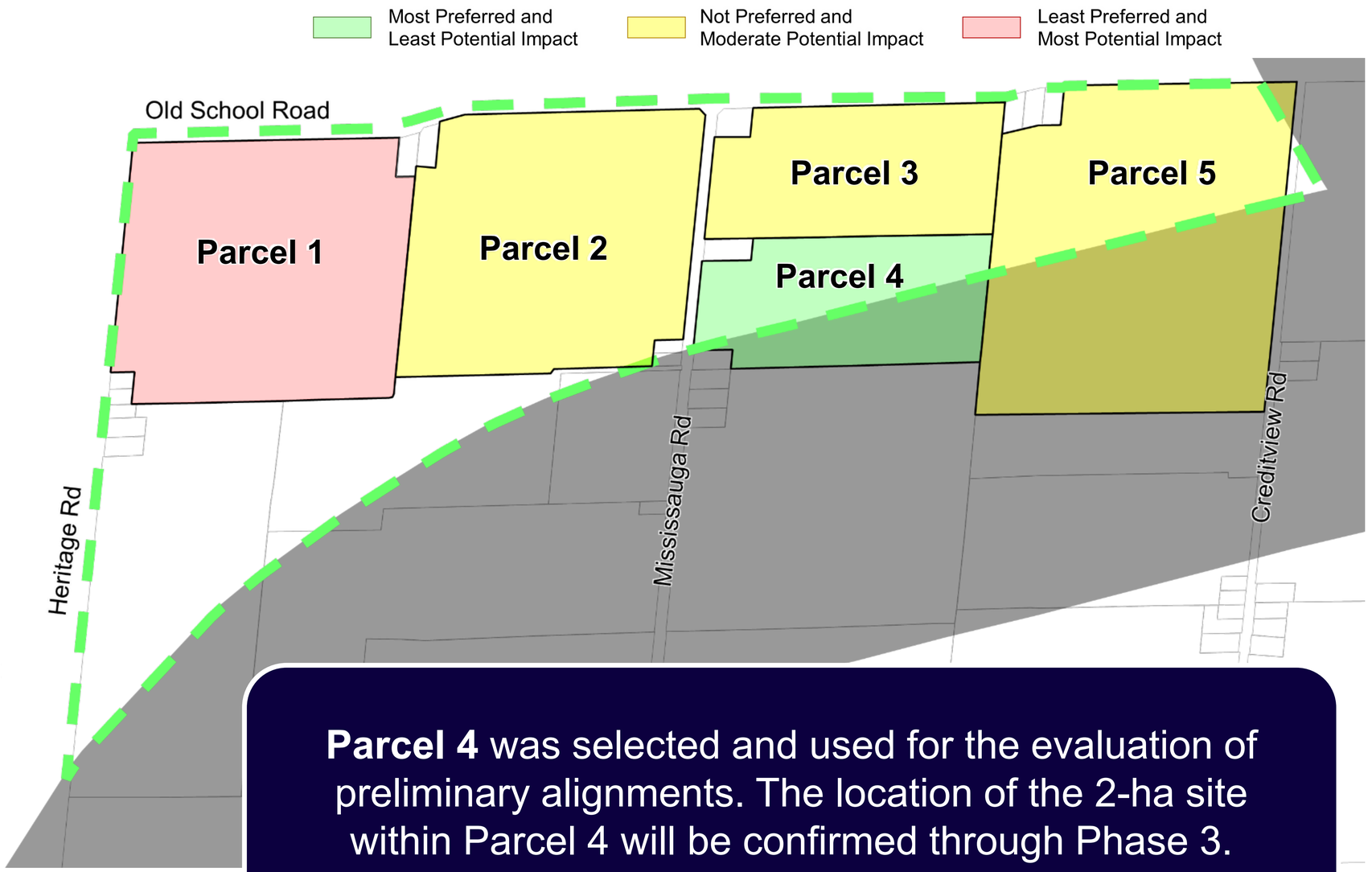
Long List Evaluation → Short List of Parcels → **Short List Evaluation** → Preliminary Alignments → Next Steps

The evaluation of the short-list of parcels concluded that **Parcel 4** is preferred as:

- There is opportunity to avoid major natural environment features and setbacks
- There are no ROW farm field access points to the parcel
- The agricultural priority of the parcel will be significantly reduced due to the proposed Highway 413
- There is no loss of systematic tile drainage
- The parcel is closest to service area which will benefit water quality operations
- Transmission main alignment with most direct route is the shortest and will require least capital cost



Parcel 4 was selected and used for the evaluation of preliminary alignments. The location of the 2-ha site within Parcel 4 will be confirmed through Phase 3.

Do you have any thoughts on the selected parcel? Please let us know!

What servicing solutions are being further evaluated?

Preliminary Preferred Alignment

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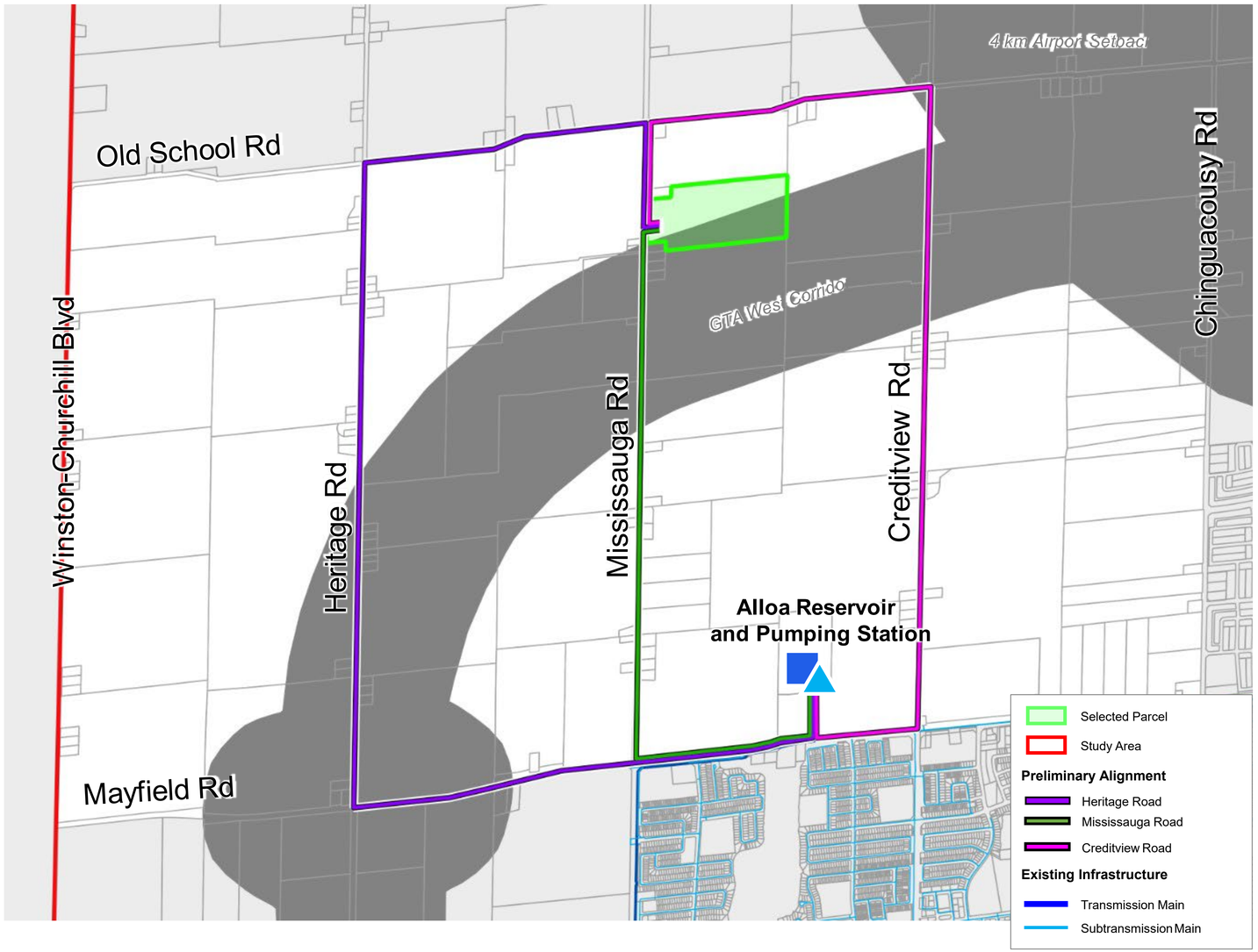
Long List Evaluation → Short List of Parcels → Short List Evaluation → Preliminary Alignments → Next Steps



Alignment 1: Heritage Road

- Heritage Road as the main corridor is the longest alignment option to Parcel 4
- Locally Significant Wetland located directly adjacent to alignment
- Alignment transects CVC regulated area for the minor crossing of the Credit River Potential for open cut pipe installation by diversion.
- Potential for disruption along Heritage Road is moderate

Alignment 2: Mississauga Road

- Mississauga Road as the main corridor is the shortest alignment option to Parcel 4
- Alignment transects TRCA regulated area for the major crossing of the Etobicoke Creek. This requires one trenchless crossing which increases complexity and risk of construction.
- Potential for disruption along Mississauga Road is low

Alignment 3: Creditview Road

- Creditview Road as the main corridor is a longer alignment option to Parcel 4 compared to Mississauga Road
- Two Provincially Significant Wetland located directly adjacent to alignment
- Alignment transects TRCA regulated area for two major crossings of the Etobicoke Creek. This requires two trenchless crossings which significantly increases complexity and risk of construction.
- Potential for disruption along Creditview Road is high

Alignment 2 (Mississauga Road) was selected as the preliminary preferred alignment from the Alloa Reservoir and Pumping Station to Parcel 4

Do you have any thoughts on the alignments? Please let us know!

What are we doing next?

- Review and incorporate responses from PIC No. 2.
- Complete additional supporting technical studies to confirm the location of the preferred site for the new elevated tank and water transmission main alignments:
    - Traffic Impact Assessment
    - Natural Environment Impact Assessment
    - Stage 2 Archaeological and Cultural Heritage Assessment
- Develop alternative design concepts for the preferred servicing solution.
- Generate, evaluate and select a preliminary preferred design concept as part of Phase 3.
- Continue to engage with Indigenous rightsholders and interest holders, review and approval agencies, and other key stakeholders.
- Prepare for PIC No. 3.

Additional project information can be found on the project website, which can be accessed by scanning the QR Code with your smartphone.

How to Stay Involved

- ✓ Fill out the questionnaire and comment sheet.
- ✓ Sign up for project information updates.
- ✓ Provide your feedback regarding materials presented in this PIC No. 2.

Do you have any questions, comments, or want to stay up to date? Please contact us anytime.

Sogol Bandehali, MSc. P.Eng.
Project Manager, Regional Municipality of Peel
10 Peel Centre Drive
Brampton, ON L6T 4B9
905-791-7800 ext. 4550
437-216-7251
sogol.bandehali@peelregion.ca

For general inquiries, please email:
WestCaledonEA@peelregion.ca

Please note that information related to this study will be collected in accordance with the *Freedom of Information and Protection of Privacy Act*. All comments received will become part of the public record and may be included in the study documentation prepared for public review.

If you need any accommodations to provide comments and/or feedback for this study, please contact the Project Manager.