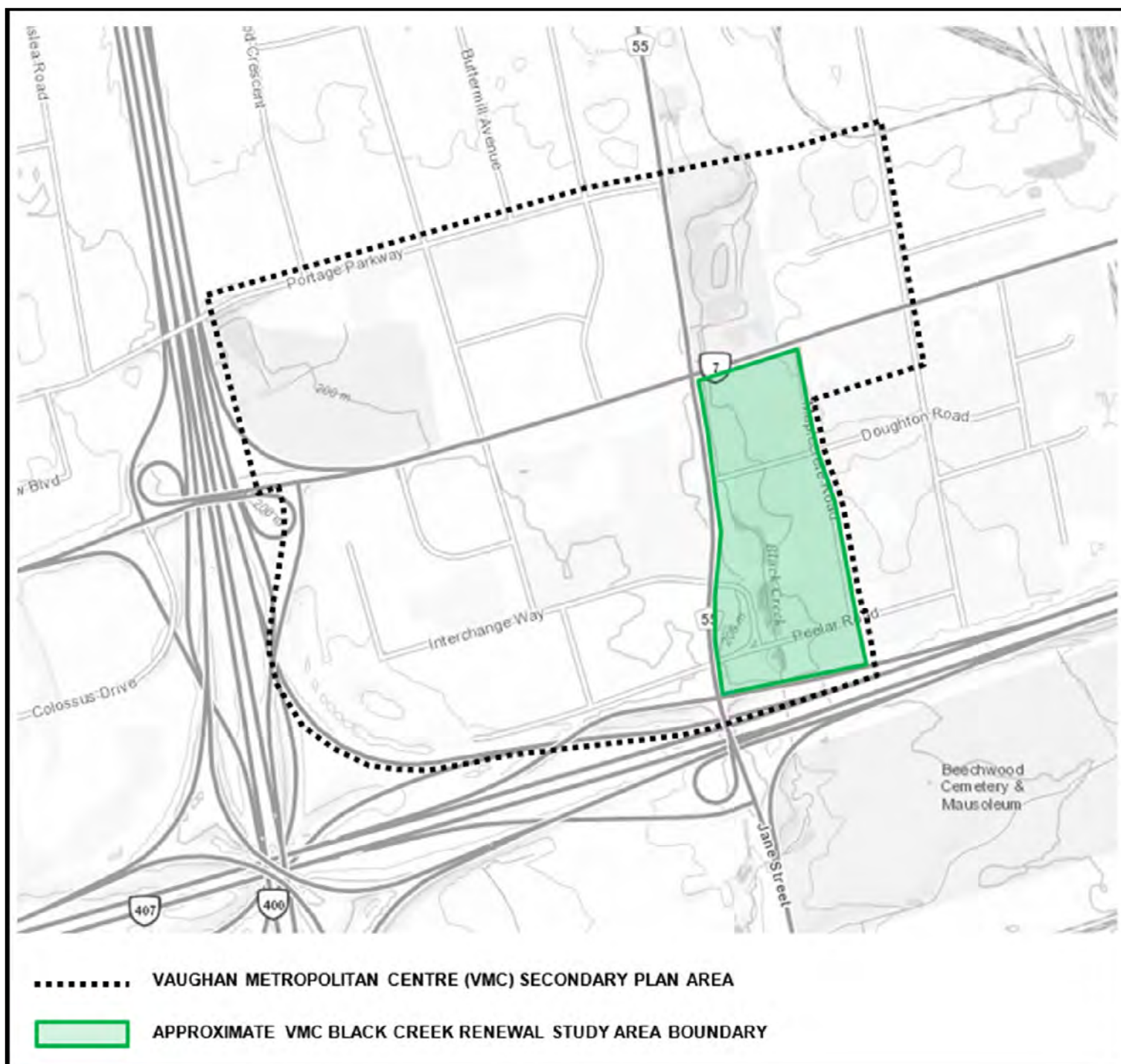


PUBLIC INFORMATION CENTRE

Vaughan Metropolitan Centre (VMC) Black Creek Renewal CLASS ENVIRONMENTAL ASSESSMENT

Wednesday, May 10, 2017
6:00 p.m. to 8:00 p.m.



*Project Management, Environmental Assessment,
Stormwater Management*

TMIG | The Municipal Infrastructure Group Ltd.

8800 Dufferin Street, Suite 200
Vaughan, ON L4K 0C5
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www.tmig.ca

The purpose of this Public Information Centre (PIC) is to:

- Provide you with a background of the Study
- Inform you of our progress to date
- Obtain your feedback

The major elements presented today are:

- Municipal Class EA Process
- Study Overview
- Background and Existing Conditions
- Evaluation Process and Criteria
- Alternative Alignment Designs
- Preferred Alignment Design
- Next Steps

You are invited to:

- Sign in to receive future updates
- Walk around and view the display boards
- Talk to representatives of the Study Team
- Submit comments via comment forms or through email, by May 26, 2017
- Visit project website at: www.vaughan.ca/BlackCreek

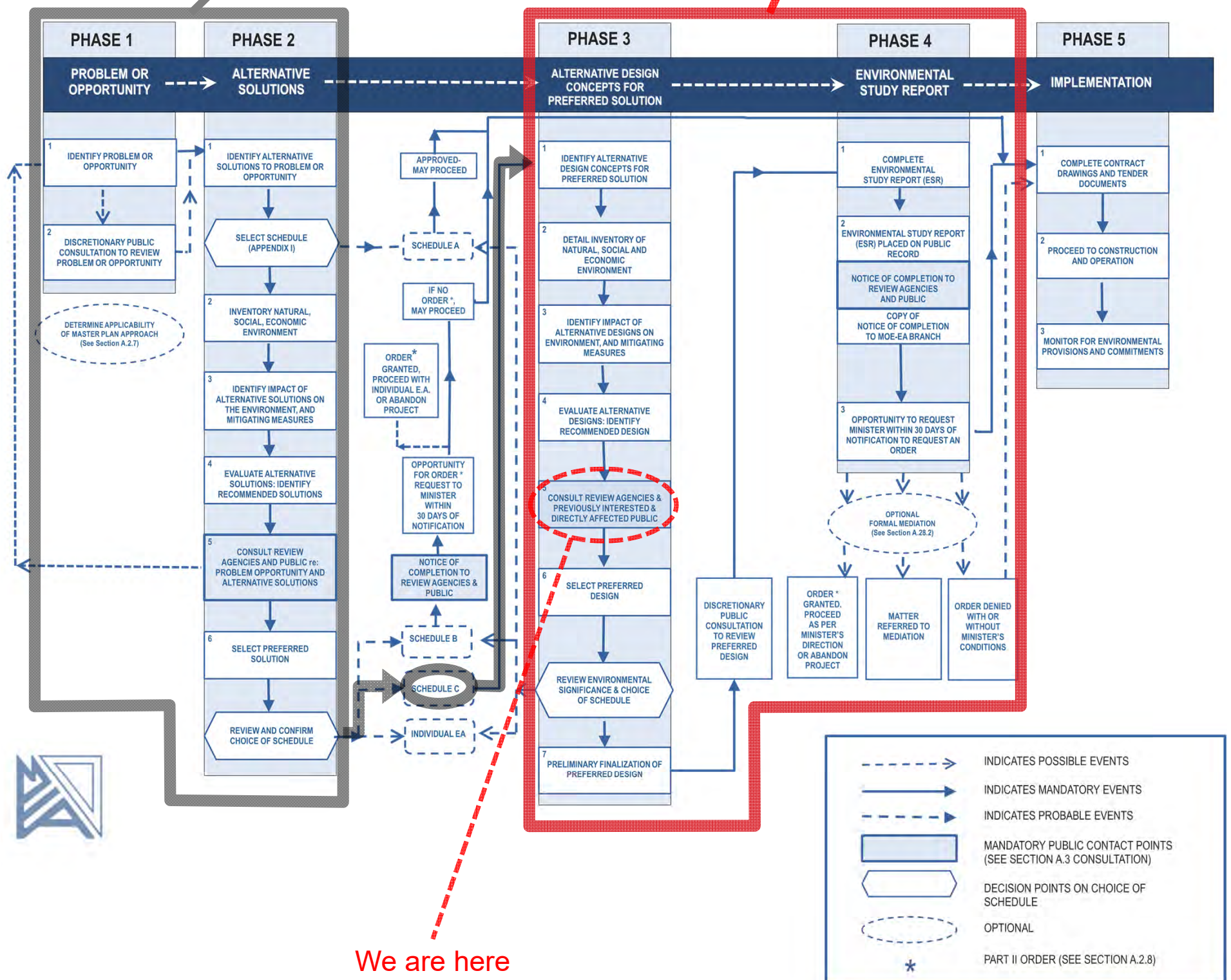


Black Creek Channel Culvert at Highway 7 looking south

- This project is subject to the Municipal Engineers Association Municipal Class Environmental Assessment (2000, as amended in 2007, 2011, and 2013)
- The Municipal Class EA is a planning and design process approved by the Ministry of the Environment and Climate Change (MOECC) to meet the requirements of the Ontario *Environmental Assessment Act*
- This study follows the Class EA process for **Schedule C** projects

The Black Creek Stormwater Optimization Study covered Phases 1 and 2

The Black Creek Renewal EA covers Phases 3 and 4



We are here

Chronology Preceding Black Creek Renewal EA

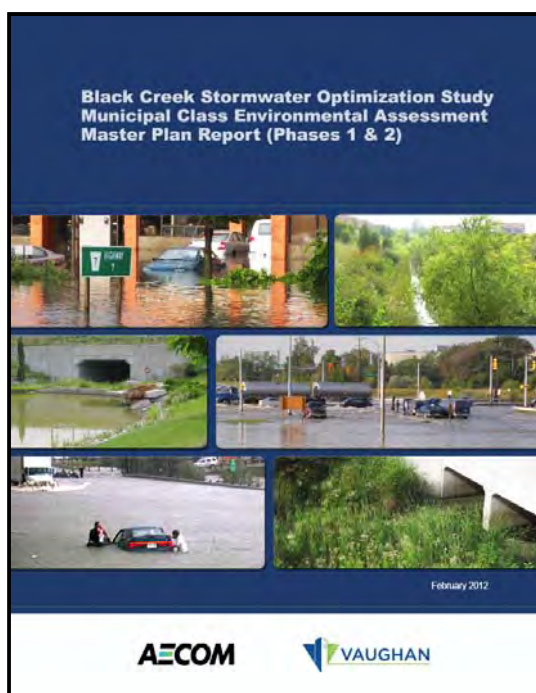
August 2005	Major storm causing flooding in Black Creek within VMC
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2008 to ongoing	VMC Secondary Plan
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- Constitutes the Official Plan for the VMC and establishes the context, planning framework and policies that will guide development for the next 20 to 25 years.
- Renewal of Black Creek is critical for redevelopment within the VMC Secondary Plan area.



2009 to 2012	Black Creek Stormwater Optimization Study EA (Phases 1 and 2 of Municipal Class EA)
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- Completed to address stormwater related issues in the broader Black Creek watershed within the City of Vaughan, including flooding in areas adjacent to the Black Creek channel.
- Preferred solution was to reduce flooding by the reconstruction and renewal of Black Creek in the VMC.

2009 to 2012	VMC Municipal Servicing Class EA Master Plan
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- Completed to identify the required improvements and expansions to the City's watermain, sanitary sewer and stormwater management systems to support planned growth in the VMC.

EA Study: Key Milestones to Date

<p>July 2012 to present</p>	<p>VMC Black Creek Renewal EA (Phases 3 and 4 of Municipal Class EA) Notice of Commencement issued July 2012</p>
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The VMC Black Creek Renewal EA's purpose is to develop and evaluate potential alternative designs for the renewal of the Black Creek corridor to reduce flooding.

<p>June 2013 to May 2014</p>	<p>Black Creek Consultation and Facilitation Process</p>
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- Consultation and facilitation process was completed with directly affected landowners and agencies to better understand key issues, opportunities and constraints.

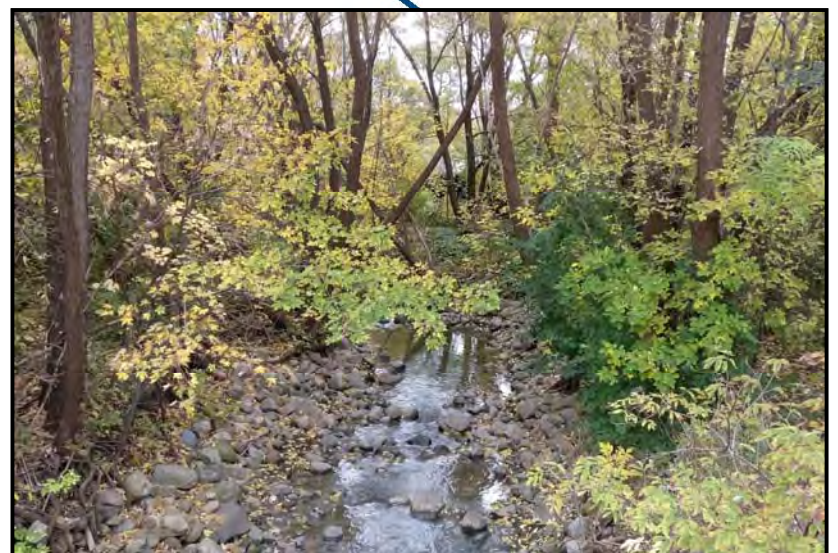
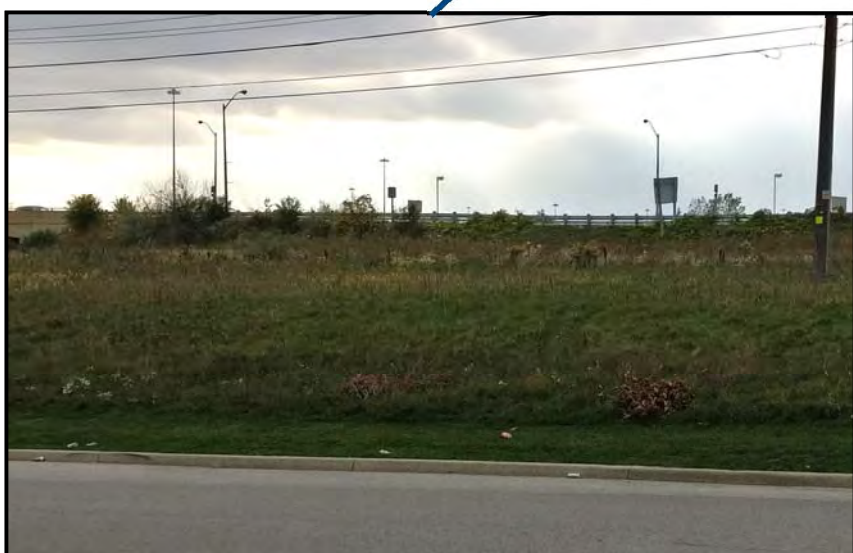
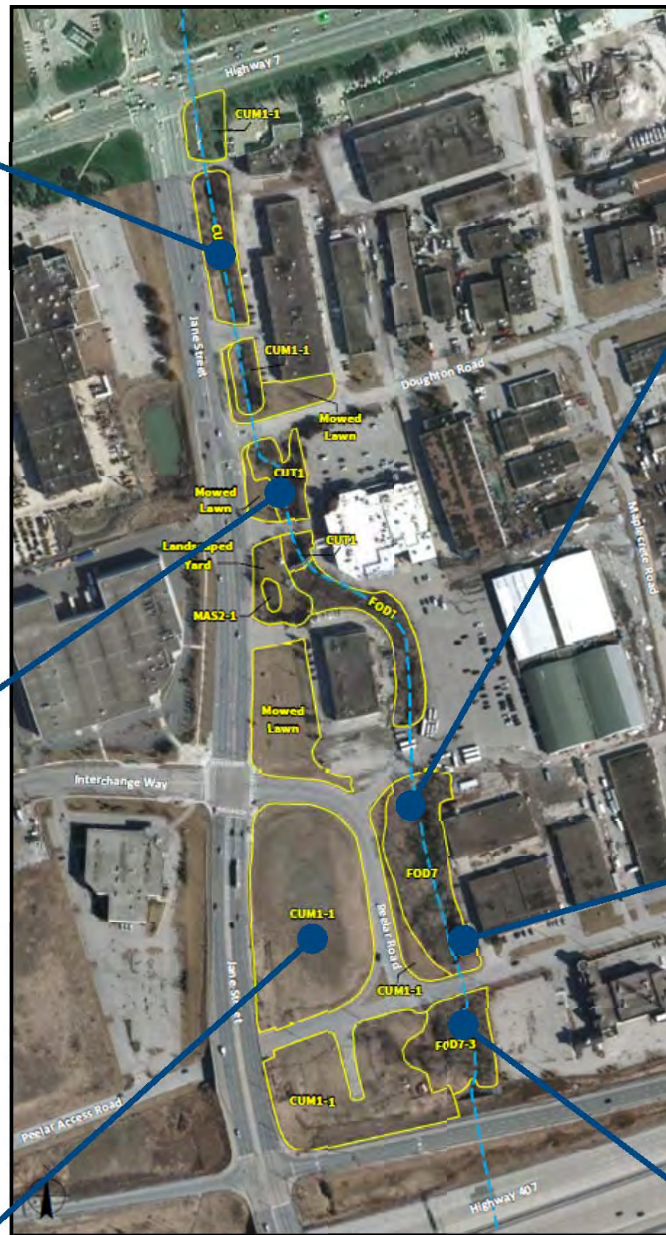
<p>July 2014 to May 2016</p>	<p>Allocation of Funding Sources Report and Development Charge Background Study – Black Creek Financial Strategy</p>
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- Study established the framework for funding a number of projects within the VMC Secondary Plan, including the renewal of the Black Creek corridor.

<p>January 2017 to May 2017</p>	<p>Project Status Update, continuation of Phase 3 and Public Information Centre</p>
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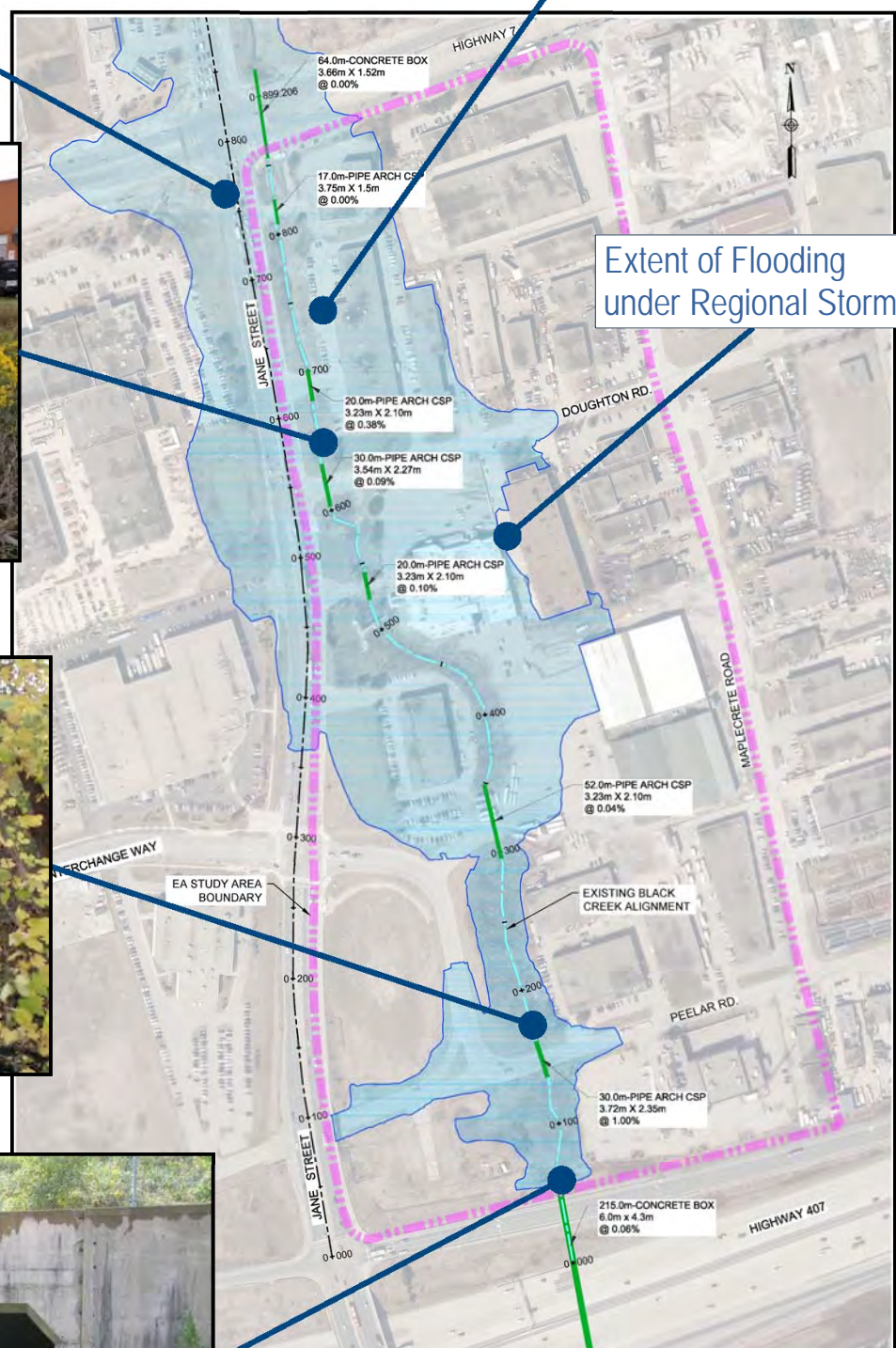
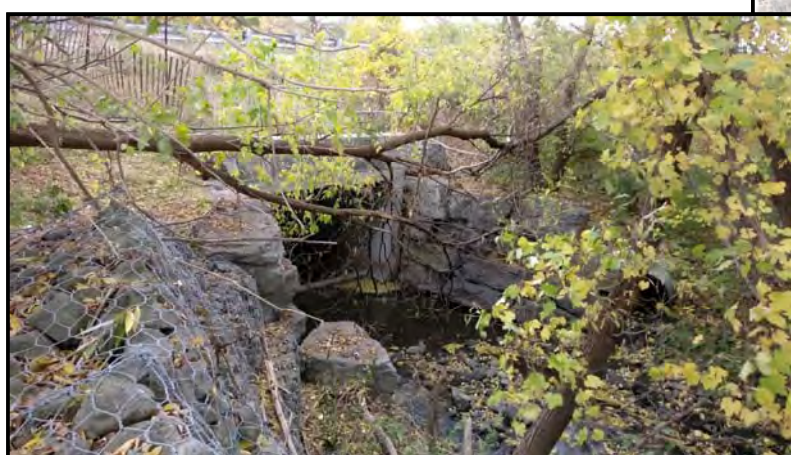
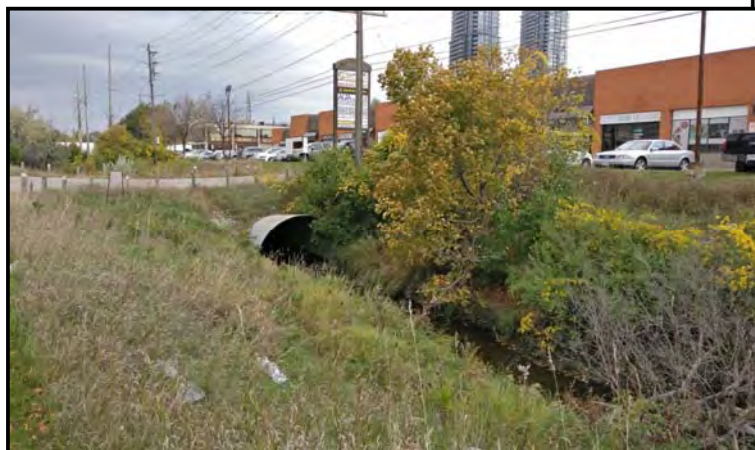
Existing Natural Environment

- Field surveys indicate that existing aquatic and riparian areas provide low-quality, size-limited, and fragmented natural habitat opportunities
- No significant ecological features or functions present (i.e., no significant wetlands or environmentally sensitive areas)
- No presence of species at risk or their habitat



Existing Hydraulic Environment

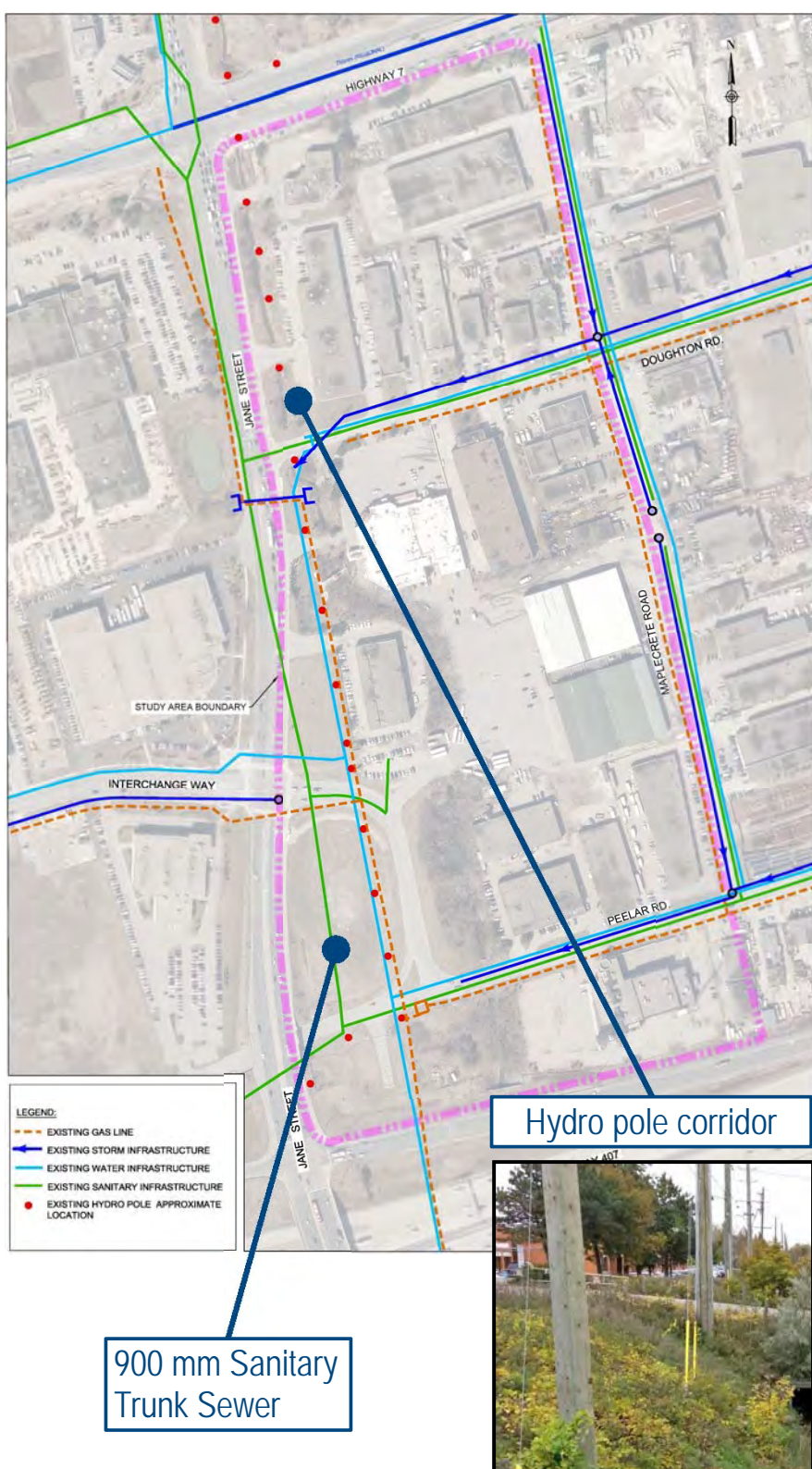
- The reach of Black Creek between Highway 407 and Highway 7 is prone to flooding
- The size of the existing channel and some of the driveway and road crossings are unable to convey peak flows from major storm events
- Major storm on August 19, 2005 caused widespread flooding to area



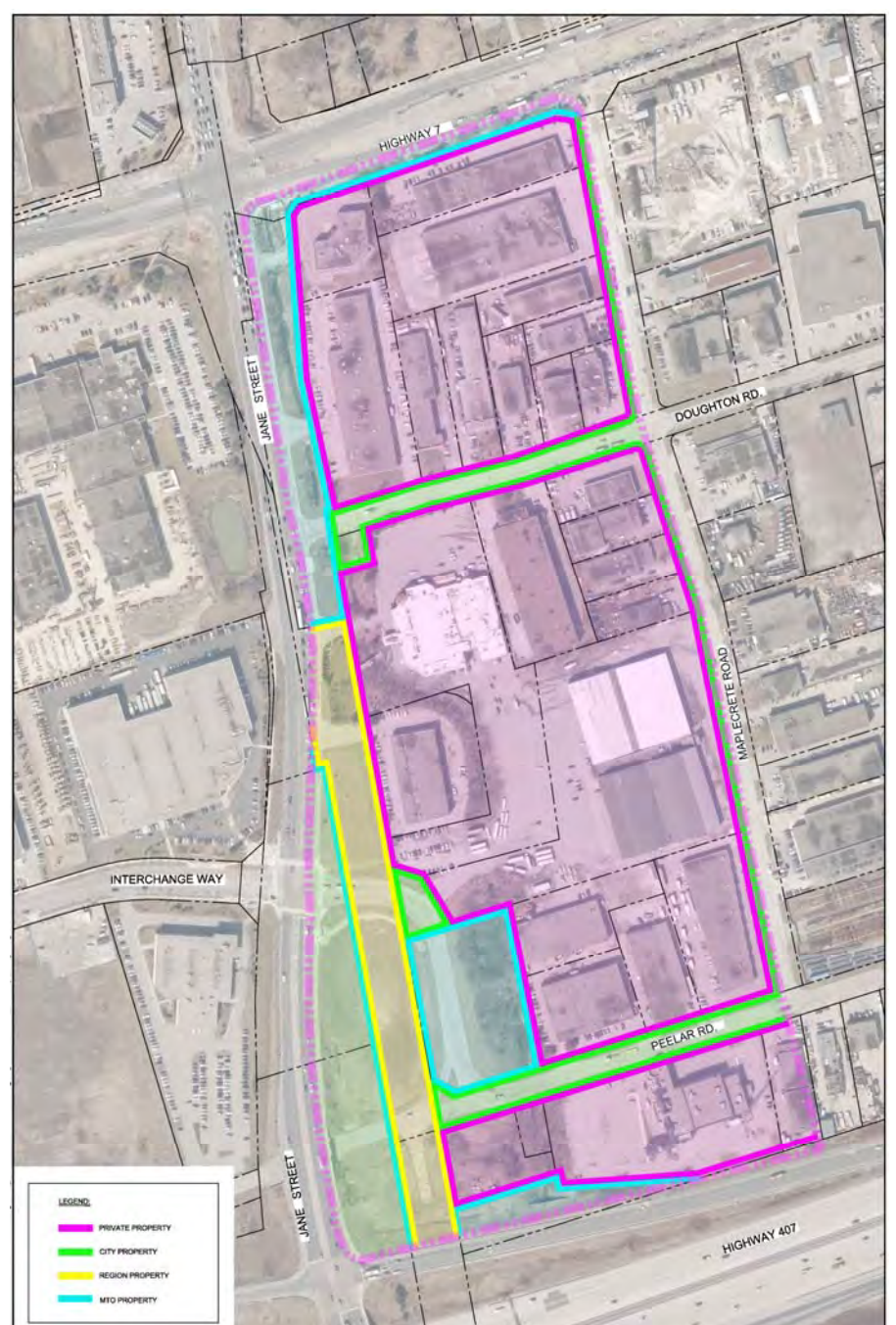
Other existing conditions that were considered for the alternative designs or in the alternative evaluation include:

- Existing utilities
- Existing land ownership
- Jane Street right-of-way
- Existing culverts at Highway 7 and Highway 407
- Existing buildings within the study area

Existing Utilities



Existing Land Ownership

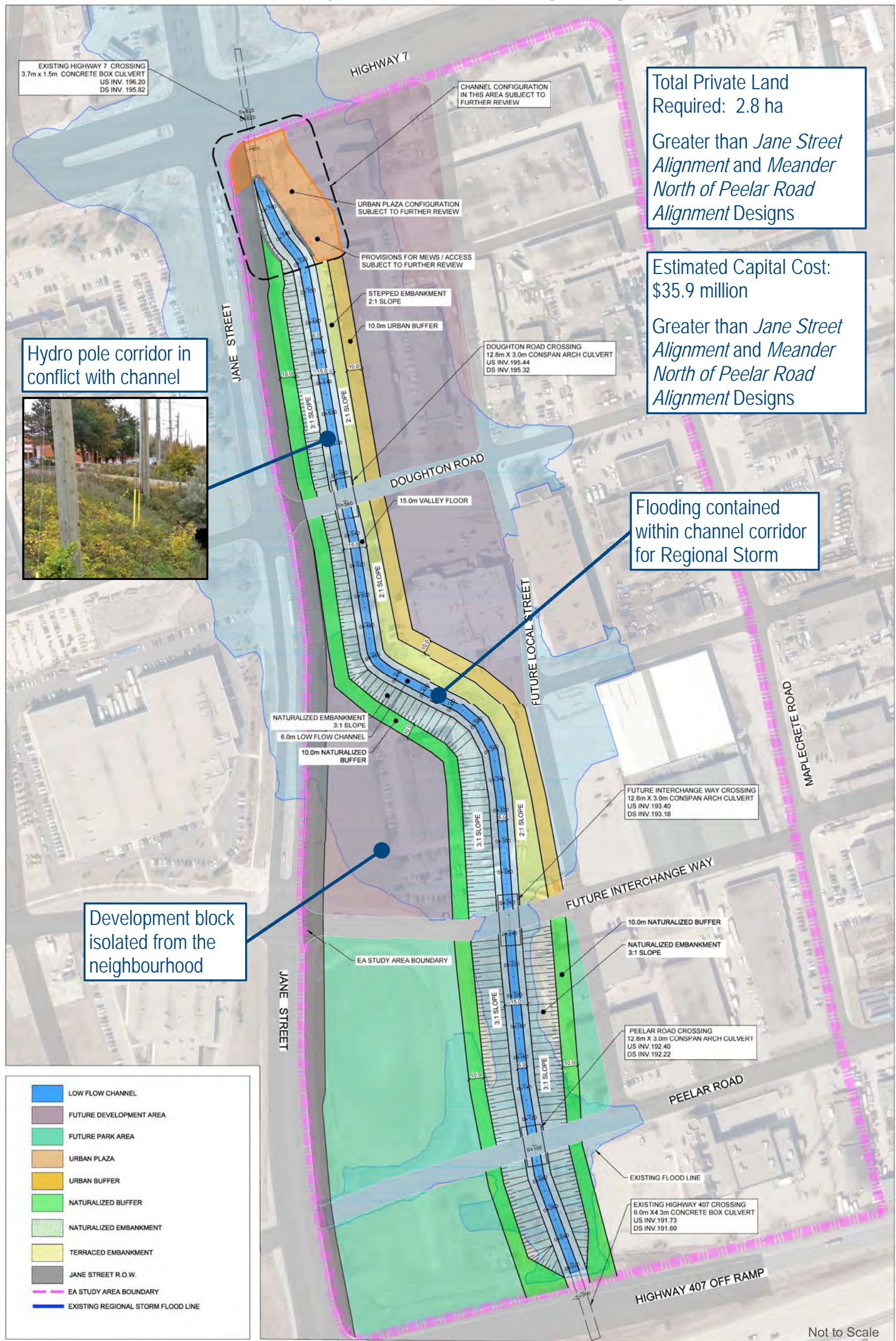


Evaluation Process and Criteria

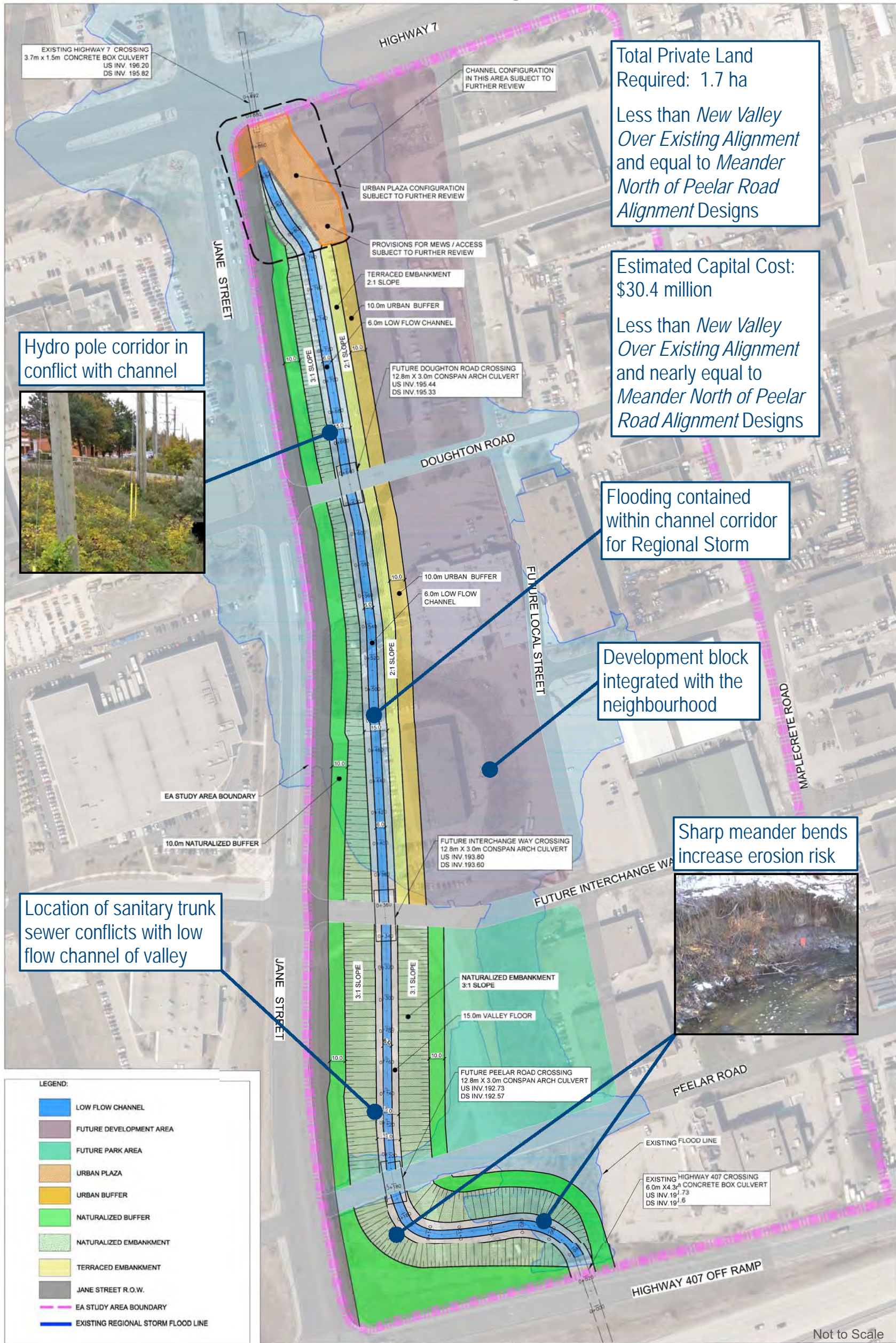
Alternative designs were comparatively and qualitatively evaluated based on the following criteria, developed within four main categories:

<p>Technical Environment</p>	<ul style="list-style-type: none"> • Safely convey Regional Storm • Operation and maintenance • Coordination with development within VMC • Approvals and permits • Constructability • Utility conflicts
<p>Natural Environment</p>	<ul style="list-style-type: none"> • Fish habitat and aquatic ecosystems • Terrestrial ecosystems • Species of Concern • Groundwater • Impacts during construction
<p>Social/Cultural Environment</p>	<ul style="list-style-type: none"> • Public safety • Private property acquisition • Integration with planned/future land uses in VMC • Impact on cultural heritage sites • Archaeologically undisturbed lands
<p>Financial Environment</p>	<ul style="list-style-type: none"> • Capital costs of implementation • Operation and maintenance costs

New Valley Over Existing Alignment



Jane Street Alignment



Hydro pole corridor in conflict with channel



Total Private Land Required: 1.7 ha
Less than *New Valley Over Existing Alignment* and equal to *Meander North of Peelar Road Alignment Designs*

Estimated Capital Cost: \$30.4 million
Less than *New Valley Over Existing Alignment* and nearly equal to *Meander North of Peelar Road Alignment Designs*

Flooding contained within channel corridor for Regional Storm

Development block integrated with the neighbourhood

Sharp meander bends increase erosion risk

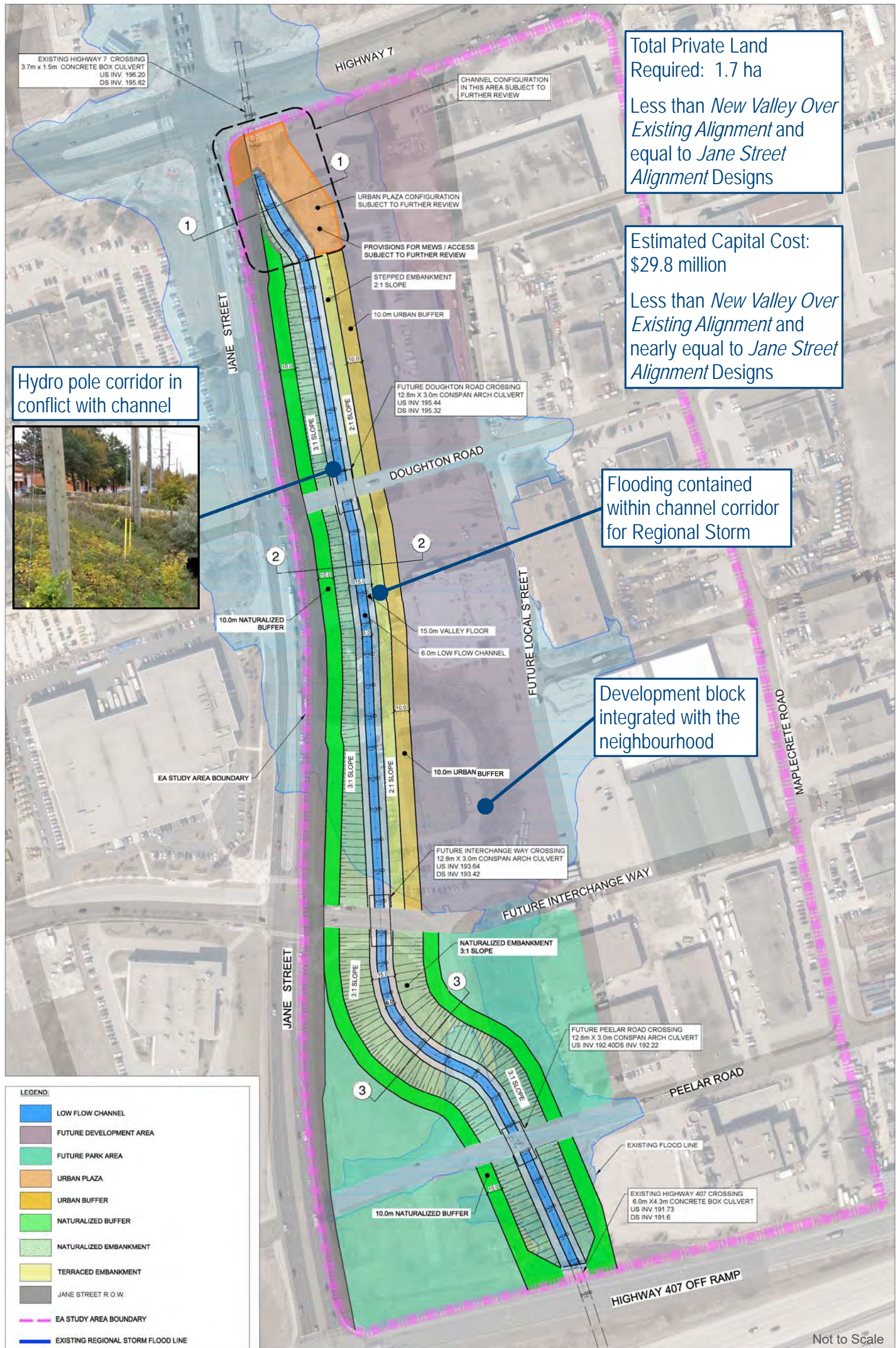


Location of sanitary trunk sewer conflicts with low flow channel of valley

- LEGEND:
- █ LOW FLOW CHANNEL
 - █ FUTURE DEVELOPMENT AREA
 - █ FUTURE PARK AREA
 - █ URBAN PLAZA
 - █ URBAN BUFFER
 - █ NATURALIZED BUFFER
 - █ NATURALIZED EMBANKMENT
 - █ TERRACED EMBANKMENT
 - █ JANE STREET R.O.W.
 - █ EA STUDY AREA BOUNDARY
 - █ EXISTING REGIONAL STORM FLOOD LINE

Not to Scale

Meander North of Peelar Road Alignment



The 'Do Nothing' option is always investigated in the Environmental Assessment Process, in the event that all other alternatives result in unacceptable impacts.

Evaluation Summary

Alternative Design	Technical Environment		Natural Environment		Social/Cultural Environment		Overall		Financial Environment
	Challenges	Performance	Impacts	Benefits	Impacts	Benefits	Cumulative Impact	Cumulative Benefit	
Do Nothing	●	○	●	○	●	○	●	○	No capital cost but costs will be incurred from future flooding
	NOT RECOMMENDED							Does not reduce flooding and VMC development hindered due to large area prone to flooding.	
New Valley over Existing Alignment	◐	●	◑	●	◐	◑	◐	◑	\$35.9 million in estimated capital costs
	NOT RECOMMENDED							Flooding will be contained in the corridor, but this alignment will require the acquisition of more private land and will create one development block that is isolated from the neighbourhood.	
Jane Street Alignment	◑	●	◑	◑	◐	●	◐	◑	\$30.4 million in estimated capital costs
	NOT RECOMMENDED							Flooding will be contained in the corridor, but the sharp meander bend will have increased risk for erosion / slope failure and this alignment has the greatest potential for conflicts with utilities.	
Recommended Alternative Alignment Design Meander North of Peelar Road Alignment	◐	●	◑	●	◑	●	◑	●	\$29.8 million in estimated capital costs
	RECOMMENDED							Flooding will be contained in the corridor and will provide the greatest integration with VMC development. The least private land and total capital cost required of all the alternatives.	

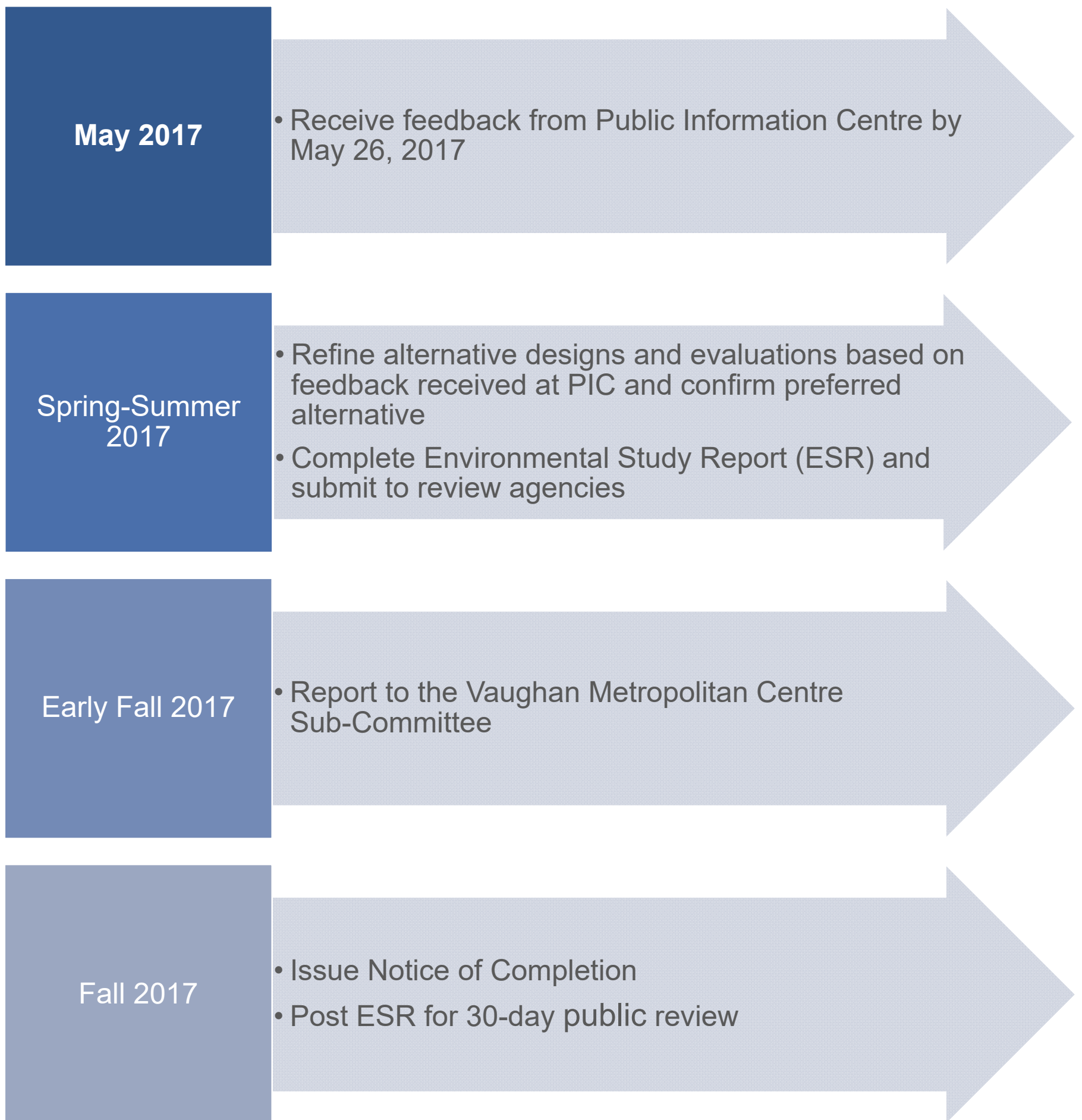
Least Impact or Greatest Benefit (Most Positive) ● → ◑ → ◐ → ◒ → ○ Greatest Impact or Least Benefit (Least Positive)

Preferred Design Meander North of Peelar Road Alignment



Artistic rendering illustrating a terraced embankment and urban buffer on the east side of the renewed Black Creek corridor near Doughton Road. The final configuration of the eastern embankment and urban buffer area will be established during detailed design of the renewed Black Creek corridor

Anticipated Timeline for Completion of the EA Study



Comments and Questions

Please share your comments with either Project Manager via the comment form or through email by May 26, 2017.

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Thank you for attending!