

# Riverwalk:

## Downtown Etobicoke Creek Revitalization Project

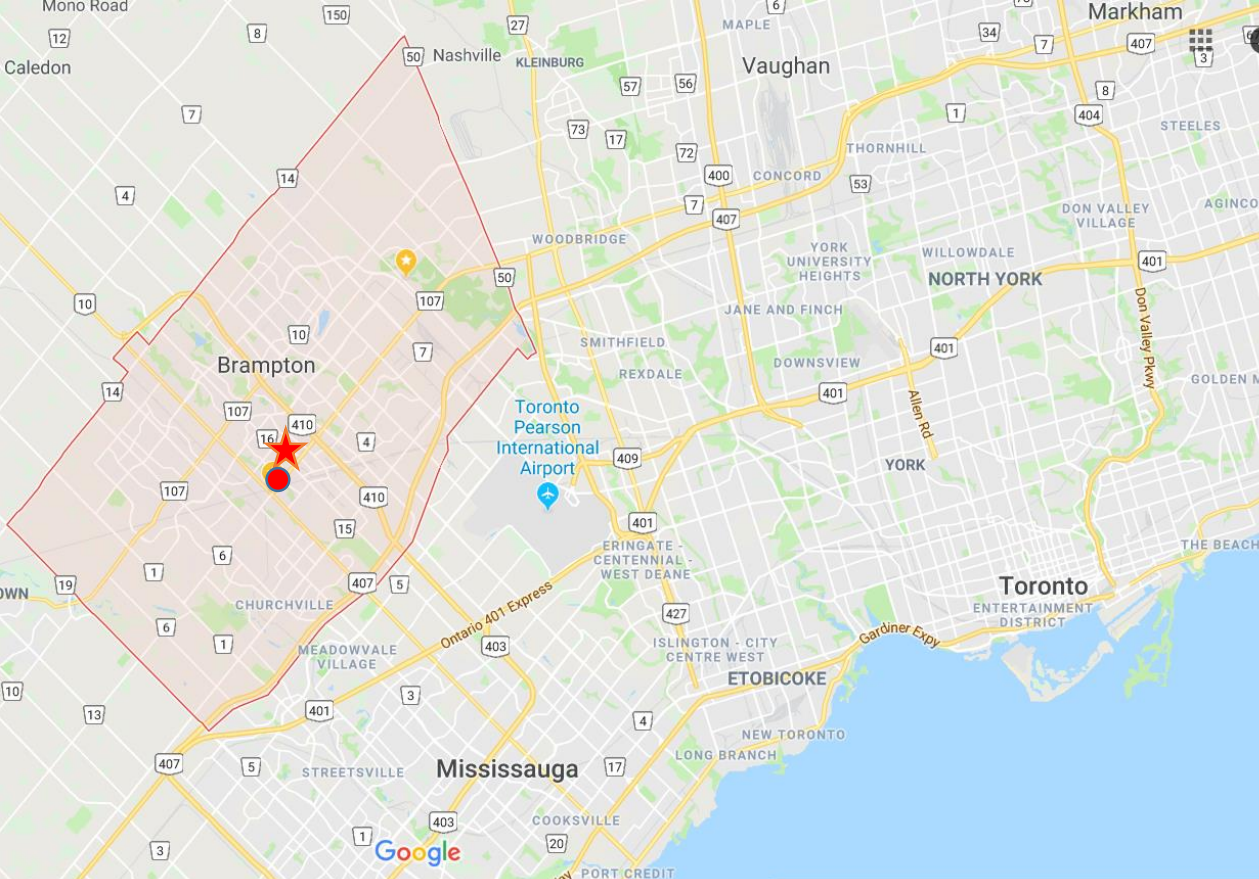
Ontario Flood Risk  
Management  
Workshop 2018



Laurian Farrell  
[Brampton.ca/riverwalk](http://Brampton.ca/riverwalk)



DOWNTOWN ETOBICOKE CREEK  
REVITALIZATION



Where is it?





# What is the Riverwalk?

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**Flood Protection**

**Unlock Development Potential**

**Identity/Placemaking**



# Etobicoke Creek By-Pass Channel







**Church Street (5x22m)**



**Scott Street (7.5x22m)**



**Queen Street (6x22m)**



**CNR Crossing (6.5x21m)**



# Why do we need it?

Historic Photos circa 1948



## *Brampton's Worst and Last Flood — 1948*



*Looking north from about the centre section of Main Street North to the C.N.R. bridge we get a good view of the flood waters in that area, showing the extreme depth of the river as it flowed beneath the railway bridge.*



*Another view of the 1948 flood experience taken further south in front of St. Paul's Church and the garage opposite, shows the size of the immense blocks of ice that came floating down and the hazardous location of the vehicles in its path.*



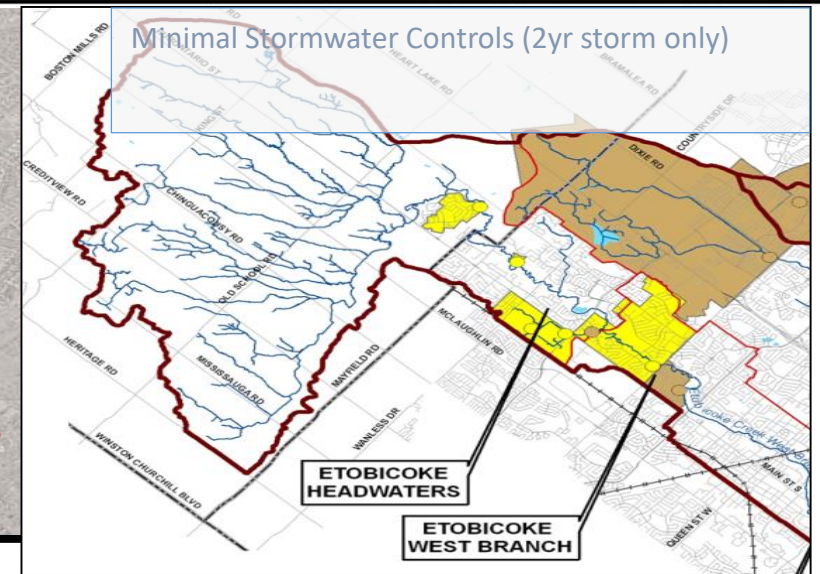
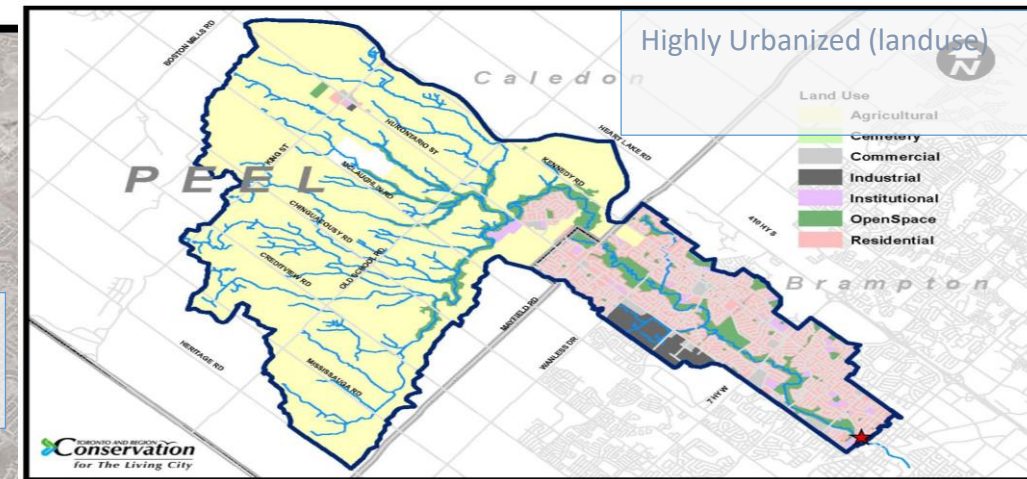
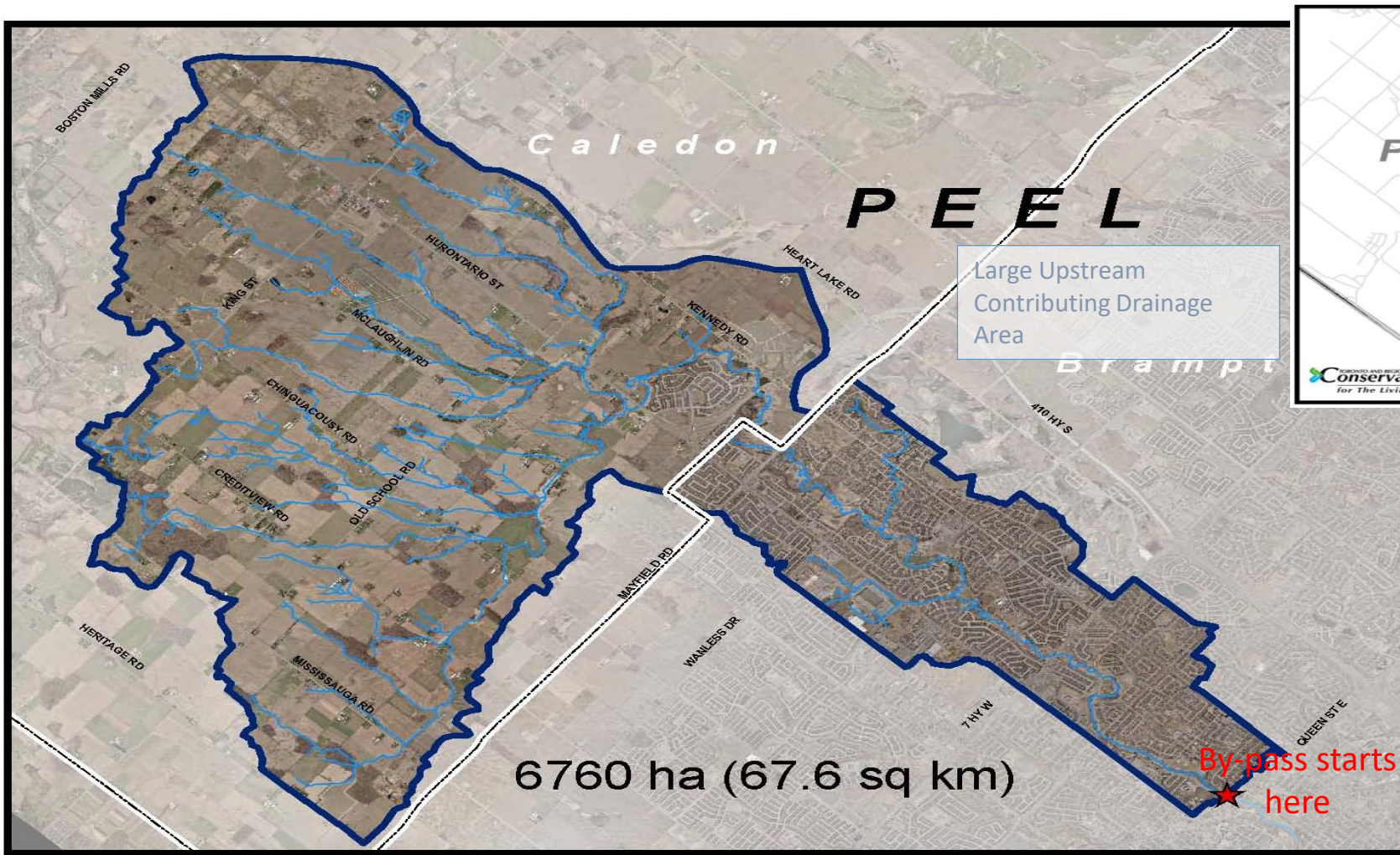
## Downtown Brampton By-pass Channel

- Constructed in **1952** by the Etobicoke & Mimico Creek Conservation Authority
- **600 m** long trapezoidal concrete lined channel
- **22m** wide (top width)
- Built to convey the **100 year storm**

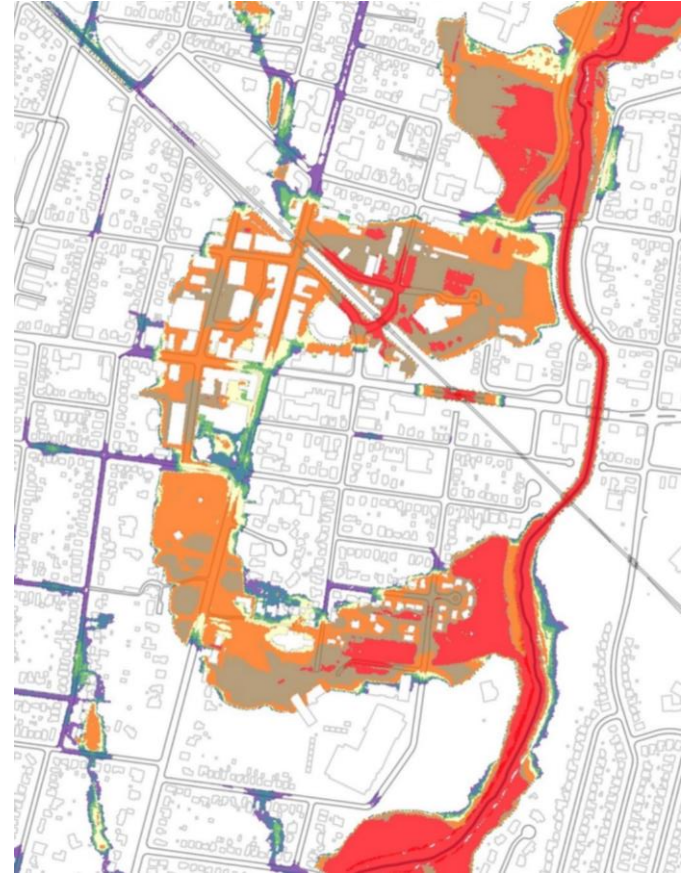
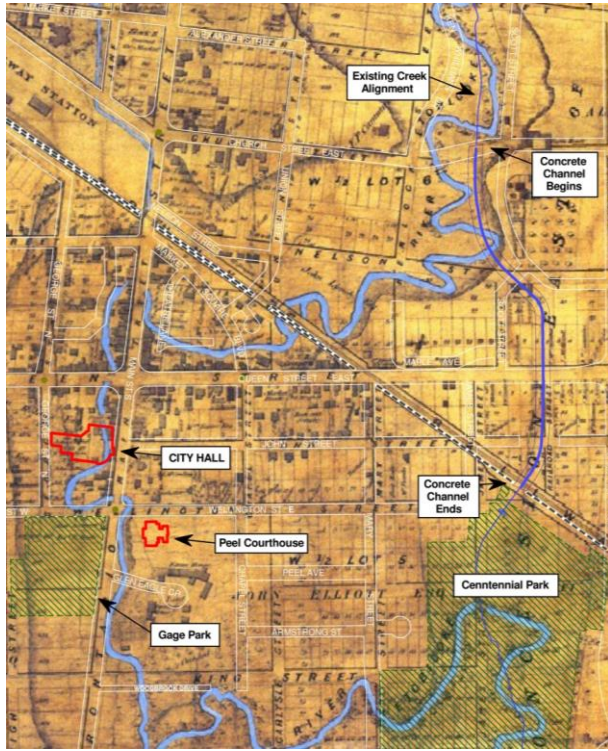




# Why does Brampton flood?



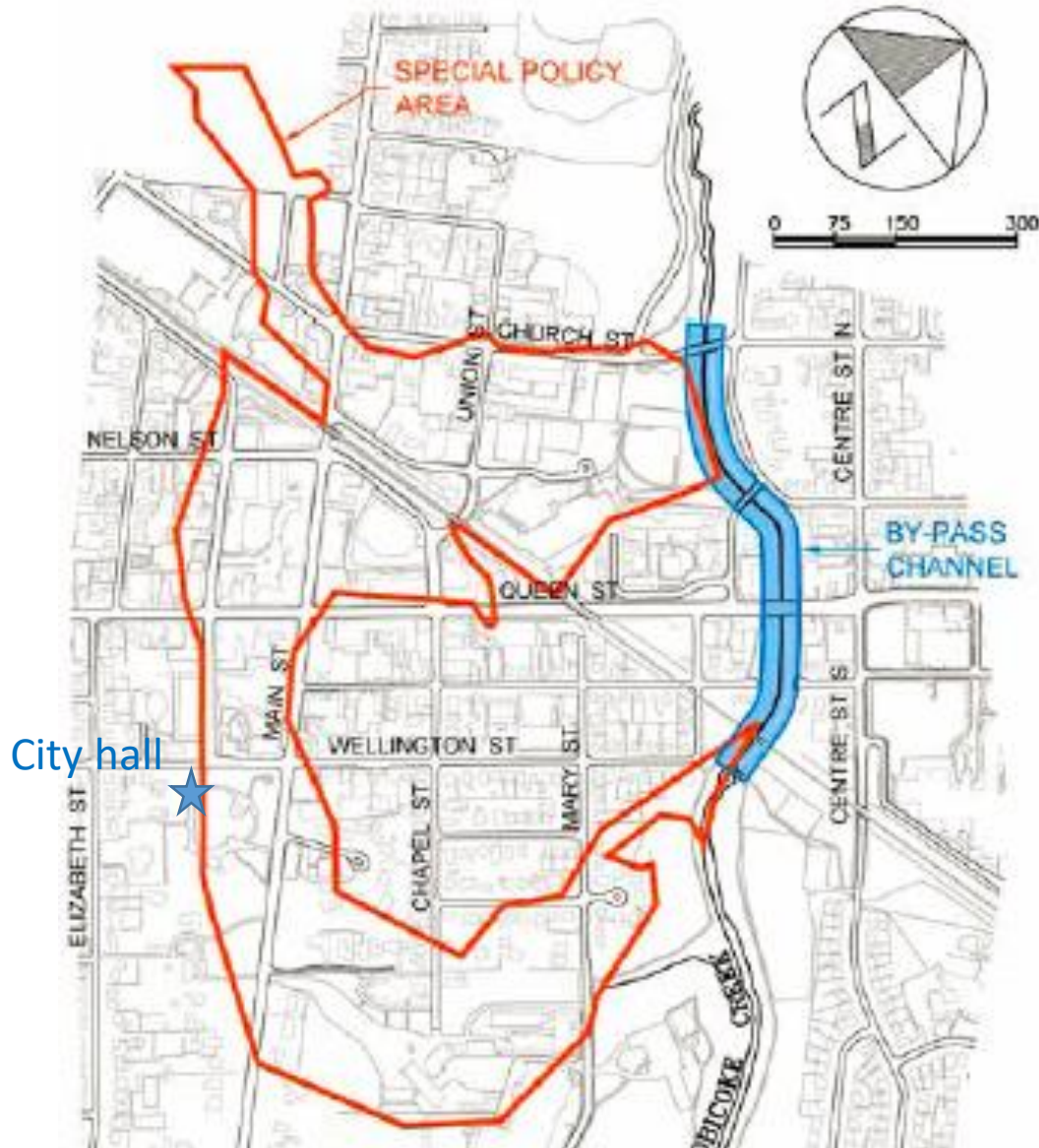






# Special Policy Area Amendment

(approved by Province in April 2014)



1<sup>st</sup> Provincial  
Approval of  
an SPA  
Amendment



- Updated boundary of the Special Policy Area to reflect current floodline mapping
- Established technical requirements for new development
- Focused residential growth at edge of floodplain
- Established permissions throughout SPA
- Restricted certain sensitive uses (e.g., institutional, emergency services, uses associated with hazardous substances)

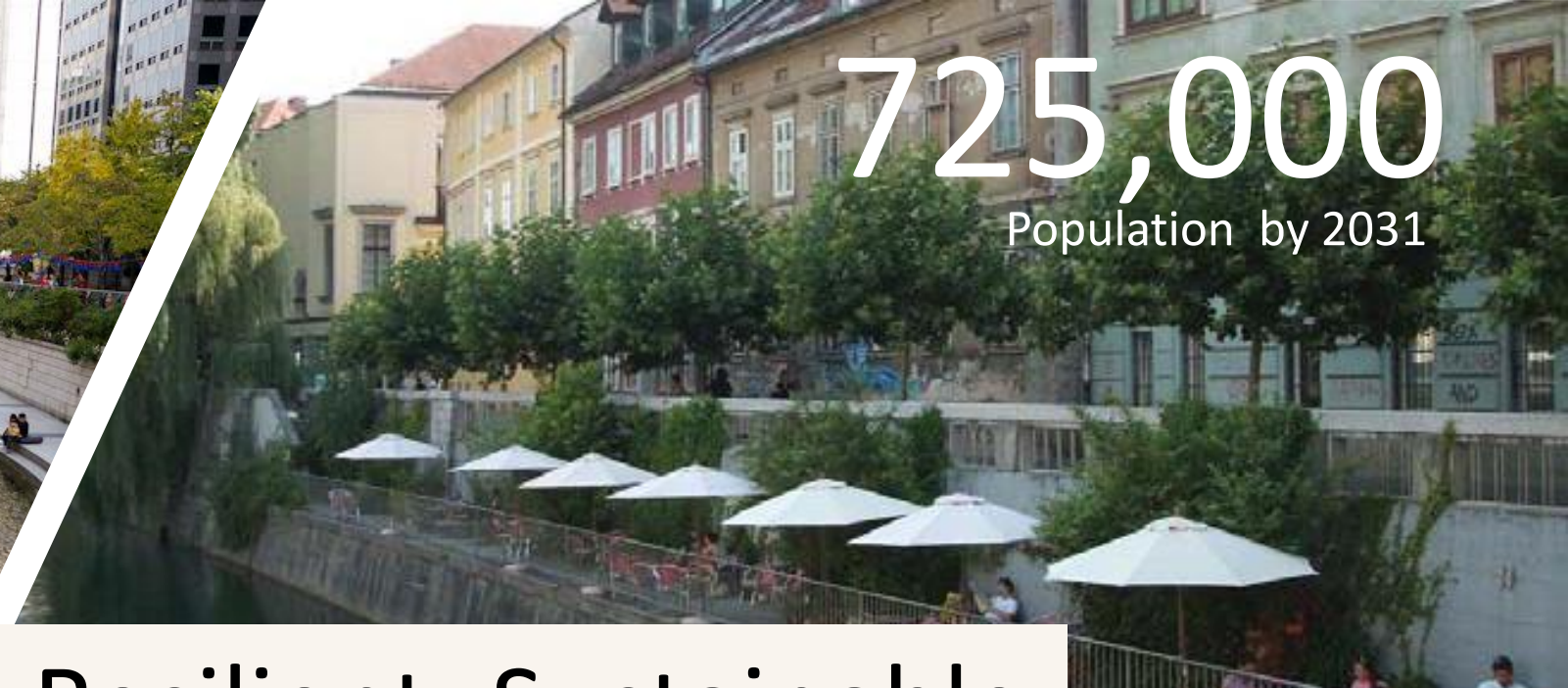
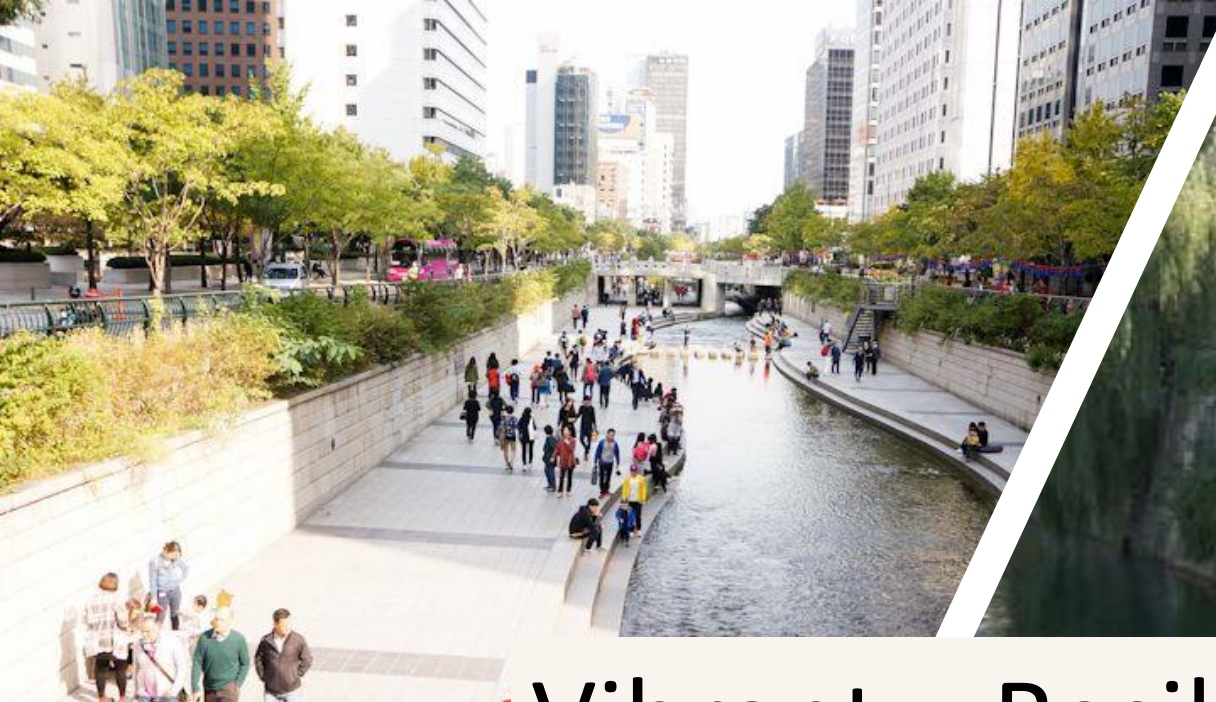


DOWNTOWN CONTEXT

# THINKING BIGGER







725,000  
Population by 2031

Vibrant – Resilient -Sustainable

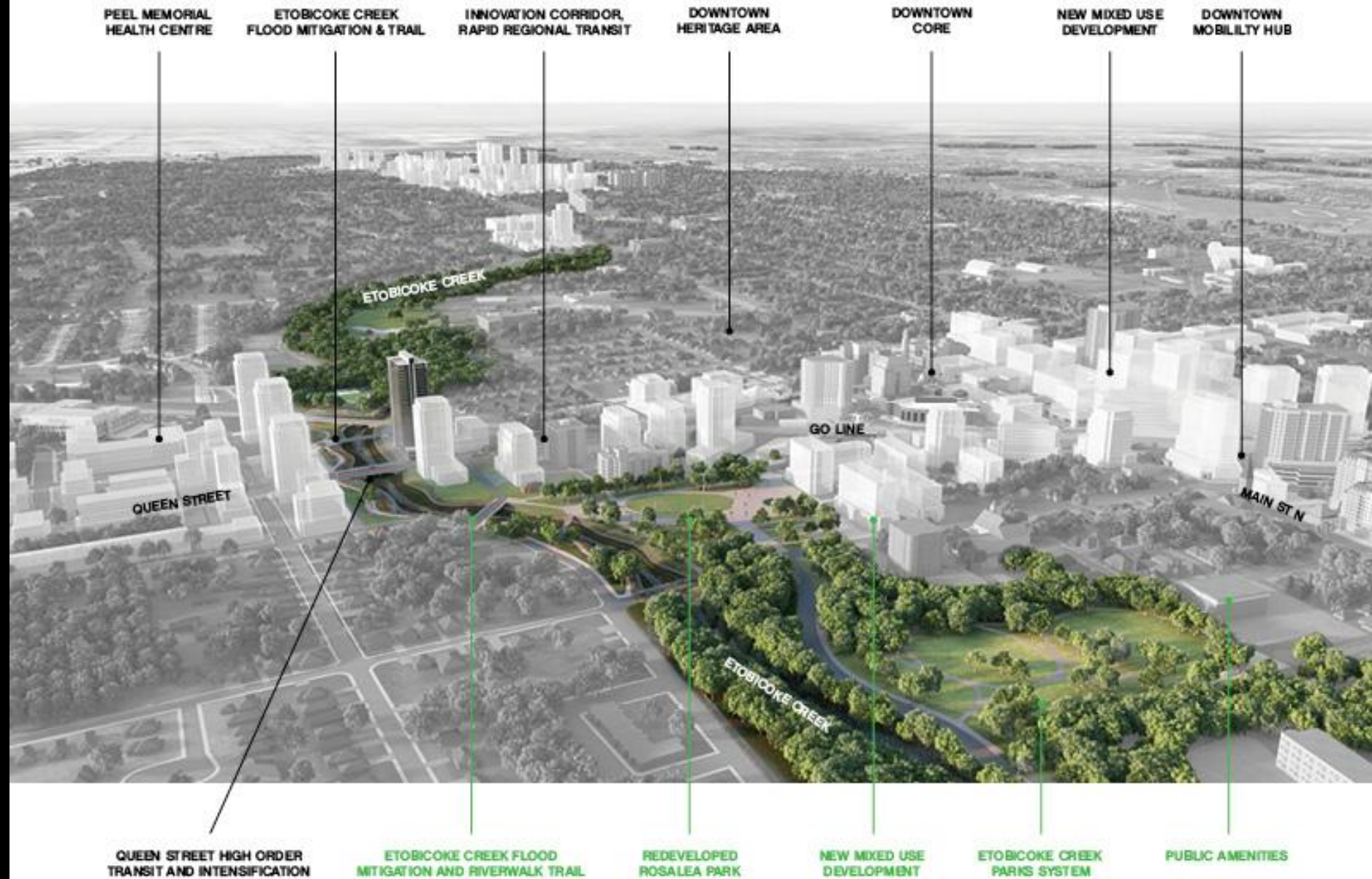


2nd

Fastest growing municipality in Canada









# Phase 1 Study

## Downtown Etobicoke Creek Revitalization Study



### 1 CONNECT

- The Downtown to the River
- Existing Trails with New Trails
- Rosalea Park with the Larger Open Space Network
- Pedestrians to the River with New, Continuous Trail & Numerous Entry Points
- Citizens to Participate in Watershed Health
- People to Each Other in Positive Public Spaces



### 2 DISCOVER

- The Revitalized Etobicoke Creek as a Major Amenity
- New Parks & Trails with Flexible Programming
- Urbanized Built Form Edges Along Streets & Open Spaces



### 3 CATALYZE

- Development facing the river
- Downtown development by addressing the Special Policy Area issue
- Placemaking with a new identity for the River & Downtown



### 4 PROTECT

- The Downtown from Flooding
- Open Green Space
- Natural Systems
- Cultural Heritage Resources



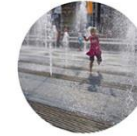
### 5 GREEN

- Flood Protection Infrastructure as Open Space Amenity
- Built Form & Open Space with Sustainable Design Including Green Roofs, Integrated Natural Systems
- The River's Edge with Native Habitat Planting



### 6 FRAME

- Rosalea Park with Urbanized, Activated Built Form Edge
- Pedestrian Priority Streets Along the River's Edge Near Queen Street



### 7 ACTIVATE

- Streets With Podium Base, Low Rise, Mid-Rise & Integration of Heritage Buildings
- Park Edges with Urbanized Built Form with Cafés, Patios & Front Doors on the Park
- The River with a New Pedestrian Experience
- The River bank ecology with enhanced greening



### 8 URBANIZE

- Built Form Adjacent to the River and Parks
- Complete Streets that put Pedestrians First
- Parks with Activated Edges and Flexible Uses



### 9 ENHANCE

- Etobicoke Creek as a Public Amenity Space
- Urban Ecology & Sustainability Along River & Trails (Habitat Planting, Urban Canopy, Permeability)
- Rosalea Park as a Reconceived Open Space
- HACE Initiative with Performance & Gathering Spaces in Parks
- Multi Modal Pedestrian Transportation Access
- The Identity of Brampton



### 10 DIVERSIFY

- Programming in Parks to Allow for Flexible Uses
- Built Form for Mixed-Use Adjacent to the River
- Mix of Public and Private Uses
- Habitat with Enhanced Urban Canopy and Riparian planting



Table 1: Comparison of Alternative Performance and Capital Costs

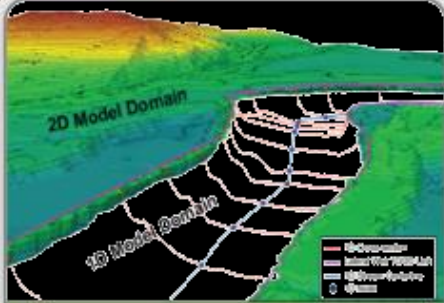
Alternative	Flood Mechanism Addressed	Reduction in Regional Storm Spill Flow (%)	Reduction in SPA Flood Depths (m)
A2: Rosalea Park Flood Berm	Spill	88	0.3 - 1.7
A3: Flood Protection Landform	Spill	88	0.3 - 1.7
A5: Lower By-pass Channel	Spill	90	0.3 - 1.8
A7: Downstream Channel Improvements	Backwater	0	0.5 (Backwater only)
A8: Tailwater Flood Protection Landform	Backwater	0	Requires further study (Backwater only)
A9: Clarence Street Bridge Improvements	Backwater	0	0.17 (Backwater only)
Combination: A3 + A5	Spill	100 (Spill eliminated)	Only backwater flooding remains

flood control?  
conveyance improvements?  
diversion?  
land acquisition?  
floodproofing?





# Phase 2 Study



## Integrated Flood Study

- Assess stormsewer capacity and overland flood potential
- Refine list of flood mitigation options
- Identify 3-4 flood mitigation options for future Environmental Assessment



## Urban Design and Land Use

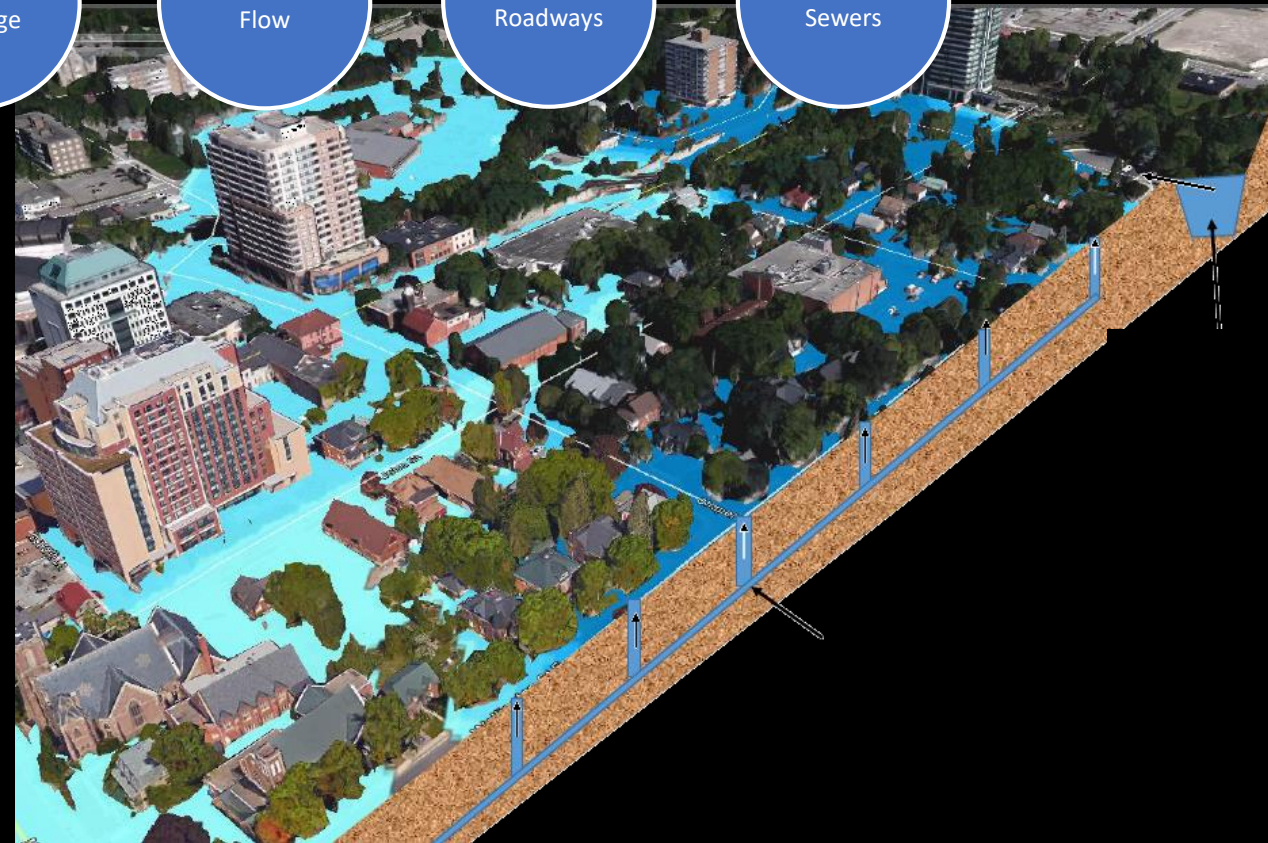
- Further develop design concepts based on new technical data
- Assess environmental, social and economic impacts of alternatives

Upstream  
drainage

Overland  
Flow

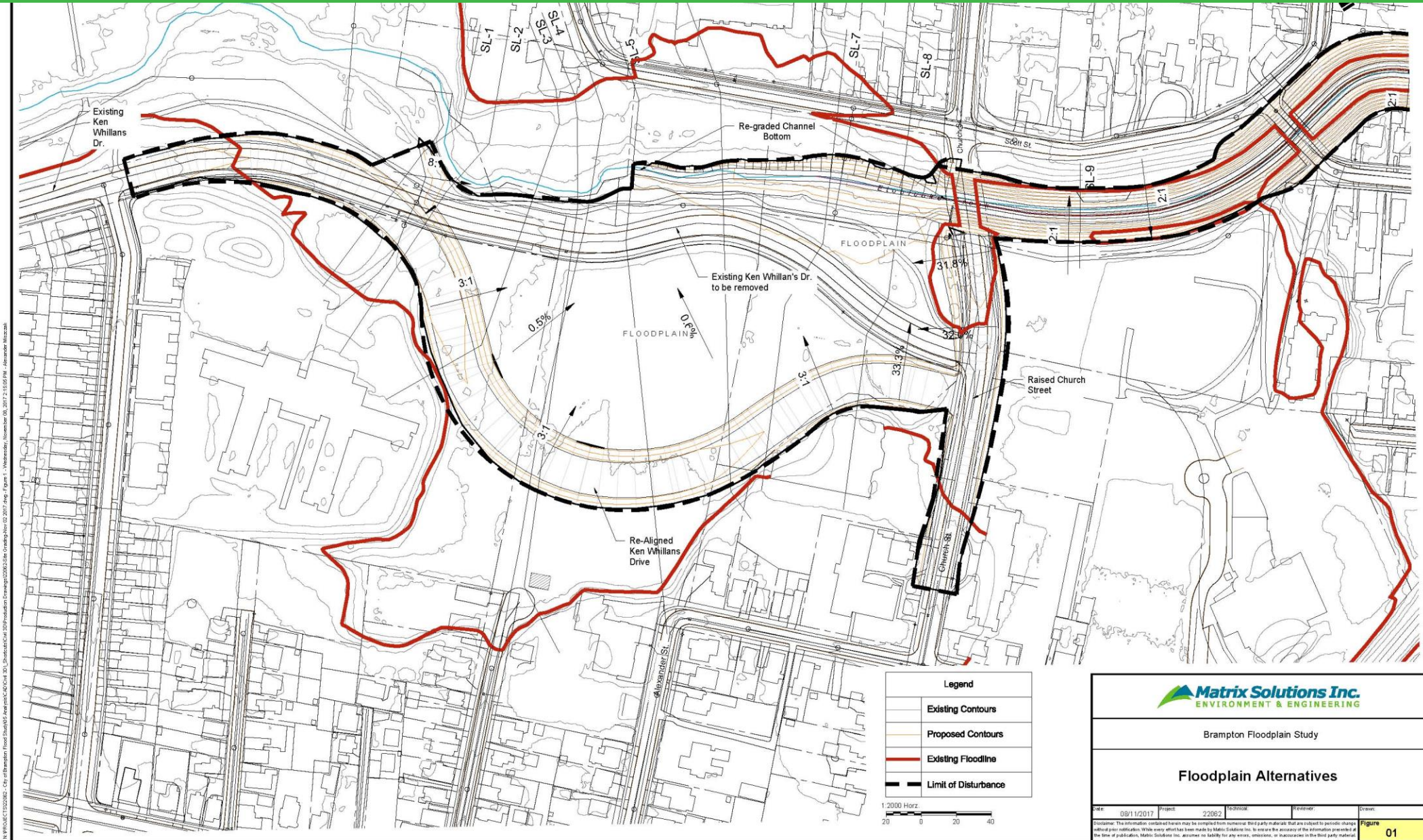
Flow on  
Roadways

Storm  
Sewers





# Ken Whillans Drive





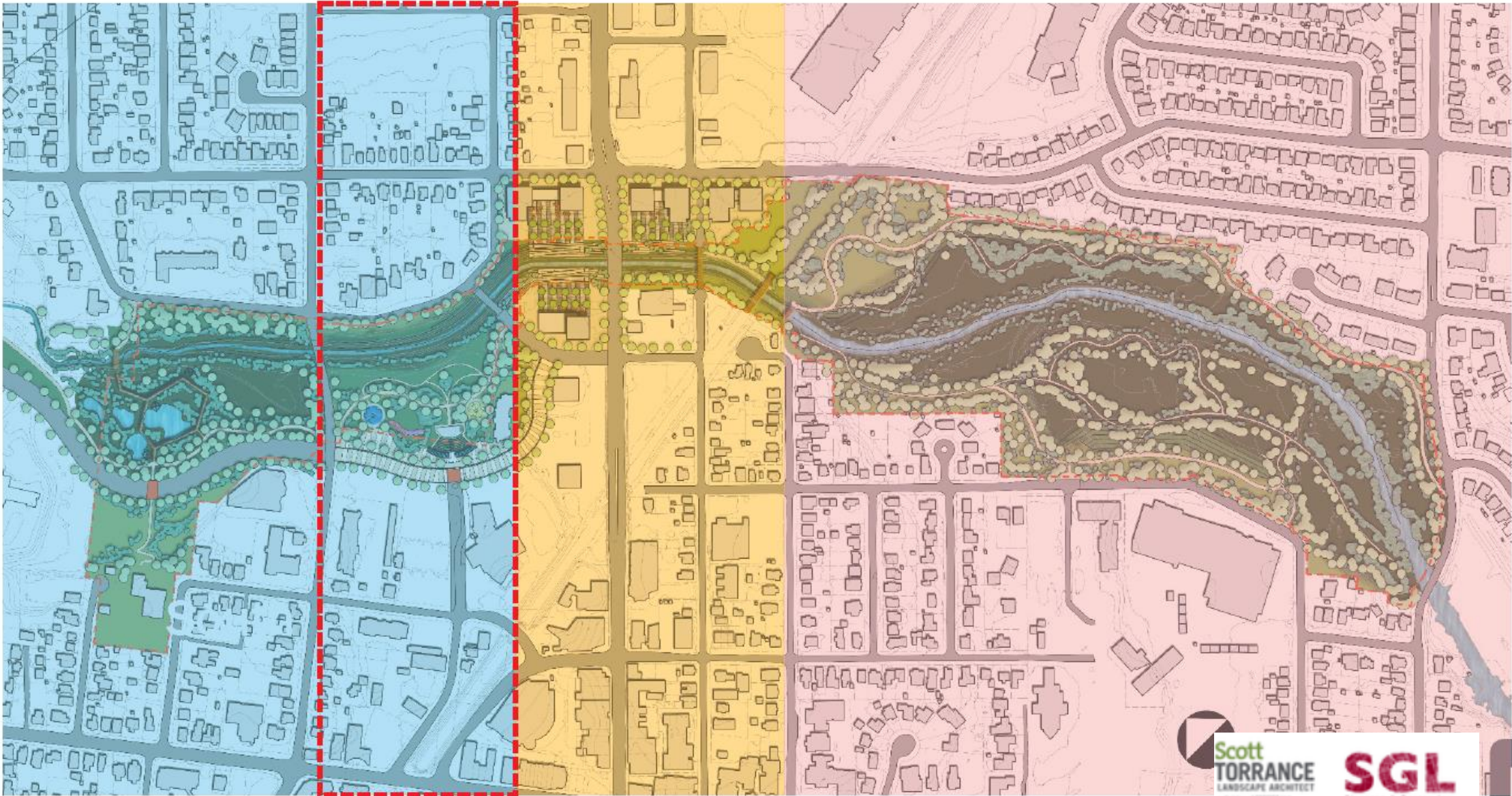
# MASTERPLAN

WETLANDS MEADOW PARK

ROSALEA PARK

URBAN GATEWAY

SOUTH RIVERWALK TRAILS





Our  
Partner



**TAKE CARE OF WHERE YOU LIVE**



**SAFEGUARDING AGAINST FLOOD RISKS**



# Environmental Assessment (EA)





# HOW DO WE GET THERE?



## THE PAST

Historic flooding, limited development opportunities in the downtown core



## THE PRESENT

Continued feasibility studies supported by Clean Water and Wastewater Fund



## THE FUTURE

Remove SPA designation, add public green space, unlock economic potential

OPPORTUNITIES FOR LONG-TERM PARTNERSHIP



# ALIGNED OBJECTIVES

## RESILIENCY

Address climate change and eliminate existing flood risk. Promote sustainable development while creating safe and healthy communities.

## SUSTAINABLE MOBILITY

Promote higher order transit, active transportation, and transit-supported development.

## URBAN GROWTH & ECONOMIC DEVELOPMENT

Create a vibrant downtown by providing a catalyst to intensify housing, commercial and office opportunities.











**Flood control**

**Resilience**

**Liveability**

**Redevelopment**

**Sustainability**

**Strong public realm**

**Healthy Development**

**Revitalization**

**Public infrastructure**

**Sustainable mobility**

**Climate Change Mitigation**

**Placemaking**

**Intensification**



# Thank You

[www.brampton.ca/riverwalk](http://www.brampton.ca/riverwalk)

