Lower Don Lands

Lower Don Lands Presentation Overview

1. Flood Protection: Lower Don Lands Don River Flood Protection for the Port Lands

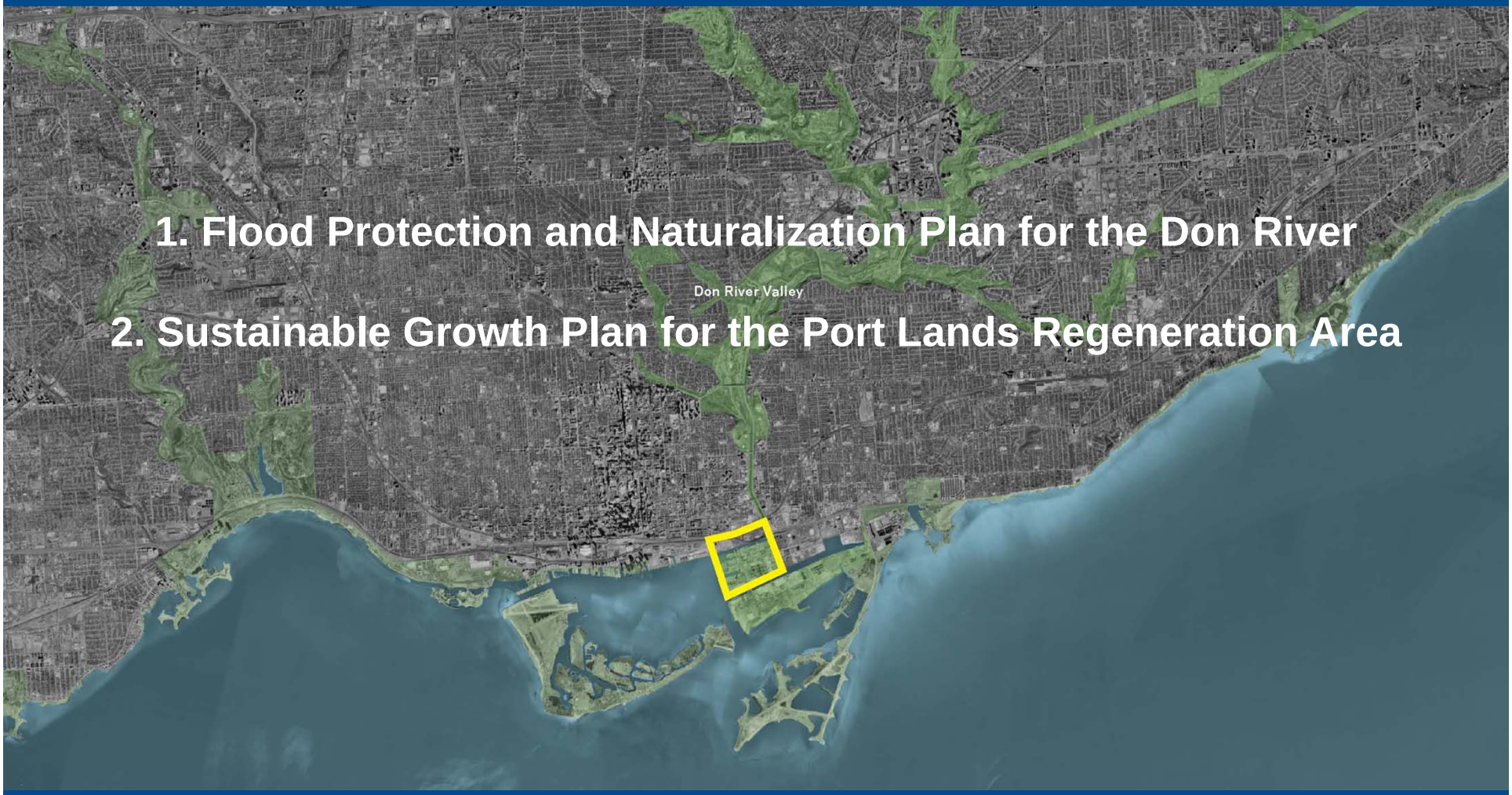
2. City Building: Sustainable Growth of the Lower Don Lands District defined by the Don River Mouth

3. Approval Review: Review of Municipal and Provincial Approvals Granted Q2 2010

4. Current Work with Stakeholders post DMNP EA submission

5. Next Steps: Business and Implementation Plan

Context


1. Flood Protection and Naturalization Plan for the Don River
Don River Valley
2. Sustainable Growth Plan for the Port Lands Regeneration Area

Flood Risk and the Need for Flood Protection

In 1954, Hurricane Hazel caused extensive damage along the Don and Humber Valleys, pointing to the need for a restructuring of the relationship between Toronto and the Don River.

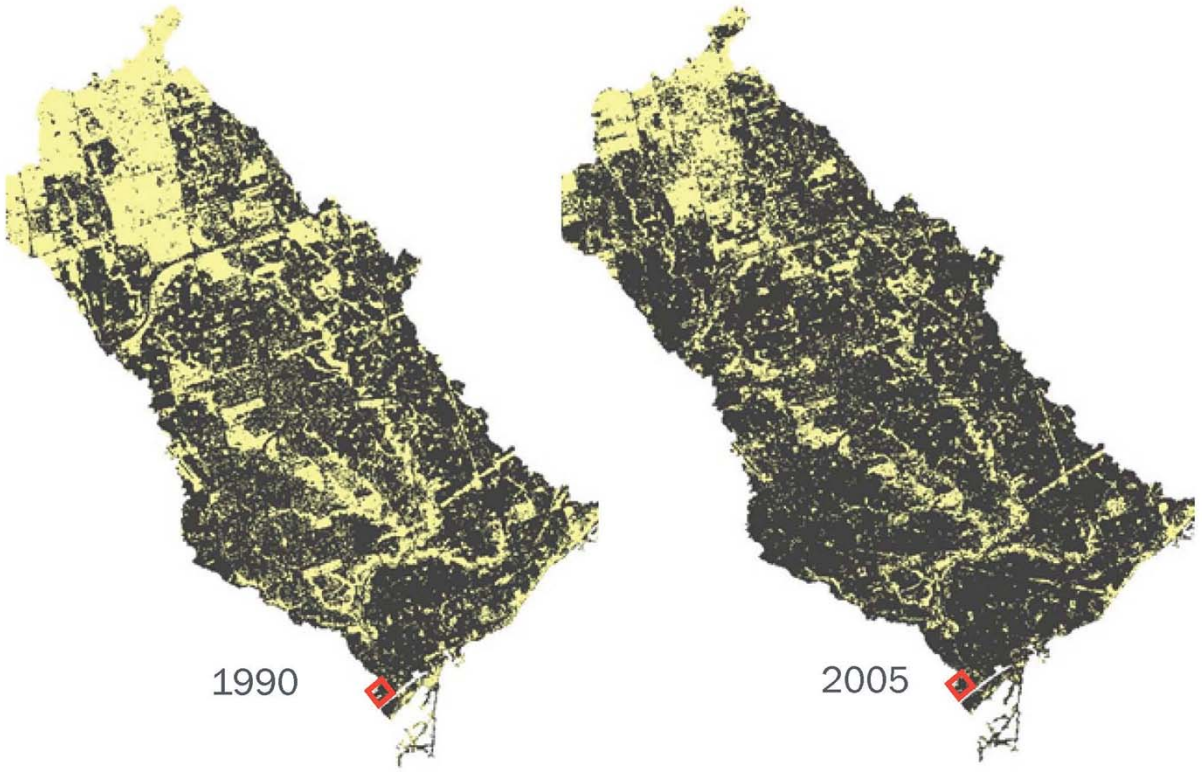
Flood Risk and the Need for Flood Protection

Understanding the Don River

In the 1890's, due to fear of disease and the need for new industrial land, Toronto began to fill the marsh. In the 1920's the Don was diverted into the right-angled hard-edged Keating Channel and its natural mouth was filled in

Understanding the Don River

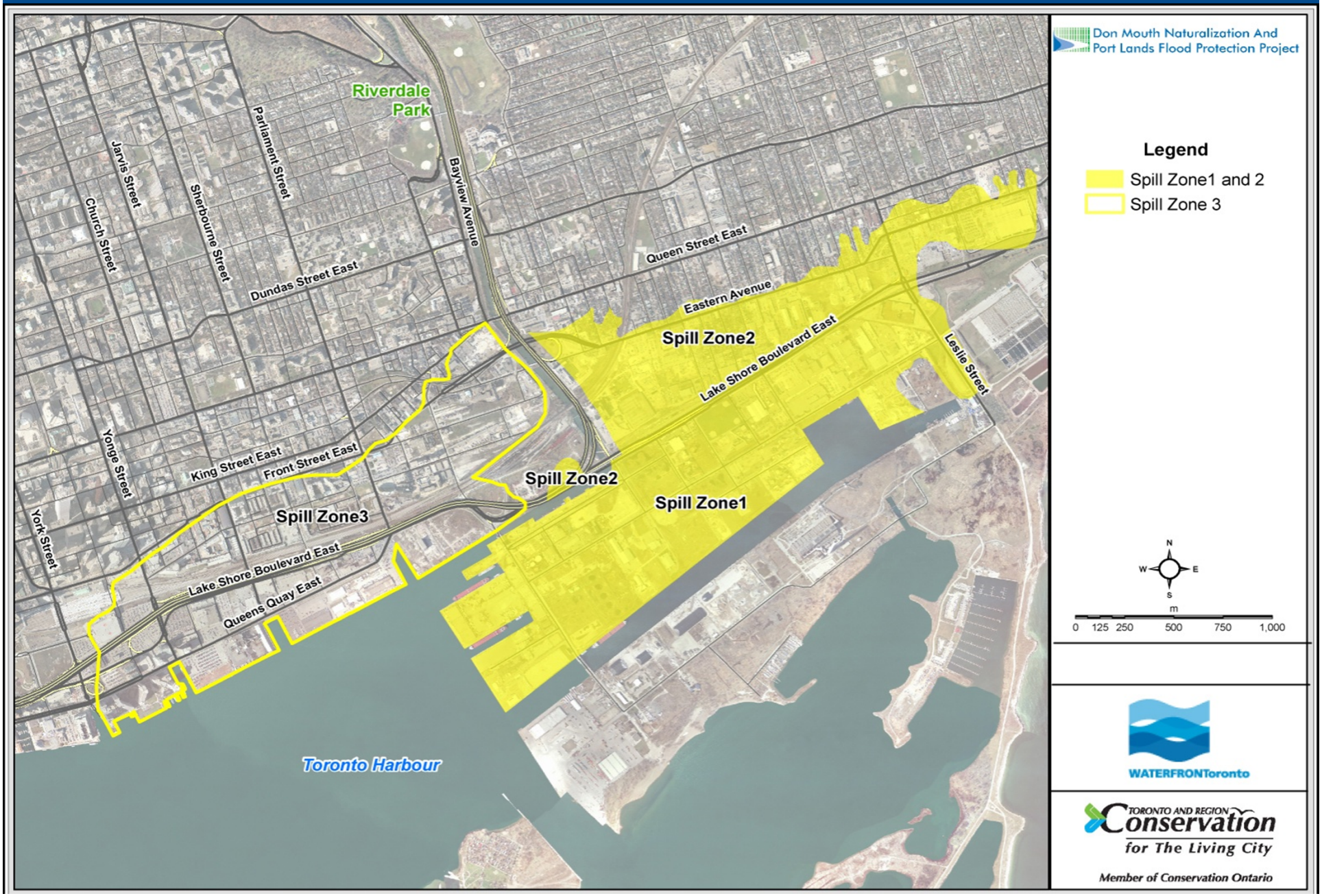
Impacts of urbanization on the Don River:



The Don River Watershed: 1990-2005

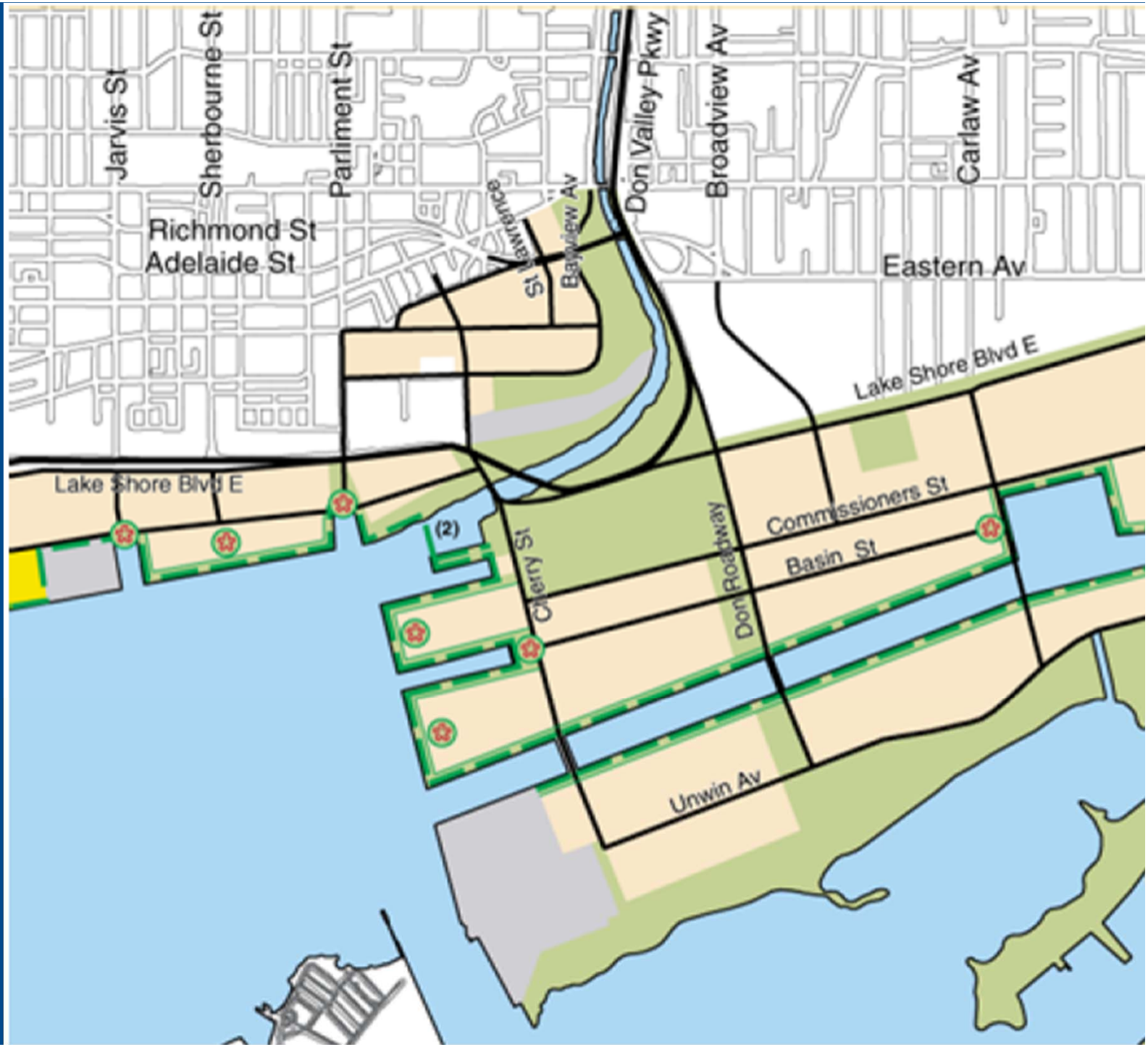
Impervious surface
Pervious surface
Project Site

Flood Zones

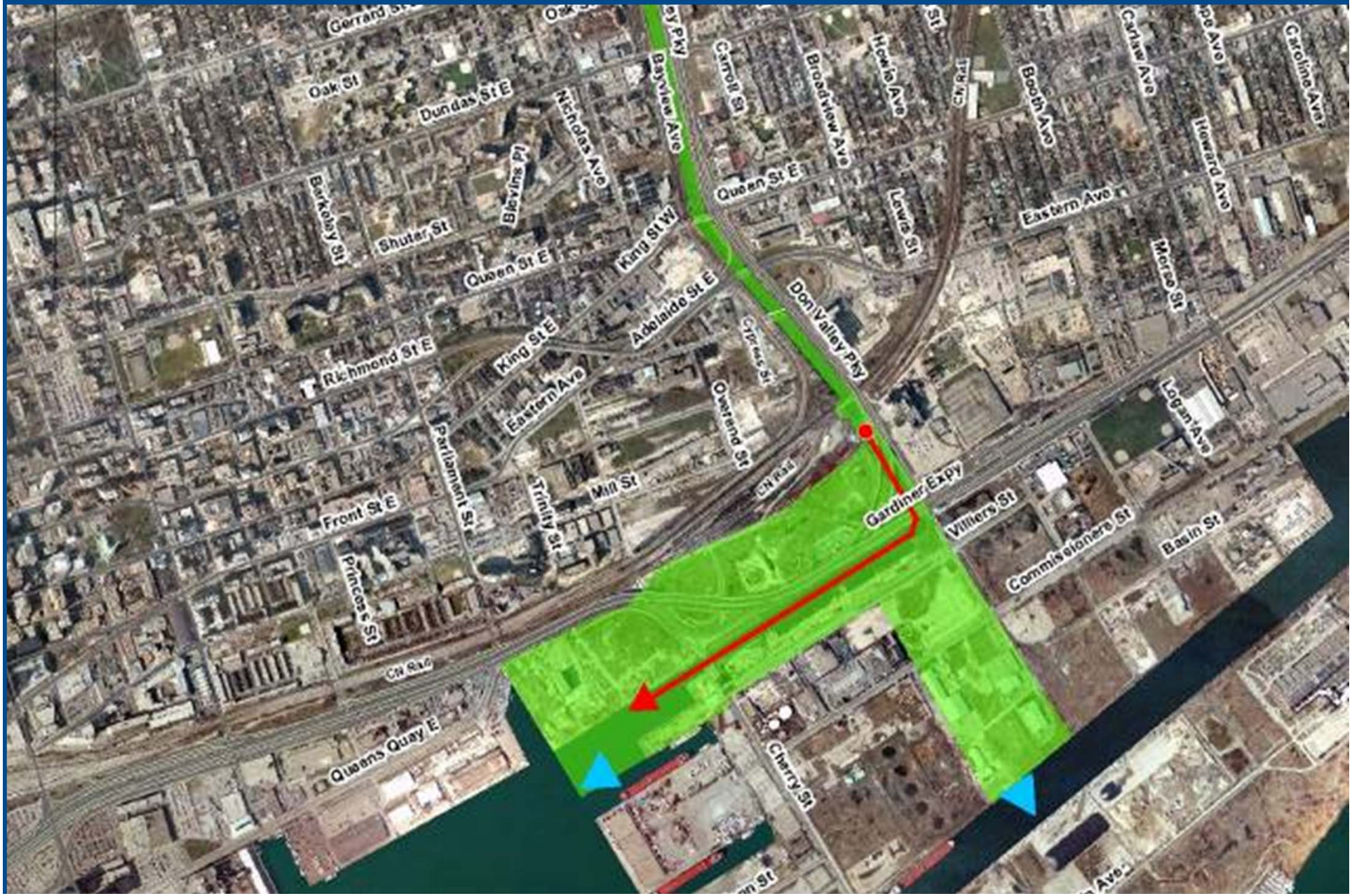

Don Mouth Naturalization And Port Lands Flood Protection Project
Legend
Spill Zone1 and 2
Spill Zone 3
Riverdale Park
Jarvis Street
Church Street
Sherbourne Street
Parliament Street
Bayview Avenue
Dundas Street East
Queen Street East
Eastern Avenue
Lake Shore Boulevard East
Leslie Street
Spill Zone2
Spill Zone2
Spill Zone1
Spill Zone3
Yonge Street
King Street East
Front Street East
York Street
Lake Shore Boulevard East
Queens Quay East
Toronto Harbour
N
W
E
S
m
0 125 250 500 750 1,000
WATERFRONTToronto
TORONTO AND REGION Conservation
for The Living City
Member of Conservation Ontario

2001

Central Waterfront Secondary Plan



2006 Approved EA Terms of Reference For DMNP EA



Evaluation of River Alternatives

Table 5-24 Summary of Step 4 Evaluation by Objective

Objective	Alternative 2	Alternative 3	Alternative 4W	Alternative 4S	Alternative 4WS
Naturalization	Least preferred	Least preferred	Moderately preferred	Moderately preferred	Most preferred
Flood Protection	Least preferred	Least preferred	Most preferred	Most preferred	Most preferred
Operational Management and Constructability	Most preferred	Most preferred	Moderately preferred	Least preferred	Least preferred
Integration with Infrastructure	Most preferred	Most preferred	Least preferred	Least preferred	Moderately preferred
Recreational and Cultural Opportunities	Most preferred	Moderately preferred	Moderately preferred	Least preferred	Most preferred
Co-ordination with Other Planning Efforts	Moderately preferred	Least preferred	Moderately preferred	Least preferred	Most preferred
Consistency with TWRC Sustainability Framework	Moderately preferred	Most preferred	Least preferred	Most preferred	Most preferred
Summary	***Moderately preferred***	***Moderately preferred***	***Moderately preferred***	***Least preferred***	***Most preferred***

Lower Don Lands 4WS Preferred: For Development Yields, Flood Protection and Economic Valuation of Open Space

Table 5-24 Summary of Step 4 Evaluation by Objective

Objective	Alternative 2	Alternative 3	Alternative 4W	Alternative 4S	Alternative 4WS
Naturalization	Least preferred	Least preferred	Moderately preferred	Moderately preferred	Most preferred
Flood Protection	Least preferred	Least preferred	Most preferred	Most preferred	Most preferred
Operational Management and Constructability	Most preferred	Most preferred	Moderately preferred	Least preferred	Least preferred
Integration with Infrastructure	Most preferred	Most preferred	Least preferred	Least preferred	Moderately preferred
Recreational and Cultural Opportunities	Most preferred	Moderately preferred	Moderately preferred	Least preferred	Most preferred
Co-ordination with Other Planning Efforts	Moderately preferred	Least preferred	Moderately preferred	Least preferred	Most preferred
Consistency with TWRC Sustainability Framework	Moderately preferred	Most preferred	Least preferred	Most preferred	Most preferred
Summary	*Moderately preferred*	*Moderately preferred*	*Moderately preferred*	*Least preferred*	*Most preferred*

LOWER DON LANDS (4WS) ECONOMIC BENEFITS:

$480 million increase in land value in Lower Don Lands
$300 million increase in land value in adjacent neighbourhoods (Eastern Avenue employment district and eastern Port Lands)
$55 million in annual tax revenue from Lower Don Lands development
$6.8 billion in private investment leveraged in Lower Don Lands

Port Lands present an incredible opportunity over 1000 acres

Challenges:

Flooding

- Provincial policies require flood proofing for any development
- OP amendment approved by Council August 2010
- 3 year EA process to be finalized April/May

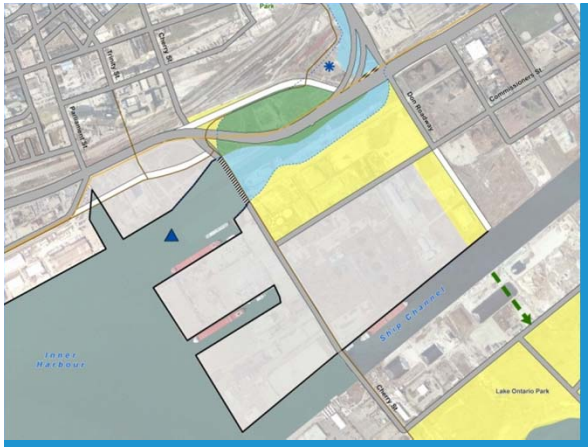
Servicing and Environmental

- Current Port Lands value only $20 M
- Hundreds of millions of investment in infrastructure required ~~tial~~
- Land is currently fill and heavily contaminated

Market

- Wholesale approach would require large upfront payment to developer
- Bringing Port Lands to market at this time would cannibalize development on city owned lands EBF and WDL

Lower Don Lands 4WS



ALTERNATIVE 2

- Costly soil remediation of 480 Lakeshore
- Loss of prime development land on 480 (almost 100% of publicly owned land in North Keating)
- Taking of portion of Home Depot lands
- Gardiner columns and foundations require shoring and potentially to be rebuilt
- Relocation or major protection of high voltage Hydro One Infrastructure
- Buried pipelines
- Requires relocation of Lakeshore Boulevard.
- **Port Business Disruption: Moderate**
- **Cost: Highest**
- **Development Opportunity for Public Lands Lowest**

ALTERNATIVE 3

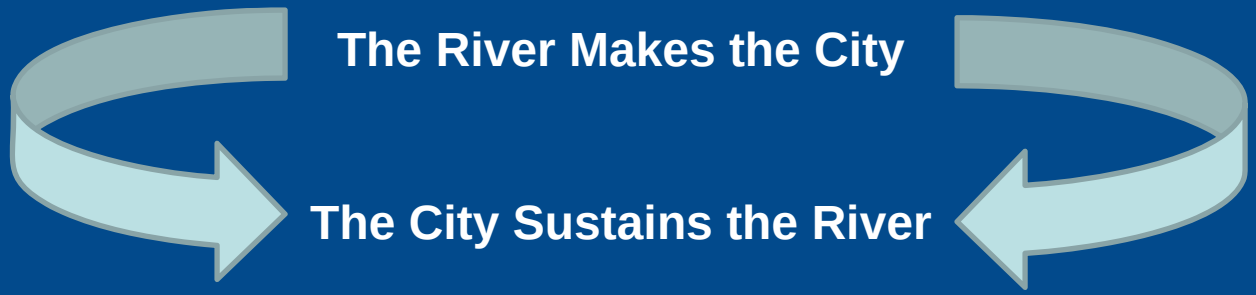
- Toronto Port Authority impeded by sediment spilling into Ship Channel
- Port Lands Energy Centre water filled with turbidity – impeding the workings of the PEC
- All development removed from west side of Don Roadway (publically owned lands)
- **Port Business Disruption: Highest**
- **Cost: Moderate**
- **Development Opportunity for Public Lands: Moderate**

ALTERNATIVE 4WS _PREFERRED

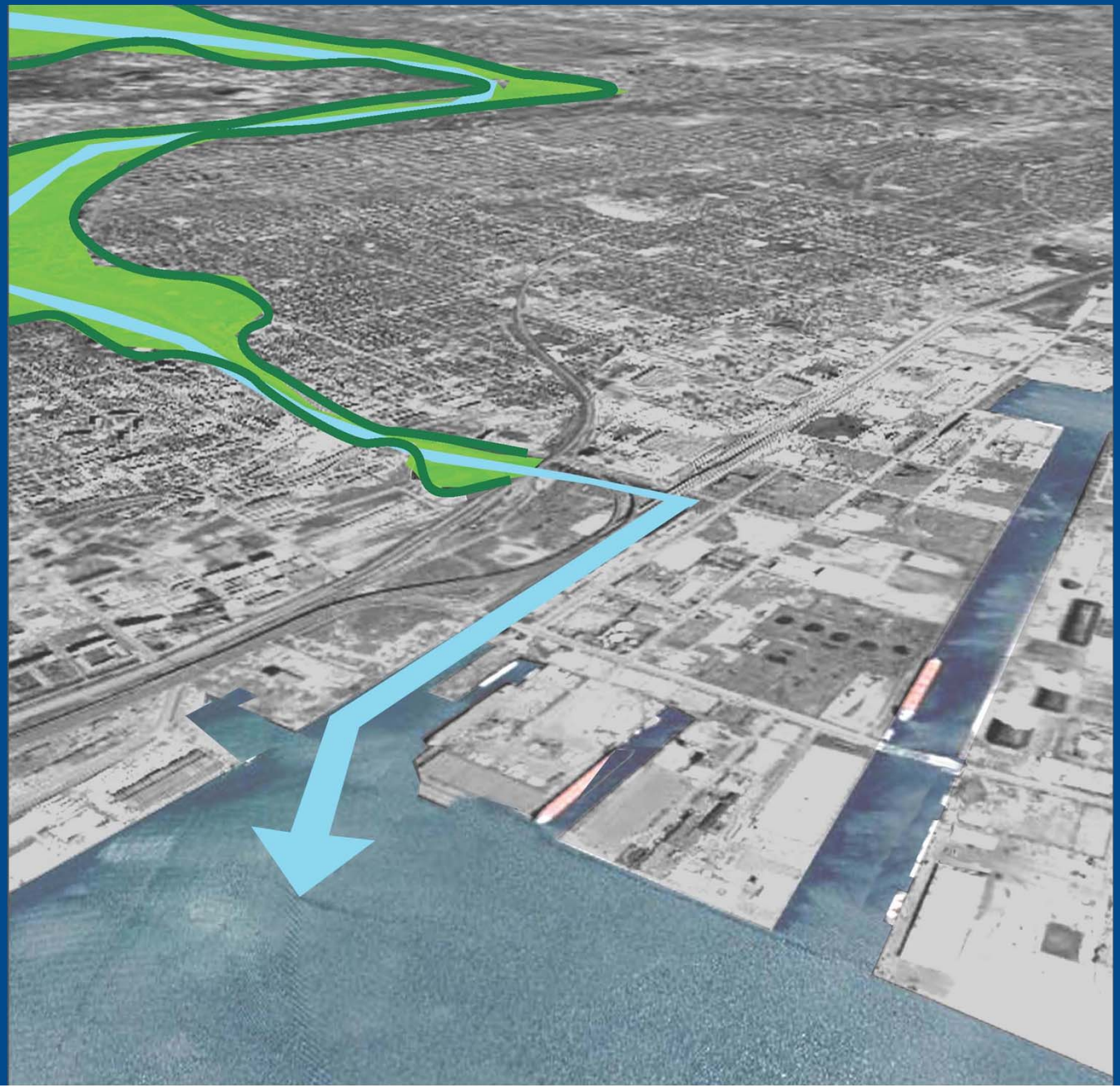
- Comprehensive flood protection
- Maintain development potential
- Benefit: Creates 5,200 linear meters of waterfront property for development vs. 3,050 linear metres in other options
- Robust Naturalization of the Don River as a catalyst to redevelopment
- **Port Business Disruption: Lowest**
- **Cost: Lowest**
- **Development Opportunity for Public Lands: Highest**

Environmental Assessments Affecting the Lower Don Lands Area

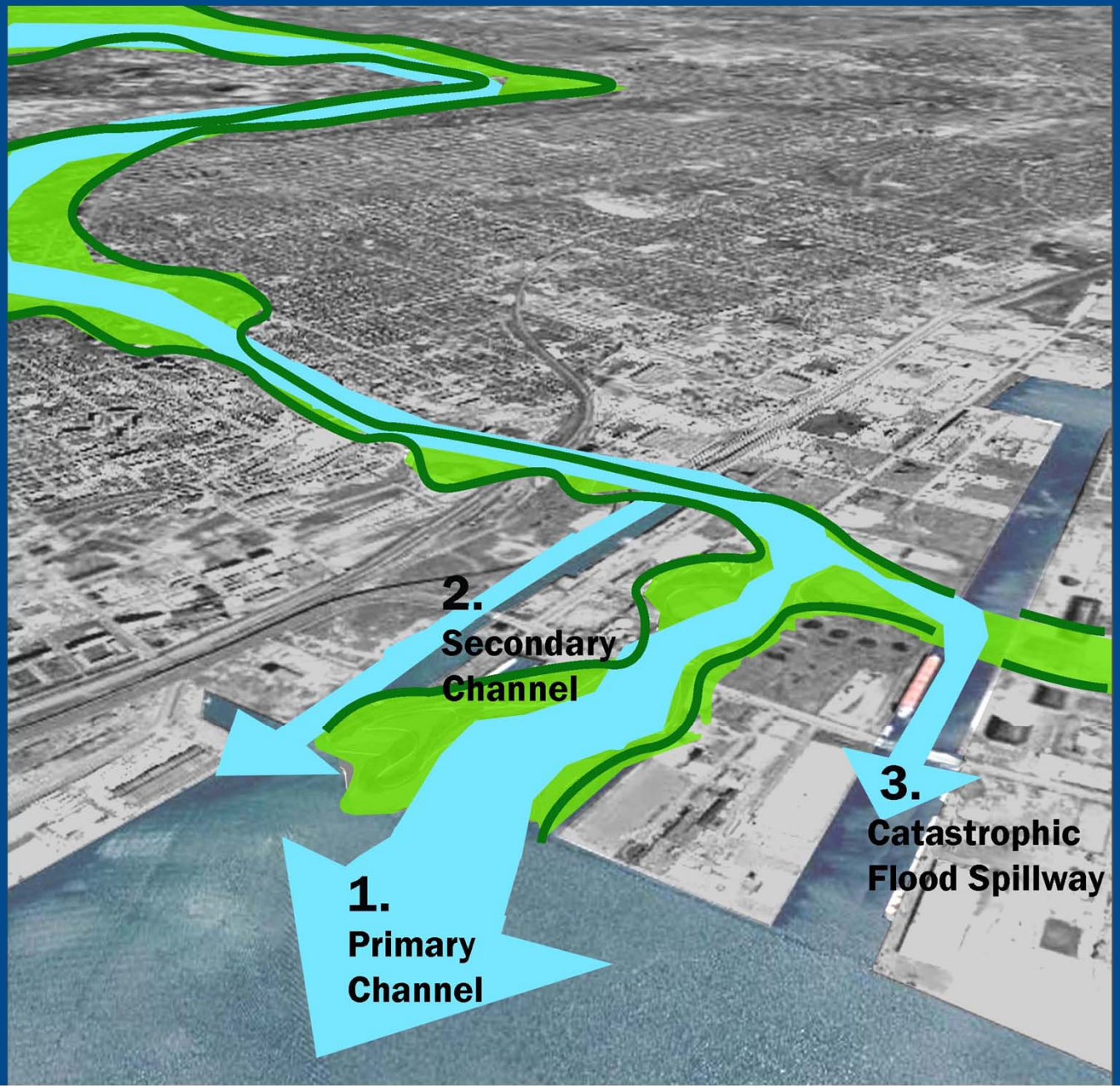
International Design Competition, Winning Proposal, 2007


The River Makes the City
The City Sustains the River

Existing Flow Conditions



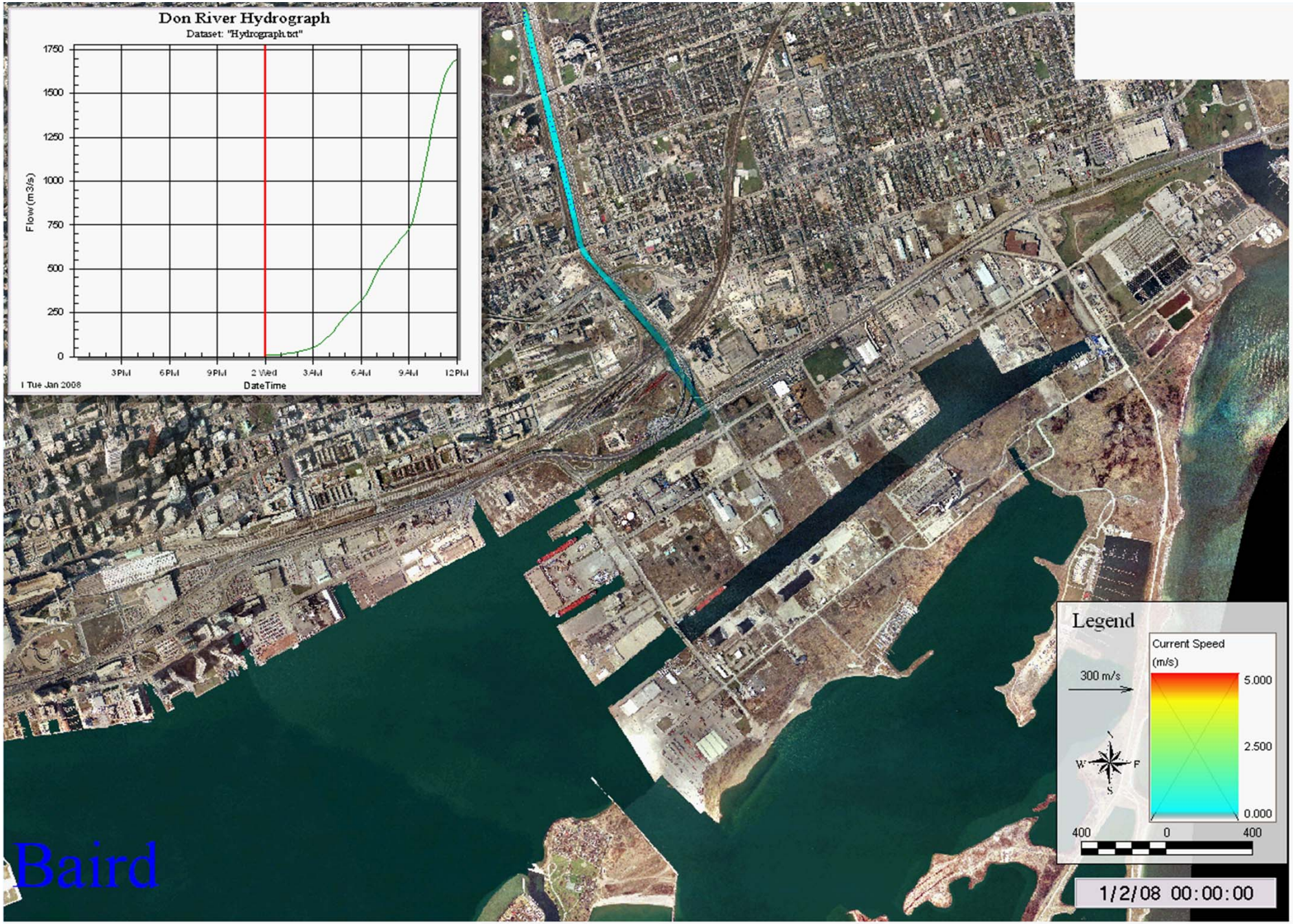
Three-Tier Flood Protection Solution in Don Mouth EA

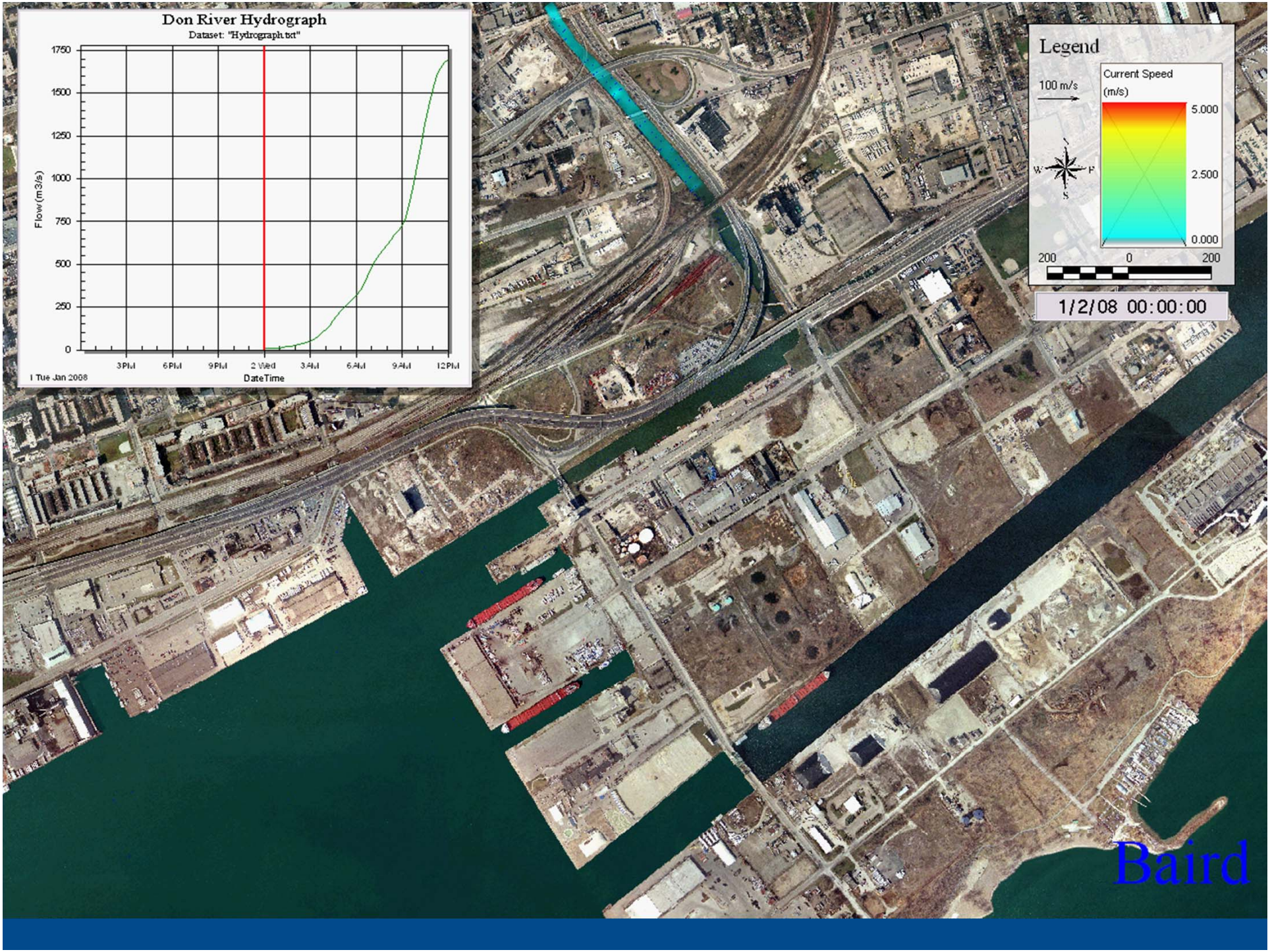


The River

The Lower Don Lands plan creates a floodplain in which the river is allowed a range of flexible dynamism as it would have in nature, while the city is fully protected from flooding. Designing for these two goals at once would not have been possible without the use of current computer modeling technologies.

The two computer models that follow show how the before and after the building of the river at the regulatory flood


Don River Hydrograph
Dataset: "Hydrograph.txt"
Flow (m3/s)
1750
1500
1250
1000
750
500
250
0
3PM
6PM
9PM
2 Wed
3AM
6AM
9AM
12PM
1 Tue Jan 2008
DateTime
Legend
Current Speed
(m/s)
300 m/s
5.000
2.500
0.000
400
0
400
1/2/08 00:00:00
Baird


Don River Hydrograph
Dataset: "Hydrograph.txt"
Flow (m3/s)
1750
1500
1250
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750
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250
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3PM
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9PM
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DateTime
Legend
100 m/s
Current Speed
(m/s)
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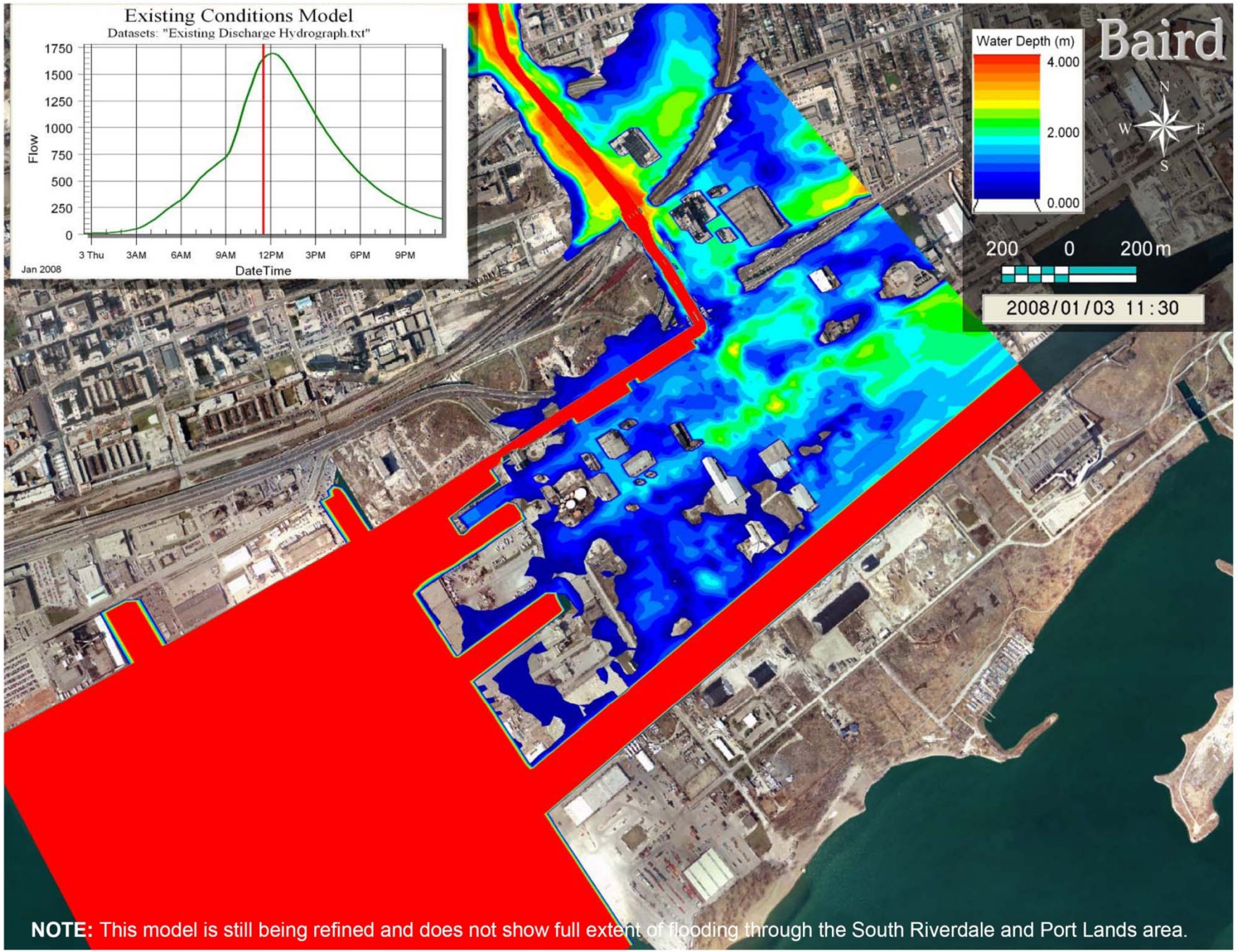
1/2/08 00:00:00
Baird


Existing Conditions Model
Datasets: "Existing Discharge Hydrograph.txt"
Flow
1750
1500
1250
1000
750
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3AM
6AM
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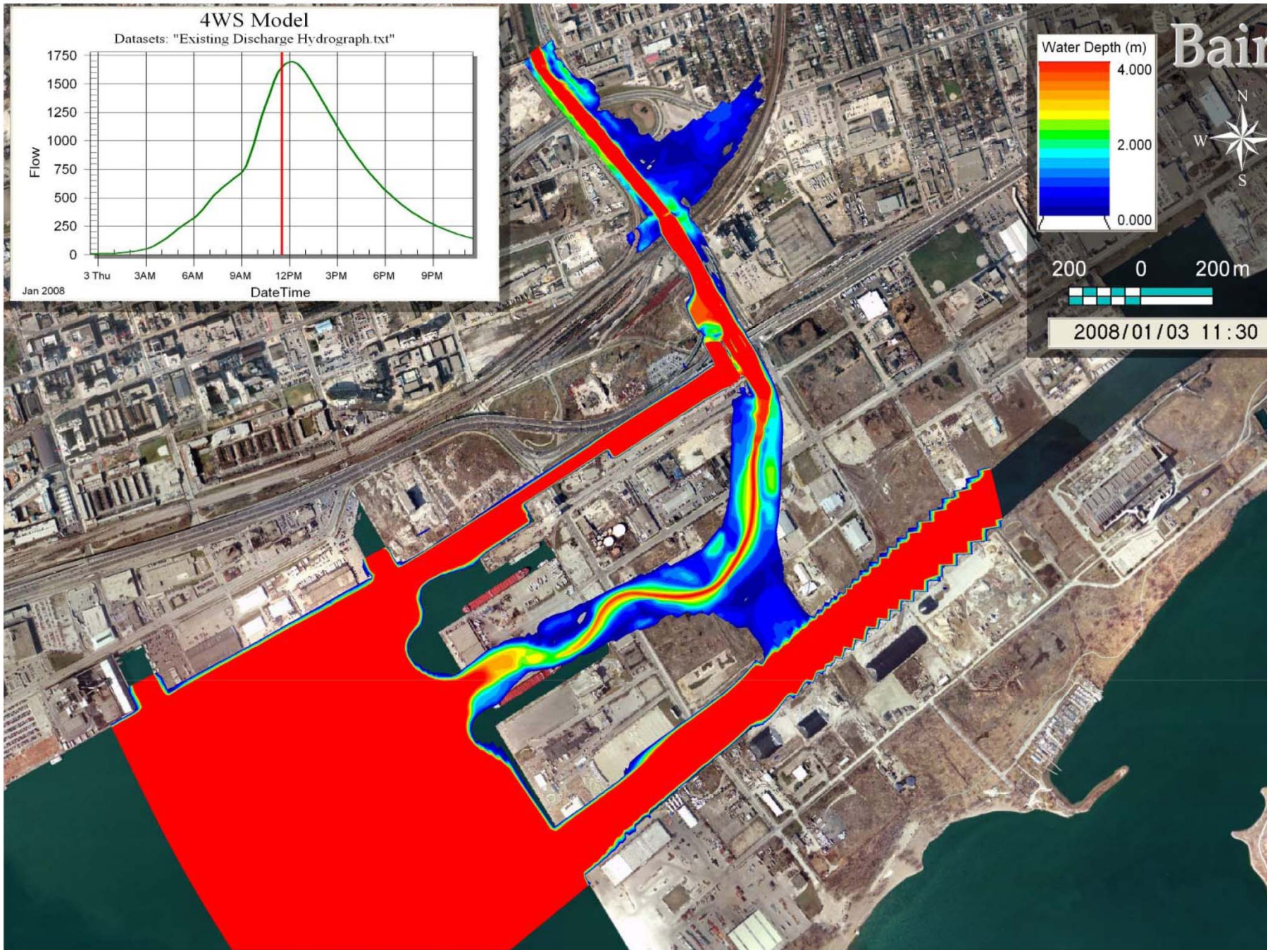
12PM
3PM
6PM
9PM
Jan 2008
DateTime
Water Depth (m)
4.000
2.000
0.000
Baird
N
W
E
S
200
0
200 m
2008/01/03 11:30
NOTE: This model is still being refined and does not show full extent of flooding through the South Riverdale and Port Lands area.


4WS Model
Datasets: "Existing Discharge Hydrograph.txt"
Flow
1750
1500
1250
1000
750
500
250
0
3 Thu
3AM
6AM
9AM
12PM
3PM
6PM
9PM
DateTime
Jan 2008
Water Depth (m)
4.000
2.000
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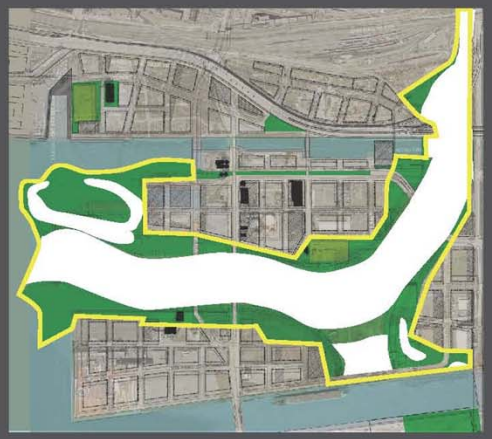
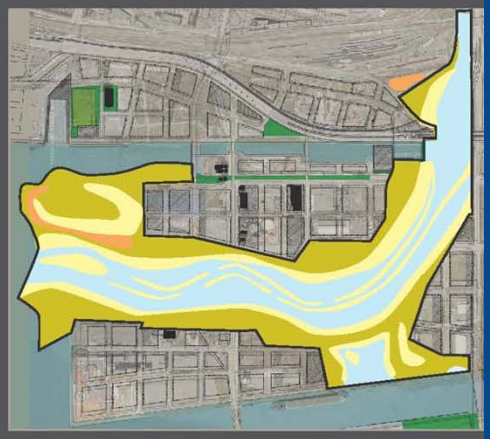
200 m
2008/01/03 11:30

Flood Protection and Naturalization Relationships





Limited Accessibility due to:

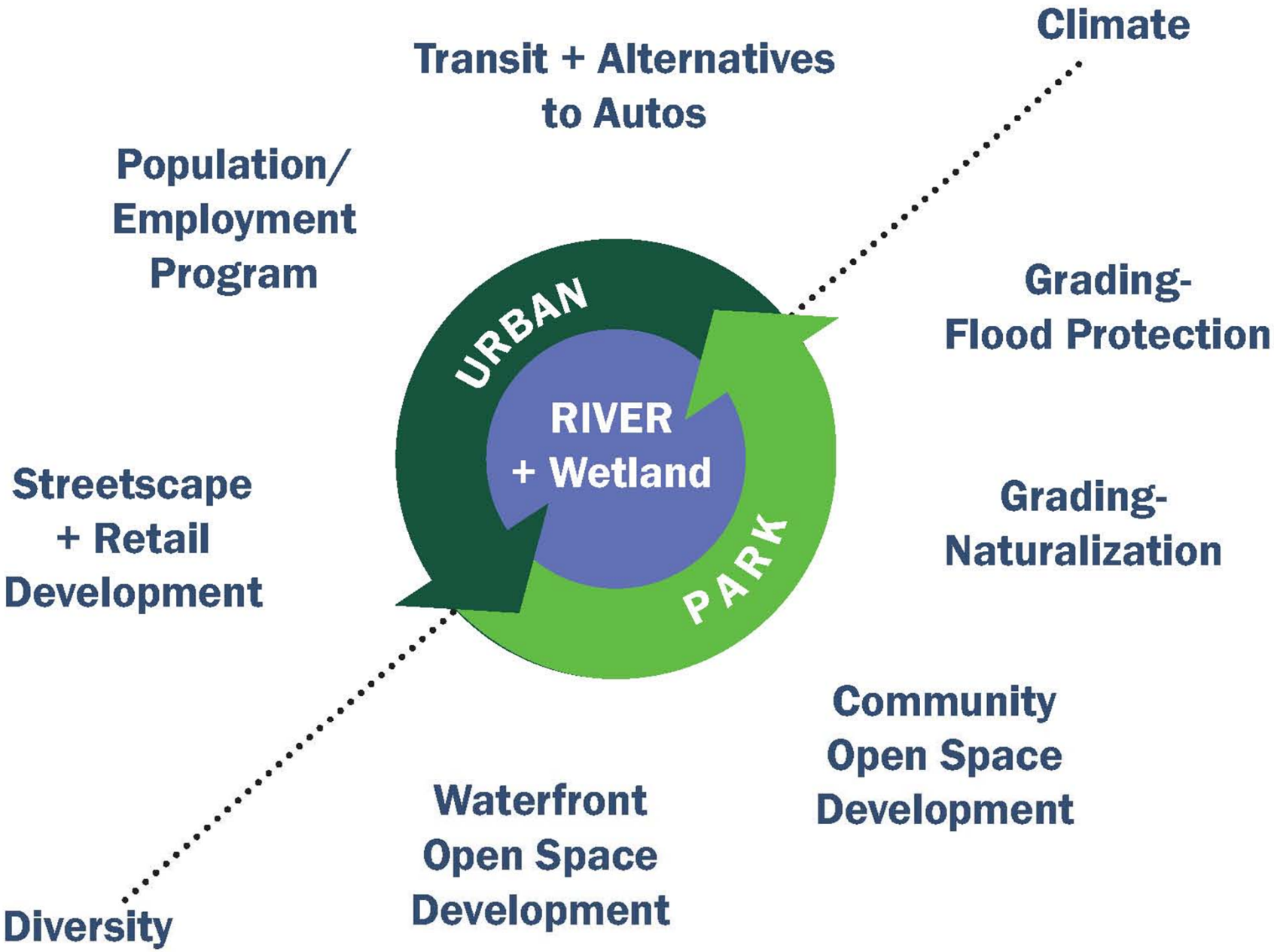
- **Water Bodies and Wetlands**
- **Naturalized Vegetation**
- **Steep Slopes**

Landscape Communities

- Open Space
- Valley Slope
- Levee System
- Lake Connected Wetlands
- Seepage Wetlands
- Aquatic

Naturalized and Flood Protected Don River Mouth

River and City Relationship



Landscape as a Part of City-Building

The Lower Don Lands is part of the continuous landscape system of the Don River Valley. This natural feature influenced the form and growth of the City of Toronto.

Landscape as a Part of City-Building

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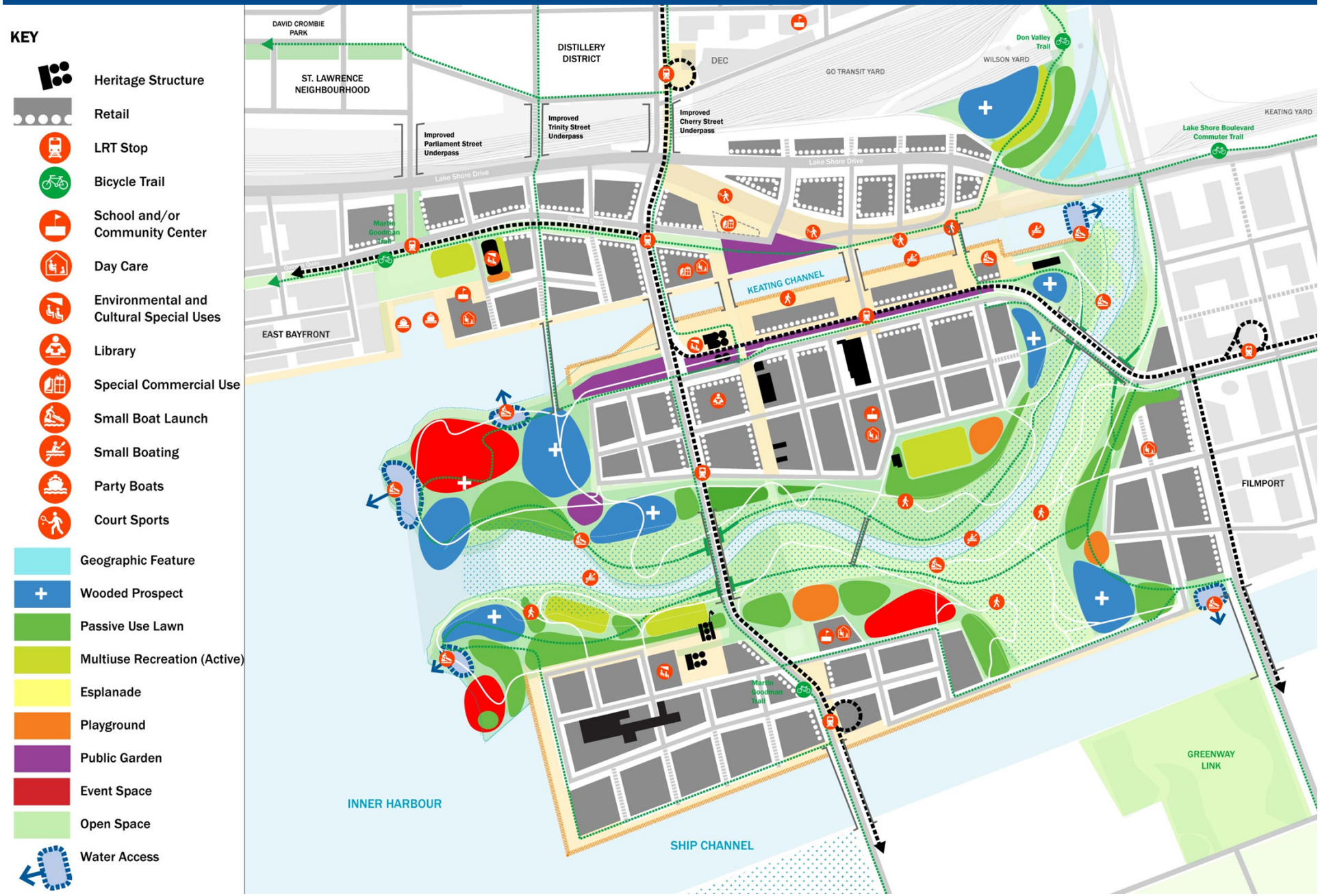
Landscape as a Part of City-Building

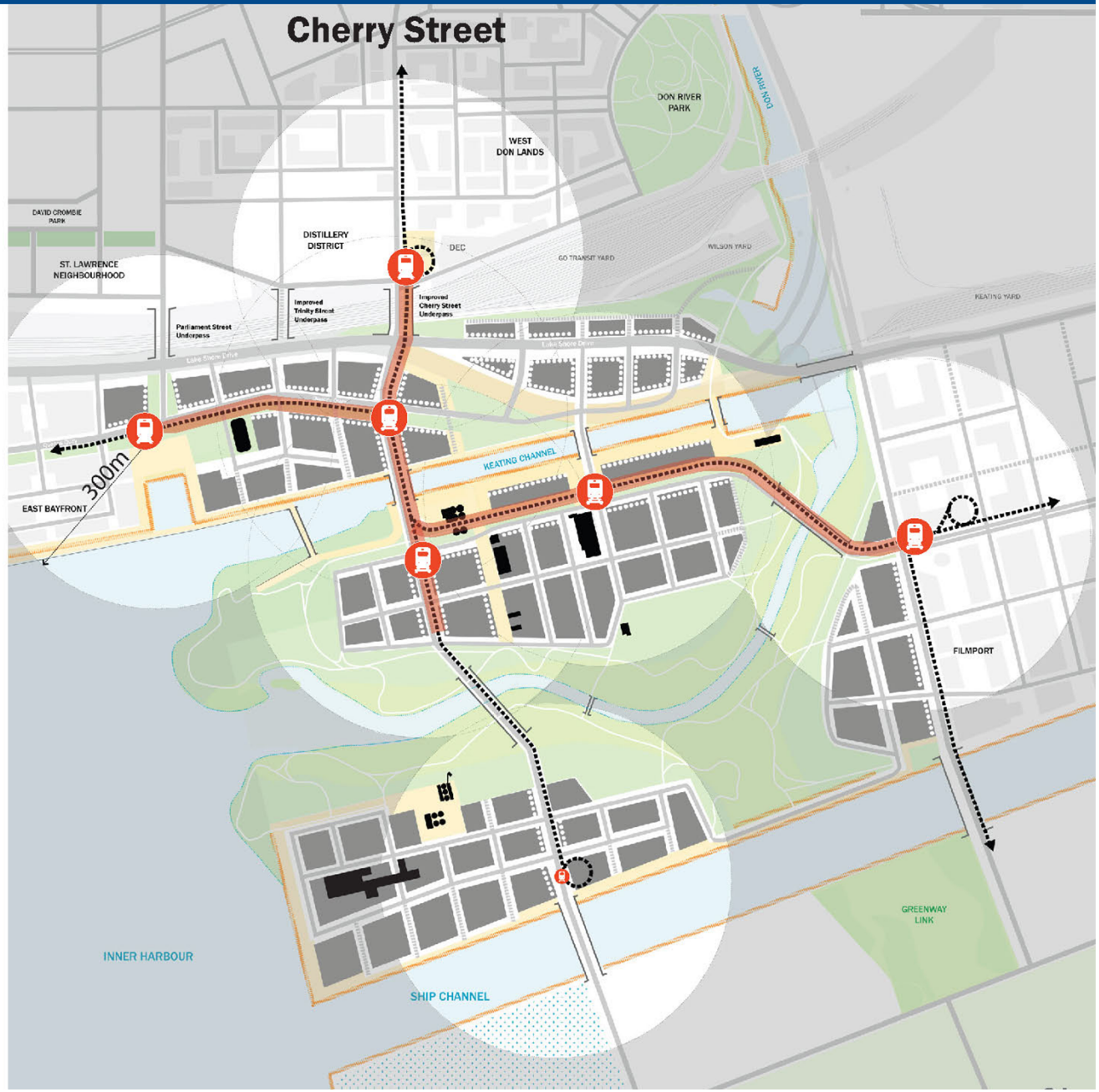
The Lower Don Lands is part of the continuous landscape system of the Don River Valley. This natural feature influenced the form and growth of the City of Toronto.

The City

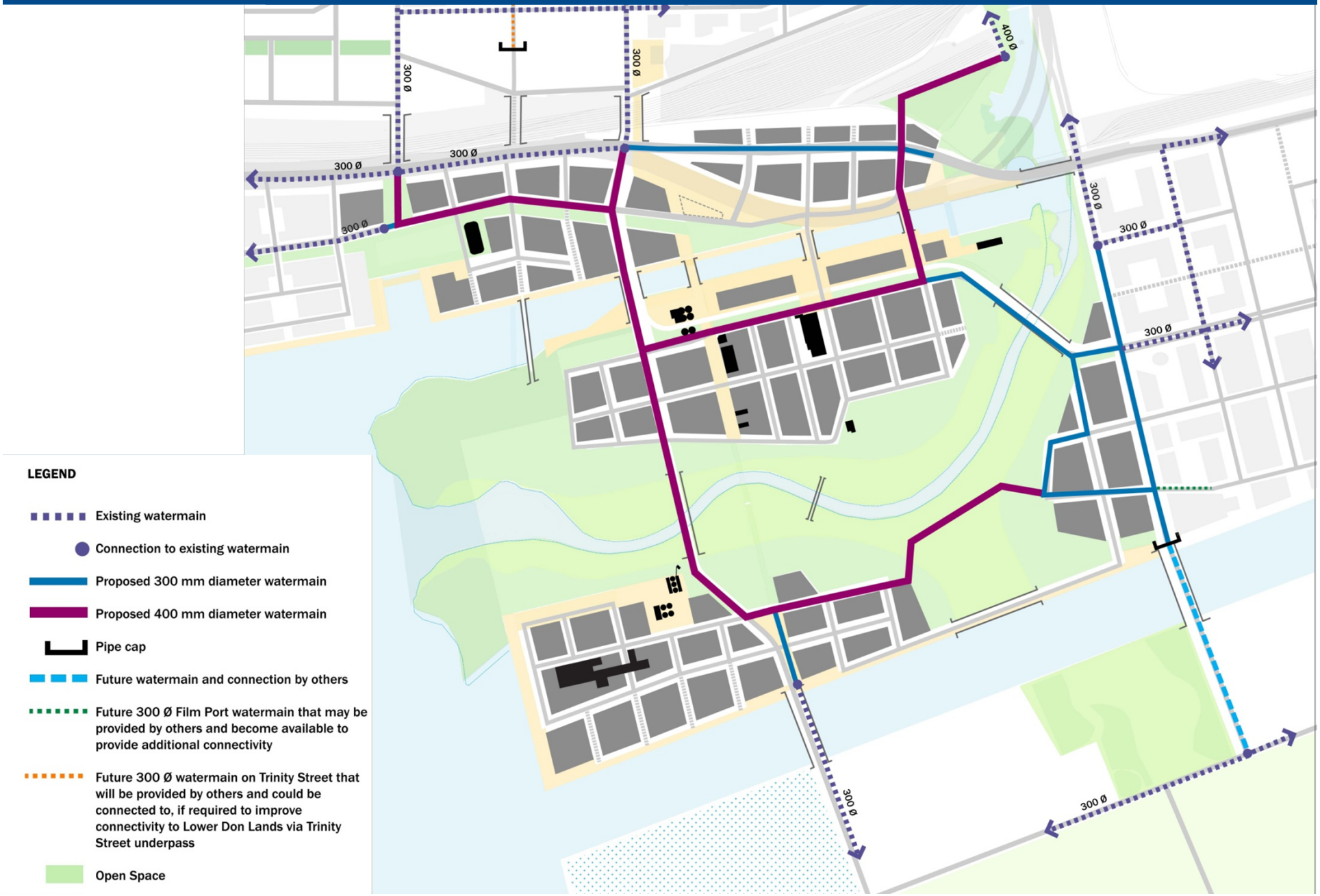
Comprehensive Neighborhood Plan



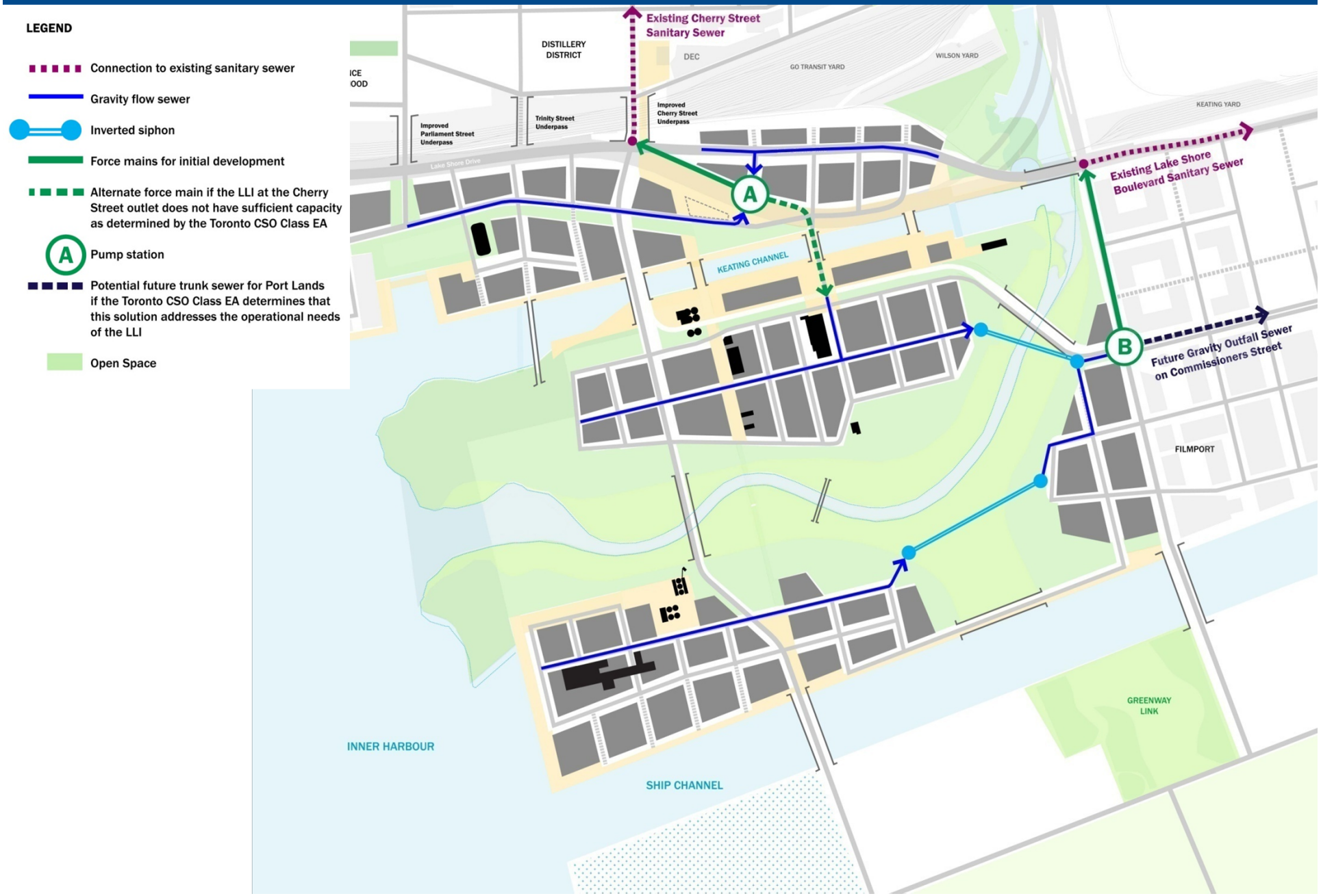
2. The LDL Municipal Class EA Master Plan and Keating Channel Precinct ESR



Water Servicing Plan



Sanitary Sewer Servicing Plan



Stormwater Management Plan

Compatibility between stormwater treatment and natural elements

Clean water for reuse in natural elements

Meets regulatory requirements for stormwater quality

Community Services Plan

Parks and Open Space Plan

LEGEND

- Esplanade
- Woodland
- Passive Use Lawn
- Multiuse Recreation
- Pedestrian Path
- Bicycle Path
- Open Space

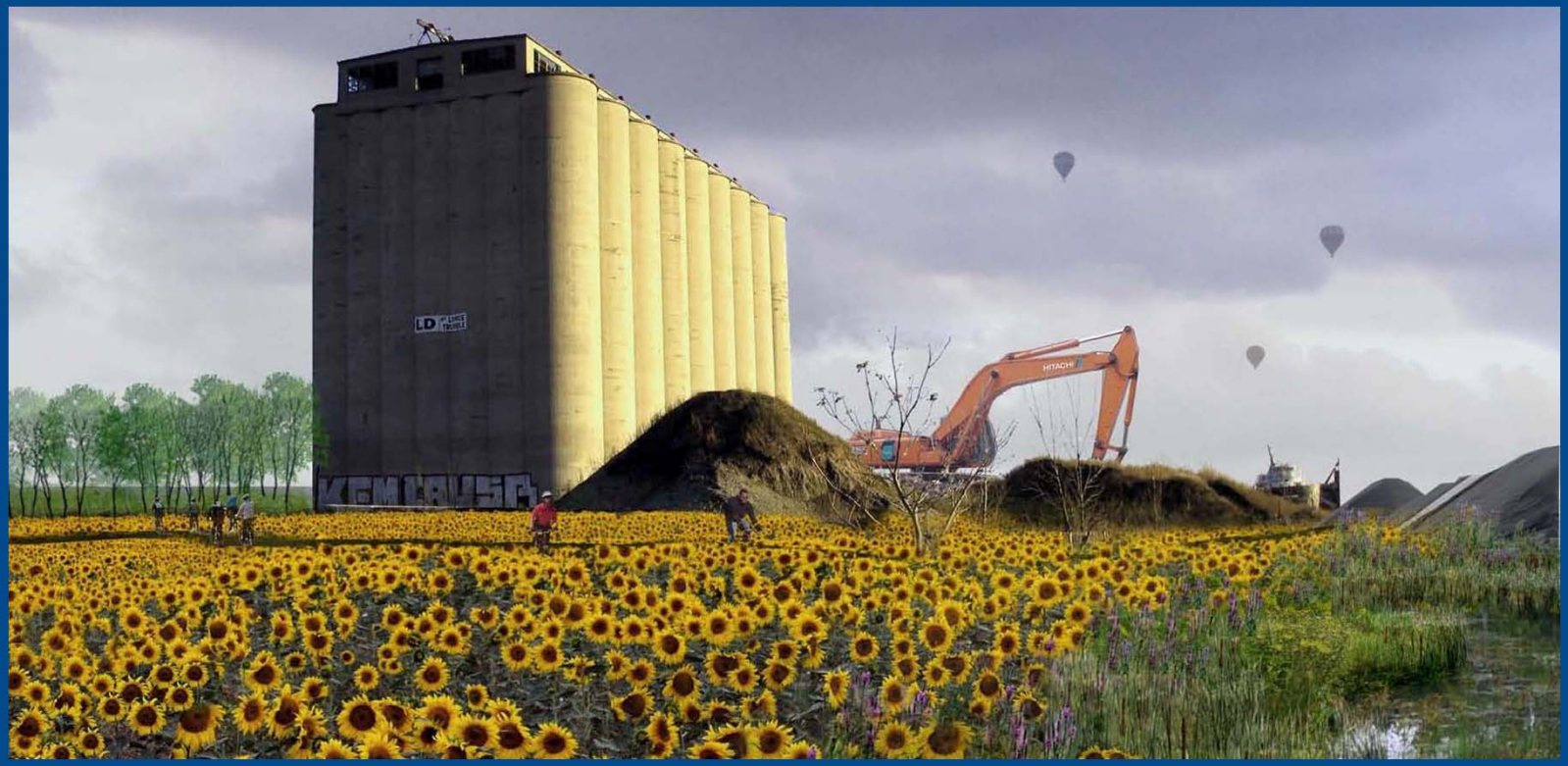
Lower Don Lands – Before

WATERFRONToronto

Lower Don Lands – Future

WATERFRONToronto

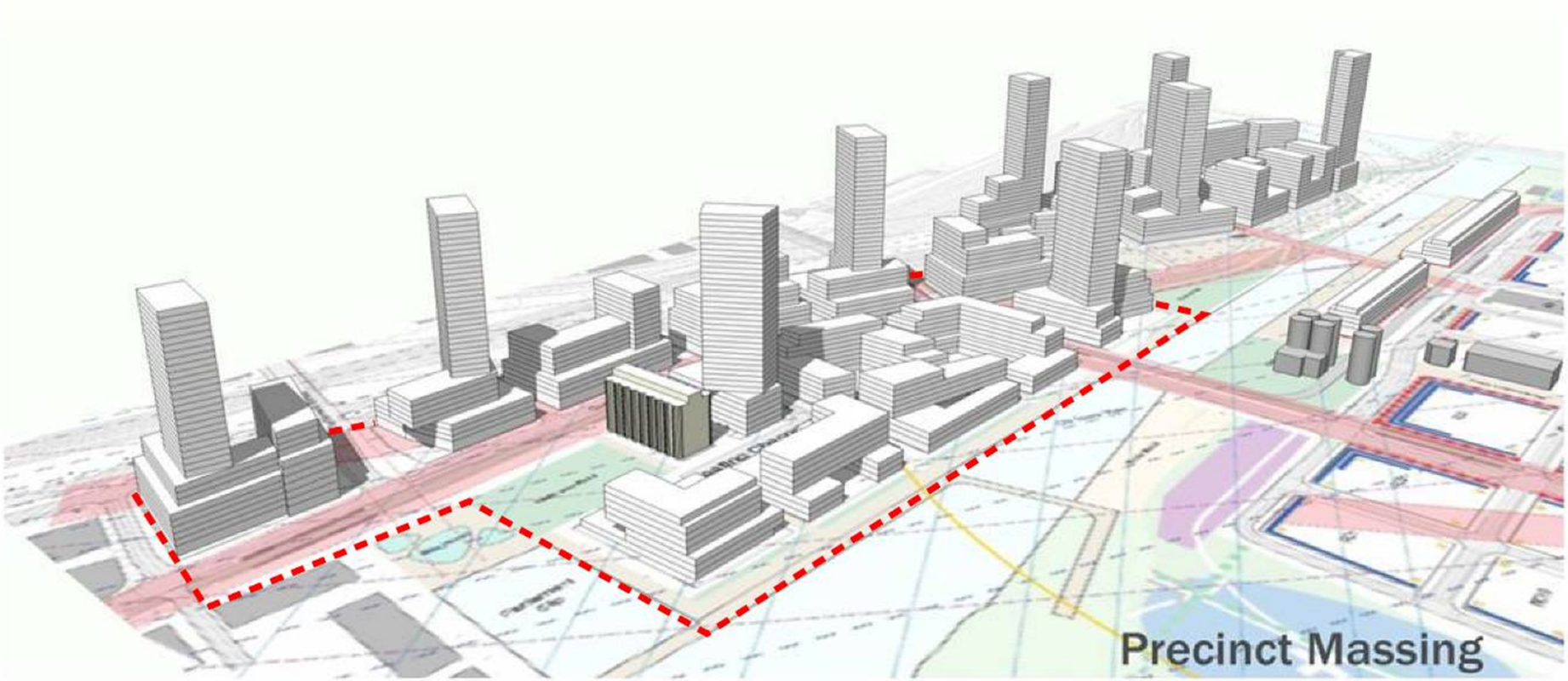
Integrated Systems



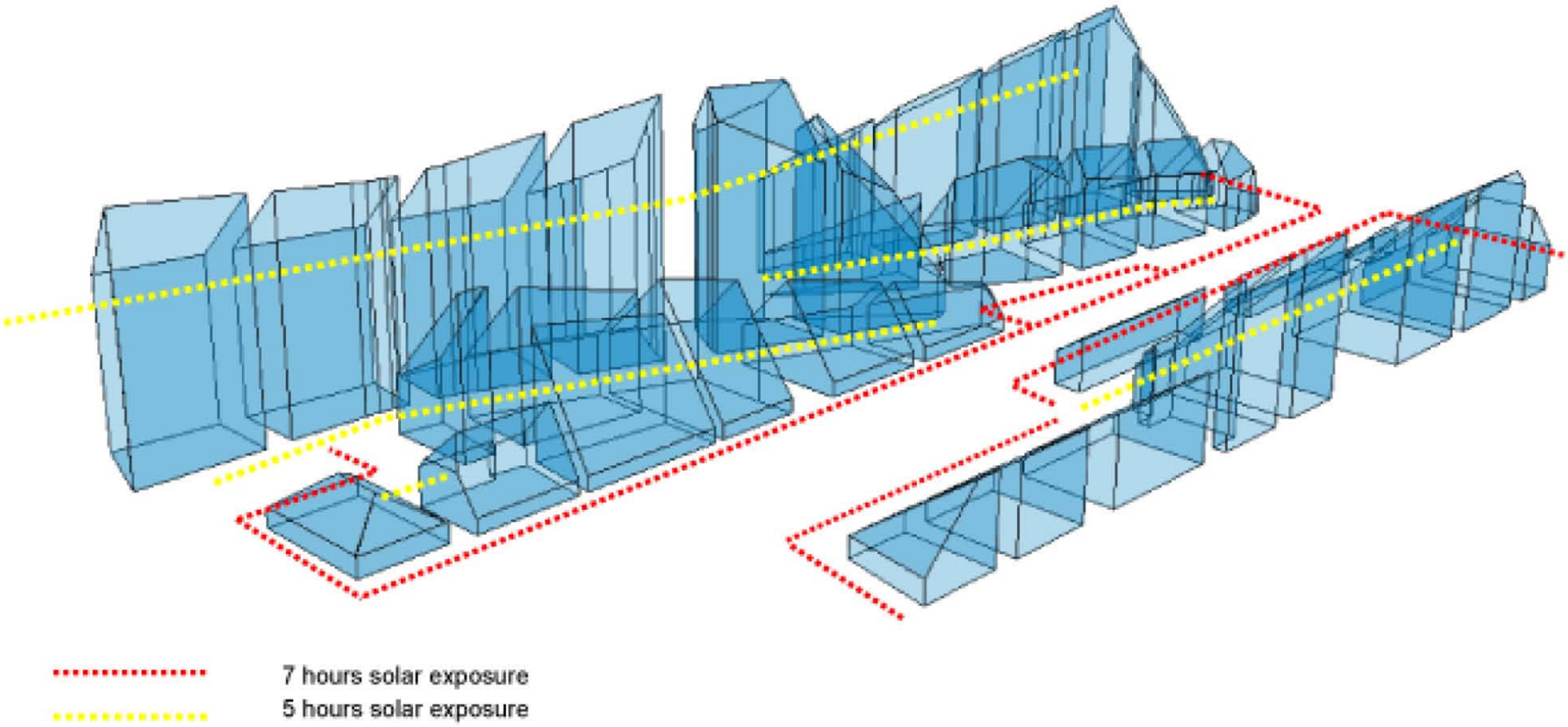
2. Clean rooftop collected stormwater supports wetlands and street trees

The proposed stormwater management plan cleans polluted runoff through bio-filtration, but also makes use of clean roof water as support for biological systems.

Keating Channel Precinct Plan Building Massing



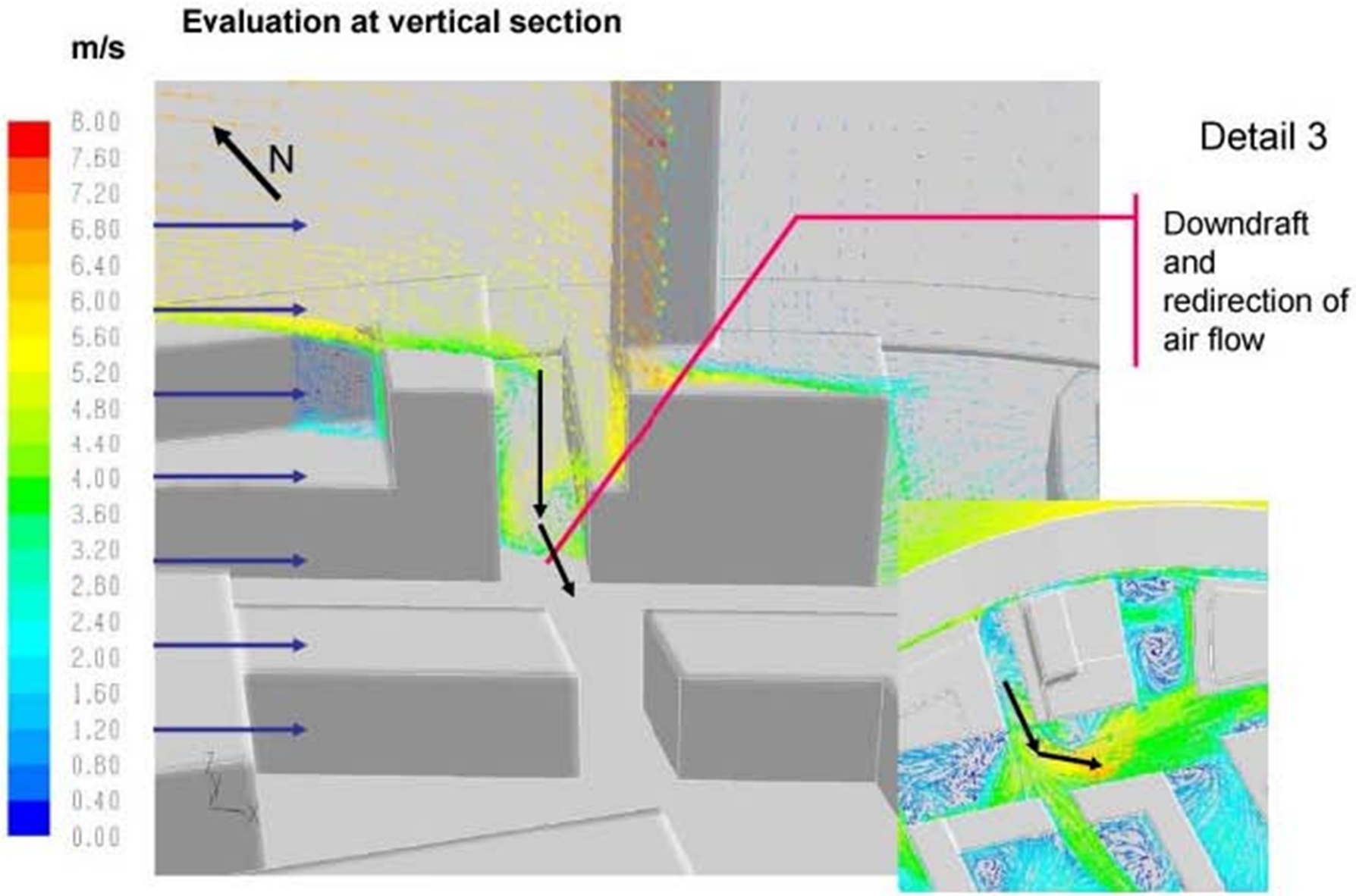
Solar Access Planes



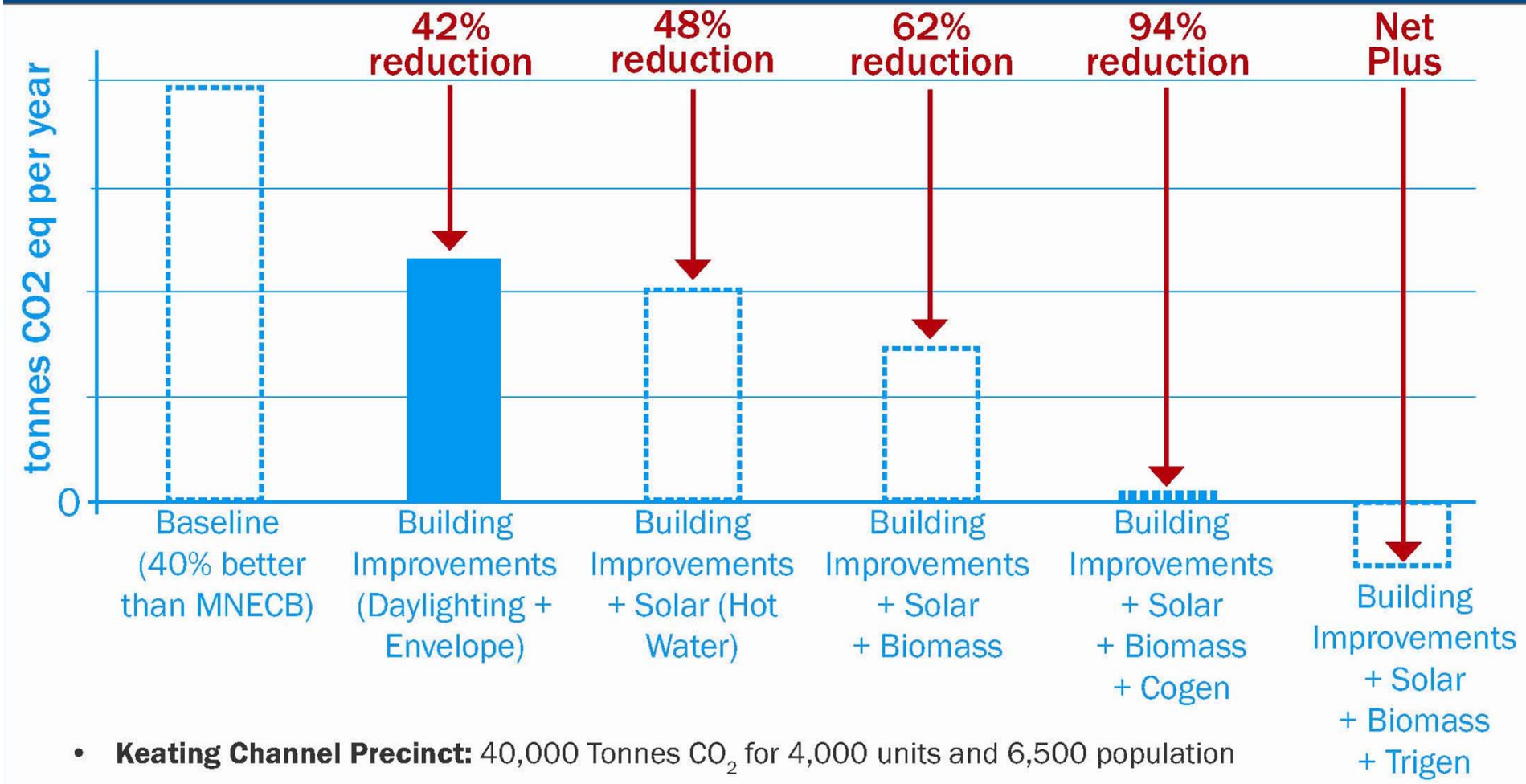
Sky exposure planes for the Keating North Precinct, shown in blue, are designed to allow solar access into the key public areas, shown as red and yellow lines, for a minimum of hours on March 21st.

Different proposals of building massing are tested for sun exposure, and changes are suggested to improve them.

Design for Winter Wind Protection and Pedestrian Comfort



Clinton Climate+ Program and Goals for Carbon Negative Communities



- **Keating Channel Precinct:** 40,000 Tonnes CO_2 for 4,000 units and 6,500 population
- **Building improvements** takes the largest step towards a carbon neutral development
- Approaching a **carbon neutral development** is one of the main goals for the Lower Don Lands
- Work closely with Waterfront Toronto for a potential **Net Plus scenario -** exporting net energy benefits to the City and the region

(Results from TRNSYS thermal/energy simulation software and GEMIS life-cycle analysis software)

Lower Don Lands Awards to Date:

2010

- Institute of Transportation Engineers Transportation Achievement Award to Lower Don Lands

2009

- American Institute of Architects Merit Award for Lower Don Lands
- BEX International Award for Best Futuristic Design for the Lower Don Lands Plan

2008

- Royal Architectural Institute of Canada's Sustainable Development Award for MVVA's Lower Don Lands design
- American Society of Landscape Architects Honor in Analysis and Planning for Port Lands Estuary: Reinventing the Don River as an Agent of Urbanism

2007

- Toronto Urban Design Award for the Port Lands Estuary Master Plan

Economic Effects Assessment of the Lower Don Lands

1. Remove flood risk

2. Build a naturalized river park setting for development and increase land value

3. Provide development opportunity for an innovative urban economy

1. Remove flood risk

Current risk:

Assessed property value of **$1.6 billion** at risk

$300-500 million in avoided damages in event of Regulatory Flood

2. Build a naturalized river park setting for development and increase land value

$480 million in incremental increase in land value in Lower Don Lands

$300 million in increased land value in surrounding neighbourhoods

$55 million annually in new tax revenue in Lower Don Lands

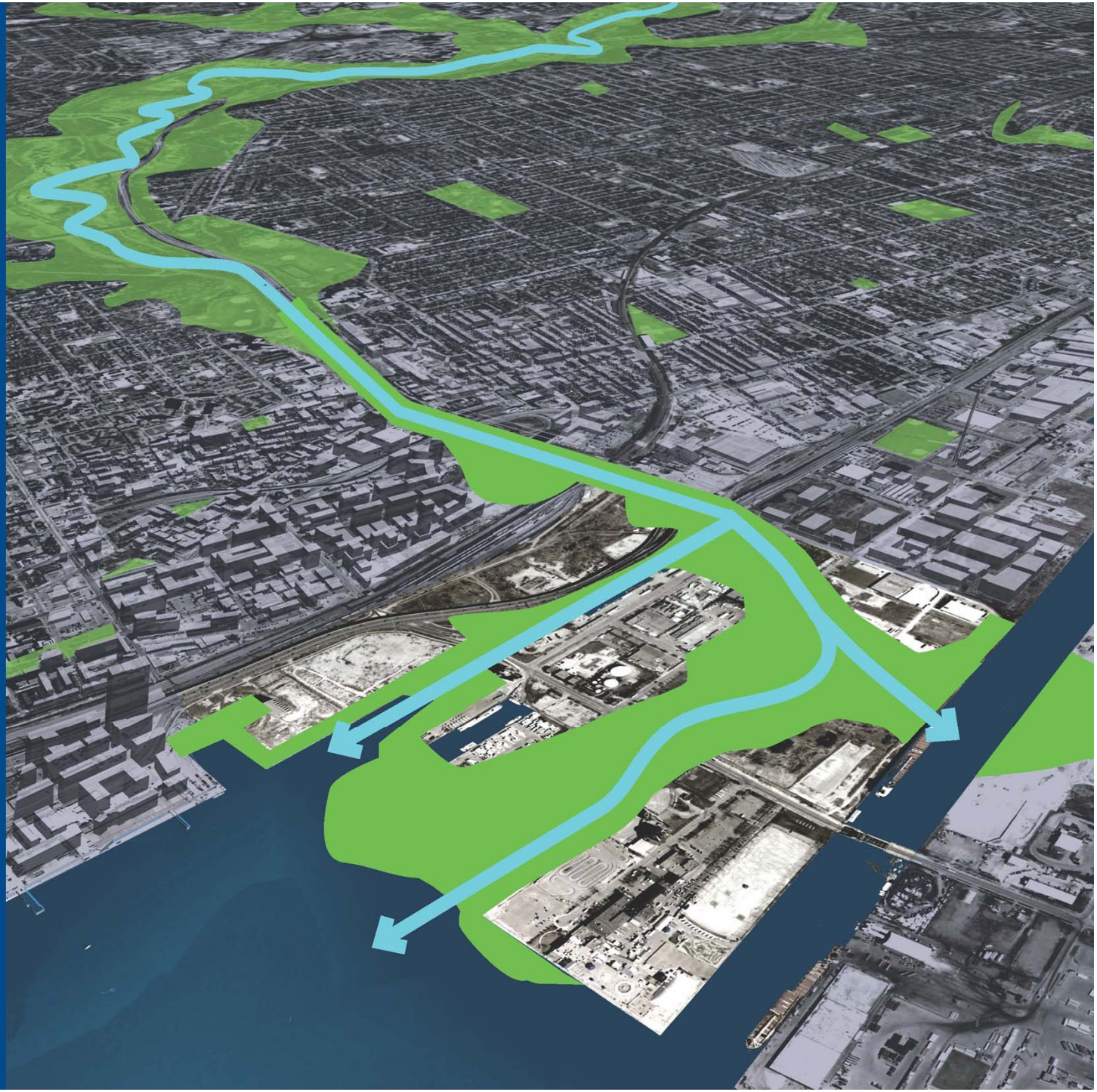
Investment in Infrastructure for the River (between $600-700 million in 2010 dollars):

$325 million for construction of the River

$200 million for all new bridges and widening existing roads

$60 million for creation of sediment and debris management area and flood protection features

$40 million for creation of Promontory Park landform



3. Provide development opportunity for an innovative economy

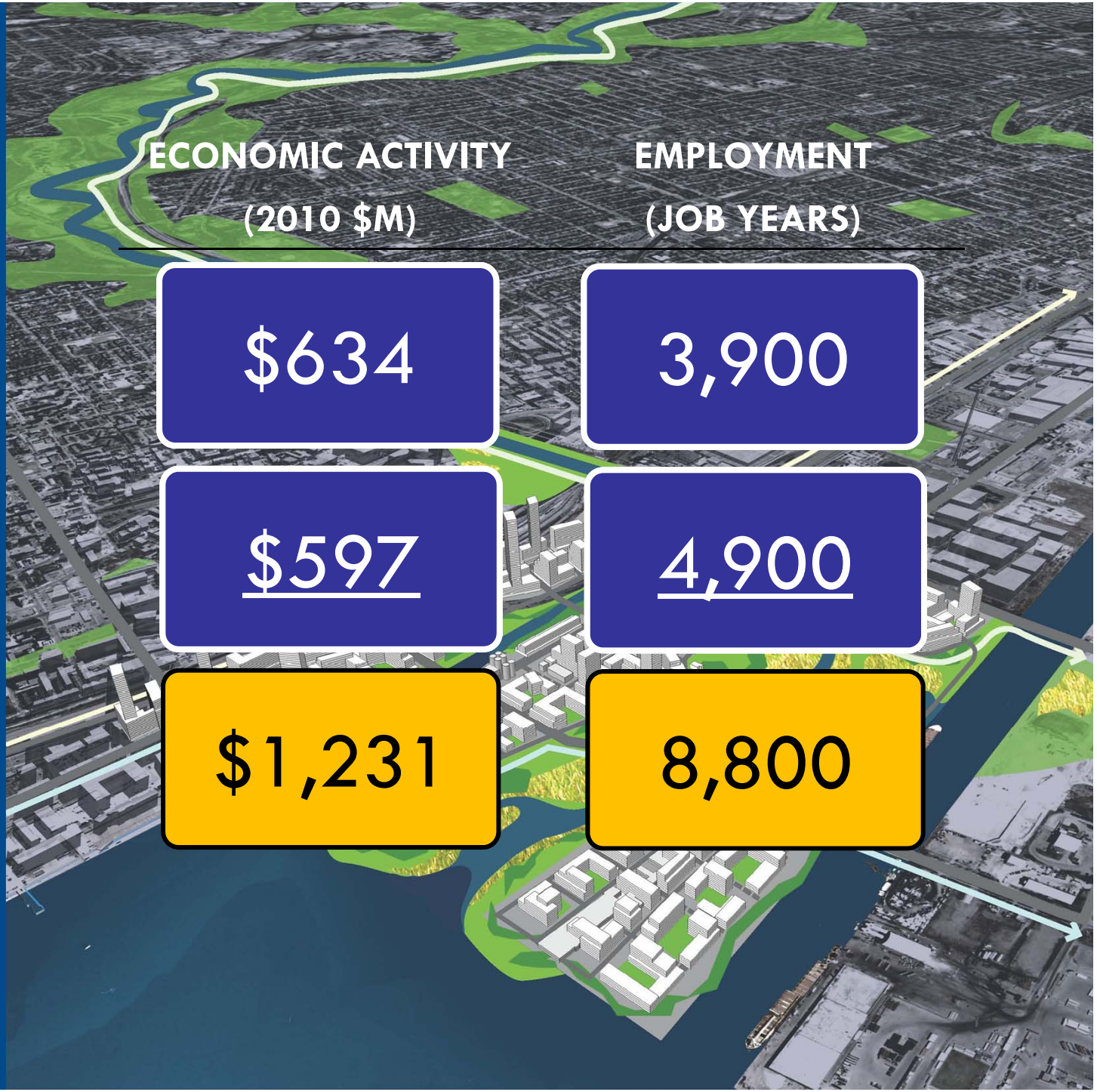
Grow Locally

Major Public Works Project with Strong Multiplier Effects

Grow Locally

Lower Don Lands, when fully built out in 2030 the estimated market value of 20,000 new residents and 14,000 new workers in 3.2million Sq. Ft. of Commercial Development is $6.8 Billion.

Major Public Works Project with Strong Multiplier Effects



	ECONOMIC ACTIVITY (2010 $M)	EMPLOYMENT (JOB YEARS)
DIRECT SPENDING EFFECTS	$634	3,900
MULTIPLIER EFFECTS	$597	4,900
TOTAL	$1,231	8,800

Conclusion

The Lower Don Lands is a catalytic project for Toronto and the Region:

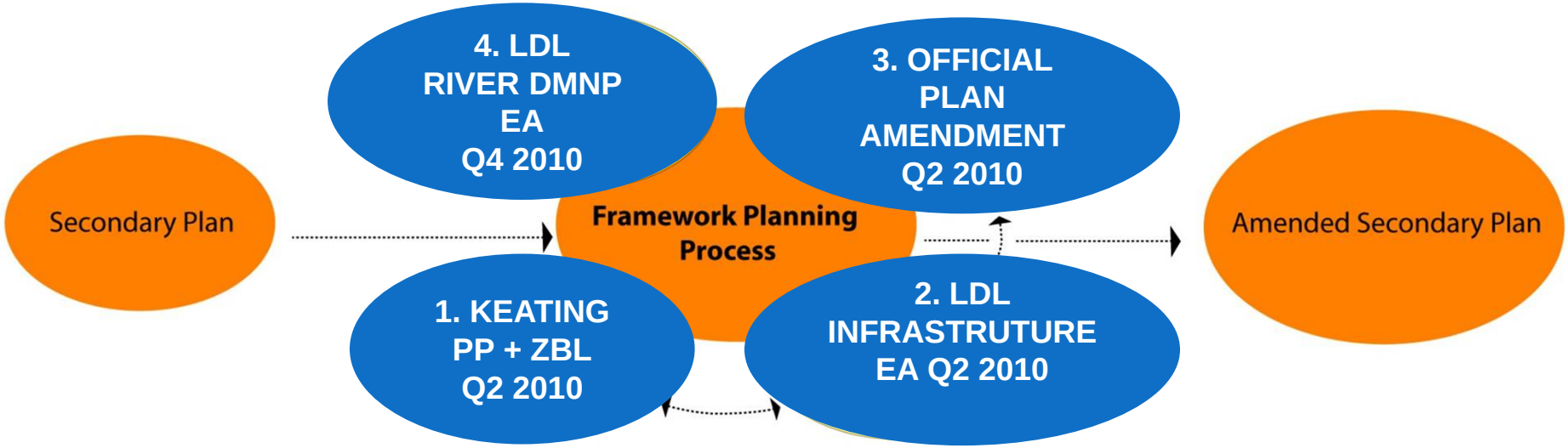
Strong economic multiplier effects

Opportunity for new development in the City Core

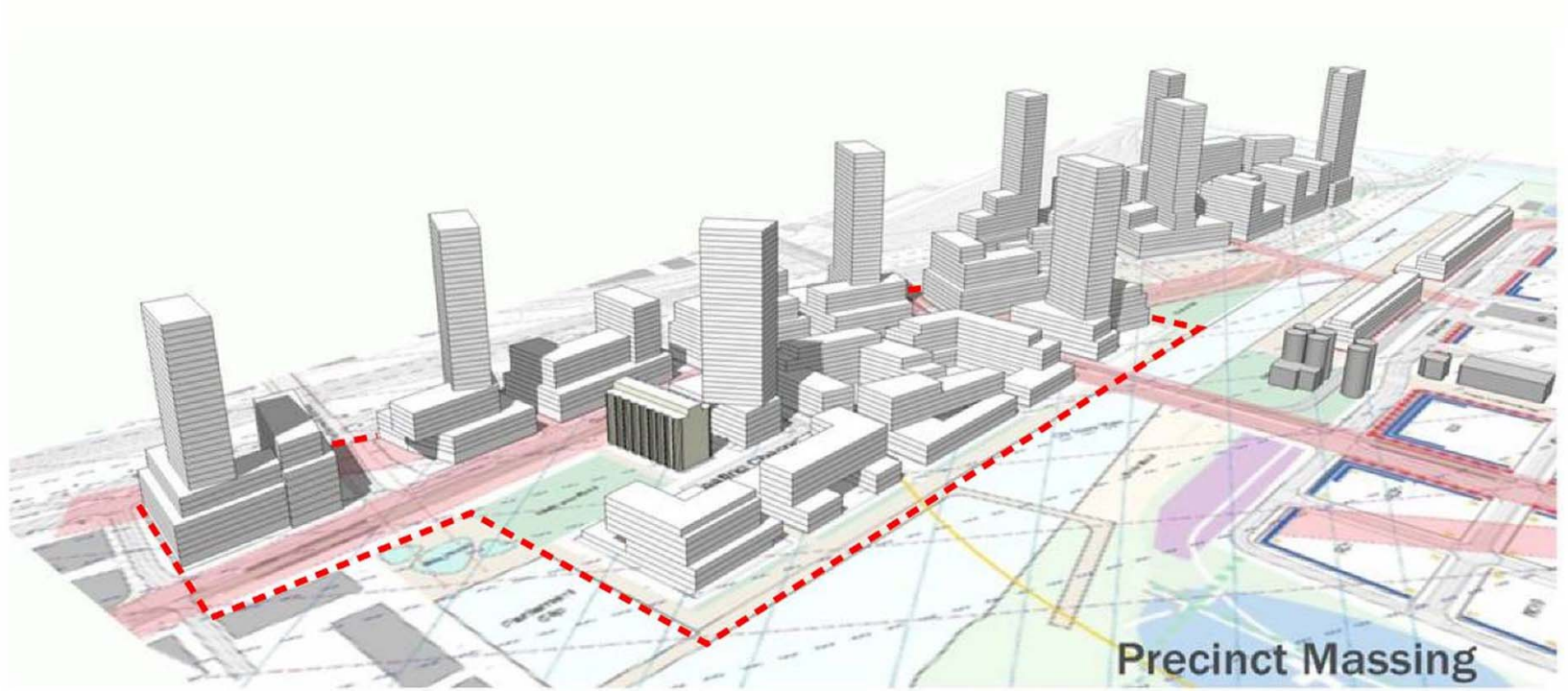
Future growth catalyst

Lower Don Lands Planning Documents and Approval Timelines

1. KEATING Channel Precinct Plan + Zoning By Law **CITY COUNCIL APPROVED Q2 2010**
2. LDL INFRASTRUCTURE EA **MOE APPROVED Q2 2010**
3. LDL RIVER DMNP EA **SUBMITTED Q4 2010**
4. Lower Don Lands Official Plan Amendment **Q2 2010: CITY COUNCIL APPROVED**



1. The Keating Channel Precinct Plan and Zoning By Law



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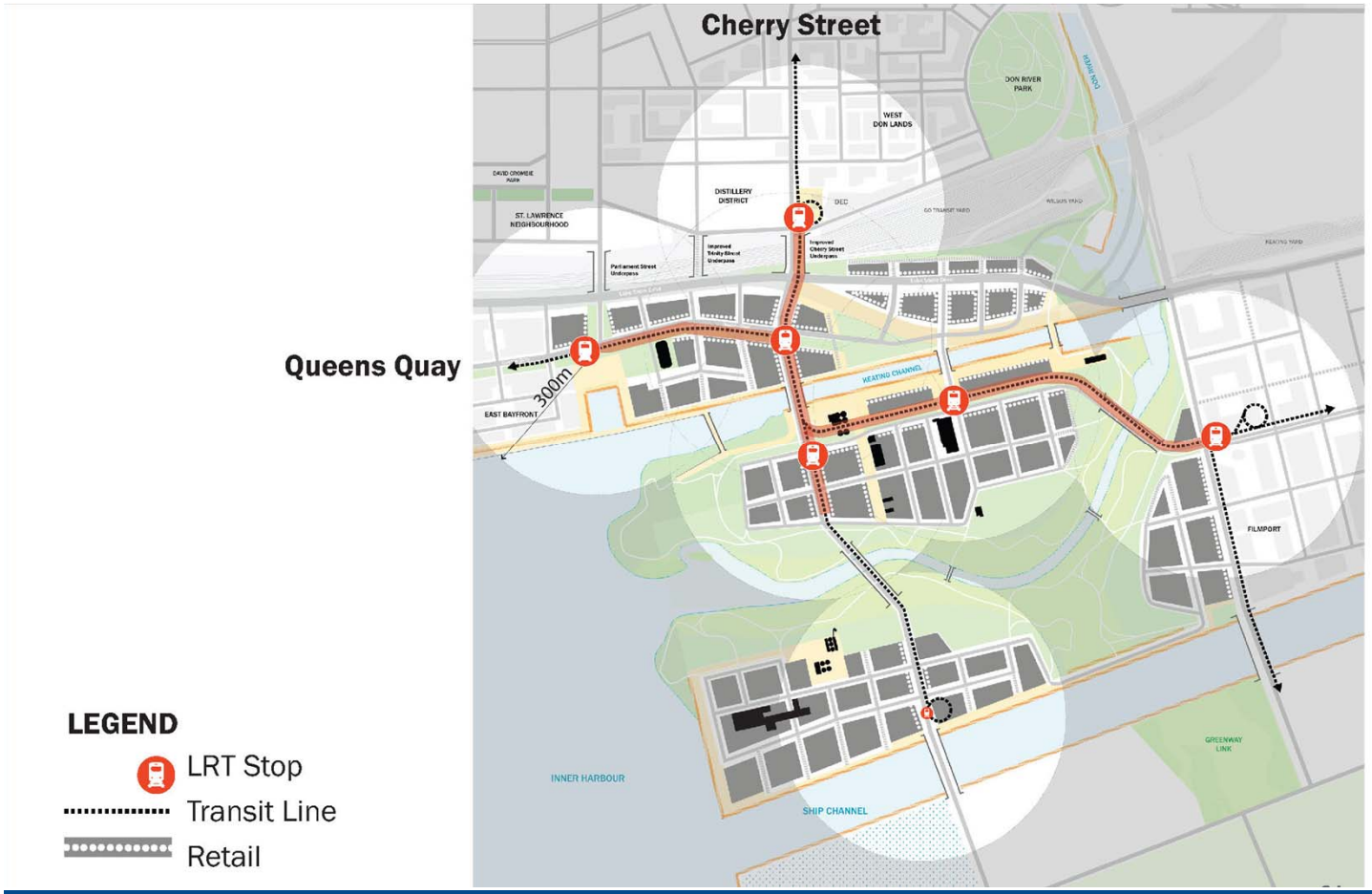
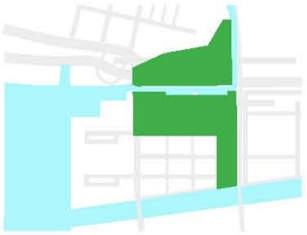
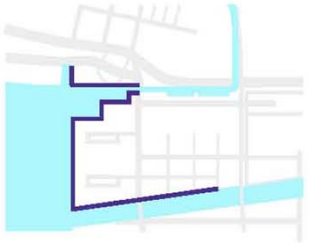
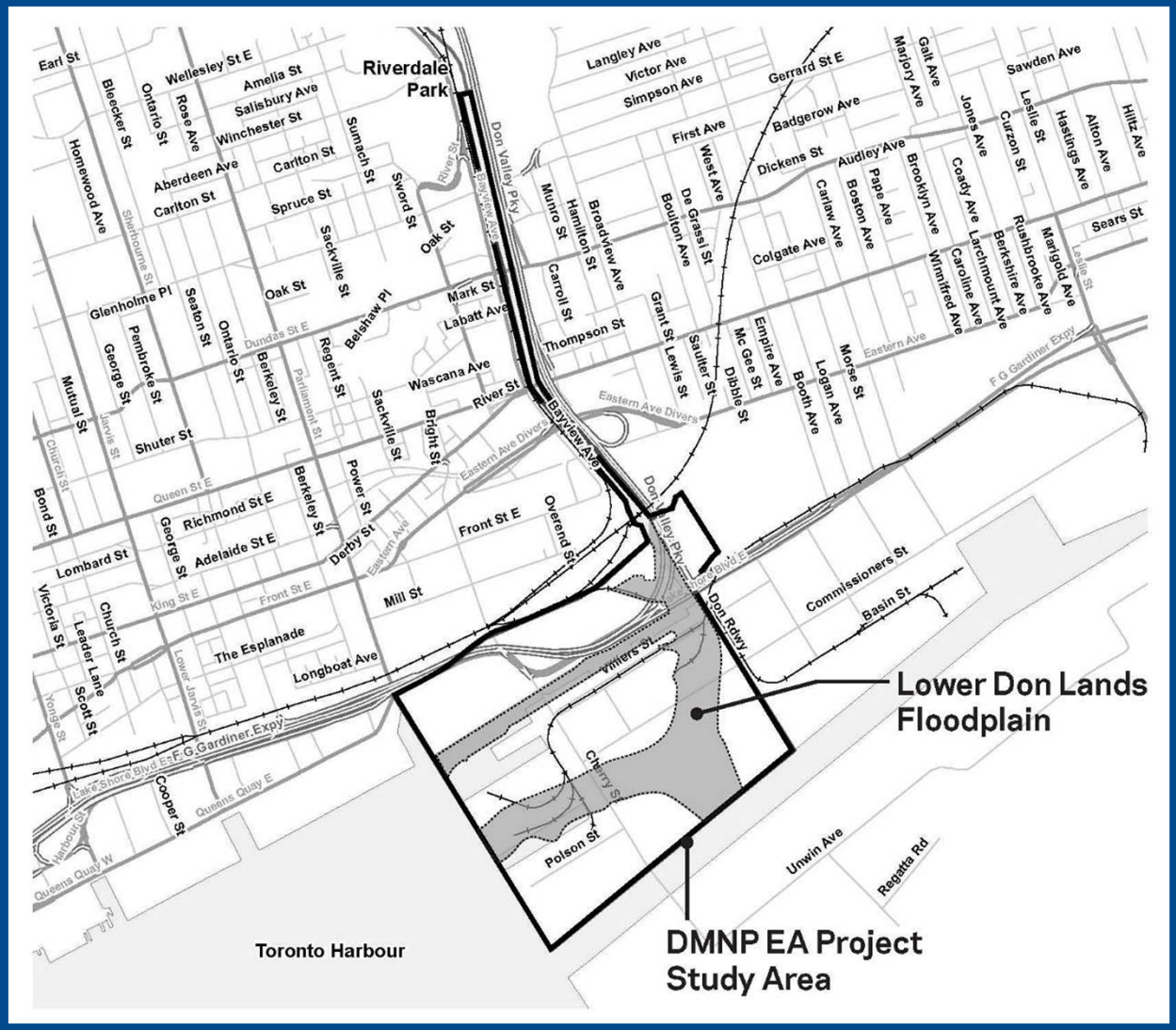


3. Official Plan Amendment

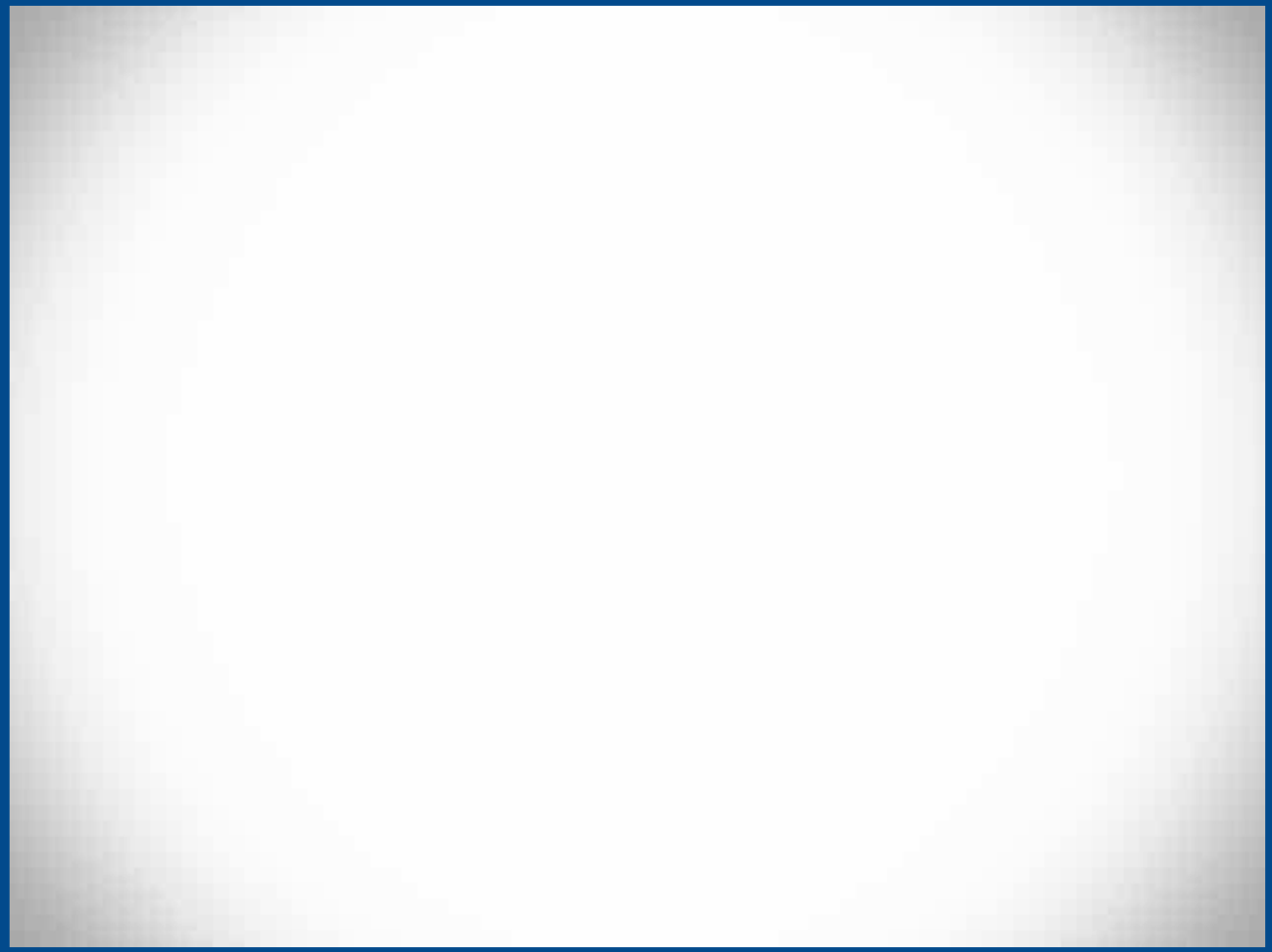
	Central Waterfront Secondary Plan	Lower Don Lands
Park and Open Space Area	 100 Acres (40.5 Hectares)	 130 Acres (52.6 Hectares)
Water Area	 25 Acres (10.1 Hectares)	 35 Acres (14.2 Hectares)
Waterfront Development	 3050 Linear Metres	 5200 Linear Metres

4. The Don Mouth Naturalization and Port Lands Flood Protection Project



Q2 2010 City of Toronto Approved the following:

1. Support the preferred alternative for the DMNP EA
2. Endorse the Lower Don Lands Framework Plan
3. Authorize Waterfront Toronto to put the Lower Don Lands Class EA Infrastructure Master Plan in the public record Endorse the Keating Channel Precinct Plan
4. Authorize Waterfront Toronto to put the Keating Channel Precinct Class EA Environmental Study Report in the public record
5. Request Waterfront Toronto to submit a Business and Implementation Plan for LDL, with priority for the Don River Mouth
6. Request the Chief Planner and/or TRCA to ensure the proposed corridors of the River and infrastructure are protected from encroachment
7. Endorse the Affordable Housing Strategy, outlined in the Keating Channel Precinct Plan
8. Request Waterfront Toronto to prepare plans and guidelines for urban design, parks and public space, heritage and public art
9. The appropriate City officials be authorized and directed to take the necessary action to give effect thereto



2010_2011 Next Steps

1. The Don Mouth Naturalization and Port Lands Flood Protection EA has been submitted to the MOE. February 11th was the deadline for objections. Letters were received from: theToronto Port Authority, Redpath and Lafarge. The regeneration of the Port requiring some loss of dock wall is at issue. We are working with them.

2. August 2010 The City approved the LDL OPA and KCP ZBLA. 9 appelants put forward 15 appeals. Issues: A) Provide a schedule for the completion of the zoning and Precinct Planning south of Keating, B) Request to add Pinewood to the LDL project. C) object to 25% non-res, AH, and the LEED Gold Requirement. D) Consolidate LDL OPA 388 with OPA 257

3. Complete a Business and Implementation Plan for Lower Don Lands.

4. Develop a Proactive Strategy to keep pace with private development pressure (CASTAN, Rose Corp, 309 Cherry, Pinewood) in the Port Lands. This should include Completion of the Business Plan, River Precinct Plan, Zoning By Law and EA .

River Phasing Plan: 2011_2021

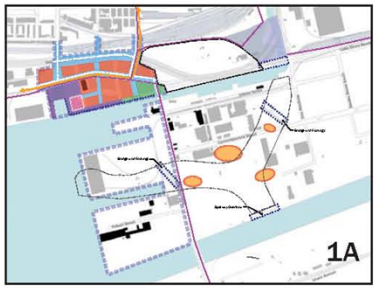
1 Accelerated Flood Protection + Public Realm Development

- Complete by 2021
- Front load construction of all earthwork
- Significant development flexibility
- All development land becomes available before the market can absorb it

Diagram Key

- road
- LRT
- open space
- mixed-use development
- school development
- fill
- cut
- structural work
- plug
- cutting/treating hotspots
- Gardiner-dependent zone
- interim traffic flow
- interim use
- interim trail
- existing/completed trail
- completed areas
- completed LRT
- flood-protected
- sediment/debris management

2011 start date



Major work includes:
- Development of Castan/Home Depot lands
- Queens Quay/Cherry St LRT link
- River bridge construction in the dry
- Spillway construction
- Sediment management area
- Enlarged Lakeshore crossing
- Treatment of contamination hotspots across the entire site

2013

Major work includes:
- Cut/fill for entire site
- Utilidor construction
- Construction of temporary plugs for flood protection
- New Cherry St bridge across Keating Channel

2016

Major work includes:
- Development of all neighbourhoods south of the Keating Channel, except South Keating east of Cherry St
- Fill South Keating, east of Cherry St
- Cherry St LRT
- Trinity St bridge
- Establishing river and park landscape

2019

Major work includes:
- Development east of existing Cherry St
- Villiers St LRT

2021 end date

Lower Don Lands completion