

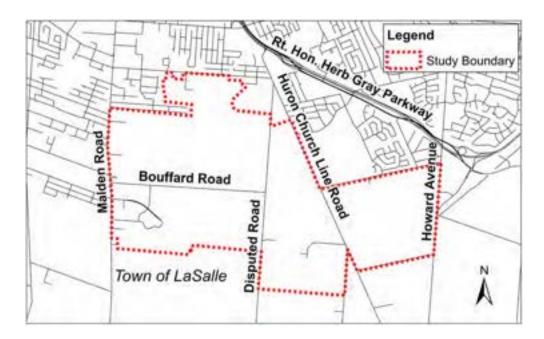
#### Town of LaSalle: Howard/Bouffard Planning Area Master Drainage Study Notice of Public Information Centre No. 2



The Town of LaSalle has retained Dillon Consulting Limited to prepare a comprehensive solution to address stormwater overflow into the Howard and Bouffard Planning Area during major storm events. The study area is shown below. The study is being completed following the requirements of the Municipal Class Environmental Assessment process for a Master Plan. The purpose of the study is to identify anticipated flood extents under existing conditions and to develop a strategy to address the flooding under existing and future developed conditions.

The project team has reviewed the feedback received from stakeholders following Public Information Centre No. 1 held at the LaSalle Civic Centre on June 26, 2019. Based on the feedback received, refinements have been made to the recommended solution. Public Information Centre No. 2 will focus on the revised recommended solution including the rationale and additional information for stakeholder review.

It is intended that the recommended solution will address the existing flood potential while also providing stormwater management to facilitate development in the area.



The project team will be displaying the revised recommended solution for public input at a Public Information Centre as outlined below. Please join us to learn more about the project and provide your feedback.

Date:December 12, 2019Time:4:00 to 7:00 p.m.Location:Council Chambers, LaSalle Civic Centre, 5950 Malden Rd, LaSalle, ON

If you have any questions about this project, please contact either of the individuals listed below.

Mark Hernandez, P.Eng. Project Manager Dillon Consulting Limited 3200 Deziel Drive, Suite 608 Windsor, ON N8W 5K8 Tel: 519.948.4243, ext. 3242 Email: <u>HowardBouffard@dillon.ca</u> Peter Marra, P.Eng. Director of Public Works Town of LaSalle 5950 Malden Road LaSalle, ON N9H 1S4 Tel: 519.969.7770, ext. 1475 Email: <u>PMarra@lasalle.ca</u>

# Howard/Bouffard Planning Area Master Drainage Study

# Public Information Centre #2

Town of LaSalle December 12, 2019



# Background

- Study Area is primarily designated residential and is planned to be developed over several years
- Several studies have been completed to plan for new infrastructure in the area:
  - Bouffard and Howard Planning Districts Functional Design Study (2005) and Addendum (2017)
  - Environmental Study Report for Laurier Parkway between Malden Road and Howard Avenue (2009)
  - Detailed design and construction of Laurier Parkway (2010)
  - Design and construction of the expansion of the Vollmer Complex and related stormwater management facility (2010).
- Previous studies addressed stormwater management (SWM) for minor and major events however, spill-over from adjacent drainage areas was not considered
- The Town of LaSalle and Essex Region Conservation Authority are only able to issue approvals for development areas outside of the flood inundation area.





## **Class Environmental Assessment Process**



PHASE 1: Problem/ Opportunity	PHASE 2: Alternative Solutions	PHASE 5: Implementation
ü Identify problems/ opportunities to be addressed in the planning and design process ü Prepare a "Problem Statement"	and the public	Ü Design and construction phase Ü Project must be designed and constructed as outlined in the study document PUBLIC FORMATION CENTRE #2 ecember 12, 2019

The Study is following the requirements of the *Municipal Class Environmental Assessment* (EA) (2015) for a Master Plan. The study is following Phases 1 and 2 of the process.

The study is a critical step for the Town and Essex Region Conservation Authority to allow development to proceed in the area. The objective is to prepare a comprehensive solution to address stormwater overflow into the Howard and Bouffard Planning Area during major storm events. The Class EA process requires that:

- ü Relevant social, environmental and engineering factors are considered in the planning and design process
- ü Public and agency input is integrated into the decisions.



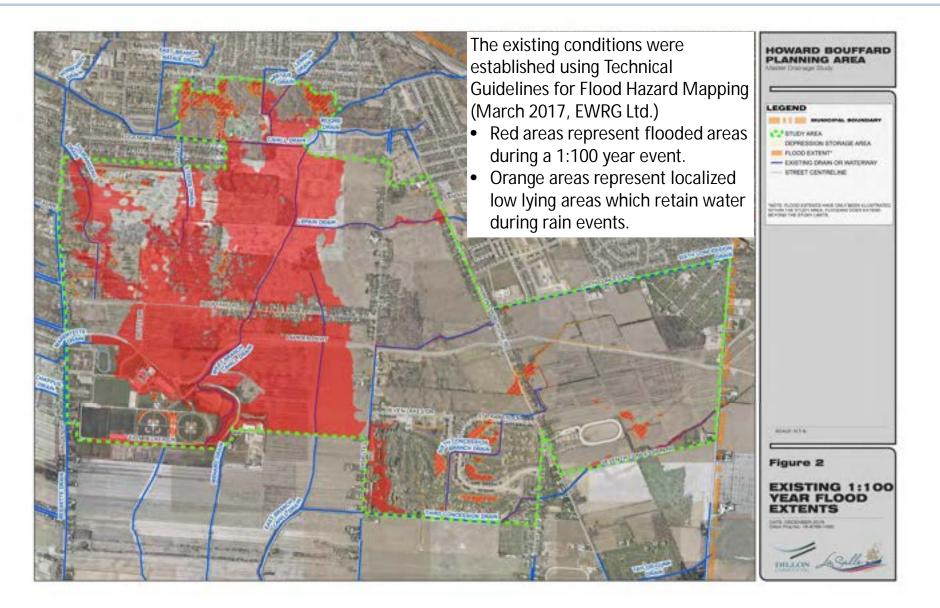
- Build on the solutions developed through the Bouffard Howard Planning Districts Class Environmental Assessment Addendum (March 2017)
- Define the flood mapping for existing conditions
- Establish build-out conditions and develop an implementation strategy to mitigate flooding in the area
- Estimate costs for identified solutions as well as cost recovery mechanisms
- Establish property requirements to facilitate the improvements.



- Public Information Centre #1 was held on June 26, 2019 and illustrated the alternatives considered to date and the recommended solution.
- Since that time, the project team has received feedback from project stakeholders including landowners, developers, agencies and municipal departments.
- In order to ensure that all future development within the planning area can be accommodated by the proposed works, the recommended solution has since been revised to reflect the following:
  - Increased developable lands within the Planning Area
  - Revised drainage solution in the northwest extents of the Planning Area
  - Revised drain alignments and drain enclosures
  - Revised pond size and pump station capacity
  - Revised structure sizes including bridges, box culverts and weirs
- The project team is seeking input on the revised recommended solution.

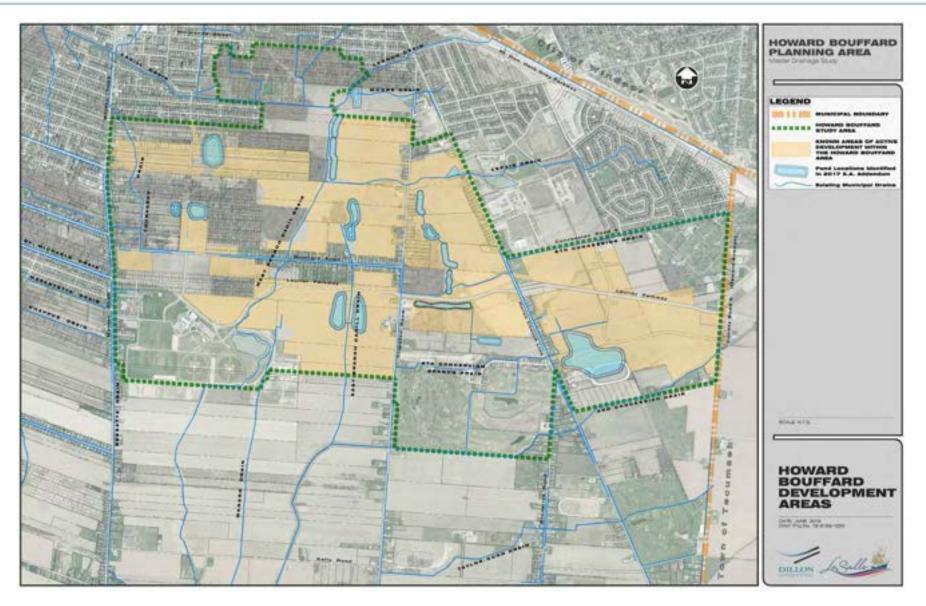
#### **Existing Conditions - Flood Extents**





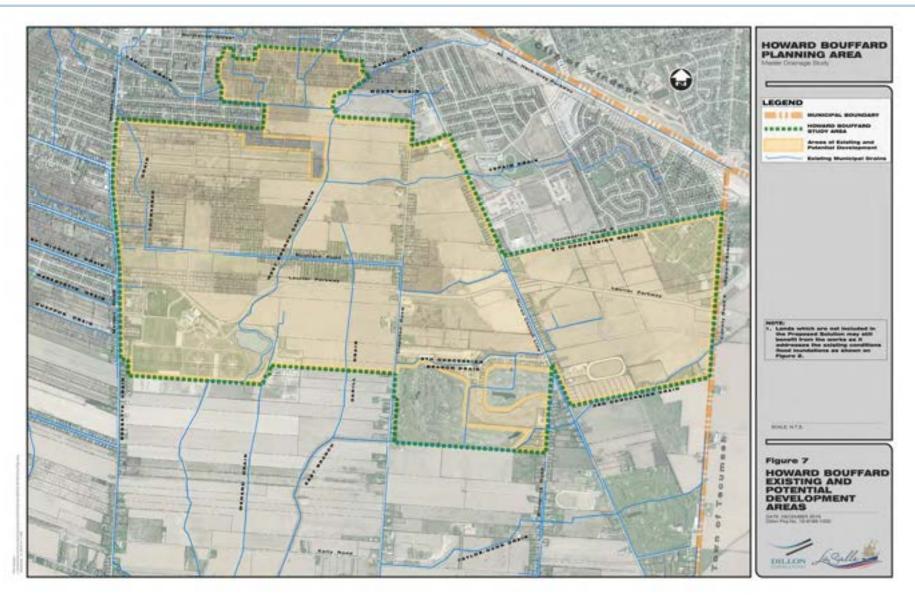
## Development Potential (From PIC#1)





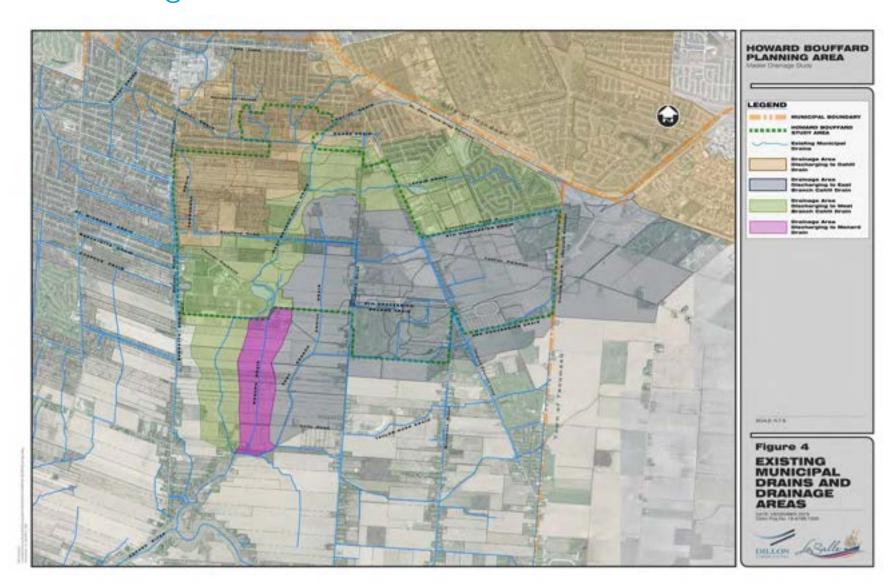
### **Existing and Revised Development Potential**





#### Existing Conditions – Municipal Drains and Drainage Areas

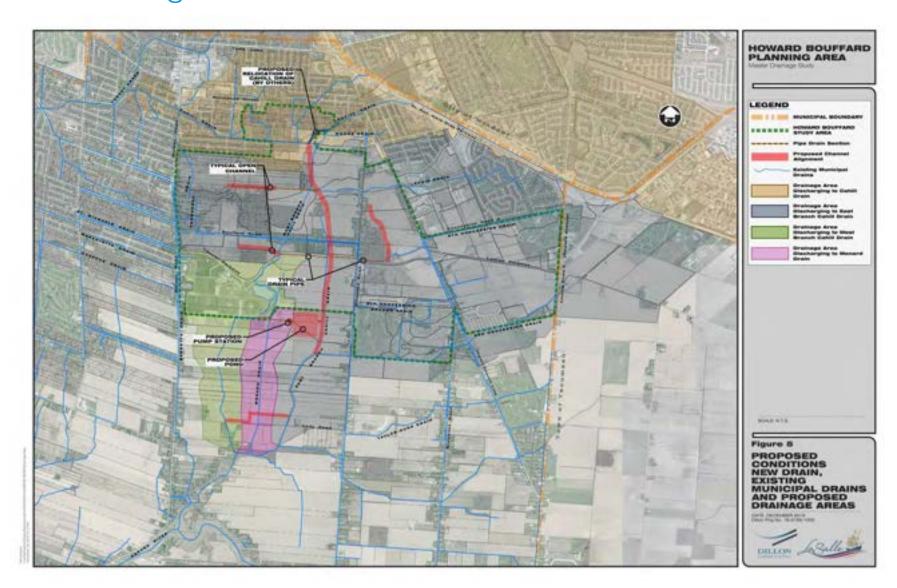




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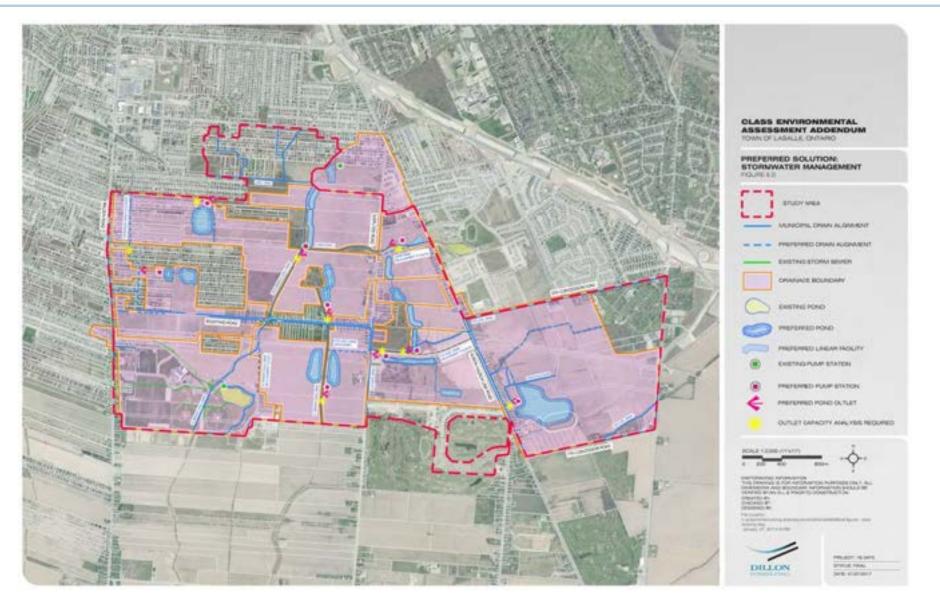
#### Proposed Conditions – Municipal Drains and Drainage Areas





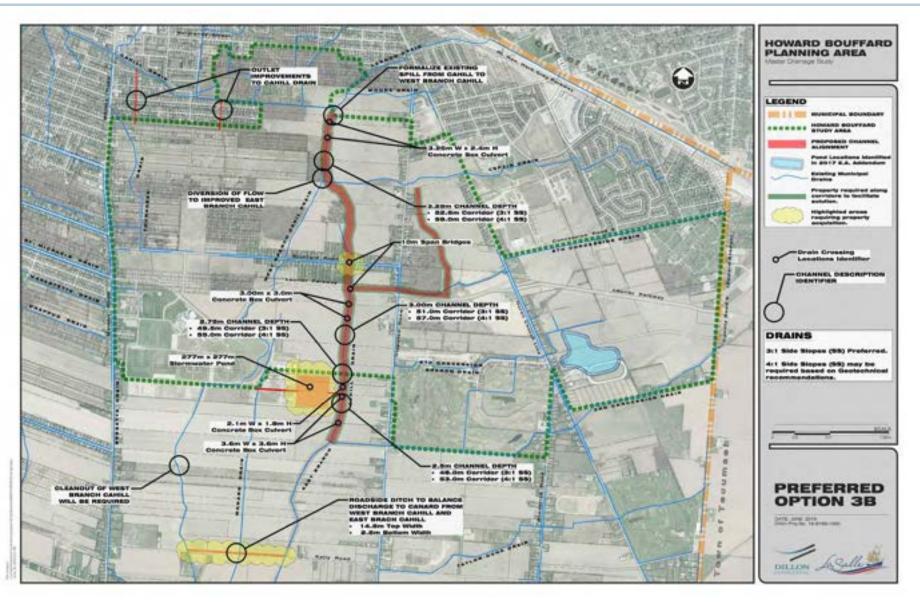
#### Stormwater Solution – 2017 EA Addendum





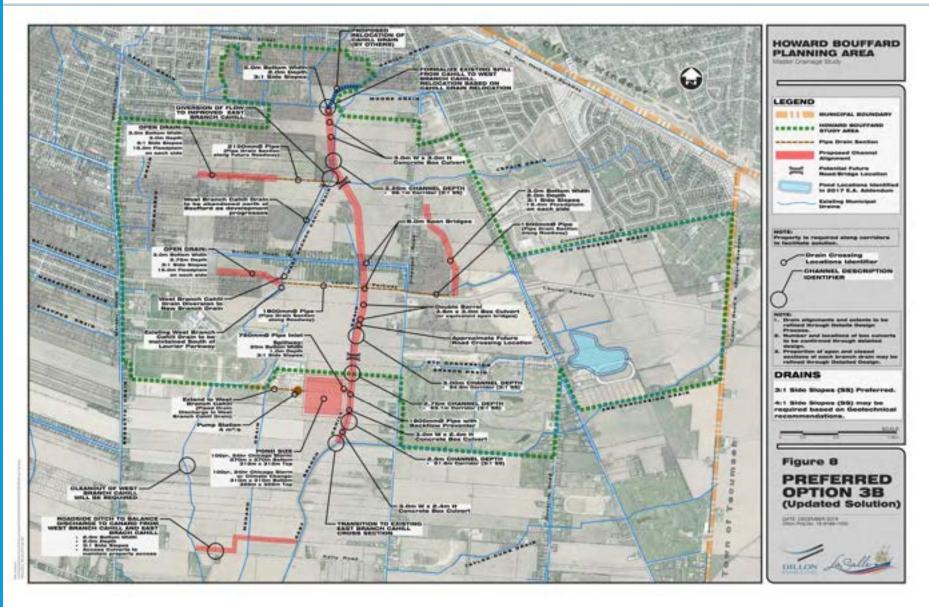
#### Recommended Solution (From PIC#1)





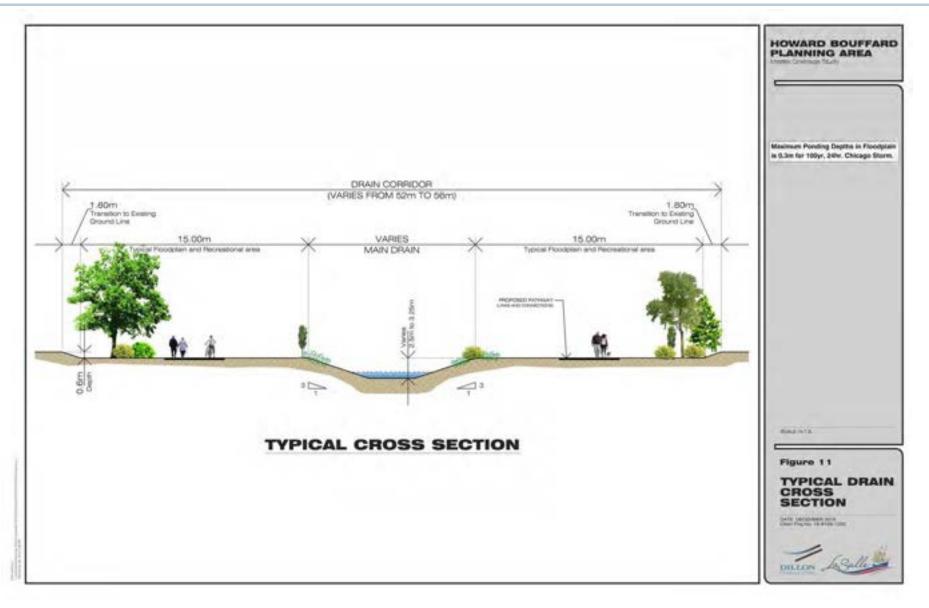
#### **Revised Recommended Solution**





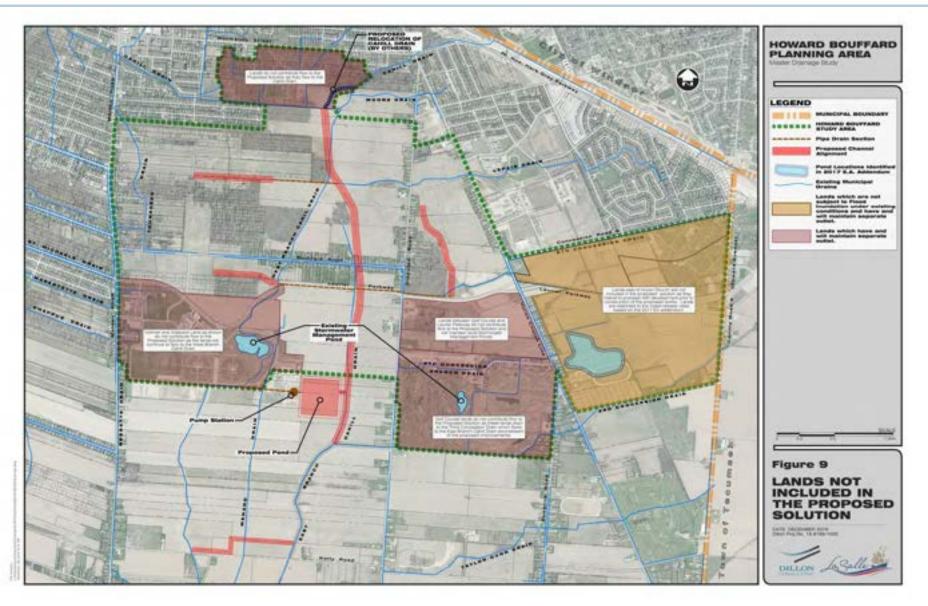
#### **Recommended Cross Section**





### Lands Not Included in Proposed Solution





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## Property Acquisition Requirements – Bouffard Rd.







- Alternatives were subject to an Urban Stress Test
- Additional 42mm of rain over 24hrs
- Results in approximately 50% increase to storage requirements
  - Additional volume of approximately 157,000m<sup>3</sup> for the recommended solution
  - Can also be addressed through depressing park lands and other green space
    - Ideal to locate parks along the drainage corridor
    - Stormwater benefits and connectivity to recreational areas along the corridor
- The more park land and other green space which can be used to provide storage will decrease the size of the Stormwater Pond accordingly.

## **Regional Pond Sizing Comparison**

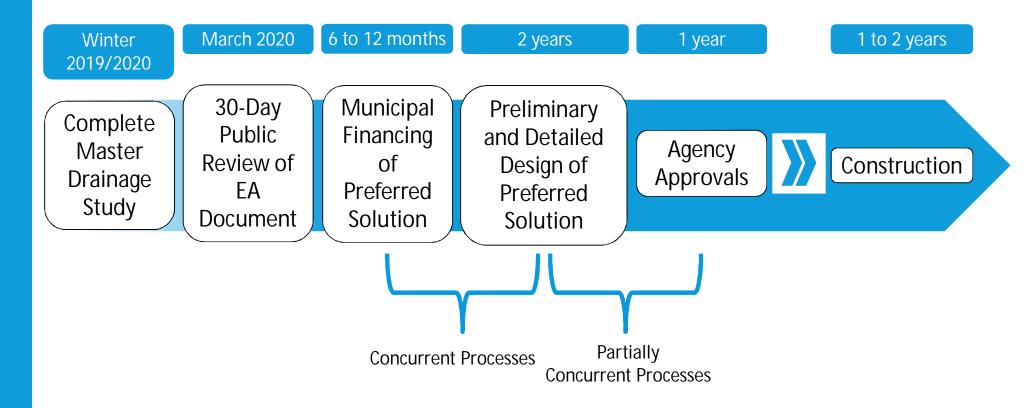


Option	Pond Footprint (m) Top of Bank	Storage Volume Required – 100yr24hr Chicago (m <sup>3</sup> )	Pond Depth (m)	Peak Water Depth (m)
Preferred Option #3B (From PIC #1) Excluding Climate Change	277 x 277	212,000	3.72	3.22
Preferred Option #3B (From PIC #1) Including Climate Change	310 x 310	324,000	4.0	3.87
Recommended Solution Excluding Climate Change	315 x 315	342,000	4.5	4.03
Recommended Solution Including Climate Change	355 x 355	499,000	4.5	4.49

§ 5:1 Side Slopes for Pond Banks (All Options)

#### **Anticipated Project Timeline**





\* Steps beyond completion of the preliminary design require Council approval.



	CAPITAL COSTS (Millions)			BENEFITS		
	Construction	Engineering	Contingency	Total	# Ponds Eliminated	# Pump Stations Eliminated
Option 3B (PIC #1)	\$25.4	\$3.8	\$7.3	\$36.5	14	8
Recommended Solution	\$36.3	\$4.5	\$8.2	\$49.0	12	7

- Excludes land acquisition costs
- Excludes park land and green areas utilized for climate change resiliency
- Excludes future bridge crossings
- There may be an opportunity to reduce the estimated cost by keeping the excavated material onsite. This will be reviewed further through the design phases of the project.

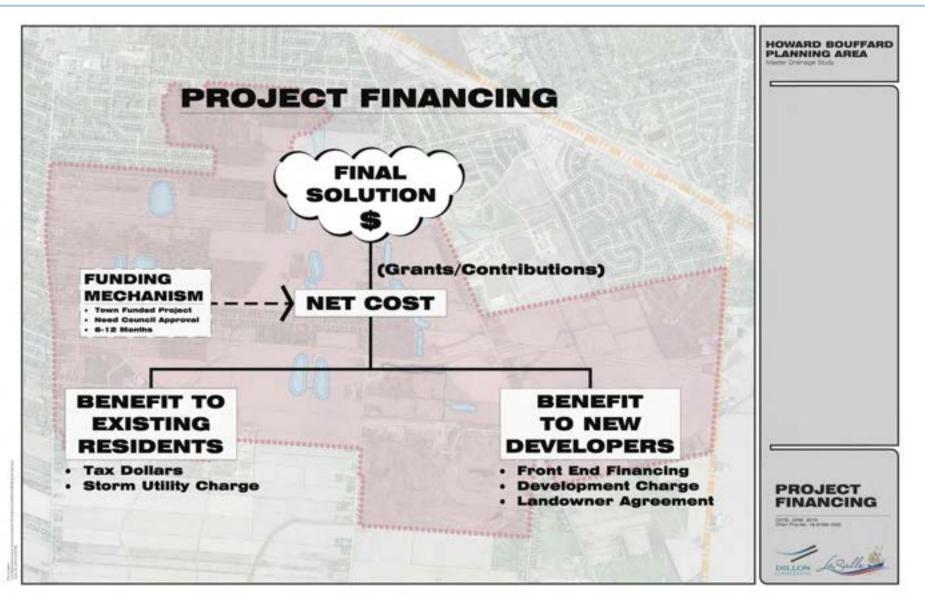
Estimated Construction Cost for Proposed Improvements reduced by:



- **LESS** Costs for Construction of Local Stormwater Ponds
- **LESS** Costs for Local Pump Stations

#### **Project Financing**







Feedback from the public and the development community is vital as it will directly influence the recommended solution.

- Comment forms have been provided and can be submitted at or following this PIC
- Stakeholders may contact the project leads via mail, email or phone

Please provide us with your comments by:

January 31, 2019





	2019 2020		
	Winter	Spring	Summer
Receive Feedback From this Meeting (PIC)			
Complete EA Report and Make Available for Public Review			
Preliminary Design of Recommended Solution			
Council Consideration of Next Steps			

#### Thank you for attending.

If you have any questions about this project, please fill out the comment sheets or contact either of the individuals listed below.

Project Website http://www.lasalle.ca/hbmds	Mark Hernandez, P.Eng. Project Manager Dillon Consulting Limited 3200 Deziel Drive, Suite 608 Windsor, ON N8W 5K8 Tel: 519.948.4243, ext. 3242 Email: <u>HowardBouffard@dillon.ca</u>	Peter Marra, P.Eng. Director of Public Works Town of LaSalle 5950 Malden Road LaSalle, ON N9H 1S4 Tel: 519.969.7770, ext. 1475 Email: <u>pmarra@lasalle.ca</u>
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