



Sandwich South Master Servicing Plan

Public Consultation
Additional Stormwater Management Assessment
June, 2022



Agenda

This virtual presentation will...

- Outline the **purpose** of this consultation session.
- Remind stakeholders of the **objectives** of this plan.
- Explain the prescribed changes to the servicing plan as it relates to the **expanded** scope area.
- Provide an overview of completed stormwater assessments, solution alternatives and **preliminary preferred** servicing strategy.
- Review impacts and **mitigation measures** needing to be incorporated into the planned servicing strategies; and
- Outline how stakeholders can provide **feedback and comment** and highlight **next steps**.



What is the purpose of this consultation?

This consultation session will present additional stormwater assessments completed as part of the Sandwich South Master Servicing Plan (SMP).

Assessments relate to additional stormwater servicing required to serve the first phases of development and the required Lauzon Parkway Improvements.

The City is planning Parkway and County on commencing the Lauzon Road 42 (CR42) intersection improvements in 2025.

Proposed intersection improvements requires the implementation of stormwater management infrastructure for the control and treatment of runoff.

Lauzon Parkway Cross Section (Lauzon Parkway Environmental Assessment 2014)

**EXHIBIT E-3: TYPICAL CROSS-SECTION LAUZON PARKWAY
E.C. ROW EXPRESSWAY TO HIGHWAY 401**



What is the Master Servicing Objectives?

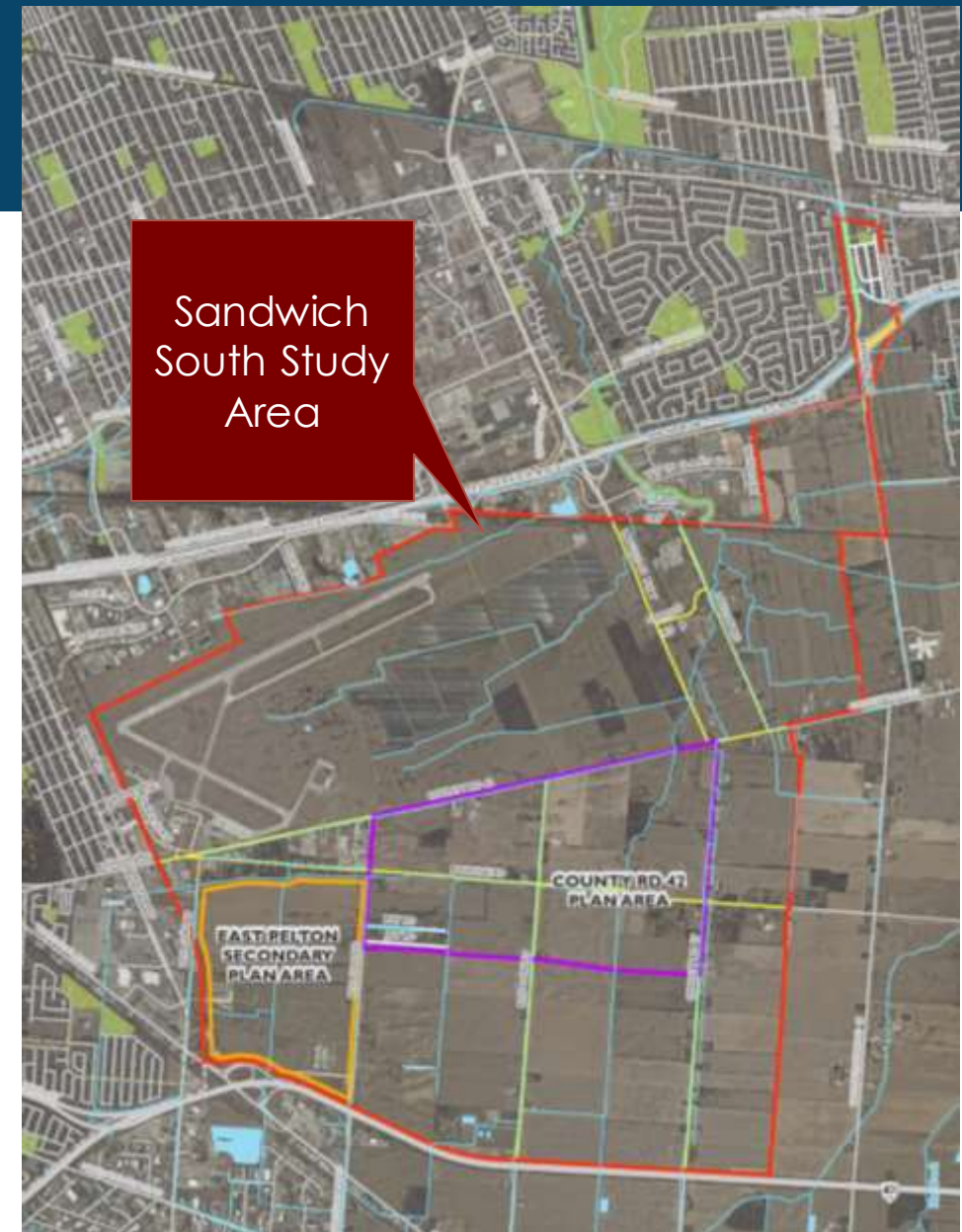
The objective of the SMP is to establish a coordinated and sustainable approach to providing services.

- The plan is developing and reviewing solutions for:
 - The collector roads network;
 - Water, sanitary and storm sewers; and
 - Stormwater management facilities.

The SMP will meet the requirements of Phase 1 and 2 of the Municipal Class Environmental Assessment process, which is an approved process under the Environmental Assessment Act.

Upon completion of this study, the City will be in a position to proceed with implementation of 'Schedule B' Projects which include the stormwater management facilities and pump stations within the assessed areas including the East Pelton and County Road 42 Secondary Plan Areas.

The stormwater management facilities required to serve the new Lauzon Parkway intersection have been added to this assessment. This facility would be needed to support one of the first phases of development, which is projected to occur along County Road 42.



What has been done to date?

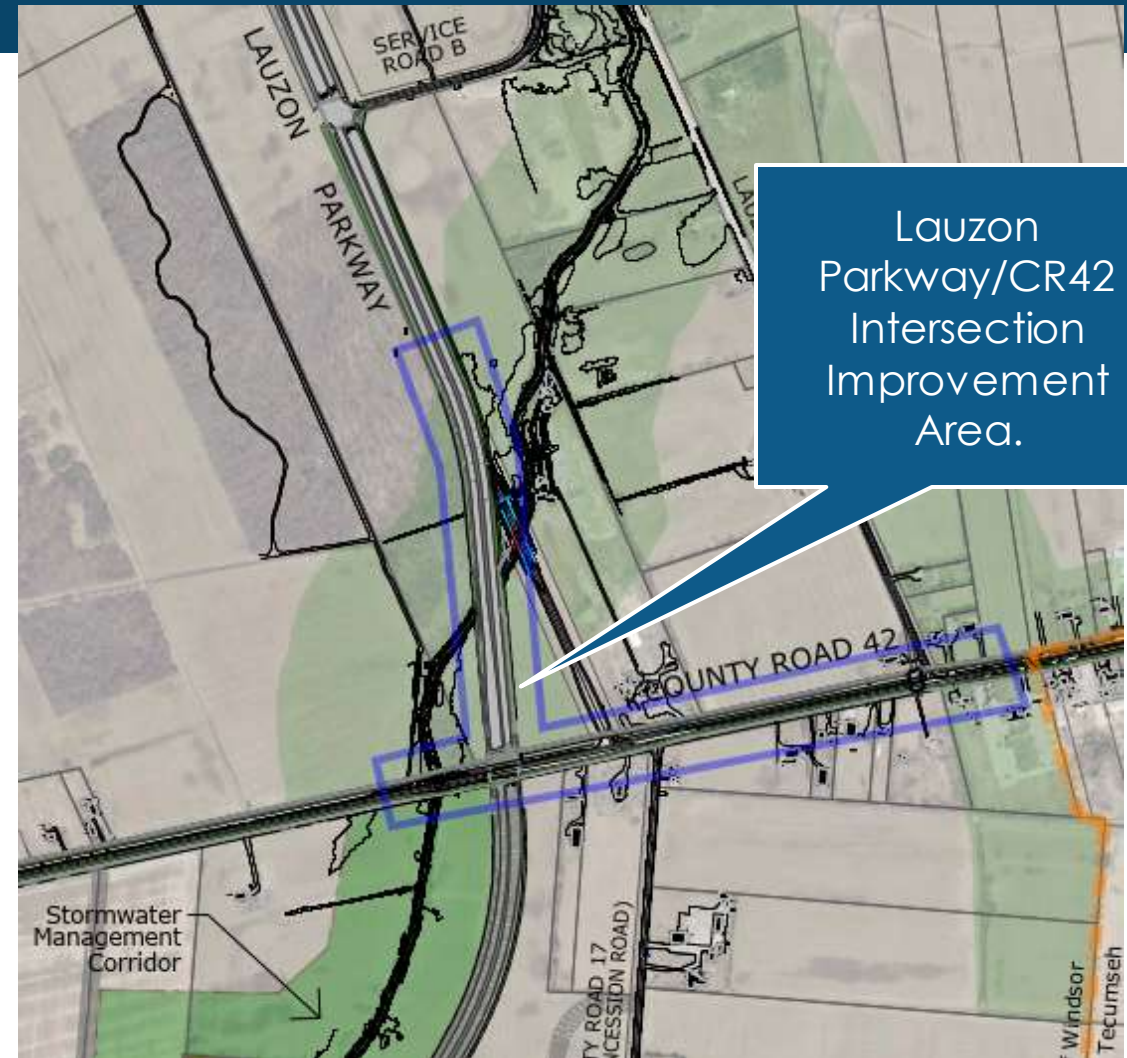
- The second Public Information Centre was held on September 8, 2021, which provided:
 - A Project Overview and Update.
 - Servicing Solutions for Stormwater Management, Sanitary and Storm Sewer Servicing and the Transportation Network.
 - Comparative Alternative Solution Evaluations and Preliminary Preferred Solutions.
 - Mitigation Measures recommended to address anticipated impacts.
- Held more than 20 Individual Developer and Property Owner Meetings.
- Consulted with First Nations;
- Completed a Stage 1 Archaeological Study which has been accepted by the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries.
- Continued coordination with Essex Region Conservation Authority (ERCA), Surrounding Municipalities and the Windsor International Airport.
- Completion of Functional Design, Cost Estimates and Preliminary Staging Plan.

Stormwater Management Additional Assessment

Lauzon Parkway Improvements

- The City is preparing to complete the first phase of the Lauzon Parkway improvements.
- The first phase is planned to include:
 - Realignment of Lauzon Parkway, south of Service Road B to the County Road 42 (CR42) Intersection;
 - Urbanization of CR42 between Little River Drain to the east City limits; and
 - Trunk storm sewers along Lauzon Parkway and CR42 required for future development road drainage.

Per the Airport Master Plan (2010), eastern portions of the airport lands may be developed as commercial/industrial developable land uses. This development will require stormwater management.



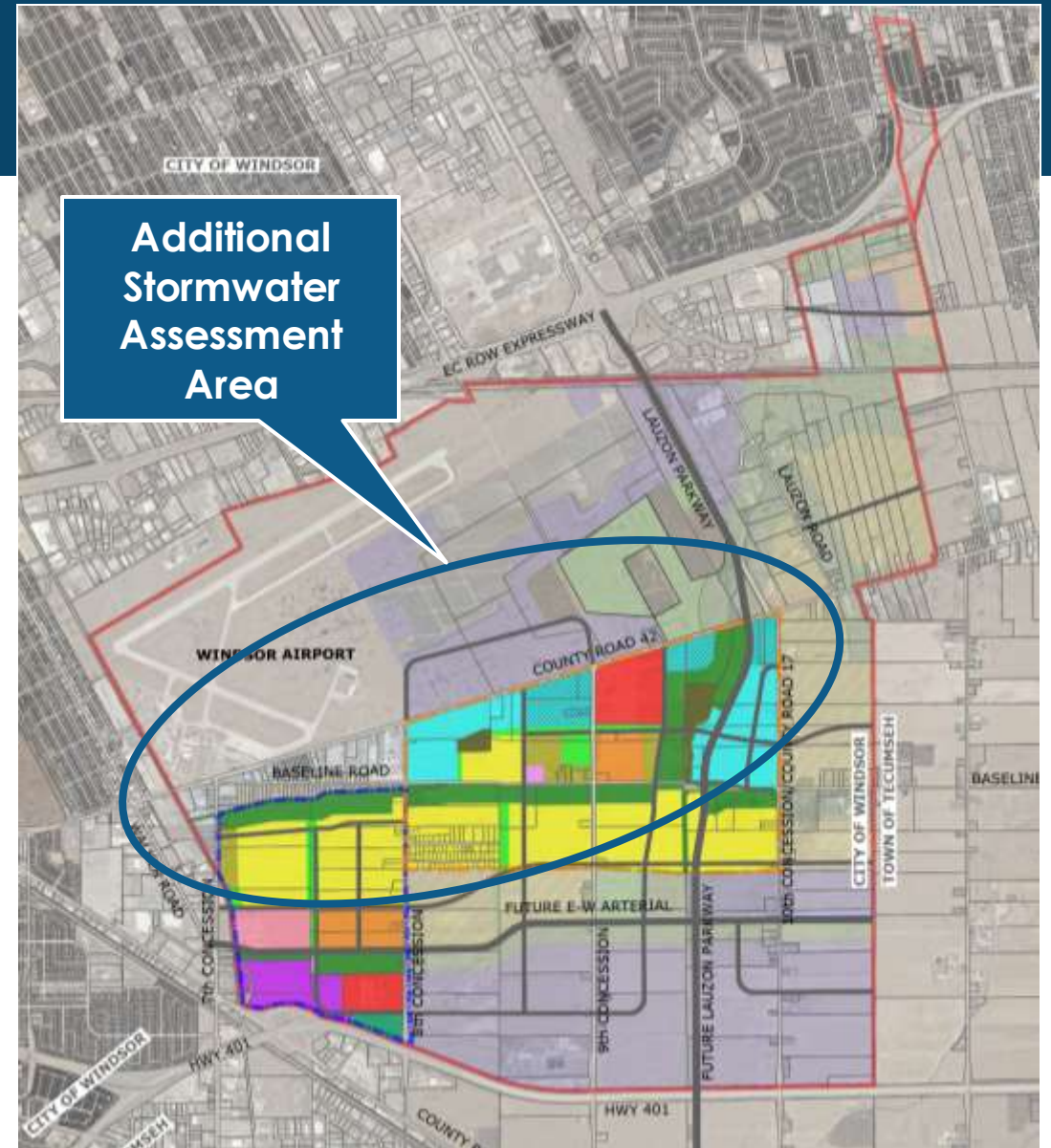
Additional Stormwater Management Analysis

Problem:

Stormwater management is required to control additional runoff for roadway expansion and developable land to meet the Regional Stormwater Management Guidelines.

Opportunity:

Under ultimate conditions, stormwater management of road drainage and proposed development areas will be provided through regional stormwater management facilities to control both water quality and quantity of runoff.

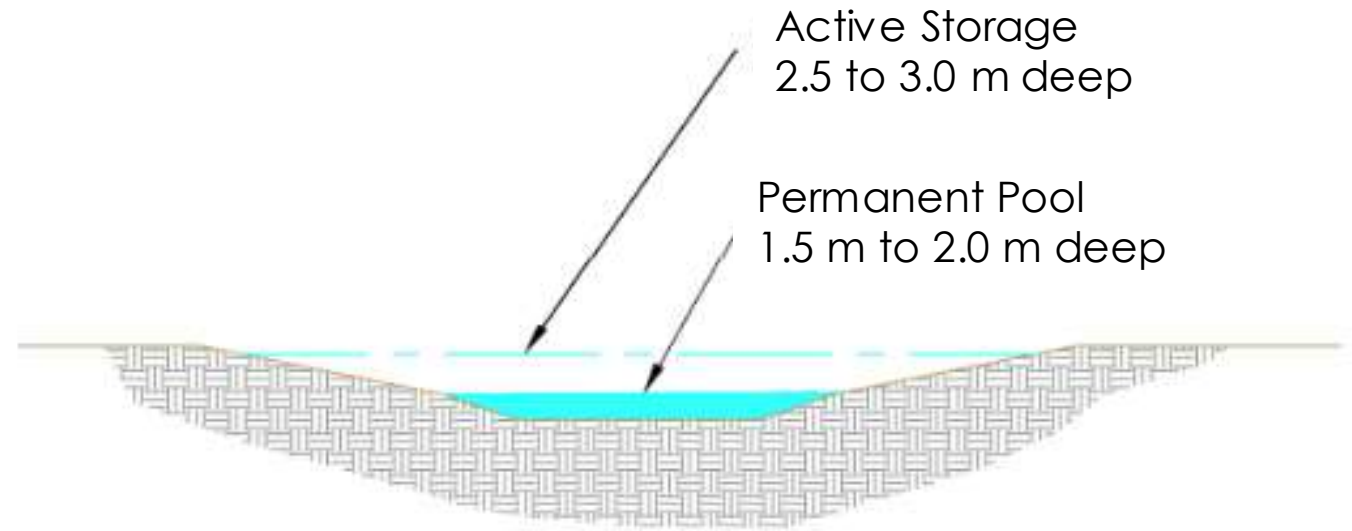
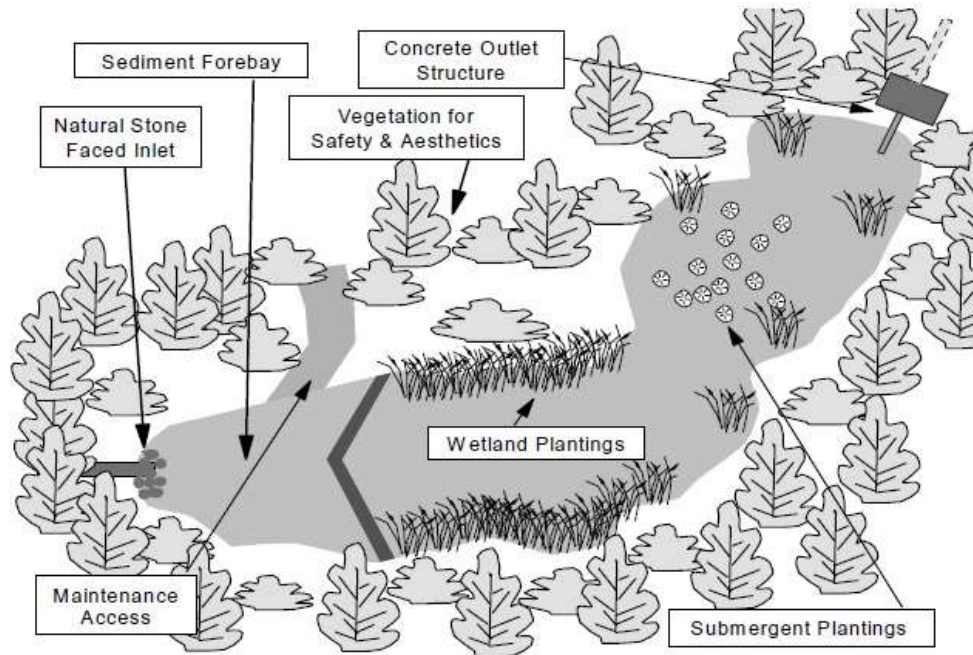


Stormwater Management Facilities

In PIC # 2, the evaluation of stormwater management solutions was presented and the use of Wet Stormwater Management Ponds were identified as preferred.

Option 1A –Wet Stormwater Pond (SWM) facilities to provide both water quantity and quality control.

Option 1A – Extended Detention Wet Pond



Typical Wet Pond Cross Section

Schematic Source: Ontario.ca

SSMSP - Additional Stormwater Assessment - June 2022

Drainage Area Expansion

The ponds required to serve the roadway extension should also accommodate future proposed development within the lands north of CR42.

There is also opportunity to utilize this open space to provide service for the widening of CR42 and developable areas south of CR42 as well.

Option B would permit reducing the stormwater management pond south of CR42. Lands for the natural environment corridor and active transportation pathway will still need to be accommodated.

Option A – Keep Original Drainage Area



Option B – Revised Drainage Area



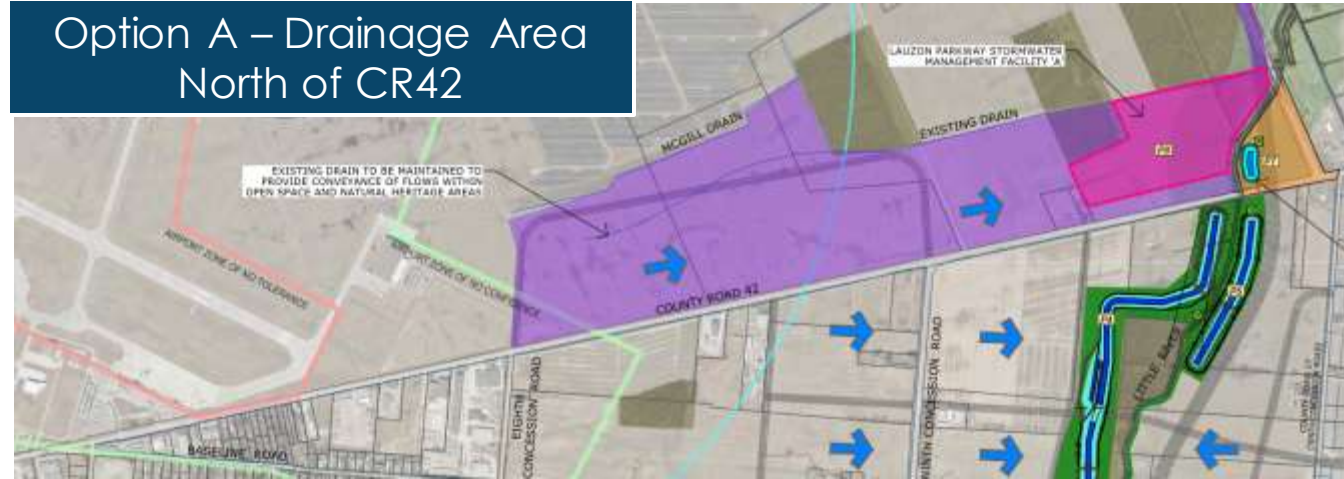
Drainage Area Expansion



Preliminary Preferred = Option B – Revise Drainage Area Boundaries

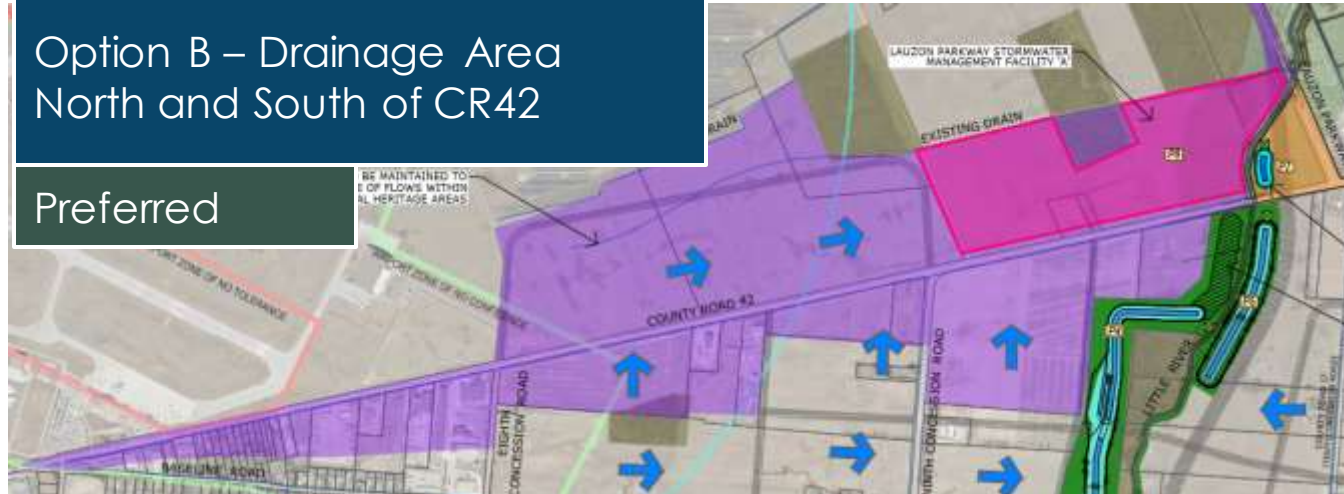
- ✓ Revising the drainage areas would reduce direct impact to developable private property lands.
- ✓ Stormwater management facilities can be expanded on designated open space lands.
- ✓ Meets all SWM Regional requirements.
- ✓ Provides outlet for proposed Lauzon Parkway improvements and first phases of development along CR42.
- ✓ Can be incorporated into naturalization of designed open space areas.
- ✓ Must be designed in accordance with applicable Transport Canada requirements and consist of features to mitigate water fowl habitat (as required by the Airport).

Option A – Drainage Area North of CR42



Option B – Drainage Area North and South of CR42

Preferred



Stormwater Pond Alternatives Evaluation

Option B- Revised Drainage Area – Four options:

B1 - Wet Pond – One Pond

One linear pond, similar to the facilities that are proposed elsewhere in the SS Area.

B2 - Wet Pond – Twin Ponds

Two interconnected twin ponds that better utilize open space designed lands.

Preferred

B3 – Dry Pond with Underground Quality Control

One dry pond with underground quality control consisting of Oil and Grit Separators and Quality Chamber System units.

B4 - Underground Quality and Quantity

Underground quality and quantity control consisting of Oil and Grit Separators, and an Underground Storage Chamber System. No surface storage.

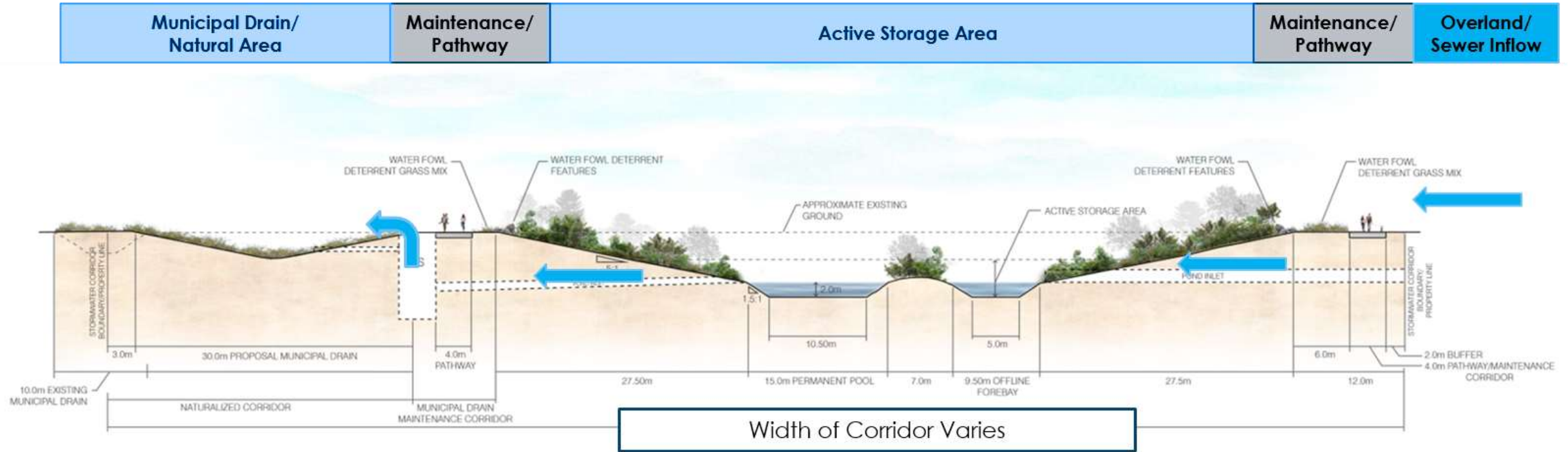
Example: Underground Retention
(Stormtech ADS Units)



Photo Credit: https://ads-pipecanada.ca//ca_en/

Stormwater Management Facilities

Typical wet pond cross section with forebay, pathway/maintenance corridor, and naturalized drain.



Natural Environment

Natural heritage features will be incorporated into the Stormwater management corridors to protect, preserve and, where appropriate, enhance the environment.

A minimum 30 metre treed buffer is required between the existing Little River Drain and the Provincially Significant Wetlands areas.

Natural heritage features and natural plantings will be incorporated into Stormwater management pond designs to deter waterfowl as a safety measure in the vicinity of the airport.



Safety Measures - Waterfowl Mitigation

- Lauzon Parkway ponds are within the **Zone of Monitoring**
 - Features that attract birds within 2 km – 4 km radius from airport lands are monitored. Birds are removed if present danger to airport.
- The SWM pond designs and waterfowl adaptive management plan considers principals of wildlife management.
- SWM pond design elements incorporate several habitat modifications to create spaces that are unappealing to waterfowl.
 - Engineering
 - ✓ Long linear ponds with narrow permanent pool width;
 - ✓ Deep permanent pools with steep side slopes; and
 - ✓ Meandering the ponds and creating regular sight barriers along the lengths of the ponds.
 - Landscaping
 - ✓ Heavily vegetate the banks of the pond;
 - ✓ Utilize woody vegetation; and
 - ✓ Specify species that are unattractive and is not a source of food.



Mitigation, Implementation & Staging

Potential Impacts and Mitigation

Potential Impact	Proposed Mitigation
Construction & Maintenance	<ul style="list-style-type: none">• Inform property owners about upcoming construction.• Use construction best management practices to minimize disruption, such as sediment and erosion control, controlling dust and following noise by-laws.• Implement necessary detours and signage.• Regular maintenance of ponds and pump stations.• Regular monitoring of waterfowl and natural features.
Property Impacts	<ul style="list-style-type: none">• Property acquisition or easements are necessary.• Compensation based on independently completed appraisal based on market values.• Consultation with effected landowners. Regular updates on the timing of progress on projects.



Potential Impacts and Mitigation

Potential Impact	Proposed Mitigation
Archaeological Resources	<ul style="list-style-type: none">• Complete necessary Stage 2 archaeological assessments prior to construction.• Complete Stage 3 and 4 assessments, as required.• Engage indigenous communities during the Stage 2 archaeological assessments.• Notify appropriate agencies should unexpected resources be recovered during construction.
Natural Environment	<ul style="list-style-type: none">• Minimize tree removal and replace any trees removed.• Protect Provincially Significant Wetlands.• Prohibit construction during spawning and nesting seasons.• Development of mitigation plans to protect terrestrial and aquatic habitat.• Obtain necessary regulatory permits.

Little River Drain



Staging – Planned Improvements

This study will allow the stormwater management ponds and pump stations within the first development areas to proceed including the facilities presented herein.

In addition, the following projects are included in the City's current capital budget:

- Lauzon Parkway/CR42 Intersection Improvements;
- Drainage Act Report for the 7th Concession Drain Realignment to divert drainage to mitigate flood risk for developable area. (Ongoing);
- 7th and 9th Concession Road Improvements.



Implementation/Staging

- Upon completion of this Master Servicing plan (subject to Council approval and public review) the City can proceed with implementation of ponds, trunk storm sewers, outlets to the respective municipal drainage outlets and stormwater pump stations (Schedule B projects).
- The study will confirm land acquisition requirements as well as estimated costs for the Schedule B projects (SWM Ponds and Pump Stations).
- Property acquisition negotiations will be initiated by the City once this study is complete and adopted.

Note: The Lauzon Parkway and County Road 42 improvements were approved as part of the 2014 Environment Assessment and therefore no further study is required prior to proceeding with detailed design and construction of the components included under that Environmental Assessment.

Upcoming Survey

Visit the project website www.sandwichsouth.ca to view the materials presented and other information.

Provide us your comments and questions by completing the survey located on the website.



We want to hear your thoughts!

What do you like about these stormwater management options? What do you not like? What is missing?

You can provide your feedback by visiting the survey link:

[Sandwich South Consultation Survey](#)

Or by scanning the QR code with your phone or tablet:

Next Steps

Finalize Preferred Solutions

Summer 2022

- ✓ Review comments from this round of consultation.
- ✓ Complete cost estimates for the upcoming Development Charge Study.

Refine Infrastructure Staging Plan

Summer 2022

- ✓ Formalize the recommended staging plan.
- ✓ Refine land requirements for Schedule B Projects.

Complete the Servicing Master Plan

Fall 2022

- ✓ Identify future impact mitigation requirements.
- ✓ Present final Master Plan to Council.

30 Day Review

Fall 2022

- ✓ Notice of Completion
- ✓ Provide public opportunity to review.
- ✓ Current process.