Sandwich South Master Servicing Plan

THE CITY OF WINDSOR
ONTARIO, CANADA

Public Information Centre #2

September 8, 2021

SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

Land Acknowledgement

To commence this meeting, we would like to first take a moment to acknowledge the land on which Windsor sits. This land is the traditional territory of the **Three Fires Confederacy of First Nations**, which includes the **Ojibwa**, the **Odawa**, and the **Potawatomie**. We respect the longstanding relationship with First Nations people in this place and also acknowledge that this territory is within the lands honoured by the Wampum Treaties.

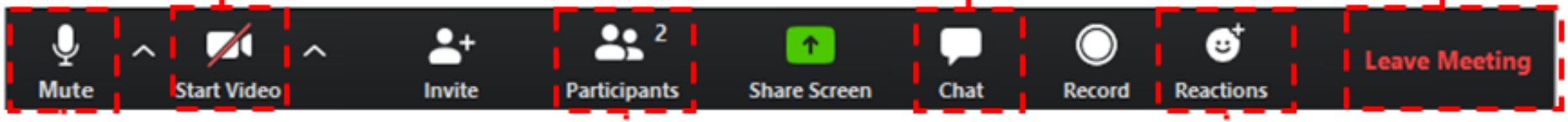
Meeting Mechanics

Zoom Controls

The video camera button turns your camera on or off

Use the chat speech bubble button to access the window to chat with participants or host

Use the Leave Meeting button to leave the meeting while it continues for the other participants



The microphone button will mute and unmute your microphone

Click on Participants to see additional meeting controls

Use the reactions button to Raise Hand

SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

Introductions and Agenda

Time	Agenda Item
5:00 pm – 5:10 pm	Introductions Meeting Logistics Agenda
5:10 pm – 5:45 pm	Presentation • Project Overview • Little River Floodplain Update • Sanitary Servicing and Stormwater Management • Transportation • Mitigation Potential Impacts • Staging and Implementation • Next Steps
5:45 pm – 7:00 pm	Comments and Questions

Your presenters:

Karla Kolli - Dillon Consulting
Project Planner

Laura Herlehy - Dillon Consulting
Project Engineering/Coordinator

Ryan Langlois - Dillon Consulting
Project Water Resource Engineer

Patrick Winter – City of Windsor
Project Manager

SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

Overview

What is the Master Servicing Plan?

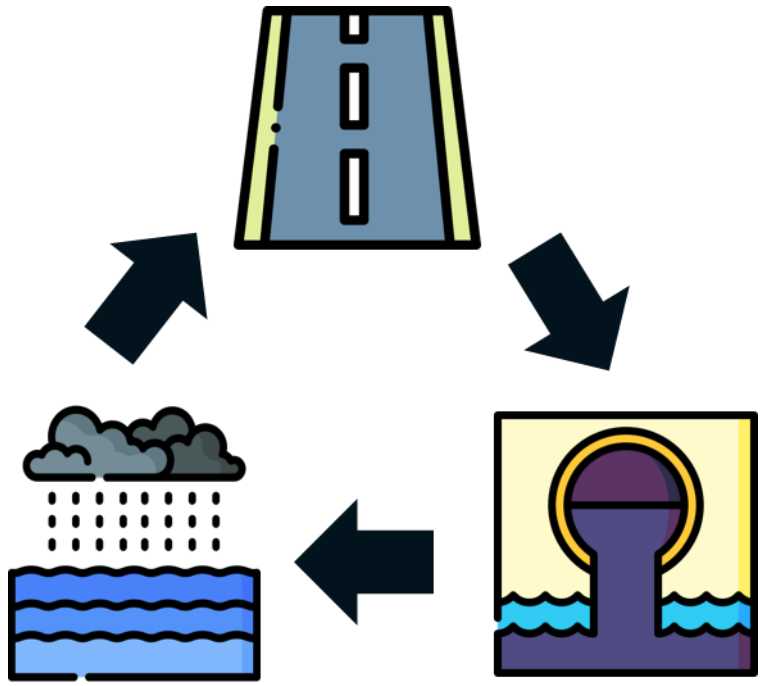
A long-term coordinated plan for municipal infrastructure in the Sandwich South area to support urbanization.

The study will develop strategy to implement future:

1) Municipal Drain Improvements and Overland Drainage
2) Stormwater Management Facilities and Pump Stations
3) Sanitary and Storm Trunk Sewers
4) Collector Roadways

The study follows the Municipal Class Environmental Assessment process and will allow the City to proceed to implementation for Schedule B Projects.

For this study, Schedule B projects include the stormwater management ponds and pump stations within the East Pelton and CR42 Secondary Plan Areas.



SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

Study Area

- Spans from the E.C. Row Expressway in the north, Walker Road in the west, Highway 401 in the south, and Banwell Road in the east.
- 2,600 Hectares of Land
- Includes two existing Secondary Plans:
  - East Pelton Secondary Plan Area
  - Country Road 42 Secondary Plan Area
- Focus has been to develop solutions for the first stages of development that includes the East Pelton and Secondary Plan Area.

SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

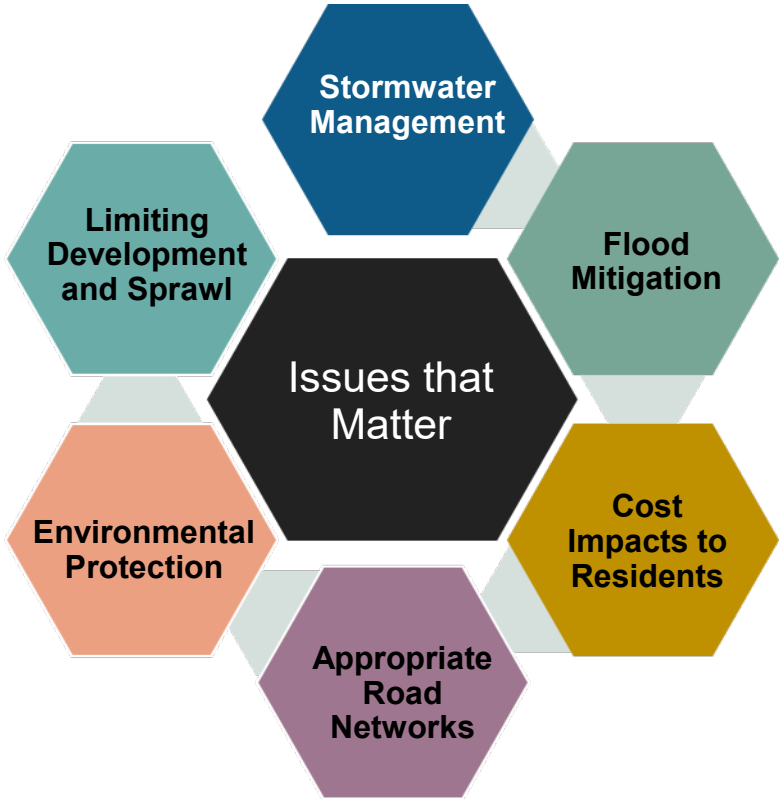
Lots of Work has been Completed

Consultation and Assessments

- Pop Up Event (January 2020)
- Public Information Centre # 1 (September to October 2020)
- Stakeholder Advisory Committee Meetings
- Stage 1 Archaeological Study
- Existing Condition Natural Environmental Assessment
- Meetings with the Ministry of Environment, Conservation and Parks
- Continued coordination with Essex Region Conservation Authority (ERCA)
- Evaluation of Alternatives
- Preliminary Functional Design
- Several Meetings with Key Stakeholders

What We Heard

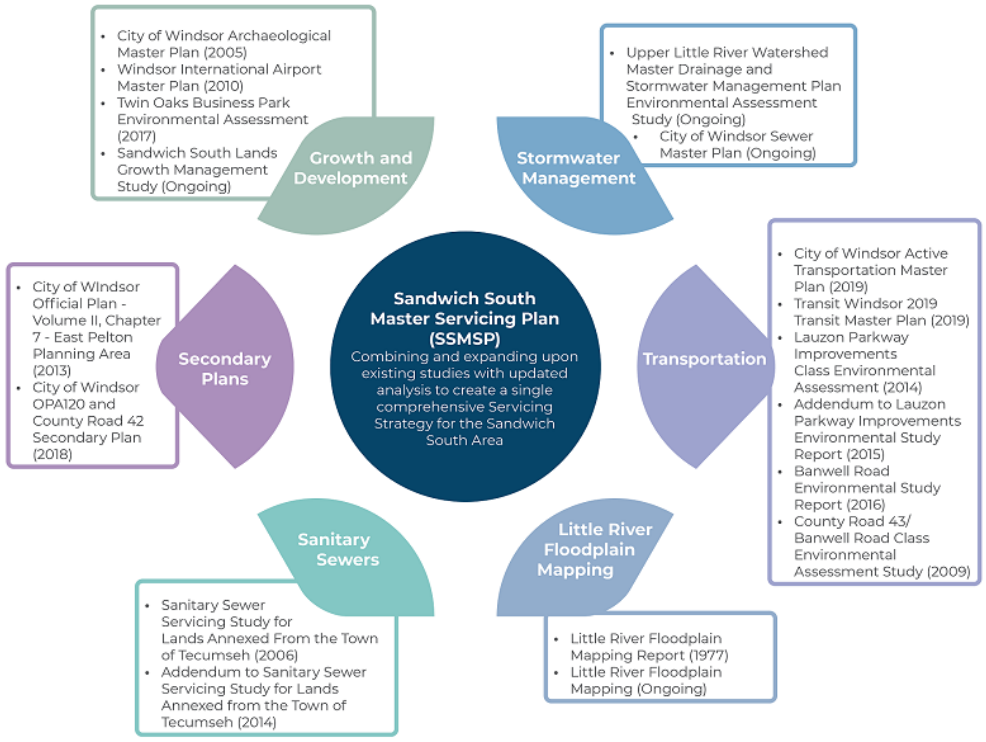
- Growth and Development
  - Why Sandwich South when there are other areas in the City to grow?
  - When will the growth happen?
- There is a desire to see more than an auto dependent community
- More information is needed on how active transportation and complete streets will be incorporated into Sandwich South
- Costs and impact to taxpayers is important and more information is needed
- There is a desire to keep greenspace within these lands
- Protection against flooding is critical
- Landowners need to understand if lands acquisition is required
- The process for community input needs to be clear and suggestions for more interactive PICs and additional meetings were provided.



Lots of Work has been Completed

The City of Windsor has been preparing for future development of this study area over the last few decades with the completion of various studies.

Recommendations and projects identified in this studies are used as a basis for the SSMSP.



SANDWICH SOUTH MASTER SERVICING PLAN

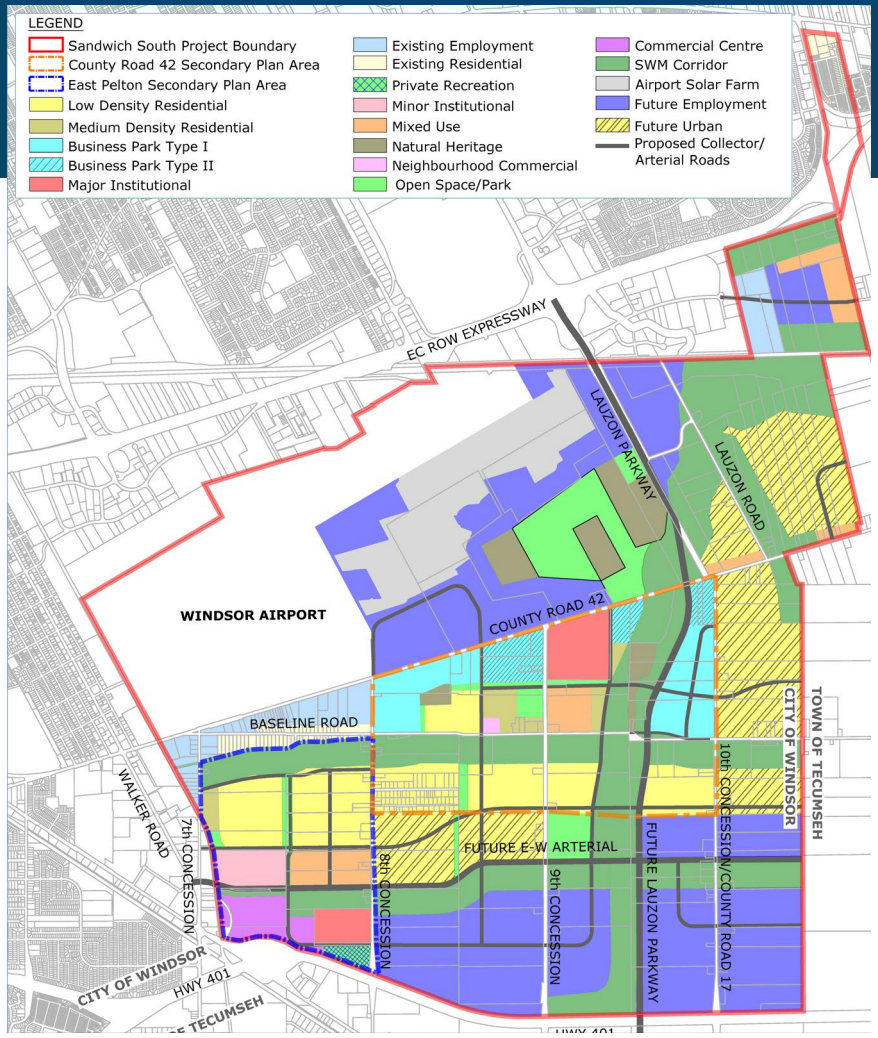
DILLON CONSULTING

Future Growth

Windsor is projected to grow from a population of 217,716 in 2016 to 225,466 in 2036.

8,000 new residents will require services, housing, employment, and infrastructure to meet their needs.

Sandwich South will accommodate some of this new population as shown in the approved East Pelton and CR42 Secondary Plans.



SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

Little River Flood Plain Mapping

SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

Little River Watershed Floodplain Mapping

Study Purpose:

- Understand existing and future flood risk and vulnerable areas.
- Identify the existing and ultimate condition floodplain conditions under various major storm events.

The findings of this study have been used to refine the SSMSP functional design:

✓ Determine drainage capacity of the existing municipal drains and Little River.

✓ Development of the allowable release rates for the development areas into the respective municipal drains.

✓ Identify the required floodproofing requirements for the initial buildouts area.

SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

Little River Watershed Floodplain Mapping

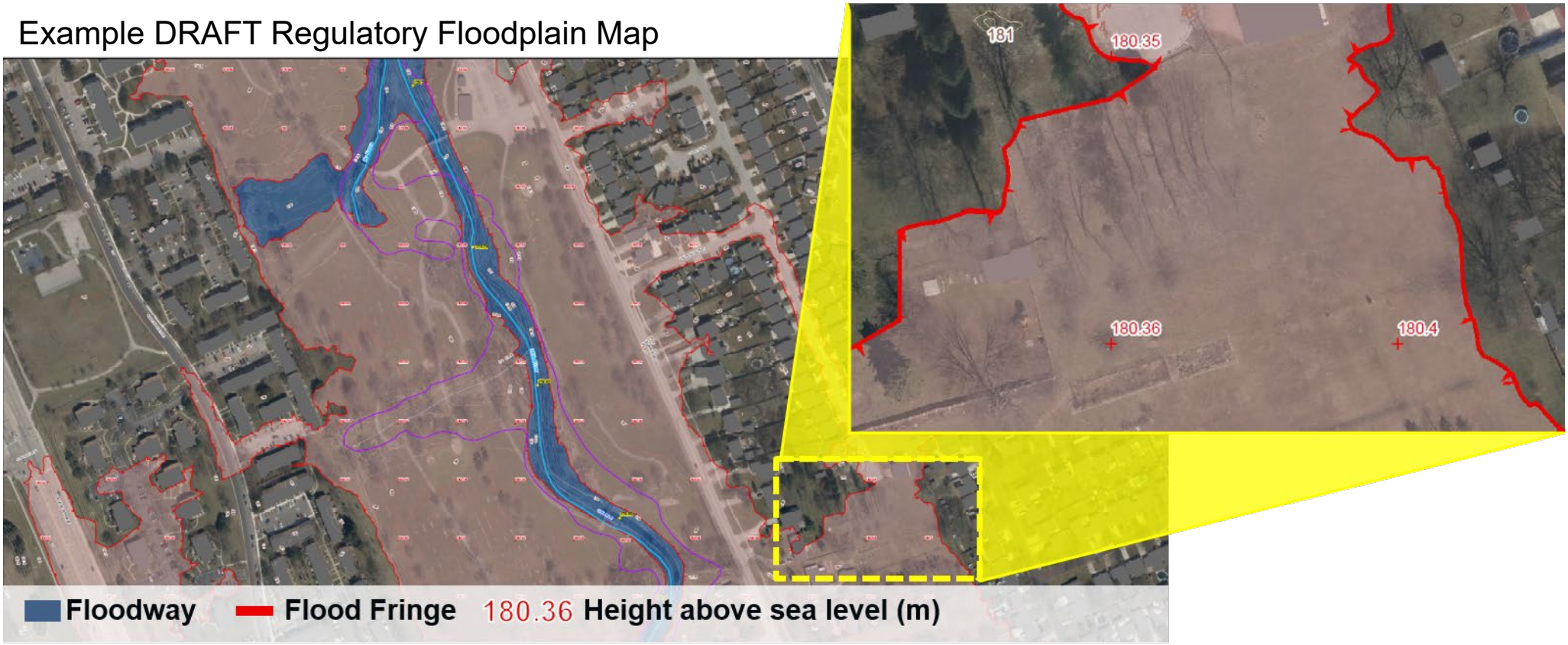
A two-zone concept has been accepted by ERCA and a 3rd Party Review Team for the existing condition floodplain update for the Little River Watershed.

The two zones would include:

- **Primary Floodway (Zone 1):** Designated flood hazard area where **development is not permitted** without a study to confirm no adverse impacts, or that the development provides floodplain compensation.
- **Secondary Flood Fringe (Zone 2):** **Development is permitted, but is required to meet flood-proofing standards** based on, at a minimum, the designated flood fringe elevations.

Little River Watershed Floodplain Mapping

Example DRAFT Regulatory Floodplain Map



SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

Little River Watershed Floodplain Mapping

Regulatory Floodplain Mapping - UPDATE

- Updated regulatory floodplain computer models to establish municipal drain floodway and flood fringe areas.
- Identified limits to development related to primary floodways.
- East Pelton and CR42 Secondary Planning Areas are out of the primary floodway.
- Established draft floodproofing requirements for the initial buildout areas.
- Draft Regulatory Floodplain Maps currently being reviewed by ERCA.

Next Steps

- Future public consultation on Regulatory Floodplain Maps (to be completed by ERCA).

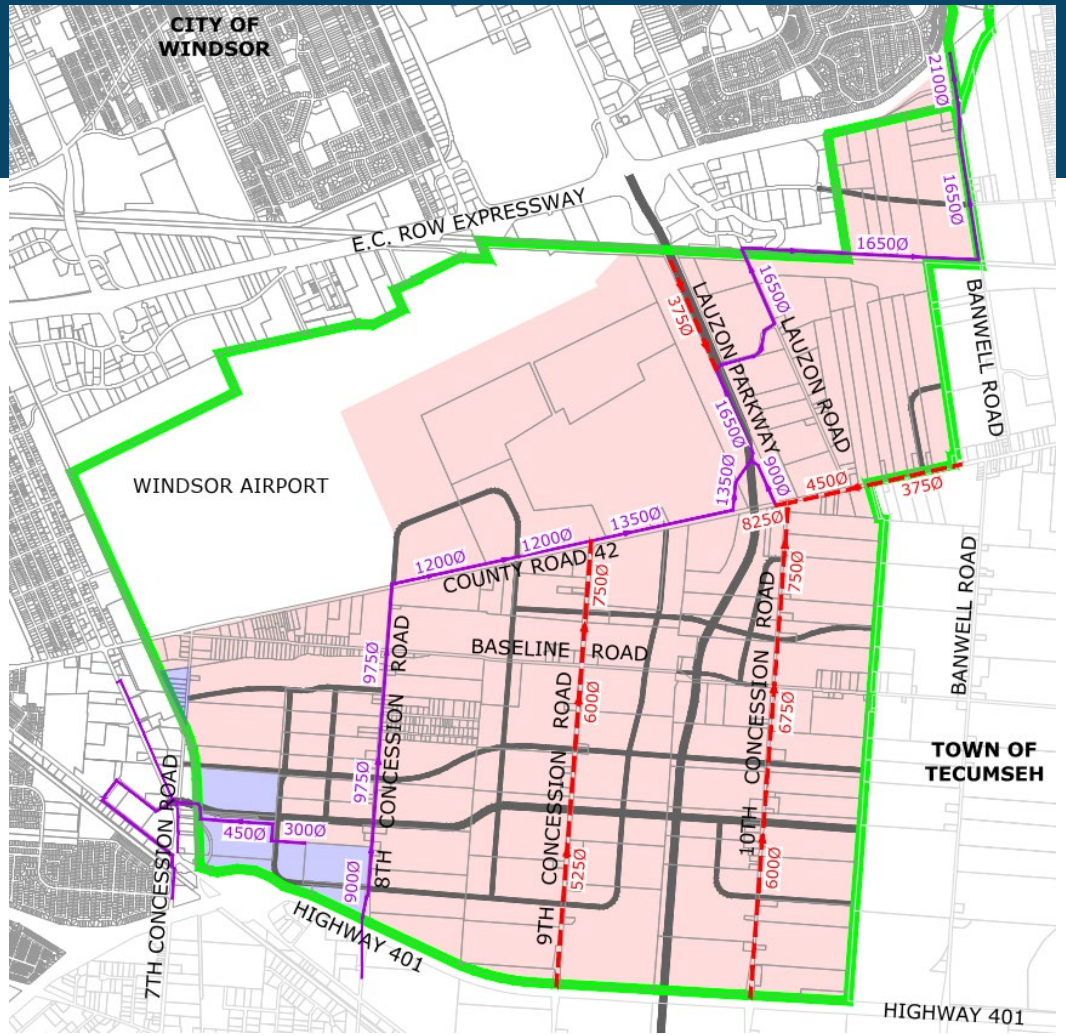
Sanitary Servicing & Stormwater Management

SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

Sanitary Servicing

- Proposed Trunk Sanitary Sewers provide servicing to study area.
- Trunk Sewers will be Schedule A/A+ where installed within the Municipal ROW.
- Timing of sanitary sewers is dependent on development needs.
- Costs to connect to new sanitary sewers will be assessed to property owners.
- Little River Pollution Control Plant Capacity Assessment to determine when future expansion is required to accommodate development.

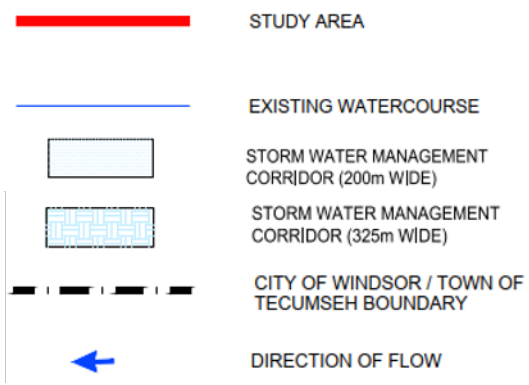


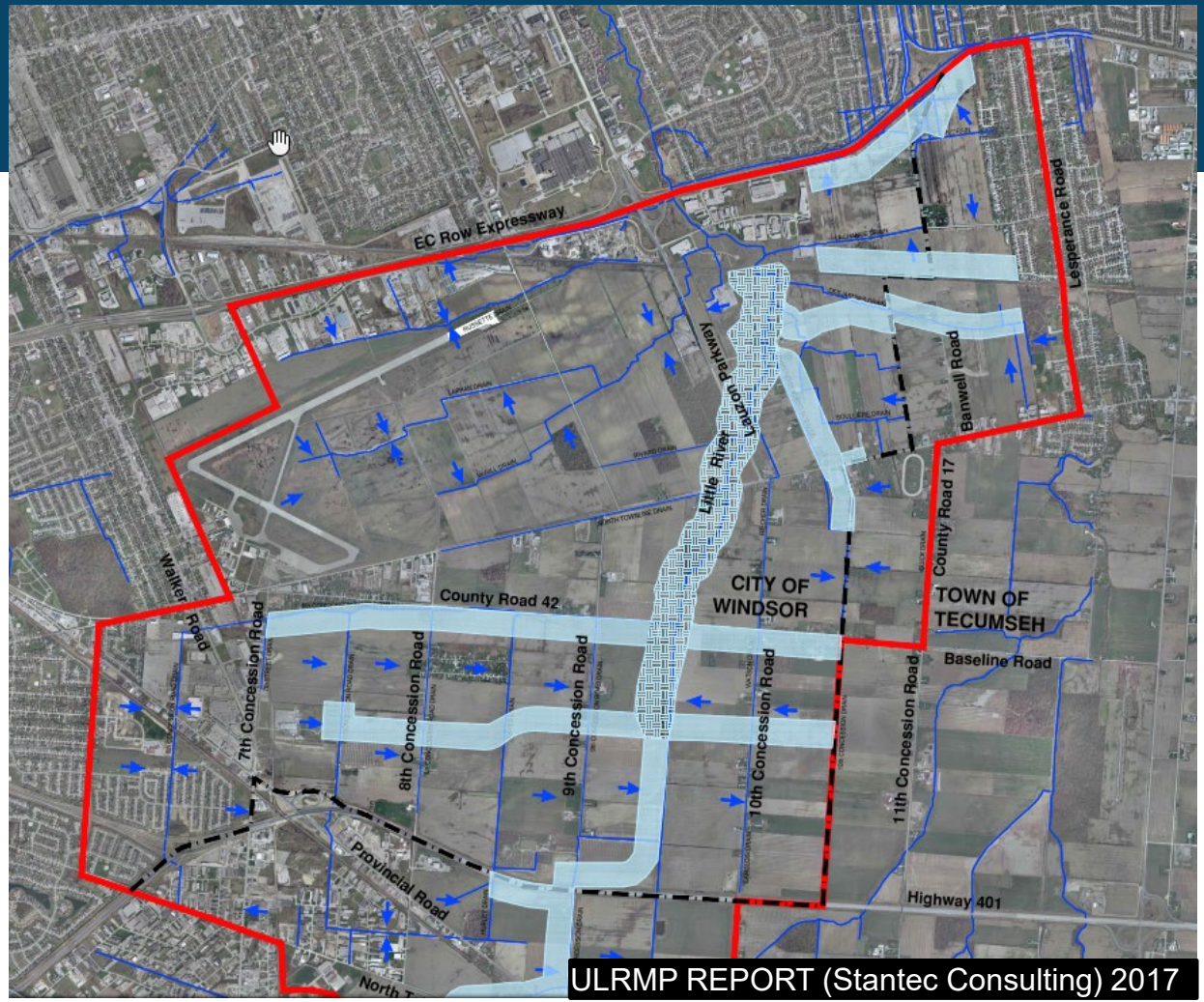
SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

Stormwater Strategy Background

- Report provides recommendations for the management of stormwater within the Upper Little River Watershed.
- Recommends Grouped Off-Line Water Quality and Quantity SWM Controls
- Currently under update, to be brought to Council Fall 2021.





ULRMP REPORT (Stantec Consulting) 2017

SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

Stormwater Strategy Background

Through the findings of the updated regulatory floodplain study, **functional Floodproofing Requirements** are to be established for the SSMP, including:

- Minimum Building Finished Floor above the regulatory 1:100 year flood fringe level.
- Required Minimum Road Grades are below the regulatory 1:100 year flood fringe level and allow overland flow routing.

Stormwater infrastructure must meet minimum design guidelines.

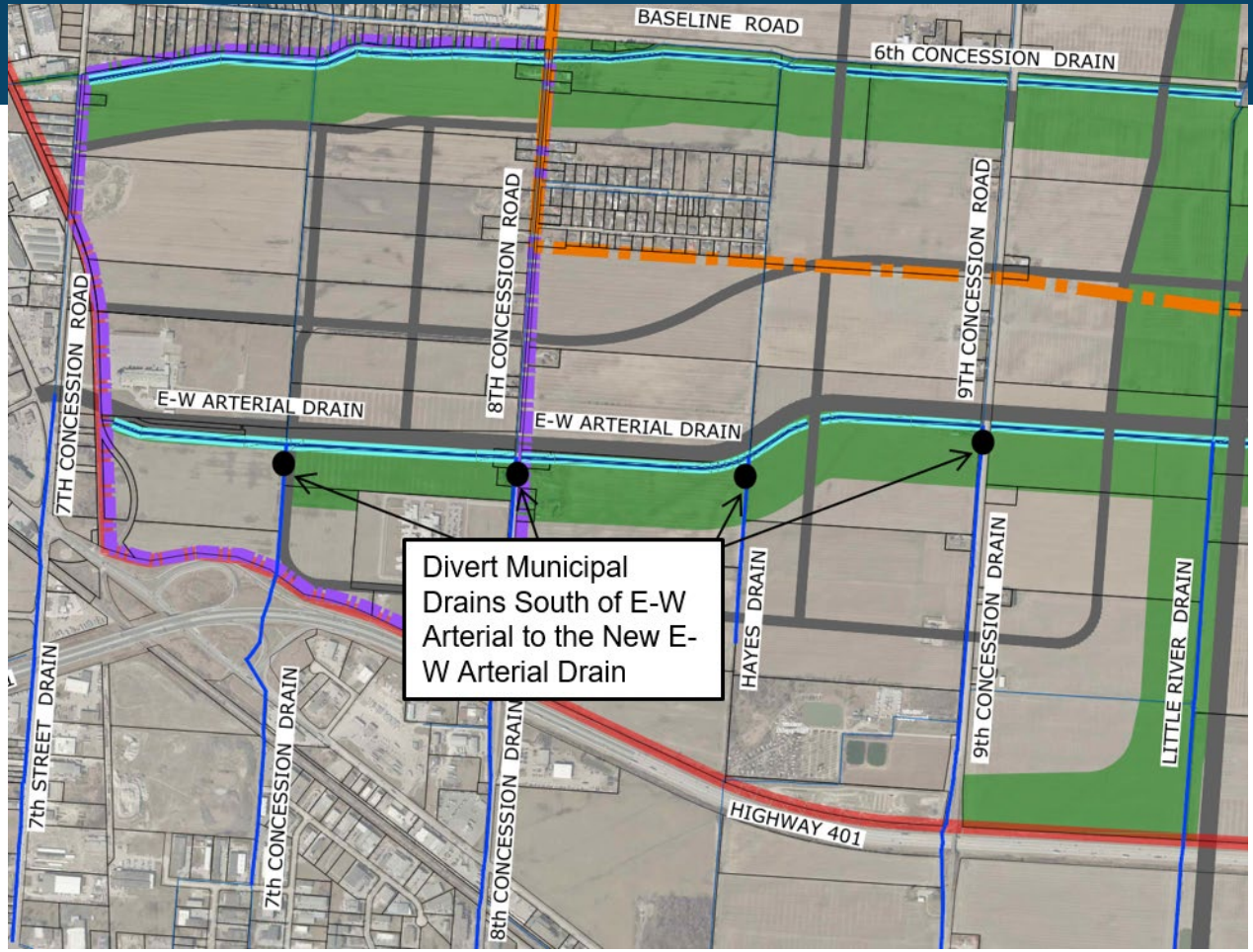
Considerations for added resiliency in the design of this infrastructure is being considered.

Stormwater Strategy Staging

To accommodate buildout of the initial development areas within the SSMP area, the East-West (E-W) Arterial Drain is required to be constructed south of the proposed E-W Arterial Roadway from the 8th Concession Road to the Little River.

This work is to include drain diversions of the following Municipal Drains south of the E-W Arterial:

- 7th Concession Drain.
- 8th Concession Drain.
- Hayes Drain.
- 9th Concession Drain.



SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

Stormwater System Problem/Opportunity

Problems

- Provide framework for Stormwater Management Pond servicing and storm sewer servicing to provide guidance for organized development.

Opportunities

- Utilize allocated stormwater management corridor to accommodate linear ponds and municipal drains.
- Design a share storm sewer network to convey stormwater to the ponds.

Stormwater Management Pond Solution Alternatives

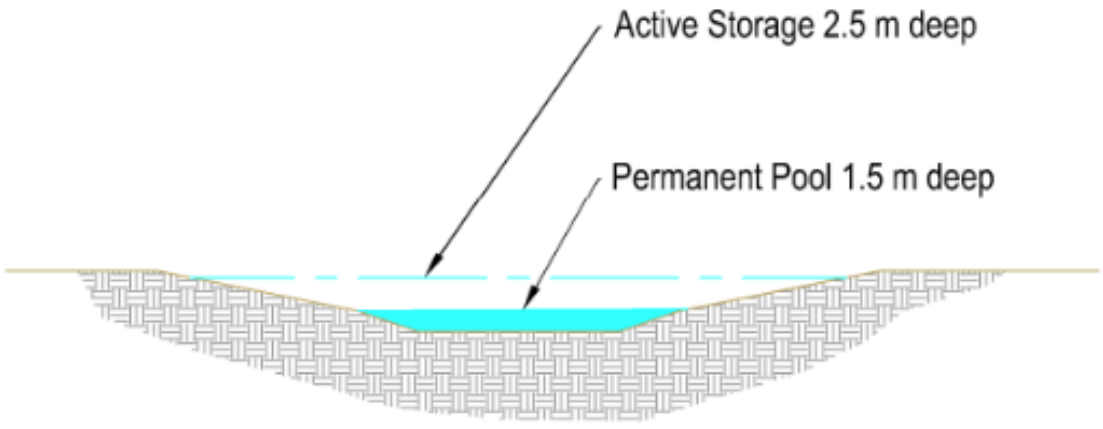
Storm Sewer Servicing Solution Alternatives

Stormwater Management Facilities

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

Option 1b – Wet Stormwater Pond (SWM) facilities with at-source quantity and quality control storage and Low Impact Development (**LID**) controls.

Option 1a and 1b - Wet Stormwater Pond



Typical Wet Pond Cross Section

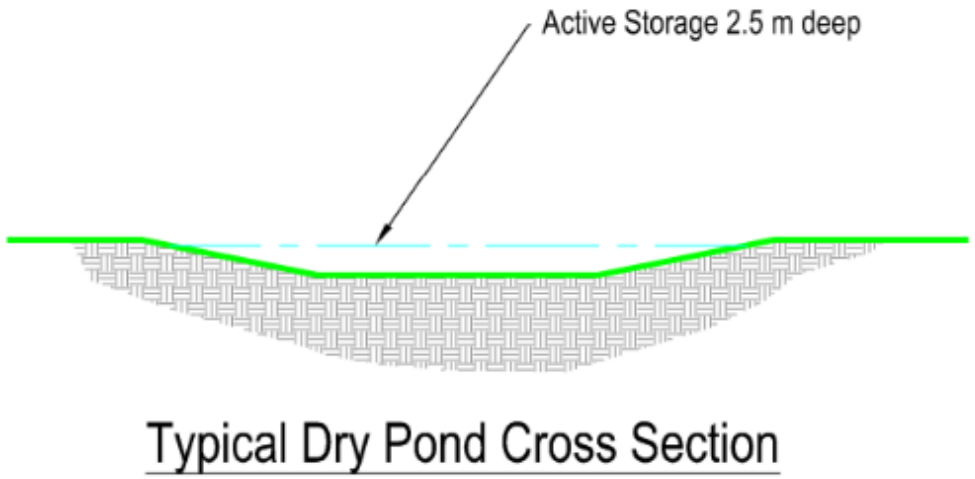
SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

Stormwater Management Facilities

Option 2a – Dry Stormwater Pond (SWM) facilities for quantity control with localized on-site quality control.
Option 2b – Dry Stormwater Pond (SWM) facilities for quantity control with localized on-site quality, quantity control and Low Impact Development (**LID**) controls to reduce end-of-pipe facility size.

Option 2a and 2b - Dry Stormwater Pond



Typical Dry Pond Cross Section

Stormwater Pond Alternatives Evaluation

Preliminary Preferred ✓ = Option 1a – Wet Stormwater Pond (SWM) facilities

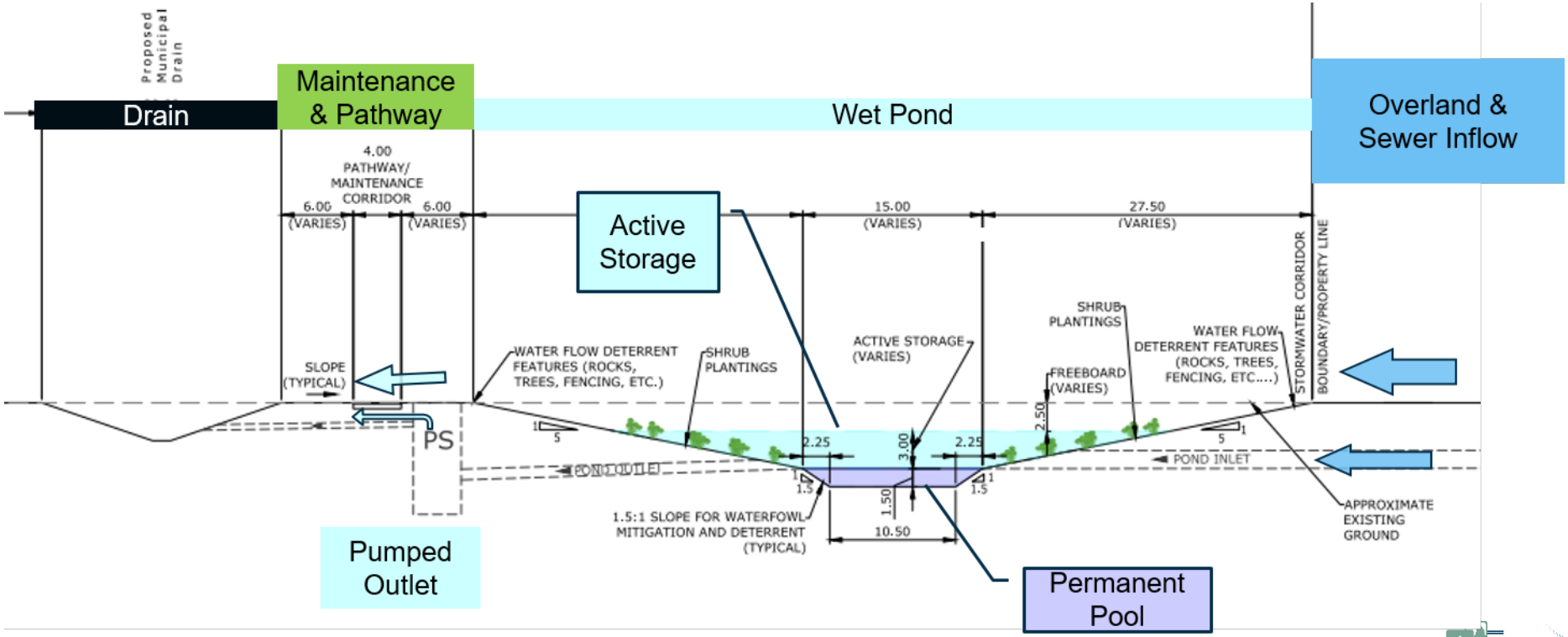
- ✓ Wet Ponds provide water quality control to mitigate the need for inline or onsite quality controls which are costly, difficult to maintain to ensure proper effectiveness.
- ✓ Can more easily accommodate added resiliency to account for climate change.
- ✓ SWM corridors incorporate natural spaces / linkages, adding an element for natural green infrastructure.
- ✓ Meets all SWM Regional requirements.
- ✓ Must consist of features to mitigate water fowl (as required by the Airport):
    - Minimizing pond permanent pool widths
    - Design consideration for plantings and landscape for waterfowl mitigation along the banks including trees and woody shrubs
    - Consideration for initial waterfowl mitigation after pond construction prior to the growth of mature vegetation

Stormwater Management Pond and Pump stations are Schedule B Projects.

Approval of this study will allow the City to proceed with property acquisitions and construction of these facilities with the East Pelton and CR42 Secondary Plan Area.

Stormwater Management Facilities

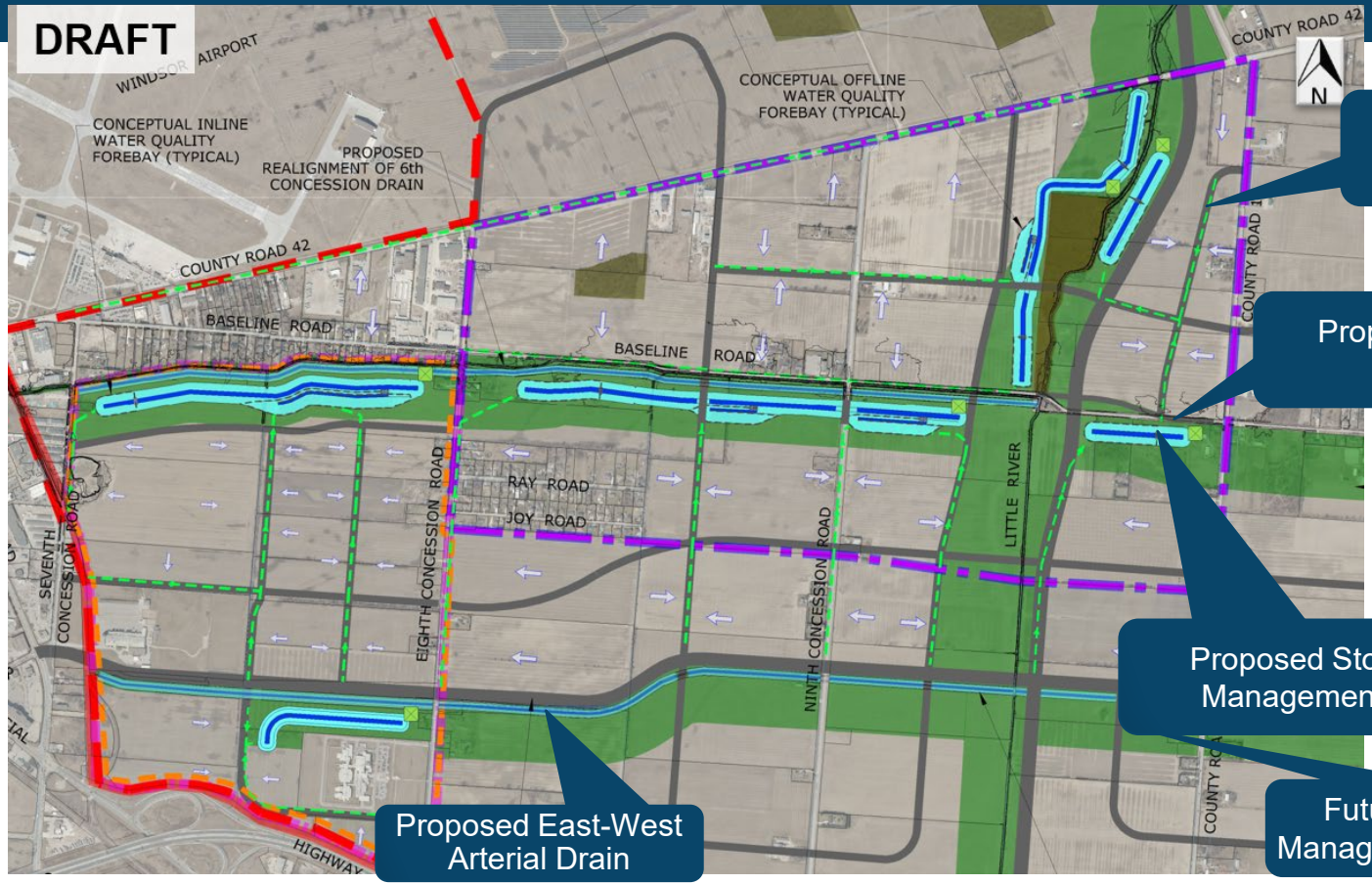
Typical wet pond cross section, pathway/maintenance corridor, and drain:



SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

Stormwater Management Facilities



Proposed Storm Sewers

Proposed Storm Pump Station Outlets

Proposed Stormwater Management Ponds

Future Stormwater Management Pond Areas

Proposed East-West Arterial Drain

SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

Storm Sewer Overview of Alternatives

Three possible solutions are being considered for storm sewer servicing within the Sandwich South Area.

Options Considered:

Option 1 – Do Nothing

✓ Option 2 – Storm Sewer Network

Option 3 – Combined Open Drain and Storm Sewer Network

Preliminary Preferred = Option 2

- ✓ Less land area required to accommodate sewers.
- ✓ Low comparative maintenance cost.
- ✓ To provide resiliency to the system, the trunk storm sewers are being sized to serve a 1:10 year storm which is greater than the regional stormwater management guidelines.

Option 2 – Storm Sewer Network

Option 3 – Combined Open Drain and Storm Sewer Network

SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

Natural Environment

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

Connections between existing natural heritage features may include a variety of habitats and vegetation communities to allow for a variety of flora and fauna.

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.

Interim methods to mitigate waterfowl habitat may be needed prior to vegetation reaching full maturity.

Transportation

Transportation Problems & Opportunities

Problems

- Current road network can only support a limited level of growth
- Lack of road capacity to serve full growth potential
- Few sidewalks or cycling facilities
- Lack East - West connectivity

Opportunities

- Identify shared road network to support growth
- Can preserve space now for future road networks
- Can preserve space for sidewalks and cycling facilities
- Can preserve space for future transit service
- Establish a long term plan to improve the existing road network

Network Options considered:

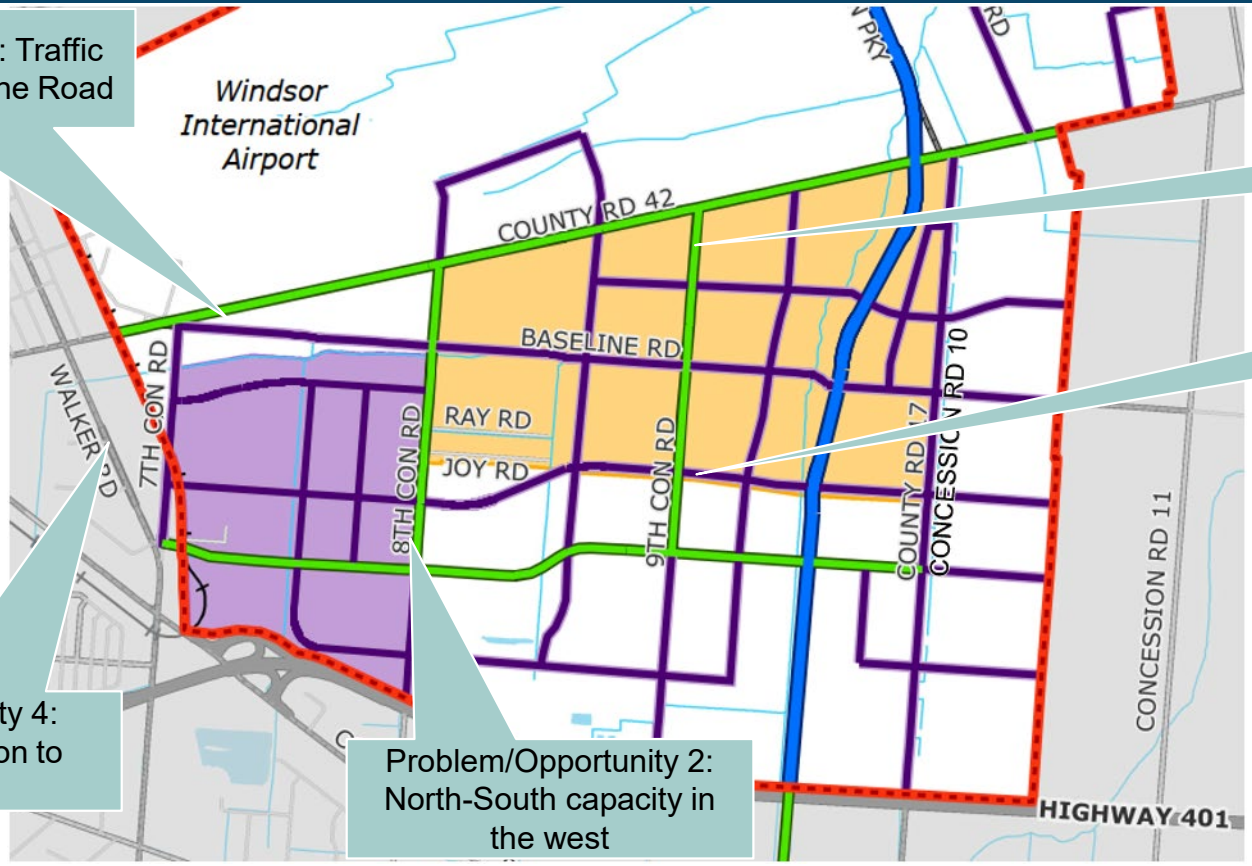
Option 1 - Maintain Conceptual Road Network

- As established by the CR42 and East Pelton Secondary Plan Areas.

✓ Option 2 - Modify Conceptual Road Network [preliminary preferred]

- Modified to provide better connectivity to the greater study area.

Transportation Overview of Alternatives



Problem/Opportunity 5: Traffic Management on Baseline Road

Problem/Opportunity 1: North-South capacity in the east

Problem/Opportunity 3: East-West Capacity

Problem/Opportunity 4: Additional connection to Walker Road

Problem/Opportunity 2: North-South capacity in the west

SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

Opportunity 1: N-S Capacity – East Study Area

To support development of the southeast portion of the study area, the need to expand the existing collector roadways would be required.

Options Considered

Option 1: Widen 10th Concession Road from 2 to 4 Lanes

✓ Option 2: Widen 9th Concession Road from 2 to 4 Lanes

Preliminary Preferred = Option 2

- ✓ 9th Concession Road will better accommodate future growth and future land uses.
- ✓ 9th Concession Road is more centralized within the Study Area.
- ✓ 10th Concession is less preferred as there will be a right-in/right-out only at County Road 42.

Image: Google Earth

SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

Opportunity 2: N-S Capacity – West Study Area

To support development of the southwest portion of the study area additional collector roadway capacity would be required.

Options Considered

Option 1: Widen 7th Concession Road from 2 Lanes to 4 Lanes

✓ Option 2: Widen 8th Concession Road from 2 Lanes and 4 Lanes

Preliminary Preferred = Option 2

- ✓ More central to the study area, making it useful to more residents, employees, and visitors.
- ✓ Will allow for a larger portion of the southeast Sandwich South lands to benefit.
- ✓ Easier for residents to make internal trips within the study area.

Image: Google Earth

SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

Opportunity 3: East-West Collector Alignment

To support development of the southwest portion of the study area the need to expand the existing collector roadways would be required.

Options Considered:

Option 1: Use Joy Road Right of Way

Option 2: Do Not Build Collector Between 8th and 9th Concession

Option 3: Curve North to Connect with East Pelton Collector

✓ Option 4: Curve South to Connect with East Pelton Collector

Preliminary Preferred = Option 4

✓ Ray and Joy Road should remain local roads to mitigate impacts to existing residents.

✓ Less direct path across the study area, but maintains connectivity within the study area.

SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

Opportunity 4: Additional E-W Connection to Walker Road

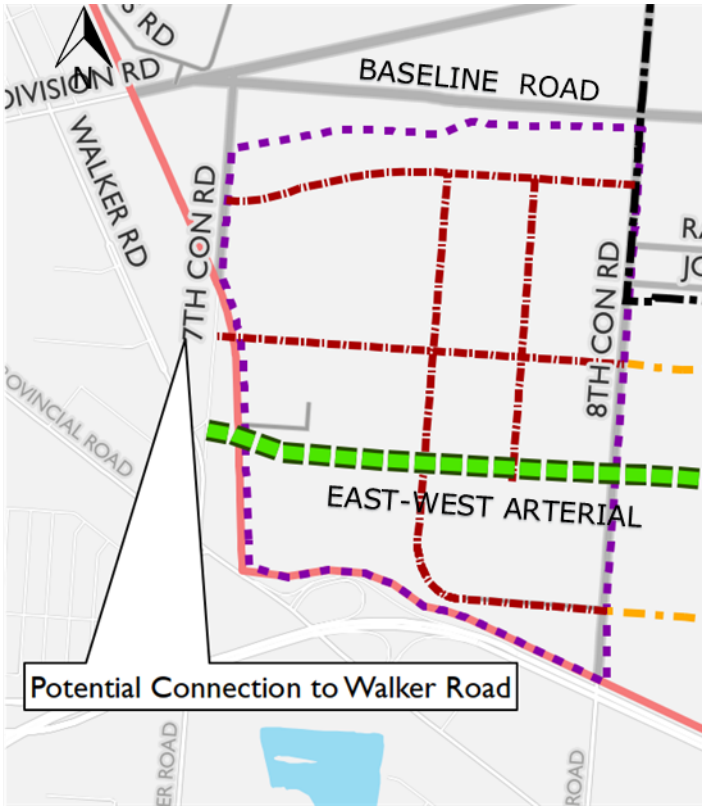
To provide flexibility for connecting to Walker Road.

Options Considered:

- ✓ Option 1: Do Not Add Connection to Walker Road
- Option 2: Add Connection to Walker Road

Preliminary Preferred = Option 1

- ✓ Does not impact businesses on 7th Concession and Walker Road.
- ✓ Does not require property acquisition.
- ✓ Consideration to provide active transportation linkage to provide cycle/pedestrian connectivity to Walker Rd.



SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

Opportunity 5: Traffic Management on Baseline

Baseline Road – Residential Area

Image: Google Earth

SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

Opportunity 5: Traffic Management on Baseline

Implement traffic management on Baseline Road between 7th and 8th Concession road to mitigate traffic and speed from future development growth.

Options Considered:

Option 1: Do Nothing

Option 2: Dead End Baseline Road at 8th Concession Road

✓ Option 3: Institute Traffic Calming Measures

Preliminary Preferred = Option 3

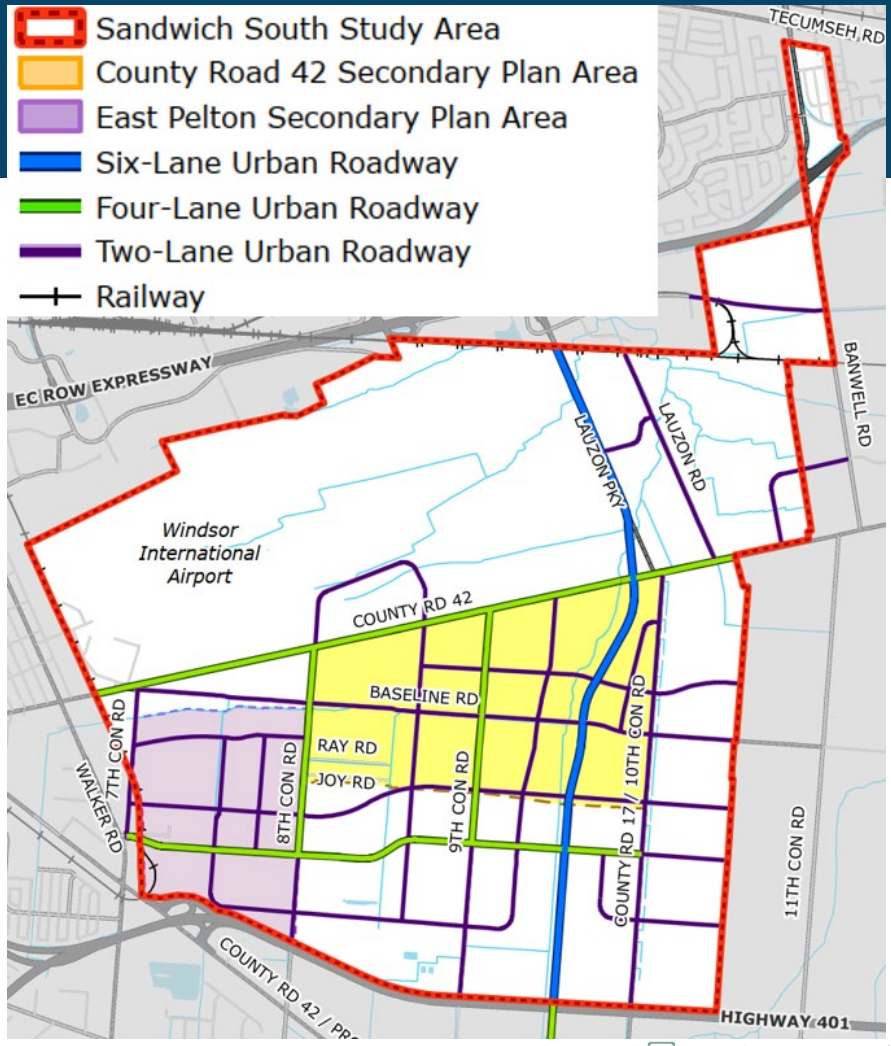
✓ Provides more direct emergency access.

✓ Supporting collector road network will support growth.

✓ Does not require property acquisition.

Ultimate Road Network

- Proposed collector roads for the entire Sandwich South Study Area.
- This plan does not show proposed local roads or laneways required to support local subdivisions and commercial developments.
- Schedule C Environmental Assessments shall be undertaken to establish alignments, connections to Arterial Roadways.
- Coordination with adjacent municipalities is required as it relates to development external to study area.



SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

Active Transportation

All collector roadways will be designed to provide active transportation to be safe and conformable for All Ages and Abilities.

Infrastructure shall be in keeping with the City's upcoming Complete Streets Guideline.

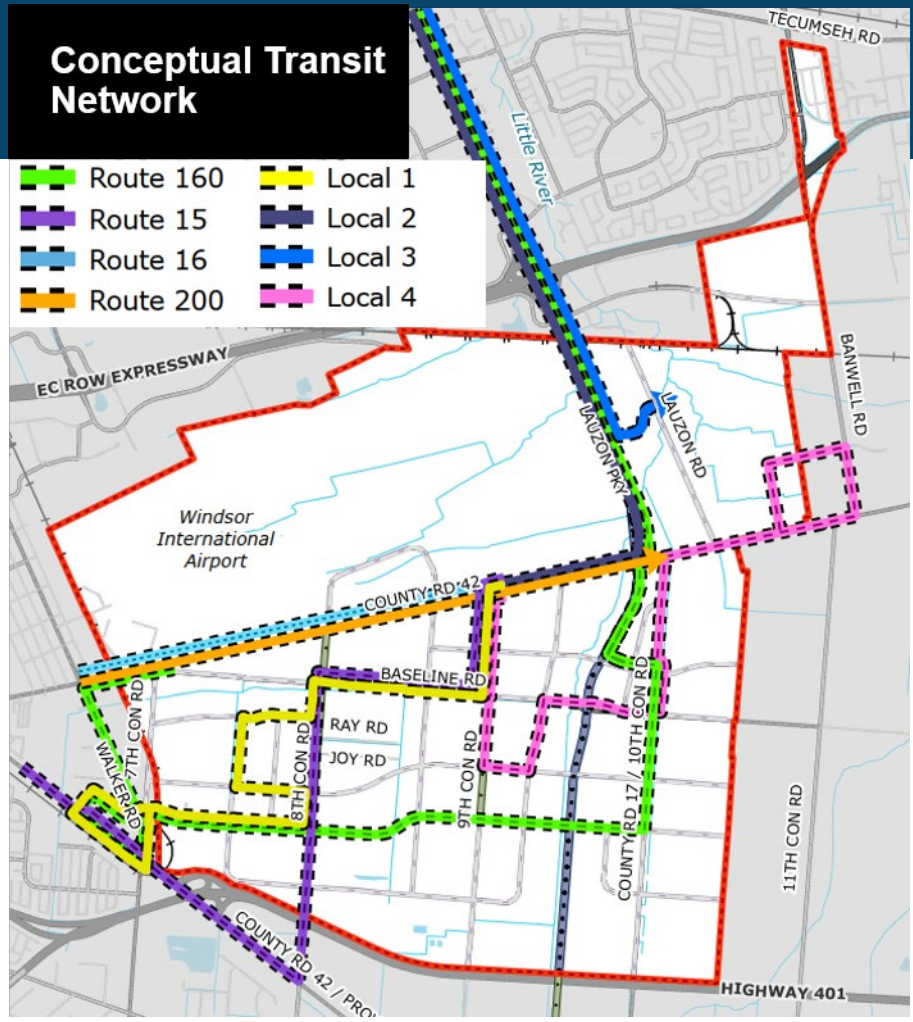
Protected Cycling Lane

Cycle Track

Draft Transit Network

Built on recommendations of the 2019 Transit Master Plan

- **Route 15:** Downtown and the Devonshire Mall Transit Terminal via Howard Avenue. This route can be extended via County Road 42.
- **Route 16:** This route will serve the Hotel Dieu Grace Healthcare Terminal, Division Road, and County Road 42.
- **Route 160:** Will serve the Lauzon Parkway from the East End Bus Terminal to County Road 42. This route can be extended to serve County Road 17, the East-West Arterial, and Walker Road.
- **Route 200:** This route will serve County Road 42 and can be extended east to connect with Tecumseh.
- **Local 1-4:** New local routes will be required to provide coverage within the study area. Conceptual routing is shown in the figure below.



SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

Mitigation, Implementation & Staging

Potential Impacts and Mitigation

Potential Impact	Proposed Mitigation
Construction & Maintenance	• Inform property owners about upcoming construction. • Use construction best management practices to minimize disruption, such as controlling dust and following noise by-laws.
Property Impacts	• Property acquisition or easements where necessary. • Compensation for property acquisition will require further consultation with effected landowners.
Archaeological Resources	• Complete necessary Stage 2 archaeological assessments prior to construction. • Notify appropriate agencies should unexpected resources be recovered during construction.
Natural Environment	• Minimize tree removal and replace any trees removed • Development of mitigation plans to protect terrestrial and aquatic habitat. • Obtain necessary regulatory permits

Staging – Planned Improvements

Project with the City's current capital works budget:

- Lauzon Parkway/CR42 Intersection Improvements;
- Drainage Act Report for the East-West Arterial Drain to divert drainage to mitigate flood risk for developable area. (Ongoing);
- 7th and 9th Concession Road Improvements; and
- First phase of the East-West Arterial Road at Walker Road.

This study will allow the stormwater management ponds and pump stations within the first development areas within the East Pelton and CR42 Secondary plan areas to proceed.

Staging – Development Driven Improvements

As development is proposed the following servicing infrastructure will be implemented.

Sanitary Servicing

- Trunk sanitary sewers have been installed providing outlet to the SSMSP area.
- Where required to facilitate development, local sanitary sewers shall be extended.
- The level of development that can be accommodated prior to commencing necessary studies to expand the Little River Pollution Control Plant will be determined.

Stormwater Ponds and Pump Stations

- Pump Station and stormwater management pond construction will allow associated drainage areas to develop.
- Temporary stormwater management measures will be discouraged.

Staging – Development Driven Improvements

Transportation Network

- The existing road network will support the initial stages of development.
- Several, already completed Environment Assessments, have established upgrades to be completed within the study area including:
  - Lauzon Parkway Extension
  - Upgrading CR42
  - Construction of the East-West Arterial Roadway
- Urbanization of proposed road rural roadways is recommended to provide active transportation linkages.
- As development proceeds the traffic demand will warrant the need to widen 8th and 9th Concession and to implement internal collector road networks.

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

INTERIM - 4 LANES - URBAN

ULTIMATE ALTERNATIVE - 6 LANES - URBAN

Schedule C EA's will be required for all collector roads that are not within one plan of subdivision.

SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

Implementation

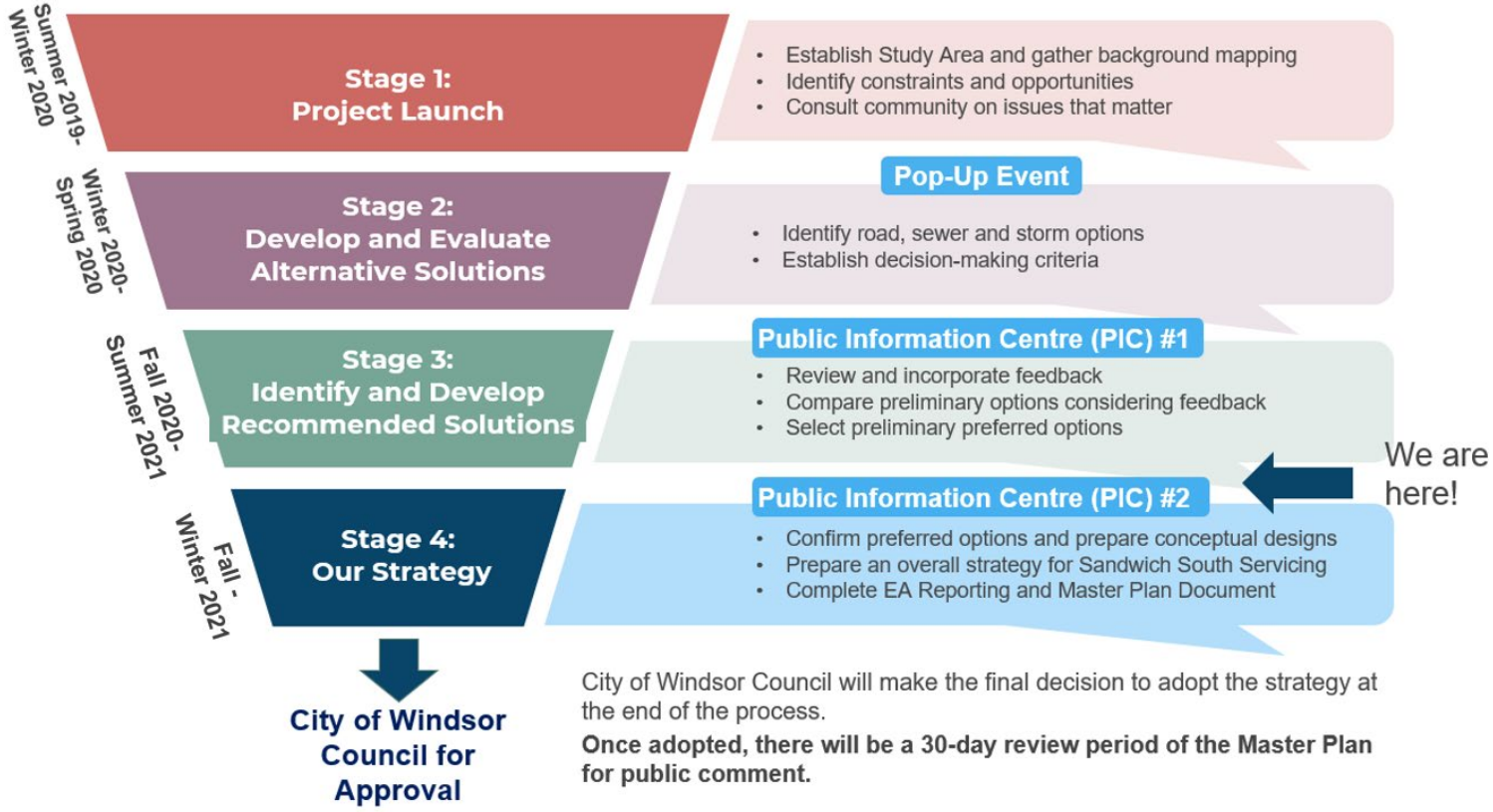
- Class Environmental Assessment Approval
  - Storm and sanitary sewer projects within the existing road ROW do not require any further EA work (Schedule A/A+ projects).
  - Upon completion of this Master Servicing plan (subject to Council approval and public review) the City can proceed with implementation of ponds, trunk storm sewers, outlets to the respective municipal drainage outlets and stormwater pump stations (Schedule B projects).
  - Collector roads require additional EA work including further consultation before implementation (Schedule C projects).
- The study will confirm land acquisition requirements as well as estimated costs for the Schedule B projects (SWM Ponds and Pump Stations).
- Implementation will be subject to property acquisition, development pressure/advancement, and the availability of funding.

Implementation

- Guidance for Development Design and Implementation
  - Development Manual specific to the Sandwich South Area will be developed.
  - Infrastructure design criteria and flood mitigation measures will be highlighted.
- Development Charges (DCs)
  - The City will recover development related capital costs from new development.
  - Area Specific DC Study for Sandwich South will be refined based on the findings of the SSMSP.
  - The SSMSP will provide cost estimates to feed into this study.
  - Cost estimates will be for all shared trunk sewer/watermain facilities, stormwater management ponds, pump stations and roadways.
- Sandwich South Lands Growth Management Study (Hemson)
  - Will be finalized based on the construction cost estimates provided by the SSMSP.

Next Steps

Project Stages and Timing



SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

Next Steps

Finalize Preferred Solutions

- ✓ Review comments from PIC and other consultation
- ✓ Confirm functionality
- ✓ Develop cost estimates for the associated Development Charge Study.

Implement Staging Plan

- ✓ Identify priority projects
- ✓ Recommend implementation plan for high priority projects
- ✓ Refine land requirements for Schedule B Projects.

Complete Master Plan

- ✓ Document consultation and design process
- ✓ Identify future EA requirements
- ✓ Present final Master Plan to Council

30 Day Review

- ✓ Notice of Completion
- ✓ Provide public opportunity to review
- ✓ New Part II Order process

SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

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 site.

SCAN ME

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:

https://www.surveymonkey.com/r/sandwichsouthPIC2

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

SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING

Q & A

SANDWICH SOUTH MASTER SERVICING PLAN

DILLON CONSULTING