Sandwich South Master Servicing Plan

Municipal Servicing Alternative and Preferred Options

Public Information Centre # 2

September 2021

1.0 Purpose

The Sandwich South Master Servicing Plan (S.S.M.S.P.) is being completed to meet the requirements of a Master Plan under the Municipal Class Environmental Assessment. As such, the work must include consideration of alternative solutions for servicing infrastructure.

This document supplements the Sandwich South Master Servicing Plan (S.S.M.S.P.) Public Information Centre # 2 presentation to provide the public and project stakeholders a summary of the development of municipal servicing alternatives, the associated comparative evaluation and the preliminary preferred options to facilitate development of Sandwich South.

Municipal servicing is broken down into three distinct categories:

- Stormwater Management and Storm Sewer Servicing;
- Transportation; and
- Sanitary Sewer Servicing[1].

[1] Note: A sanitary servicing system for the Sandwich South study area will be prepared. All sanitary services will be within existing road allowances or in some cases within new road allowances set by the transportation work completed for this study. As such, these project are considered Schedule A+ projects under the Municipal Class Environmental Assessment and alternatives were not considered.

This document shall be reviewed in conjunction with the presentation and review materials that are available on the project website at [For more information, visit the project website at www.sandwichsouth.ca](http://www.sandwichsouth.ca).

2.0 Project Objectives and Evaluation Criteria

During earlier consultation on this project we gathered information and developed an "Issues that Matter" report that highlights the issues raised by the technical team and stakeholders. That report led us into developing the following objectives and evaluation criteria:

- Manage flood risk
  - To what extent can the alternative address surface flooding?
- Protect quality of life
  - Is there potential property that would be required?
  - What are the potential impacts to cultural heritage (archaeology and built heritage)?
  - What are the potential construction related impacts?
  - Are there long term operation impacts on local residents and businesses?
  - Are there potential recreation opportunities?
- Be cost effective and provide value
  - What is the relative cost of the alternative?
  - Are there opportunities to reduce overall cost and/or reduce costs to taxpayers?
  - What is the local economic benefit?
  - What is the level of complexity for construction and operation?
- Protect the natural environment
  - What are the environmental effects of the alternative?
  - Will there be impacts to species at risk?
  - Is there an opportunity to protect natural spaces?
- Support the creation of a complete community
  - Does the alternative support active modes of travel?
  - Does the alternative support a self-sufficient community?

- Does the alternative provide an accessible solution?

- Protect health and safety
  - Will this alternative reduce risk?
  - Will this alternative improve safety?
- Align with existing infrastructure and studies
  - How compatible is the alternative with existing and surrounding infrastructure?
- Build in resiliency
  - How are infrastructure alternatives resilient to climate change?
- Build in flexibility
  - What is the potential for phasing the infrastructure alternative?
  - How flexible and adaptable is the alternative to change?
  - Does the alternative allow us to accommodate future population and employment growth?

Each comparative evaluation is broken up into several tables, each table describes how each option is evaluated under each specific criteria listed above. Preferred alternatives represent the solution that is most preferred under most of the criteria categories. No scoring or weighting was used to evaluate these options.

3.0 Stormwater Management

Stormwater management included overall strategy development, and servicing strategy. The options and evaluation of these items are included below.

3.1 Surface Flooding

Problem/Opportunity: With the development of the Sandwich South study area there will be additional surface runoff that needs to be managed.

Past work on surface flooding in this area considered the following range of ways to manage runoff across the study area including:[2]

[2] Upper Little River Master Drainage and Stormwater Management Plan Environmental Assessment, Environmental Study Report, 2017

1. Do Nothing;
2. Water Quality and Erosion Control Only;
3. Communal Stormwater Facilities;
4. On-Line Quantity Control with Local Quality and Erosion Controls;
5. Distributed Off-Line SWM Controls; and
6. Grouped Off-Line SWM Controls.

The preferred alternative documented in this previous work was grouped off-line stormwater management controls. This means stormwater control ponds would be centralized along municipal drains, servicing one or more property. This is a cost-effective configuration, reducing the number of facilities to be maintained in the future. It also relies on stormwater management corridors that promote natural linkages along watercourses and greenways.

The work on the Sandwich South Master Servicing Plan is based on the results of the previous work and further considers options for implementing grouped off-line stormwater management controls.

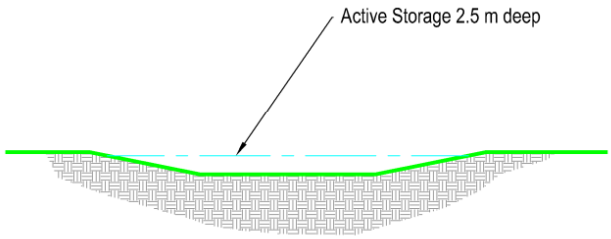
3.1.1 Identifying Alternative Solutions

There are a number of design options to implement grouped off-line stormwater management controls. Five high level alternatives were considered for surface flooding management, which included:

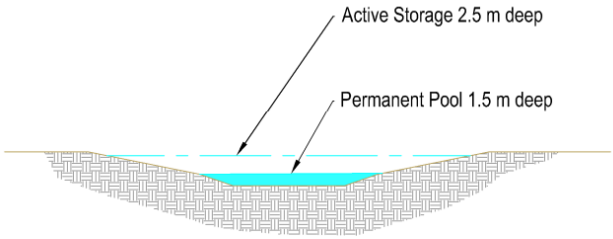
- Do Nothing: Implements no site controls for surface water quality or quantity control.
- Option 1a: Wet ponds with a permanent pool of water.
- Option 1b: Wet ponds complemented by Low Impact Development controls throughout the neighbourhood.
    - These controls include underground storage, permeable pavement and vegetated features to help mimic the natural water cycle.
- Option 2a: Dry ponds with on-site quality control measures.
- Option 2b: Dry ponds with on-site quality control and Low Impact Development controls.

Pumping stations of the same capacity and in the same locations are required for all the surface flooding management alternatives. There are no specific pumping station alternatives to be considered.

Figure 1 shows the differences between the wet and dry ponds proposed within the options above, including a typical cross-section, and a sample image of the constructed facility. Note that these are examples, and do not necessarily reflect the design of the ultimate preferred option facilities.



Typical Dry Pond Cross Section



Typical Wet Pond Cross Section

Figure 1: Typical Cross-Section and Images of Dry Pond (L) and Wet Pond (R)

3.1.2 Evaluation

The five surface flooding management options were comparatively evaluated using the criteria previously noted. The following summarizes the results of the evaluation and a more detailed evaluation table is included as **Table 6.1** through **Table 6.10** at the end of this document.

The first alternative considered, 'Do Nothing' option, was found to be incompatible for the level of development and flooding management considered for this area.

Options 1a and 1b both implement a wet pond, with Option 1b utilizing Low Impact Development controls (LIDs) in addition to the wet pond.

Options 2a and 2b both implement a dry pond with on-site quality control measures. Option 2b utilizes LIDs in addition to the dry pond and quality control.

In the evaluation of the ponds, a key factor considered was the ability of each of the alternatives to meet quality and quantity objectives as set out by local conservation authority and other applicable regulators. The wet pond can be designed such that quality control can be provided within the pond proper, in addition to quantity control. While this will result in some maintenance works, they are expected to be infrequent and are straightforward to undertaken.

Conversely, the dry ponds do not allow for quality control and thus will have to include on-site quality control measures. These measures typically have higher maintenance requirements and will require additional space beyond the footprint of the dry pond.

The inclusion of LID controls in Options 1b and 2b were not found to significantly impact the quality or quantity of surface runoff that ultimately will reach the pond facilities, as compared to Options 1a and 2a wherein these controls were not included. In consideration of the ongoing maintenance requirements associated with LIDs, it is preferred that an alternatives be selected that does not include these controls.

Preliminary preferred alternative: Option 1a: wet ponds with a permanent pool of water.

3.2 Stormwater Servicing

Problem/Opportunity: With future development of the Sandwich South study area there is a need to provide a stormwater servicing system.

With establishment of a surface flooding solution, options for implementation of a servicing system for future servicing and to direct storm flows to the proposed facilities established during evaluation of surface flooding options were evaluated.

3.2.1 Identifying Alternative Solutions

Three alternatives were considered for the stormwater servicing strategy, which included:

- Option 1: Do Nothing:
  - No area-wide comprehensive storm conveyance system implemented.
- Option 2: Traditional Storm Sewer Network:
  - Enclosure of the existing municipal drain system and provision of buried stormwater trunk sewers.
- Option 3: Combined Open Drain and Storm Sewer Network:
  - Utilization of existing and new open drains in combination with buried storm sewers.

Figure 2 shows a typical construction for infrastructure specified for the above options.

Figure 2: Storm Sewer Network (L) and Open Drain (R) Sample Images

Option 2 would utilize the pictured storm sewer network buried infrastructure, and Option 3 would use both types of pictured infrastructure.

3.2.2 Evaluation

The three stormwater servicing options were comparatively evaluated using the criteria previously noted. The following summarizes the results of the evaluation and a more detailed evaluation table is included as **Table 6.11** through **Table 6.20** at the end of this document.

Option 1: Do Nothing, was found to be incompatible for the level of development and strategy considered for this area.

No provision of area-wide servicing infrastructure would put the onus of servicing on individual developments, requiring new development to utilize existing drains or implement site specific drainage systems to available outlets. Individual developments may then require additional stormwater storage onsite as the existing drain system has a lower level of service than a new stormwater conveyance system. This may result in reduced area available for development within the study area, and increase overall complexity and maintenance costs. In addition, floodplain extents would not be significantly altered, resulting in limitations in developable area.

Option 2: The infrastructure would be buried, thus maximizing the developable area within the right-of-way. Maintenance costs are low with buried infrastructure. Traditional storm sewer network would be designed for adequate flow capacity according to required design storms, and would reduce floodplain areas.

Option 3: This option is less conducive to development due to the area required for the drains (reduces developable area), and the maintenance costs associated with the open drains. Storm sewers would be designed for adequate quantity of flows according to required design storms, however existing drainage infrastructure is designed to a prior standard, thus the floodplain area would not be as reduced as with Alternative 2.

In the evaluation of the servicing alternatives, a key factor considered was the suitability of the alternative to meet development preferences within the area. Option 2 is preferred in multiple categories from this regard, including allowing maximum developable area, least maintenance costs, reduction of floodplain area, and increased public safety.

Preliminary preferred alternatives: Option 2: traditional storm sewer network.

4.0 Transportation

Additional traffic will be introduced as a result of development within the Sandwich South study area. To confirm the need for transportation improvements the team considered the following options:

- Do Nothing - this option assumes that no improvements are made to the existing collector roadways in the area. This is not practical since the existing network lacks the facilities to serve the demand from pedestrians, cyclists, transit users, and vehicles that will come as development occurs.
- Expand the Network – this option expands the road network to accommodate the travel demand. This can be accomplished through an emphasis on vehicular movements only, or with an emphasis on sustainable modes in addition to cars such as pedestrian, cycling and transit modes. Given the high level of development in the study area and few boundary roads, additional transportation facilities are needed and it will be important to reduce the auto mode share to manage travel demand.
- Consider Smaller Development – while bringing fewer people and jobs to Sandwich South could result in less traffic and the highest level of service for vehicle travel, it does not fully accommodate the future population and employment that has been identified for this area.

The further transportation analysis in this document is based on the anticipated population and employment for the study area and the philosophy of expanding the road network with an emphasis on sustainable modes, including transit, vehicular and pedestrian modes. Travel demand was estimated through a traffic model informed by mode shares from City documents and development plans.

Transportation improvement alternatives to guide the development of a proposed network for Sandwich South were reviewed on 2 levels:

- Road Network Servicing Alternatives
  - What roadway and active transportation connections will be provide community linkages?
- Road Corridor Servicing Alternatives
  - What opportunities exist to support the proposed road network?

4.1 Transportation Road Network Solutions

Problem/Opportunity: There is a need to develop a road network that best meets the future needs of the Sandwich South study area and provides a variety of transportation facilities for cars, transit, cycling and walking that are accessible for all ages and abilities.

Previous studies have been undertaken from which a conceptual road network was devised within the Secondary Plan areas. The conceptual road network was reviewed as part of this evaluation.

4.1.1 Identifying Alternative Solutions

Two options were considered for the collector road network:

- Option 1: Maintain the existing conceptual road networks from previous planning studies; or
- Option 2: Use the existing conceptual road network as a base, but modify the network to better connect neighbourhoods and mitigate issues such as conflicts with environmental areas and network inefficiencies.

Specific local issues were considered in the development of a modified collector road network including:

- Separation from the Highway 401 Interchange: New intersections must be at least 200 metres away from ramps onto Highway 401.
- Crossing of Natural Areas: New roadways should not cross natural areas, where possible. At road crossings, natural road crossings or bridges should be considered.
- Connectivity: In the planned network, there is a lack of connectivity between the East Pelton Secondary Plan Area, the County Road 42 Secondary Plan Area and the balance of the study area. The plans can be modified to include a collector that traverses the entirety of the study area.
- Facilitation of Development: Now that more development specific details are available in East Pelton, some modifications can be made to the Secondary Plan road network.

In addition to the specific issues listed above, the following network planning principles below were used to guide the development of a collector road network:

4.1.1.1 Connections

- A well-connected network provides continuous direct routes to destinations, which can be achieved by maximizing the number of connections to arterials. Based on the traffic distribution and the study area's location in the City of Windsor, the general orientation of traffic is to/from the north and west. Therefore, the major direction is

to maximize connections to Walker Road and County Road 42 west of Lauzon Parkway.

- In general, while considering an urban road network, 400 metre spacing between signalized intersections on arterial roads is ideal to provide the necessary coordination to achieve signal progression.
- Additional connections to the existing arterial road network, by distributing the turning movements among additional intersections, can effectively resolve the problem of excessive intersection turning volumes at congested intersections. These additional connections are derived from extending collector roads both internally and externally. This will help ease operational issues on Lauzon Parkway in particular.
- Additional lanes and roundabouts can also be introduced to certain intersections to increase traffic capacity.

4.1.1.2 Corridors

- Long and direct collector roads that link communities and serve local multi-modal demand is the first priority. This ensures that some internal trips can be served on the collector road network.
- According to generally accepted spacing guidelines, Arterial roads should be 2 kilometres apart and collector roads should be 1 kilometre from other collectors and arterials. However, due to the high expected traffic volumes and constraints in the road network, spacing may be less in some locations.
- In order to enhance the development of the future urban area, the corridors should be able to provide enough capacity to carry the forecasted traffic volumes while offering the opportunity to extend beyond the study area in the future to accommodate future development. In addition, the corridors should include pedestrian and cycling infrastructure to serve active modes of transport and support sustainable development.
- Any collector roads added to the plan should extend those that are already included in the East Pelton and County Road 42 Secondary Plans.

4.1.2 Evaluation

The two road network options were comparatively evaluated using the criteria previously noted. The following summarizes the results of the evaluation and a more detailed evaluation table is included as **Table 7.1** through **Table 7.8** at the end of this document.

Option 1 includes maintaining the conceptual road networks devised as part of previous studies. As the design has progressed for these areas, and noting the issues above, Option 1 would not allow for addressing some of the issues, therefore making it more difficult to travel between destinations within the study area, and adjacent areas. This option would therefore make it more difficult to access employment areas and businesses within the study area making it less suited to support growth (less efficient network).

Option 2 allows for modifications to the conceptual design, allowing the issues noted above to be addressed, and the concerns with Option 1 to be mitigated. As such, Option 2 is the preferred option.

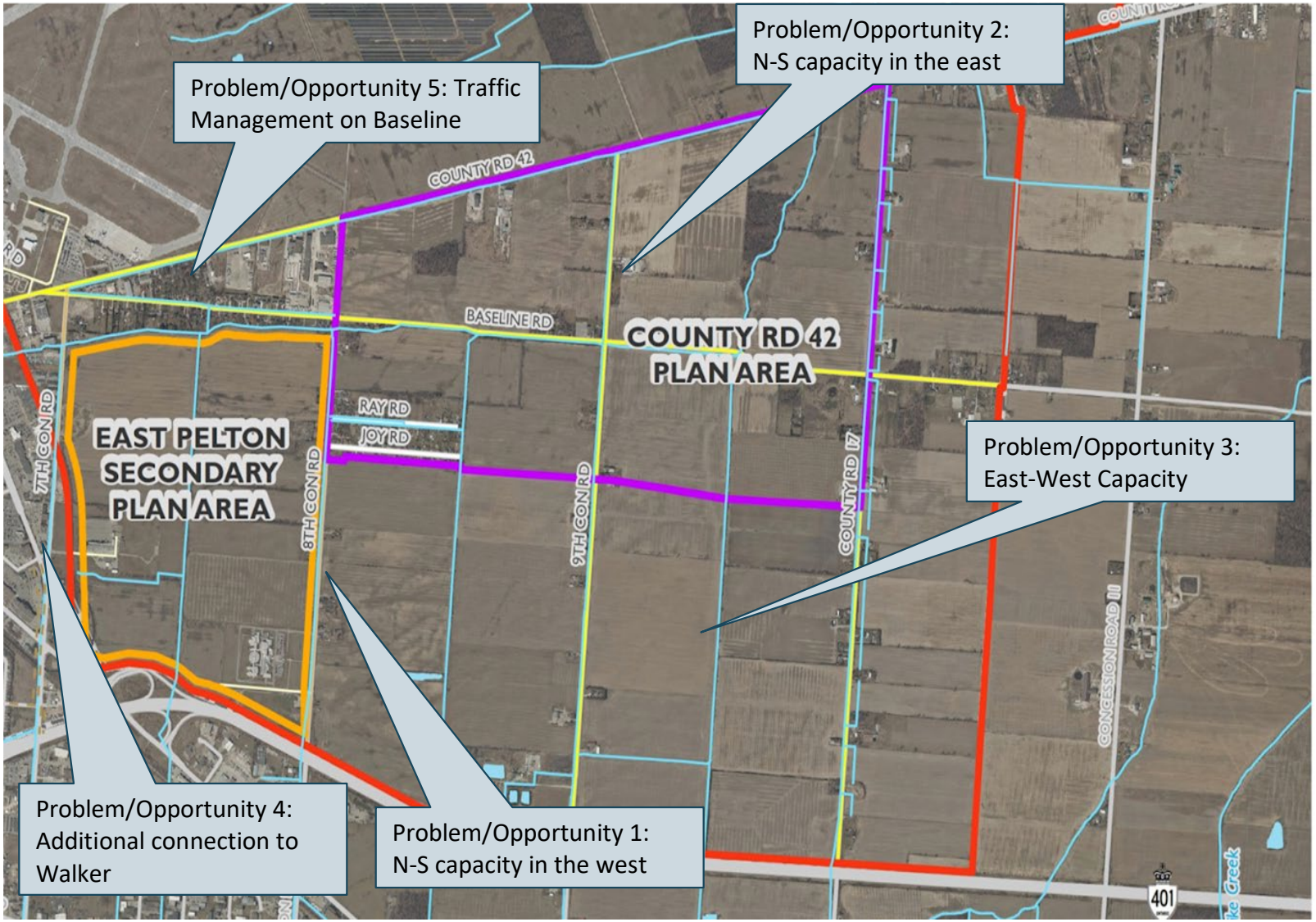


Figure 3: Road Corridor Problem/Opportunity Locations

4.2 Road Corridor Solutions

With establishment of a transportation road network, individual opportunities and problems were identified, for which road corridor solutions were evaluated.

4.2.1 Identifying Alternative Solutions

- Problem/Opportunity 1: N-S capacity in the West
  - Alternatives solutions considered: Widening of Concession Road 7 or Concession Road 8 to four lanes.
- Problem/Opportunity 2: N-S capacity in the East
  - Alternative solutions considered: Widening of Concession Road 9 or Concession Road 10 to four lanes.
- Problem/Opportunity 3: East-West Collector Alignment
  - Alternative solutions considered: Use Joy Road Right-of-Way, do not build collector between 8th and 9th Concession, curve the alignment of East-West Collector North to connect with East Pelton collector or curve the alignment south to connect with East Pelton collector.
- Problem/Opportunity 4: Additional East-West Connection to Walker Road
  - Alternative solutions considered: Do not add a new connection, add an additional East-West connection from Concession Road 7 to Walker Road.
- Problem/Opportunity 5: Traffic management on Baseline Road
  - Alternative solutions considered: Traffic management on Baseline Road between Concession 7 and Concession 8, dead end Baseline Road at Concession 8.

The locations of the problems/opportunities are shown in **Figure 3**.

4.2.2 Evaluation

For each problem/opportunity the alternatives were evaluated based on the criteria presented previously. The following summarizes the results of these evaluations. More detailed evaluation tables are included as **Table 7.9** through **Table 7.48** at the end of this document.

4.2.2.1 Problem/Opportunity 1: Additional North-South Capacity on Concession 7 vs Concession 8

Due to the level of traffic expected on the north-south roads in the study area, one of Concession Road 7 and Concession Road 8 should be widened to four lanes. Widening Concession Road 8 is the preferred alternative because it is more central to the study area making it more useful to residents, employees and visitors. Widening a road that is more centrally located allows for a larger portion of the Sandwich South lands to benefit and makes internal trips within the study area easier. Comparatively, Concession Road 7 is less preferred because it is on the periphery of the study area and will be right-in/right out at the East-West Arterial, limiting its utility.

Preliminary preferred alternative: Widen Concession 8 from 2 lanes to 4 lanes.

4.2.2.2 Problem/Opportunity 2: Additional North-South Capacity on Concession 9 vs Concession 10

Due to the level of traffic expected on the north-south roads in the study area, either Concession Road 9 or Concession Road 10 should be widened to four lanes. Both corridors are similar, however Concession Road 10 is planned to be right-in/right-out only at County Road 42 due to its proximity to Lauzon Parkway. Widening Concession Road 9 provides the most transportation flexibility as it is more central to the study area allowing a larger portion of the development area to benefit.

Preliminary preferred alternative: Widen Concession 9 from 2 lanes to 4 lanes.

4.2.2.3 Problem/Opportunity 3: East-West Collector Alignment/Joy Road Traffic Management

In order to create a complete road network facilitating travel within the study area, several collector roads need to be added to the study area. However, there are few opportunities to add a collector that can traverse the entirety of the study area. There is an opportunity to add an east-west collector between Baseline Road and the East-West Arterial that can use the Joy Road right-of-way, curve north to connect with a collector in East Pelton, or curve south to connect with a collector in East Pelton. Due to the narrow right of way on Joy Road and the disruption to existing residents, using the Joy Road right of way is not preferred. Curving the road south is the preferred alternative as it avoids the Joy Road right of way.

Preliminary preferred alternative: Curve south to connect with East Pelton collector.

4.2.2.4 Problem/Opportunity 4: Additional East-West Connection to Walker Road

There are only two future connections from the study area to Walker Road, County Road 42 and the East-West Arterial. The potential to add another connection to Walker Road at Concession 7 was explored. From a traffic operations perspective there would be some improvement to the Walker Road / County Road 42 intersection, however the impact would be minimal. In addition, a new connection would require likely require property acquisition and could impact businesses on Concession 7 and Walker Road. Therefore, the benefits of an additional connection to Walker Road are considered minimal compared to the costs. The City will consider ways to provide an active transportation link to provide additional cycling/pedestrian connectivity to Walker Road.

Preliminary preferred alternative: Do not add vehicular connection to Walker Road. Consider opportunities to provide an active transportation link.

4.2.2.5 Problem/Opportunity 5: Baseline Road Traffic Management

There is an existing residential community on Baseline Road between Concession Road 7 and Concession Road 8. With the future development of Sandwich South, traffic volumes on this corridor are likely to increase, disrupting existing residents. A dead-end on Baseline Road at Concession Road 8 would solve this problem, however it introduces emergency access issues due to the length of the cul-de-sac that would be created. Therefore, the preferred option is to institute traffic calming measures that will lower the amount of traffic travelling on this corridor, while still allowing access for emergency vehicles and some vehicle traffic.

Preliminary preferred alternative: Institute traffic calming measures.

5.0 Conclusion

The following list the preliminary preferred alternatives for servicing the Sandwich South study area:

- Wet ponds with a linear, narrow permanent pool of water to capture surface flooding and provide quality control including water flow mitigation measures;
- A traditional enclosed storm sewer network;
- Adoption of a conceptual road network modified from that presented in previous studies;
- Widening of Concession Road 8 from 2 lanes to 4 lanes;
- Widening of Concession Road 9 from 2 lanes to 4 lanes;
- Development of an east-west collector traversing the full study area south of Joy Road south to connect with the East Pelton collector;
- No additional vehicular connection to Walker Road but consideration of an active transportation connection; and
- Traffic calming measures on Baseline Road between Concession 7 and Concession 8.

Subject to comments received during consultation, the above list of preliminary preferred alternatives will become the proposed servicing plan for Sandwich South.

The future Environmental Study Report will identify whether any further environmental assessment work is required for the proposed infrastructure and will include further information on potential effects and proposed mitigation, and staging and implementation.

6.0 Stormwater Management Alternatives

6.1 Evaluation of Alternative Solutions for Stormwater Management

Table 6.1: Manage Flood Risk

Criteria	Do nothing	Option 1a: Wet ponds with a permanent pool of water	Option 1b: Wet ponds complemented by Low Impact Development controls	Option 2a: dry ponds with on-site quality control measures	Option 2b: dry ponds with on-site quality control and Low Impact Development controls
To what extent can the alternative address surface flooding?	Poorly. Only current level of development may be protected.	Very Well. This Option will decrease surface flooding risks in downstream watercourses.	Same as Option 1a	Same as Option 1a	Same as Option 1a
Preference	Least Preferred	Most Preferred	Most Preferred	Most Preferred	Most Preferred

Table 6.2: Protect Quality of Life

Criteria	Do nothing	Option 1a: Wet ponds with a permanent pool of water	Option 1b: Wet ponds complemented by Low Impact Development controls	Option 2a: dry ponds with on-site quality control measures	Option 2b: dry ponds with on-site quality control and Low Impact Development controls
Is there potential property that would be required?	No.	Highest requirement. Largest property acquisition requirements to accommodate size of pond facilities	Same as Option 1a	Moderate requirement. Less property requirements compared to Option 1a to accommodate size of pond facilities.	Same as Option 2a
What are the potential impacts to cultural heritage (archaeology and built heritage)?	Low. No additional ground disturbance will be required to maintain existing conditions.	High. Ground disturbance is required within areas identified as high potential and therefore Stage 2 archaeological assessments will be required in advance of any ground disturbance. Low potential for impact to build heritage features.	Same as Option 1a	Moderately High. Dry ponds will require a generally smaller footprint of disturbance. Areas have been identified as high potential and therefore Stage 2 archaeological assessments will be required in advance of any ground disturbance. Low potential for impact to build heritage features.	Same as Option 2a

Criteria	Do nothing	Option 1a: Wet ponds with a permanent pool of water	Option 1b: Wet ponds complemented by Low Impact Development controls	Option 2a: dry ponds with on-site quality control measures	Option 2b: dry ponds with on-site quality control and Low Impact Development controls
What are the potential construction related impacts to the public/ community? (Noise, dust, vibration)	Low. No immediate impacts due to no immediate construction activities. Eventual developments may incur potential noise, vibrational and dust impacts as localized development occurs.	Moderate. Construction of pond facility may result in noise, vibration and dust impacts to adjacent properties. Eventual development may incur potential noise, vibrational and dust impacts as localized development occurs.	Same as Option 1a.	Same as Option 1a.	Same as Option 1a.
What are the potential construction related impacts? (Municipal Capital Works impacts)	None. **may need P.S. as well – check that this is included. Limits development or needs extra infrastructure	Low. Ponds will be constructed prior to occupation. Protection of existing open drains will need to be implemented.	Moderate. Ponds will be constructed prior to occupation. Low Impact Development will have some additional construction impacts due to additional time and project complexity and will require occasional refurbishment/reconstruction during the lifecycle.	Low. Ponds will be constructed prior to occupation. On-site quality control measures will be required across the community, needed to replace wet pond quality control	Same as Option 1b
Are there long term operation impacts on local residents and businesses?	High. Onsite stormwater controls will require regular maintenance requiring additional costs to private property owners. Effectiveness and maintenance of private property controls difficult to enforce which presents a risk to the municipal and private systems.	Low. Pond maintenance will be required including landscape and matineance of water fowl mititation features..	High. Pond maintenance will be required. Low Impact Development controls across the community will require regular maintenance.	High. Pond maintenance will be required including landscaping and maintenance of the dry pond footprint. Additional maintenance required for upstream quality control infrastructure such as oil and grit separators.	High. Pond maintenance will be required. Low Impact Development controls across the community will require regular maintenance.
Are there potential recreation opportunities?	No.	Yes. Trail corridors along pond facilities will support local opportunities.	Same as Option 1a	Same as Option 1a	Same as Option 1a

Criteria	Do nothing	Option 1a: Wet ponds with a permanent pool of water	Option 1b: Wet ponds complemented by Low Impact Development controls	Option 2a: dry ponds with on-site quality control measures	Option 2b: dry ponds with on-site quality control and Low Impact Development controls
Preference	Most Preferred	Less Preferred	Least Preferred	Less Preferred	Less Preferred

Table 6.3: Be Cost Effective and Provide Value

Criteria	Do nothing	Option 1a: Wet ponds with a permanent pool of water	Option 1b: Wet ponds complemented by Low Impact Development controls	Option 2a: dry ponds with on-site quality control measures	Option 2b: dry ponds with on-site quality control and Low Impact Development controls
What is the relative cost of the alternative?	None. All costs will be the responsibility of private property owners.	Moderate. Centralized facilities are cost-effective to construct and maintain. Requires a number of pump stations.	High. Centralized facilities are cost-effective to construct and maintain. Requires a number of pump stations. Low Impact Development controls increase capital cost by approximately $120M.	Moderate. Centralized facilities are cost-effective to construct and maintain. Requires a number of pump stations. Localized on-site quality controls would be less costly than Low Impact Development controls.	Highest. Centralized facilities are cost-effective to construct and maintain. Requires a number of pump stations. Low Impact Development controls increase capital cost by approximately $120M and on-site quality controls increase cost further.
Are there opportunities to reduce overall cost and/or reduce costs to taxpayers?	Not Applicable. Do nothing alternative will not result in increased costs to taxpayers.	Yes. Centralized facilities are cost-effective to construct and maintain.	No. Due to uncertain reliability, Low Impact Development controls would not decrease the size and cost of downstream ponds.	No. Localized on-site quality controls would be less efficient to operate than downstream centralized wet ponds. Operating costs for localized on-site quality controls would be borne directly by property owners.	No. Localized on-site quality and Low Impact Development controls would be less efficient to operate than downstream centralized wet ponds. Operating costs for localized on-site quality and Low Impact Development controls would be borne directly by property owners.

Criteria	Do nothing	Option 1a: Wet ponds with a permanent pool of water	Option 1b: Wet ponds complemented by Low Impact Development controls	Option 2a: dry ponds with on-site quality control measures	Option 2b: dry ponds with on-site quality control and Low Impact Development controls
What is the local economic benefit?	Low. Development can commence sooner (with no infrastructure works having to be done in advance). Upon development, stormwater management measures will need to be implemented on private property reducing the developable area and require additional capital and maintenance costs.	Moderate. Greater area required to accommodate centralized stormwater management facility.	Same as Option 1a.	High. Greatest area available for development based on the smallest comparative pond footprint.	Same as Option 2a.
What is the level of complexity for construction and operation? (Capital developments)	Low. No construction and as-is operation.	Lowest. Long-standing experience with standard wet pond measures.	High. Windsor Essex SWM guidelines noted challenges related to LID design and implementation including budgetary constraints to meet operation and maintenance demands, ownership and restrictive covenants on private properties, and space constraints in right of ways to achieve pre-treatment and to avoid utilities.	Moderate. Private landowners will be responsible for construction and operation of on-site quality control measures. Maintenance of on-site quality control measures may require inspection and oversight by the City to ensure proper operation and to receive credit in MECP Environmental Compliance Approval.	Highest. Windsor Essex SWM guidelines note challenges for LIDs including budgetary constraints to meet operation and maintenance demands, ownership and restrictive covenants on private properties, and space constraints in right of ways to achieve pre-treatment and to avoid utilities.

Criteria	Do nothing	Option 1a: Wet ponds with a permanent pool of water	Option 1b: Wet ponds complemented by Low Impact Development controls	Option 2a: dry ponds with on-site quality control measures	Option 2b: dry ponds with on-site quality control and Low Impact Development controls
What is the level of complexity for construction and operation? (Local developments)	High. Private landowners will be responsible for construction and operation of on-site quantity and quality control measures. Maintenance of on-site quality control measures may require inspection and oversight by the City to ensure proper operation and to receive credit in MECP. Due to existing conditions of drainage infrastructure, developments may require localized pumping stations to achieve outlet to existing drainage infrastructure (open drains).	Low. Quality and quantity stormwater management requirements are met and therefore facilities are not required at localized developments.	Similar to Option 1a, however additional construction and operation complexity due to the implementation of LIDs.	Same as Option 1a.	Same as Option 1b
Preference	Less Preferred	Most Preferred	Least Preferred	Less Preferred	Less Preferred

Table 6.4: Protect the Natural Environment

Criteria	Do nothing	Option 1a: Wet ponds with a permanent pool of water	Option 1b: Wet ponds complemented by Low Impact Development controls	Option 2a: dry ponds with on-site quality control measures	Option 2b: dry ponds with on-site quality control and Low Impact Development controls
What are the environmental effects of the alternative?	Neutral. No anticipated change in environmental impact.	Positive. Meets water quality treatment requirements. Does not control water balance however no there are no local requirements, and limited opportunities to efficiently recharge groundwater and reduce stormwater runoff volumes. Central pond corridor incorporates naturalized green infrastructure.	Positive. Exceeds water quality treatment requirements, as Low Impact Development controls provide redundant, additional treatment capacity. Low Impact Development controls limits water balance impacts of urbanization. Central pond corridor incorporates naturalized green infrastructure.	Neutral. Dry ponds and on-site quality controls may not meet local water quality treatment requirements. Maintenance of on-site quality control measures may require inspection and oversight by the City to ensure proper operation and to receive credit in MECP Environmental Compliance Approval. Central pond corridor incorporates naturalized green infrastructure.	Neutral. Dry ponds and other controls may not meet local water quality treatment requirements. Maintenance of on-site quality control measures may require inspection and oversight by the City to ensure proper operation and to receive credit in MECP Environmental Compliance Approval. Central pond corridor incorporates naturalized green infrastructure.
Will there be impacts to species at risk?	Lowest No anticipated change in impact.	Moderate. Some species at risk found within study area, however mitigation strategies can be implemented to reduce impact.	Same as Option 1a.	Same as Option 1a.	Same as Option 1a.
Is there an opportunity to protect natural spaces?	No.	Yes. Central pond corridor can be integrated with adjacent natural spaces. Provides opportunity to implement a Natural Heritage System.	Same as Option 1a	Same as Option 1a	Same as Option 1a
Preference	Less Preferred	Less Preferred	Most Preferred	Least Preferred	Least Preferred

Table 6.5: Support the Creation of a Complete Community

Criteria	Do nothing	Option 1a: Wet ponds with a permanent pool of water	Option 1b: Wet ponds complemented by Low Impact Development controls	Option 2a: dry ponds with on-site quality control measures	Option 2b: dry ponds with on-site quality control and Low Impact Development controls
Does the alternative support a self-sufficient community?	No. Dependency on adjacent infrastructure for quantity control.	Yes. Stormwater management services are provided in the local community. Quality and quantity control will be provided within the local community – no impacts upstream or downstream.	Same as Option 1a	Same as Option 1a	Same as Option 1a
Preference	Least Preferred	Most Preferred	Most Preferred	Most Preferred	Most Preferred

Table 6.6: Protect Health and Safety

Criteria	Do nothing	Option 1a: Wet ponds with a permanent pool of water	Option 1b: Wet ponds complemented by Low Impact Development controls	Option 2a: dry ponds with on-site quality control measures	Option 2b: dry ponds with on-site quality control and Low Impact Development controls
Will this alternative reduce risk?	No. No change in flooding risk.	Yes. Flood control criteria will reduce risks associated with flooding in watercourses and drains.	Same as Option 1a	Same as Option 1a	Same as Option 1a
Will this alternative improve safety?	No. The existing storm network is designed to accommodate smaller rain events. Areas are susceptible to flooding under extreme rain events.	Yes. The stormwater management network will be designed to reduce upstream surface flooding during major rain events. Implementation of the stormwater management network, coupled with maintenance of minimum flood protection elevations, will minimize surface flooding and allow for safer travel on roadways and maintain emergency access.	Same as Option 1a	Same as Option 1a	Same as Option 1a
Preference	Least Preferred	Most Preferred	Most Preferred	Most Preferred	Most Preferred

Table 6.7: Align with Existing Infrastructure and Studies

Criteria	Do nothing	Option 1a: Wet ponds with a permanent pool of water	Option 1b: Wet ponds complemented by Low Impact Development controls	Option 2a: dry ponds with on-site quality control measures	Option 2b: dry ponds with on-site quality control and Low Impact Development controls
How compatible is the alternative with existing and surrounding infrastructure?	Not Applicable	Very compatible. The option is compatible with upstream and downstream drainage systems.	Same as Option 1a	Same as Option 1a	Same as Option 1a
Preference	Least Preferred	Most Preferred	Most Preferred	Most Preferred	Most Preferred

Table 6.8: Build in Resiliency

Criteria	Do nothing	Option 1a: Wet ponds with a permanent pool of water	Option 1b: Wet ponds complemented by Low Impact Development controls	Option 2a: dry ponds with on-site quality control measures	Option 2b: dry ponds with on-site quality control and Low Impact Development controls
How does the infrastructure alternative address climate change?	Does not address climate change.	Adaptation: ponds facilities incorporate design safety factors to account for potential higher future rainfall intensities. Mitigation: naturalized pond corridors promote carbon sequestration (e.g., approx. 0.26 tC/hectare/year for recreational open space).	Adaptation: ponds facilities incorporate design safety factors to account for potential higher future rainfall intensities. Low Impact Development controls provide additional redundancy. Mitigation: naturalized pond corridors promote carbon sequestration (e.g., approx. 0.26 tC/hectare/year for recreational open space).	Adaptation: ponds facilities incorporate design safety factors to account for potential higher future rainfall intensities. Mitigation: naturalized pond corridors promote carbon sequestration (e.g., approx. 0.26 tC/hectare/year for recreational open space).	Adaptation: ponds facilities incorporate design safety factors to account for potential higher future rainfall intensities. Low Impact Development controls provide additional redundancy. Mitigation: naturalized pond corridors promote carbon sequestration (e.g., approx. 0.26 tC/hectare/year for recreational open space).
Preference	Least Preferred	Less Preferred	Most Preferred	Less Preferred	Most Preferred

Table 6.9: Build in Flexibility

Criteria	Do nothing	Option 1a: Wet ponds with a permanent pool of water	Option 1b: Wet ponds complemented by Low Impact Development controls	Option 2a: dry ponds with on-site quality control measures	Option 2b: dry ponds with on-site quality control and Low Impact Development controls
What is the potential for phasing the infrastructure alternative?	Low. Without a detailed stormwater management plan, upstream development may have a negative impact on downstream areas. This option will not include a comprehensive servicing plan (which would have provided a framework for all municipal servicing needs including other water, wastewater and transportation servicing needs). Phasing of development may increase in complexity and have limitations.	High. Pond facilities can be phased to accommodate each service area. The secondary plan areas have been subdivided into sub-drainage areas that each have an individual outlet to the existing drain network. Development upstream will not have impacts to the downstream system as phasing occurs.	Same as Option 1a	Same as Option 1a	Same as Option 1a
How flexible and adaptable is the alternative to change?	Existing infrastructure is not flexible to change.	Moderately Flexible. Drainage catchment may be retrofitted with Low Impact Development controls in the future if required.	Limited Flexibility. Low Impact Development controls in the catchment may be increased in capacity in the future if required.	Highly Flexible. Dry ponds may be converted to wet ponds in areas where land is available (e.g., adjacent corridor). Drainage catchment may be retrofitted with Low Impact Development controls in the future if required.	Moderately Flexible. Dry ponds may be converted to wet ponds in areas where land is available (e.g., adjacent corridor). Low Impact Development controls in the catchment may be increased in capacity in the future if required.

Criteria	Do nothing	Option 1a: Wet ponds with a permanent pool of water	Option 1b: Wet ponds complemented by Low Impact Development controls	Option 2a: dry ponds with on-site quality control measures	Option 2b: dry ponds with on-site quality control and Low Impact Development controls
Does the alternative allow us to accommodate future population and employment growth?	No. Lack of capacity within stormwater management facilities and existing floodplain area will negatively impact the possible future population and employment growth (impacting area available for development). Requirement for developments to have localized stormwater quantity and quality controls will impact the developable lands available thus reducing the achievable growth.	Yes. Future population and employment growth are accommodated by stormwater controls under this option.	Yes. Future population and employment growth are accommodated by stormwater controls under this option.	Yes. Future population and employment growth are accommodated by stormwater controls under this option.	Yes. Future population and employment growth are accommodated by stormwater controls under this option.
Preference	Least Preferred	Most Preferred	Less Preferred	Less Preferred	Most Preferred

Table 6.10: Overall Preference

Criteria	Do nothing	Option 1a: Wet ponds with a permanent pool of water	Option 1b: Wet ponds complemented by Low Impact Development controls	Option 2a: dry ponds with on-site quality control measures	Option 2b: dry ponds with on-site quality control and Low Impact Development controls
Overall Preference	Less Preferred	**Most Preferred Solution**	Less Preferred	Less Preferred	Less Preferred

Table 6.11: Manage Flood Risk

Criteria	Option 1: Do Nothing	Option 2: Traditional Storm Sewer Network	Option 3: Combined Open Drain and Storm Sewer Network
To what extent can the alternative address surface flooding?	This alternative will not address surface flooding on a greater secondary plan area.	Highest The municipal storm sewer system will be designed to convey a 1:5 year return period and mitigate surface flooding within municipal ROWs to acceptable depths under the 1:100 year storm.	Same as Option 2.
Preference	Least Preferred	Most Preferred	Most Preferred

Table 6.12: Protect Quality of Life

Criteria	Option 1: Do Nothing	Option 2: Traditional Storm Sewer Network	Option 3: Combined Open Drain and Storm Sewer Network
Is there potential property that would be required?	No. It is assumed that the existing municipal drains, roadside drains and storm sewers would remain in place.	Yes. Property requirements would be consistent with corridors required for other linear infrastructure (transportation development, water distribution, etc.)	Yes. Property requirements would be consistent with corridors required for other linear infrastructure (transportation development, water distribution, etc.), however a wider ROW will be required to accommodate width of open drains.
What are the potential impacts to cultural heritage (archaeology and built heritage)?	Low. No additional ground disturbance will be required to maintain existing conditions.	High. Ground disturbances and construction will be designed to maintain integrity of cultural heritage assets. Studies will identify areas of concern.	Highest. Ground disturbances and construction will be designed to maintain integrity of cultural heritage assets. Studies will identify areas of concern. This solution has comparative greater impact areas then Option 2.
What are the potential construction related impacts?	None. No construction required.	Highest level of impact. Construction of storm sewer network will require ground disturbance varying in depth along entirety of network. Longest expected construction timeline.	High level of impact. Construction of sewer network will require ground disturbance varying in depth along entirety of network. Level of disturbance required to construct open drains is less than storm sewer construction.

Criteria	Option 1: Do Nothing	Option 2: Traditional Storm Sewer Network	Option 3: Combined Open Drain and Storm Sewer Network
Are there long term operation impacts on local residents and businesses?	Yes. Operation for open ditches will require routine maintenance. Any localized facilities with private property development areas would require routine maintenance for proper operation.	No. Operational activities will be minimal.	Yes. Open ditches will require routine maintenance.
Preference	Most Preferred	Less Preferred	Least Preferred

Table 6.13: Be Cost Effective and Provide Value

Criteria	Option 1: Do Nothing	Option 2: Traditional Storm Sewer Network	Option 3: Combined Open Drain and Storm Sewer Network
What is the relative cost of the alternative?	No cost.	Highest cost. Construction of underground sewer facilities carry the highest construction cost.	Moderate cost. Underground sewer facilities will carry a higher construction cost, however surface drains will have a lower construction cost than underground.
Are there opportunities to reduce overall cost and/or reduce costs to taxpayers?	No controls in place for quality or quantity of flow may increase cost to taxpayers as a result of flood risk.	Low maintenance costs associated with storm sewer network. Reduced potential cost as a result of risk of flooding.	Some maintenance costs will be incurred to maintain the open drains. Increased costs to taxpayers. Reduced potential cost as a result of risk of flooding.
What is the local economic benefit?	Low. Development can commence sooner (with no infrastructure works having to be done in advance), however developable area is lesser than other alternatives.	Maximizes developable lands. Storm sewer network can be constructed within the proposed road right-of-way, requiring no additional space.	Provides increase in developable lands. Where storm sewer network is constructed, developable lands will be maximized, however where open drains are maintained they will require land area which cannot be used for development.
What is the level of complexity for construction and operation? (Capital infrastructure works)	Low. No additional construction is required.	Moderate. Moderate construction complexity for storm sewer network. Low anticipated operational requirements for storm sewers.	Moderate. Greatest construction complexity for storm sewer network. Low anticipated operational requirements for storm sewers. Moderate operational requirements for open drains.

Criteria	Option 1: Do Nothing	Option 2: Traditional Storm Sewer Network	Option 3: Combined Open Drain and Storm Sewer Network
What is the level of complexity for construction and operation? (Development infrastructure works)	High. Ultimate buildout will require construction and operation of stormwater facilities throughout the developments. Existing drainage scheme will result in requirement for pumping stations throughout developments to achieve positive drainage. Localized facilities will be required throughout development area.	Low. Sufficient drainage and stormwater management will be provided by the proposed capital works. Minimal infrastructure will require construction/ operation at the development level.	Same as Option 2.
Preference	Less Preferred	Most Preferred	Less Preferred

Table 6.14: Protect the Natural Environment

Criteria	Option 1: Do Nothing	Option 2: Traditional Storm Sewer Network	Option 3: Combined Open Drain and Storm Sewer Network
What are the environmental effects of the alternative?	Low impacts.	Moderate impacts. Removal of existing open drains may remove natural areas, however drains provide minimal natural benefits due to maintenance requirements. End-of-pipe facilities can be used to mitigate losses of natural areas (drains). Natural Heritiage Areas will be not disturbed.	Moderate/Low impacts. Removal of existing open drains may remove natural areas, however drains provide minimal natural benefits due to maintenance requirements. Maintenance of some open drains may mitigate some losses. Natural Heritiage Areas will be not disturbed.
Will there be impacts to species at risk?	None.	Moderate. Some species at risk found within open drains in the study area. Removal of open drains will result in negative impact to species at risk. Due to type of species found, mitigation may be possible through transplanting or utilization of pond areas.	Same as Option 2.
Is there an opportunity to protect natural spaces?	None.	Stormwater management facilities will provide opportunity for naturalization and select species habitat (for the exception of avian species due to airport safety restrictions)	Same as Option 2.
Preference	Most Preferred	Less Preferred	Less Preferred

Table 6.15: Support the Creation of a Complete Community

Criteria	Option 1: Do Nothing	Option 2: Traditional Storm Sewer Network	Option 3: Combined Open Drain and Storm Sewer Network
Does the alternative support a self-sufficient community?	No. Dependency on adjacent infrastructure for quantity control.	Yes. Localized storm sewers will convey storm water flows to management facilities provided in the local community. Quantity control and storage reduces downstream risk of flooding.	Same as Option 2.
Preference	Less Preferred	Most Preferred	Most Preferred

Table 6.16: Protect Health and Safety

Criteria	Option 1: Do Nothing	Option 2: Traditional Storm Sewer Network	Option 3: Combined Open Drain and Storm Sewer Network
Will this alternative reduce health risk?	No. Existing road-side facilities carry risk to public safety due to topographical and water hazard. Localized facilities will be required to be designed to minimize risk of creating habitat for waterfowl, which increases risk at the adjacent airport lands.	Yes. Reduced number of open drains (risk to public safety due to topographical and water hazard). New stormwater pond facilities and remaining open drains will be designed such that risk to public safety is minimized, through consideration of side slopes and pond depths. Pond facilities will further be designed to minimize waterfowl habitat to minimize risk to adjacent airport lands.	Moderate. Open drains will remain, which pose a risk to public safety due to topographical and water hazard. Where possible, open drains can be redesigned to reduce risk (in greenspace areas). New stormwater pond facilities will be designed such that risk to public safety is minimized, through consideration of side slopes and pond depths. Pond facilities will further be designed to minimize waterfowl habitat to minimize risk to adjacent airport lands.
Preference	Less Preferred	Most Preferred	Most Preferred

Table 6.17: Align with Existing Infrastructure and Studies

Criteria	Option 1: Do Nothing	Option 2: Traditional Storm Sewer Network	Option 3: Combined Open Drain and Storm Sewer Network
How compatible is the alternative with existing and surrounding infrastructure?	Development stormwater systems may not be compatible with shallow municipal drains. Municipal drains are typical designed to convey a 1:2 year return period, however local storm sewer systems are required to be designed to convey a 1:5 year return period, greater than the receiving drain (outlet).	Compatible. New infrastructure will be designed to accommodate existing features where congruent with development plans.	Same as Option 2.

Criteria	Option 1: Do Nothing	Option 2: Traditional Storm Sewer Network	Option 3: Combined Open Drain and Storm Sewer Network
Preference	Less Preferred	Most Preferred	Most Preferred

Table 6.18: Build in Resiliency

Criteria	Option 1: Do Nothing	Option 2: Traditional Storm Sewer Network	Option 3: Combined Open Drain and Storm Sewer Network
How does the infrastructure alternative address climate change?	Existing infrastructure (drains) will not address climate change. Localized developments will be required to construct stormwater quantity and quality facilities that provide resiliency to climate change.	Infrastructure is designed with capacity safety factor to increase resiliency. Design inputs consider increased storm flows as a result of climate change. Traditional storm sewer network servicing solutions provides the opportunities to design sewers with more resilient design.	Same as Option 2.
Preference	Less Preferred	Most Preferred	Most Preferred

Table 6.19: Build in Flexibility

Criteria	Option 1: Do Nothing	Option 2: Traditional Storm Sewer Network	Option 3: Combined Open Drain and Storm Sewer Network
What is the potential for phasing the infrastructure alternative?	None. No new infrastructure with which to phase. Development will occur as approved.	Phasing of the infrastructure will be required. Low flexibility in phasing. Construction will be required to occur from downstream location, to allow for adequate outlet for new developments.	Same as Option 2.
How flexible and adaptable is the alternative to change?	Existing infrastructure is not flexible to change.	Flexible. Flexibility of storm sewer system is dependent on elevations of downstream facilities, ground, and required design elevations for pipes. Design is flexible however some constrains exist with existing ground conditions and required depths of pipes.	Less Flexible. Flexibility of storm sewer system is dependent on elevations of downstream facilities, ground, and required design elevations for pipes. Inclusion of open drain features may increase flexibility, as fewer constraints will be present on underground facilities. Greater dependence on pumped outlets and private drain connections for individual developments.

Criteria	Option 1: Do Nothing	Option 2: Traditional Storm Sewer Network	Option 3: Combined Open Drain and Storm Sewer Network
Does the alternative allow us to accommodate future population and employment growth?	Low. Lack of capacity within stormwater management facilities, and extents of floodplain area (impacting area available for development) will negatively impact the possible future population and employment growth. Requirement for developments to have localized stormwater quantity and quality controls will impact the developable lands available thus reducing the achievable growth.	High. Storm sewer network will allow for adequate quantity and quality control of stormwater flows to accommodate growth. Developable area will be maximized through location of the underground storm sewers within the transportation right-of-way. Developable area will be maximized through adequate 100-year flow conveyance and thus reduction of floodplain area.	Moderate. Available area for development will be negatively impacted by the space required to accommodate open drain assets. Storm sewer and open drain network will allow for adequate quantity and quality control of stormwater flows to accommodate growth. Developable area will not be maximized due to the space required to construct open drains adjacent to transportation right-of-way. Developable area will be maximized through adequate 100-year flow conveyance and thus reduction of floodplain area.
Preference	Least Preferred	Most Preferred	Less Preferred

Table 6.20: Overall Preference

Criteria	Option 1: Do Nothing	Option 2: Traditional Storm Sewer Network	Option 3: Combined Open Drain and Storm Sewer Network
Overall Preference	Less Preferred	**Most Preferred Solution**	Less Preferred

7.0 Collector Road Network Alternative Evaluation

Table 7.1: Protect Quality of Life

Criteria	Option 1: Maintain Conceptual Road Network	Option 2 : Modify Conceptual Road Network
Is there potential property that would be required?	Yes.	Yes.
What are the potential impacts to cultural heritage (archaeology and built heritage)?	Additional archaeological assessments will be required for areas identified to be high potential for archaeological resources.	Additional archaeological assessments will be required for areas identified to be high potential for archaeological resources.
What are the potential construction related impacts?	Construction will impact home owners and businesses.	Construction will impact home owners and businesses.
Are there long term operation impacts on local residents and businesses?	This option will make it more difficult to travel between destinations within the study area.	This option will make it easier to travel throughout the study area.
Preference	Less Preferred	Most Preferred

Table 7.2: Be Cost Effective and Provide Value

Criteria	Option 1: Maintain Conceptual Road Network	Option 2 : Modify Conceptual Road Network
What is the relative cost of the alternative?	Similar cost for both options.	Similar cost for both options.
Are there opportunities to reduce overall cost and/or reduce costs to taxpayers?	No.	No.
What is the local economic benefit?	This option will make it more difficult to access employment and businesses within the study area.	This option will make it easier to access employment and businesses within the study area.
What is the level of complexity for construction and operation?	Similar complexity for both options.	Similar complexity for both options.
Preference	Less Preferred	Most Preferred

Table 7.3: Protect the Natural Environment

Criteria	Option 1: Maintain Conceptual Road Network	Option 2 : Modify Conceptual Road Network
What are the environmental effects of the alternative?	Significant construction will be required. The proposed Natural Heritage System is recommended to be implemented to protect, preserve and enhance environmentally significant natural features.	See Option 1.
Will there be impacts to species at risk?	Potential for impacts to natural environmental features and consideration of how to minimize.	Potential for impacts to natural environmental features and consideration of how to minimize.

Criteria	Option 1: Maintain Conceptual Road Network	Option 2 : Modify Conceptual Road Network
Is there an opportunity to protect natural spaces?	The planned road network conflicts with the stormwater management corridors which will accommodate the future Natural Heritage System areas. Secondary Plan area road networks avoided existing Natural Heritage areas.	Modifying the road network will allow for adjustments to be made to accommodate the proposed stormwater management corridors and proposed Natural Heritage System Areas. Expansion of the road network requires crossing of existing and proposed natural environment areas. Considerations for crossings of facilities will be required to mitigate impacts of the heritage area.
Preference	Most Preferred	Less Preferred

Table 7.4: Support the Creation of a Complete Community

Criteria	Option 1: Maintain Conceptual Road Network	Option 2 : Modify Conceptual Road Network
Does the alternative support active modes of travel?	Both options will add active modes of travel.	Both options will add active modes of travel.
Does the alternative support a self-sufficient community?	Travel between different neighbourhoods in the study area will be more difficult.	Yes, as it will make is easier for residents to make internal trips within the study area.
Does the alternative provide an accessible solution?	Accessible sidewalks and crossings will be provided.	Accessible sidewalks and crossings will be provided.
Preference	Less Preferred	Most Preferred

Table 7.5: Protect Health and Safety

Criteria	Option 1: Maintain Conceptual Road Network	Option 2 : Modify Conceptual Road Network
Will this alternative reduce risk?	Neither option poses a risk or significantly reduces risk to health and safety.	Neither option poses a risk or significantly reduces risk to health and safety.
Will this alternative improve safety?	Neither option improves or reduces safety.	Neither option improves or reduces safety.
Preference	Equal	Equal

Table 7.6: Align with Existing Infrastructure and Studies

Criteria	Option 1: Maintain Conceptual Road Network	Option 2 : Modify Conceptual Road Network
How compatible is the alternative with existing and surrounding infrastructure?	The alternative is compatible with existing and surrounding infrastructure.	The alternative is compatible with existing and surrounding infrastructure.
Preference	Equal	Equal

Table 7.7: Build in Flexibility

Criteria	Option 1: Maintain Conceptual Road Network	Option 2 : Modify Conceptual Road Network
What is the potential for phasing the infrastructure alternative?	The option has the potential to phase infrastructure.	The option has the potential to phase infrastructure.
How flexible and adaptable is the alternative to change?	The option provides some flexibility to develop Sandwich South.	The option provides some flexibility to develop Sandwich South.
Does the alternative allow us to accommodate future population and employment growth?	This options is less suited to support growth as it is a less efficient network.	The option accommodates future growth.
Preference	Less Preferred	Most Preferred

Table 7.8: Overall Preference

Criteria	Option 1: Maintain Conceptual Road Network	Option 2 : Modify Conceptual Road Network
Overall Preference	Least Preferred	Most Preferred

7.1 Problem/Opportunity 1: N-S Capacity in the West

Table 7.9: Protect Quality of Life

Criteria	Option 1: Widen Concession 7	Option 2 : Widen Concession 8
Is there potential property that would be required?	Property may be required to expand the existing 20 metre right of way	Property may be required to expand the current 20-22 metre right of way
What are the potential impacts to cultural heritage (archaeology and built heritage)?	Additional archaeological assessments will be required for areas identified to be high potential for archaeological resources.	Additional archaeological assessments will be required for areas identified to be high potential for archaeological resources.
What are the potential construction related impacts?	Construction will impact home owners and businesses along the corridor	Construction will impact home owners and businesses along the corridor.
Are there long term operation impacts on local residents and businesses?	The East-West Arterial/Concession 7 intersection will be right in right out, limiting where this road can be accessed from.	This roadway is more central to the study area, making it useful to more residents, employees, and visitors.
Preference	Less Preferred	Most Preferred

Table 7.10: Be Cost Effective and Provide Value

Criteria	Option 1: Widen Concession 7	Option 2 : Widen Concession 8
What is the relative cost of the alternative?	Similar cost for both options.	Similar cost for both options.
Are there opportunities to reduce overall cost and/or reduce costs to taxpayers?	No.	No.
What is the local economic benefit?	This provides additional vehicular capacity for a smaller portion of the study area. Access to/from 7th Concession to/from the E/W Arterial is restricted to right-in/right/out only.	Improvements to 8th Concession will allow for a larger portion of the Sandwich South lands to benefit.
What is the level of complexity for construction and operation?	Crossing with existing railway will pose additional construction complexity.	Less complex than Concession 7.
Preference	Less Preferred	Most Preferred

Table 7.11: Protect the Natural Environment

Criteria	Option 1: Widen Concession 7	Option 2 : Widen Concession 8
What are the environmental effects of the alternative?	7th Concession drain runs along the west side of the road. Necessary aquatic habitat mitigation measures will be required.	8th Concession drain runs along the west side of the road. Necessary aquatic habitat mitigation measures will be required.
Will there be impacts to species at risk?	Potential for impacts to natural environmental features and consideration of how to minimize.	Potential for impacts to natural environmental features and consideration of how to minimize.

Criteria	Option 1: Widen Concession 7	Option 2 : Widen Concession 8
Is there an opportunity to protect natural spaces?	There are no natural spaces to protect.	There are no natural spaces to protect.
Preference	Equal	Equal

Table 7.12: Support the Creation of a Complete Community

Criteria	Option 1: Widen Concession 7	Option 2 : Widen Concession 8
Does the alternative support active modes of travel?	Both options will add active modes of travel.	Both options will add active modes of travel.
Does the alternative support a self-sufficient community?	Access to/from 7th Concession at the East-West Arterial will be limited to right-in/right-out only, thus reducing access to the community.	Yes, as it will make is easier for residents to make internal trips within the study area.
Does the alternative provide an accessible solution?	Accessible sidewalks and crossings will be provided.	Accessible sidewalks and crossings will be provided.
Preference	Less Preferred	Most Preferred

Table 7.13: Protect Health and Safety

Criteria	Option 1: Widen Concession 7	Option 2 : Widen Concession 8
Will this alternative reduce risk?	Neither option poses a risk or significantly reduces risk to health and safety.	Neither option poses a risk or significantly reduces risk to health and safety.
Will this alternative improve safety?	Neither option improves or reduces safety.	Neither option improves or reduces safety.
Preference	Equal	Equal

Table 7.14: Align with Existing Infrastructure and Studies

Criteria	Option 1: Widen Concession 7	Option 2 : Widen Concession 8
How compatible is the alternative with existing and surrounding infrastructure?	The alternative is compatible with existing and surrounding infrastructure.	The alternative is compatible with existing and surrounding infrastructure.
Preference	Equal	Equal

Table 7.15: Build in Flexibility

Criteria	Option 1: Widen Concession 7	Option 2 : Widen Concession 8
What is the potential for phasing the infrastructure alternative?	The option has the potential to phase infrastructure.	The option has the potential to phase infrastructure.

Criteria	Option 1: Widen Concession 7	Option 2 : Widen Concession 8
How flexible and adaptable is the alternative to change?	The option provides some flexibility to develop Sandwich South.	The option provides increased flexibility to develop Sandwich South.
Does the alternative allow us to accommodate future population and employment growth?	Future growth will primarily be on the east side of 7th Concession only. Supports this growth only from C.R. 42 to the East-West Arterial.	The option accommodates future growth. Supports future growth on both sides of 8th Concession from C.R. 42 to Highway 401.
Preference	Less Preferred	Most Preferred

Table 7.16: Overall Preference

Criteria	Option 1: Widen Concession 7	Option 2 : Widen Concession 8
Overall Preference	Least Preferred	Most Preferred

7.2 Problem/Opportunity 2: N-S Capacity in the East

Table 7.17: Protect Quality of Life

Criteria	Option 1: Widen Concession Road 10/County Road 17	Option 2: Widen Concession Road 9
Is there potential property that would be required?	Property may be required to expand the existing 20 metres right of way	Property may be required to expand the existing 30 metre right of way
What are the potential impacts to cultural heritage (archaeology and built heritage)?	None.	None.
What are the potential construction related impacts?	Construction will impact home owners and businesses along the corridor	Construction will impact home owners and businesses along the corridor.
Are there long term operation impacts on local residents and businesses?	The County Road 42/Concession 10 intersection will be right in right out, limiting where this road can be accessed from.	This roadway is more central to the study area, making it useful to more residents, employees, and visitors.
Preference	Less Preferred	Most Preferred

Table 7.18: Be Cost Effective and Provide Value

Criteria	Option 1: Widen Concession Road 10/County Road 17	Option 2: Widen Concession Road 9
What is the relative cost of the alternative?	Similar cost for both options.	Similar cost for both options.
Are there opportunities to reduce overall cost and/or reduce costs to taxpayers?	No.	No.
What is the local economic benefit?	This provides additional vehicular capacity for a smaller portion of the study area.	Improvements to Concession Road 9 will allow for a larger portion of the Sandwich South lands to benefit.
What is the level of complexity for construction and operation?	Similar complexity for both options.	Similar complexity for both options.
Preference	Less Preferred	Most Preferred

Table 7.19: Protect the Natural Environment

Criteria	Option 1: Widen Concession Road 10/County Road 17	Option 2: Widen Concession Road 9
What are the environmental effects of the alternative?	Watson drain runs along the west side of the road. Necessary aquatic habitat mitigation measures will be required.	9th Concession drain runs along the west side of the road. Necessary aquatic habitat mitigation measures will be required.
Will there be impacts to species at risk?	Potential for impacts to natural environmental features and consideration of how to minimize.	Potential for impacts to natural environmental features and consideration of how to minimize.
Is there an opportunity to protect natural spaces?	There are no natural spaces to protect.	There are no natural spaces to protect.

Criteria	Option 1: Widen Concession Road 10/County Road 17	Option 2: Widen Concession Road 9
Preference	Equal	Equal

Table 7.20: Support the Creation of a Complete Community

Criteria	Option 1: Widen Concession Road 10/County Road 17	Option 2: Widen Concession Road 9
Does the alternative support active modes of travel?	Both options will add active modes of travel.	Both options will add active modes of travel.
Does the alternative support a self-sufficient community?	Access to/from Concession Road 10 at County Road 42 will be limited to right-in/right-out only, thus reducing access to the community.	Yes, as it will make is easier for residents to make internal trips within the study area.
Does the alternative provide an accessible solution?	Accessible sidewalks and crossings will be provided.	Accessible sidewalks and crossings will be provided.
Preference	Less Preferred	Most Preferred

Table 7.21: Protect Health and Safety

Criteria	Option 1: Widen Concession Road 10/County Road 17	Option 2: Widen Concession Road 9
Will this alternative reduce risk?	Neither option poses a risk or significantly reduces risk to health and safety	Neither option poses a risk or significantly reduces risk to health and safety
Will this alternative improve safety?	Neither option improves or reduces safety.	Neither option improves or reduces safety.
Preference	Equal	Equal

Table 7.22: Align with Existing Infrastructure and Studies

Criteria	Option 1: Widen Concession Road 10/County Road 17	Option 2: Widen Concession Road 9
How compatible is the alternative with existing and surrounding infrastructure?	The alternative is compatible with existing and surrounding infrastructure.	The alternative is compatible with existing and surrounding infrastructure.
Preference	Equal	Equal

Table 7.23: Build in Flexibility

Criteria	Option 1: Widen Concession Road 10/County Road 17	Option 2: Widen Concession Road 9
What is the potential for phasing the infrastructure alternative?	The option has the potential to phase infrastructure.	The option has the potential to phase infrastructure.
How flexible and adaptable is the alternative to change?	The option provides flexibility to develop Sandwich South.	The option provides flexibility to develop Sandwich South.

Criteria	Option 1: Widen Concession Road 10/County Road 17	Option 2: Widen Concession Road 9
Does the alternative allow us to accommodate future population and employment growth?	The option accommodates future growth, although provides decrease access to/from C.R. 42.	The option accommodates future growth.
Preference	Less Preferred	Most Preferred

Table 7.24: Overall Preference

Criteria	Option 1: Widen Concession Road 10/County Road 17	Option 2: Widen Concession Road 9
Overall Preference	Less Preferred	Most Preferred

7.3 Problem/Opportunity 3: East-West Collector Alignment

Table 7.25: Protect Quality of Life

Criteria	Option 1: Use Joy Road Right of Way	Option 2: Do Not Build Collector Between Concession Road 8 and North-South Collector to the East	Option 3: Curve North to Connect with East Pelton Collector	Option 4: Curve South to Connect with East Pelton Collector
Is there potential property that would be required?	Yes. Joy Road has an inconsistent (roughly 10 metre) right of way that would need to be expanded.	No.	Yes, new right of way would need to be created.	Yes, new right of way would need to be created.
What are the potential impacts to cultural heritage (archaeology and built heritage)?	None.	None.	None.	None.
What are the potential construction related impacts?	Construction would be disruptive to residents of Joy Road.	None.	Construction would be required to build new roadway.	Construction would be required to build new roadway.
Are there long term operation impacts on local residents and businesses?	Heightened traffic volumes for residents of Joy Road.	The elimination of the only collector extending across the entire study area would increase traffic volumes on parallel roadways and increase traffic congestion.	Less direct path across the study area, but maintains connectivity within the study area.	Less direct path across the study area, but maintains connectivity within the study area.
Preference	Less Preferred	Less Preferred	Most Preferred	Most Preferred

Table 7.26: Be Cost Effective and Provide Value

Criteria	Option 1: Use Joy Road Right of Way	Option 2: Do Not Build Collector Between Concession Road 8 and North-South Collector to the East	Option 3: Curve North to Connect with East Pelton Collector	Option 4: Curve South to Connect with East Pelton Collector
What is the relative cost of the alternative?	Most expensive due to the purchase of developed property on Joy Road.	Least Expensive	Medium cost.	Medium cost.
Are there opportunities to reduce overall cost and/or reduce costs to taxpayers?	No costs.	No costs.	No costs.	No costs.
What is the local economic benefit?	Supports access to local businesses.	Increases traffic congestion on parallel roadways, leading to delays accessing local businesses.	Supports access to local businesses.	Supports access to local businesses.
What is the level of complexity for construction and operation?	Complex due to construction adjacent to developed property.	No construction.	Low.	Low.

Criteria	Option 1: Use Joy Road Right of Way	Option 2: Do Not Build Collector Between Concession Road 8 and North-South Collector to the East	Option 3: Curve North to Connect with East Pelton Collector	Option 4: Curve South to Connect with East Pelton Collector
Preference	Least Preferred	Less Preferred	Most Preferred	Most Preferred

Table 7.27: Protect the Natural Environment

Criteria	Option 1: Use Joy Road Right of Way	Option 2: Do Not Build Collector Between Concession Road 8 and North-South Collector to the East	Option 3: Curve North to Connect with East Pelton Collector	Option 4: Curve South to Connect with East Pelton Collector
What are the environmental effects of the alternative?	Necessary aquatic habitat mitigation measures will be required at drain crossings.	No change to existing conditions.	Necessary aquatic habitat mitigation measures will be required at drain crossings.	Necessary aquatic habitat mitigation measures will be required at drain crossings.
Will there be impacts to species at risk?	Potential for impacts to natural environmental features and consideration of how to minimize.	No change to existing conditions.	Potential for impacts to natural environmental features and consideration of how to minimize.	Potential for impacts to natural environmental features and consideration of how to minimize.
Is there an opportunity to protect natural spaces?	Where roadways crossing drains or significant natural environment crossings, opportunities to implement habitat crossings shall be considered. Future planning studies required for collector road network shall future investigate and develop associated solutions.	There are no natural spaces to protect.	There are no natural spaces to protect.	There are no natural spaces to protect.
Preference	Least Preferred	Most Preferred	Least Preferred	Least Preferred

Table 7.28: Support the Creation of a Complete Community

Criteria	Option 1: Use Joy Road Right of Way	Option 2: Do Not Build Collector Between Concession Road 8 and North-South Collector to the East	Option 3: Curve North to Connect with East Pelton Collector	Option 4: Curve South to Connect with East Pelton Collector
Does the alternative support active modes of travel?	Yes, facilities for active modes would be included.	No, active modes would be diverted to parallel roads.	Yes, facilities for active modes would be included.	Yes, facilities for active modes would be included.
Does the alternative support a self-sufficient community?	Yes.	No, this option limits the opportunity to travel internally within the study area.	Yes.	Yes.

Criteria	Option 1: Use Joy Road Right of Way	Option 2: Do Not Build Collector Between Concession Road 8 and North-South Collector to the East	Option 3: Curve North to Connect with East Pelton Collector	Option 4: Curve South to Connect with East Pelton Collector
Does the alternative provide an accessible solution?	Accessible sidewalks and crossings will be provided.	Not Applicable	Accessible sidewalks and crossings will be provided.	Accessible sidewalks and crossings will be provided.
Preference	Most Preferred	Least Preferred	Most Preferred	Most Preferred

Table 7.29: Protect Health and Safety

Criteria	Option 1: Use Joy Road Right of Way	Option 2: Do Not Build Collector Between Concession Road 8 and North-South Collector to the East	Option 3: Curve North to Connect with East Pelton Collector	Option 4: Curve South to Connect with East Pelton Collector
Will this alternative reduce risk?	See below.	See below.	See below.	See below.
Will this alternative improve safety?	No option improves or reduces safety.	No option improves or reduces safety.	No option improves or reduces safety.	No option improves or reduces safety.
Preference	Equal	Equal	Equal	Equal

Table 7.30: Align with Existing Infrastructure and Studies

Criteria	Option 1: Use Joy Road Right of Way	Option 2: Do Not Build Collector Between Concession Road 8 and North-South Collector to the East	Option 3: Curve North to Connect with East Pelton Collector	Option 4: Curve South to Connect with East Pelton Collector
How compatible is the alternative with existing and surrounding infrastructure?	The alternative is compatible with existing and surrounding infrastructure.	This option adds a gap to the transportation network.	The alternative is compatible with existing and surrounding infrastructure.	The alternative is compatible with existing and surrounding infrastructure.
Preference	Most Preferred	Least Preferred	Less Preferred	Most Preferred

Table 7.31: Build in Flexibility

Criteria	Option 1: Use Joy Road Right of Way	Option 2: Do Not Build Collector Between Concession Road 8 and North-South Collector to the East	Option 3: Curve North to Connect with East Pelton Collector	Option 4: Curve South to Connect with East Pelton Collector
What is the potential for phasing the infrastructure alternative?	This option does not need to be implemented immediately. It can be phased after a significant amount of development has occurred east of Concession Road 8.	Not Applicable.	This option does not need to be implemented immediately. It can be phased after a significant amount of development has occurred east of Concession Road 8.	This option does not need to be implemented immediately. It can be phased after a significant amount of development has occurred east of Concession Road 8.

Criteria	Option 1: Use Joy Road Right of Way	Option 2: Do Not Build Collector Between Concession Road 8 and North-South Collector to the East	Option 3: Curve North to Connect with East Pelton Collector	Option 4: Curve South to Connect with East Pelton Collector
How flexible and adaptable is the alternative to change?	Not flexible.	Not flexible.	Not flexible.	Not flexible.
Does the alternative allow us to accommodate future population and employment growth?	Yes.	This option reduces east-west road capacity, adding traffic volume to other east-west corridors.	Yes.	Yes.
Preference	Most Preferred	Least Preferred	Less Preferred	Most Preferred

Table 7.32: Overall Preference

Criteria	Option 1: Use Joy Road Right of Way	Option 2: Do Not Build Collector Between Concession Road 8 and North-South Collector to the East	Option 3: Curve North to Connect with East Pelton Collector	Option 4: Curve South to Connect with East Pelton Collector
Overall Preference	Least Preferred	Less Preferred	More Preferred	Most Preferred

7.4 Problem/Opportunity 4: Additional East-West Connection to Walker Road

Table 7.33: Protect Quality of Life

Criteria	Option 1: Do Not Add Connection to Walker Road	Option 2: Add Connection to Walker Road
Is there potential property that would be required?	No.	Yes, significant property acquisition will be required. Businesses will be disrupted or eliminated.
What are the potential impacts to cultural heritage (archaeology and built heritage)?	None.	None.
What are the potential construction related impacts?	None.	Construction will impact businesses on Concession Road 7 and Walker Road
Are there long term operation impacts on local residents and businesses?	The intersections at Walker Road/County Road 42 and Walker Road/East-West Arterial will perform poorly for vehicular traffic, causing delays.	A modest amount of traffic will be diverted from the Walker Road/County Road 42 and Walker Road/East-West Arterial intersections, improving travel times. However, the improvement is minimal.
Preference	Least Preferred	Most Preferred

Table 7.34: Be Cost Effective and Provide Value

Criteria	Option 1: Do Not Add Connection to Walker Road	Option 2: Add Connection to Walker Road
What is the relative cost of the alternative?	No costs.	Expensive option due to construction, property acquisition costs and business losses.
Are there opportunities to reduce overall cost and/or reduce costs to taxpayers?	No costs.	No opportunity.
What is the local economic benefit?	None.	Some traffic will be diverted from the Walker Road/County Road 42 and Walker Road/East-West Arterial intersections, improving travel times and offering more opportunities to access local businesses. However, the improvement is minimal.
What is the level of complexity for construction and operation?	No construction.	Complex due to extensive property acquisition, creation of new right of way, and disruption to existing businesses.
Preference	Most Preferred	Least Preferred

Table 7.35: Protect the Natural Environment

Criteria	Option 1: Do Not Add Connection to Walker Road	Option 2: Add Connection to Walker Road
What are the environmental effects of the alternative?	None.	Minimal, majority of the property to be acquired is fully developed. Necessary aquatic habitat mitigation measures will be required at drain crossings.
Will there be impacts to species at risk?	No impacts to species at risk.	Potential for impacts to natural environmental features and consideration of how to minimize.
Is there an opportunity to protect natural spaces?	Limited natural spaces to protect.	Limited natural spaces to protect.
Preference	Most Preferred	Least Preferred

Table 7.36: Support the Creation of a Complete Community

Criteria	Option 1: Do Not Add Connection to Walker Road	Option 2: Add Connection to Walker Road
Does the alternative support active modes of travel?	No. Active modes of transportation are supported on the East-West Arterial and County Road 42.	This option will add a corridor for active modes of travel in addition to the East-West Arterial and County Road 42.
Does the alternative support a self-sufficient community?	No.	Yes, by improving access to and from the study area, particularly if the corridor can extend across the study area.
Does the alternative provide an accessible solution?	No.	Accessible sidewalks and crossings will be provided.
Preference	Least Preferred	Most Preferred

Table 7.37: Protect Health and Safety

Criteria	Option 1: Do Not Add Connection to Walker Road	Option 2: Add Connection to Walker Road
Will this alternative reduce risk?	See below.	See below.
Will this alternative improve safety?	No.	Some traffic will be diverted from the Walker Road/County Road 42 and Walker Road/East-West Arterial intersections, lessening the opportunity for collisions at these congested intersections.
Preference	Most Preferred	Least Preferred

Table 7.38: Align with Existing Infrastructure and Studies

Criteria	Option 1: Do Not Add Connection to Walker Road	Option 2: Add Connection to Walker Road
How compatible is the alternative with existing and surrounding infrastructure?	The alternative is compatible with existing and surrounding infrastructure.	Alternative would require implementation of a signalized intersection at Walker Road and would require an at-grade rail crossing.

Criteria	Option 1: Do Not Add Connection to Walker Road	Option 2: Add Connection to Walker Road
Preference	Most Preferred	Least Preferred

Table 7.39: Build in Flexibility

Criteria	Option 1: Do Not Add Connection to Walker Road	Option 2: Add Connection to Walker Road
What is the potential for phasing the infrastructure alternative?	Not Applicable.	This option can be phased based on development triggers, provided that the internal collector network aligns with the location of the connection.
How flexible and adaptable is the alternative to change?	There would be less redundancy or flexibility in the transportation network.	The option provides flexibility and builds redundancy into the road network in case of closures, construction, etc. on County Road 42 and East-West Arterial.
Does the alternative allow us to accommodate future population and employment growth?	Without this connection, some study area traffic can be accommodated, however the Walker Road/County Road 42 and Walker Road/East-West Arterial intersections will fail at a certain level of development.	This option lessens the traffic at the Walker Road/County Road 42 and Walker Road/East-West Arterial intersections, allowing more future growth. However, the benefit to traffic operations is minimal.
Preference	Least Preferred	Most Preferred

Table 7.40: Overall Preference

Criteria	Option 1: Do Not Add Connection to Walker Road	Option 2: Add Connection to Walker Road
Overall Preference	Most Preferred	Least Preferred

7.5 Problem/Opportunity 5: Traffic Management on Baseline Road

Table 7.41: Protect Quality of Life

Criteria	Option 1: Do Nothing	Option 2: Dead End Baseline Road at Concession Road 8	Option 3: Institute Traffic Calming Measures
Is there potential property that would be required?	No.	No.	No.
What are the potential impacts to cultural heritage (archaeology and built heritage)?	None.	None.	None.
What are the potential construction related impacts?	None.	Small amount of construction to dead end road.	Construction required to add physical traffic calming measures will inconvenience residents.
Are there long term operation impacts on local residents and businesses?	Very high traffic volumes will use this corridor, disrupting existing residents.	Inconveniences residents, employees, and visitors travelling east-west across the study area, but drastically reduces traffic for residents of Baseline Road. Emergency access issues due to length of cul-de-sac.	Inconveniences residents, employees, and visitors travelling east-west across the study area, but modestly reduces traffic for residents of Baseline Road.
Preference	Less Preferred	More Preferred	Most Preferred

Table 7.42: Be Cost Effective and Provide Value

Criteria	Option 1: Do Nothing	Option 2: Dead End Baseline Road at Concession Road 8	Option 3: Institute Traffic Calming Measures
What is the relative cost of the alternative?	No costs.	Low cost.	Medium cost.
Are there opportunities to reduce overall cost and/or reduce costs to taxpayers?	No costs.	No costs.	No costs.
What is the local economic benefit?	None.	None.	None.
What is the level of complexity for construction and operation?	No construction.	Low.	Low.
Preference	Most Preferred	Less Preferred	Least Preferred

Table 7.43: Protect the Natural Environment

Criteria	Option 1: Do Nothing	Option 2: Dead End Baseline Road at Concession Road 8	Option 3: Institute Traffic Calming Measures
What are the environmental effects of the alternative?	None.	None.	None.

Criteria	Option 1: Do Nothing	Option 2: Dead End Baseline Road at Concession Road 8	Option 3: Institute Traffic Calming Measures
Will there be impacts to species at risk?	No impacts to species at risk.	No impacts to species at risk.	No impacts to species at risk.
Is there an opportunity to protect natural spaces?	There are no natural spaces to protect.	There are no natural spaces to protect.	There are no natural spaces to protect.
Preference	Equal	Equal	Equal

Table 7.44: Support the Creation of a Complete Community

Criteria	Option 1: Do Nothing	Option 2: Dead End Baseline Road at Concession Road 8	Option 3: Institute Traffic Calming Measures
Does the alternative support active modes of travel?	No. Active modes of transportation are supported on the East-West Arterial and C.R. 42.	Eliminating flow-through traffic on Baseline Road will enhance real and perceived safety for active modes.	Limiting flow-through traffic on Baseline Road will enhance real and perceived safety for active modes.
Does the alternative support a self-sufficient community?	No impact.	No impact.	No impact.
Does the alternative provide an accessible solution?	Accessible sidewalks and crossings will be provided.	Accessible sidewalks and crossings will be provided.	Accessible sidewalks and crossings will be provided.
Preference	Least Preferred	Most Preferred	Most Preferred

Table 7.45: Protect Health and Safety

Criteria	Option 1: Do Nothing	Option 2: Dead End Baseline Road at Concession Road 8	Option 3: Institute Traffic Calming Measures
Will this alternative reduce risk?	See below.	See below.	See below.
Will this alternative improve safety?	No.	Eliminating flow-through traffic on Baseline Road will enhance real and perceived safety for active modes. Emergency access issues due to length of cul-de-sac.	Limiting flow-through traffic on Baseline Road will enhance real and perceived safety for active modes.
Preference	Less Preferred	Least Preferred	Most Preferred

Table 7.46: Align with Existing Infrastructure and Studies

Criteria	Option 1: Do Nothing	Option 2: Dead End Baseline Road at Concession Road 8	Option 3: Institute Traffic Calming Measures
How compatible is the alternative with existing and surrounding infrastructure?	The alternative is compatible with existing and surrounding infrastructure.	The alternative is compatible with existing and surrounding infrastructure.	The alternative is compatible with existing and surrounding infrastructure.

Criteria	Option 1: Do Nothing	Option 2: Dead End Baseline Road at Concession Road 8	Option 3: Institute Traffic Calming Measures
Preference	Equal	Equal	Equal

Table 7.47: Build in Flexibility

Criteria	Option 1: Do Nothing	Option 2: Dead End Baseline Road at Concession Road 8	Option 3: Institute Traffic Calming Measures
What is the potential for phasing the infrastructure alternative?	Not Applicable.	This option does not need to be implemented immediately. It can be phased after a significant amount of development has occurred east of Concession Road 8.	This option does not need to be implemented immediately. It can be phased after a significant amount of development has occurred east of Concession Road 8.
How flexible and adaptable is the alternative to change?	The option provides flexibility because nothing prevents Options 2 or 3 from being implemented in the future.	The option less flexibility because while reversing this decision in the future would be relatively inexpensive, the existing community may not be supportive of removing the dead end in the future.	The option has the least flexibility because reversing this decision in the future would require road work and the existing community may not be supportive of removing the traffic calming measures.
Does the alternative allow us to accommodate future population and employment growth?	Yes.	This option reduces east-west road capacity, adding traffic volume to County Road 42 and the East-West Arterial.	This option reduces east-west road capacity, adding traffic volume to County Road 42 and the East-West Arterial.
Preference	Most Preferred	Least Preferred	Less Preferred

Table 7.48: Overall Preference

Criteria	Option 1: Do Nothing	Option 2: Dead End Baseline Road at Concession Road 8	Option 3: Institute Traffic Calming Measures
Overall Preference	Least Preferred	Less Preferred	Most Preferred