

<b>TO:</b>	<b>CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON APRIL 2, 2019</b>
<b>FROM:</b>	<b>KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR ENVIRONMENTAL AND ENGINEERING SERVICES AND CITY ENGINEER</b>
<b>SUBJECT:</b>	<b>SOUTHDALE ROAD WEST AND BOSTWICK ROAD IMPROVEMENTS ENVIRONMENTAL STUDY REPORT</b>

<b>RECOMMENDATION</b>
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That, on the recommendation of the Managing Director, Environmental and Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to the Southdale Road West / Bostwick Road Improvements Environmental Assessment:

- (a) The Southdale Road West / Bostwick Road Improvements Municipal Class Environmental Study Report **BE ACCEPTED**;
- (b) A Notice of Study Completion for the Project **BE FILED** with the Municipal Clerk; and
- (c) The Environmental Study Report **BE PLACED** on the public record for a 30 day review period.

<b>PREVIOUS REPORTS PERTINENT TO THIS MATTER</b>
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- Civic Works Committee – June 19, 2012 – London 2030 Transportation Master Plan
- Planning and Environmental Committee – October 15, 2012 – The Southwest Area Secondary Plan Report
- Strategic Priorities and Policy Committee – June 23, 2014 – Approval of 2014 Development Charges By-Law and DC Background Study
- Civic Works Committee – March 8, 2016 – Bostwick Road Environmental Assessment, Wharncliffe Road West to Pack Road, Appointment of Consulting Engineer
- Strategic Priorities and Policy Committee – June 9, 2016 – Growth Management Implementation Strategy (GMIS): 2017 Annual Review and Update – Appendix ‘F’: Detailed Commentary Regarding Developer Infrastructure Reports
- Civic Works Committee – January 10, 2017 – Southdale Road Environmental Assessment Appointment of Consulting Engineer

<b>COUNCIL’S 2015-19 STRATEGIC PLAN</b>
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The following report supports the Strategic Plan through the strategic focus area of *Building a Sustainable City* by implementing and enhancing safe and convenient mobility choices for transit, automobile users, pedestrians, and cyclists through the improvement of roadways.

## BACKGROUND

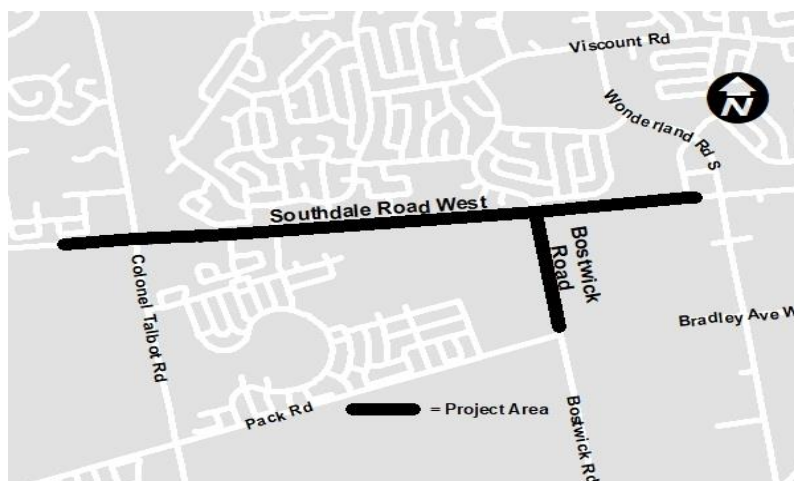
### Purpose

This report provides Committee and Council with an overview of the Municipal Class Environmental Assessment (EA) for the Southdale Road West Environmental Assessment (EA) from Pine Valley Boulevard to Colonel Talbot Road, including a portion of Bostwick Road north of Pack Road and seeks approval to finalize the study. The completed Environmental Study Report (ESR) documents the EA process undertaken for the Southdale Road West/Pack Road Class EA.

### Background

The Southdale Road West Improvements Class EA Study was carried out in accordance with Schedule 'C' of the Municipal Class Environmental Assessment (Class EA) document. The Class EA process is approved under the Ontario Environmental Assessment Act and outlines the process whereby municipalities can comply with the requirements of the Ontario Environmental Assessment Act.

The Class EA study has satisfied the requirements of the Ontario Environmental Assessment Act by providing a comprehensive, environmentally sound planning process with public participation, and facilitating dialogue with parties representing a number of diverse interests. This ESR documents the decision making process carried out during the Southdale Road West Improvements Class EA Study. See below Figure 1.0 which illustrates the study area.



**Figure 1.0 – Southdale Road West Improvements EA Study Area**

Within the study area, Southdale Road West is a two-lane arterial roadway extending from Pine Valley Boulevard in the east to Colonel Talbot Road in the west. Also included in the study area is Bostwick Road which is a two-lane arterial road extending from Pack Road at the southern limit to Southdale Road West at the northern limit. The study area includes five intersections with: Southdale Road West/Pine Valley Boulevard, Southdale Road West/Bostwick Road, Southdale Road West/Tillman Road, Southdale Road West/Pomeroy Lane, Southdale Road West/Colonel Talbot Road, and Bostwick Road/Pack Road. Southdale Road West throughout the study area currently experiences congestion issues with increasing development in the area. The current posted speed along Southdale Road West is 60 km/hr east of Colonel Talbot Road, with Bostwick Road being 70 km/hr.

The EA identifies solutions to improve Southdale Road West. The proposed widening of Southdale Road West and Bostwick Road will allow for improved sightlines, operations, maintenance, and overall safety to meet the mobility and accessibility needs of all users, including an increased level of service to compliment the increased development and traffic within the study area and overall corridors. The project will allow for safer usage by emergency services, motorists, cyclists, and pedestrians by addressing existing capacity and safety issues.

Due to rising traffic volumes and developments in the area, the City identified a need for improvements along the Southdale Road West corridor, which included the portion of Bostwick Road to match into another on-going EA for the remainder of Bostwick Road (Bostwick Road Realignment MCEA). More recently, the City's Cycling Master Plan, The London Plan and the 2030 Transportation Master Plan show the importance of improvements to the Southdale Road West corridor for all modes of transportation to better and more safely connect the City's transportation network.

### **The London Plan**

The London Plan, which encompasses the objectives and policies for the City's short and long-term physical land development, classifies this portion of Southdale Road West as a Civic Boulevard. The land use surrounding this portion of Southdale Road West is primarily Green Space, Environmental Review lands, Neighbourhoods, and Shopping Area. The London Plan classifies this portion of Bostwick Road as a Civic Boulevard, with the surround land use being the same as Southdale Road West.

The Civic Boulevard street classification places a priority on pedestrian, cycle and transit movements, moves medium to high volumes of vehicular traffic, very high-quality pedestrian realm, and very high standard of urban design.

### **2030 Transportation Master Plan (2013)**

One of the five "Smart Moves" that form the basis of the TMP is a More Strategic Program of Road Network Improvements. There is a greater emphasis in this TMP on transit, active transportation, travel demand management, and safety. The City's approach to defining the need for road network improvements has become more strategic. This approach recognizes the targets for reduced modal share for the automobile by 2030 and is consistent with the City's expectation that transit and active transportation modal shares will increase significantly from current levels. The City's approach also explicitly recognizes that road improvements will be required for different purposes, including meeting capacity needs.

## **ENVIRONMENTAL ASSESSMENT SUMMARY**

### **Project Description**

The ESR documents the process followed to determine the recommended undertaking and the environmentally significant aspects of the planning, design, and construction of the proposed improvements. It describes the problem being addressed, the existing social, natural and cultural environmental considerations, planning and design alternatives that were considered and a description of the recommended alternative.

The ESR also identifies environmental effects and proposed mitigation measures, commitments to further work and consultation associated with the implementation of the project. A copy of the Executive Summary for the ESR is contained in Appendix A.

## Planning and Analysis of Alternatives

Phase I of the Municipal Class EA (MCEA) process involved the identification of the problem and opportunity statement. It was determined that as the City of London continues to grow and develop, new transportation infrastructure is required that recognizes the capacity needs of planned growth and the objectives of protecting established communities and business. Significant growth is anticipated along this portion of both Southdale Road West and Bostwick Road, including existing capacity and level of service issues.

Phase 2 of the MCEA process involved identifying alternative solutions (planning alternatives) to address the problem/opportunity statement.

The following six alternative solutions were examined as it relates to the Southdale Road West and Bostwick Road corridors:

- Alternative 1 – Do Nothing
  - Assumes no improvements will be made beyond those already planned and approved.
- Alternative 2 – Limit Growth
  - Assumes no improvements will be made beyond those already planned and approved and includes measures to limit development in the study area.
- Alternative 3 – Road Network Improvements
  - Includes potential improvements to nearby east/west roads (commissioners Road and Pack Road/Bradley Avenue Extension).
- Alternative 4 – Operational Improvements
  - Includes the implementation of additional turn lanes, traffic signal coordination, etc.
- Alternative 5 – Road Widening
  - Includes widening of Southdale Road West to provide additional traffic lanes to increase capacity.
- Alternative 6 – Transportation Demand Management (TDM)
  - Includes measures to reduce vehicle volumes by using bike lanes, and promoting transit.

The above identified alternative solutions were screened against the problem and opportunity statement listed above. The evaluation of alternative solutions was comprised of a two-step process. Firstly, Do Nothing, Limit Growth and Road Network Improvements were screened out because it was determined that these solutions will not address the Project needs as identified in the problem and opportunity statement.

Do Nothing – This was not carried forward for further assessment as, although this solution avoids impacts to natural environment, archaeological and cultural resources and costs less compared to other solutions, it does not address transportation planning and does not address the problem and opportunity statement identified for this project.

Limit Growth – This option was not carried forward as it does not comply with current City policies and does not address the problem and opportunity statement.

Road Network Improvements – This option was not carried forward for further assessment as it offers only limited improvements to capacity and level of services on Southdale Road West due to planned growth along the corridors and marginal diversion of traffic on other roads. This option does not address the problem and opportunity statement for this project.

Operational Improvements, Road Widening and TDM were carried forward for further assessment and were evaluated against the criteria developed for this Project in order to determine the preferred recommended solution. At the end of Phase 2 of the MCEA process, the recommended preferred solution for the Project was to widen Southdale Road West and Bostwick Road from 2 lanes to 4 lanes.

### **Design Alternatives**

Phase 3 of the MCEA process involves the development and evaluation of alternative design concepts. The main outcome in this phase of the study was developing road cross-sections and layout concepts for the recommended planning solution.

Identification of the land requirements for this project was a key outcome to identify appropriate mitigation measures such as minimizing cultural, socio-economic and environmental impacts, while still meeting the City’s design standards.

The evaluation and identification of the preferred design was divided into two components:

- Road Widening Concepts
  - Evaluate widening of Southdale Road West to the north, widening to the south, and widening from the centreline.
  - Evaluate widening of Bostwick Road to the west, widening to the east, and widening about the centreline.
- Intersection Concepts
  - Evaluate alternatives for the intersection (signalized or roundabout) at Southdale Road West and Colonel Talbot Road.
  - Evaluate alternatives for the intersection (signalized or roundabout) at Southdale Road West and Bostwick Road.

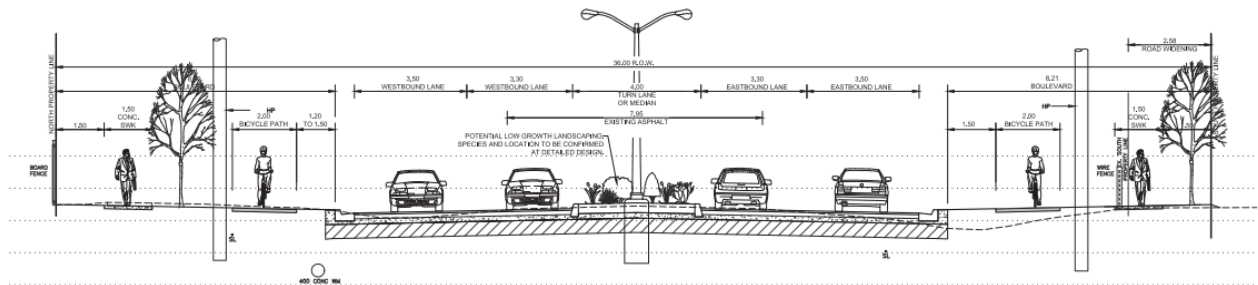
### **Recommended Alternative**

The preferred recommended alternative for Southdale Road West and Bostwick Road considered transportation facilities for all road users (motorists, transit, cyclists and pedestrians as per the City’s Complete Streets requirements) and potential impacts natural, socio-economic and cultural features and costs. The preferred design was selected, developed and refined through extensive consultation with agencies, stakeholders and the public.

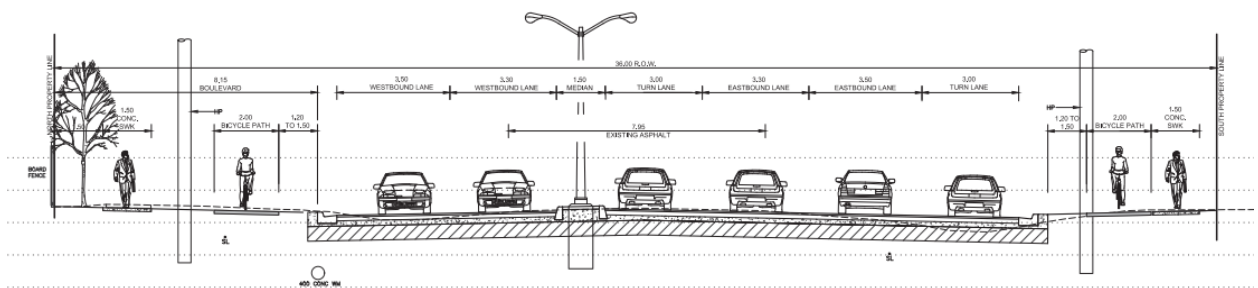
<b>Summary</b>	<b>Preferred</b>	<b>Rationale</b>
Road Alignment – Southdale Road West	Widen to the south	<ul style="list-style-type: none"> <li>• Fewer property owners impacted.</li> <li>• Less property acquisitions required.</li> <li>• Less encroachments on existing park, stormwater and Hydro One Infrastructure.</li> <li>• Lower capital costs</li> </ul>

Road Alignment – Bostwick Road	Widen from the centreline	<ul style="list-style-type: none"> <li>• More equitable property acquisition from multiple property owners.</li> <li>• Less encroachment into either of the natural features.</li> </ul>
Intersection – Southdale Road and Colonel Talbot Road	Roundabout (2 lane)	<ul style="list-style-type: none"> <li>• More equitable property acquisition from multiple owners</li> <li>• Better addresses the Level of Service and capacity constraints both existing and projected.</li> </ul>
Intersection – Southdale Road and Bostwick Road	Signalized	<ul style="list-style-type: none"> <li>• Less property acquisitions required.</li> <li>• Lower overall capital costs</li> <li>• No known impacts on natural features or archaeological resources.</li> </ul>

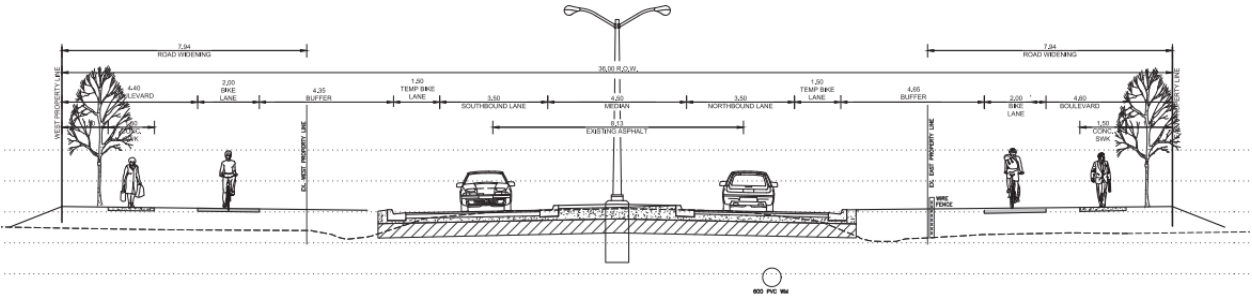
The proposed right-of-way widths along both Southdale Road West and Bostwick Road will generally be standardized to 36 m wide, with localized widenings or adjustments at the intersections. As a result, the cross-sections for each road will generally be standardized. Some details of each cross-section may vary subject to the location along the corridor, due to the presence of significant utilities or other features that may warrant a modified alignment of the sidewalks and/or bike paths. See the below typical cross-sections for both Southdale Road West and Bostwick Road. The cross-sections for Bostwick Road show both an interim solution and an ultimate solution. Initial implementation will likely be to the ultimate based on cost-effectiveness and subject to property availability.



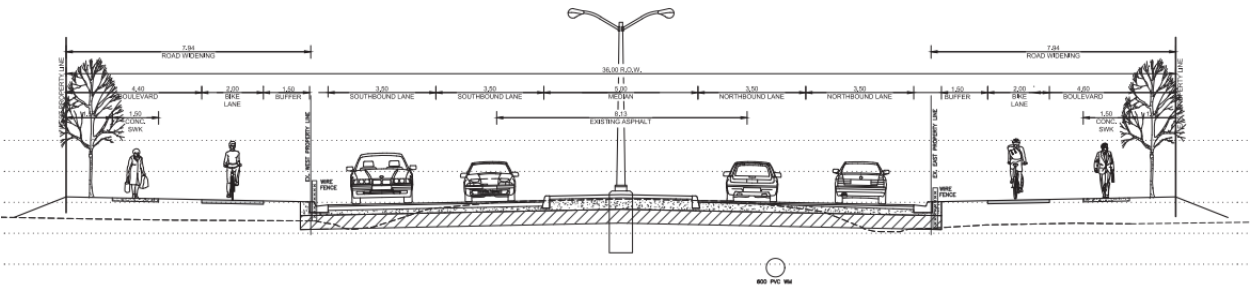
**Southdale Road West Typical Cross Section**



**Southdale Road West Turn Lane Typical Cross Section**



**Bostwick Road Interim Cross Section**



**Bostwick Road Ultimate Cross Section**

Each of the intersections within the study area will be reconstructed. All existing signalized intersections will generally be maintained, and reconstructed to accommodate the widened Southdale Road West or Bostwick Road cross-sections.

The Colonel Talbot Road intersection will be reconstructed, implementing a 2-lane roundabout at this location with pedestrian crossovers. The current proposed alignment and layout was created to minimize impacts to existing properties and utilities.



Southdale Road West / Colonel Talbot Road roundabout looking south east.

Existing driveways along these two corridors connect to the roadway at full access entrances. Through the implementation of the recommended alternative, the driveways will be adjusted as right-in right-out only accesses to accommodate the proposed cross-section and provide the safest access.

### Public and Agency Consultation

Consultation was a key component of this Class EA study in order to provide an opportunity for stakeholder groups and the public to gain an understanding of the study process and provide feedback. The consultation plan was organized around key study milestones, including the two Public Information Centres (PIC's), stakeholder engagement and participation of technical review/regulatory agencies. The key stakeholders included residence, interested public, agencies, Indigenous Communities and those who may be affected by the project.

A Notice of Study Commencement was issued in May of 2017 to inform the public of the initiation of the study. The study team received correspondence from the public and agencies indicating their interest in the study and requesting to be kept informed.

Public Information Centre No. 1 was held on November 2, 2017 to present the study, including information on existing conditions, alternative planning solutions, evaluation criteria and design considerations. It served as an opportunity for the public to review the project information, ask questions, and provide input to the members of the study team.

Public Information Centre No. 2 was held on May 3, 2018 as an opportunity for attendees to review the impact of the road improvement options on the social, cultural, economic, and natural environments as well as review the preliminary preferred design.

Agencies and stakeholders were notified at study milestones and during specific phases of the study which required an information update pertaining to them. In addition to formal public events, the project team conducted in-person meetings with stakeholders and agencies as requested and required. Presentations were made to the City of London Environmental and Ecological Planning Advisory Committee (EEPAC), Cycling Advisory Committee (CAC) and Transportation Advisory Committee (TAC) throughout the project.

## IMPLEMENTATION

### **Construction Staging and Traffic Detouring**

Completion of the full scope of the proposed works will be a significant undertaking. As a result, traffic through and within the project area would be impacted in some fashion over multiple years. Construction phasing and timing will have regard for the Environmental Assessment and will be established with the upcoming 2019 Development Charges Background Study.

Subject to approval and acceptance of this ESR, detailed design will be initiated. The design and approvals of the proposed project will include property requirements, agency approvals and program co-ordination. The proposed works are near term and can be phased to better coordinate with GMIS needs and Development Charges Study commitments. Commencement of construction for the Southdale Road West section between Pine Valley Boulevard and Bostwick Road is planned for 2022 with potential utility relocations in 2021 and will need to be coordinated with other major City projects. Network traffic management and a communications plan will be developed during detailed design to inform road users and instruct local traffic movement. Access to recreational, commercial and residential properties will be maintained during construction.

The subsequent plan for improvement projects for Southdale Road West (from Bostwick Road to Colonel Talbot) and Bostwick Road (from Pack Road to Southdale Road West) sections will continue to also be under review for near-term implementation. The timing and implementation of these sections will be determined based on the identified improvements, infrastructure needs and the Development Charges Background Study. The ESR will provide guidance for future property development including road widening dedication and access management requirements.



The project phasing may also be further subdivided to accelerate the construction of the Colonel Talbot Road roundabout based on capacity needs. This may be implemented due to its shorter construction period, and affords the opportunity to address a traffic constraint within the corridor.

<b>FINANCIAL CONSIDERATIONS</b>
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**Preliminary Cost Estimates**

The estimated total project cost associated with the proposed improvements, including engineering, roadway construction, earthworks, stormwater management, watermain works, traffic signals and street lighting, utility relocations, landscaping, staging, and other project costs is approximately \$23.3 M. An additional investment of \$0.67 M for coordinated watermain and sanitary sewer lifecycle renewal will benefit from project efficiencies. The breakdown of the cost estimate with anticipated implementation timing based on a multi-stage approach is shown below. Figures are in 2018 dollars.

**Cost Estimate for Southdale Road West, Pine Valley to Bostwick Road  
(including Bostwick Road)**

<b>Transportation Cost Estimate</b>	
<b>Item</b>	<b>Estimated Cost (2018 \$)</b>
Roadworks and Earthworks	3,620,000
Storm Sewers	830,000
Traffic Signals and Illumination	500,000
Miscellaneous	540,000
<b>Sub-total</b>	<b>5,490,000</b>
Property Acquisition	390,000
Utility Relocation	120,000
Contingency (15%)	900,000
Engineering and Consulting (15%)	900,000
<b>Total Preliminary Cost Estimate</b>	<b>7,800,000</b>
<b>Lifecycle Renewal Cost Estimate</b>	
Watermain	110,000
Sewer	80,000
<b>Sub-total</b>	<b>190,000</b>
Contingency (15%)	30,000
Engineering and Consulting (15%)	30,000
<b>Total Preliminary Cost Estimate</b>	<b>250,000</b>

## Cost Estimate for Southdale Road West, Bostwick Road to Colonel Talbot Road

Transportation Cost Estimate	
Item	Estimated Cost (2018 \$)
Roadworks and Earthworks	8,430,000
Storm Sewers	1,250,000
Traffic Signals and Illumination	740,000
Miscellaneous	820,000
<b>Sub-total</b>	<b>11,240,000</b>
Property Acquisition	420,000
Utility Relocation	180,000
Contingency (15%)	1,800,000
Engineering and Consulting (15%)	1,800,000
<b>Total Preliminary Cost Estimate</b>	<b>15,440,000</b>
Lifecycle Renewal Cost Estimate	
Watermain	160,000
Sewer	120,000
<b>Sub-total</b>	<b>280,000</b>
Contingency (15%)	70,000
Engineering and Consulting (15%)	70,000
<b>Total Preliminary Cost Estimate</b>	<b>420,000</b>

The 2014 Development Charges Background Study includes a cost estimate of \$20 M for both phases of transportation work. This estimate was based on limited project information and made assumptions based on speculated impacts and construction staging having implications on schedule. The completion of this EA provides a much informed cost estimate for this unique project that has been used to inform the 2019 Development Charge Background Study development and enable better long-term financial planning. The final cost of the project will be influenced through detailed design, as mitigation measures are fully developed.

### CONCLUSION

Improvements to the Southdale Road West and Bostwick Road corridors are necessary to address existing capacity issues, and adequately handle and protect for planned growth within the area. A Municipal Class Environmental Assessment (EA) was undertaken to confirm the detailed preferred solution to proceed in coordination with the required corridor improvements. The ESR is ready for final public review.

The Southdale Road West and Bostwick Road Class EA Study was carried out in accordance with Schedule 'C' of the Municipal Class Environmental Assessment (Class EA) documents (October 2000, amended 2007, 2011, and 2015). The Class EA process is approved under the Ontario Environmental Assessment Act and outlines the process whereby municipalities can comply with the requirements of the Ontario Environmental Assessment Act.

Six alternative planning solutions were developed and assessed against their ability to reasonably address the above problems and opportunities. Of the six alternatives, Alternative 5 – Road Widening was selected as the preferred planning solution. Key factors for the selected alternative include: improving safety, active transportation, better handled for increased growth, and addresses existing capacity issues to provide a much higher level of service.

Two alternative design concepts were developed and evaluated based on factors such as impact on areas of archaeological potential, built heritage resources, vegetation and existing environmental features, property, landscaping, cut/fill volumes, utilities, and opportunities for active transportation. The impact of these factors was similar between both alternative design features. Widening to the south on Southdale Road West, and widening around centre for Bostwick Road were the recommended preferred alternative. This was selected as it best addresses the project problem statement based on detailed evaluation and feedback received from the public. The above factors were most balanced with this chosen alternative and design criteria.

Consultation was a key component of this study. The Class EA was prepared with input from agencies, utilities, emergency service providers, property owners in proximity to the study and Indigenous Communities.

Pending Council approval, a Notice of Study Completion will be filed, and the ESR will be placed on public record for a 30-day review period. Stakeholders and the public are encouraged to provide input and comments regarding the study during this time period. Should the public and stakeholders feel that the EA process has not been adequately addressed, they may request a Part II Order to the Minister of the Environment, Conservation and Parks within the 30-day review period per MOECP instructions on their website.

Construction of the first phase of improvements identified in the Southdale Road West and Bostwick Road EA is anticipated to begin in 2022 subject to property acquisition, approvals, finalization of the 2019 Development Charges Background Study and subsequent Growth Management Implementation Strategy updates.

**Acknowledgements**

This report was prepared with assistance from Matthew Davenport, E.I.T., and Ted Koza, P. Eng., of the Transportation Planning and Design Division.

<b>PREPARED BY:</b>	<b>RECOMMENDED BY:</b>
<b>DOUG MACRAE, P. ENG., MPA DIRECTOR ROADS AND TRANSPORTATION</b>	<b>KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR ENVIRONMENTAL AND ENGINEERING SERVICES AND CITY ENGINEER</b>

Attach: Appendix A – Environmental Study Report Executive Summary

c: Peter McAllister, AECOM Canada Ltd.

# Appendix A

## Environmental Study Report Executive Summary

### Introduction

The City of London (the City) has completed a Municipal Class Environmental Assessment (MCEA) study to address necessary transportation infrastructure requirements along the Southdale Road West and Bostwick Road corridors. The Southdale Road West Improvements MCEA (hereafter the “Project”) is classified as a Schedule ‘C’ project in the Municipal Engineers Association (MEA) MCEA process (October 2000, as amended in 2007, 2011 and 2015), where project activities are subject to the full environmental assessment (EA) planning process of the MCEA.

### Background

The City of London continues to develop and grow as a municipality. To accommodate this growth, new infrastructure is required that recognizes the capacity needs of planned growth and the objectives of protecting established communities and businesses. Southdale Road West is one of the major east-west arterial thoroughfare and access roadways into the City of London, connecting the southwest corner of the City and areas to the west, through to the central and easterly areas of the City. It serves as a major corridor for economic, social, urban, and transportation development, and is located at the south and west edges of existing built up area, the north edge of what will be an area of future development in the near term.

This widening project was identified as a priority in the City of London’s 2030 Transportation Master Plan (TMP), the guiding policy document for future transportation planning and as part of the Growth Management Implementation Strategy (GMIS) for transportation projects. The need for capacity improvements was also identified as part of the 2014 Development Charge Background Study, including phasing. The City of London is considering the widening of this corridor from Colonel Talbot Road to Pine Valley Boulevard, from 2 to 4 lanes, beginning with the phase from Pine Valley Boulevard to Farnham Road in 2022.

Bostwick Road, from Southdale Road West to north of Pack Road, while not covered in the TMP, improvements to this corridor have been considered in this study to support anticipated future development within and adjacent to the study area.

### Problem/Opportunity Statement

The MCEA Problem/Opportunity Statement provides the basis for the need and justification for this project and aligns with the recommendations of the TMP.

**Problem:** As the City of London continues to grow and develop, new transportation infrastructure is required that recognizes the capacity needs of planned growth and the objectives of protecting established communities and businesses. Significant growth is anticipated along the south side of Southdale Road West between Tillman Road and Pine Valley Boulevard, and some areas along the corridor are experiencing traffic delays during peak periods. In addition, the new Southwest Optimist Community Centre and YMCA will increase vehicular, pedestrian and cycling traffic along this section of Southdale Road West. Considering this, and modeling through the City’s Transportation Master Plan, the existing two lane road will not have sufficient capacity to accommodate the projected growth and number of road users. Improvements are also needed on Bostwick Road from Southdale Road West to Pack Road. It is anticipated that the existing two lane roads will not have sufficient capacity to accommodate the projected growth and number of road users.

Five year collision review indicates rear-end collisions were reported as the most prevalent type of traffic impact in the study area. This can be attributed to relatively high speed limits and the lack of passing opportunities.

**Opportunity:** By following the **Complete Streets** approach, there is an opportunity to improve Southdale Road West (Pine Valley Boulevard to Colonel Talbot Road) and Bostwick Road (Pack Road to Southdale Road West) to accommodate the existing and future traffic demand (including transit and active transportation), and provide better connectivity to adjacent neighbourhoods for the overall road network.

A '**Complete Street**' is designed for all ages, abilities and modes of travel. On Complete Streets, safe and comfortable access for pedestrians, bicycles, transit users and people with disabilities is not an afterthought, but an integral planning feature (Source: Complete Streets Canada).

This project also has the ability to align with the principles of **Vision Zero**, a global movement that has been adopted by the City to eliminate traffic injuries and fatalities caused by vehicular collisions. Vision Zero London is the City's road safety strategy to reduce the number and severity of collisions occurring within the City and increase road safety for cyclists, motorists and pedestrians. (Source: City of London).

## Alternative Planning Solutions

For the purposes of the Southdale Road West Improvements MCEA, planning solutions to the undertaking include:

1. **Do Nothing** – Assumes no improvements will be made beyond those already planned and approved.
2. **Limit Growth** - Assumes no improvements will be made beyond those already planned and approved and includes measures to limit development in the study area.
3. **Road Network Improvements** – Includes potential improvements to nearby east/west roads (Commissioners Road and Pack Road/Bradley Avenue Extension)
4. **Operational Improvements** – includes the implementation of additional turn lanes, traffic signal coordination, etc.
5. **Road Widening** – includes widening of Southdale Road West to provide additional traffic lanes to increase capacity.
6. **Transportation Demand Management (TDM)** – Includes measures to reduce vehicle volumes by using bike lanes, and promoting transit.

The above identified alternative solutions were screened against the problem and opportunity statement identified in Section 5 of this Report. The evaluation of alternative solutions is comprised of a two-step process. Firstly, Do Nothing, Limit Growth and Road Network Improvements were screened out because it was determined that these solutions will not address the project needs as identified in the problem and opportunity statement in Section 4.

**Do Nothing** – This was not carried forward for further assessment as, although this solution avoids impacts to natural environment, archaeological and cultural resources and costs less compared to other solutions, it does not address transportation planning and does not address the problem and opportunity statement identified for this project.

**Limit Growth** – This option was not carried forward as it does not comply with current City policies and does not address the problem and opportunity statement.

**Road Network Improvements** - This option was not carried forward for further assessment as it offers only limited improvements to capacity and level of service on Southdale Road West due to planned growth along corridor and marginal diversion of traffic on other roads. This option does not address the problem and opportunity statement for this project.

Next, the remaining alternative solutions, (Operational Improvements, Road Widening and TDM), were carried forward for further assessment and were evaluated against the criteria developed for the project in order to determine the preferred recommended solution.

## Alternative Design Solutions

At the end of Phase 2 of the MCEA process, the recommended preferred solution for the project was to widen Southdale Road West and Bostwick Road from 2 lanes to 4 lanes. Phase 3 identifies the alignment for the preferred solution of widening and evaluates intersection types (roundabouts or signalized).

The evaluation and identification of the preferred design is divided into two components:

### A: Road Widening Concepts

- Evaluate widening of Southdale Road West to the north, widening to the south, and widening from the centerline.
- Evaluate widening of Bostwick Road to the west, widening to the east, and widening about the centerline.

### B: Intersection Concepts:

- Evaluate alternatives for the intersection (signalized or roundabout) at Southdale Road West and Colonel Talbot Road.
- Evaluate alternatives for the intersection (signalized or roundabout) at Southdale Road West and Bostwick Road.

## Preferred Design Solution

The Preferred Design for Southdale Road West and Bostwick Road (**Figure ES1**) considered transportation facilities for all road users (motorists, transit, cyclists and pedestrians as per the City’s Complete Streets requirements) and potential impacts to natural, socio-economic and cultural features and costs. The preferred design was selected, developed and refined through extensive consultation with agencies, stakeholders and the public.

### Summary of Preferred Design

Summary	Preferred	Rationale
<b>Road Alignment – Southdale Road West</b>	Widen to the south	<ul style="list-style-type: none"> <li>• Fewer property owners impacted</li> <li>• Less property acquisition required</li> <li>• Less encroachments on existing park, stormwater and Hydro One infrastructure</li> <li>• Lower capital costs</li> </ul>
<b>Road Alignment – Bostwick Road</b>	Widen from the centerline	<ul style="list-style-type: none"> <li>• More equitable property acquisition from multiple property owners</li> <li>• Less encroachment into either of the natural features</li> </ul>
<b>Intersection – Southdale Road and Colonel Talbot Road</b>	Roundabout (2 lane)	<ul style="list-style-type: none"> <li>• More equitable property acquisition from multiple property owners</li> </ul>
<b>Intersection – Southdale Road and Bostwick Road</b>	Signalized	<ul style="list-style-type: none"> <li>• Less property acquisition required</li> <li>• Lower overall capital costs</li> <li>• No known impacts on natural features or archaeological resources</li> </ul>

## Cross Section Elements

The proposed right-of-way widths along both Southdale Road West and Bostwick Road will generally be standardized to 36.0m wide, with localized widenings or adjustments at the

intersections. As a result, the cross sections for each road will also generally be standardized. Some details of each cross section may vary subject to the location along the corridor, due to the presence of significant utilities or other features that may warrant a modified alignment of the sidewalks and/or bike paths.

Each of the intersections within the study area will be reconstructed. All existing signalized intersections will generally be maintained, and reconstructed to accommodate the widened Southdale Road West or Bostwick Road cross section.

The Colonel Talbot Road intersection will be reconstructed, implementing a 2-lane roundabout at this location. The current proposed alignment and layout was created to minimize impacts to existing properties and utilities. The exact layout of the intersection will need to be further refined during detailed design to address any final grading transitions to adjacent properties or the adjacent SWM facility.

### **Construction Staging and Traffic Detouring**

Completion of the full scope of the proposed work will be a significant undertaking. As a result, traffic through and within the project area would be impacted in some fashion over the course of an expected 2-year period, for each phase of the project, subject to the actual staging and stage duration. Therefore, consideration should be given to the staging and sequencing of construction and traffic management.

#### **Implementation Schedule**

<b>Project Phase</b>	<b>Project Component</b>
<b>Phase 1</b>	Southdale Road: Farnham Road to Pine Valley Boulevard
<b>Phase 2</b>	Southdale Road: Colonel Talbot Road to Farnham Road
<b>Phase 3</b>	Bostwick Road: Southdale Road West to south limits of study area

To accommodate the potential 2-year construction window for each phase, the project is to be reviewed to determine what impacts may occur to the local residents and traveling public during that time. Each phase will have varying degrees of impact, with the most significant impact occurring during the first year of each phase.

The project may also be further subdivided to consider the reconstruction of the Colonel Talbot Road intersection to construct the new roundabout. This may be implemented due to its shorter construction period, and affords the opportunity to address a significant traffic bottleneck within the corridor.

The actual staging and duration of the project will be reviewed further as part of detailed design, and could be adjusted subject to design and approvals timing, complexity of construction, approved budgets, and other factors that may alter the overall project duration or how it is constructed.

## Preliminary Construction Cost Estimate

The total preliminary construction estimate for this project is **\$23.2MM**, including 15% contingency and 15% engineering. Cost estimate includes preliminary estimates for potential property acquisition requirements.

### Preliminary Project Cost Estimate

<b>Item</b>	<b>Colonel Talbot Road to Bostwick Road</b>	<b>Bostwick Road to Pine Valley Boulevard and Bostwick Road</b>	<b>Project Total</b>
Road Works	\$ 8,181,660	\$ 3,454,440	\$ 11,636,100
Removals	\$ 252,285	\$ 168,190	\$ 420,475
Storm Sewers	\$ 1,244,514	\$ 829,676	\$ 2,074,190
Traffic Signals	\$ 381,000	\$ 254,000	\$ 635,000
Streetlights	\$ 363,000	\$ 242,000	\$ 605,000
Miscellaneous	\$ 818,282	\$ 545,520	\$ 1,363,802
Watermain	\$ 158,250	\$ 105,500	\$ 263,750
Sanitary Sewers	\$ 124,950	\$ 83,300	\$ 208,250
<b>SUBTOTAL</b>	<b>\$ 11,523,941</b>	<b>\$ 5,682,626</b>	<b>\$ 17,206,567</b>
Utility Relocation	\$ 180,000	\$ 120,000	\$ 300,000
Engineering (15%)	\$ 1,943,077	\$ 995,385	\$ 2,938,462
Contingency (15%)	\$ 1,753,111	\$ 952,074	\$ 2,705,185
Property Acquisition	\$ 426,600	\$ 394,400	\$ 821,000
<b>TOTAL</b>	<b>\$ 15,826,729</b>	<b>\$ 8,144,485</b>	<b>\$ 23,971,214</b>

\* Utilities relocation costs to be shared between City of London and utilities owners. Exact cost sharing agreement and values to be confirmed during detailed design and approvals process.

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