

<b>TO:</b>	<b>CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON SEPTEMBER 25, 2018</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>RICHMOND STREET AND FANSHAWE PARK ROAD INTERSECTION 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 Richmond Street and Fanshawe Park Road Intersection Improvements Environmental Assessment:

- (a) The Richmond Street and Fanshawe Park Road Intersection Improvements Municipal Class Environmental Study Report **BE ACCEPTED**;
- (b) A Notice of Completion for the project **BE FILED** with the Municipal Clerk; and,
- (c) The project Environmental Study Report **BE PLACED** on 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
- Strategic Priorities and Policy Committee – June 23, 2014 – Approval of 2014 Development Charges By-Law and Development Charges Background Study.
- Civic Works Committee – March 23, 2015 – Environmental Assessment Study 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 mobility choices for cyclists, transit, automobile users and pedestrians. The environmental assessment identifies the solution to improve operations and safety at this intersection in coordination with the Bus Rapid Transit (BRT) north corridor terminal.

## DISCUSSION

### **Purpose**

This report provides Committee and Council with an overview of the Richmond Street and Fanshawe Park Road Intersection Improvements Municipal Class Environmental Assessment (EA) and seeks approval to finalize the study. The completed Environmental Study Report (ESR) documents the EA and decision-making process for the intersection improvements.

### **Background**

The need to improve the intersection of Richmond Street and Fanshawe Park Road was identified in the Smart Moves 2030 Transportation Master Plan (TMP), and it was carried forward into the 2014 update of the Development Charges Background Study for near-term implementation subject to approvals and funding. The TMP identified travel demands across the east-west routes in the north half of the city and recommended road network improvements to provide the additional capacity needed to avoid significant levels of congestion in the future.

Richmond Street is four lanes wide and serves as a northern gateway into the City. Forming a primary link in London's arterial road network, it connects the Masonville, Stoneybrook, Sunningdale and Uplands Planning Districts to London's downtown. It also provides access to regional facilities including Western University. The current traffic volume on Fanshawe Park Road is 33,000 vehicles per day. Traffic volume on Richmond Street south of Fanshawe Park Road is 27,000 vehicles per day and lower north of the intersection at 17,000 vehicles per day.

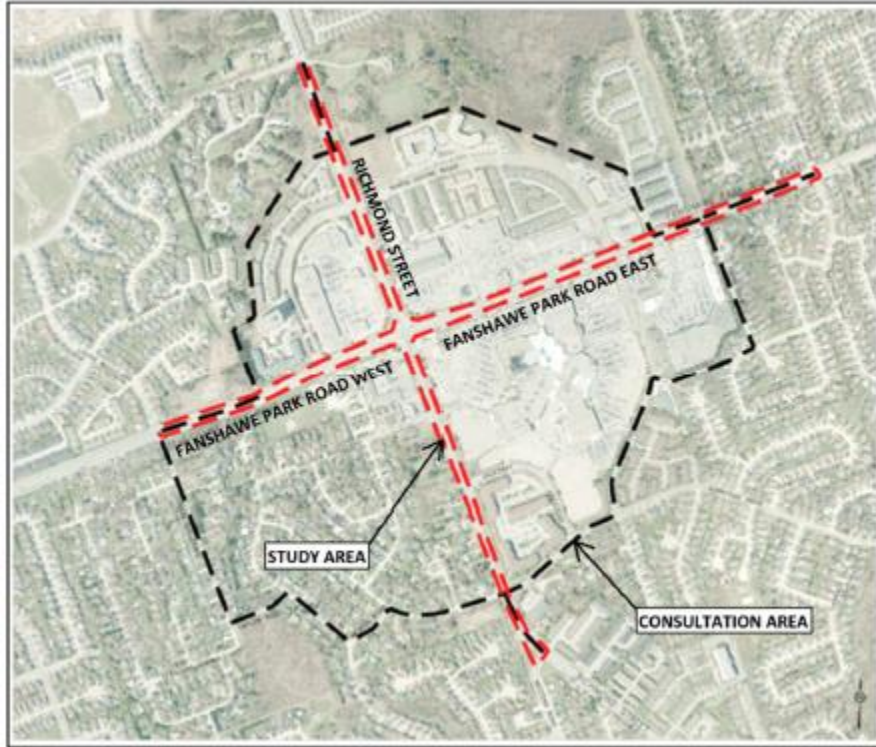
During the weekday afternoon peak period, the intersection of Richmond Street and Fanshawe Park Road is above capacity and operates poorly due to intersection congestion and high delays. The northbound left turn and westbound through movements are operating very poorly as well with more than three minutes of delay per vehicle. With no improvements to the intersection, conditions on current critical movements are predicted to worsen and the intersection will continue to fail.

The intersection improvements will include measures to improve pedestrian and cyclist accommodation. Sidewalks are provided on both sides of Fanshawe Park Road and Richmond Street at and beyond the intersection, but the existing channelized islands at the intersections do not provide a pedestrian friendly environment. Richmond Street, south of Fanshawe Park Road, does not currently have defined cycling facilities. Boulevard bike paths are located on the south side of Fanshawe Park Road and sporadically on the north side in the area of the intersection.

### **Project Description**

The EA for improvements to the Richmond Street and Fanshawe Park Road intersection satisfies the requirements of the *Municipal Class EA* (October 2000, as amended in 2007, 2011, and 2015) for a Schedule 'C' project. Improvements to the intersection are required to address existing and future traffic volumes, intersection safety, and pedestrian and cyclist needs.

Dillon Consulting Limited was retained to complete the EA for improvements to the Richmond Street and Fanshawe Park Road intersection. The study area for the project is shown on Figure 1.



**Figure 1: Study Area**

The Bus Rapid Transit Network was approved by Council on May 16, 2017. The consultant for the BRT project is currently finalizing the Environmental Project Report (EPR) that builds on the Rapid Transit Master Plan. Coordination between the Richmond Street and Fanshawe Park Road Intersection Improvements EA and the BRT initiative was key throughout the EA process to be consistent with the preliminary design of rapid transit on Richmond Street for the section south of Fanshawe Park Road.

The approved BRT alignment south of Fanshawe Park Road will extend on Richmond Street from Hillview Boulevard southerly to Western Road and continuing on Western Road. The north BRT Terminal will utilize the existing bus terminal at Masonville Place. Implementation of the north BRT corridor on Richmond Street is expected to begin in the 2022/2023 timeframe subject to EPR approval.

## ENVIRONMENTAL ASSESSMENT SUMMARY

The Environmental Study Report (ESR) documents the process followed to determine the recommended undertaking and the environmentally significant aspects of the planning, design and construction of the proposed intersection 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. A copy of the Executive Summary for the ESR is contained in Appendix A.

### **Planning and Analysis of Alternatives**

Phase 1 of the Municipal Class EA process involved the problem and opportunity statement identification. It was determined that improvements are needed at this Intersection to address existing and future road/traffic operational deficiencies, future BRT transit terminal and transit needs, intersection safety, pedestrian and cyclist needs, access management issues, and long-term vision for the transit village intersection.

Phase 2 of the EA process involved a review and update to alternative solutions to the problem/opportunity statement. The 2030 TMP recommended that the Fanshawe Park

Road/Richmond Street intersection be improved by adding through lanes, additional left turn lanes, and improvements to pedestrian and cycling facilities. As part of this review, the intersection improvements recommended by the TMP were refined to address the issues associated with the major traffic movements at the intersection.

Phase 3 of the EA process involved the identification of the design options. Based on the Phases 1 and 2 review and update, five design options were developed and evaluated to address the problems and opportunities identified for the Richmond Street and Fanshawe Park Road intersection. In addition to the preferred access management changes, all options include the following improvements:

- Westbound dual left turn lanes
- Northbound dual left turn lanes
- Improved cycling facilities and pedestrian environment

In addition to the above improvements, Design Options 1 to 5 included the following improvements:

Design Option 1:

- Additional northbound through lane, southbound right turn lane and removal of all channelized islands

Design Option 2:

- Additional northbound, eastbound and westbound through lanes, southbound right turn lane and removal of all channelized islands

Design Option 3:

- Northbound and southbound right turn lanes and addition of northbound channelization

Design Option 4:

- Additional northbound, eastbound and westbound through lanes, southbound right turn lane and addition of a northbound right lane with channelization

Design Option 5:

- Additional eastbound and westbound through lanes, addition of northbound right turn lane, removal of existing westbound right turn lane and removal of all channelized islands

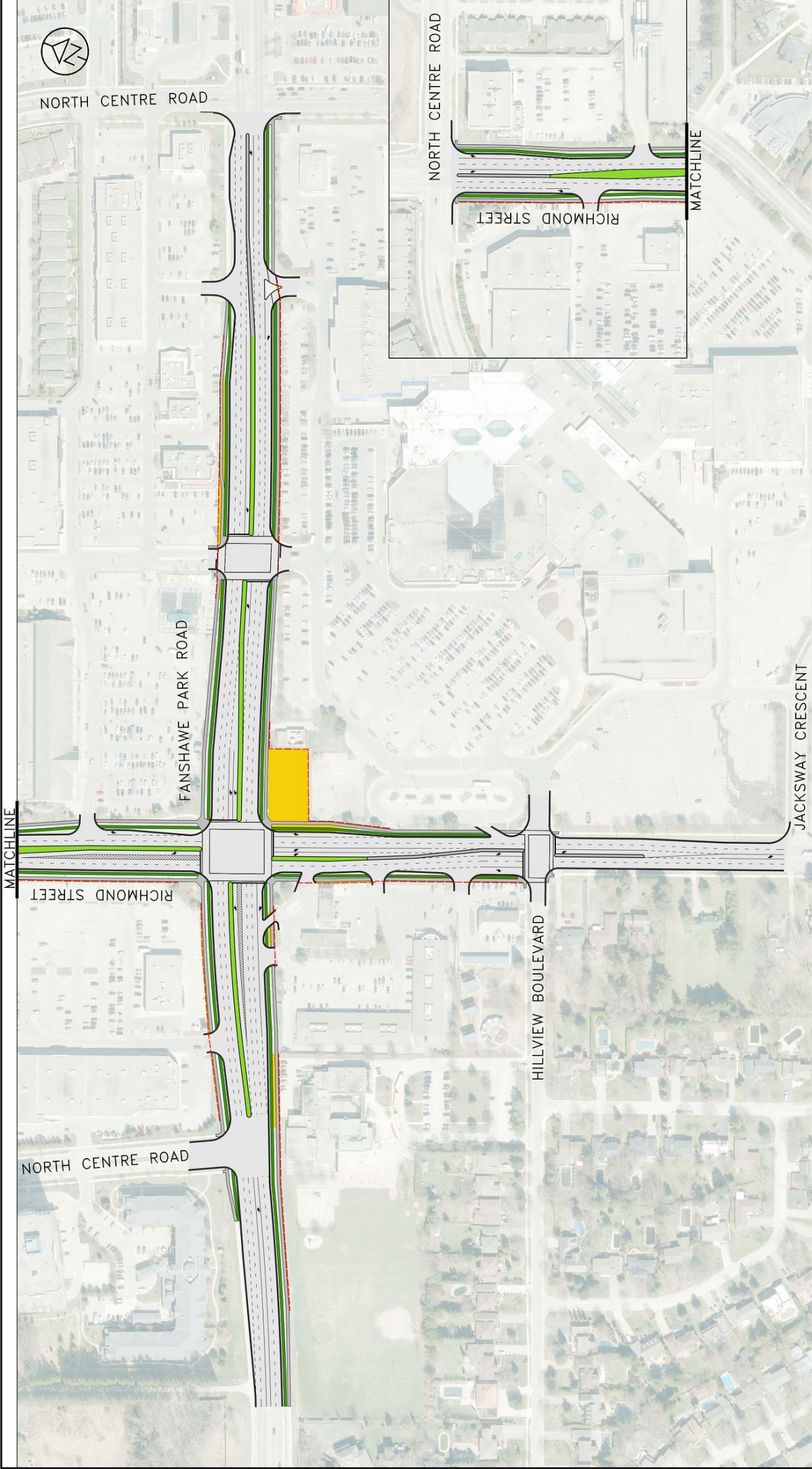
## **Comparative Evaluation of Design Options**

A comparative evaluation of Design Options 1 to 5 was completed to determine the preferred option. Reflecting existing and future conditions potentially affected by the options, the evaluation covered transportation planning and traffic operations, road design, construction, land uses and socio-economic environment and relative costs.

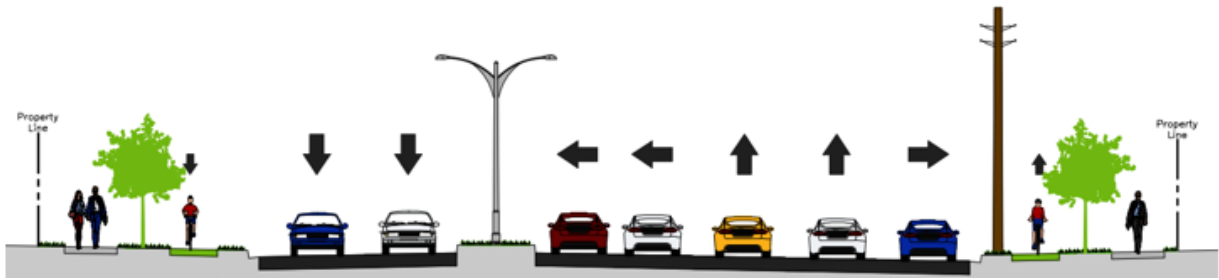
Based on the comparative evaluation, Design Option 5 was chosen as the preferred option. In summary, it improves traffic operations, better accommodates pedestrians and is compatible with the BRT design, the “Main Street”, “Transit Village” and “Rapid Transit Boulevard” designations of the London Plan, and future widening of Fanshawe Park Road. It also facilitates the incorporation of urban design elements to implement the London Plan’s policies and enhance the gateway function of the intersection.

The preferred design for intersection improvements is shown on Figure 2 below and the cross-sections of the proposed roadway improvements are shown on Figures 3 to 6.

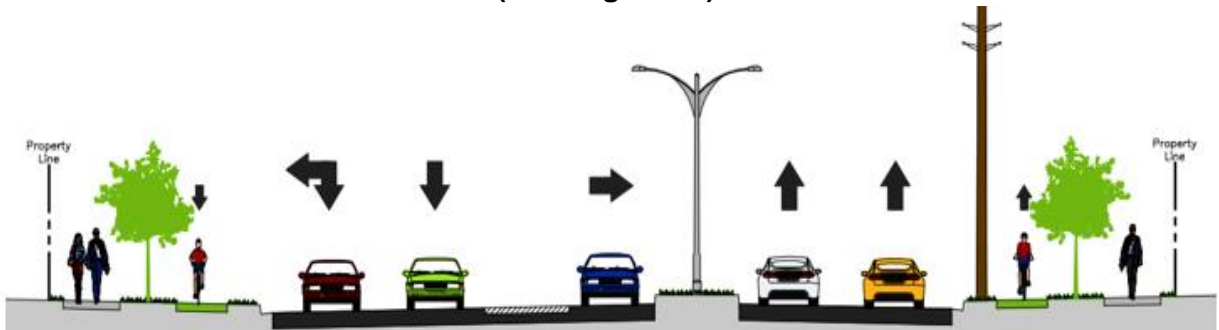




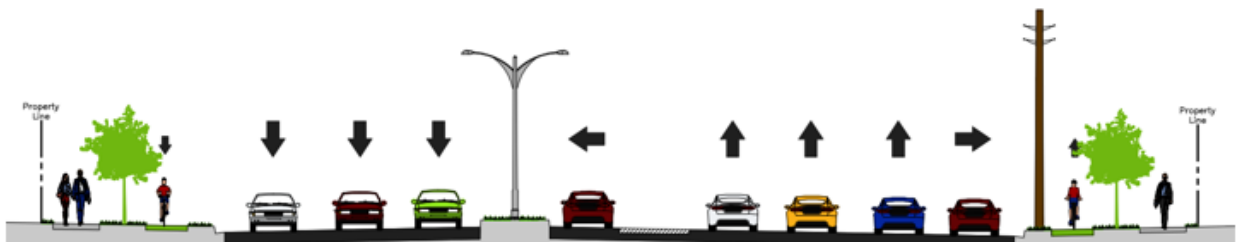
**Figure 2: Preferred Design for Intersection Improvements**



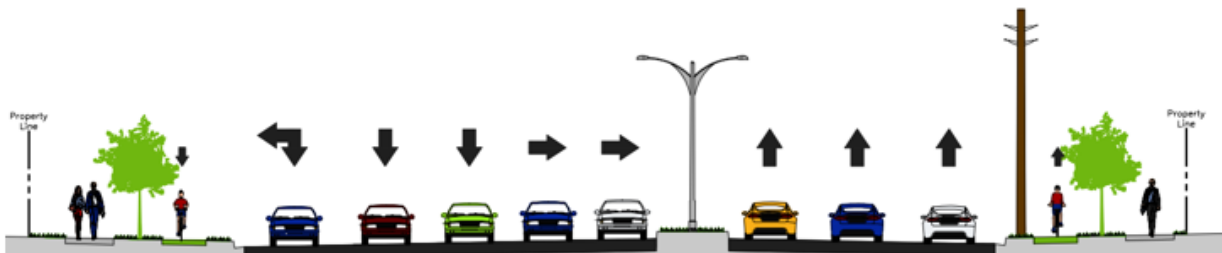
**Figure 3: Preferred Richmond Street Cross-Section, South of Fanshawe Park Road (Looking North)**



**Figure 4: Preferred Richmond Street Cross-Section, North of Fanshawe Park Road (Looking North)**



**Figure 5: Preferred Fanshawe Park Road Cross-Section, West of Richmond Street (Looking East)**



**Figure 6: Preferred Fanshawe Park Road Cross-Section, East of Richmond Street (Looking East)**

### Property Impacts

The preferred design requires property from all quadrants of the intersection. Property requirements at the southeast quadrant will result in the removal of a commercial building. Figure 7 shows the property required for the preferred design.

The City will continue consultation with impacted property owners in the future to discuss and negotiate compensation for property impacts as a result of the proposed plan.

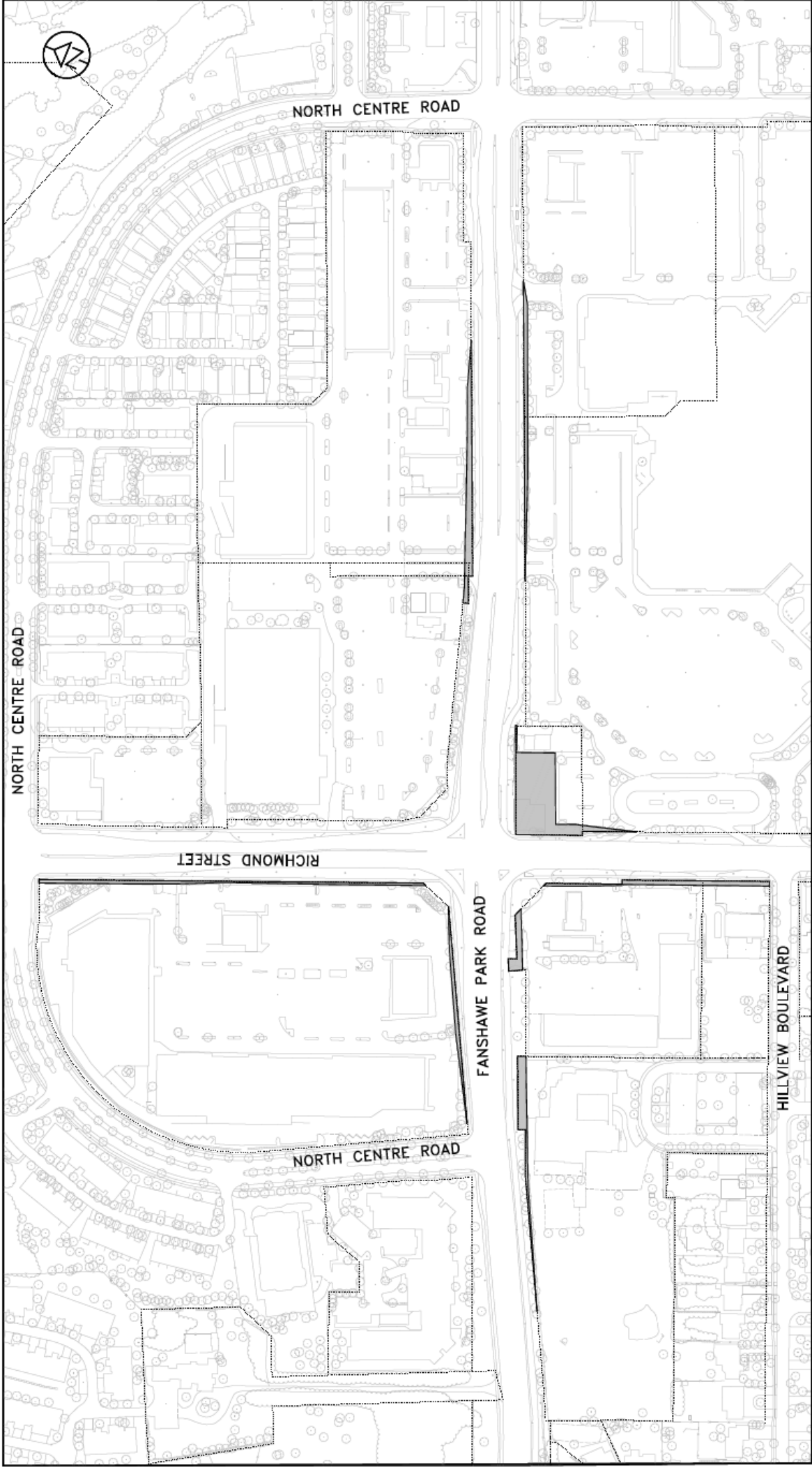


Figure 7: Property Required for the Preferred Design



## CONSULTATION

A Notice of Study Commencement for the project was issued in August 2015. Replies were received from the Ministry of Environment and Climate Change (MOECC), Masonville Place and the Old Masonville Ratepayers Association. Two residents expressed concerns about pedestrian safety.

Public Information Centre (PIC) 1 was held on October 22, 2015. The purpose of PIC 1 was to obtain public and agency input on the work completed during the review and update of Phases 1 and 2 of the Class EA process, including the alternative design components developed for the intersection improvements.

In general, most of the PIC attendees agreed that intersection improvements are required to relieve traffic congestion and improve traffic and pedestrian safety. Concerns included traffic infiltration into the surrounding neighbourhoods, the timing and length of construction, traffic signal timing and the movement of pedestrian and cyclists. Only one written submission was received during the comment period.

Public Information Centre (PIC) 2 was held on June 16, 2016. The purpose of PIC 2 was to present the design options developed for the proposed improvements, the comparative evaluation of the options and the preferred option. Design Option 5 was identified as the preferred design.

Most of the PIC attendees appeared to agree with the proposed intersection improvements and the selection of Design Option 5 as the preferred design. Comments included many of the same concerns expressed at PIC 1, including traffic infiltration, the timing and length of construction, traffic signal timing and pedestrian and cyclist safety.

### **Consultation with First Nations**

The Ministry of the Environment and Climate Change (MOECC) provided information and resources to assist the City and Dillon with First Nations consultation. According to MOECC's Preliminary Assessment Checklist, First Nation and Metis Community Interests and Rights, the intersection improvements do not trigger any interests or rights. The Notice of Study Commencement and the notices for Public Information Centres 1 and 2 were mailed to the First Nations on the project contact list by letters issued by the City. No concerns were identified from the First Nations.

### **Meetings with Impacted Property Owners and Businesses**

A meeting was held early in the process in July 2016 with the owners of the commercial property at the southeast corner accommodating Hakim Optical

Prior to PIC 2, the City of London advised several businesses by letter dated June 10, 2016, that their property would be potentially impacted by proposed access management changes or property acquisitions. Meetings have been held with engaged businesses including Cadillac Fairview (the owner of Masonville Place), IVEST Properties (the owner of the plaza on the southwest quadrant), Copia Developments (the owner of the building at the southeast corner), and Suncor/ Petro-Canada (the owner of Petro-Canada at the southwest corner of the intersection).

Subsequent to PIC 2, meeting invitations were extended to all property owners impacted by the intersection improvements. Meetings were held with property owners impacted by the proposed property acquisition including, Thames Valley District School Board (related to Masonville School) and Bentall Kennedy (owner of property on northwest quadrant). The owners of the commercial property at the southeast corner were contacted again after PIC 2.



Meetings will also to be coordinated between the rapid transit team and the property owners impacted by the BRT project including, TD Canada Trust and Richmond and Fanshawe Centre Inc. These properties are located on the west side of Richmond Street, south of Fanshawe Park Road and north of Hillview Boulevard.

<b>FINANCIAL IMPLICATIONS AND IMPLEMENTATION</b>
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A preliminary cost estimate summary for the Richmond Street and Fanshawe Park Road intersection improvements is illustrated below. The costs include roadway construction, traffic signals and illumination, storm sewers, sanitary sewers, watermains, utility relocation, property acquisition and miscellaneous costs.

Item	Estimated Cost (\$)
<b>Intersection Improvement Investments</b>	
Road works and Earthworks	3,039,000
Storm Sewers and Appurtenances	305,000
Traffic Signals and Illumination	1,025,000
Miscellaneous	205,000
Utility Relocations	1,438,000
Retaining Walls and Associated Work	215,000
<b>Sub-total</b>	<b>6,227,000</b>
Contingency (15%)	934,000
Engineering and Consulting (15%)	934,000
Property Acquisition	4,155,000
<b>TOTAL PRELIMINARY COST ESTIMATE</b>	<b>12,250,000</b>
<b>Coordinated Lifecycle Renewal Investments</b>	
Sanitary Sewers and Appurtenances	151,000
Watermains and Appurtenances	526,000
<b>Sub-total</b>	<b>677,000</b>
Contingency (15%)	101,500
Engineering and Consulting (15%)	101,500
<b>Lifecycle Renewal Sub-total</b>	<b>880,000</b>
<b>TOTAL PRELIMINARY COST ESTIMATE</b>	<b>13,130,000</b>

The initial 2014 DC estimates were based on a very preliminary review of the intersection and limited property impacts were known when the budget for the intersection was allocated in the 2014 Development Charges Background Study. A placeholder budget of \$7.9 M for the project was identified in the 2014 Development Charges Background Study. After more thorough analysis and scoping through the EA process, the transportation improvements are estimated at \$12.25 M. Lifecycle renewal investments in sanitary sewer and watermain were coordinated with the project for cost-effectiveness and are valued at an additional \$880,000.

The previous suggested implementation year for the project was 2018. The project EA schedule was adjusted to coordinate with the BRT progress and a new project implementation schedule will be considered in the formulation of the upcoming 2019 Development Charges Bylaw and capital budget updates. The revised Development Charges Background Study budgeting and schedule will account for the updated project

cost estimate and an involved property acquisition schedule. The project implementation schedule is tentatively identified for construction start in 2022.

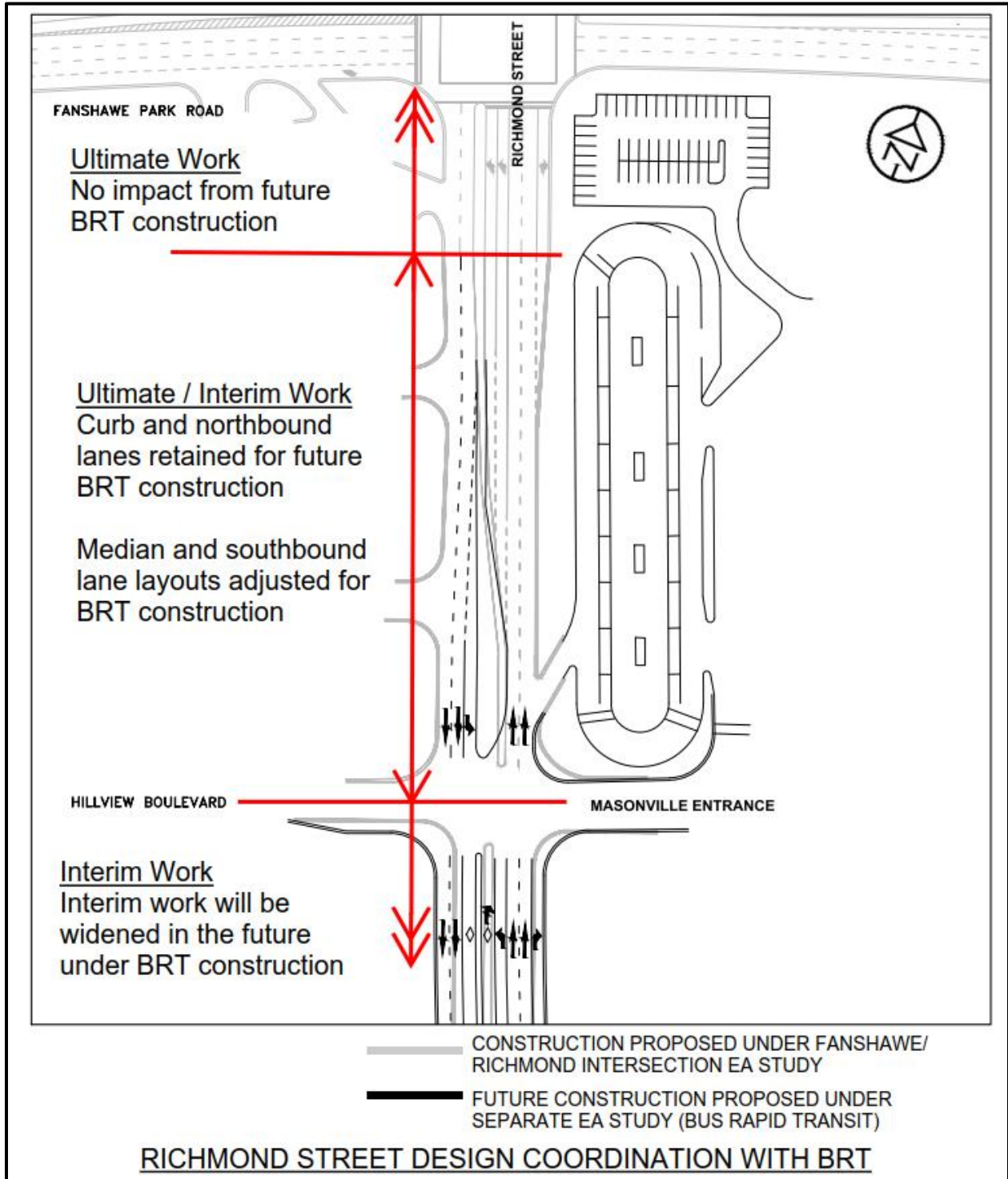
The development of design alternatives was completed with consideration for compatibility with the future rapid transit (BRT) design. Property acquisition requirements north of Hillview Boulevard have also been incorporated such that these properties are only impacted once. These requirements are included in this EA as shown in Figure 7. South of the Hillview Boulevard / Masonville Mall entrance, additional property will be required in the future as part of the BRT project.

The preliminary design has also been coordinated with London Hydro to determine impacts on existing hydro infrastructure and relocation requirements. The preferred relocation strategy for London Hydro is for their plant to be relocated underground prior to the road work due to significant corridor constraints. This work will be completed on a standard utility cost sharing basis and the City portion of this cost is included in the preliminary cost estimate for the project.

### **Implementation**

Coordination with the BRT project will also be considered as the projects progress. To accommodate the future rapid transit (BRT) design, work on Richmond Street between Fanshawe Park Road and Hillview Blvd has been designed as an interim construction step in this EA to minimize future construction cost. Within these limits, the outside curbs and boulevards can be maintained with minor southbound lane reconfiguration and new median work to occur during rapid transit construction. An interim southbound right-turn lane is provided on Richmond Street at Hillview Boulevard to accommodate the ultimate location of future southbound through lanes under the BRT construction project. The extent of the interim/future work as part of this EA is shown in Figure 8 below. Ultimate boulevard configurations and property requirements south of Hillview Boulevard are to be included in the rapid transit EA Study.

Due to the increased roadway and boulevard widths, significant boulevard tree removals will be required within the proposed limits of the ROW. New tree planting locations and species will be determined in the detailed design phase as part of a landscape planting plan. The centre islands, the northeast corner, and northwest corner of the intersection also provide potential opportunity space for urban design elements at the intersection. These elements could include: public art, shade trees, pedestrian seating, waste receptacles, cyclist wayfinding and rest areas. Locations and features will be determined in detailed design.



**Figure 8: Construction Coordination with BRT Project**

**CONCLUSION**

The provincial Environmental Assessment Act requires the completion of an EA for projects of this scope. A Municipal Class EA was undertaken for the improvements of Hamilton Road and Highbury Avenue intersection. An ESR has been completed and is ready for final public review. The EA was prepared with input from external agencies, utilities, emergency service providers, and other stakeholders, and property owners in proximity to the study area.

Based on a comparative evaluation, the design option that was selected improves overall future intersection traffic operations while minimizing impacts on the surrounding residential and commercial properties, compared to the other options. The selected design option also provides improved cycling and pedestrian facilities and includes design features such as landscaping and urban design elements to be consistent with the transit village vision.

Pending Council approval, a Notice of 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 issues have not been adequately addressed, they may provide written notification within the 30-day review period to the Minister of the Environment and Climate Change requesting further consideration.

**Acknowledgements**

This report was prepared with assistance from Maged Elmadhoon, Traffic and Transportation Engineer in the Transportation Planning and Design Division.

<b>SUBMITTED BY:</b>	<b>RECOMMENDED BY:</b>
<b>DOUG MACRAE, P.ENG., MPA DIVISION MANAGER, TRANSPORTATION PLANNING and DESIGN</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: Brian Huston, P.Eng., Dillon Consulting Limited

## Appendix A

### Environmental Study Report Executive Summary

# Executive Summary

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## Introduction

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The City of London retained Dillon Consulting Limited to complete an Environmental Assessment (EA) Study for improvements to the Fanshawe Park Road/Richmond Street intersection following the requirements of the *Municipality Class EA* (October 2000, as amended in 2007, 2011, and 2015) for a Schedule 'C' project. Building on the recommendations of the City's 2030 *Smart Moves Transportation Master Plan* (May 2013), the EA Study assessed the need for additional through and turning lanes at the intersection, access management modifications, transit considerations and pedestrian and cyclist friendly design features at the intersection.

The study followed Phases 1 to 4 of the Class EA process. Phases 1 and 2 of the process were covered by the City's TMP and reviewed and updated as part of this Class EA.

## Phase 1 Review and Update, Problem/Opportunity Identification

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The following Problem/Opportunity Statement was developed as part of the review and update of Phase 1 of the Class EA process. The statement is based on an overview of planning, engineering and environmental conditions potentially affected by the proposed intersection improvements.

Improvements to the Fanshawe Park Road/Richmond Street intersection are required to address:

- Existing traffic volumes (2015 data):
  - During the weekday morning (AM) peak hour, the overall intersection is above capacity at a Level of Service (LOS) 'E', and operates poorly with intersection congestion and high delays. The northbound left turn movement has significant delays of more than three minutes and is above capacity at LOS 'F' with more than three minute delays
  - During the weekday afternoon (PM) peak hour, the intersection is above capacity at LOS 'F'. The northbound left turn and westbound through movements are operating above capacity at LOS 'F' with more than three minute delays. Also, the eastbound left turn and through movements are operating above capacity at LOS 'F', approaching three minute delays
  - During the Saturday peak hour, the intersection is above capacity at LOS 'D'. The westbound left turn movement is operating above capacity at LOS 'F' with nearly two minute delays
- Future traffic volumes (2015 data projected to 2026 using a 1.5% annual growth rate):
  - During the morning (AM) peak hour, the intersection will operate at LOS 'F'. The northbound left turn movement will continue to operate above capacity at LOS 'F' with nine minute delays. The southbound through right and eastbound through movements are approaching capacity and are now at LOS 'F'
  - During the afternoon (PM) peak hour, the intersection will operate at LOS 'F'. The eastbound left turn, eastbound through, northbound left turn and



- westbound through movements operate above capacity at LOS 'F' with six minute delays for the northbound left turn movement
- During the Saturday peak hour, the intersection will also operate at LOS 'F' with the westbound, northbound and southbound left turn movements operating above capacity at LOS 'F' and delays ranging from 2.5 minutes to more than three minutes. The eastbound and westbound through movements are both operating above capacity at LOS 'F'
- Intersection safety:
  - According to 2014 London Police collision reports, there were 293 reported collisions at the intersection from 2007 to 2014. Out of the total number of collisions, 63% were rear end collisions
- Access management issues:
  - Individual access points to commercial entrances in close proximity of the intersection are contributing to the existing queuing and collision issues
- Transit needs, including future Bus Rapid Transit (BRT) routes
- Pedestrian and cyclist needs.

## Phase 2 Review and Update, Alternative Solutions

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The TMP recommended that the Fanshawe Park Road/Richmond Street intersection be improved by adding through lanes, additional left turn lanes (to create westbound and northbound dual lefts) and a northbound pedestrian-friendly channelized right turn lane. As part of the Phase 2 review and update, the intersection improvements recommended by the TMP were refined. The following work was completed for Phase 2:

- An overview of planning, engineering and environmental conditions potentially affected by the proposed improvements to the intersection
- The “Do Nothing” alternative (maintaining the intersection “as is” with no improvements) was dismissed from further consideration as it does not address existing or future traffic capacity, queuing and collision issues, future transit needs, or pedestrian and cyclist needs
- Options for improving access management at the intersection were identified and evaluated. Preferred access management options were subsequently incorporated into all of the Design Options developed for the improvements. These options included restricting some access points to right-in-right-out access using medians to physically restrict left-turn movements out of entrances close to the intersection. Closure of the exit from the existing bus terminal will be required
- Alternative design components were evaluated to address the issues associated with the major traffic movements at the intersection. Examples of the components include increase green time for traffic signals, increase capacity by adding straight-through lanes on Fanshawe Park Road, providing dual-left or longer turn lanes and increase the storage length for turns. The most effective components were carried forward and incorporated into the Design Options developed for the intersection improvements.

## Phase 3, Design Options

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### Design Options

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Based on the Phases 1 and 2 review and update, five Design Options were developed and evaluated. In addition to the preferred access management changes, all options include the following improvements:

- Westbound dual left turn lanes
- Northbound dual left turn lanes
- Southbound slotted left turn lane
- Eastbound slotted left turn lane
- Improved cycling and pedestrian facilities.

In addition to these improvements, Design Options 1 to 5 included the following improvements:

- Design Option 1 – additional northbound through lane, southbound right turn lane and removal of all channelized islands
- Design Option 2 – additional northbound, eastbound and westbound through lanes, southbound right turn lane and removal of all channelized islands
- Design Option 3 – northbound and southbound right turn lanes and addition of northbound channelization
- Design Option 4 – additional northbound, eastbound and westbound through lanes, southbound right turn lane and addition of a northbound right lane with channelization
- Design Option 5 – additional eastbound and westbound through lanes, addition of northbound right turn lane, removal of existing westbound right turn lane and removal of all channelized islands.

The lane configurations of the five Design Options developed for the intersection improvements, along with the existing layout, are summarized in **Table ES1**.

**Table ES1: Lane Configuration of Design Options**

	Existing	Option 1	Option 2	Option 3	Option 4	Option 5
<b>Fanshawe Park Road Eastbound</b>						
Through lanes	2	2	3	2	3	3
Left turn lane	Single	Single	Single	Single	Single	Single
Right turn lane	Yes*	Yes	Yes	Yes*	Yes*	Yes
Bike lanes	Yes**	Yes**	Yes**	Yes**	Yes**	Yes**
<b>Fanshawe Park Road Westbound</b>						
Through lanes	2	2	3	2	3	3
Left turn lane	Single	Dual	Dual	Dual	Dual	Dual
Right turn lane	Yes*	Yes	Yes	Yes*	Yes*	No
Bike lanes	No	Yes**	Yes**	Yes**	Yes**	Yes**
<b>Richmond Street Northbound</b>						
Through lanes	2	3	3	2	2	2
Left turn lane	Single	Dual	Dual	Dual	Dual	Dual
Right turn lane	No	No	No	Yes*	Yes*	Yes
Bike lanes	Sharrow	Yes**	Yes**	Yes**	Yes**	Yes**
<b>Richmond Street Southbound</b>						
Through lanes	2	2	2	2	2	2
Left turn lane	Single	Single	Yes	Single	Single	Single
Right turn lane	No*	Yes	Yes	Yes*	Yes*	No
Bike lanes	No	Yes**	Yes**	Yes**	Yes**	Yes**

\*with channelized island

\*\*in-boulevard bike lanes will be provided.

### Comparative Evaluation of Design Options

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A comparative evaluation of Design Options 1 to 5 was completed to determine the preferred option. Reflecting existing and future conditions potentially affected by the options, the evaluation covered transportation planning and traffic operations, road design, construction, land uses and socio-economic environment and relative costs. For this project, the most important criteria are future Level of Service, pedestrian and cyclist safety, and compatibility with the City's on-going *rapid transit* initiative and the London Plan (adopted by Council in June 2016).

Based on the comparative evaluation, Design Option 5 was chosen as the preferred option. In summary, the results of the comparative evaluation showed that:

- Design Option 4 provided the most significant intersection operation improvements, with slightly shorter delays than Design Option 5
- Design Option 1, Design Option 2 and Design Option 5 better accommodate pedestrians by removing channelization (not considered pedestrian friendly)
- Design Option 2, Design Option 4 and Design Option 5 are most compatible with rapid transit and the "Main Street" designation of the London Plan
- Design Option 2, Design Option 4 and Design Option 5 facilitate more boulevard space to incorporate urban design elements to implement the London Plan's policies and enhance the gateway function of the intersection.

### Public and Agency Consultation

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A Notice of Study Commencement for the project was issued in August 2015. Replies were received from the Ministry of Environment and Climate Change (MOECC), Masonville Place and the Old Masonville Ratepayers Association. Two residents expressed concerns about pedestrian safety.

Public Information Centre (PIC) 1 was held on October 22, 2015, at the Masonville Branch of the London Public Library. The purpose of PIC 1 was to obtain public and agency input on the work completed during the review and update of Phases 1 and 2 of the Class EA process, including the alternative design components developed for the intersection improvements.

A total of 26 individuals attended PIC 1. Almost all of the attendees were residents of the surrounding neighbourhoods. Representatives of London Hydro, the Middlesex-London Health Unit, Masonville Ratepayers Association, Masonville Mall and Copia Developments also attended. In general, most of the PIC attendees agreed that intersection improvements are required to relieve traffic congestion and improve traffic and pedestrian safety. Concerns included traffic infiltration into the surrounding neighbourhoods, the timing and length of construction, traffic signal timing and the movement of pedestrian and cyclists. Only one written submission was received during the comment period. A resident requested that speed bumps be installed on North Centre Road to slow traffic and improve pedestrian safety. Adding a London Transit bus route past Richmond Woods Retirement Village was also suggested.

PIC 2 was held on June 16, 2016, at the Richmond Woods Retirement Centre on North Centre Road. The purpose of PIC 2 was to present the Design Options developed for the proposed improvements, the comparative evaluation of the options and the preferred option. Design

Option 5 was identified as the preferred design. A total of 37 individuals signed the Record of Attendance.

Most of the PIC attendees appeared to agree with the proposed intersection improvements and the selection of Design Option 5 as the preferred design. Concerns included many of the same concerns expressed at PIC 1, including traffic infiltration, the timing and length of construction, traffic signal timing and pedestrian and cyclist safety.

#### Meetings with Impacted Businesses

Prior to PIC 2, the City of London advised several businesses by letter dated June 10, 2016, that their property is potentially impacted by proposed access management changes or property acquisitions. Meetings have been held with:

- representatives of Cadillac Fairview (the owner of CF Masonville Place)
- IVEST Properties (the owner of the plaza on the southwest quadrant)
- Copia Developments (the owner of the building at the southeast quadrant), and
- Suncor/ Petro-Canada (the owner of Petro-Canada at the southwest corner of the intersection).

Subsequent to PIC 2, meetings were held or to be held with other property owners impacted by the proposed property acquisition:

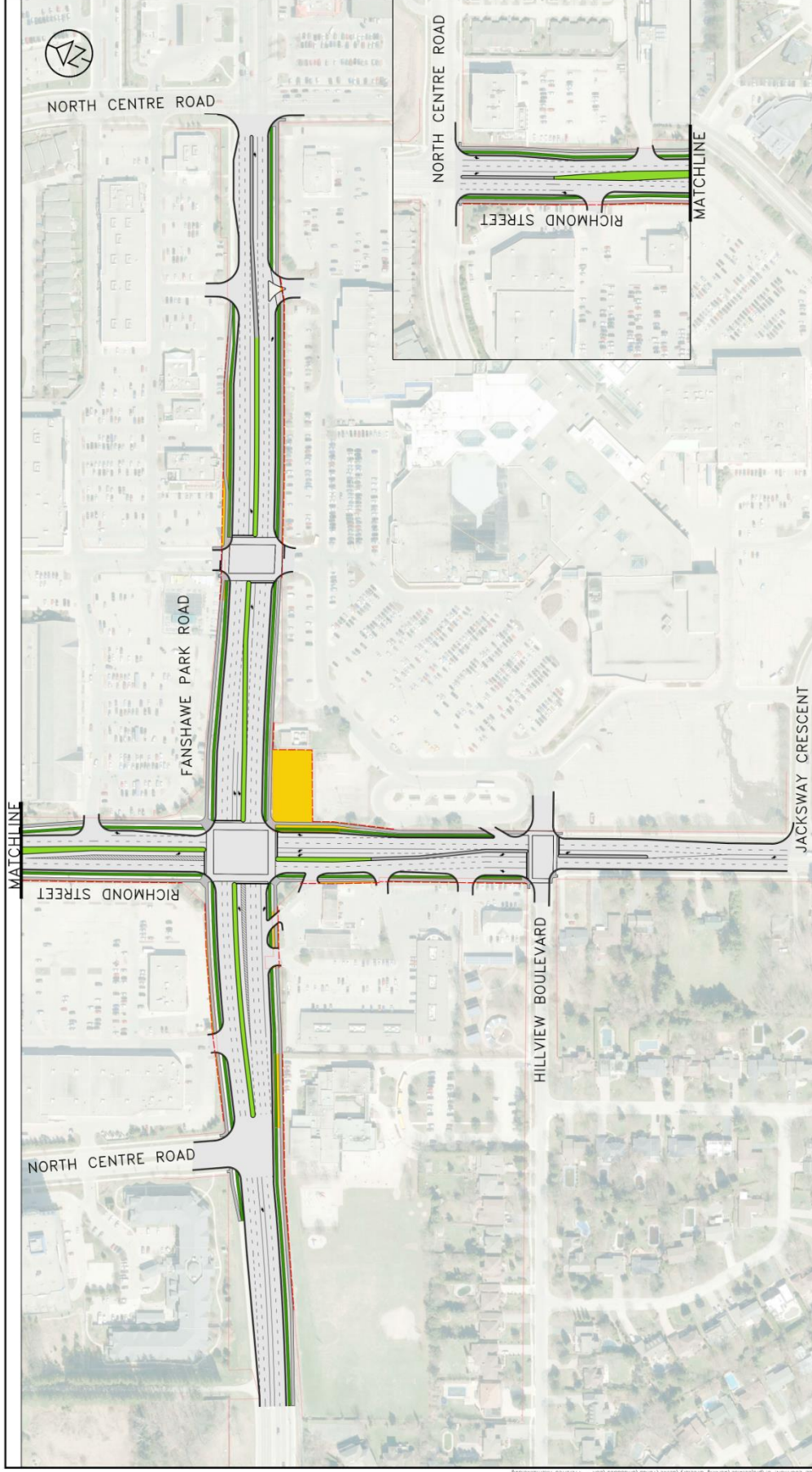
- Thames Valley District School Board (with respect to Masonville School on Hillview Boulevard)
- Bentall Kennedy (owner of property on northwest quadrant)
- RioCan (owner of property on north side of Fanshawe Park Road, east of Richmond Street)
- Choice Properties (owner of property on northeast corner of Fanshawe Park Road and Richmond Street intersection).

The rapid transit team will hold meetings with property owners impacted by the BRT project including, TD Canada Trust and Richmond and Fanshawe Centre Inc. These properties are located on the west side of Richmond Street, south of Fanshawe Park Road and north of Hillview Boulevard.

### **Preferred Design**

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In summary, Design Option 5 was chosen as the preferred design as it provides a balance between improvements in overall traffic operations, pedestrian safety, compatibility with the *rapid transit* initiative and the ability to incorporate urban design features outlined in The London Plan. As shown in **Figures ES1 to ES6**, the preferred design includes westbound dual left turn lanes, northbound dual left turn lanes, a southbound slotted left turn lane, an eastbound slotted left turn lane and northbound and eastbound right turn lanes as well as additional through lanes westbound and eastbound in the vicinity of the intersection. The existing southbound and westbound right turn lanes and all right turn channelization will be removed. Other design features include improved pedestrian and cycling facilities, landscaping and urban design elements.



**DILLON CONSULTING**

RICHMOND STREET AND FANSHAW PARK ROAD INTERSECTION IMPROVEMENTS  
PREFERRED DESIGN  
FIGURE E51

**CITY OF LONDON CORPORATION OF THE CITY OF LONDON**

CITY OF LONDON  
RICHMOND STREET & FANSHAW PARK ROAD INTERSECTION IMPROVEMENTS ENVIRONMENTAL ASSESSMENT STUDY  
TS-11-34

PROPOSED SIDEWALK  
PROPOSED IN-BOULEVARD BIKE LANES  
PROPOSED PLANTED CURBED MEDIAN (2m WIDTH)  
PROPOSED CONCRETE CURBED MEDIAN (2m WIDTH)

EXISTING ROW  
ROW AND PROPERTY REQUIRED

SCALE - HORZ  
20m 0 40m

PROJECT No. 15-1018  
DATE: AUGUST 2018

CITY OF LONDON CORPORATION OF THE CITY OF LONDON

CITY OF LONDON  
RICHMOND STREET & FANSHAW PARK ROAD INTERSECTION IMPROVEMENTS ENVIRONMENTAL ASSESSMENT STUDY  
TS-11-34



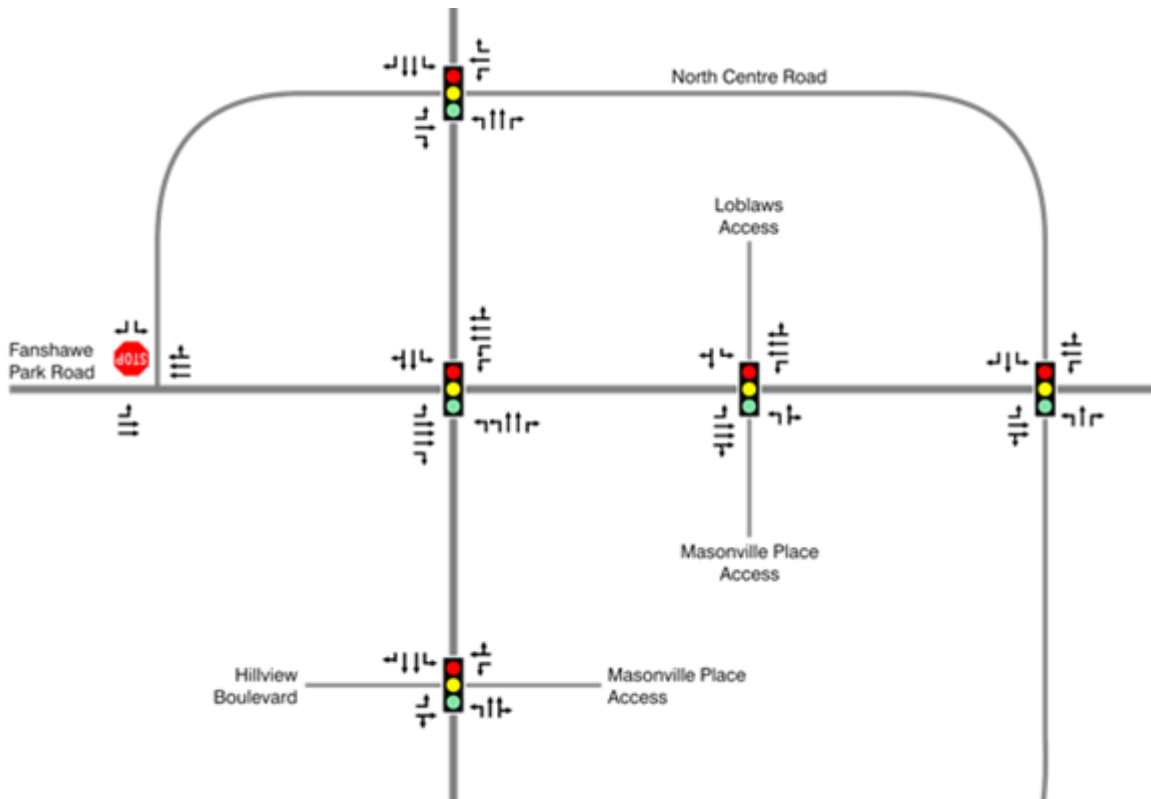


Figure ES2: Preferred Design, Lane Configuration and Traffic Control Measures

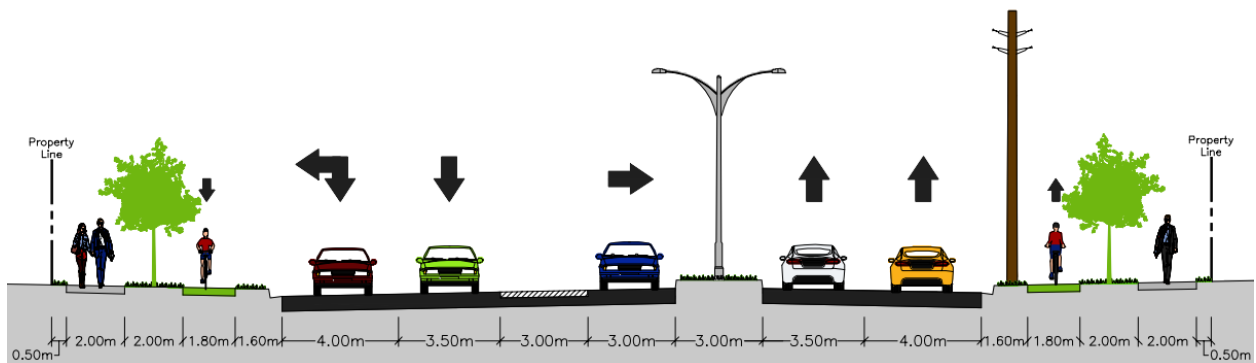


Figure ES3: Preferred Richmond Street Cross-Section, North of Fanshawe Park Road

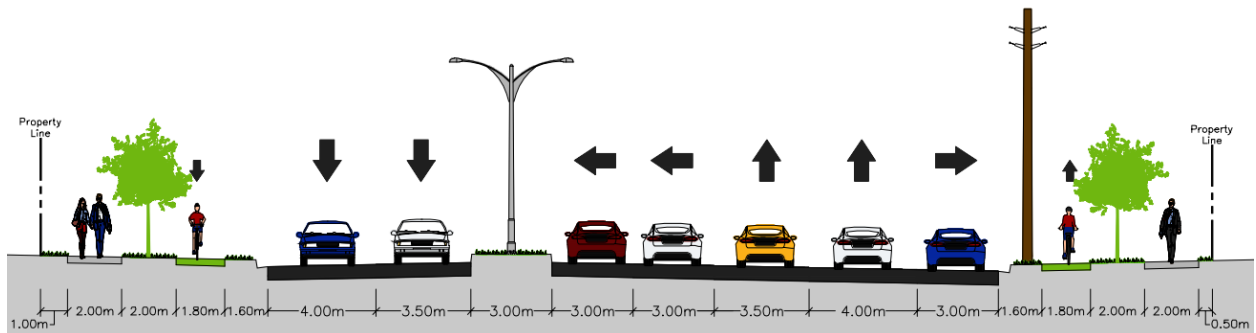


Figure ES4: Preferred Richmond Street Cross-Section, South of Fanshawe Park Road

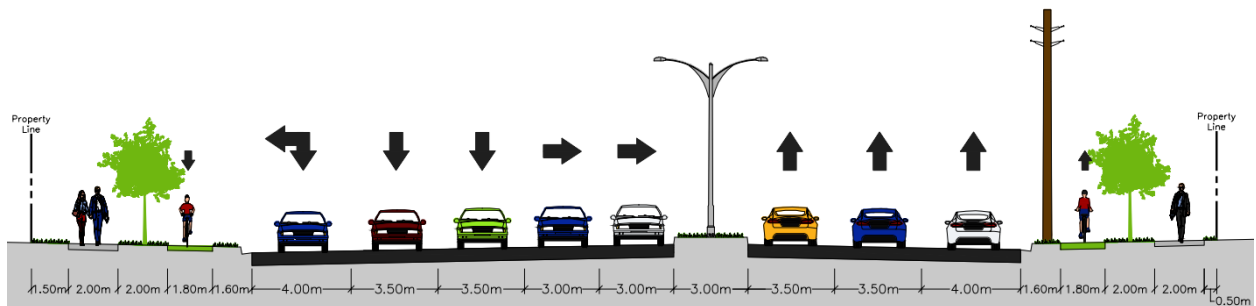
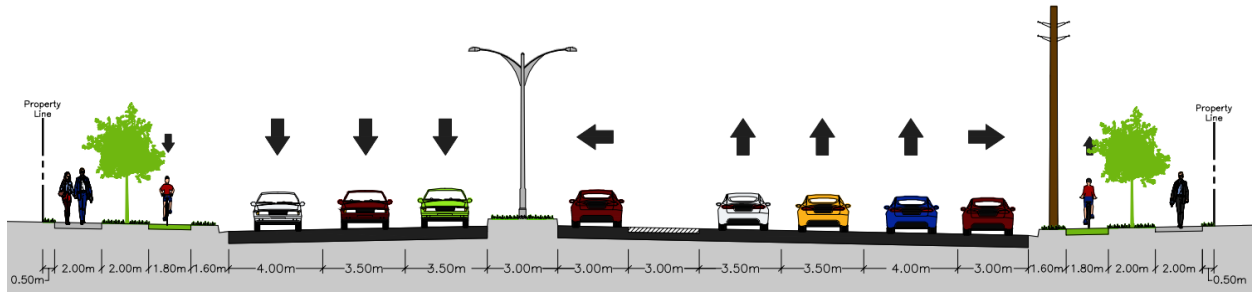
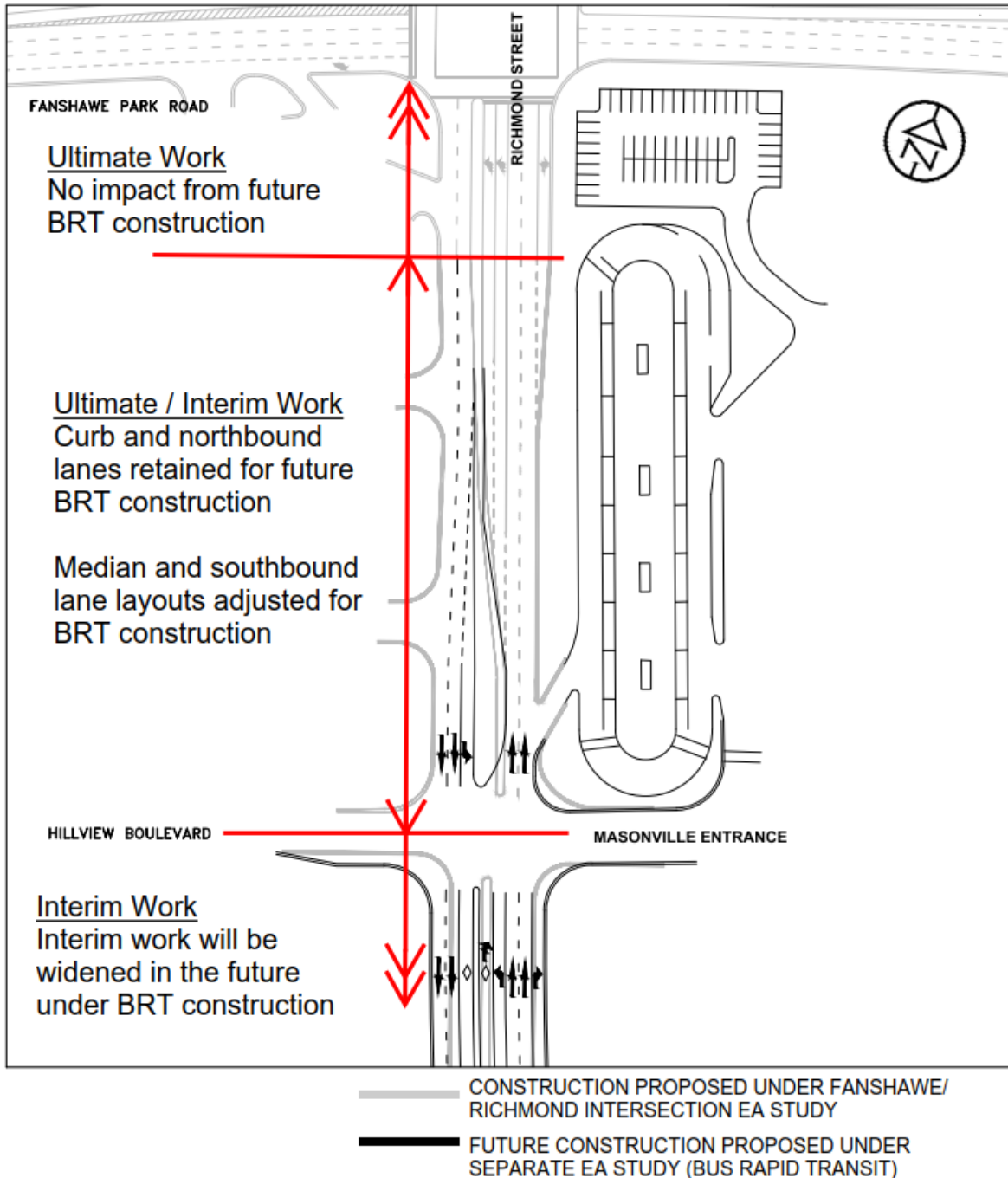


Figure ES5: Preferred Fanshawe Park Road Cross-Section, East of Richmond Street



**Figure ES6: Preferred Fanshawe Park Road Cross-Section, West of Richmond Street**

The development of design alternatives was completed with consideration for compatibility with the future rapid transit (RT) design. To accommodate the future bus rapid transit (BRT) design, work on Richmond Street between Fanshawe Park Road and Hillview Boulevard has been designed as an interim construction step in this EA to minimize future construction cost. This is illustrated in **Figure ES7**. North of Hillview Boulevard, construction completed on the northbound lanes will be maintained in the RT design. An interim southbound right-turn lane is provided on Richmond Street at Hillview Boulevard to set the future westerly curb line for future through lanes under the BRT project. This curb and boulevard can be maintained with minor lane reconfigurations and median work to occur during RT construction. Property acquisition requirements north of Hillview Boulevard have also been incorporated such that these properties are only impacted once. These requirements are included in this EA. South of Hillview Boulevard / Masonville Mall entrance, additional property will be required in the future as part of the RT project.



**Figure ES7: Ultimate and Interim Work Coordination with RT EA**

Due to the increased roadway and boulevard widths, significant tree removals will be required within the proposed limits of the ROW. New tree planting locations and species will be determined in the Detailed Design phase as part of a landscape planting plan. **Figure ES8** shows the potential locations for urban design elements at the intersection. These elements could include: public art, shade trees, pedestrian seating, waste receptacles, and cyclist wayfinding and rest areas. Locations and features will be determined in detailed design.

### Utility Relocations

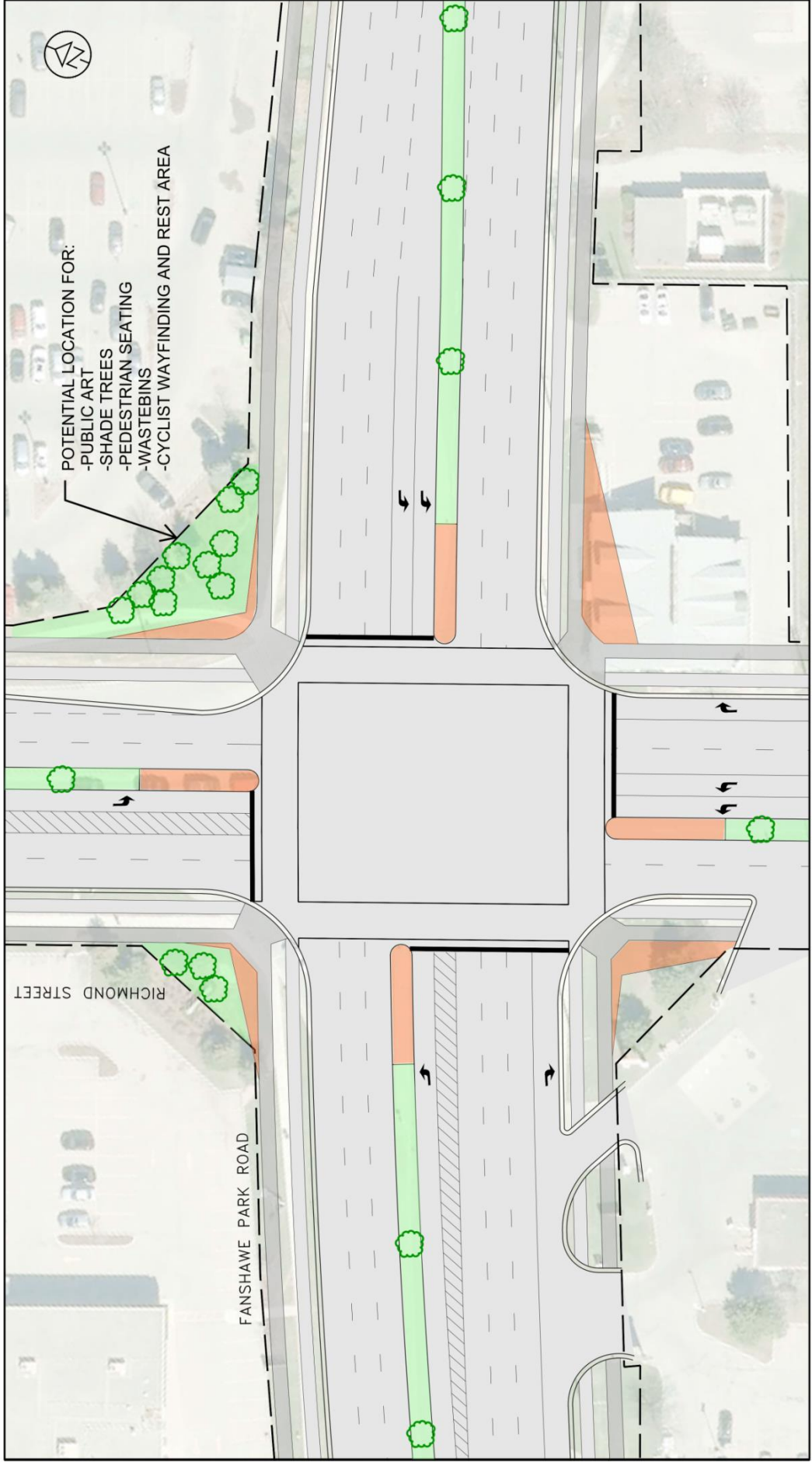
The preliminary design was coordinated with London Hydro to determine impacts on existing hydro infrastructure and relocation requirements. The preferred relocation strategy for London Hydro is for their plant to be relocated underground ahead of the roadway work. This work will be completed on a 50/50 cost sharing basis and the City portion of this cost is included in the preliminary cost estimate for the project.

### Construction Timing and Traffic Management during Construction

The proposed schedule for intersection improvements is under review and subject to budget availability, completion of Detailed Design and receipt of all required approvals. Utility relocations, property acquisitions and tree clearing will be completed prior to construction.

A detailed traffic staging plan will be developed during detailed design. During construction:

- Temporary lane reductions will be required on Fanshawe Park Road and Richmond Street
- Access to residential and commercial properties will be maintained
- Temporary traffic signals will be in operation at the intersections.



RICHMOND STREET AND  
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 INTERSECTION IMPROVEMENTS  
 POTENTIAL URBAN DESIGN ELEMENTS  
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 ENVIRONMENTAL ASSESSMENT STUDY  
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## Preliminary Construction Cost Estimate

As shown in **Table ES2**, the preliminary construction cost estimate for the proposed intersection improvements, including the City's share of utility relocations, is \$13,130,000 million.

**Table ES2: Preliminary Construction Cost Estimate**

Item	Estimated Cost (\$)
<b>Intersection Improvement Investments</b>	
Road works and Earthworks	3,039,000
Storm Sewers and Appurtenances	305,000
Traffic Signals and Illumination	1,025,000
Miscellaneous	205,000
Utility Relocations	1,438,000
Retaining Walls and Associated Work	215,000
<b>Sub-total</b>	<b>6,227,000</b>
Contingency (15%)	934,000
Engineering and Consulting (15%)	934,000
Property Acquisition	4,155,000
<b>TOTAL PRELIMINARY COST ESTIMATE</b>	<b>12,250,000</b>
<b>Coordinated Lifecycle Renewal Investments</b>	
Sanitary Sewers and Appurtenances	151,000
Watermains and Appurtenances	526,000
<b>Sub-total</b>	<b>677,000</b>
Contingency (15%)	101,500
Engineering and Consulting (15%)	101,500
<b>Lifecycle Renewal Sub-total</b>	<b>880,000</b>
<b>TOTAL PRELIMINARY COST ESTIMATE</b>	<b>13,130,000</b>