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<b>TO:</b>	<b>CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON MAY 5, 2015</b>
<b>FROM:</b>	<b>JOHN BRAAM, P.ENG. MANAGING DIRECTOR, ENVIRONMENTAL &amp; ENGINEERING SERVICES AND CITY ENGINEER</b>
<b>SUBJECT:</b>	<b>HIGHWAY 401 / COLONEL TALBOT ROAD / HIGHWAY 4 INTERCHANGE RECONSTRUCTION MINISTRY OF TRANSPORTATION CLASS ENVIRONMENTAL ASSESSMENT ADDENDUM</b>

<b>RECOMMENDATION</b>
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That, on the recommendation of the Managing Director, Environmental & Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to the Environmental Assessment Addendum conducted by the Ontario Ministry of Transportation for the reconstruction of the Highway 401 / Colonel Talbot Road / Highway 4 Interchange:

- a) the following report **BE RECEIVED** for information; and,
- b) the Environmental Assessment Addendum Process **BE ENDORSED**, it being noted that this endorsement considers the extensive stakeholder consultation that the Ministry has undertaken.

<b>PREVIOUS REPORTS PERTINENT TO THIS MATTER</b>
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- Civic Works Committee – February 4, 2013 - Highway 401 Interchange Projects Agreement with Ministry of Transportation

<b>BACKGROUND</b>
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**Purpose**

The purpose of this report is to summarize the current Ministry of Transportation (MTO) study and obtain Council endorsement of the Class Environmental Assessment (EA) Addendum process that MTO has followed.

**Context**

London Interchange Program

In February 2013, Council moved forward with a unique opportunity and approved the project delivery legal agreement between the Ministry of Transportation and the City of London for the construction of four Highway 401 Interchange Projects in London. The program provides considerable tangible benefits to the City as the construction of the

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projects will create local jobs and the improvements will facilitate economic development along the Highway 401 corridor and in the South West Area Plan.

<b>DISCUSSION</b>
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The approved agreement defined responsibilities and cost sharing for the following projects:

- New Highway 401 / Wonderland Road interchange that will improve mobility and accessibility in southwest London;
- A southerly extension of the Veterans Memorial Parkway to Wilton Grove Road and associated Highway 401 interchange reconstruction to accommodate the new road;
- An expansion of the Highway 401 / Highbury Avenue interchange to accommodate growing traffic volumes and support growth in the area; and,
- Reconstruction of the Highway 401 / Colonel Talbot Road / Highway 4 Interchange to address traffic operational issues associated with the existing cloverleaf interchange layout.

A new interchange at Wonderland Road and an expanded interchange with a south extension of Veterans Memorial Parkway (VMP) were included in the London Economic Development Plan options, supported by the Industrial Land Development Strategy Update recommendations and recommended by the Smart Moves 2030 London Transportation Master Plan. The improvements along the Highway 401 corridor will facilitate future industrial development and will support residential and commercial growth in the South West Area Plan with improved accessibility.

The City's projected commitment to these projects is estimated at \$25,000,000 plus some prior engineering fees and in-kind land contributions. The contributions equate to 23% of the estimated total cost of \$115,000,000. The agreement includes a clause whereby the City's payment to MTO is adjusted proportionately by a maximum of \$2,000,000, to reflect an increase or decrease in the total cost of all four interchanges as compared to the estimate.

All four interchange projects are identified on the Ministry of Transportation Southern Highways Program.

Highway 401 / Colonel Talbot Road / Highway 4 Interchange Project

In 2004, the Ministry of Transportation (MTO) completed a Provincial Transportation Class Environmental Assessment (EA) study of Highway 401, from Colonel Talbot Road / Highway 4 to Highbury Avenue. The Transportation Environmental Study Report (TESR) outlined short, medium and long-term needs to address highway operating capacity, safety and interchange deficiencies. Primary recommendations were for additional lanes on Highway 401 and improvements to interchanges through London.

The 2004 TESR identified the need to replace the Colonel Talbot Road / Highway 4 overpass to accommodate the widening of Highway 401. The EA also recommended improvements to the interchange. The existing cloverleaf interchange design creates operational issues because traffic is forced to "weave" due to close spacing of Highway 401 on- and off-ramps. It was therefore recommended to replace the interchange with a more typical parclo (partial cloverleaf) design. The recommended plan included the

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replacement of the Glanworth Drive bridge over Highway 401 on a slightly different alignment. A plan illustrating the 2004 Recommended Plan is in Appendix A.

An addendum to this EA that is focused on the Highway 401 / Colonel Talbot Road / Highway 4 interchange is underway given the passage of time and updated design standards. Information on the study including the most recent public displays from the second public meeting is available at the project website:

<https://sites.google.com/a/dillon.ca/10bridges-ca/hwy401londonbridges>.

The project management for the Highway 401 / Colonel Talbot Road / Highway 4 interchange project is the responsibility of MTO. MTO is the proponent and project manager of the current EA.

MTO is the road authority for Highway 401 and Highway 4. The City is the road authority for the remaining local roads in the area with the exception of a short distance on Glanworth Drive where it crosses Highway 401 and bisects the interchange.

Colonel Talbot Road begins at the limit of MTO / City jurisdiction on the north side of the interchange. Colonel Talbot Road north of Highway 401 is an arterial road with approximately 15,500 vehicles per day. Glanworth Drive is the primary east-west arterial road with approximately 1,000 vehicles per day.

**Environmental Assessment Addendum Summary**

MTO retained Dillon Consulting Ltd. to undertake a review and update of the Colonel Talbot Road / Highway 4 Interchange aspects of the previously approved 2004 EA to prepare for the reconstruction of the interchange in the near future. Due to the length of time since the 2004 study and changes to design standards, an Addendum to the EA is being prepared. The EA Addendum study was initiated in February 2013 and Public Information Centers were held in June 2013 and November 2013.

Alternatives

The previous EA proposed replacing the existing clover-leaf interchange with a Parclo A4 interchange. A new Colonel Talbot Road (Highway 4) bridge was to be constructed on the existing alignment, and the Glanworth Drive Bridge was to be reinstated on a slightly different alignment just easterly of the current structure.

The EA Addendum has included the development of six alternatives. All six alternatives retain the Parclo A-4 interchange design and propose to replace the Colonel Talbot Road (Highway 4) Bridge on slight easterly shift from the current alignment for constructability reasons. What differentiates the alternatives is consideration of different configurations of the surrounding local roads. Plans illustrating the current alternatives are included in Appendix A and described as follows:

Alternative	Description
1.	Interchange improvements with Glanworth Drive bridge and Littlewood Drive realignment
2.	Interchange improvements with permanent closure of Glanworth Drive bridge

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3.	Interchange improvements with permanent closure of Glanworth Drive bridge and Littlewood Drive realignment
4.	Interchange improvements with Glanworth Drive bridge and northerly realignment of westbound exit ramp
5.	Interchange improvements with Glanworth Drive bridge and more northerly realignment of westbound exit ramp
6.	Interchange improvements with Glanworth Drive bridge and more northerly Glanworth Drive / Littlewood Drive realignment

Alternative 2, Interchange improvements with permanent closure of Glanworth Drive bridge is the EA Addendum preferred alternative. With consideration of the low volume of traffic on Glanworth Drive, the preferred plan will realign traffic via Tempo Road to Colonel Talbot Road, and the Glanworth Drive Bridge will not be replaced.

In summary, the primary features of the preferred plan include:

- Replacement of the Colonel Talbot Road / Highway 4 bridge to accommodate the widening of Highway 401 on an alignment slightly east of the current structure;
- Reconstruction of the Highway 4 bridge approaches to accommodate a grade raise for the longer structure and new alignment;
- Realigning Glanworth Drive to better connect with Tempo Road;
- Removal of the Glanworth Drive bridge and approaches;
- Realigning the Highway 4 / Tempo Road / Burtwistle Road intersection further south; and,
- Reconstruction of interchange ramps on different alignments.

The new Colonel Talbot Road / Highway 4 Bridge will be constructed to the east of the existing structure, and it will allow traffic to be maintained during construction. During construction, periodic overnight and / or weekend closures of Colonel Talbot Road will be required. Periodic overnight closures of Highway 401 will also be required.

The preferred plan (Alternative 2) was selected based on a detailed evaluation of Traffic Operations and Safety, Engineering, Drainage and Stormwater Management, Natural Environment, Socio-Economic Environment, Cultural Heritage Resources and Cost. Although the removal of Glanworth Drive Bridge results in minor out-of-the-way travel for local east-west road users, Alternative 2 maintains connectivity in the local road network and meets both current and future provincial and municipal travel demands. Compared to the other alternatives, Alternative 2 has the following benefits:

- rates high in Traffic Operations & Safety;
- best meets MTO and City Access Management Guidelines;
- requires the least new infrastructure, has the least impact on utilities and it is the least complex to construct;
- has the least impacts on terrestrial resources;
- requires the least amount of farmland, severs no farm holdings and best conforms to the City's Official Plan "Agricultural" policies;
- has the least impact on land uses and Gentek, does not impact potentially contaminated property and affects the least amount of land with archaeological potential; and,
- has the lowest capital, operations and maintenance costs and requires the least property.

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### Stakeholder Consultation

Consultation with project stakeholders was a key component of this study. A summary of the stakeholder consultation is attached in Appendix B for your reference.

Gentek Building Products Limited, located immediately north of the interchange, was an active stakeholder during the EA process. Gentek has indicated support for Alternatives 2 & 6.

The Lambeth Community Association (LCA) was also an active stakeholder during the EA process and met with MTO on four separate occasions. These meetings included representatives of the local agricultural community who expressed concerns associated with the movement of large agricultural equipment along Glanworth Drive. As a result of these discussions, three additional alternatives (Alternatives 4, 5 and 6) were created and carried through the comparative evaluation process. MTO also conducted a comprehensive traffic study of the interchange to review the amount and nature of agricultural traffic.

To further accommodate stakeholder concerns regarding the movement of Glanworth Drive agricultural equipment through the interchange, MTO has made additional commitments to enhance the preferred plan that include:

- traffic signals at the Colonel Talbot (Highway 4) and Tempo Road / Burtwistle Drive intersection;
- a wider right-turning radius at Tempo Road heading northbound and Littlewood Road heading southbound;
- fully paved shoulders on Colonel Talbot Road (Highway 4) between the Westbound off-ramp / Littlewood Road intersection and the Tempo Road / Burtwistle Drive intersection;
- full width paved shoulders across the Colonel Talbot Road / Highway 4 Bridge; and,
- wider than standard left turn zones to accommodate agricultural equipment for the northbound left-turn onto Littlewood Drive and the southbound left turn onto Tempo Road.

The Highway 401 / Colonel Talbot Road / Highway 4 interchange improvements and bridge replacement is identified in the Ministry of Transportation Southern Highways Program (SHP) for completion beyond 2018.

<b>CONCLUSION</b>
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Dillon Consulting Ltd., on behalf of MTO, will be finalizing a Class Environmental Assessment Addendum for the reconstruction of the Highway 401 / Colonel Talbot Road / Highway 4 Interchange. The preferred plan is to reconstruct the interchange to improve operations with a standard Parclo A-4 interchange that is typical of Ontario driver expectation. The preferred plan will accommodate a future widening of Highway 401 and will widen Colonel Talbot Road / Highway 4 through the interchange. The preferred plan will remove the existing Glanworth Drive bridge and reroute Glanworth Drive traffic on Tempo Drive south of the interchange. Enhancements are proposed to accommodate large agricultural equipment taking this route.

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The EA Addendum is nearing completion. The next step for the study is to file the Transportation Environmental Study Report (TESR) on the public record. City staff has monitored the stakeholder consultation throughout the process and believe it to be thorough. MTO undertook additional consultation and technical study in response to the expressed stakeholder concerns. The development and evaluation of additional alternatives through the consultation process determined that the recommended alternative provides the best overall benefit with consideration of the wide range of evaluation criteria. Additionally, mitigation measures have been identified to alleviate agricultural operator concerns. Consequently, staff recommends that Council endorse the Ministry’s EA Addendum process.

**Acknowledgements**

This report was prepared with information from Dan Barber, P.Eng., Project Manager for MTO, and the assistance of Karl Grabowski, P.Eng., Transportation Design Engineer in the Transportation Planning & Design Division.

<b>PREPARED BY:</b>	<b>REVIEWED AND CONCURRED BY:</b>
<b>DOUG MACRAE, P.ENG DIVISION MANAGER, TRANSPORTATION PLANNING &amp; DESIGN</b>	<b>EDWARD SOLDI, P.ENG. DIRECTOR, ROADS AND TRANSPORTATION</b>
<b>RECOMMENDED BY:</b>	
<b>JOHN BRAAM, P.ENG. MANAGING DIRECTOR, ENVIRONMENTAL AND ENGINEERING SERVICES &amp; CITY ENGINEER</b>	

Attachments: Appendix A Plans of 2004 Recommended Alternative and EA Addendum Alternatives 1 to 6.

Appendix B MTO EA Addendum Consultation Summary

- c: Councillor Anna Hopkins, Ward 9
- Dan Barber, Ministry of Transportation
- Jeff Matthews, Dillon Consulting Ltd.

Agenda Item #

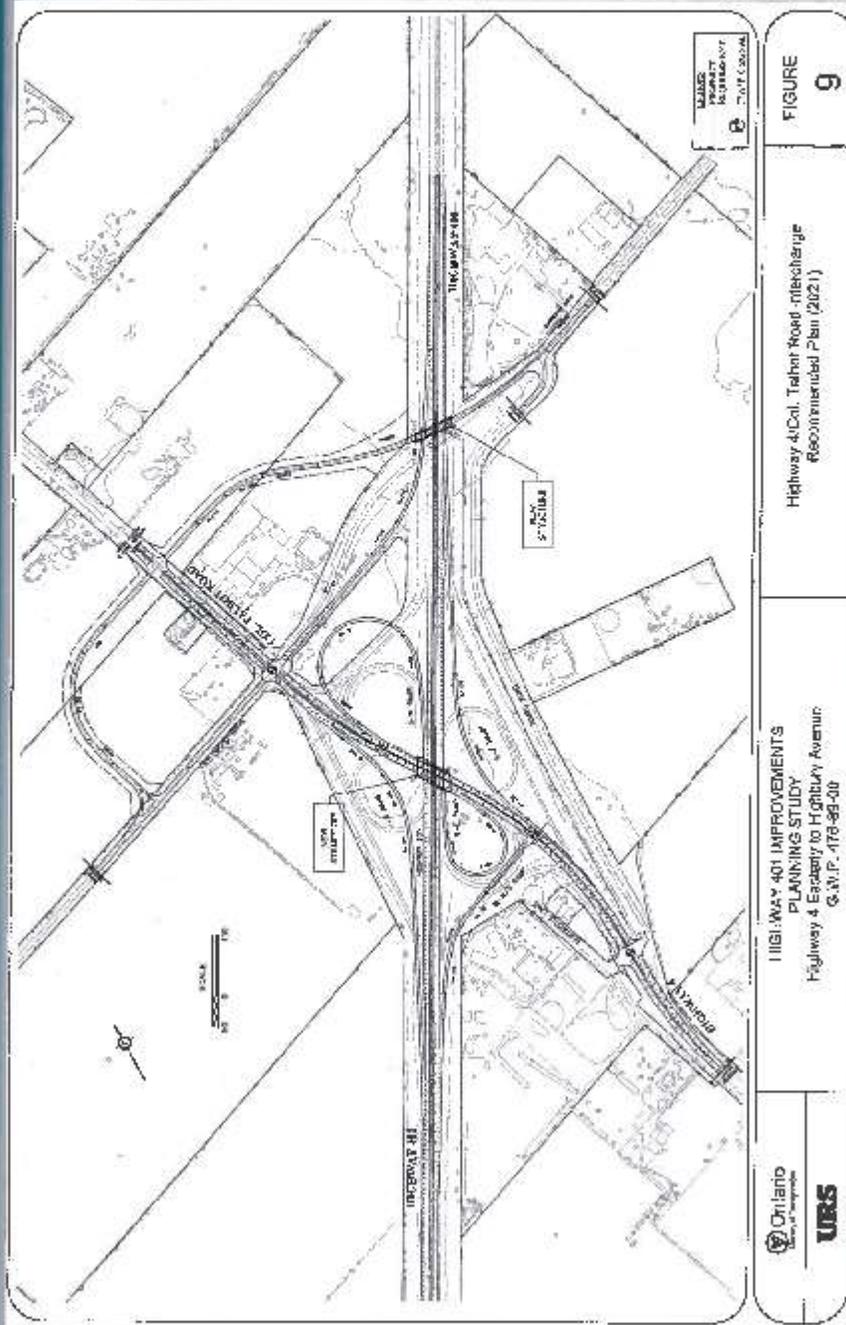
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### APPENDIX A

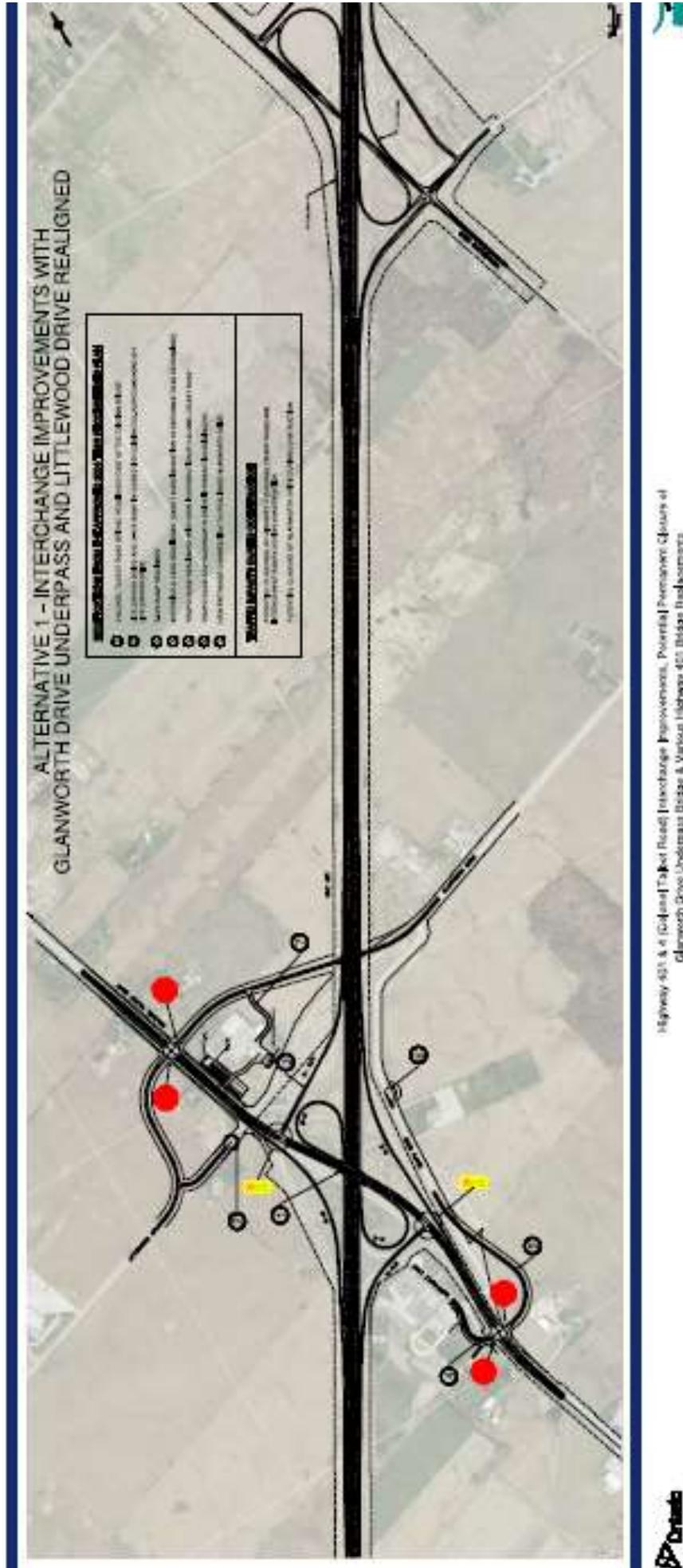
Plans of 2004 Recommended Alternative  
and EA Addendum Alternatives 1 to 6

# 2004 TESR Approved Plan

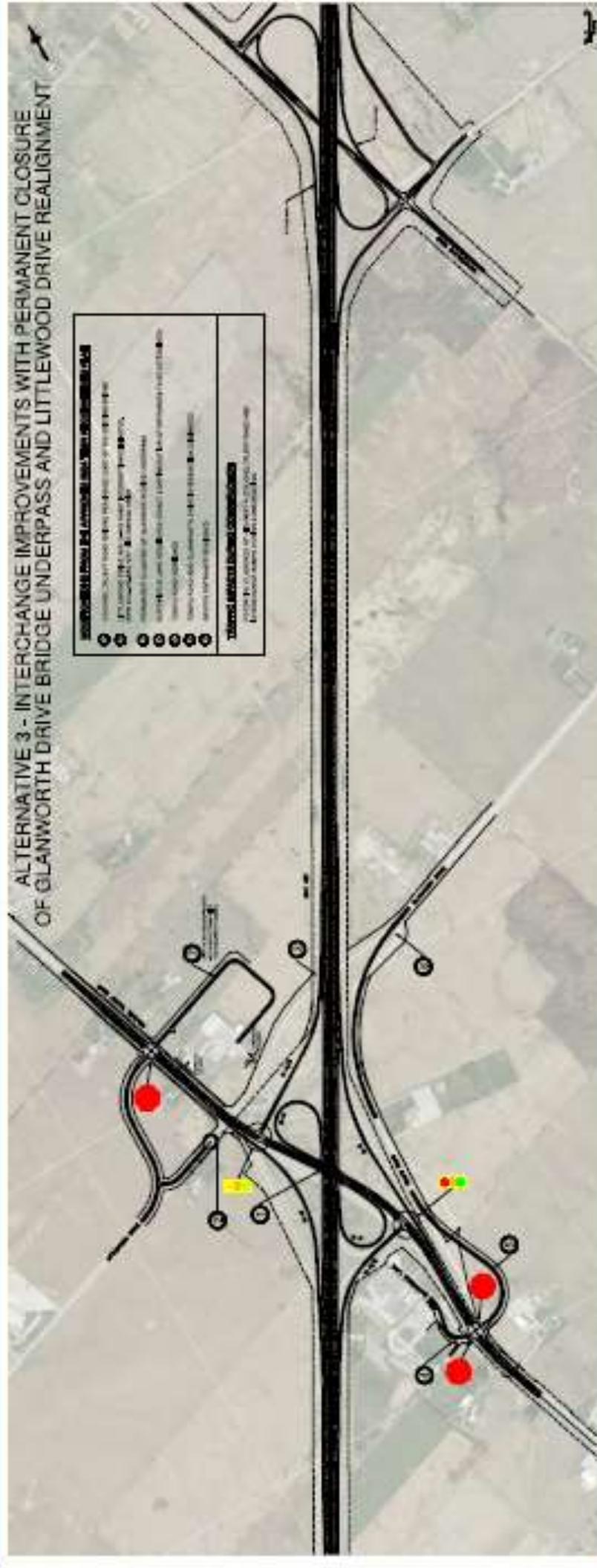


Highway 401 and 4 (Colonel Talbot Road) Interchange Improvements







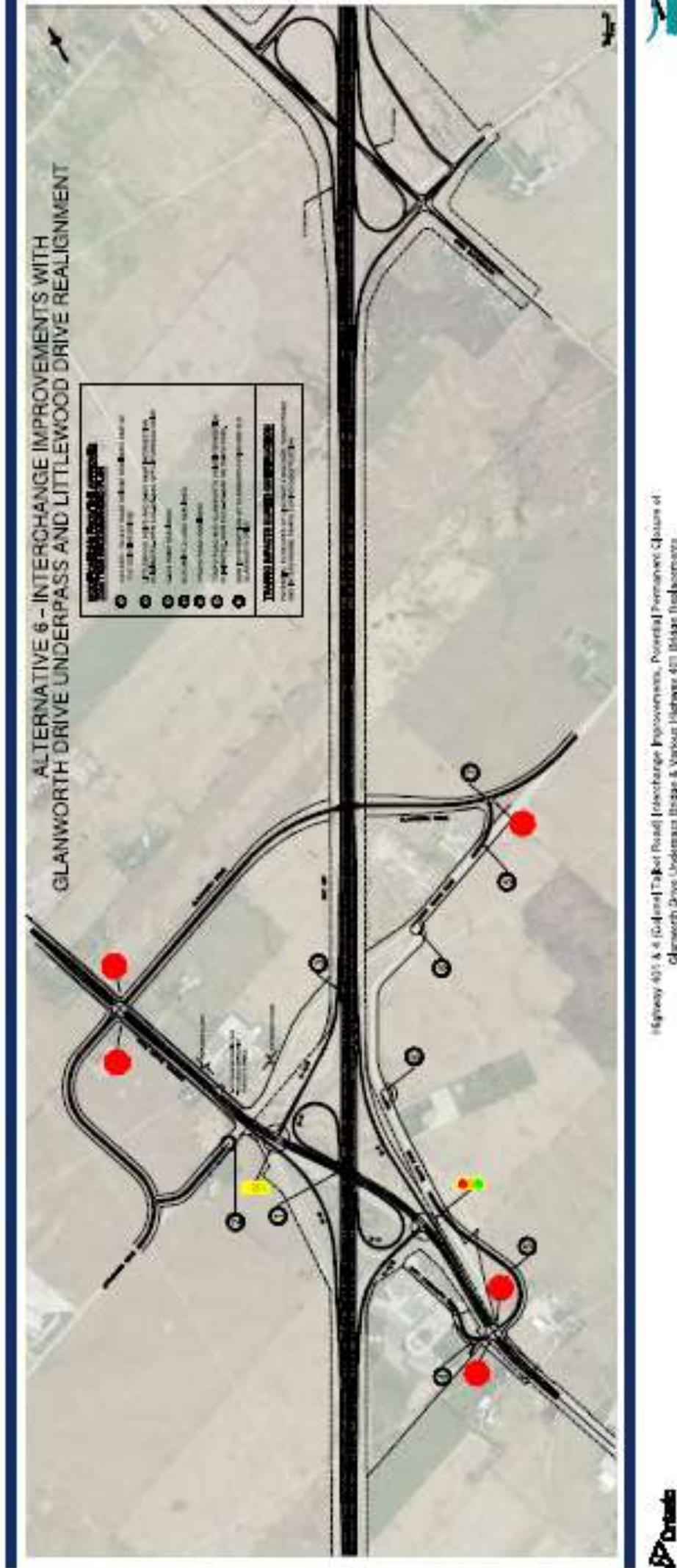


Highway 401 & 4 (Glanworth) Interchange Improvements, Potential Permanent Closure of Glanworth Drive Underpass Bridge & Varibout Highway 401 Bridge (Imp/Comments)









Highway 401 & 4 (Gardner/Talbot Road) Interchange Improvements, Potential Permanent Closures of Glanworth Drive Underpass Bridge & Various Highway 401 Bridge Trussmembers



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## **APPENDIX B**

### MTO EA Addendum Consultation Summary

#### **Ministry of Transportation, Ontario Highway 401 & 4 (Colonel Talbot Road) Interchange Improvements and Structural Replacement**

##### **Summary of Consultation Activities Completed to Date**

- **Notice of Study Commencement – February 6, 2013**
- **Public Information Centre #1 – June 19, 2013**
  - Attended by 34 people
- **Community Group Meeting – July 9, 2013**
  - Lambeth Community Association
  - City of London - Staff
  - Ministry of Transportation
  - Dillon Consulting Limited
- **Community Group Meeting – September 19, 2013**
  - Lambeth Community Association
  - MPP Office - Staff
  - City of London - Staff
  - Ministry of Transportation
  - Dillon Consulting Limited
- **Business Owner Meeting: Gentek – October 7, 2013**
  - Gentek Building Products Limited
  - Ministry of Transportation
  - Dillon Consulting Limited
- **Business Owner Meeting: Advanced Border Processing Centre – October 7, 2013**
  - Advanced Border Processing Centre
  - Ministry of Transportation
  - Dillon Consulting Limited
- **Public Information Centre #2 – November 13, 2013**
  - Attended by 75 people
    - MP – Joe Preston
    - MPP – Jeff Yurek
    - City of London Councilors: Henderson & Usher
- **Meeting with City of London – November 25, 2013**
  - City of London – Mayor and Councilors
  - City of London – Staff
  - Ministry of Transportation
  - Dillon Consulting Limited

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- **Business Owner Meeting: Best Western Stoneridge Inn – December 10, 2013**
  - Best Western Stoneridge Inn
  - Ministry of Transportation
  - Dillon Consulting Limited
  
- **Community Group Meeting – January 9, 2014**
  - Lambeth Community Association
  - City of London – Mayor and Councilor Henderson
  - City of London - Staff
  - Ministry of Transportation
  - Dillon Consulting Limited
  
- **Community Group Meeting – October 20, 2014**
  - Lambeth Community Association
  - City of London - Staff
  - Ministry of Transportation
  - Dillon Consulting Limited
  
- **Business Owner Meeting: Gentek – January 15, 2015**
  - Gentek Building Products Limited
  - Ministry of Transportation
  - Dillon Consulting Limited

**Dillon Consulting Limited**  
**March 25, 2015**  
**12-7110**